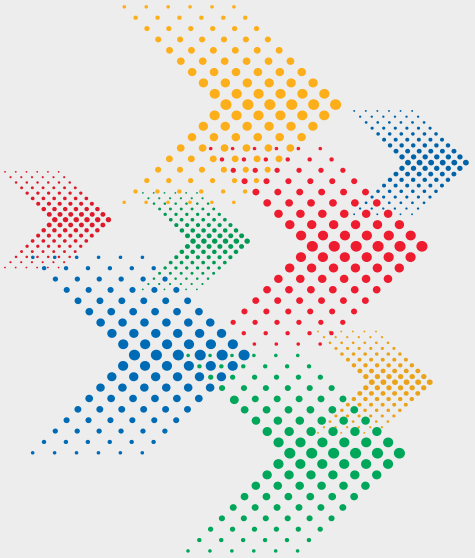
Polaris Platform

A proposal by Quebec's research-intensive universities to attract top talent and boost research capacity

May 23, 2025



Challenges and opportunities

For the Canadian research ecosystem, the recent volatility resulting from budgetary challenges and growing political constraints in the United States presents considerable risks. At the same time, the situation provides an opportunity for Canada to consolidate its scientific sovereignty by positioning itself as a stable destination for the world's top talents and to expand its role in international research partnerships. As is the case in the current economy, we need well considered public investments that will guarantee our future strength and competitiveness.

Université Laval · McGill · Université de Montréal · UdeS Université de Sherbrooke

Canadian initiatives have been proposed to harness emerging opportunities. Our consortium of Quebec research intensive universities is proposing a range of targeted and complementary measures that would benefit research institutions across Quebec and Canada. The Polaris platform puts forward a set of initiatives to increase Canadian sovereignty, economic resilience and strategic integration of research into Canada's innovation and industrial capacities. These initiatives cover a vast array of sectors of key importance to our society, including those vulnerable to disruption by geopolitical changes or that are essential to long-term prosperity, or to public confidence in our democratic institutions. Financing for these measures could be flexible and graduated, depending on governments' choices and capacities.

The Polaris platform has both federal and provincial components, which are harmonized with Canadian research objectives, and with Quebec's distinctive innovation ecosystem. The suggested initiatives enable flexible deployment based on priorities and opportunities. Investments, both for salary support and for infrastructure, should be made on a competitive basis and in a coordinated manner to offer integrated support to institutions for the range of expenses related to recruitment: salaries, fellowships, moving, set-up, equipment, etc.

The federal component

The objective of the Polaris platform is to consolidate Canadian leadership in science and technology while promoting economic resilience, global mobilization and the democratic values that are at the very heart of our society. Federally, several options stand out as priority levers for immediately strengthening Canada's ability to attract strategic talent, starting with the creation of Polaris chairs. Other initiatives, such as new doctoral and postdoctoral fellowships, would create a structured pathway for talent attraction. Furthermore, infrastructure investments would ensure long-term consolidation of scientific leadership in key sectors.

Canada would benefit from more highly qualified personnel and increased research activity, in science and technology, as well as in the social sciences and humanities, to increase productivity and innovation. The proposed chairs and fellowships could encompass a variety of fields crucial to Canada's strategic interests. These include artificial intelligence, RNA therapeutics, clean energy, quantum technologies, semi-conductor materials, climate change, the Arctic, democratic societies, natural resources, sustainable agriculture and food security, or culture. These diverse research areas reflect both the governments' emerging priorities and the desire to support research that contributes to the country's economic, social and environmental resilience.

- **Polaris research chairs**

  Recruitment of 25 to 100 world-renowned researchers would cost an average of $1 million annually, with an additional $500,000 from the Canada Foundation for Innovation (CFI) for infrastructure support. The scale of deployment depends on the level of strategic ambition of the program: 25 chairs would renew the current level of investment; 50 chairs would allow for strategic investment and growth; 100 chairs for a transformative national repositioning. The program is modelled on the Canada 150 Research Chairs program and could be financed from the federal envelope created by the conclusion of the C150 initiative.

  Estimated cost for 100 chairs: $550 million

- **Polaris industrial research chairs**

  Chairs created jointly by universities and the private sector, co-financed by federal partners like the National Research Council. The cost would be at the level of $1 million annually, of which $500,000 would be from the federal government. These chairs would be embedded in or closely collaborating with the private sector and focused on priority research areas, such as artificial intelligence, clean technologies, biomanufacturing and quantum technology. This program would help translate research into economic productivity and innovation.

  Estimated cost for 25 chairs: $50 million

- **National Polaris fellowships**

  Fellowships valued at $40,000 annually for four years, awarded to 500 foreign doctoral students, including those based in the United States, in targeted disciplines. These fellowships would complement federal graduate education fellowships, which were recently the subject of reforms, supporting international students within a coherent national talent-management framework.

  Estimated cost for 500 fellowships: $80 million

- **Polaris postdoctoral fellowships**

  Political decisions currently being made in the United States could increase the availability of highly qualified scientific talent. A program of postdoctoral fellowships could quickly attract promising young researchers to Canada and result in consolidated strategic research teams and immediate economic returns. Fellowships would offer competitive support to international researchers who wish to pursue their work in a stable, open and collaborative environment.

  Estimated cost (for example, 300 fellowships × $70,000 over two years: $42 million)

- **Polaris fellowships for early career researchers**

  Inspired by the Canada Research Fellowships and the University Research Fellowships, partial salary support awards for newly appointed professors in Canada through 150 early career researcher fellowships, to accelerate research. Investments in early careers bridge the support awarded to doctoral students and that awarded to research chairs for senior scientists.

  Estimated cost for 150 fellowships: $60 million

- **Investments in research sovereignty**

  Long-term, strategic investments in major infrastructure projects designed to ensure Canada's status as a leader and to support international partnerships. The priority areas include RNA platforms, powerful computing infrastructure for artificial intelligence, public interest data ecosystems and latest-generation scientific installations. This initiative would reinforce Canada's scientific independence in critical sectors, and these investments are aligned with the mission-oriented research approach, consistent with the objectives of the future research funding framework.

  Estimated cost: $2 billion over four years ($500 million a year)

The role of philanthropy

Philanthropy is a potential complementary source of support. Foundations and individual donors could be willing to support researchers confronted with growing barriers in other countries. At the same time, this type of involvement is generally easier to mobilize when there is a national framework that is coherent and visible. A structured initiative like Polaris would thus reinforce universities' capacity to attract private donations in support of shared objectives.


UNIVERSITÉ
LAVAL

McGill

Université
de Montréal

UDS
Université de
Sherbrooke