
Polar Knowledge Canada

2017–18

Departmental Results Report

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Affairs and Internal Trade

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Minister's message

Our 2017–18 Departmental Results Report provides parliamentarians and Canadians with information on the progress we made towards achieving the results outlines in our 2017-18 Departmental Plan. Last year, to improve reporting to Canadians, we introduced the simplified Departmental Plan to replace the Report on Plans and Priorities.

The Departmental Results Report describes the work achieved in a clear, straightforward manner to provide transparency on how Polar Knowledge Canada (POLAR) spent taxpayers' dollars over the past year. We describe our programs and services for Canadians and how our work supported the fulfillment of our departmental mandate commitments and the government's priorities.



The Government of Canada is committed to renewing the relationship between Canada and Indigenous Peoples, tackling the challenge of climate change and promoting economic development and creating jobs for the middle class. Despite being a relatively new agency, POLAR is making great strides towards these broader priorities in the North, while strengthening Canada's polar science leadership.

POLAR is working to ensure that sound scientific knowledge informs decision-making in the North. By investing in scientific research and through the opening of the Canadian High Arctic Research Station (CHARS) campus, POLAR is fostering science and Indigenous Knowledge to support environmental protection, sustainable development and the creation of jobs. As a science-based agency, POLAR undertakes and supports the collection of baseline information, environmental monitoring, scientific research, and technology development to help address the challenges of climate change and strengthen the resilience of northern communities. Knowledge mobilisation, outreach and capacity building are also key areas of work for POLAR.

A major priority has been involving and engaging with Indigenous organizations and building capacity at the community level through training and participation in science and technology projects funded or carried out by POLAR. Engagement is and will continue to be an integral part of POLAR activities and it will help to create greater awareness of POLAR's mandate and polar science research and related opportunities as well as initiate longer term collaborations and partnerships. These partnering efforts have involved a high level of engagement with the Arctic and Antarctic scientific communities through technical workshops, roundtable discussions, conferences and the development of agreements and project-specific initiatives to strengthen polar research.

The CHARS campus in Cambridge Bay, Nunavut, provides a world-class hub for science, technology and innovation in Canada's North. It is attracting researchers from across Canada and internationally to help position Canada as an international leader in polar science and technology.

Ultimately, the research performed at the CHARS campus will help improve economic opportunities, environmental stewardship, and the quality of life of Northerners and all Canadians. POLAR is now headquartered out of the CHARS campus and is working to ensure that staffing processes appropriately reflect commitments under the Nunavut Agreement.

I am honoured to have this agency as part of my new portfolio and look forward to seeing it deliver on its very exciting mandate.

The Honourable Dominic LeBlanc, P.C., M.P. Minister of Intergovernmental and Northern Affairs and Internal Trade

President and CEO's message

Since our inception on June 1, 2015, Polar Knowledge Canada (POLAR) has made significant progress in establishing itself, and is now operating out of the CHARS campus. Our Science and Technology team has expanded the baseline understanding of northern ecosystems; overseen research on alternative and renewable energy and on the impacts of changing ice, permafrost and snow; and built partnerships in support of improved design and construction of northern infrastructure. These multi-year research partnerships continue to advance knowledge as the projects move forward.



POLAR continues to fulfill a brokering role, strengthening connections between Canadian science-based departments and agencies, Indigenous organizations, industry and private sector and academia within Canada and internationally. Through this proactive engagement, POLAR is working to identify Science and Technology priorities for 2020-25, and broader strategic priorities to advance knowledge mobilization and capacity building goals in line with Government of Canada priorities.

Our Knowledge Management and Engagement team has successfully expanded public awareness of POLAR and Arctic and Antarctic research with our current stakeholders as well as with new partners. That team is also helping to put northern research to work through knowledge mobilization products that inform decision-makers and support evidence-based policy development, and strengthen Canadian Antarctic research. It is also building polar capacity through science camps, support for training initiatives and student employment in Cambridge Bay, Nunavut.

POLAR will continue to partner with other federal agencies in pursuit of Government of Canada policy priorities in areas such as climate change, environmental stewardship, and open data. POLAR will also increasingly engage northern and Indigenous communities to ensure its priorities align with their needs and to ensure that Indigenous Knowledge is respectfully incorporated in our research efforts.

Central to our recruitment and training efforts is our commitment to working towards increasing representation of Nunavut Inuit in POLAR positions in respect of our obligations under Article 23 of the Nunavut Agreement. This will continue to be a priority in the years to come. Over the course of this year, POLAR's results demonstrate its support to Canada as a leading producer of polar science and knowledge.

David J. Scott, Ph.D. President and Chief Executive Officer

Results at a glance

The CHARS campus is currently operating as Polar Knowledge Canada’s (POLAR’s) headquarters and the space is being used by POLAR and visiting researchers. Plans are underway for an official grand opening.

In fiscal year 2017-18, there was a total of 2,408 researcher-days of use at the CHARS campus, representing Canadian science-based departments and agencies, Indigenous organizations, industry and private sector, and Canadian and international academia. Their research activities have been made possible through a number of agreements and memoranda of understanding between POLAR and external partners and are creating results that are strengthening polar knowledge and helping Canada become a world leader in polar science. POLAR’s Knowledge Management and Engagement team has worked extensively this fiscal year to raise awareness with stakeholders and partners of POLAR and Arctic and Antarctic research activities.

During fiscal year 2017-18, POLAR’s research, and work with other federal agencies, has continued to support the Government of Canada’s climate change, environmental stewardship, open data and reconciliation priorities. Efforts have been made to ensure that Indigenous Knowledge is respectfully incorporated in all of POLAR’s Arctic research efforts. POLAR has also engaged with northern and Indigenous communities to increase capacity building activities and employment opportunities, and work towards improving representation of Nunavut Inuit in POLAR positions. POLAR’s additional capacity building activities included science camps, support for training initiatives and student employment in Cambridge Bay, Nunavut.

For more information on POLAR’s plans, priorities and results achieved, see the “Results: what we achieved” section of this report.

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

Raison d'être

POLARⁱ is a federal agency (departmental corporation) that was established with the coming into force of the **Canadian High Arctic Research Station Act**ⁱⁱ on June 1, 2015. The Act merged the mandate and functions of the former Canadian Polar Commission and the pan-northern science and technology program associated with the Canadian High Arctic Research Station (CHARS) project of Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC).

The purpose of POLAR as stated in the Act is to:

- Advance knowledge of the Canadian Arctic in order to improve economic opportunities, environmental stewardship and the quality of life of its residents and all other Canadians;
- Promote the development and dissemination of knowledge of the other circumpolar regions, including the Antarctic;
- Strengthen Canada's leadership on Arctic issues; and,
- Establish a hub for scientific research in the Canadian Arctic.

Mandate and role

The functions of POLAR are to:

- Undertake scientific research and develop technology;
- Implement scientific research and technology development programs and projects;
- Promote the testing, application, transfer, diffusion and commercialization of technology;
- Publish and disseminate studies, reports and other document; and,
- Complement national and international networks of expertise and of facilities.

POLAR is now headquartered at the CHARS campus in Cambridge Bay, Nunavut. The CHARS campus comprises a main research building, a field and maintenance building and living accommodations for visiting researchers. The CHARS campus construction continues to be managed by CIRNAC until commissioning is completed, after which point, the campus will then become part of POLAR. Key elements of the governance of POLAR are:

- In 2017-18, POLAR reported to the Minister of Crown-Indigenous Relations. In 2018-19, the organization will fall under the new portfolio of the Minister of Intergovernmental and Northern Affairs and Internal Trade.
- A nine-member Board of Directors is responsible for oversight, long-term strategic direction and decisions on the annual budget and work plans of the organization.
- The President and CEO, as the Deputy Head of the agency, is accountable for day-to-day management of POLAR.

- Science and Technology is responsible for managing the implementation of the Science and Technology Program; Knowledge Management and Engagement is responsible for knowledge mobilization, engagement and capacity building activities; and Human Resources, Planning and Reporting and Finance and Facilities Management is responsible for internal services.

For more general information about POLAR, see the “Supplementary information” section of this report. For more information on the department’s organizational mandate letter commitments, see the [Minister’s mandate letters](#)ⁱⁱⁱ for the Minister of Crown-Indigenous Relations and the Minister of Intergovernmental and Northern Affairs and Internal Trade.

Operating context and key risks

Operating context

The polar regions are undergoing significant change. In Canada's North, this change is driven by a number of complex factors, some global in nature, others rooted in the dynamics of the region's unique history, and others stemming from the increased empowerment of Indigenous peoples through settled comprehensive land claims. Key influences at this time include:

- Rapid environmental change occurring in the Arctic and Antarctic, including its climate and weather extremes, through increased temperatures and the continuing loss of ice, glaciers, snow and permafrost. These changes affect the entire planet, and are challenging our understanding of their consequences and our ability to provide knowledge for decision-makers. In the Arctic, these changes are also directly impacting the people who live in the North, including Indigenous peoples and their traditional food sources.
- High costs of doing research in both the Arctic and the Antarctic, as a result of the remoteness of the polar regions, logistical challenges, and extreme environmental conditions.
- Economic interests in the Arctic which have established the region as a larger player in the global economy, but also with very significant local effects. In spite of rapid environmental and social change, the Arctic remains a region of geopolitical stability which is a pre-condition for sustaining Arctic research.
- Increasing political and economic empowerment of Northerners, exemplified by the devolution of responsibility for lands and resource management to territorial governments and the gradual shifting of the control of the research agenda northward.
- Ongoing advances in Indigenous self-government taking place throughout the region and their positive effects on government policies, including how research is undertaken.
- Lower levels of educational attainment among Inuit impacting the preparedness of Inuit for certain types of positions within POLAR, and the associated requirement to invest additional resources in capacity building and employee development.
- Heightened interest of Canadians regarding the Arctic and Antarctic.
- The fact that developing local technical capacity and ensuring community buy-in and participation will be critical to technology development and transfer in the North. The private sector must also be motivated to pursue the smaller northern markets for these new technologies.

Key risks

As a relatively new agency, there are a number of risks outside of POLAR’s control that can potentially impact the achievement of planned results. Efforts are underway to mitigate these risks through sustained engagement, capacity building, funding programs, partnership development and staffing processes.

Community buy-in is one possible risk. Stakeholder expectations regarding the benefits derived from the CHARS campus are extremely high in terms of employment opportunities for local people, economic development in Nunavut, and support for local businesses and organizations. POLAR is seeking to mitigate this risk through outreach and engagement, hiring of local people, and support for education programs and science camps in Cambridge Bay. There are also expectations by other jurisdictions in Canada’s North regarding the ability of POLAR’s programs to have an impact in other areas of Canada (specifically Yukon, the Northwest Territories, Nunavik and Nunatsiavut) as well as the trickle down effect from having the CHARS campus as a “hub” for national and international science activities.

Inability to deliver on objectives of the pan-northern S&T Program is a specific risk for POLAR as a science-based agency. The scope of the S&T program is very broad and expectations are high among partner organizations for POLAR to conduct and support world-class science and technology as well as exercise a coordination role in Canada on Arctic and Antarctic science. The breadth and complexity of this work will make delivery a challenge with current resource levels. To mitigate this risk, POLAR is developing partnerships to help address gaps in capacity and science expertise. Partnership efforts include multiple stakeholders, such as federal government departments/agencies, northern and Indigenous organizations, territorial governments, academia, and international players.

Recruitment and retention of highly-qualified staff will be an ongoing risk for POLAR. Many factors, including the interest, availability and preparedness of Inuit for positions within POLAR, will have implications for POLAR’s obligations under the Nunavut Agreement to work towards 85% representation of Inuit across job groups and levels. Although POLAR will continue to give preference to job applicants who self-identify as Inuit under the Nunavut Agreement, increasing Inuit representation will be especially challenging given that there are science-specific classifications and degree or post-graduate (M.Sc., Ph.D.) education requirements for many positions related to the S&T program and for policy-focused positions within the Knowledge Management and Engagement team. This risk is compounded by the fact that the CHARS campus is in a small Northern community with a limited local labour pool for science- and policy-focused positions. As a result, POLAR will continue to support Pilimmaksaivik, the Federal Centre of Excellence for Inuit Employment in Nunavut, in the development and implementation of a whole-of-government (WoG) approach to Inuit employment and training, and implement a POLAR-specific Inuit Employment Plan that supplements and leverages WoG initiatives. This includes continuing efforts to support long-term capacity building among youth in Nunavut, including through funding science camps and workshops.

It will be challenging for POLAR to attract and retain scientific and technical staff to work in Cambridge Bay, therefore, measures will be implemented to attract early and late-career researchers for employment opportunities with POLAR, and promote POLAR and the CHARS campus to the Canadian academic community.

Key risks

A summary of the key risks facing POLAR is presented in the table below. Addressing the risks highlighted is important to the agency, as successful mitigation will ultimately allow POLAR to implement its mandate and meet stakeholder expectations. The official opening of the CHARS campus will be a key transition period for the organization as well as for the Cambridge Bay community. In addition, the potential positive impact of the science and knowledge generated by the S&T program will help Canadians better understand fundamental changes occurring in the environment in Canada’s North. Employment and training opportunities offered by POLAR in Cambridge Bay will also contribute positively to the economic development of the region.

Risks	Mitigating strategy and effectiveness	Link to the department’s Programs	Link to mandate letters ⁱⁱⁱ commitments and any government-wide or departmental priorities
<p>Community buy-in Northern communities may not see direct benefits to the activities undertaken, including through the creation of jobs.</p>	<p>Community outreach and engagement, community involvement in projects, development of local capacity, including through summer jobs for students. Hiring of local graduates from Nunavut Arctic College Environmental Technology Program (ETP) and fostering an interest in S&T in Northern youth to prepare the next generation for employment at POLAR.</p> <p>Continued engagement and consultation with key stakeholders and partners.</p>	<p>Outreach and Capacity Building</p> <p>Internal Services</p>	<p>Minister Bennett’s mandate letter: “Renew the relationship between Canada and Indigenous Peoples, based on recognition, rights, respect, co-operation, and partnership.”</p>

Risks	Mitigating strategy and effectiveness	Link to the department's Programs	Link to mandate letters ⁱⁱⁱ commitments and any government-wide or departmental priorities
<p>Inability to deliver on objectives of the pan-northern S&T Program</p>	<p>Build-up in-house capacity to conduct science and technology projects in support of mandate.</p> <p>Increase cooperation between other federal departments and other partners.</p> <p>Leverage partnerships (depts., industry, international, etc.) to increase ability to deliver on the objectives of this program and its sub-programs.</p>	<p>Science and Technology for the North</p>	<p>Minister Bennett's mandate letter:</p> <p>"Lead our government's work in the North. You will advance work on a shared Arctic Leadership model and a new Arctic Policy for Canada, and support northern programming, governing institutions, and scientific initiatives."</p> <p>"Work with the Minister of Environment and Climate Change on the implementation of the Pan-Canadian Framework on Clean Growth and Climate Change in the North and support northern communities confronting immediate climate adaptation challenges."</p> <p>Minister LeBlanc's mandate letter:</p> <p>"Lead our government's work in the North including a new Arctic Policy for Canada. In collaboration with the Minister of Crown-Indigenous Relations, continue to advance work on a shared Arctic Leadership model and support northern programming, governing institutions, and scientific initiatives."</p> <p>"Support the Minister of Environment and Climate Change and provinces and territories on the implementation of the Pan-Canadian Framework on Clean Growth and Climate Change, and support northern communities confronting immediate climate adaptation challenges."</p>

Risks	Mitigating strategy and effectiveness	Link to the department's Programs	Link to mandate letters ⁱⁱⁱ commitments and any government-wide or departmental priorities
<p>Inuit representation in POLAR positions</p> <p>The interest, availability and preparedness of Inuit and other factors will have implications for POLAR's obligations under the Nunavut Agreement to work towards 85% representation of Inuit across job groups and levels.</p>	<p>Continue to support Pilimaksaivik in the development and implementation of a whole-of-government (WoG) approach to Inuit employment and training.</p> <p>Develop and implement a POLAR-specific Inuit Employment and Pre-employment Training Plan that supplements and leverages WoG initiatives.</p>	<p>Internal services</p> <p>Outreach and capacity building</p>	<p>Minister Bennett mandate letter:</p> <p>“Renew the relationship between Canada and Indigenous Peoples, based on recognition, rights, respect, co-operation, and partnership.”</p> <p>Minister LeBlanc's mandate letter:</p> <p>“Support the Minister of Crown-Indigenous Relations on the work taking place in full partnership with First Nations, Inuit and Métis Peoples on the creation of the Recognition and Implementation of Rights Framework. Specifically, you will support her with engagement with provinces and territories on the Framework.”</p>

Risks	Mitigating strategy and effectiveness	Link to the department's Programs	Link to mandate letters ⁱⁱⁱ commitments and any government-wide or departmental priorities
<p>Staff Recruitment and Retention POLAR may struggle to attract and retain scientific and technical staff to work in Cambridge Bay.</p> <p>Loss of momentum and difficulties with program continuity as temporary staff turns over in favour of permanent staff.</p>	<p>Staffing will target Nunavut Inuit and both early and late career scientists and personnel.</p> <p>Ensure appropriate transition period between temporary and permanent staff.</p> <p>Continue to support Pilimmaksaivik in the development and implementation of a whole-of-government (WoG) approach to Inuit employment and training in Nunavut.</p> <p>Implement a POLAR-specific Inuit Employment Plan that supplements and leverages WoG initiatives.</p> <p>Funding of programs targeting Inuit youth to increase interest in science-based positions.</p>	<p>Science and Technology for the North</p> <p>Internal services</p>	<p>Minister Bennett mandate letter: “Renew the relationship between Canada and Indigenous Peoples, based on recognition, rights, respect, co-operation, and partnership.”</p> <p>Minister LeBlanc’s mandate letter: “Lead our government’s work in the North including a new Arctic Policy for Canada. In collaboration with the Minister of Crown-Indigenous Relations, continue to advance work on a shared Arctic Leadership model and support northern programming, governing institutions, and scientific initiatives.”</p>

Results: what we achieved

Program: Science and Technology for the North

Description

This program aims to anchor a strong research presence in Canada’s Arctic. It consists of two sub-programs: 1) Science and Monitoring and 2) Technology Development and Transfer. By partnering with key stakeholders and through its internal science and technology capacity, POLAR will acquire the wide range of information needed to pursue effective solutions to polar issues, policy and program development, and advance Canada’s position as a leading Arctic nation. This program will create an environment in which both Indigenous Knowledge and science contribute to addressing challenges in the Arctic.

Sub-Program: Science and Monitoring

The Science and Monitoring sub-program aims to collaborate with organizations on cross-disciplinary and cross-sectoral issues in order to leverage collective experience, expertise, and resources. This program will also fund, through Grants and Contributions, external recipients (e.g., academics, communities, not-for-profit organizations, industry, and other levels of governments) who can help deliver on POLAR’s priorities on science, technology and monitoring excellence.

Sub-Program: Technology Development and Transfer

The Technology Development and Transfer sub-program aims to establish POLAR as a major hub for arctic technology development by providing a research platform, expertise, infrastructure, and funding to support northern entrepreneurs and innovators in developing, adapting, and testing technologies that could be used in the North.

Results

The results achieved by the Science and Technology for the North program are described in the following table.

Results Achieved – Science and Technology for the North

Expected results	Performance indicators	Target	Date to achieve target	2017–18 Actual results*	2016–17 Actual results*	2015–16 Actual results*
1.1 Sustainable use of Arctic land and resources is supported by science and technology research and training activities facilitated by POLAR.	The number of projects undertaken via agreements/ MOUs with external partners.	Baseline to be determined	Baseline to be determined	7	3	35
	The number of joint research projects with external partners.	Baseline to be determined	Baseline to be determined	14	7	Data unknown
	The level of investment by partners in research activities with POLAR.	Baseline to be determined	Baseline to be determined	Data unknown	Data unknown	Data unknown
	The number of scientists working with POLAR.	Baseline to be determined	Baseline to be determined	Data unknown**	Data unknown**	Total number of Principal Investigators working with POLAR: 31
	The number of researcher-days of use at the CHARS facilities (e.g., GoC, International).	Baseline to be determined	Baseline to be determined	2408	860	Data unknown
1.1.1 Projects funded by POLAR strengthen northern capacity and leadership in science and monitoring.	The number of monitoring projects with external partners.	Baseline to be determined	Baseline to be determined	13	4	17
	Investment by partners in monitoring activities with POLAR.	Baseline to be determined	Baseline to be determined	Data unknown	Data unknown	Data unknown
	Take up on competitive award processes.	Baseline to be determined	Baseline to be determined	Data unknown	Data unknown	Data unknown

Results Achieved – Science and Technology for the North

Expected results	Performance indicators	Target	Date to achieve target	2017–18 Actual results*	2016–17 Actual results*	2015–16 Actual results*
	Publications of POLAR supported research.	Baseline to be determined	Baseline to be determined	Data unknown	Data unknown	Data unknown
	Number of citations of POLAR research.	Baseline to be determined	Baseline to be determined	Data unknown	Data unknown	Data unknown
1.1.2 Solutions to Arctic challenges are developed using traditional or local knowledge and science and technology.	The number of technology projects with external partners.	Baseline to be determined	Baseline to be determined	5	0	1
	Investment by partners in technology projects with POLAR.	Baseline to be determined	Baseline to be determined	\$1,464,000	Data unknown	Data unknown
	Spin off investments/sales of new technologies in northern communities.	Baseline to be determined	Baseline to be determined	Data unknown	Data unknown	Data unknown

* As a new agency, POLAR is not yet in a position to compile data on all of its indicators as activities have not yet reached a steady state. For the results reported as “Data unknown,” supporting procedures and systems have not been fully developed to compile data on actual results.

** While data on this indicator were collected in 2015-16, in subsequent years, the number of scientists working with POLAR could not be confirmed as POLAR’s projects (both internal and externally funded) have become more numerous and more complex, with multiple partners.

Budgetary financial resources (dollars)

2017–18 Main Estimates	2017–18 Planned spending	2017–18 Total authorities available for use	2017–18 Actual spending (authorities used)	2017–18 Difference (Actual spending minus Planned spending)
13,599,331	13,599,331	13,470,969	13,044,111	-555,220

Human resources (full-time equivalents)

2017–18 Planned full-time equivalents	2017–18 Actual full-time equivalents	2017–18 Difference (Actual full-time equivalents minus Planned full-time equivalents)
22	19	-3

Program: Polar Knowledge Application

Description

The program aims to promote and further strengthen polar science and technology nationally and internationally and build science capacity through training, outreach, and learning opportunities. Outreach and engagement activities will provide the feedback necessary to ensure polar knowledge is relevant to partners, including Indigenous Peoples. The program consists of two sub-programs: 1) Knowledge Management and 2) Outreach and Capacity Building

Results

Results achieved

The Knowledge Management and Engagement program has achieved significant results in mobilizing polar knowledge of the Arctic and Antarctic to a variety of national and international stakeholders. POLAR has been asked to provide direct policy support to senior government-led initiatives, including co-chairing the Arctic Science and Indigenous Knowledge Working Group of the Arctic Policy Framework, preparations for the Second Arctic Science Ministerial and leading Canada through the negotiations and implementation of the Arctic Council's legally binding Agreement on Enhancing International Scientific Cooperation in the Arctic.

Coordinating information exchanges among multi-disciplinary stakeholders enhances knowledge to action activities to provide holistic solutions as seen in the areas of marine science in the Kitikmeot region of Nunavut, northern housing and Canadian Antarctic research. POLAR actively strengthens partnerships to leverage domestic and international research to assess gaps to stimulate new knowledge in key Arctic and Antarctic research areas. Our leadership towards ensuring the respectful use of Indigenous Knowledge is recognized by our successful conference sessions at the Canadian Science Policy Conference in November 2017 and ArcticNet's conference on Arctic Change in December 2017.

Participating in communications and outreach activities such as Science Odyssey, Canada 150 Bio Blitz, and the C3 Expedition, ensures that Canadians benefit from the knowledge generated. Continuous communication outputs through social media, mail outs and the Canadian Geographic Polar Blog series reaches both researchers and interested members of the general public. Our funding programs provide financial support to external partners for capacity building and training opportunities, such as the Nunavut Arctic College Environmental Technology Program in Cambridge Bay, Yukon First Nations youth community-based monitoring training and Actua science camps for children and youth across the three territories. POLAR actively communicates with government, academia, northern and Indigenous organizations to strengthen connections and enhance information exchanges by presenting and attending conferences, Annual General Meetings, and stakeholder workshops.

Additional information on the results achieved by the Polar Knowledge Application program are described in the following table.

Results Achieved – Polar Knowledge Application

Expected results	Performance indicators	Target	Date to achieve target	2017–18 Actual results*	2016–17 Actual results*	2015-16 Actual results*
1.1 Science and Technology for the North - Sustainable use of Arctic land and resources is supported by science and technology research and training activities facilitated by POLAR.	The number of projects undertaken via agreements/MOUs with external partners.	Baseline to be determined	Baseline to be determined	7	Data unknown	2
1.2 Polar Knowledge Application - Canada's science and technology programming and policies are impacted by knowledge on polar science and technology.	Percentage of projects directly linked to domestic and international investment of Arctic programming and policies.	Baseline to be determined	Baseline to be determined	Data unknown	Data unknown	Data unknown
1.2.1 Knowledge Management - Knowledge gathered and produced by POLAR informs polar science and technology stakeholders.	Percentage of media dissemination to key stakeholders including Indigenous communities.	Baseline to be determined	Baseline to be determined	Data unknown	Data unknown	Data unknown

Results Achieved – Polar Knowledge Application

Expected results	Performance indicators	Target	Date to achieve target	2017–18 Actual results*	2016–17 Actual results*	2015-16 Actual results*
1.2.2 Outreach and Capacity Building – Northern youth and the domestic and international policy community are made aware of Canadian world-class knowledge on Arctic science and technology and current and future job opportunities at the Canadian High Arctic Research Station (CHARS) campus.	The level of participation in projects by northern communities (e.g., number of northern-based participants, nature & duration of involvement, community engagement). Awareness of POLAR's mandate among scientific research organizations (nationally and internationally).	Baseline to be determined	Baseline to be determined	Data unknown	Data unknown	Data unknown
	POLAR web traffic volume based on web analytics data; media coverage (trend in the number of media references) and level of social media coverage and interactions).	Baseline to be determined	Baseline to be determined	3731 (approximate number of hits)	Data unknown	Data unknown

Results Achieved – Polar Knowledge Application

Expected results	Performance indicators	Target	Date to achieve target	2017–18 Actual results*	2016–17 Actual results*	2015-16 Actual results*
1.2.2 Outreach and Capacity Building – Northern youth and the domestic and international policy community are made aware of Canadian world-class knowledge on Arctic science and technology and current and future job opportunities at the Canadian High Arctic Research Station (CHARS) campus.	Level and number of POLAR opportunities for science or science support related training for northerners.	Baseline to be determined	Baseline to be determined	Data unknown	Data unknown	Data unknown
	Number of jobs created for northerners with POLAR support.	Baseline to be determined	Baseline to be determined	Data unknown	Data unknown	Data unknown
	Number of science camps receiving POLAR support (including number and age range of participants).	Baseline to be determined	Baseline to be determined	76	Data unknown	10
	Number of northerners employed by POLAR (including number of applicants, success rate, Inuit representation, career progression).	Baseline to be determined	Baseline to be determined	19	Data unknown	Data unknown

* As a new agency, POLAR is not yet in a position to compile data on all of its indicators as activities have not yet reached a steady state. For the results reported as “Data unknown,” supporting procedures and systems have not been fully developed to compile data on actual results.

Budgetary financial resources (dollars)

2017–18 Main Estimates	2017–18 Planned spending	2017–18 Total authorities available for use	2017–18 Actual spending (authorities used)	2017–18 Difference (Actual spending minus Planned spending)
3,106,557	3,106,557	3,784,232	3,480,211	373,654

Human resources (full-time equivalents)

2017–18 Planned full-time equivalents	2017–18 Actual full-time equivalents	2017–18 Difference (Actual full-time equivalents minus Planned full-time equivalents)
14	12	-2

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

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. The 10 service categories are: Management and Oversight Services; Communications Services; Legal Services; Human Resources Management Services; Financial Management Services; Information Management Services; Information Technology Services; Real Property Services; Materiel Services; and Acquisition Services.

Results

During fiscal year 2017-18, POLAR performed the following internal services delivery and management initiatives:

- Staff the POLAR organization to increase internal capacity and recruit staff to the CHARS campus in Cambridge Bay as facilities become operational.
- Support Pilimmaksaivik in the development and implementation of a whole- of- government (WoG) approach to Inuit employment and training and POLAR-specific plans that supplement and leverage WoG initiatives.
- Adopt and enhance information management and information technology solutions to advance collection, management, reporting, and safeguarding of business information within POLAR and with its partners.
- Build a solid foundation for internal services through the ongoing development of corporate management programs, notably in the area of planning and performance measurement, occupational health and safety, information technology and information management, and project management.
- Build sound financial management practices for POLAR by establishing forecasting tools and engaging managers in financial planning.
- Assess options to support POLAR's corporate process management, in particular, human resources, business intelligence, and financial information systems (for example onboarding to SAP).

Budgetary financial resources (dollars)

2017–18 Main Estimates	2017–18 Planned spending	2017–18 Total authorities available for use	2017–18 Actual spending (authorities used)	2017–18 Difference (Actual spending minus Planned spending)
4,888,343	4,888,343	5,590,356	5,003,805	115,462

Human resources (full-time equivalents)

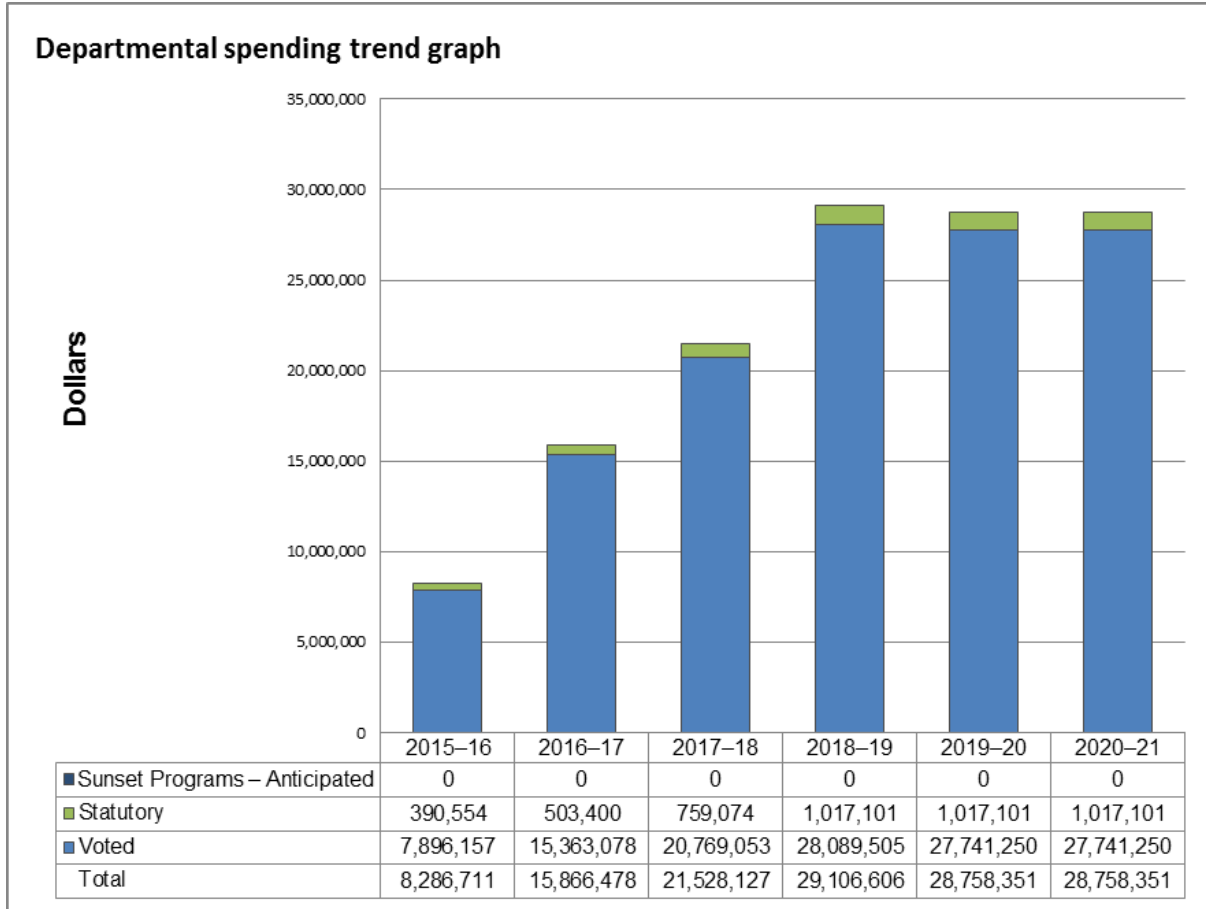
2017–18 Planned full-time equivalents	2017–18 Actual full-time equivalents	2017–18 Difference (Actual full-time equivalents minus Planned full-time equivalents)
16	24	8

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

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	2017–18 Main Estimates	2017–18 Planned spending	2018–19 Planned spending	2019–20 Planned spending	2017–18 Total authorities available for use	2017–18 Actual spending (authorities used)	2016–17 Actual spending (authorities used)	2015–16 Actual spending (authorities used)
Polar Science and Knowledge	16,705,888	16,705,888	19,847,349	19,499,094	17,255,201	16,524,322	11,569,877	6,479,469
Subtotal	16,705,888	16,705,888	19,847,349	19,499,094	17,255,201	16,524,322	11,569,877	6,479,969
Internal Services	4,888,343	4,888,343	9,259,257	9,259,257	5,590,356	5,003,805	4,296,601	1,806,742
Total	21,594,231	21,594,231	29,106,606	28,758,351	22,845,557	21,528,127	15,866,478	8,286,711

There was no significant variance between the actual versus planned spending in 2017-2018.

The increase in voted spending from 2016-17 to 2017-18 was primarily due to the reprofiling of \$2.5 million in transfer payment funds from 2016-17 to 2017-18 in order to fulfill POLAR commitments.

The increase in planned spending 2018-19 is related to the transfer of operational responsibilities for the CHARS campus to POLAR from CIRNAC, impacting the Science & Technology for the North and Polar Knowledge Application programs, as well as Internal Services. Final transfer of assets with full responsibilities for the governance and maintenance of all facilities will be completed in 2019-20.

Actual human resources

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

Core Responsibilities and Internal Services	2015–16 Actual full-time equivalents	2016–17 Actual full-time equivalents	2017–18 Planned full-time equivalents	2017–18 Actual full-time equivalents	2018–19 Planned full-time equivalents	2019–20 Planned full-time equivalents
Polar Science and Knowledge	20	25	36	31	32	32
Subtotal	20	25	36	31	32	32
Internal Services	8	14	16	24	26	26
Total	28	39	52	55	58	58

There was no significant change in total actual versus planned FTEs in 2017-18. There was, however, an increase in actual FTEs from 2016-17 to 2017-18 due to planned additional capacity needed to support the development of the agency and the official opening of the CHARS campus facilities.

Expenditures by vote

For information on POLAR’s organizational voted and statutory expenditures, consult the [Public Accounts of Canada 2017–2018](#).^{vi}

Government of Canada spending and activities

Information on the alignment of POLAR’s spending with the Government of Canada’s spending and activities is available in the [GC InfoBase](#).^v

Financial statements and financial statements highlights

Financial statements

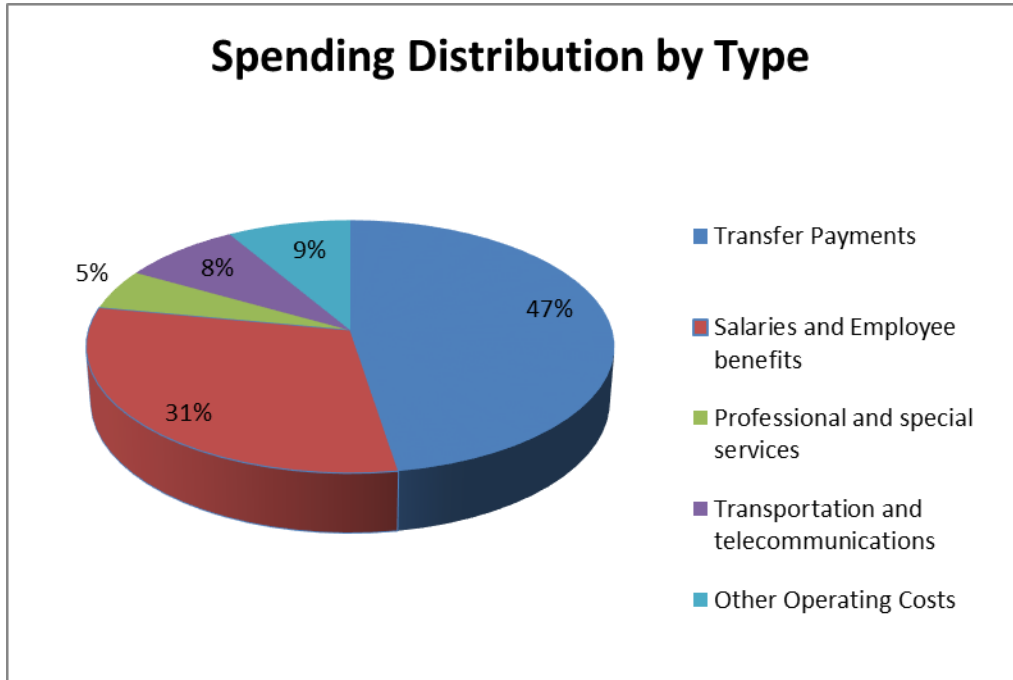
POLAR’s financial statements (unaudited) for the year ended March 31, 2018, are available on the [departmental website](#).ⁱ

Financial statements highlights

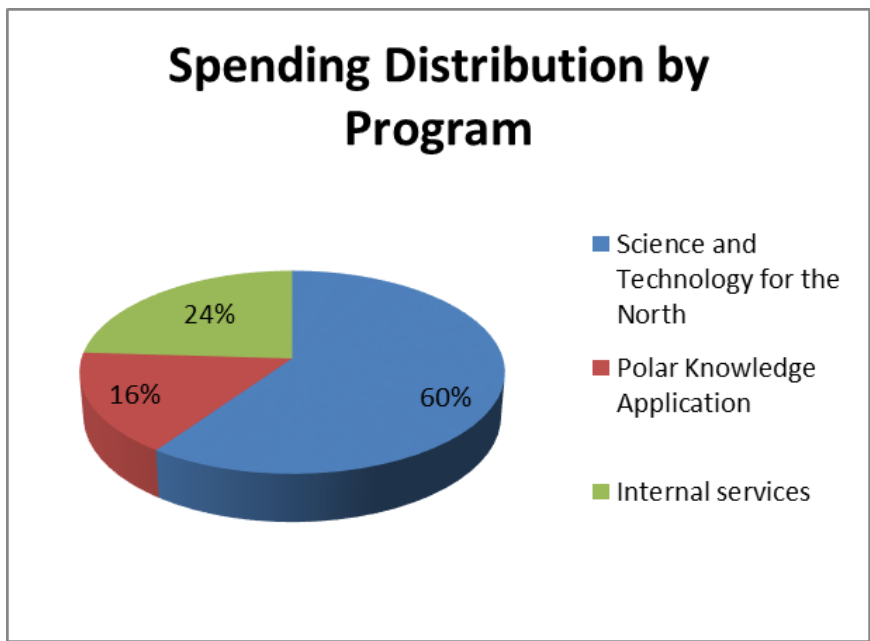
Condensed Statement of Operations (unaudited) for the year ended March 31, 2018 (dollars)

Financial information	2017–18 Planned results	2017–18 Actual results	2016–17 Actual results	Difference (2017–18 Actual results minus 2017–18 Planned results)	Difference (2017–18 Actual results minus 2016–17 Actual results)
Total expenses	22,525,492	21,986,755	15,826,382	(538, 737)	6,160,373
Total revenues	0	0	0	0	0
Net cost of operations before government funding and transfers	22,525,492	21,986,755	15,826,382	(538, 737)	6,160,373

Total expenses for 2017-18 increased by \$6.2 million compared to 2016-17. The majority of this increase is attributed to transfer payments of \$3.3 million as well as the increase of salaries and employee benefits of \$2.1 million. The remaining increase of \$0.8 million is mostly due to increases in transportation and telecommunications, rentals and utilities, materials and supplies.



Total expenses for POLAR were \$21.99 million in 2017-18 of which \$10.4 million or 47% was spent on transfer payments, \$6.7 million or 31% was spent on salaries and employee benefits, \$1.8 million or 8% was spent on transportation and telecommunications and \$1.1 million or 5% was spent on professional services fees. The balance of \$1.9 million or 9% of POLAR costs was spent on other operating expenses such as machinery and equipment, utilities, materials and supplies as well as rentals.



Based on POLAR’s financial statements, total expenses were \$21.99 million in 2017–18. The majority of the funds, \$13.1 million or 60%, were spent on the Science and Technology for the North; while Polar Knowledge Application represented \$3.6M or 16% of total expenses and Internal Services represented \$5.3 million or 24%.

Condensed Statement of Financial Position (unaudited) as of March 31, 2018
(dollars)

Financial information	2017–18	2016–17	Difference (2017–18 minus 2016–17)
Total net liabilities	3,239,016	2,358,839	880,177
Total net financial assets	2,887,665	2,059,577	828,088
Departmental net debt	351,351	299,262	52,089
Total non-financial assets	1,819,129	1,879,527	(60,398)
Departmental net financial position	1,467,778	1,580,265	(112,487)

Total net liabilities were \$3.2 million at the end of 2017–18, which is an increase of \$0.9 million from the previous year's total net liabilities of \$2.4 million. The accounts payable and accrued liabilities represent the largest portion of liabilities, at \$2.9 million (89%) of total liabilities. Other liabilities include vacation pay and compensatory leave and future employee benefits for a total of \$0.3 million (11%). The change in total liabilities can be attributed mainly to a timing difference in the recording of the expenses.

Total net financial assets were \$2.9 million at the end of 2017–18, which is an increase of \$0.8 million from the previous year's total net financial assets of \$2.1 million. The assets due from the Consolidated Revenue Fund accounted for \$2.7 million (94%) of total financial assets and accounts receivable accounted for the remaining \$0.2 million (6%). The change in total net financial assets can be largely attributed to an increase in the Consolidated Revenue Fund.

Supplementary information

Corporate information

Organizational profile

Appropriate minister(s): The Honourable Dominic LeBlanc, P.C., M.P.

Chairperson: Mr. Richard Boudreault

Institutional head: Dr. David J. Scott, Ph.D., President and Chief Executive Officer

Ministerial portfolio: Minister of Intergovernmental and Northern Affairs and Internal Trade

Enabling instrument(s): Canadian High Arctic Research Station Act

Year of incorporation / commencement: 2015

Other: POLAR is overseen by a nine-member Board of Directors, including a Chairperson and Vice-Chairperson. The Board approves the organization's science and technology plan and annual work plans and budget. The Board is accountable to the Minister of Minister of Intergovernmental and Northern Affairs and Internal Trade. All members are appointed by Order-in-Council to hold office for terms not exceeding five years, and are eligible for re-appointment for a second term of office. Members of the Board of Directors hold office on a part-time basis.

Reporting framework

POLAR's Strategic Outcome and Program Alignment Architecture of record for 2017–18 are shown below:

1. **Strategic Outcome:** Canada has world-class Arctic science and technology to support the development and stewardship of Canada's North and is recognized as a leader on circumpolar research issues.

1.1 Program: Science and Technology for the North

1.1.1 Sub-Program: Science and Monitoring

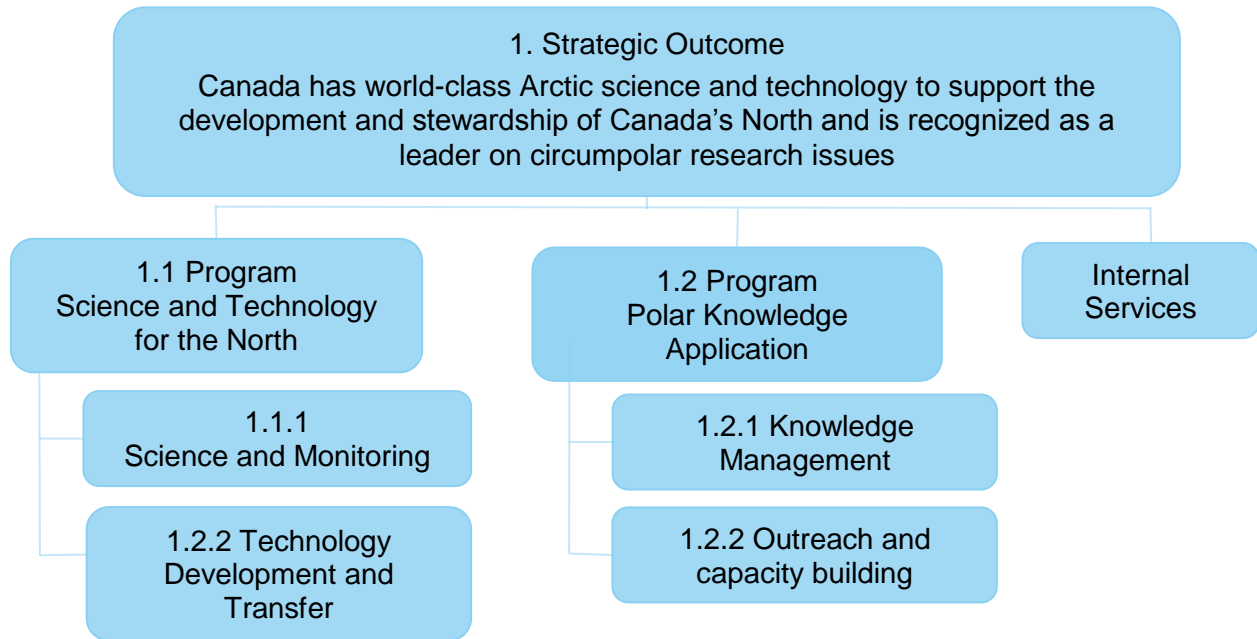
1.1.2 Sub-Program: Technology Development and Transfer

1.2 Program: Polar Knowledge Application

1.2.1 Sub-Program: Knowledge Management

1.2.2 Sub-Program: Outreach and Capacity Building

Internal Services



Supporting information on lower-level programs

Supporting information on lower-level programs is available on the [GC InfoBase](#).^v

Supplementary information tables

The following supplementary information tables are available on [POLAR's website](#):ⁱ

- ▶ Details on transfer payment programs of \$5 million or more

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](#).^{vii} 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

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Tel.: (613) 943-8605

David J. Scott, Ph.D., President and Chief Executive Officer

Tel. (613) 943-8605

Email: info@polar.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.

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 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.

evaluation (évaluation)

In the Government of Canada, the systematic and neutral collection and analysis of evidence to judge merit, worth or value. Evaluation informs decision making, improvements, innovation and accountability. Evaluations typically focus on programs, policies and priorities and examine questions related to relevance, effectiveness and efficiency. Depending on user needs, however, evaluations can also examine other units, themes and issues, including alternatives to existing interventions. Evaluations generally employ social science research methods.

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 approach used to assess how diverse groups of women, men and gender-diverse people may experience policies, programs and initiatives. The “plus” in GBA+ acknowledges that the gender-based analysis goes beyond biological (sex) and socio-cultural (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. Examples of GBA+ processes include using data disaggregated by sex, gender and other intersecting identity factors in performance analysis, and identifying any impacts of the program on diverse groups of people, with a view to adjusting these initiatives to make them more inclusive.

government-wide priorities (priorités pangouvernementales)

For the purpose of the 2017–18 Departmental Results Report, those high-level themes outlining the government's agenda in the 2015 Speech from the Throne, namely: 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.

Management, Resources and Results Structure (structure de gestion, des ressources et des résultats)

A comprehensive framework that consists of an organization’s inventory of programs, resources, results, performance indicators and governance information. Programs and results are depicted in their hierarchical relationship to each other and to the Strategic Outcome(s) to which they contribute. The Management, Resources and Results Structure is developed from the Program Alignment Architecture.

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 that receive Treasury Board approval by February 1. Therefore, planned spending may include amounts incremental to planned expenditures 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.

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 what must be done first to support the achievement of the desired Strategic Outcome(s) or Departmental Results.

program (programme)

A group of related resource inputs and activities that are managed to meet specific needs and to achieve intended results and that are treated as a budgetary unit.

Program Alignment Architecture (architecture d’alignement des programmes)

A structured inventory of an organization’s programs depicting the hierarchical relationship between programs and the Strategic Outcome(s) to which they contribute.

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.

sunset program (programme temporisé)

A time-limited program that does not have an ongoing funding and policy authority. When the program is set to expire, a decision must be made whether to continue the program. In the case of a renewal, the decision specifies the scope, funding level and duration.

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. Polar Knowledge Canada, <https://www.canada.ca/en/polar-knowledge>
- ii. Canadian High Arctic Research Station Act, <http://laws-lois.justice.gc.ca/eng/acts/C-17.8/page-1.html>
- iii. The Minister's mandate letter, <https://pm.gc.ca/eng/mandate-letters>
- iv. GC InfoBase, <https://www.tbs-sct.gc.ca/ems-sgd/edb-bdd/index-eng.html#start>
- v. GC InfoBase, <https://www.tbs-sct.gc.ca/ems-sgd/edb-bdd/index-eng.html#start>
- vi. Public Accounts of Canada 2017–2018, <http://www.tpsgc-pwgsc.gc.ca/recgen/cpc-pac/index-eng.html>
- vii. Report on Federal Tax Expenditures, <http://www.fin.gc.ca/purl/taxexp-eng.asp>