

SUMMARY: THE REPORT OF THE ADVISORY PANEL ON FEDERAL SUPPORT FOR FUNDAMENTAL SCIENCE

“Independent science and scholarly inquiry have been underfunded for much of the past decade, as the federal government has concentrated resources on innovation-facing and priority-driven programs.”

On June 13, 2016, Minister of Science Kirsty Duncan launched an independent review of federal funding for fundamental science. A panel of nine experts, headed by David Naylor, released its report on April 10, 2017. The report’s recommendations fall into two broad streams:

- Making transformative investments
- Creating stronger oversight and governance for federal funding agencies

A. Transformative Investments

1. DIRECT PROJECT FUNDING

“The panel’s single-most important recommendation is that the federal government should rapidly increase its investment in independent investigator-led research”

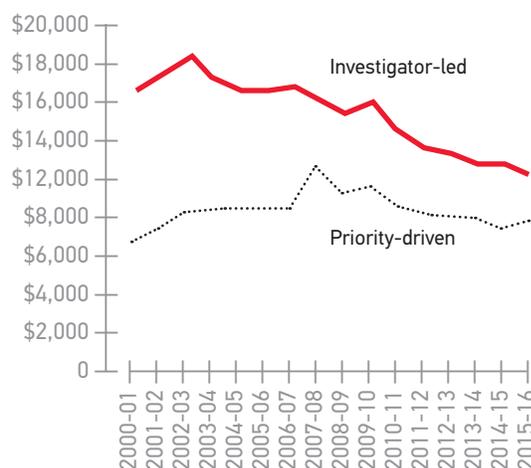
The Need

Funding for investigator-led research has plummeted (see Exhibit 6.2), and with it, success rates for grants in many disciplines. The recommendation for investment moves the balance of funding back toward a 70:30 ratio, and addresses current gaps.

Major Recommendations:

- Gradually increase new investment in independent investigator-led research to reach \$485 million/year
- Take a systematic approach for international collaboration, multidisciplinary work, high-risk ventures, and projects requiring a rapid response.

Exhibit 6.2: Granting Council Funding per Researcher for Investigator-led and Priority-driven Research (Constant 2000 Dollars)



Source: Compilations from the secretariat based on data provided by granting councils. The number of researchers for 2014 to 2016 was extrapolated from prior year growth trends.

2. INFRASTRUCTURE AND OPERATING FUNDING FOR INFRASTRUCTURE

The Need

The lack of an annual budget for Canada Foundation for Innovation leads to inconsistent investment year over year, impeding planning and coordination. Canada also needs more nation-wide coordination of digital research infrastructure to reap benefits from research data. Matching funding for major science initiatives that serve researchers nationally is challenging, as provinces are often reluctant to provide match for a Canada-wide initiative.

Major Recommendations

- Stabilize CFI funding.
- Improve co-ordination of digital research infrastructure.
- Improve support for major science initiatives/Infrastructure operating costs

1 All information, including quotes, graphs, and the information to create summary tables, are taken from Investing in Canada’s Future: Strengthening the Foundations of Canadian Research (2017), the report of the Advisory Panel on Federal Support for Fundamental Science.



3. SUPPORT FOR STUDENTS, SCHOLARS AND SCIENTISTS

The Need

The creation of scholarship and fellowship programs over time has resulted in a lack of consistency as to the appropriate value, duration, and international portability of graduate and post-graduate awards across programs. Many of our most talented young researchers are therefore underfunded. As well, the dollar value of Canada Research Chairs has remained unchanged since the inception of the program in 2000, causing their real value to have dropped considerably.

Major Recommendations

- Harmonize scholarship and fellowship programs and optimize to attract international talent.
- Improve funding levels, allocation, and management of CRC awards.



4. FACILITIES AND ADMINISTRATION (F&A) COSTS

The Need

F&A costs are expenses directly related to the research enterprise, but not to an individual grant. They cover commercialization and business outreach costs, maintaining equipment, meeting regulatory standards, computational services, lighting, heating, financial administration of grants, HR services for research staff, and other costs of administering grants and awards. These generally run to about 40% to 60% of a research grant. The federal government currently reimburses F&A costs at an average of 21.6%, meaning that universities must cross-subsidize the research mission at the expense of teaching and student services.

Major recommendation:

- Improve Research Support Fund reimbursement rate to 40%.

Summary of Financial Investment Needed to Renew Canadian Research (\$ Millions)

	Year 1	Year 2	Year 3	Year 4
1. Direct project funding	155	310	465	485
2. Operating funding for infrastructure	65	65	65	65
3. Support for students, scholars and scientists	70	210	245	280
4. Facilities and administration costs	96	206	362	478
Total	386	791	1,137	1,308²

B. Governance

“Canada’s federal research ecosystem, despite many strengths, is weakly coordinated and inconsistently evaluated, and has not had consistent oversight.”

The Need

Federal-provincial-territorial collaboration as well as the links between extramural and intramural research need strengthening. Current advisory systems have not had the stability and support to make a lasting contribution. As well, there is no structure in place to improve coordination among the granting councils and with CFI, so efforts are dependent on individual leadership and are piecemeal.

Major Recommendations

- Create a new National Advisory Council on Research and Innovation (NACRI) to provide advice, strategic alignment and evaluation of Canada’s federal research and innovation ecosystems.
- Create a Four Agency Coordinating Board to develop and harmonize funding strategies, prioritizing cross-cutting issues related to early career researchers, equity and diversity, indigenous scholars and research, peer review.

² This figure represents approximately 0.04% of the overall federal government budget.