



RESEARCH & INNOVATION INVESTMENT SUMMARY

Prepared by: Robert Merson, March 19, 2019

The federal budget presented by the Liberal government, made important announcements about National Pharmacare, and supporting traditionally underrepresented populations, including women, and indigenous peoples. In terms of research & innovation however, there weren't many surprises. The significant changes to the federal research and innovation strategy were announced in the previous 2018 budget. Once again, Minister Morneau, referenced the important work of Dr. David Naylor and Canada's Fundamental Science Review, and the budget highlighted previous funding initiatives that have been implemented (e.g. the 5 Innovation Superclusters, the Strategic Innovation Fund, Innovative Solutions Canada, and the Canadian National Intellectual Property Strategy). To refresh your memory on the major research and innovation invests that will be rolling out, please refer to the 2018 Federal Budget Summary.

<http://www.mersoncorp.com/mci/wp-content/uploads/2018/02/BUDGET-2018-HIGHLIGHTS-ON-INNOVATION.pdf>

The new announcements of funding as of Budget 2019 include the following:

- Stem Cell Network - \$18M over 3 years
- Brain Canada Foundation - \$40M over 2 years (starting in 2020-21)
- Terry Fox Research Institute - \$150M over 5 years
- Ovarian Cancer Canada - \$10M over 5 years
- Genome Canada - \$100.5M over 5 years (starting 2020-21)
- Let's Talk Science - \$10M over 2 years (starting 2020-21)
- TRIUMP (BC based sub-atomic physics research laboratory) – \$195.9M over 5 years (starting 2020-21), leveraged with another \$96.8M from existing NRC resources

A new Strategic Science Fund was also announced to start in 2022-23, but little details were provided, stating that the Science Minister would be providing additional details in the coming months.

In summary, there was some new funding announced in the 2019 Budget for research & innovation, but the major changes to have been implemented over the past few years, with the 2018 budget offering the biggest surge in investment. The coming election in the Fall of 2019 will determine the longevity of these initiatives.

Direct highlights from the budget are included below.

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CANADIAN FEDERAL BUDGET – 2019



Excerpts on Innovation from the Canadian Federal Budget 2019

Compiled directly from budget (Source: Department of Finance, Budget 2019)

Highlights and section titles by R. Merson

Supporting Talents and Small & Growing Companies

- Building on the success of the **Global Talent Stream** pilot, Budget 2019 proposes to make the Global Talent Stream a permanent program. A permanent Global Talent Stream will give Canadian businesses expedited, predictable access to top global talent when Canadian workers are unavailable. To establish this new permanent program, Budget 2019 proposes to invest \$35.2 million over five years, beginning in 2019–20, with \$7.4 million per year ongoing.
- To help **Futurpreneur Canada** continue its efforts to support the next generation of entrepreneurs, Budget 2019 proposes to provide Futurpreneur Canada \$38 million over five years, starting in 2019–20.

Innovation in Key Sectors

- To help Canada's **forest sector** continue to innovate and grow, Budget 2019 proposes to invest up to \$251.3 million over three years, starting in 2020–21, to Natural Resources Canada to extend existing innovation and diversification programs.
- For Canada's **oil and gas sector** – Budget 2019 proposes to provide a further \$100 million over four years, starting in 2019–20, to the Strategic Innovation Fund, leveraging private sector co-investments, in order to support the activities of the Clean Resource Innovation Network.
- For Canada's participation in **lunar exploration** - To support these efforts, on February 28, 2019, the Prime Minister announced an investment of \$2.05 billion over 24 years to ensure that Canada continues to be a leader in space robotics. This investment includes \$150 million over five years, starting in 2019–20, for a Lunar Exploration Accelerator Program that will help small and medium-sized enterprises develop new technologies to be used and tested in lunar orbit and on the Moon's surface in fields that include artificial intelligence, robotics, and health.

Regulatory Roadmaps

In Budget 2018, the Government announced its intention to review regulatory requirements and practices that impede innovation and growth in the following high-growth sectors:

- Agri-food and aquaculture.
- Health and bio-sciences.
- Transportation and infrastructure.

As a next step, Budget 2019 introduces the first three “Regulatory Roadmaps” to specifically address stakeholder issues and irritants in these sectors, informed by over 140 responses from businesses and Canadians across the country, as well as recommendations from the Economic Strategy Tables.



Budget 2019 proposes the necessary funding and legislative revisions so that regulatory departments and agencies can move forward on the Roadmaps, including providing the Canadian Food Inspection Agency, Health Canada and Transport Canada with up to \$219.1 million over five years, starting in 2019–20, (with \$0.5 million in remaining amortization), and \$3.1 million per year on an ongoing basis.

To ensure that these Roadmaps can be implemented in a timely manner, Budget 2019 proposes to provide up to \$67.8 million over five years, starting in 2019–20, for Justice Canada resources. These funds will strengthen the Government’s capacity to draft the legislative and regulatory changes needed to facilitate a new approach to regulations in these sectors and others.

Granting Councils / Organizations / Programs

- **Stem Cell Network:** Stem cell research—pioneered by two Canadians in the 1960s—holds great promise for new therapies and medical treatments for respiratory and heart diseases, spinal cord injury, cancer, and many other diseases and disorders. The Stem Cell Network is a national not-for-profit organization that helps translate stem cell research into clinical applications and commercial products. To support this important work and foster Canada’s leadership in stem cell research, Budget 2019 proposes to provide the Stem Cell Network with renewed funding of \$18 million over three years, starting in 2019–20.
- **Brain Canada Foundation:** The Brain Canada Foundation is a national charitable organization that raises funds to foster advances in neuroscience discovery research, with the aim of improving health care for people affected by neurological injury and disease. To help the medical community better understand the brain and brain health, Budget 2019 proposes to provide the Brain Canada Foundation’s Canada Brain Research Fund with up to \$40 million over two years, starting in 2020–21. This investment will be matched by funds raised from other non-government partners of the Brain Canada Foundation.
- **Terry Fox Research Institute:** The Terry Fox Research Institute manages the cancer research investments of the Terry Fox Foundation. Budget 2019 proposes to provide the Terry Fox Research Institute with up to \$150 million over five years, starting in 2019–20, to help establish a national Marathon of Hope Cancer Centres Network. The Institute would seek matching funding through a combination of its own resources and contributions that it would seek from other organizations, including hospital and research foundations.
- **Ovarian Cancer Canada:** Ovarian Cancer Canada supports women living with the disease and their families, raises awareness and funds research. Budget 2019 proposes to provide Ovarian Cancer Canada with \$10 million over five years beginning in 2019–20 to help address existing gaps in knowledge about effective prevention, screening, and treatment options for ovarian cancer.
- **Genome Canada:** The insights derived from genomics—the study of the entire genetic information of living things encoded in their DNA and related molecules and proteins—hold the potential for breakthroughs that can improve the lives of Canadians and drive innovation and economic growth. Genome Canada is a not-for-profit organization



dedicated to advancing genomics science and technology in order to create economic and social benefits for Canadians. To support Genome Canada's operations, Budget 2019 proposes to provide Genome Canada with \$100.5 million over five years, starting in 2020–21. This investment will also enable Genome Canada to launch new large-scale research competitions and projects, in collaboration with external partners, ensuring that Canada's research community continues to have access to the resources needed to make transformative scientific breakthroughs and translate these discoveries into real-world applications.

- **Let's Talk Science:** Science, technology, engineering and math (STEM) are not just things we study in school—together, they are transforming all aspects of our lives, and redefining the skills and knowledge people need to succeed in a changing world. Let's Talk Science engages youth in hands-on STEM activities and learning programs, such as science experiments, helping youth develop critical thinking skills and opening up doors to future study and work in these fields. It also helps ensure more girls—and other groups that are underrepresented in STEM—gain and maintain interest in STEM from an early age. Budget 2019 proposes to provide Let's Talk Science with \$10 million over two years, starting in 2020–21, to support this important work.
- **TRIUMF** is a world-class sub-atomic physics research laboratory located in British Columbia, and home to the world's largest cyclotron particle accelerator. TRIUMF has played a leading role in many medical breakthroughs—such as developing alongside Canadian industrial partners new approaches to the medical imaging of diseases—and brings together industry partners, leading academic researchers and scientists, and graduate students from across Canada and around the world to advance medical isotope production, drug development, cancer therapy, clinical imaging, and radiopharmaceutical research. Budget 2019 proposes to provide TRIUMF with \$195.9 million over five years, starting in 2020–21, to build on its strong track record of achievements. Combined with an additional \$96.8 million from the existing resources of the National Research Council, federal support for TRIUMF will total \$292.7 million over this five-year period.

New Strategic Science Fund

To make federal investments in third-party science and research more effective, Budget 2019 proposes to establish a new Strategic Science Fund. This new Fund will respond to recommendations that arose during consultations with third-party science and research organizations. It will operate using a principles-based framework for allocating federal funding that includes competitive, transparent processes. This will help protect and promote research excellence. Under the Fund, the principles-based framework will be applied by an independent panel of experts, including scientists and innovators, who will provide advice for the consideration of the Government on approaches to allocating funding for third-party science and research organizations. Budget 2019 proposes to establish and operate the Strategic Science Fund starting in 2022–23.

CANADIAN FEDERAL BUDGET – 2019



Summary Investment Table (Chapter 2 from Budget – Part 5 & 6 of Table for Reference)

Chapter 2 - Building a Better Canada

millions of dollars

	2018– 2019	2019– 2020	2020– 2021	2021– 2022	2022– 2023	2023– 2024	Total
Part 5. Building a Nation of Innovators							
Establishing a Permanent Global Talent Stream	0	6	7	7	7	8	35
Improving Support for Small, Growing Companies	0	5	80	100	105	105	395
Supporting the Next Generation of Entrepreneurs	0	7	8	8	8	8	38
Helping Canada's Forest Sector Innovate and Grow	0	0	85	85	85	1	255
Less: Funds Sourced from Existing Departmental Resources	0	0	-1	-1	-1	-1	-4
Supporting Innovation in the Oil and Gas Sector Through Collaboration	0	10	30	30	30	0	100
Investing in a Diverse and Growing Western Economy	0	9	9	9	0	0	27
Launching a Federal Strategy on Jobs and Tourism	0	24	39	0	0	0	63
Less: Funds from Previous Budgets or Fall Statements	-6	0	0	0	0	0	-6
Bringing Innovation to Regulations	0	44	59	58	29	29	219
Part 5. Building a Nation of Innovators Total	-6	106	315	296	263	149	1,123

Chapter 2 - Building a Better Canada

millions of dollars

	2018– 2019	2019– 2020	2020– 2021	2021– 2022	2022– 2023	2023– 2024	Total
Part 6. Building Research Excellence in Canada							
Stem Cell Network	0	6	6	6	0	0	18
Less: Funds Sourced from Existing Departmental Resources	0	-6	-6	-6	0	0	-18
Brain Canada Foundation	0	0	20	20	0	0	40
Terry Fox Research Institute	0	11	20	32	39	48	150
Ovarian Cancer Canada	0	1	2	2	2	2	10
Genome Canada	0	0	32	18	23	19	92
Let's Talk Science	0	0	5	5	0	0	10
Strengthening Canada's World Class Physics Research	0	0	39	39	41	38	158
Part 6. Building Research Excellence in Canada Total	0	12	119	117	104	107	459