

**Natural Sciences and
Engineering Research Council
of Canada**

2022–23

Departmental Plan

The Honourable François-Philippe Champagne,
P.C., M.P.
Minister of Innovation, Science and Industry

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2022.

Catalogue Number: NS1-30E-PDF

ISSN: 2371-6592

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From the Minister

On behalf of the Natural Sciences and Engineering Research Council (NSERC), it is our pleasure to present the 2022–23 Departmental Plan. As the country continues to recover from the COVID-19 pandemic, Innovation, Science and Economic Canada (ISED) and its portfolio will work closely with partners across Government to build a more resilient, clean and inclusive economy that benefits all Canadians.

NSERC’s investments will support highly-skilled people in the development of cutting-edge research and innovation. NSERC will continue to make progress on important files such as: climate change, Indigenous self-determination in research, research security, quantum, international collaborations, and the commercialization of leading research, to drive technological breakthroughs, protect Canada’s competitive advantage and to help innovative Canadian companies grow and create jobs. The Agency will continue to adapt in response to the ongoing COVID-19 pandemic by providing valuable support to the research community. NSERC will continue to apply equity, diversity and inclusion principles to address barriers to accessibility in the research funding system.

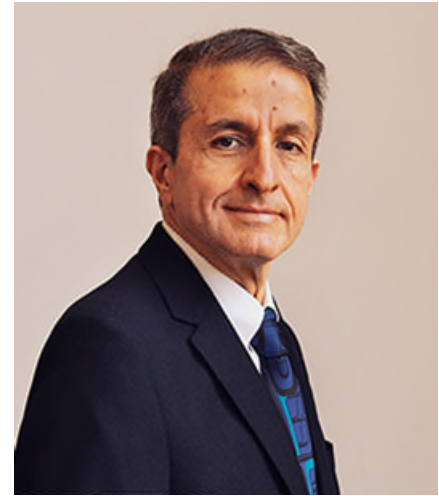
Together with Canadians of all backgrounds and in all regions, ISED and its portfolio will continue to build a strong culture of innovation for a resilient, sustainable and inclusive economic future.

The Honourable François-Philippe Champagne
Minister of Innovation, Science and Industry



From the President

It is my pleasure to present NSERC's 2022-23 Departmental Plan. Since 1978, NSERC has played a critically important role in the evolution of natural sciences and engineering research in Canada. NSERC funds visionaries, explorers and innovators who are searching for the scientific and technical breakthroughs that will drive prosperity in Canada. NSERC's Departmental Plan for the coming year articulates our objectives and intended results for making Canadian natural sciences and engineering research internationally competitive, developing a pool of highly skilled people, and ensuring that the results of the research we fund is used for the benefit of all Canadians.



Discovery is the foundation of all scientific advancements, and NSERC's largest area of support. We back people with bold, promising ideas and give them the freedom to explore when their research points them in exciting, unexpected directions. We encourage young talent and create unparalleled training opportunities for the next generation of scientists and engineers. We forge international collaborations that connect Canadian researchers to the global network of ideas, and attract the world's brightest minds to our country to increase the impact of science, technology and innovation in Canada.

NSERC helps organizations of all sizes tap into the talent and technology at Canada's universities and colleges. Researchers offer partners innovative ideas, specialized laboratories and highly trained students who are ready to launch their careers. Partners provide researchers with new perspectives, market knowledge and pathways to commercialization. Together, they turn scientific and technical breakthroughs into benefits for Canadians.

NSERC encourages Canadians to embrace a Science, Technology, Engineering, and Mathematics (STEM) mindset, so they can grow up curious and critical of the world around them. We popularize science culture by supporting museums, libraries and not-for-profits putting on activities for youth and families that promote STEM as an important part of their lives. NSERC works closely with the research community to make science and engineering more equitable, diverse and inclusive. NSERC wants all Canadians to see themselves as discoverers and innovators.

NSERC recognizes that the COVID-19 pandemic is affecting researchers' and students' capacity to conduct their regular research and training activities. NSERC also recognizes that the COVID-19 pandemic has the potential to exacerbate inequities in the natural sciences and engineering research community. Certain identity factors are associated with greater adverse impacts for some members of the research community (e.g., gender, race, Indigenous identity, geographic

location, rurality, disability, age, socioeconomic status, career stage, family responsibilities, etc.). With this in mind, NSERC will continue to monitor the evolution of the COVID-19 pandemic and adapt its guidelines.

In 2022-23 we will continue engaging with external stakeholders on key topics relevant to the future of natural sciences and engineering research funding in Canada such as: supporting research; supporting researchers, students and post-doctoral fellows; and improving funding efficiency and enhancing research use and impact.

In addition, NSERC will establish a new, flexible work environment at our new workplace location in 2022–23. This will provide our employees with the tools and resources they need to ensure an adaptive, inclusive and responsive work environment, both virtually and onsite, with a strong focus on equity, diversity and inclusion.

As we look forward to 2022-23 and beyond, NSERC will launch a new long-term strategic plan that will help guide the organization to advance Canada’s ability to discover, develop talent and innovate for the new challenges and opportunities of the future.

Prof. Alejandro Adem, FRSC
President
Natural Sciences and Engineering Research Council

Plans at a glance

NSERC will continue to support the Minister of Innovation, Science and Industry to improve economic growth and ensure pandemic readiness for years to come. NSERC will support the whole-of-government effort to reduce emissions, create clean jobs and address the climate-related challenges communities are already facing. NSERC will work to support the Minister of Innovation, Science and Industry to safeguard Canada’s world-leading research ecosystem and to build a brighter future through continued collaboration, engagement, and the use of science and evidence-based decision-making.

Discovery Research

Over the course of the coming year, NSERC will continue to advance the international competitiveness of Canada’s natural sciences and engineering research. Providing support for researchers and highly qualified personnel through the evolution of the COVID-19 pandemic and adapting NSERC’s operations, as needed, remain a top priority. Other key highlights include:

- Work in close collaboration with the Social Sciences and Humanities Research Council (SSHRC), the Canadian Institutes of Health Research (CIHR) and other key stakeholders to advance policy priorities of the [Canada Research Coordinating Committee](#)ⁱ such as the Tri-agency Early Career Researcher (ECR), Equity, Diversity and Inclusion (EDI) and Indigenous Research Action Plans.
- Continue to develop and implement program design improvements in response to the Evaluation of the Discovery Research Program. For example, and further informed by the results of a Gender-Based Analysis Plus (GBA Plus), NSERC will modify the Research Tools and Instruments application eligibility criteria to increase access for eligible researchers.
- NSERC will award approximately 10 grants through the Discovery Horizons pilot to support projects that broadly integrate or transcend disciplines to advance knowledge in the natural sciences and engineering.

Research Training and Talent Development

NSERC will continue to support the growth and development of a pool of diverse and highly skilled people in the natural sciences and engineering. Key planning highlights include:

- Modernize the [Undergraduate Student Research Awards Program](#)ⁱⁱ (USRA) by continuing to increase the award value from \$4,500 up to \$6,000.
- Deliver [PromoScience grants](#)ⁱⁱⁱ, with a sustained focus on science teachers and underrepresented groups such as girls and Indigenous youth, which will reach an estimated one million young Canadians in 2022-23.

- Work in close collaboration with SSHRC, CIHR and other key stakeholders to advance the [Canada Research Coordinating Committee](#)^{iv} Tri-agency Training Strategy.

Research Partnerships

Through its Research Partnerships, NSERC will continue to mobilize knowledge generated through the transformation of Canada’s Natural Sciences and Engineering (NSE) research into results for the benefit of all Canadians. Key planning highlights to achieve this outcome include:

- Continue to enhance and expand the reach of the [Alliance](#)^v program that supports university researchers to collaborate with a broad range of partner organizations (private, public, and not-for-profit sectors) to generate new knowledge and accelerate the application of research results to create benefits for Canada.
- Continue to work with provincial and federal partners to support research partnerships and collaborations of strategic interest to the Government of Canada, while ensuring that research is as open as possible and as safeguarded as necessary.
- Continue to explore partnership opportunities with international partners in Europe and the US to advance areas of mutual interest, and deliver the Alliance International funding opportunity, a stream of the Alliance research funding program designed to support international collaborations. This will provide support for researchers in Canada to work with leading international researchers from the academic sector and will help establish and grow international research collaborations and projects that have a high potential for impact in NSE disciplines.
- Continue efforts to simplify and streamline the College and Community Innovation (CCI) program, better enabling it to address the changing dynamics of applied research in colleges and communities across Canada. In 2022-23, the first [Mobilize](#)^{vi} grants will be awarded and an improved grant to support applied research and development collaborative projects will be updated.

For more information on NSERC’s plans, see the “Core responsibilities: planned results and resources” section of this plan.

Core responsibilities: planned results and resources

This section contains information on the department’s planned results and resources for each of its core responsibilities.

Funding Natural Sciences and Engineering Research and Training

Description

The Natural Sciences and Engineering Research Council of Canada (NSERC), through grants, fellowships and scholarships, promotes and supports research and research training in the natural sciences and engineering to develop talent, generate discoveries, and support innovation in pursuit of economic and social outcomes for Canadians.

Planning highlights

Departmental Result: Canada’s natural sciences and engineering research is internationally competitive.

NSERC will continue to support the Minister of Innovation, Science and Industry to improve economic growth and ensure pandemic readiness for years to come. NSERC will support the whole-of-government effort to reduce emissions, create clean jobs and address the climate-related challenges communities are already facing. NSERC will work to support the Minister of Innovation, Science and Industry to safeguard Canada’s world-leading research ecosystem and to build a brighter future through continued collaboration, engagement, and the use of science and evidence-based decision-making.

In 2022-23, NSERC will continue to support its grants and scholarships applicants, peer reviewers and employees as the COVID-19 pandemic evolves. Support measures introduced in 2020-21 that will continue into 2022-23 include the one-year extension with funds offered to recipients of [Discovery Grants](#)^{vii}, [Subatomic Physics Discovery Grants](#)^{viii} (Individual, Project, Major Resources), [Northern Research Supplements](#)^{ix} and [Discovery Development Grants](#)^x. This extension with funds aims to lessen the COVID-19 impacts on researchers and highly qualified personnel during the uncertain period of the pandemic. Since the beginning of the pandemic, new tools and systems were developed to support virtual peer review. New and innovative ways to deliver programs will continue to be designed in 2022-23.

The COVID-19 pandemic has had differential impacts on the research community. NSERC developed guidelines for applicants and reviewers to ensure that COVID-19-related impacts on research and training are considered. In 2022-23, the agency will continue to build on lessons learned from its initial response to the COVID-19 pandemic and from the experiences of the research community to adapt its operations, as needed, and ensure equitable funding outcomes.

In support of the Canada Research Coordinating Committee’s commitment to strengthen Canada’s response and recovery to the COVID-19 pandemic, NSERC will continue to collaborate with CIHR and SSHRC to direct federal support to help sustain the research community, fund rapid-response research, and enable forward-looking, evidence-based decisions in government.

In 2022–23, NSERC will continue to work with CIHR and SSHRC on the implementation of the Tri-Agency Early Career Researcher (ECR) Action Plan. This will include providing timely resources to support ECRs through [Discovery Launch Supplements](#)^{xi}, to establish their research programs and hire students in diverse areas ranging from environmental sciences and agriculture to information and communications technologies. NSERC will continue tracking, monitoring and making informed decisions regarding the experiences of ECRs in academia.

In response to the [Evaluation of the Discovery Research Program](#)^{xii} recommendations, NSERC continues to carry out program design improvements. Following a GBA Plus of the [Research Tools and Instruments grants program](#)^{xiii} (RTI), in FY 2022-23 program eligibility will be modified to increase access to RTI to the largest number of eligible researchers. In 2022-23 through the [Discovery Institute Support](#)^{xiv} funding opportunity, NSERC will award up to seven grants to Canadian-based theoretical research institutes to enable the development of research activities and foster training and collaboration within and among institutes. NSERC is also committed to ensuring a transparent management of the Discovery Research Program and will continue to expand the use of online, interactive dashboards as a means to share information on program results and funding allocation processes.

Also in response to the Evaluation of the Discovery Research Program, NSERC will investigate ways to enhance the Discovery Grants program to ensure its sustainability and its continued adaptability to emerging dynamics in the fields of natural sciences and engineering.

Women continue to be under-represented in the natural sciences and engineering. Through the [Chairs for Women in Science and Engineering Program](#)^{xv} (CWSE) NSERC provides women with role models and promotes their participation and retention in science and engineering. As a response to the recommendations of the 2021 CWSE evaluation, in 2022-2023, NSERC will launch a CWSE competition with new program objectives to increase the impact of the program.

International collaboration enables Canadian researchers to keep abreast of the latest research results and to leverage international research capacity. It is expected that, by the end of 2022-23, 47% of NSERC-funded research will involve international collaboration. NSERC is a member of the Belmont Forum, a partnership of international funding organizations, and has formal partnerships with international science councils, and regional consortia committed to the advancement of interdisciplinary science. NSERC will continue to provide context and input to

newly proposed [Belmont Forum Collaborative Research Actions](#)^{xvi} to increase alignment with Canadian research strengths.

NSERC celebrates exceptional examples of research excellence with a wide range of prizes, which also act as an inspiration for Canadian research as we continue to push the frontiers of knowledge. In 2022-23, NSERC will award the second round of two new prizes to honour recent Canadian Nobel laureates, the NSERC [Donna Strickland Prize](#)^{xvii} for Societal Impact of Natural Sciences and Engineering Research and the [Arthur B. McDonald Fellowships](#)^{xviii}. NSERC will continue to award the [Gerhard Herzberg Canada Gold Medal](#)^{xix} for Science and Engineering, the [NSERC John C. Polanyi Award](#)^{xx}, the [Brockhouse Canada Prize](#)^{xxi} for Interdisciplinary Research in Science and Engineering and the [Synergy Awards](#)^{xxii} for Innovation in 2022-23.

Departmental Result: Canada has a pool of highly skilled people in the natural sciences and engineering.

NSERC endorses the government of Canada’s commitment to promoting equity, diversity and inclusion in natural science and engineering. Through its funding opportunities, NSERC supports the attraction, retention and development of highly qualified and skilled people in the NSE in Canada. By providing grants and scholarships, NSERC helps build the human capital required to enable a strong, globally competitive research and innovation system in Canada. Researchers and students benefit from the grant, scholarship and award funding, which supports post-secondary university research and training as well as some outreach activities at universities, museums, science centres, and community-based organizations that target youth, parents and teachers.

NSERC currently supports over 7,000 students and postdoctoral fellows through scholarships and fellowships and invests over \$400 million in domestic and international student training through grants. In 2022-23, NSERC will continue to work with CIHR and SSHRC on the development of the CRCC Tri-Agency Training Strategy. The strategy’s vision to support, inspire and empower the next generation of leaders, within and beyond the research ecosystem, for the benefit of Canada, with a mission of developing and delivering an innovative, equitable, accessible and effective suite of scholarship and fellowship funding opportunities in support of a diverse base of trainees.

In 2022-23, NSERC will continue to modernize the [Undergraduate Student Research Awards Program](#)^{xxiii} (USRA) by implementing key recommendations stemming from the 2019-20 Gender-Based Analysis Plus (GBA Plus) analysis of the program. A particular focus will be placed on increasing transparency in the review process as well as accessibility to the program to a diverse group of students. In 2022-23, NSERC is continuing the implementation of the new award value, which increased from \$4,500 up to \$6,000. When accounting for the 25% minimum contribution from the university, the award will have a minimum value of \$7,500 for the student.

Through the delivery of the [Collaborative Research and Training Experience](#)^{xxiv} (CREATE) funding opportunity, NSERC will continue to provide enhanced opportunities for research trainees to develop technical and professional skills, and to gain experience in enriched and varied research environments, including work-integrated learning. CREATE will also continue to support international and multidisciplinary research through partnership with the German Research Foundation (DFG), and to involve researchers from the social and health sector.

Through its continued national leadership of science and engineering promotion in Canada, NSERC is promoting an understanding of science, technology, engineering and mathematics to young Canadians encourages them to study the NSE at the post-secondary level. NSERC will continue the delivery of [PromoScience grants](#)^{xxv}, with a sustained focus on science teachers and on underrepresented groups such as girls and Indigenous youth, which will reach an estimated one million young Canadians in 2022-23. NSERC will continue its partnerships with like-minded organizations to support [Science Odyssey](#)^{xxvi} and [Science Literacy Week](#)^{xxvii}.

In 2019-20, NSERC signed the [San Francisco Declaration on Research Assessment](#)^{xxviii} (DORA), joining CIHR, SSHRC, the Canada Foundation for Innovation (CFI) and Genome Canada as signatories. DORA is a global initiative aimed at supporting the development and promotion of best practices in the assessment of scholarly research. NSERC will continue to raise awareness about DORA through outreach engagements with the research community. Following consultations with stakeholders in 2021-22, NSERC revised its policy on contributions to research and training to ensure that the quality and impact of a broad range of contributions are included. In 2022-23, NSERC will support the implementation of the new guidelines through development of best practices in assessment that could be used to update program selection criteria and peer reviewer guidelines.

In 2021-22, NSERC, in collaboration with CIHR and SSHRC, launched the [Tri-Agency Interdisciplinary Peer Review](#)^{xxix} pilot. This tri-agency peer review committee includes expertise from across the social sciences, humanities, natural sciences, engineering, and health sciences and complements existing interdisciplinary opportunities to ensure that the full range of research disciplines in Canada can be supported through the agencies. In 2022-23 NSERC will award approximately 10 [Discovery Horizons](#)^{xxx} grants through this pilot initiative, supporting investigator-initiated individual and team projects that broadly integrate or transcend disciplines to advance knowledge in the natural sciences and engineering.

In 2022-23, NSERC will continue working with agencies and departments on the Canada Research Coordinating Committee (CRCC) to advance federal priorities and create an inclusive internationally competitive research ecosystem in Canada. Work will focus on strengthening research excellence by creating a more equitable, diverse and inclusive research environment across all disciplines.

The agency and its CRCC partners will also work together to better support trainees and early career researchers in all fields and implement, with Indigenous Peoples, an interdisciplinary research and research training model that contributes to reconciliation.

In line with the strategic plan [Setting New Directions to Support Indigenous Research and Research Training in Canada 2019-2022](#)^{xxxix}, work will continue on a series of mechanisms seeking to further build and strengthen relationships with First Nations, Inuit and Métis peoples; support the research priorities of Indigenous peoples; increase access for Indigenous peoples to agencies' program funding; and champion Indigenous leadership, self-determination and capacity-building in research. This includes launching the Indigenous Leadership Circle in Research and developing a framework to support self-identification of First Nations, Métis and Inuit Peoples in our programs. In addition, NSERC will continue delivering its programs which currently support Indigenous research and research training, such as the [PromoScience](#)^{xxxix} and [NSERC Indigenous Student Ambassadors](#)^{xxxix} programs.

Departmental Result: Canada's natural sciences and engineering research knowledge is used.

Building on successful initiatives via [Alliance](#)^{xxxix} with Environment and Climate Change Canada, Alberta Innovates, the Ontario Centre of Innovation, les Fonds de recherche du Québec – Nature et technologies, and Mitacs, NSERC will continue to work with provincial and federal partners to support research partnerships and collaborations of strategic interest to the Government of Canada.

In 2021-22, NSERC partnered with the European Commission under the banner of Horizon Europe to support EU-Canada research collaborations to advance the development of quantum technologies. In 2021-22 NSERC signed a Memorandum of Understanding (MOU) with the National Science Foundation in the US and also renewed its MOU with DFG. These partnerships, underpinned by streamlined application and review processes, will enable new collaborations in 2022-23 between Canadian researchers and researchers in these countries. In 2022-23 NSERC will continue to explore partnership opportunities with international partners in Europe and the US to advance areas of mutual interest.

In 2022-23 NSERC will deliver Alliance International, a stream of the Alliance research funding program designed to support international collaborations. Through two grant types, this funding opportunity will provide support for researchers in Canada to work with leading international researchers from the academic sector and will help establish and grow international research collaborations and projects that have a high potential for impact in NSE disciplines. Catalyst grants will allow Canadian researchers to initiate international collaborations while Collaboration grants will support the activities of Canadian researchers working on international projects that address challenges of global importance. This funding stream will be leveraged to support Canada's National Quantum Strategy (Budget 2021). In 2022-23, NSERC will award Catalyst

grants that support the creation of international collaborations between Canadian researchers and their international counterparts in areas including, but not limited to, quantum computing, quantum sensors, and quantum cryptography. Applications will be evaluated through the standard Alliance International review process.

In 2022-23, NSERC will continue to enhance and expand the reach of the [Alliance](#)^{xxxv} program that supports collaboration between university researchers and a broad range of partner organizations (private, public, and not-for-profit sectors). These collaborations generate new knowledge and accelerate the application of research results to create benefits for Canada. In 2022-23 NSERC will deliver Alliance Consortia grants to develop large-scale research collaborations across institutions that connect government needs and industry applications. Both Alliance Domestic and Consortia will be leveraged to support Canada's National Quantum Strategy announced in Budget 2021. NSERC will conclude the delivery of [Alliance Missions grants](#)^{xxxvi}, which provide opportunities for the research community to address challenges that have emerged as a result of the pandemic and other critical science/technology challenges. Alliance Missions Projects will provide \$24 million in project funding over two years.

In 2022-23, NSERC will continue to administer [Applied Research and Technology Partnership](#)^{xxxvii} (ARTP) grants that allow colleges, CEGEPs and polytechnics across the country to help small to medium-sized enterprises (SMEs) in Canada seize new opportunities by applying innovative research and technologies or developing them into useful new products and services. These grants will also help train students in leading-edge skills essential for the future competitiveness of companies. The resulting real-world innovation and technical development will help these businesses grow and become more competitive. Support for this program was announced in the [2021 Federal Budget](#)^{xxxviii} which provided College and Community Innovation (CCI) program with an additional \$46.9 million over two years. This tri-agency program is administered by NSERC, in collaboration with CIHR and the SSHRC.

NSERC will also continue efforts to simplify and streamline the CCI program, better enabling it to address the changing dynamics of applied research in colleges and communities across Canada. The evolution of CCI increases connectivity within the research and innovation ecosystem; enhances tri-agency collaboration; broadens the program's scope to include social and health innovation; expands the range of partner organizations; and, creates more training opportunities for college students. [Mobilize grants](#)^{xxxix}, which includes objectives of several previous funding opportunities, were launched in December 2021 to allow colleges a more flexible and streamlined way to initiate partnerships and enhance training opportunities. In 2022-23, the first Mobilize grants will be awarded, and a revised grant to support applied research and development collaborative projects will be launched, and the support for the Technology Access Centres will be updated.

NSERC will continue support projects that accelerate the pre-competitive development of promising technology. The [Idea to Innovation](#)^{xl} (I2I) grants provide funding to college and university faculty members to support research and development projects that commercialize new intellectual property. Through a new initiative within the I2I program, NSERC is partnering with [Lab2Market](#)^{xli} to enable research teams to assess the commercial potential of their technology. The 16-week program, modelled on successful international initiatives, helps researchers validate the business/commercial value of their ideas.

In 2022-23, NSERC will continue its work supporting the transition and consolidation of a number of programs, with a complete wind-down of the [Networks of Centres of Excellence](#)^{xlii} (NCE) suite of programs by 2023–24. Funding from the NCE program is being transferred gradually to the [New Frontiers in Research Fund](#)^{xliii}. The [Centres of Excellence for Commercialization and Research \(CECR\)](#)^{xliv} and the [Business-led Networks of Centres of Excellence \(BL-NCE\)](#)^{xlv} programs will be supported until the end of the existing centres and networks funding agreements. ISED’s Strategic Innovation Fund will subsequently be responsible for supporting similar organizations.

Following the principle that Canada’s world-leading research ecosystem should be as open as possible and as safeguarded as necessary, NSERC has collaborated with federal partners and with post-secondary institutions to promote awareness of best practices and tools for research security, such as those on the [Safeguarding Your Research](#)^{xlvi} portal, and to establish the new [National Security Guidelines for Research Partnerships](#)^{xlvii}. These Guidelines have been applied to NSERC’s Alliance program since July 2021, for applications involving a private sector partner organization. In 2022-23, NSERC will continue to support the implementation of these initiatives and remains committed to continual improvement of its policies and procedures with regards to research security.

Gender-based analysis plus

In 2022-23, NSERC will continue to work with CIHR and SSHRC on implementation of the [Tri-agency Equity, Diversity and Inclusion \(EDI\) Action Plan](#)^{xlviii}. The plan outlines actions needed to provide equitable access for all members of the research community to granting agency funding opportunities, and to influence the achievement of an inclusive post-secondary research system and culture in Canada.

Implementation measures in 2022-23 will continue to move toward a more comprehensive and inclusive understanding of research excellence, and to identify and address barriers to accessibility in the research funding system. The agencies will continue to collect, analyze and release disaggregated data on program participation and award rates, in order to help identify inequities and inform future decisions to address them. Policies and processes will be examined to support the inclusion of diverse participants on selection committees and advisory bodies. In

addition, the [Dimensions program](#)^{xlix} will move into the application phase, towards the objective of public recognition for post-secondary institutions seeking to enhance EDI in the research ecosystem.

United Nations’ (UN) 2030 Agenda for Sustainable Development and the UN Sustainable Development Goals

In 2022-2023 NSERC will continue to engage in discussions to support the 2022-2026 Federal Sustainable Development Strategy (FSDS) in the areas of Sustainable Development Goal 4: Quality Education and Sustainable Development Goal 13: Climate Action.

Experimentation

Through the provision of a safe environment to experiment with innovative ideas in program design, peer review, and process improvement, NSERC will continue to drive innovation and increase creative problem-solving.

Planned results for Funding Natural Sciences and Engineering Research and Training

The following table shows, for Funding Natural Sciences and Engineering Research and Training, the planned results, the result indicators, the targets and the target dates for 2022–23, and the actual results for the three most recent fiscal years for which actual results are available.

Departmental result	Departmental result indicator	Target	Date to achieve target	2018–19 actual result	2019–20 actual result	2020–21 actual result
Canada's natural sciences and engineering research is internationally competitive	Canada's rank among OECD nations on the citation score of natural sciences and engineering research publications	18	March 31, 2023	18	17	N/A*
	Percentage of funded research involving international collaboration	47%	March 31, 2023	47%	48%	N/A*
Canada has a pool of diverse and highly skilled people in the natural sciences and engineering	Number of research trainees supported by NSERC through scholarships and fellowships†	7,000	March 31, 2023	N/A	N/A	7,467
	Funding allocated to support research trainees through grants‡	\$400M	March 31, 2023	N/A	N/A	\$440M
	Percentage of newly funded recipients who self-identify as women¥	33%‡	March 31, 2023	32.7%	35.7%	35.2%
	Percentage of newly funded recipients who self-identify as visible minorities†	28%‡	March 31, 2023	N/A	N/A	28.5%
	Percentage of newly funded recipients who self-identify as Indigenous peoples†	1.4%‡	March 31, 2023	N/A	N/A	1.4%
	Percentage of newly funded recipients who self-identify as persons with disabilities†	1.9%‡	March 31, 2023	N/A	N/A	2%
	Percentage of previously funded graduate students and postdoctoral fellows that list Research and	80%	March 31, 2023	80%	N/A	82%

	Development as the main activity in their current position					
Canada's natural sciences and engineering research knowledge is used	Number of partners on research projects†	3,600	March 31, 2023	N/A	N/A	3,348
	Percentage of funded projects reporting social and/or environmental outcomes for Canadians†	74%	March 31, 2023	N/A	N/A	77%
	Percentage of funded projects reporting economic outcomes for Canadians	50%	March 31, 2023	52%	52%	52%
	Non-academic partner funding for research projects†	\$320M	March 31, 2023	N/A	N/A	\$409M

* Results are delayed one year, due to availability of data.

† New indicator for 2021-22.

¥New methodology to calculate the indicator; self-ID questionnaire results to be used.

‡Targets for EDI indicators were established using results from competition years 2018, 2019 and 2020.

The financial, human resources and performance information for NSERC's program inventory is available on [GC InfoBase](#)¹.

Planned budgetary spending for Funding Natural Sciences and Engineering Research and Training

2022–23 budgetary spending (as indicated in Main Estimates)	2022–23 planned spending	2023–24 planned spending	2024–25 planned spending
\$1,334,829,363	\$1,334,829,363	\$1,199,292,625	\$1,199,324,164

Financial, human resources and performance information for NSERC’s program inventory is available on [GC InfoBase^{li}](#).

Planned human resources for Funding Natural Sciences and Engineering Research and Training

2022–23 planned full-time equivalents	2023–24 planned full-time equivalents	2024–25 planned full-time equivalents
323	307	305

Financial, human resources and performance information for NSERC’s program inventory is available on [GC InfoBase^{lii}](#).

Internal services: planned results

Description

Internal services are the services that are provided within a department so that it can meet its corporate obligations and deliver its programs. There are 10 categories of internal services:

- ▶ management and oversight services
- ▶ communications services
- ▶ legal services
- ▶ human resources management services
- ▶ financial management services
- ▶ information management services
- ▶ information technology services
- ▶ real property management services
- ▶ materiel management services
- ▶ acquisition management services

Planning highlights

To effectively and efficiently execute its mandate, NSERC must remain a nimble, responsive and adaptive organization, one that ensures the well-being and productivity of its employees in a changing work environment. Focus for 2022–23 will be on the following activities:

Renewing the workplace—NSERC will move to a new, state-of-the-art office location that aligns with the GC workplace standard. We will ensure that office re-entry is gradual, safe, and based on all COVID-19 protocols and vaccination requirements. NSERC will be adopting a flexible approach to work and business processes that promotes a workforce that is diverse, mobile, and focuses on excellence in a modern, inclusive and healthy workplace enabled by innovative tools and technology.

Supporting NSERC’s workforce—Knowing that achieving results depends on skilled and dedicated staff, NSERC has multiple initiatives designed to create an environment where diverse employees can thrive. It is implementing its new People Strategy that focusses on four key priorities; building our workforce for future success, promoting a safe, respectful and healthy work environment, foster accessibility, diversity and inclusiveness at work, and modernize our operations to support agile, resilient and responsible workforce. This will also be supported by the opening of the Office of the Ombuds and workplace well-being.

NSERC will continue to participate in the governance of major tri-agency programs and initiatives, including the new Canada Biomedical Research Fund (CBRF), and to contribute to other government-wide governance tables.

Becoming more agile—Over the past few years, the rate of change in the Canadian research context has increased. In 2022–23, NSERC will continue to focus on building its own flexibility

and agility to respond to these changes. This includes improving processes for allocation (and rapid reallocation) of resources, and upgrading its information management and information technology infrastructure.

Implementing the tri-agency grants management solution—The three federal research granting agencies’ existing grants management systems operate on dated technologies and are limited in their ability to adapt to the changing needs of both the research community and the agencies themselves. As such, NSERC will continue working with CIHR and SSHRC to develop the [tri-agency grants management solution](#)^{liii}. Taking a user-centric approach provides an opportunity to modernize grants management and meet the standards of excellence that the Canadian research community and tri-agency staffs expect in terms of efficiency, interoperability, accessibility and usability. In 2022–23, consultations with both internal and external stakeholders will continue as the agencies obtain the necessary Treasury Board expenditure and contract authorities, and the initiative advances toward the selection of an industry partner and implementation phase.

Planned budgetary spending for internal services

2022–23 budgetary spending (as indicated in Main Estimates)	2022–23 planned spending	2023–24 planned spending	2024–25 planned spending
\$21,248,014	\$21,248,014	\$19,914,358	\$19,674,237

Planned human resources for internal services

2022–23 planned full-time equivalents	2023–24 planned full-time equivalents	2024–25 planned full-time equivalents
174	166	164

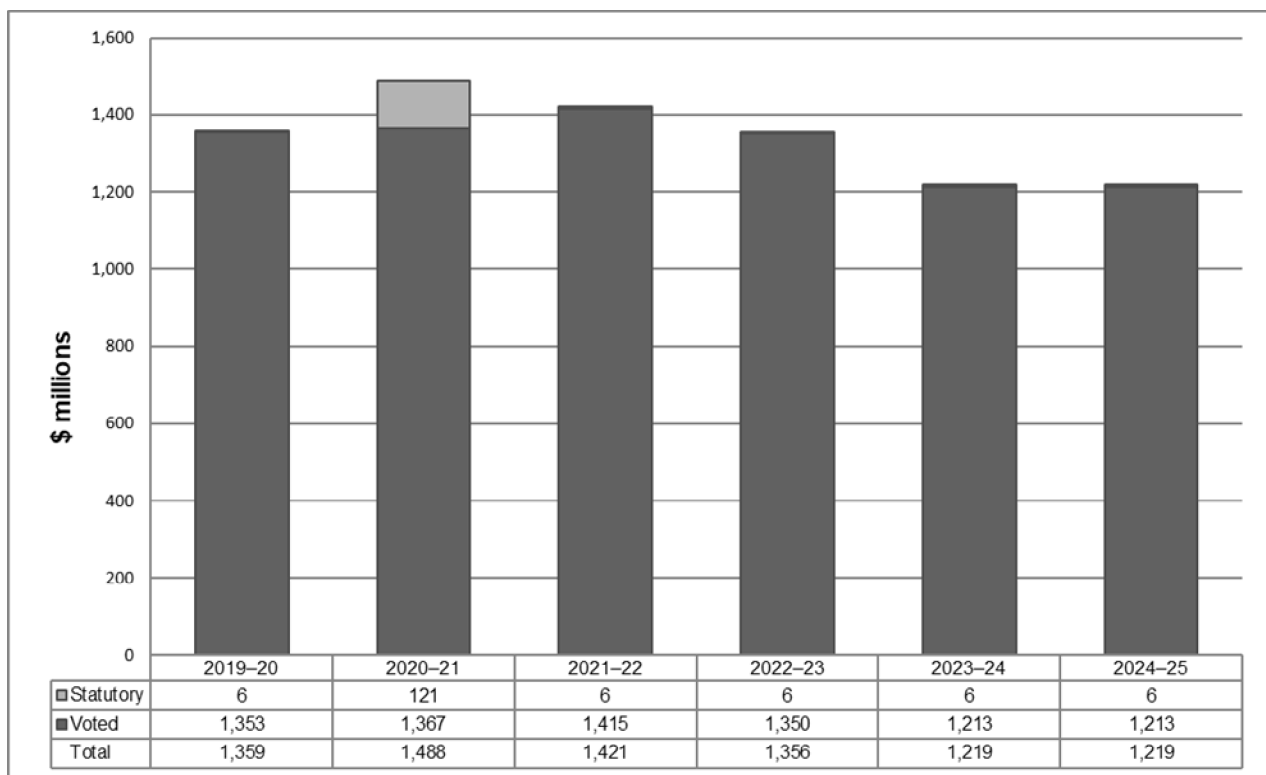
Planned spending and human resources

This section provides an overview of the department’s planned spending and human resources for the next three fiscal years and compares planned spending for 2022–23 with actual spending for the current year and the previous year.

Planned spending

Departmental spending 2019–20 to 2024–25

The following graph presents planned spending (voted and statutory expenditures) over time.



The decrease in 2022-23 and following years is mainly due to the Canada First Research Excellence Fund, for which funding renewal will be sought, and the gradual transfer of the Centres of Excellence for Commercialization and Research program and Business-Led Networks of Centres of Excellence program to ISED under the Strategic Innovation Fund.

Budgetary planning summary for core responsibilities and internal services (dollars)

The following table shows information on spending for each of NSERC's core responsibilities and for its internal services for 2022–23 and other relevant fiscal years.

Core responsibilities and internal services	2019–20 actual expenditures	2020–21 actual expenditures	2021–22 forecast spending	2022–23 budgetary spending (as indicated in Main Estimates)	2022–23 planned spending	2023–24 planned spending	2024–25 planned spending
Funding Natural Sciences and Engineering Research and Training	\$1,332,759,771	\$1,459,503,049	\$1,393,892,310	\$1,334,829,363	\$1,334,829,363	\$1,199,292,625	\$1,199,324,164
Subtotal	\$1,332,759,771	\$1,459,503,049	\$1,393,892,310	\$1,334,829,363	\$1,334,829,363	\$1,199,292,625	\$1,199,324,164
Internal Services	\$26,605,581	\$28,972,205	\$27,077,213	\$21,248,014	\$21,248,014	\$19,914,358	\$19,674,237
Total	\$1,359,365,352	\$1,488,475,254	\$1,420,969,523	\$1,356,077,377	\$1,356,077,377	\$1,219,206,983	\$1,218,998,401

The decrease in 2022-23 and following years is mainly due to the Canada First Research Excellence Fund, for which funding renewal will be sought, and the gradual transfer of the Centres of Excellence for Commercialization and Research program and Business-Led Networks of Centres of Excellence program to ISED under the Strategic Innovation Fund.

Planned human resources

The following table shows information on human resources, in full-time equivalents (FTEs), for each of NSERC’s core responsibilities and for its internal services for 2022–23 and the other relevant years.

Human resources planning summary for core responsibilities and internal services

Core responsibilities and internal services	2019–20 actual full-time equivalents	2020–21 actual full-time equivalents	2021–22 forecast full-time equivalents	2022–23 planned full-time equivalents	2023–24 planned full-time equivalents	2024–25 planned full-time equivalents
Funding Natural Sciences and Engineering Research and Training	303	315	325	323	307	305
Subtotal	303	315	325	323	307	305
Internal services	168	181	175	174	166	164
Total	471	496	500	497	473	469

The decrease in FTEs starting 2022-23 is mainly due to gradually transferring the Centres of Excellence for Commercialization and Research program and Business-Led Networks of Centres of Excellence program to ISED under the Strategic Innovation Fund Estimates.

Estimates by vote

Information on NSERC’s organizational appropriations is available in the [2022–23 Main Estimates](#)^{liv}.

Future-oriented condensed statement of operations

The future-oriented condensed statement of operations provides an overview of NSERC's operations for 2021–22 to 2022–23.

The forecast and planned amounts in this statement of operations were prepared on an accrual basis. The forecast and planned amounts presented in other sections of the Departmental Plan were prepared on an expenditure basis. Amounts may therefore differ.

A more detailed future-oriented statement of operations and associated notes, including a reconciliation of the net cost of operations with the requested authorities, are available on [NSERC's website](#)^{lv}.

Future-oriented condensed statement of operations for the year ending March 31, 2023 (dollars)

Financial information	2021–22 forecast results	2022–23 planned results	Difference (2022–23 planned results minus 2021–22 forecast results)
Total expenses	\$1,423,098,911	\$1,360,515,075	(\$62,583,836)
Total revenues	\$178,779	\$203,223	\$24,444
Net cost of operations before government funding and transfers	\$1,422,920,132	\$1,360,311,852	(\$62,608,280)

Total expenses are expected to decrease by approximately 4.4% (\$62.6 million). This decrease is primarily attributable to the gradual transfer of the Centres of Excellence for Commercialization and Research program and Business-Led Networks of Centres of Excellence program to Innovation, Science and Economic Development Canada (ISED) under the Strategic Innovation Fund, as announced in Budget 2018.

Corporate information

Organizational profile

Appropriate minister(s): **Minister of Innovation, Science and Industry**
The Honourable François-Philippe Champagne, P.C., M.P.

Institutional head: Prof. Alejandro Adem, FRSC (President)

Ministerial portfolio: Innovation, Science and Economic Development

Enabling instrument(s): **Natural Sciences and Engineering Research Council Act**^{lvi}

Year of incorporation / commencement: May 1, 1978

Raison d’être, mandate and role: who we are and what we do

Information on NSERC’s raison d’être, mandate and role is available on [NSERC's website](#)^{lvii}.

Information on NSERC’s mandate letter commitments is available in the [Minister’s mandate letter](#)^{lviii}.

Operating context

Information on the operating context is available on [NSERC's website](#)^{lix}.

Reporting framework

NSERC’s approved departmental results framework and program inventory for 2022–23 are as follows.

Departmental Results Framework	Core Responsibility: Funding Natural Sciences and Engineering Research and Training		Internal Services
	Departmental Result: Canada’s natural sciences and engineering research is internationally competitive	Indicator: Canada’s rank among OECD nations on the citation score of natural sciences and engineering research publications	
		Indicator: Percentage of funded research involving international collaborations	
	Departmental Result: Canada has a pool of diverse and highly skilled people in the natural sciences and engineering	Indicator: Percentage of newly funded recipients who self-identify as women	
		Indicator: Percentage of newly funded recipients who self-identify as visible minorities	
		Indicator: Percentage of newly funded recipients who self-identify as Indigenous peoples	
		Indicator: Percentage of newly funded recipients who self-identify as persons with disabilities	
		Indicator: Funding allocated to support research trainees through grants	
		Indicator: Number of research trainees supported by NSERC through scholarships and fellowships	
		Indicator: Percentage of previously funded graduate students and postdoctoral fellows that list Research and Development as the main activity in their current position	
Departmental Result: Canada’s natural sciences and engineering research knowledge is used	Indicator: Non-academic partner funding for research projects		
	Indicator: Number of partners on research projects		
	Indicator: Percentage of funded projects reporting social and/or environmental outcomes for Canadians		
	Indicator: Percentage of funded projects reporting economic outcomes for Canadians		
Program Inventory	Program: Discovery Research		
	Program: Research Training and Talent Development		
	Program: Research Partnerships		

Supporting information on the program inventory

Supporting information on planned expenditures, human resources, and results related to NSERC's program inventory is available on [GC InfoBase](#).^{lx}

Supplementary information tables

The following supplementary information tables are available on [NSERC's website](#)^{lxi}:

- ▶ Departmental Sustainable Development Strategy/Reporting on Green Procurement
- ▶ Details on transfer payment programs
- ▶ Gender-based analysis plus

Federal tax expenditures

NSERC's Departmental Plan does not include information on tax expenditures.

Tax expenditures are the responsibility of the Minister of Finance. The Department of Finance Canada publishes cost estimates and projections for government-wide tax expenditures each year in the [Report on Federal Tax Expenditures](#)^{lxii}. This report provides detailed information on tax expenditures, including objectives, historical background and references to related federal spending programs, as well as evaluations, research papers and gender-based analysis plus.

Organizational contact information

Mailing address

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K1A 1H5

Telephone: 343-549-6120

Email: sorin.seruna@nserc-crsng.gc.ca

Website: https://www.nserc-crsng.gc.ca/index_eng.asp^{lxiii}

Appendix: definitions

appropriation (crédit)

Any authority of Parliament to pay money out of the Consolidated Revenue Fund.

budgetary expenditures (dépenses budgétaires)

Operating and capital expenditures; transfer payments to other levels of government, organizations or individuals; and payments to Crown corporations.

core responsibility (responsabilité essentielle)

An enduring function or role performed by a department. The intentions of the department with respect to a core responsibility are reflected in one or more related departmental results that the department seeks to contribute to or influence.

Departmental Plan (plan ministériel)

A document that sets out a department's priorities, programs, expected results and associated resource requirements, covering a three-year period beginning with the year indicated in the title of the report. Departmental Plans are tabled in Parliament each spring.

departmental result (résultat ministériel)

A change that a department seeks to influence. A departmental result is often outside departments' immediate control, but it should be influenced by program-level outcomes.

departmental result indicator (indicateur de résultat ministériel)

A factor or variable that provides a valid and reliable means to measure or describe progress on a departmental result.

departmental results framework (cadre ministériel des résultats)

A framework that consists of the department's core responsibilities, departmental results and departmental result indicators.

Departmental Results Report (rapport sur les résultats ministériels)

A report on a department's actual performance in a fiscal year against its plans, priorities and expected results set out in its Departmental Plan for that year. Departmental Results Reports are usually tabled in Parliament each fall.

experimentation (expérimentation)

The conducting of activities that explore, test and compare the effects and impacts of policies and interventions in order to inform decision-making and improve outcomes for Canadians. Experimentation is related to, but distinct from, innovation. Innovation is the trying of something new; experimentation involves a rigorous comparison of results. For example, introducing a new

mobile application to communicate with Canadians can be an innovation; systematically testing the new application and comparing it against an existing website or other tools to see which one reaches more people, is experimentation.

full-time equivalent (équivalent temps plein)

A measure of the extent to which an employee represents a full person-year charge against a departmental budget. Full-time equivalents are calculated as a ratio of assigned hours of work to scheduled hours of work. Scheduled hours of work are set out in collective agreements.

gender-based analysis plus (GBA Plus) (analyse comparative entre les sexes plus [ACS Plus])

An analytical tool used to support the development of responsive and inclusive policies, programs and other initiatives; and understand how factors such as sex, race, national and ethnic origin, Indigenous origin or identity, age, sexual orientation, socio-economic conditions, geography, culture and disability, impact experiences and outcomes, and can affect access to and experience of government programs.

government-wide priorities (priorités pangouvernementales)

For the purpose of the 2022-23 Departmental Plan, government-wide priorities are the high-level themes outlining the Government's agenda in the 2021 Speech from the Throne: building a healthier today and tomorrow; growing a more resilient economy; bolder climate action; fighter harder for safer communities; standing up for diversity and inclusion; moving faster on the path to reconciliation and fighting for a secure, just, and equitable world.

horizontal initiative (initiative horizontale)

An initiative in which two or more federal organizations are given funding to pursue a shared outcome, often linked to a government priority.

non-budgetary expenditures (dépenses non budgétaires)

Net outlays and receipts related to loans, investments and advances, which change the composition of the financial assets of the Government of Canada.

performance (rendement)

What an organization did with its resources to achieve its results, how well those results compare to what the organization intended to achieve, and how well lessons learned have been identified.

plan (plan)

The articulation of strategic choices, which provides information on how an organization intends to achieve its priorities and associated results. Generally, a plan will explain the logic behind the strategies chosen and tend to focus on actions that lead up to the expected result.

planned spending (dépenses prévues)

For Departmental Plans and Departmental Results Reports, planned spending refers to those amounts presented in the Main Estimates.

A department is expected to be aware of the authorities that it has sought and received. The determination of planned spending is a departmental responsibility, and departments must be able to defend the expenditure and accrual numbers presented in their Departmental Plans and Departmental Results Reports.

program (programme)

Individual or groups of services, activities or combinations thereof that are managed together within a department and that focus on a specific set of outputs, outcomes or service levels.

program inventory (répertoire des programmes)

An inventory of a department's programs that describes how resources are organized to carry out the department's core responsibilities and achieve its planned results.

result (résultat)

An external consequence attributed, in part, to an organization, policy, program or initiative. Results are not within the control of a single organization, policy, program or initiative; instead, they are within the area of the organization's influence.

statutory expenditures (dépenses législatives)

Expenditures that Parliament has approved through legislation other than appropriation acts. The legislation sets out the purpose of the expenditures and the terms and conditions under which they may be made.

target (cible)

A measurable performance or success level that an organization, program or initiative plans to achieve within a specified time period. Targets can be either quantitative or qualitative.

voted expenditures (dépenses votées)

Expenditures that Parliament approves annually through an Appropriation Act. The vote wording becomes the governing conditions under which these expenditures may be made.

Endnotes

- i Canada Research Coordinating Committee, <https://www.canada.ca/en/research-coordinating-committee.html>
- ii Undergraduate Student Research Awards, https://www.nserc-crsng.gc.ca/Students-Etudiants/UG-PC/USRA-BRPC_eng.asp
- iii PromoScience grants, http://www.nserc-crsng.gc.ca/Promoter-Promotion/PromoScience-PromoScience/About-Apropos_eng.asp
- iv Canada Research Coordinating Committee, <https://www.canada.ca/en/research-coordinating-committee.html>
- v Alliance, https://www.nserc-crsng.gc.ca/Innovate-Innover/alliance-alliance/index_eng.asp
- vi Mobilize, https://www.nserc-crsng.gc.ca/Professors-Professeurs/RPP-PP/mobilize-mobilisation/index_eng.asp
- vii Discovery Grants, https://www.nserc-crsng.gc.ca/Professors-Professeurs/grants-subs/DGIGP-PSIGP_eng.asp
- viii Subatomic Physics Discovery Grants, https://www.nserc-crsng.gc.ca/ResearchPortal-PortailDeRecherche/Instructions-Instructions/SAP_DG-SD_PSA_eng.asp
- ix Northern Research Supplements, https://www.nserc-crsng.gc.ca/Professors-Professeurs/Grants-Subs/DGNRS-SDSRN_eng.asp
- x Discovery Development Grants, https://www.nserc-crsng.gc.ca/Professors-Professeurs/Grants-Subs/DiscoveryPilot-DecouvertePilote_eng.asp
- xi Discovery Launch Supplements, https://www.nserc-crsng.gc.ca/Professors-Professeurs/Grants-Subs/Dis-Sup_eng.asp
- xii Evaluation of the Discovery Research Program, https://www.nserc-crsng.gc.ca/_doc/Reports-Rapports/DiscoveryResearch_FinalReport_e.pdf
- xiii Research Tools and Instruments grants program, https://www.nserc-crsng.gc.ca/professors-professeurs/rtii-oiri/rti-oir_eng.asp
- xiv Discovery Institute Support, https://www.nserc-crsng.gc.ca/professors-professeurs/grants-subs/dis-adir_eng.asp
- xv Chairs for Women in Science and Engineering Program, https://www.nserc-crsng.gc.ca/Professors-Professeurs/CFS-PCP/CWSE-CFSG_eng.asp
- xvi Belmont Forum Collaborative Research Actions, <https://www.belmontforum.org/cras/>
- xvii Donna Strickland Prize, https://www.nserc-crsng.gc.ca/Prizes-Prix/Strickland-Strickland/About-Apropos_eng.asp
- xviii Arthur B. McDonald Fellowships, https://www.nserc-crsng.gc.ca/Prizes-Prix/McDonald-McDonald/About-Apropos_eng.asp
- xix Gerhard Herzberg Canada Gold Medal, https://www.nserc-crsng.gc.ca/Prizes-Prix/Herzberg-Herzberg/Index-Index_eng.asp
- xx NSERC John C. Polanyi Award, https://www.nserc-crsng.gc.ca/Prizes-Prix/Polanyi-Polanyi/Index-Index_eng.asp
- xxi Brockhouse Canada Prize, https://www.nserc-crsng.gc.ca/Prizes-Prix/Brockhouse-Brockhouse/Index-Index_eng.asp
- xxii Synergy Awards, https://www.nserc-crsng.gc.ca/Prizes-Prix/Synergy-Synergie/Index-Index_eng.asp
- xxiii Undergraduate Student Research Awards Program, https://www.nserc-crsng.gc.ca/Students-Etudiants/UG-PC/USRA-BRPC_eng.asp
- xxiv Collaborative Research and Training Experience, https://www.nserc-crsng.gc.ca/professors-professeurs/grants-subs/create-foncer_eng.asp
- xxv PromoScience grants, https://www.nserc-crsng.gc.ca/Promoter-Promotion/PromoScience-PromoScience/About-Apropos_eng.asp
- xxvi Science Odyssey, <http://www.sciod.ca/>
- xxvii Science Literacy Week, <http://www.scienceliteracy.ca/>
- xxviii San Francisco Declaration on Research Assessment, <https://sfдора.org/>
- xxix Tri-Agency Interdisciplinary Peer Review, <https://cihr-irsc.gc.ca/e/52470.html>
- xxx Discovery Horizons, https://www.nserc-crsng.gc.ca/Professors-Professeurs/Grants-Subs/DH-HD_eng.asp
- xxxi Setting New Directions to Support Indigenous Research and Research Training in Canada 2019-2022, <https://www.canada.ca/en/research-coordinating-committee/priorities/indigenous-research/strategic-plan-2019-2022.html>

- xxxii PromoScience, https://www.nserc-crsng.gc.ca/promoter-promotion/promoscience-promoscience/about-apropos_eng.asp
- xxxiii NSERC Indigenous Student Ambassadors, https://www.nserc-crsng.gc.ca/students-etudiants/aboriginal-autochtones_eng.asp
- xxxiv Alliance, https://www.nserc-crsng.gc.ca/Innovate-Innover/alliance-alliance/index_eng.asp
- xxxv Alliance, https://www.nserc-crsng.gc.ca/Innovate-Innover/alliance-alliance/index_eng.asp
- xxxvi Alliance Missions grants, https://www.nserc-crsng.gc.ca/Innovate-Innover/AllianceMissions-MissionsAlliance/index_eng.asp
- xxxvii Applied Research and Technology Partnership, https://www.nserc-crsng.gc.ca/Innovate-Innover/ARTP-PRAT_eng.asp
- xxxviii 2021 Federal Budget, <https://www.budget.gc.ca/2021/home-accueil-en.html>
- xxxix Mobilize grants, https://www.nserc-crsng.gc.ca/Professors-Professeurs/RPP-PP/mobilize-mobilisation/index_eng.asp
- xl Idea to Innovation, https://www.nserc-crsng.gc.ca/Professors-Professeurs/RPP-PP/I2I-INNOV_eng.asp
- xli Lab2Market, <https://lab2market.ca/>
- xlii Networks of Centres of Excellence, https://nce-rce.gc.ca/Index_eng.asp
- xliii New Frontiers in Research Fund, <https://www.sshrc-crsh.gc.ca/funding-financement/nfrf-fnfr/index-eng.aspx>
- xliv Centres of Excellence for Commercialization and Research (CECR), https://www.nce-rce.gc.ca/Programs-Programmes/CECR-CECR/Index_eng.asp
- xlv Business-led Networks of Centres of Excellence (BL-NCE), http://www.nce-rce.gc.ca/Programs-Programmes/BLNCE-RCEE/Index_eng.asp
- xlvi Safeguarding Your Research, https://science.gc.ca/eic/site/063.nsf/eng/h_97955.html
- xlvii National Security Guidelines for Research Partnerships, https://science.gc.ca/eic/site/063.nsf/eng/h_98256.html
- xlviii Tri-agency Equity, Diversity and Inclusion (EDI) Action Plan, https://www.nserc-crsng.gc.ca/NSERC-CRSNG/EDI-EDI/Action-Plan_Plan-dAction_eng.asp
- xliv Dimensions program, https://www.nserc-crsng.gc.ca/NSERC-CRSNG/EDI-EDI/Dimensions-Program_Programme-Dimensions_eng.asp
- i. GC InfoBase, <https://www.tbs-sct.gc.ca/ems-sgd/edb-bdd/index-eng.html#start>
- ii. GC InfoBase, <https://www.tbs-sct.gc.ca/ems-sgd/edb-bdd/index-eng.html#start>
- iii. GC InfoBase, <https://www.tbs-sct.gc.ca/ems-sgd/edb-bdd/index-eng.html#start>
- liii Tri-Agency Grants Management System https://science.gc.ca/eic/site/063.nsf/eng/h_97924.html
- liv. 2022–23 Main Estimates, <https://www.canada.ca/en/treasury-board-secretariat/services/planned-government-spending/government-expenditure-plan-main-estimates.html>
- lv NSERC's website, https://www.nserc-crsng.gc.ca/NSERC-CRSNG/Reports-Rapports/plans-plans_eng.asp
- lvi Natural Sciences and Engineering Research Council Act, <https://laws.justice.gc.ca/eng/acts/N-21/>
- lvii NSERC's website, https://www.nserc-crsng.gc.ca/NSERC-CRSNG/Reports-Rapports/plans-plans_eng.asp
- lviii Minister's mandate letter, <https://pm.gc.ca/en/mandate-letters/2021/12/16/minister-innovation-science-and-industry-mandate-letter>
- lix NSERC's website, https://www.nserc-crsng.gc.ca/NSERC-CRSNG/Reports-Rapports/plans-plans_eng.asp
- lx. GC InfoBase, <https://www.tbs-sct.gc.ca/ems-sgd/edb-bdd/index-eng.html#start>
- lxi NSERC's website, https://www.nserc-crsng.gc.ca/NSERC-CRSNG/Reports-Rapports/plans-plans_eng.asp
- lxii. Report on Federal Tax Expenditures, <https://www.canada.ca/en/department-finance/services/publications/federal-tax-expenditures.html>
- lxiii NSERC, https://www.nserc-crsng.gc.ca/index_eng.asp