

RESEARCH & INNOVATION INVESTMENT SUMMARY

Prepared by: Robert Merson, April 16, 2024

Investments into the life sciences sector have remained elusive since the 2021 federal budget that announced the Canadian Biomanufacturing and Life Sciences Strategy, the funding for which is scheduled to end this fiscal year. While the federal budget 2024 continues to mention previously announced "Key Ongoing Actions", there are no significant investments for the sector again this year.

The primary investment in innovation this year has focused on Artificial Intelligence (AI) with \$2.4B of investment, which includes an AI Compute Access Fund to support researchers, start-ups and businesses with access to computation infrastructure, as well as support for new technologies with funding through the regional development agencies.

Clean energy and clean technologies also got much of the innovation attention, with a heavy focus on investment tax credits.

No new investments however in the previously announced programs, such as the Strategic Innovation Fund (SIF), the Superclusters or the Canadian Biomanufacturing and Life Sciences Strategy.

Additional investments have been proposed for the tri-council funding agencies of \$1.8B over 5 years, however, there's an additional announcement that the government will "create a new capstone research funding organization", under which the granting councils will continue to exist. Scholarship amounts for graduate and post-doctoral positions will also increase.

Direct highlights from the budget are included below.

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Excerpts on Innovation from the Canadian Federal Budget 2024

Compiled directly from budget (Source: Department of Finance, Budget 2024) Highlights and section title edits by R. Merson

Highlights from "Boosting Research, Innovation, and Productivity" (Section 4.1)

<u>To secure Canada's Al advantage</u> Budget 2024 announces a monumental increase in targeted Al support of \$2.4 billion, including:

- \$2 billion over five years, starting in 2024-25, to launch a new AI Compute Access Fund and Canadian AI Sovereign Compute Strategy, to help Canadian researchers, start-ups, and scale-up businesses access the computational power they need to compete and help catalyze the development of Canadian-owned and located AI infrastructure.
- \$200 million over five years, starting in 2024-25, to boost AI start-ups to bring new technologies to market, and accelerate AI adoption in critical sectors, such as agriculture, clean technology, health care, and manufacturing. This support will be delivered through Canada's Regional Development Agencies.
- \$100 million over five years, starting in 2024-25, for the National Research Council's AI Assist Program to help Canadian small- and medium-sized businesses and innovators build and deploy new AI solutions, potentially in coordination with major firms, to increase productivity across the country.
- \$50 million over four years, starting in 2025-26, to support workers who may be impacted by AI, such as creative industries. This support will be delivered through the Sectoral Workforce Solutions Program, which will provide new skills training for workers in potentially disrupted sectors and communities.

Incentivizing More Innovation and Productivity

The government wants to encourage Canadian businesses to invest in the capital—both tangible and intangible—that will help them boost productivity and compete productively in the economy of tomorrow.

To incentivize investment in innovation-enabling and productivity enhancing assets, Budget 2024 proposes to allow businesses to immediately write off the full cost of investments in patents, data network infrastructure equipment, computers, and other data processing equipment. Eligible investments, as specified in the relevant capital cost allowance classes, must be acquired and put in use on or after Budget Day and before January 1, 2027. The cost of this measure is estimated at \$725 million over five years, starting in 2024-25.

Boosting R&D and Intellectual Property Retention

To modernize and improve the Scientific Research and Experimental Development (SR&ED) tax incentives, the federal government launched consultations on January 31, 2024, to explore costneutral ways to enhance the program to better support innovative businesses and drive economic growth. In these consultations, which closed on April 15, 2024, the government asked Canadian researchers and innovators for ways to better deliver SR&ED support to small- and medium-sized Canadian businesses and enable the next generation of innovators to scale-up, create jobs, and grow the economy.

Budget 2024 announces the government is launching a second phase of consultations on more specific policy parameters, to hear further views from businesses and industry on specific and technical reforms. This includes exploring how Canadian public companies could be made eligible for the enhanced credit. Further details on the consultation process will be released shortly on the Department of Finance Canada website.



Budget 2024 proposes to provide \$600 million over four years, starting in 2025-26, with \$150 million per year ongoing for future enhancements to the SR&ED program. The second phase of consultations will inform how this funding could be targeted to boost research and innovation.

Enhancing Research Support

Canada's granting councils already do excellent work within their areas of expertise, but more needs to be done to maximize their effect. The improvements we are making today, following extensive consultations including with the Advisory Panel on the Federal Research Support System, will strengthen and modernize Canada's federal research support.

- To increase core research grant funding and support Canadian researchers, Budget 2024 proposes to provide \$1.8 billion over five years, starting in 2024-25, with \$748.3 million per year ongoing to SSHRC, NSERC, and CIHR.
- To provide better coordination across the federally funded research ecosystem, Budget 2024 announces the government will create a new capstone research funding organization. The granting councils will continue to exist within this new organization, and continue supporting excellence in investigator-driven research, including linkages with the Health portfolio. This new organization and structure will also help to advance internationally collaborative, multidisciplinary, and mission-driven research. The government is delivering on the Advisory Panel's observation that more coordination is needed to maximize the impact of federal research support across Canada's research ecosystem.
- To help guide research priorities moving forward, Budget 2024 also announces the government will create an advisory Council on Science and Innovation. This Council will be made up of leaders from the academic, industry, and not-for-profit sectors, and be responsible for a national science and innovation strategy to guide priority setting and increase the impact of these significant federal investments.
- Budget 2024 also proposes to provide a further \$26.9 million over five years, starting in 2024-25, with \$26.6 million in remaining amortization and \$6.6 million ongoing, to the granting councils to establish an improved and harmonized grant management system.

World-Leading Research Infrastructure

To advance the next generation of cutting-edge research, Budget 2024 proposes major research and science infrastructure investments, including:

- \$399.8 million over five years, starting in 2025-26, to support TRIUMF, Canada's sub-atomic physics research laboratory, located on the University of British Columbia's Vancouver campus. This investment will upgrade infrastructure at the world's largest cyclotron particle accelerator, positioning TRIUMF, and the partnering Canadian research universities, at the forefront of physics research and enabling new medical breakthroughs and treatments, from drug development to cancer therapy.
- \$176 million over five years, starting in 2025-26, to CANARIE, a national not-for-profit organization that manages Canada's ultra high-speed network to connect researchers, educators, and innovators, including through eduroam. With network speeds hundreds of times faster, and more secure, than conventional home and office networks, this investment will ensure this critical infrastructure can connect researchers across Canada's world-leading post-secondary institutions.
- \$83.5 million over three years, starting in 2026-27 to extend support to Canadian Light Source in Saskatoon. Funding will continue the important work at the only facility of its kind in Canada. A synchrotron light source allows scientists and researchers to examine the microscopic nature of matter. This specialized infrastructure contributes to breakthroughs in areas ranging from climate-resistant crop development to green mining processes.



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- \$45.5 million over five years, starting in 2024-25, to support the Arthur B. McDonald Canadian Astroparticle Physics Research Institute, a network of universities and institutes that coordinate astroparticle physics expertise. Headquartered at Queen's University in Kingston, Ontario, the institute builds on the legacy of Dr. McDonald's 2015 Nobel Prize for his work on neutrino physics. These expert engineers, technicians, and scientists design, construct, and operate the experiments conducted in Canada's underground and underwater research infrastructure, where research into dark matter and other mysterious particles thrives. This supports innovation in areas like clean technology and medical imaging, and educates and inspires the next wave of Canadian talent.
- \$30 million over three years, starting in 2024-25, to support the completion of the University of Saskatchewan's Centre for Pandemic Research at the Vaccine and Infectious Disease Organization in Saskatoon. This investment will enable the study of high-risk pathogens to support vaccine and therapeutic development, a key pillar in Canada's Biomanufacturing and Life Sciences Strategy. Of this amount, \$3 million would be sourced from the existing resources of Prairies Economic Development Canada.

Investing in Homegrown Research Talent

- To foster the next generation of research talent, Budget 2024 proposes to provide \$825 million over five years, starting in 2024-25, with \$199.8 million per year ongoing, to increase the annual value of master's and doctoral student scholarships to \$27,000 and \$40,000, respectively, and post-doctoral fellowships to \$70,000. This will also increase the number of research scholarships and fellowships provided, building to approximately 1,720 more graduate students or fellows benefiting each year. To make it easier for students and fellows to access support, the enhanced suite of scholarships and fellowship programs will be streamlined into one talent program.
- To support Indigenous researchers and their communities, Budget 2024 also proposes to provide \$30 million over three years, starting in 2024-25, to support Indigenous participation in research, with \$10 million each for First Nation, Métis, and Inuit partners.

Boosting Talent for Innovation

 Budget 2024 announces the government's intention to work with Talent for Innovation Canada to develop a pilot initiative to build an exceptional research and development workforce in Canada. This industry-led pilot will focus on attracting, training, and deploying top talent across four key sectors: bio-manufacturing; clean technology; electric vehicle manufacturing; and microelectronics, including semiconductors.

Advancing Space Research and Exploration

- Budget 2024 proposes to provide \$8.6 million in 2024-25 to the Canadian Space Agency for the Lunar Exploration Accelerator Program to support Canada's world-class space industry and help accelerate the development of new technologies. This initiative empowers Canada to leverage space to solve everyday challenges, such as enhancing remote health care services and improving access to healthy food in remote communities, while also supporting Canada's human space flight program.
- Budget 2024 announces the establishment of a new whole-of-government approach to space exploration, technology development, and research. The new National Space Council will enable the level of collaboration required to secure Canada's future as a leader in the global space race, addressing cross-cutting issues that span commercial, civil, and defence domains. This will also enable the government to leverage Canada's space industrial base with its world-class capabilities, workforce, and track record of innovation and delivery.



Highlights from "Growing Businesses to Create More Jobs" (Section 4.3)

Boosting Regional Economic Growth

To create jobs and boost regional economic growth, Budget 2024 proposes to provide an additional \$158.5 million over two years, starting in 2024-25, on a cash basis, to Canada's Regional Development Agencies for the Regional Economic Growth through Innovation program. A portion of this funding will be dedicated to housing innovation.

Cutting Red Tape to Boost Innovation

Budget 2024 announces the government's intent to introduce amendments to the Red Tape Reduction Act to broaden the use of regulatory sandboxes across government. The changes will enable innovation by offering limited exemptions to existing legislation and regulations, streamlining the regulatory system, and reforming regulations to modern business realities.

Summary Investment Tables

Section 4.1 from Budget

millions of dollars

	2023- 2024	2024- 2025	2025- 2026	2026- 2027	2027- 2028	2028- 2029	Total
4.1. Boosting Research,	•	•		•	•		
Innovation, and							
Productivity	0	1,103	1,641	1,684	929	1,584	6,941
Strengthening Canada's Al							
Advantage	0	85	210	440	720	895	2,350
Safe and Responsible Use of							
Al	0	11	17	10	10	10	59
Using AI to Keep Canadians							
Safe	0	1	2	2	1	1	7
Incentivizing More Innovation							
and Productivity	0	755	855	490	-795	-580	72
Boosting R&D and Intellectual Property							
Retention	0	0	150	150	150	150	600
Enhancing Research Support	0	75	153	286	517	764	1,795
World-Leading Research							
Infrastructure	0	18	123	148	156	164	608
Less: Funds Sourced from Existing Departmental							
Resources	0	-9	-32	-27	-19	-19	-10
Year-Over-Year							
Reallocation of Funding	0	9	12	7	0	0	2
Investing in Homegrown							
Research Talent	0	142	146	178	189	200	85
Advancing Space Research							
and Exploration	0	9	0	0	0	0	9
Accelerating Clean Tech Intellectual Property Creation							,
and Retention	0	7	8	0	0	0	1.