

# Natural Sciences and Engineering Research Council of Canada

2018–19

## **Departmental Results Report**

---

The Honorable Navdeep Bains, P.C., M.P.  
Minister of Innovation, Science and Industry

**© Her Majesty the Queen in Right of Canada, as represented by the Minister of Industry,  
2020.**

**Catalogue Number: NS1-32E-PDF**

**ISSN: 2561-0075**

---

## Table of contents

Minister’s message .....	1
Institutional Head’s message .....	3
Results at a glance .....	5
Results: what we achieved .....	7
Core Responsibilities .....	7
Core Responsibility title .....	7
Internal Services .....	15
Analysis of trends in spending and human resources.....	19
Actual expenditures .....	19
Actual human resources .....	21
Expenditures by vote .....	21
Government of Canada spending and activities.....	21
Financial statements and financial statements highlights .....	21
Financial statements .....	21
Financial statements highlights.....	22
Supplementary information .....	25
Corporate information .....	25
Organizational profile .....	25
Raison d’être, mandate and role: who we are and what we do	26
Operating context and key risks .....	26
Reporting Framework .....	27
Supporting information on the Program Inventory .....	28
Supplementary information tables .....	28
Federal tax expenditures .....	28
Organizational contact information .....	28
Appendix: definitions .....	29
Endnotes.....	33

---



## Minister's message

We are pleased to present the 2018–19 Departmental Results Report for the Natural Sciences and Engineering Research Council of Canada (NSERC).

Over the past year, the various organizations in the Innovation, Science and Economic Development Portfolio have together worked hard to make Canada a global innovation leader and to build an economy that works for everyone.

Our primary objectives were, and continue to be, to empower businesses to reach their innovation potential to compete in a global, knowledge-based economy; to enhance Canada's economic strengths by supporting science and research; and to promote Canadian tourism. These objectives were supported by new and existing policies and programs designed to help Canadian entrepreneurs from across the country and from diverse backgrounds grow and reach new markets. We also continued to implement multi-year investments in science, including historic investments in fundamental research, while our robust tourism industry was bolstered by support for national initiatives.

NSERC's budget increase to support fundamental research, announced in budget 2018, provided an 8% increase from the previous year in the award levels for its flagship Discovery Grants program. The budget of \$9.1 million over two years for the College and Community Social Innovation Fund enabled colleges to increase their capacity to work with communities to develop partnerships that foster innovation in education, delivery of social services, integration of vulnerable populations, and community development. The launch of Alliance Grants, resulting from a comprehensive review of NSERC's Research Partnerships program, will generate new knowledge and accelerate the application of research results to create benefits for Canada. Dimensions: equity, diversity and inclusion Canada, a new tri-agency pilot program led by NSERC, will help facilitate a post-secondary transformation to increase equity, diversity and inclusion and help drive deeper cultural change within the research ecosystem.

These are just a few examples of NSERC's work on behalf of Canadians through collaboration, dialogue and partnerships across the country. We invite you to read this report to learn more about how we are working with and for Canadians to build our innovation nation.



**The Honourable Navdeep Bains**  
Minister of Innovation, Science  
and Industry



---

## Institutional Head's message

As the newly appointed President of the Natural Sciences and Engineering Research Council (NSERC), it is my pleasure to present NSERC's 2018–19 Departmental Results Report.

Since its creation in 1978, NSERC has played a pivotal role in the growth of natural sciences and engineering in Canada to develop talent, generate discoveries and support innovation in pursuit of economic, environmental and social outcomes. Thanks to NSERC's support, scientists and engineers across Canada are engaged in cutting-edge research and innovation that produce important benefits for all Canadians, such as fundamental research into quantum systems that is helping us build the next generation of ultra-fast computers. Likewise, NSERC's programs benefit thousands of students and postdoctoral fellows across the country, and provide the stable long-term support that deep, multi-year research requires to tackle complex problems.

NSERC also supports creative public outreach activities, explaining and promoting the value of science and engineering to our citizens, especially to young people.

As a member of the Canada Research Coordinating Committee (CRCC), NSERC is working in close collaboration with Canada's federal research granting agencies to improve coordination and advance CRCC's priorities that include: ensuring equity and diversity in all aspects of our business; supporting a new generation of early career researchers, who will be the leaders, discoverers and innovators of tomorrow; and addressing the underrepresentation of Canada's Indigenous communities in natural sciences and engineering.

With the historic investments of over \$500 million over five years in support of science and research announced in Budget 2018 and support for new postgraduate research scholarships in Budget 2019, NSERC is well positioned to deliver on the Government of Canada's objectives in advancing knowledge, skills and innovation for the benefit of all Canadians.

Over the coming year NSERC will continue to support Canada's natural sciences and engineering research community with investments in discovery research, research talent development and research partnerships that will be the source of new opportunities for all of us.

Dr. Alejandro Adem  
President



**Dr. Alejandro Adem**  
President



## Results at a glance

What funds were used? (2018–19 actual spending)	Who was involved? (2018–19 actual full-time equivalents)
\$ 1,330,149,905	431

### Discovery Research

In 2018–19, the federal government announced a historic increase of \$354.7 million over five years in funding for discovery research through the Natural Sciences and Engineering Research Council of Canada (NSERC). In the first year of this additional funding, the award levels in its flagship Discovery Grants program increased by 8% from the previous year, providing awards to nearly 2,300 researchers. To provide additional support to researchers at small institutions, NSERC, through the [Discovery Development Grants](#),<sup>i</sup> provided \$860,000 to 72 recipients. In April 2018, NSERC awarded funding to the ATLAS-Canada subatomic physics project at the level of \$18.6 million over three years, enabling Canadian particle physicists to continue to play a leading role in international research at the Large Hadron Collider at the European Organization for Nuclear Research (CERN). NSERC became a Belmont Forum member, and in February 2019 was able to influence the language used in the call for proposals around the inclusion of Indigenous peoples and engagement with their communities for the new [Collaborative Research Action](#)<sup>ii</sup> on [Resilience in Rapidly Changing Arctic Systems](#) (Arctic II).<sup>iii</sup> NSERC, in collaboration with the Social Sciences and Humanities Research Council of Canada (SSHRC) and the Canadian Institutes of Health Research (CIHR), implemented the changes brought to the Tri-agency Canada Research Chairs program in order to foster greater equity, diversity and inclusion in the sciences. As a result, the nominations of individuals from underrepresented groups to the 2018 cycle increased compared to last year, from 30.2% to 43.7% for women; from 3.6% to 4.4% for Indigenous peoples; and from 17.7% to 23.4% for members of visible minorities. NSERC Discovery Grants, the flagship program in the Discovery Research portfolio, play an important role in helping build talent for Canada’s knowledge-based economy as researchers spend approximately 56% of their grant on stipends to support bright and engaged students at all levels who work in their labs.

### Research Training and Talent Development

As part of the investments announced in Budget 2018, the Tri-Agencies developed an Early Career Researcher (ECR)<sup>[1]</sup> Action Plan and adopted a common definition of ECR. As a result of this change, 90 additional applicants to the Discovery Grants program were considered ECRs. NSERC further enhanced support for ECRs through the creation of the [Discovery Launch Supplement](#).<sup>iv</sup> As a result of this new initiative, the total Discovery Grant funding for ECRs in 2018–19 increased to \$96 million, 16% higher than the previous year. NSERC continues to extend its national leadership of science and engineering promotion in Canada. In direct support to the next generation of scientists and engineers, STEAM Horizon Awards were presented to five young Canadians, including two candidates from Indigenous communities. Through its [Collaborative Research and Training Experience](#)<sup>v</sup> (CREATE) funding opportunity, NSERC continued to support the development of highly qualified people who are “marketplace-ready” in natural sciences and engineering. In 2018–19, 94 awardees received \$24 million, and 38% of the total CREATE internships are in industrial settings. The new Dimensions pilot program was

developed to help address barriers faced by underrepresented groups, across all disciplines and fields of study. The [Equity, Diversity and Inclusion Institutional Capacity-Building Grant](#) funding opportunity announced in Budget 2018 was launched in January 2019. A total of 15 institutions have been awarded grants in this first round of competition, to foster equity, diversity and inclusion (EDI) in the Canadian post-secondary research enterprise. Indirect support to students and fellows to build talent through the Discovery Grants program as noted above, and through Research Partnerships (see below) also plays a critical role in NSERC's talent development achievements.

### **Research Partnerships**

In 2018–19, NSERC-funded research and development (R&D) projects leveraged \$269 million in cash and in-kind contributions from nearly 3,800 private sector research partners. As directed in Budget 2018, NSERC has consolidated its various collaborative R&D grants to modernize, simplify and improve programming. The new [Alliance program](#)<sup>vi</sup> was opened to accept applications after engagement with the research community across Canada. As part of the design of the Alliance grant, NSERC built in EDI considerations that align with NSERC's [EDI framework](#),<sup>vii</sup> to increase equity in awards and enhance research excellence. The research partnerships also provide a rich learning environment that offers student trainees the opportunity to add to their experience by working with users of knowledge on real world challenges. In 2018–19, 20,000 full-time and part-time students worked on NSERC-funded research partnership projects. Following the extension of the pilot program for the [College and Community Social Innovation Fund](#),<sup>viii</sup> a total of 92 eligible applications were received. The budget of \$9.1 million over two years allowed for the funding of 41 grants, enabling colleges to increase their capacity to work with communities, developing partnerships that foster innovation in areas such as education, delivery of social services, integration of vulnerable populations and community development. NSERC partnership grants, like Discovery Grants, also build talent for Canada's knowledge-based economy. In this case, approximately 50% of researchers' grant funding is used to pay for student stipends who build important competencies while working as part of academic-industry collaborations.

### **Internal Services**

In 2018–19, NSERC continued the implementation of its People Strategy Action Plan for 2016–20. This included introducing mandatory training on bias awareness and healthy workplaces as well as the People of NSERC-SSHRC Live program, which celebrates the diversity within our organization. NSERC, in collaboration with SSHRC and CIHR, continued the planning for the renewal of information technology support systems for grant applications and management. NSERC also ensures alignment to and compliance with Government of Canada priorities, policy requirements and transformative initiatives. In 2018–19, the Common Administrative Services Directorate (CASD) began assessing the impacts of, and developing implementation strategies for, changes related to the Treasury Board of Canada Secretariat's Policy Reset Initiative. NSERC's migration to the new financial management system has been postponed to 2021 in order to align with the timelines for SSHRC and CIHR. Therefore, the project charter and implementation plan will be developed in the second half of 2019–20.

For more information on NSERC's plans, priorities and results achieved, see the "Results: what we achieved" section of this report.

## Results: what we achieved

### Core Responsibilities

#### Core Responsibility title

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.

### Results

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

In 2018–19, NSERC supported more than 12,400 researchers at post-secondary institutions across Canada through its funding opportunities under the Discovery Research Program as well as the Research Training and Talent Development and Research Partnerships programs. The publication of research results in peer-reviewed journals provides a good measure of discovery and knowledge generated in the natural sciences and engineering (NSE) in Canada, while the citation of these publications provides a measure of the knowledge flow and the influence of Canadian researchers in the NSE. The ranking of Canada among the Organisation for Economic Co-operation and Development (OECD) nations on the average citation in the NSE illustrates Canada’s international competitive strength. A standardized measure of citations used internationally is the Average Relative Citation Factor (ARC). The ARC score is calculated for every country in a particular field and then normalized to 1.0. An ARC value above 1.0 for a country means that, on average, the country's publications in that field are cited more often than the world average. An ARC value below 1.0 would mean that a country's publications in a field are not cited as often as the world average. Based on the most recent data available (2017), Canada ranked 15<sup>th</sup> among the 36 OECD countries, with an ARC score of 1.42.

To leverage other research efforts at the international level, NSERC grant holders often establish international collaborations. The latest data from peer-reviewed journals show that 47% of publications by a Canadian researcher involved international collaboration. In 2018–19, the federal government announced a historic increase of \$354.7 million over five years in funding for discovery research through NSERC. This funding supports the Government of Canada’s Innovation and Skills Plan, a whole-of-government, multi-year approach meant to establish Canada as one of the most innovative countries in the world and to foster a culture of innovation from coast to coast to coast. In the first year of this additional funding, NSERC was able to increase award levels in its flagship program—Discovery Grants—by 8% from the previous year, providing awards to nearly 2,300 researchers in 2018–19. The program plays an important role in helping build talent for Canada’s knowledge-based economy as researchers spend

approximately 56% of their grant on stipends to support bright and engaged students at all levels who work in their labs.

To provide additional support to researchers at small institutions, NSERC increased the award levels from \$10,000 to \$15,000 per year for [Discovery Development Grants](#). In 2018–19, 72 recipients received \$860,000.

NSERC continuously strengthens the consideration of EDI in its programs. In 2018–19, the [Discovery Accelerator Supplements program](#)<sup>ix</sup> was expanded to consider contributions by Discovery Grant applicants to EDI in the research and training environment, and this competition saw the highest ever percentage of awards to female applicants, at 29%.

In April 2018, NSERC awarded the ATLAS-Canada subatomic physics project, funding at the level of \$18.6 million over three years enabling Canadian researchers to continue to play a leading role in ATLAS, one of the four major experiments run by an international collaboration at the Large Hadron Collider at CERN, the largest particle physics laboratory in the world.

In June 2018, applications requesting NSERC funds in the [Belmont Forum-BiodivERsA](#)<sup>x</sup> joint call for proposals in “Scenarios of Biodiversity and Ecosystem Services” were highly successful. NSERC awarded a total of \$1.8 million over three years, double the amount originally planned, due to the high Canadian success rate. In October 2018, NSERC attended the Belmont Forum Plenary meeting in the UK and proposed to become a Belmont Forum member, to increase NSERC’s influence on the selection of topics and content for calls for proposals. NSERC’s membership was ratified and very positively received by the other members. A new [Collaborative Research Action on Resilience in Rapidly Changing Arctic Systems](#) was launched in February 2019, and NSERC was able to influence the language used in the call for proposals around the inclusion of Indigenous peoples and engagement with their communities.

NSERC participated in the [GENDER-NET Plus European Research Area Network \(ERA-NET\)](#)<sup>xi</sup> Cofund program along with a consortium of 16 partners from 13 different countries. GENDER-NET Plus received 85 pre-proposals across 326 partners. Even though the 13 funded projects don’t involve Canadian researchers, NSERC’s participation in GENDER-NET Plus provides a unique opportunity to share best practices related to sex and gender integration into the research. It also strengthens international collaborations among research program owners and managers, and provides support for the promotion of gender equality through institutional changes. NSERC will continue to participate in the various work packages of the consortium, including attending the meetings of the General Assembly on an annual basis.

In 2018–19, NSERC, in collaboration with SSHRC and CIHR, implemented the changes brought to the Tri-agency Canada Research Chairs program in order to foster greater EDI in the sciences. The nominations of individuals from underrepresented groups to the 2018 cycle increased compared to last year, from 30.2% to 43.7% for women; from 3.6% to 4.4% for Indigenous peoples; and from 17.7% to 23.4% for members of visible minorities.

NSERC supported the work of the newly created [Canada Research Coordinating Committee](#)<sup>xii</sup> (CRCC), which aims to improve collaboration, coordination and harmonization among the granting councils and the [Canada Foundation for Innovation](#)<sup>xiii</sup> (CFI) to the benefit of researchers

and research trainees across Canada. In summer 2018, the CRCC engaged in national consultations with more than 1,500 Canadian researchers, administrators and stakeholders who helped shape inter-agency policies and programs that promise to strengthen Canadian research. CRCC members engaged Indigenous communities across Canada and held a National Dialogue in March 2019, through the [Strengthening Indigenous Research Capacity](#)<sup>xiv</sup> initiative, in order to co-develop new models for Indigenous research that support reconciliation in Canada. CRCC led the design of the [New Frontiers in Research Fund](#)<sup>xv</sup> program, announced in Budget 2018 and launched in December 2018, creating opportunities for Canadian leadership and participation in international, interdisciplinary, fast-breaking and high-risk research.

NSERC supports Canada's participation in the international [Open Government Partnership](#)<sup>xvi</sup> through the commitment of the Government of Canada's Action Plan to increase openness of federal science activities. NSERC, in collaboration with CIHR and SSHRC, has continued to monitor the implementation of the [Tri-Agency Open Access Policy on Publications](#)<sup>xvii</sup> in the context of international policy developments.

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

Through its funding opportunities, NSERC supports the attraction, retention and development of highly qualified and skilled people in the NSE in Canada. In 2018–19, NSERC supported 37,700 students, directly, through scholarships, and indirectly through the Discovery Grants program and through Research Partnerships.

Over the past year, NSERC, SSHRC and CIHR advanced their efforts to achieve greater harmonization and coordination of policies and programs. As part of the investments announced in Budget 2018, the Tri-Agencies developed an Early Career Researcher (ECR)<sup>[1]</sup> Action Plan and adopted a common definition. As a result of this change, 90 additional applicants were considered ECRs. The plan, a CRCC priority, is designed to ensure fair access to research support and equitable participation in the funding system, and to provide measures to harmonize relevant data collection across the three agencies. NSERC further enhanced support for ECRs through the creation of the [Discovery Launch Supplements](#). This program provides timely resources to support ECRs as they establish a Discovery Grant funded research program. As a result, the total Discovery Grant funding for ECRs in 2018–19 increased to \$96 million, 16% higher than the previous year. Further support to ECRs was provided through the first competition of the Tri-agency [New Frontiers in Research Fund](#) program, administered by SSHRC, which was open only to ECRs as principal investigators. Grants were awarded to 157 researchers with a total value of over \$38 million over two years. From an EDI perspective, an analysis of the self-identification data of team members of successful applications revealed that over 50% are members of at least one of the four designated groups (women, Indigenous peoples, persons with disabilities and members of visible minorities).

NSERC continues to extend its national leadership of science and engineering promotion in Canada. [Science Odyssey](#)<sup>xviii</sup> 2018 involved more than 500 partners who organized over 1,000

---

<sup>[1]</sup> CIHR previously used the term Early Career Investigators (ECI). The Tri-Agencies have adopted Early Career Researchers (ECR). For consistency, ECR will be used in this document.

events in over 300 cities across Canada. [Science Literacy Week](#)<sup>xxix</sup> 2018 was delivered in partnership with the Canadian Space Agency and featured a space theme in celebration of Canadian astronaut David Saint-Jacques' mission to the International Space Station. Together, more than 300 science outreach partners delivered over 800 events that were attended by Canadian youth and the general public in 200 cities and communities across Canada. To help facilitate participation in the events, supplements of up to \$5,000 were awarded to PromoScience grantees: 90 supplements for Science Odyssey and 73 supplements for Science Literacy Week. In direct support to the next generation of scientists and engineers, [STEAM Horizon Awards](#)<sup>xxx</sup> were presented to five youth, including two candidates from Indigenous communities.

NSERC continues to deliver its [PromoScience grants](#),<sup>xxxi</sup> and in 2018, over \$9 million in funding was awarded to 96 grantees over a three-year period. Of these 96 grants, 37 were for teachers, 20 were for girls and 47 focused on Indigenous youth.

To strengthen the promotion of science, technology, engineering and mathematics (STEM) fields to Canadian youth, NSERC is running a five-year pilot of the micro-funding instrument promoted by Treasury Board to experiment with an innovative approach to distribute grants (low-value payments of up to \$1,000) to individuals and not-for-profit organizations. In 2018–19, 28 recipients in seven different provinces received grants through the [NSERC Student Ambassadors grants](#)<sup>xxii</sup> and through the [NSERC Young Innovators grants](#),<sup>xxiii</sup> 39 organizations in 10 provinces/territories were provided with grants of \$1,000.

Through its scholarship, fellowship and grant funding opportunities, NSERC continued to support the development of highly qualified people who are “marketplace-ready.” In 2018–19 36.3% of the supported research trainees gained industrial experience. NSERC continued to deliver its [Collaborative Research and Training Experience](#) (CREATE) funding opportunity, which provides enhanced opportunities for research trainees to develop technical and professional skills, and to gain experience in enriched and varied research environments. In 2018–19, 94 awardees received \$24 million, and 38% of the total CREATE internships are in industrial settings. These actions align with the government priority of helping employers create more co-op placements for students in STEM fields.

Increasing diversity and equity in the research enterprise are key priorities for NSERC, CIHR and SSHRC. In 2018–19, to develop a uniquely Canadian program to support increased EDI throughout post-secondary institutions, two rounds of consultations were conducted across the country. Following the first round, a draft charter of EDI principles was developed and input solicited by travelling to 18 locations to engage with more than 450 participants, including individuals from underrepresented or disadvantaged groups. The new [Dimensions pilot program](#)<sup>xxiv</sup> was developed to help address barriers faced by women, Indigenous peoples (First Nations, Inuit and Métis), persons with disabilities, members of visible minority/racialized groups and members of LGBTQ2+ communities, across all disciplines and fields of study.

Through the coordinated work of the three agencies, many of the key initiatives outlined in the Tri-agency EDI action plan approved in September 2018 were initiated, including the mandatory gender-based analysis plus (GBA+) training for program and policy staff, with 52% of the targeted workforce having completed the training as of March 2019. In 2018–19, 33% of all NSERC award holders were women. In competition year 2019, both the Discovery Grants and Scholarships and Fellowships core program literature were updated, requiring applicants to

indicate how sex, gender and diversity considerations are taken into account in their proposed research design.

The [Equity, Diversity and Inclusion Institutional Capacity-Building Grant<sup>xxv</sup>](#) funding opportunity announced in Budget 2018 was launched in January 2019. The objective of this new funding opportunity is to foster EDI in the Canadian post-secondary research enterprise through a focus on the identification and elimination of systemic barriers that impede the career advancement, recruitment and retention of underrepresented groups. A total of 51 post-secondary research institutions (including 13 colleges) submitted an application. A total of 15 institutions have been awarded a grant in this first round of competition.

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

The connectivity between key elements of Canada’s knowledge ecosystem is vital to its dynamism. NSERC devotes one third of its budget to partnerships between researchers from university and colleges and industry organizations, as well as organizations from not-for profit and government sectors. In 2018–19, NSERC-funded R&D projects leveraged \$269 million in cash and in-kind contributions from nearly 3,800 private sector research partners. The partner organizations directly benefited from these projects through a variety of impacts, including increasing expertise or knowledge, developing or improving a product, process or service or improving environmental outcomes.

As directed in Budget 2018, NSERC has consolidated its various collaborative R&D grants to modernize, simplify and improve programming. The new [Alliance program](#) was opened in 2019 following consultations with the research community across Canada. The Alliance grant program is being designed to support projects that:

- generate new knowledge and/or technology to address complex challenges;
- create economic, social and/or environmental benefits;
- contribute to Canada’s long-term competitiveness;
- support public policy;
- train new researchers in areas that are important to Canada and to the partner organizations;
- draw on diverse perspectives and skill sets to accelerate the translation and application of research results.

The research partnerships also provide a rich learning environment that offer student trainees the opportunity to add to their experience by working with users of knowledge on real world challenges. In 2018–19, 20,000 full-time and part-time students worked on NSERC-funded research partnership projects and reported that they gained not only valuable knowledge in the discipline but also essential skills in communication, management and critical thinking. Students and trainees who perform research as part of their studies are provided with leading-edge learning opportunities, as well as employment opportunities. Over 25% of the partner companies hired a student from the research project. By mobilizing knowledge, these trainees reciprocally provide leading-edge science and technology expertise to innovative companies and organizations across Canada. With the NSERC partnership grants, approximately 50% of

researchers' grant funding is used to pay for student stipends who build important competencies while working as part of academic-industry collaborations.

As a result of the horizontal review of Innovation programs announced in Budget 2018, the [Centres of Excellence for Commercialization and Research](#)<sup>xxvi</sup> and the [Business-led Networks of Centres of Excellence](#)<sup>xxvii</sup> programs continued to help connect businesses to Canada's world-class research enterprise. The funded organizations through those programs are being gradually transferred to Innovation, Science and Economic Development's (ISED's) Strategic Innovation Fund as funding streams are being launched. The Networks of Centres of Excellence Secretariat is ensuring a gradual transition of those programs, as evidenced by the recent \$11.8 million funding provided to ending entities, in support of activities during the transition period.

In December 2018, the Government of Canada announced that funding for the [Networks of Centres of Excellence](#)<sup>xxviii</sup> (NCE) program will gradually be transferred to the New Frontiers in Research Fund. The transition will occur over the next few years with a complete wind-down of the NCE suite of programs by 2023–24. During the transition period, ongoing and newly funded networks will be fully supported until the end of their funding agreement. In 2018–19, a final cohort of four new networks active across NSE, social sciences and humanities and health sciences were awarded \$87.2 million over five years following a competitive peer review process.

In 2018–19, NSERC further implemented its online end-of-grant reporting system, to capture information from partners on outcomes at the end of the partnered grants. At the end of 2018, a total of 11,800 reports have been received since 2016 that cover the major funding opportunities within the Research Partnerships program. To date, partners have reported the following:

- 97% of partners would recommend academic collaborations to others
- 76% of partners said the project enhanced the knowledge and skills of personnel
- 52% of partners developed or improved a product, process or service
- 93% of partners said the project achieved its objectives
- one in three partners said the research results helped to reduce environmental impact

In 2018–19, as part of the design of the new Alliance grant, NSERC built in EDI considerations that align with NSERC's EDI framework, to increase equity in awards and enhance research excellence. The new Alliance grant will continue to support partnerships between multinational organizations and Canadian academic researchers using the same principles as the [Collaborative Research and Development grants](#).<sup>xxix</sup>

Following the extension of the pilot program for the [College and Community Social Innovation Fund](#) (CCSIF), a first competition was launched in 2017. A total of 92 eligible applications were received, and a peer review committee of 15 members from the college, university, public, private and not-for-profit sectors met to review the CCSIF applications and make funding recommendations to NSERC. The budget of \$9.1 million over two years allowed for the funding of 41 grants, enabling colleges to increase their capacity to work with communities, with the goal of developing partnerships that foster innovation in areas such as education, delivery of social services, integration of vulnerable populations and community development.

## Results achieved

Departmental results	Performance indicators	Target	Date to achieve target	2018–19 Actual results	2017–18 Actual results	2016–17 Actual results
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	22	March 31, 2019	N/A	15*	22
	Percentage of funded research involving international collaboration	57	March 31, 2019	N/A	47**	56
Canada has a pool of highly skilled people in the natural sciences and engineering	Proportion of award holders who are underrepresented individuals	29	March 31, 2019	33	28.5	28.4
	Number of research trainees supported	33,000	March 31, 2019	37,700	34,400	33,400
	Percentage of research trainees supported gaining industrial experience	30–35	March 31, 2019	36.3	28.5	31.4
	Percentage of previously funded research trainees that go on to work in a research position	67	March 31, 2019	80	N/A	66
Canada's natural sciences and engineering research knowledge is used	Partner funding for research projects	\$225M	March 31, 2019	\$269M	\$248M	\$220M
	Number of partners on research projects	3,700	March 31, 2019	3,760	3,710	3,610
	Percentage of funded projects reporting socioeconomic outcomes for Canadians	55	March 31, 2019	52	51	47

Notes: \* Methodology to calculate the result updated to include more journals with publications acknowledging NSERC as funder.

\*\* Methodology to calculate the result updated to include NSERC-acknowledged papers only.

**Budgetary financial resources (dollars)**

2018–19 Main Estimates	2018–19 Planned spending	2018–19 Total authorities available for use	2018–19 Actual spending (authorities used)	2018–19 Difference (Actual spending minus Planned spending)
1,254,480,217	1,254,480,217	1,334,869,447	1,330,149,905	75,669,688

Note: The variance is explained by the implementation of the Budget 2018 measures for fundamental research funding; to support collaborative innovation projects involving partner organizations, colleges and polytechnics through the College and Community Innovation Program; increases to the Canada Research Chairs program; and to fund a new pilot project to increase EDI in research in Canadian post-secondary institutions.

**Human resources (full-time equivalents)**

2018–19 Planned full-time equivalents	2018–19 Actual full-time equivalents	2018–19 Difference (Actual full-time equivalents minus Planned full-time equivalents)
282	284	2

Note: The variance in full-time equivalents (FTEs) is explained by the implementation of Budget 2018 measures (fundamental research, College and Community Innovation Program and Increasing Diversity in Science).

Financial, human resources and performance information for NSERC's Program Inventory is available in the [GC InfoBase](#).<sup>xxx</sup>

## Internal Services

### Description

Internal Services are those groups of related activities and resources that the federal government considers to be services in support of programs and/or required to meet corporate obligations of an organization. Internal Services refers to the activities and resources of the 10 distinct service categories that support program delivery in the organization, regardless of the Internal Services delivery model in a department. The 10 service categories are:

- ▶ Acquisition Management Services
- ▶ Communications Services
- ▶ Financial Management Services
- ▶ Human Resources Management Services
- ▶ Information Management Services
- ▶ Information Technology Services
- ▶ Legal Services
- ▶ Materiel Management Services
- ▶ Management and Oversight Services
- ▶ Real Property Management Services

### Results

Budgetary financial resources (dollars)

2018–19 Main Estimates	2018–19 Planned spending	2018–19 Total authorities available for use	2018–19 Actual spending (authorities used)	2018–19 Difference (Actual spending minus Planned spending)
18,976,393	18,976,393	22,397,807	23,190,539	4,214,146

Note: The variance in expenditures is explained by the implementation of Budget 2018 measures (fundamental research, College and Community Innovation Program and Increasing Diversity in Science).

## Human resources (full-time equivalents)

2018–19 Planned full-time equivalents	2018–19 Actual full-time equivalents	2018–19 Difference (Actual full-time equivalents minus Planned full-time equivalents)
132	147	15

Note: The variance in FTEs is explained by the implementation of Budget 2018 measures (fundamental research, College and Community Innovation Program and Increasing Diversity in Science).

In 2018–19, NSERC continued the implementation of its People Strategy Action Plan for 2016–20. In alignment with the People Strategy and in response to findings from the 2017 Public Service Employee Survey (PSES), NSERC continued efforts to reinforce and maintain a respectful, healthy and inclusive workplace through training and special events. This included introducing mandatory training on bias awareness and healthy workplaces as well as the People of NSERC-SSHRC Live program, which celebrates the diversity within the organization. These measures were undertaken to demonstrate NSERC’s commitment to promoting a respectful work environment free of harassment, discrimination, incivility and any form of disrespect through the implementation of the People Strategy.

Results of the 2018 PSES demonstrated a continued increase in employee engagement; the 81% survey response rate from staff was among the highest in the public service. Our employees have a great sense of satisfaction from their work, feel valued at work and are proud of the work they do. Key areas of continued required focus are related to our Mental Health and Well-Being Strategy, our Prevention of Harassment and Civility in the Workplace Strategy and our Diversity and Inclusivity initiatives.

NSERC, in collaboration with SSHRC and CIHR, continued the planning for the renewal of information technology support systems for the full grants management life cycle and engaged with stakeholders to validate the needs of the research community. Following an extensive analysis, the presidents of the three granting agencies formally approved the decision to move forward with preliminary planning of a Tri-agency grants management system on September 19, 2018.

As an interim measure while the grants management solution is being considered, the SSHRC/NSERC Information and Innovative Solutions team continued to evolve as necessary the existing systems to meet ongoing and emerging program needs. In particular, in 2018–19 the team used an existing platform to successfully develop and launch the systems for the new Tri-agency New Frontiers in Research Fund Program (Stream 1).

NSERC also ensures alignment to and compliance with Government of Canada priorities, policy requirements and transformative initiatives. In 2018–19, the Common Administrative Services Directorate (CASD) began assessing the impacts of and developing implementation strategies for changes related to the Treasury Board Secretariat’s Policy Reset Initiative.

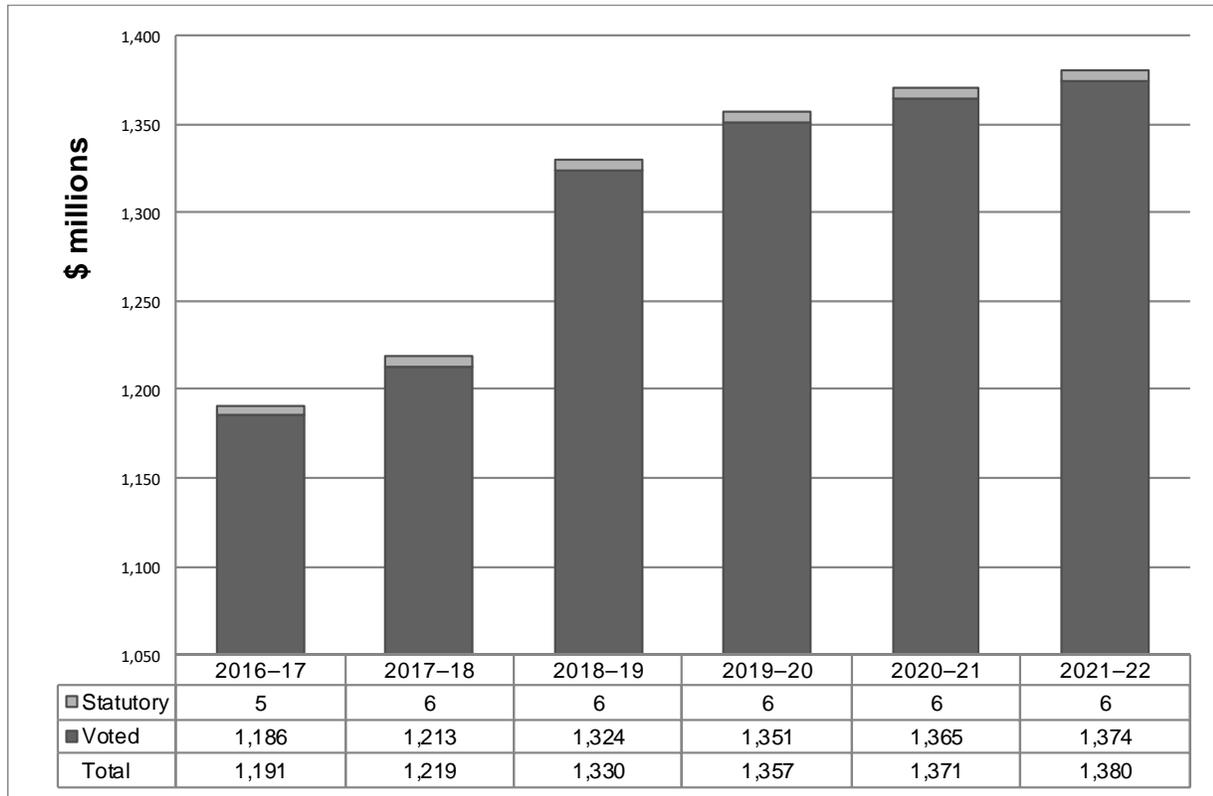
NSERC's migration to the new financial management system has been postponed, in agreement with Treasury Board Secretariat, to 2021 in order to align with timelines for SSHRC and CIHR. Consequently, the project charter and implementation plan will be developed in the second half of 2019–20.



## Analysis of trends in spending and human resources

### Actual expenditures

Departmental spending trend graph



## Budgetary performance summary for Core Responsibilities and Internal Services (dollars)

Core Responsibilities and Internal Services	2018–19 Main Estimates	2018–19 Planned spending	2019–20 Planned spending	2020–21 Planned spending	2018–19 Total authorities available for use	2018–19 Actual spending (authorities used)	2017–18 Actual spending (authorities used)	2016–17 Actual spending (authorities used)
Funding Natural Sciences and Engineering Research and Training	1,235,503,824	1,235,503,824	1,332,842,006	1,347,479,261	1,312,471,640	1,306,959,366	1,198,380,206	1,171,723,852
<b>Subtotal</b>	1,235,503,824	1,235,503,824	1,332,842,006	1,347,479,261	1,312,471,640	1,306,959,366	1,198,380,206	1,171,723,852
Internal Services	18,976,393	18,976,393	23,998,403	23,505,390	22,397,807	23,190,539	20,761,682	19,537,041
<b>Total</b>	1,254,480,217	1,254,480,217	1,356,840,409	1,370,984,651	1,334,869,447	1,330,149,905	1,219,141,888	1,191,260,893

Note: The variance of actuals is explained by the increase of programs, communication and support services in delivering of funds for the implementation of Budget 2016 (Discovery Research), Budget 2017 (PromoScience) and Budget 2018 (fundamental research funding; College and Community Innovation Program; Canada Research Chairs program).

## Actual human resources

Human resources summary for Core Responsibilities and Internal Services  
(full-time equivalents)

Core Responsibilities and Internal Services	2016–17 Actual full-time equivalents	2017–18 Actual full-time equivalents	2018–19 Planned full-time equivalents	2018–19 Actual full-time equivalents	2019–20 Planned full-time equivalents	2020–21 Planned full-time equivalents
Funding Natural Sciences and Engineering Research and Training	275	284	282	284	300	300
<b>Subtotal</b>	275	284	282	284	300	300
Internal Services	137	138	132	147	156	156
<b>Total</b>	412	422	414	431	456	456

Note: The variance in FTEs is explained by the increase of programs, communication and support services in delivering of funds for the implementation of Budget 2016 (Discovery Research), Budget 2017 (PromoScience) and Budget 2018 (fundamental research funding; College and Community Innovation Program; Canada Research Chairs program).

## Expenditures by vote

For information on NSERC's organizational voted and statutory expenditures, consult the [Public Accounts of Canada 2018–2019](#).<sup>xxx</sup>

## Government of Canada spending and activities

Information on the alignment of NSERC's spending with the Government of Canada's spending and activities is available in the [GC InfoBase](#).

## Financial statements and financial statements highlights

### Financial statements

NSERC's financial statements (unaudited) for the year ended March 31, 2019, are available on the [departmental website](#).

## Financial statements highlights

Condensed Statement of Operations (unaudited) for the year ended March 31, 2019 (dollars)

Financial information	2018–19 Planned results*	2018–19 Actual results	2017–18 Actual results	Difference (2018–19 Actual results minus 2018–19 Planned results)	Difference (2018–19 Actual results minus 2017–18 Actual results)
Total expenses	1,261,370,000	1,335,062,820	1,224,417,677	73,692,820	110,645,142
Total revenues	178,779	178,224	424,918	(555)	(246,695)
Net cost of operations before government funding and transfers	1,261,191,221	1,334,884,596	1,223,992,759	73,693,375	110,891,837

Note: As per 2018–19 [Future-Oriented Statement of Operations](#).<sup>xxxii</sup>

The increase in total expenses over previous year is mainly due to variances in transfer payments in the following initiatives:

- an increase of \$35.3 million for the Canada First Research Excellence Fund
- an increase of \$23.0 million from 2018 for Fundamental Research
- an increase of \$19.7 million for College and Community Innovation Program
- an increase of \$19.0 million for University-Industry projects
- an increase of \$6.6 million for the Canada Research Chairs
- an increase of \$6.0 million for the Canada 150 Research Chairs

Condensed Statement of Financial Position (unaudited) as of March 31, 2019  
(dollars)

Financial Information	2018–19	2017–18	Difference (2018–19 minus 2017–18)
Total net liabilities	10,808,068	40,285,700	(29,477,632)
Total net financial assets	8,441,417	37,576,749	(29,135,332)
Departmental net debt	2,366,651	2,708,951	(342,300)
Total non-financial assets	2,550,749	3,824,369	(1,273,620)
Departmental net financial position	184,098	1,115,418	(931,320)

Notes: The decrease in net liabilities and net financial assets is mainly due to grants and subsidies recognized at the end of 2017–18 that were paid in the following fiscal year, which was not the case at the end of 2018–19.

The decrease in non-financial assets is mainly due to the annual depreciation of the agency's tangible capital assets, which surpassed the additions made during the year.



## Supplementary information

Corporate information

### **Organizational profile**

**Appropriate minister:** **Minister of Science and Sport**

The Honourable Kirsty Duncan, P.C., M.P.

**Institutional head:** Dr. Alejandro Adem (President)

**Ministerial portfolio:** Innovation, Science and Economic Development

**Enabling instrument:** [Natural Sciences and Engineering Research Council Act<sup>xxxiii</sup>](#)

**Year of incorporation / commencement:** **May 1, 1978**

## **Raison d'être, mandate and role: who we are and what we do**

### **Raison d'être**

“Raison d'être, mandate and role: who we are and what we do” is available on [NSERC's website](#).

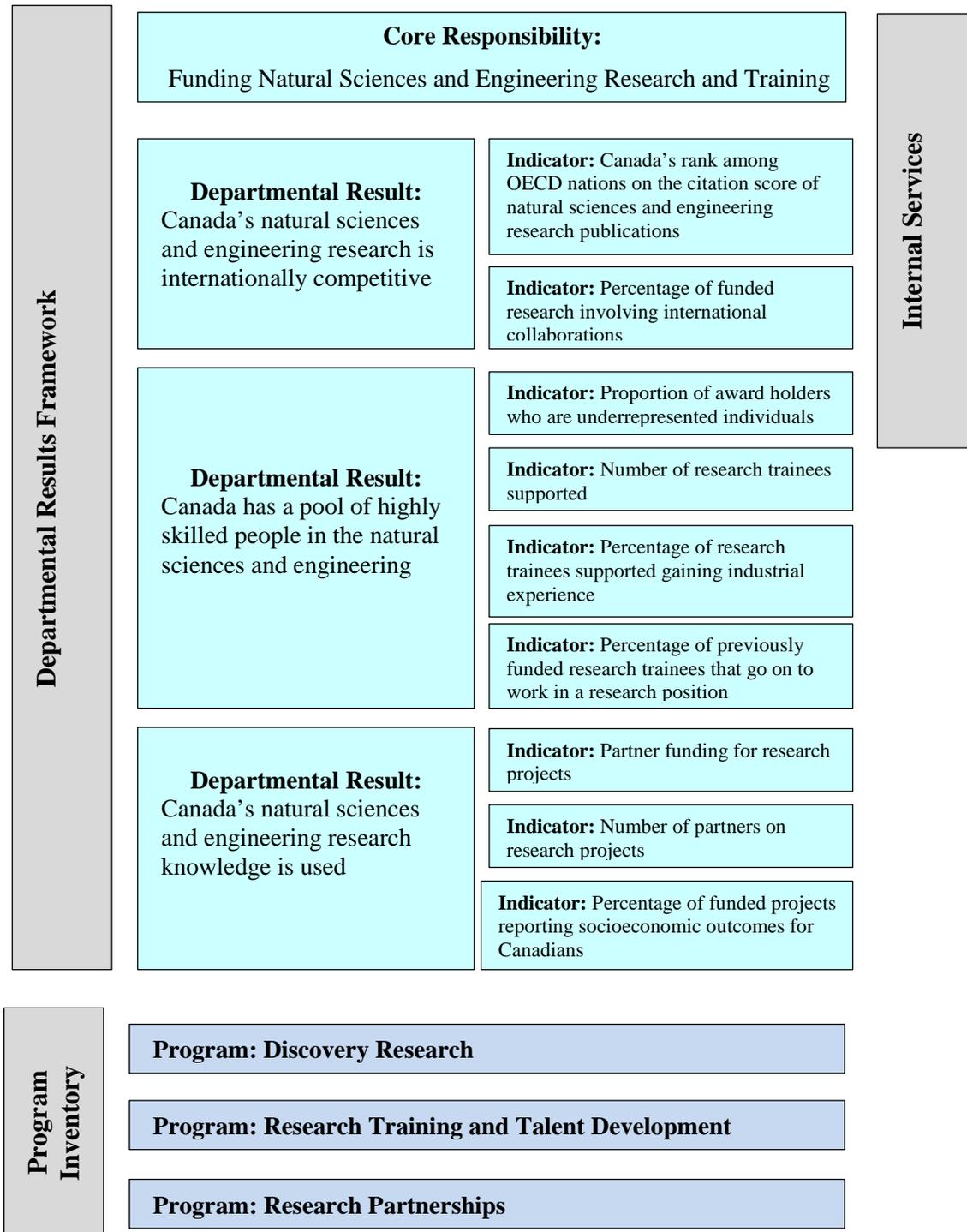
### **Operating context and key risks**

Information on operating context and key risks is available on [NSERC's website](#).

## Reporting Framework

NSERC’s Departmental Results Framework and Program Inventory of record for 2018–19 are shown below.

Graphical presentation of Departmental Results Framework and Program Inventory



## Supporting information on the Program Inventory

Financial, human resources and performance information for NSERC's Program Inventory is available in the [GC InfoBase](#).

## Supplementary information tables

The following supplementary information tables are available on [NSERC's website](#)<sup>xxxiv</sup>:

- ▶ Departmental Sustainable Development Strategy
- ▶ Details on transfer payment programs of \$5 million or more
- ▶ Gender-based analysis plus

## Federal tax expenditures

The tax system can be used to achieve public policy objectives through the application of special measures such as low tax rates, exemptions, deductions, deferrals and credits. The Department of Finance Canada publishes cost estimates and projections for these measures each year in the [Report on Federal Tax Expenditures](#).<sup>xxxv</sup> This report also provides detailed background information on tax expenditures, including descriptions, objectives, historical information and references to related federal spending programs. The tax measures presented in this report are the responsibility of the Minister of Finance.

## Organizational contact information

**Sorin Seruna**

**Manager, Corporate Planning and Reporting**

Natural Sciences and Engineering Research Council of Canada

**Telephone:** 613-944-7531

**Email:** [sorin.seruna@nserc-crsng.gc.ca](mailto:sorin.seruna@nserc-crsng.gc.ca)

## 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 report on the plans and expected performance of an appropriated department over a three-year period. Departmental Plans are tabled in Parliament each spring.

### **Departmental Result (résultat ministériel)**

A Departmental Result represents the change or changes that the 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)**

Consists of the department's Core Responsibilities, Departmental Results and Departmental Result Indicators.

### **Departmental Results Report (rapport sur les résultats ministériels)**

A report on an appropriated department's actual accomplishments against the plans, priorities and expected results set out in the corresponding Departmental Plan.

### **experimentation (expérimentation)**

Activities that seek to explore, test and compare the effects and impacts of policies, interventions and approaches, to inform evidence-based decision-making, by learning what works and what does not.

### **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+) (analyse comparative entre les sexes plus [ACS+])**

An analytical process used to help identify the potential impacts of policies, programs and services on diverse groups of women, men and gender differences. We all have multiple identity factors that intersect to make us who we are; GBA+ considers many other identity factors, such as race, ethnicity, religion, age and mental or physical disability.

**government-wide priorities (priorités pangouvernementales)**

For the purpose of the 2018–19 Departmental Results Report, those high-level themes outlining the government’s agenda in the 2015 Speech from the Throne: Growth for the Middle Class; Open and Transparent Government; A Clean Environment and a Strong Economy; Diversity is Canada’s Strength; and Security and Opportunity.

**horizontal initiative (initiative horizontale)**

An initiative where two or more departments 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.

**performance indicator (indicateur de rendement)**

A qualitative or quantitative means of measuring an output or outcome, with the intention of gauging the performance of an organization, program, policy or initiative respecting expected results.

**performance reporting (production de rapports sur le rendement)**

The process of communicating evidence-based performance information. Performance reporting supports decision-making, accountability and transparency.

**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 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.

**priority (priorité)**

A plan or project that an organization has chosen to focus and report on during the planning period. Priorities represent the things that are most important or that must be done first to support the achievement of the desired Strategic Outcome(s) or Departmental Results.

**program (programme)**

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

**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.

**Strategic Outcome (résultat stratégique)**

A long-term and enduring benefit to Canadians that is linked to the organization's mandate, vision and core functions.

**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. Discovery Development Grants, [http://www.nserc-crsng.gc.ca/Professors-Professeurs/Grants-Subs/DiscoveryPilot-DecouvertePilote\\_eng.asp](http://www.nserc-crsng.gc.ca/Professors-Professeurs/Grants-Subs/DiscoveryPilot-DecouvertePilote_eng.asp)
- ii. Collaborative Research Action, <https://www.belmontforum.org/cras/>
- iii. Resilience in Rapidly Changing Arctic Systems, <https://formas.se/en/start-page/archive/calls/2019-02-21-arctic-research---resilience-in-rapidly-changing-arctic-systems.html>
- iv. Discovery Launch Supplement, [http://www.nserc-crsng.gc.ca/Professors-Professeurs/Grants-Subs/Dis-Sup\\_eng.asp](http://www.nserc-crsng.gc.ca/Professors-Professeurs/Grants-Subs/Dis-Sup_eng.asp)
- v. Collaborative Research and Training Experience Program, [http://www.nserc-crsng.gc.ca/Professors-Professeurs/Grants-Subs/CREATE-FONCER\\_eng.asp](http://www.nserc-crsng.gc.ca/Professors-Professeurs/Grants-Subs/CREATE-FONCER_eng.asp)
- vi. Alliance program, [http://www.nserc-crsng.gc.ca/Innovate-Innover/alliance-alliance/index\\_eng.asp](http://www.nserc-crsng.gc.ca/Innovate-Innover/alliance-alliance/index_eng.asp)
- vii. EDI framework, [http://www.nserc-crsng.gc.ca/NSERC-CRSNG/EDI-EDI/framework\\_cadre-de-reference\\_eng.asp](http://www.nserc-crsng.gc.ca/NSERC-CRSNG/EDI-EDI/framework_cadre-de-reference_eng.asp)
- viii. College and Community Social Innovation Fund, [http://www.nserc-crsng.gc.ca/Professors-Professeurs/RPP-PP/CCSIF-ICC\\_eng.asp](http://www.nserc-crsng.gc.ca/Professors-Professeurs/RPP-PP/CCSIF-ICC_eng.asp)
- ix. Discovery Accelerator Supplement program, [http://www.nserc-crsng.gc.ca/Professors-Professeurs/Grants-Subs/DGAS-SGSA\\_eng.asp](http://www.nserc-crsng.gc.ca/Professors-Professeurs/Grants-Subs/DGAS-SGSA_eng.asp)
- x. Belmont Forum-BiodivERsA, [http://www.nserc-crsng.gc.ca/Professors-Professeurs/Grants-Subs/Belmont-Belmont\\_eng.asp](http://www.nserc-crsng.gc.ca/Professors-Professeurs/Grants-Subs/Belmont-Belmont_eng.asp)
- xi. GENDER-NET Plus European Research Area Network (ERA-NET), <http://gender-net-plus.eu/joint-call/cofunded-call/>
- xii. Canada Research Coordinating Committee, <http://www.ic.gc.ca/eic/site/icgc.nsf/eng/07620.html>
- xiii. Canada Foundation for Innovation, <https://www.innovation.ca/>
- xiv. Strengthening Indigenous Research Capacity, [http://www.sshrc-crsh.gc.ca/funding-financement/programmes-programmes/indigenous\\_research-recherche\\_autochtone-eng.aspx](http://www.sshrc-crsh.gc.ca/funding-financement/programmes-programmes/indigenous_research-recherche_autochtone-eng.aspx)
- xv. New Frontiers in Research Fund, <http://www.sshrc-crsh.gc.ca/funding-financement/nfrf-fnfr/index-eng.aspx>
- xvi. Open Government Partnership, <https://www.opengovpartnership.org/members/canada/>
- xvii. Tri-Agency Open Access Policy on Publications, [http://www.science.gc.ca/eic/site/063.nsf/eng/h\\_F6765465.html](http://www.science.gc.ca/eic/site/063.nsf/eng/h_F6765465.html)
- xviii. Science Odyssey, <http://www.sciod.ca/>
- xix. Science Literacy Week, <http://www.scienceliteracy.ca/>
- xx. STEAM Horizon Awards, <https://steamhorizonawards.ca/>
- xxi. PromoScience grants, [http://www.nserc-crsng.gc.ca/Promoter-Promotion/PromoScience-PromoScience/About-Apropos\\_eng.asp](http://www.nserc-crsng.gc.ca/Promoter-Promotion/PromoScience-PromoScience/About-Apropos_eng.asp)
- xxii. NSERC Student Ambassador grants, [http://www.nserc-crsng.gc.ca/Students-Etudiants/UG-PC/Ambassadors-Ambassadeurs\\_eng.asp](http://www.nserc-crsng.gc.ca/Students-Etudiants/UG-PC/Ambassadors-Ambassadeurs_eng.asp)
- xxiii. NSERC Young Innovators grants, [http://www.nserc-crsng.gc.ca/Promoter-Promotion/YI-JI\\_eng.asp](http://www.nserc-crsng.gc.ca/Promoter-Promotion/YI-JI_eng.asp)
- xxiv. Dimensions program, [http://www.nserc-crsng.gc.ca/NSERC-CRSNG/EDI-EDI/Dimensions\\_Dimensions\\_eng.asp](http://www.nserc-crsng.gc.ca/NSERC-CRSNG/EDI-EDI/Dimensions_Dimensions_eng.asp)
- xxv. Equity, Diversity and Inclusion Institutional Capacity-Building Grant, [http://www.nserc-crsng.gc.ca/Institutions-Etablissements/EDI-Capacity\\_eng.asp](http://www.nserc-crsng.gc.ca/Institutions-Etablissements/EDI-Capacity_eng.asp)
- xxvi. Centres of Excellence for Commercialization and Research, [http://www.nce-rce.gc.ca/programmes-programmes/cecr-cecr/index\\_eng.asp](http://www.nce-rce.gc.ca/programmes-programmes/cecr-cecr/index_eng.asp)
- xxvii. Business-led Networks of Centres of Excellence, [http://www.nce-rce.gc.ca/Programmes-Programmes/BLNCE-RCEE/Index\\_eng.asp](http://www.nce-rce.gc.ca/Programmes-Programmes/BLNCE-RCEE/Index_eng.asp)
- xxviii. Networks of Centres of Excellence, [http://www.nce-rce.gc.ca/Index\\_eng.asp](http://www.nce-rce.gc.ca/Index_eng.asp)
- xxix. Collaborative Research and Development grants, [http://www.nserc-crsng.gc.ca/Professors-Professeurs/RPP-PP/CRD-RDC\\_eng.asp](http://www.nserc-crsng.gc.ca/Professors-Professeurs/RPP-PP/CRD-RDC_eng.asp)
- xxx. GC InfoBase, <https://www.tbs-sct.gc.ca/ems-sgd/edb-bdd/index-eng.html#start>
- xxxi. Public Accounts of Canada 2017–2018, <http://www.tpsgc-pwgsc.gc.ca/recgen/cpc-pac/index-eng.html>

- xxxii. Future-Oriented Statement of Operations, [http://www.nserc-crsng.gc.ca/NSERC-CRSNG/Reports-Rapports/FOSO\\_e.pdf](http://www.nserc-crsng.gc.ca/NSERC-CRSNG/Reports-Rapports/FOSO_e.pdf)
- xxxiii. Natural Sciences and Engineering Research Council Act, <http://laws.justice.gc.ca/eng/acts/N-21/>
- xxxiv. Natural Sciences and Engineering Research Council of Canada, [http://www.nserc-crsng.gc.ca/NSERC-CRSNG/Reports-Rapports/plans-plans\\_eng.asp](http://www.nserc-crsng.gc.ca/NSERC-CRSNG/Reports-Rapports/plans-plans_eng.asp)
- xxxv. Report on Federal Tax Expenditures, <http://www.fin.gc.ca/purl/taxexp-eng.asp>