



2020 

The year "2020" is written in a large, blue, sans-serif font. To its right is a graphic element consisting of a blue square with a white diagonal line, forming a stylized arrow pointing to the right.

# NSERC 2020 STRATEGIC PLAN (2015-20)

Draft Discussion Document  
February 3, 2015



Natural Sciences and Engineering  
Research Council of Canada

Conseil de recherches en sciences  
naturelles et en génie du Canada

Canada 

The word "Canada" is written in a black, serif font. To its right is a small Canadian flag icon.

## **PREAMBLE**

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As Canadians we live in exciting times of breakthrough scientific discoveries and knowledge, of rapidly emerging technologies, and of new ways of harnessing the potential of scientific discovery and innovation.

It will require us to step up our game on the world stage. We must unleash the power of our talented people and strengthen the dynamic between discovery and innovation.

In the year 2020, we at NSERC see Canada as a thriving, dynamic, and globally connected nation that is a leader in fostering a dynamic interaction between discovery and innovation for the benefit of Canadians.

Through our scholarships and grants we fund over 11,000 professors and 30,000 students at institutions across Canada. Our partnerships with over 3,000 companies infuse industry with talent and knowledge while providing students with market-oriented skills and training.

As this country's primary enabler of natural science and engineering research, we look forward to playing a central role in implementing the newly announced Science, Technology and Innovation strategy.

Working with our partners we will build the talented, highly qualified people who can develop the discoveries and innovations that contribute to our quality of life. We will focus on the discovery-innovation continuum to push the boundaries of knowledge to provide social and economic benefits. We will be the go-to agency that opens the door for expert advice on issues of importance to Canadians on science and technology.

NSERC is well-positioned to build upon its strong foundation and promote research excellence. It is my pleasure to present NSERC's Draft Strategic Plan for 2015-20 for your consideration.

Dr. B Mario Pinto

## ***Executive Summary***

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The Natural Sciences and Engineering Research Council is committed to providing research results for Canadians, developing global excellence and leadership in discovery and innovation, and striving for organizational excellence. The 2014 Federal Strategy for Science, Technology and Innovation provides the strategic policy framework for delivering the NSERC 2020 Vision and Strategic Goals.

***VISION: To be a global leader in strengthening the dynamic between discovery and innovation for the societal and economic benefit of Canada.***

Our vision is founded on people, the lifeblood of discovery and innovation, and on achieving four strategic goals:

### **1) Fostering a science culture in Canada**

We will reinforce the foundation of science, technology, engineering and mathematics (STEM) to foster an interest in younger generations and underrepresented segments of Canadian society to achieve the benefits of scientific inquiry. We will promote a culture that highly values discovery and innovation by demonstrating the impacts of Canadian research.

### **2) Building a diversified and competitive research base**

We will build upon the potential of academic institutions of all sizes. We will mobilize and connect expertise across disciplines, sectors, and international boundaries. We will work collaboratively with partners to expand and leverage Canadian research expertise.

### **3) Strengthening the dynamic between discovery and innovation**

A strong dynamic between discovery and innovation is key to future Canadian prosperity. We will establish partnerships that address future challenges by facilitating the dynamic flow of ideas, talent, and technologies between academia and industry to benefit Canadian business and society.

### **4) Going global**

Discovery and innovation are intrinsically global. We will work with domestic and international partners to establish global networks for the future and increase our scientific footprint. We will mobilize agile teams that respond to strategic challenges and opportunities and that leverage world-class scientific and engineering knowledge, talent, and expertise.

## ***Our Vision***

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***To be a global leader in strengthening the dynamic between discovery and innovation for the societal and economic benefit of Canada***

## ***What we believe in***

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Our vision is based on guiding principles that underpin everything we do:

***We are committed to research results for Canadians***

We believe in the critically important role that science, technology, and innovation play in Canada's future prosperity. We invest in researchers and innovators to generate socio-economic impacts that will be of benefit to Canadians today and in the future.

***We are committed to global excellence and leadership in discovery and innovation***

We believe in the potential of Canadian researchers and innovators to be the best in the world. In keeping with that commitment, we will ensure that our investments are consistent with the highest standards of excellence, based on rigorous, transparent, and competitive merit review.

***We are committed to organizational excellence***

We strive to be an agile, dynamic, adaptive, and service-oriented agency. We are committed to streamlined program delivery through open communications and partnerships with researchers, institutions, and industry. We value and respect diversity and the contributions of others. We conduct our work with transparency.

## ***Our Strategic Goals***

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The 2014 Federal Strategy for Science, Technology and Innovation provides the policy framework for implementing the strategic goals of NSERC 2020.

To deliver on the Federal Strategy, NSERC seeks to be the catalyst for discovery and innovation in Canada, acting as the central enabler for natural sciences and engineering research. Shaped by our vision and guiding principles, we will help position Canada as a leader in strengthening the dynamic between discovery and innovation through four interconnected and mutually reinforcing strategic goals.

### ***Goal 1: Fostering a science culture in Canada***

Canada's future prosperity resides in the minds, skills, creativity, and aspirations of its people. Their ability to research critical issues, to develop new ways of thinking, and to promote new ideas will help Canada address national challenges and opportunities today and in the future.

Our goal will be to foster interest in science, technology, engineering, and mathematics through the promotion of a culture that highly values science and technology across society. Our strategy will be to encourage younger generations, underrepresented groups, and the general population to pursue careers in the natural sciences and engineering by demonstrating the impacts of Canadian research. We will engage the next generation of scientists, engineers, and skilled contributors to the Canadian economy by providing the support to learn about and discover advancements in science and technology.

**Outcome:** The creation of a robust science culture in Canada that values science and technology.

### ***Goal 2: Building a diversified and competitive research base***

Our goal will be to ensure that our investments continue to strengthen Canada's capacity to conduct world-class discovery research in natural sciences and engineering. Our strategy will be to provide the support and flexibility required for researchers to pursue scholarly scientific enquiry that will allow for the emergence of a dynamic, diversified and multidisciplinary research enterprise in Canada.

We will collaborate with key research funding partners and build upon research excellence in academic institutions of all sizes across Canada.

Through our funding policies and merit review processes we will support a strong and dynamic community of students and researchers from the earliest stages of their careers. We will facilitate their development of knowledge and skills, connect them to domestic and international centres of expertise, and challenge them to be the best in the world at what they do.

We aim to develop an internationally competitive research system by attracting students and researchers from within Canada and abroad to pursue research in Canada. By offering globally competitive scholarships, fellowships, and training opportunities, Canada will retain world-class researchers and capitalize on their research skills and expertise to address issues of national priority.

**Outcome:** A world-class, dynamic, diverse, and multidisciplinary discovery research enterprise in Canada.

### ***Goal 3: Strengthening the dynamic between discovery and innovation***

Strengthening processes of discovery and innovation and connecting them with global networks will be essential in fostering Canada's future prosperity. In an era of rapidly expanding, highly competitive global markets and supply chains, future economic growth will increasingly be determined by the ability of Canadian companies to leverage expertise and capitalize on research discoveries and technological innovations in this new economic reality.

Our goal will be to proactively integrate the ideas, talent, and capabilities in Canada's universities, colleges and polytechnics with Canadian companies to reinforce their research strength and accelerate their ability to innovate. Our strategy will be to establish partnerships that address future challenges by facilitating the dynamic flow of ideas, talent, and technologies between academia, industry and other agencies. We will provide training and research partnership opportunities for students and researchers by connecting, engaging and collaborating with Canadian companies based on business objectives and desired outcomes.

We will partner and align with other federal, provincial, and international organizations to accelerate the adoption of appropriate technologies into society and the market place.

**Outcome:** Science and engineering-based and market-oriented partnerships between Canada's universities, colleges and polytechnics with Canadian businesses resulting in economic and societal benefits to Canada.

#### ***Goal 4: Going global***

Discovery and innovation are intrinsically global. Canadians live in an era where traditional local and national boundaries of knowledge and discovery no longer apply. For Canadian researchers to succeed in this new environment, they need to be connected to cutting-edge discoveries and innovations wherever they are occurring.

Our goal will be to increase Canada's scientific footprint internationally. We will support the mobilization of Canadian researchers and innovators to participate in and take advantage of new developments abroad and at a scale that will have significant impact. Our strategy will be to work with domestic and international partners to leverage Canadian research strengths in areas of national importance and to gain access to world-class scientific and engineering knowledge, talent, and expertise.

We will help mobilize the formation of agile, multinational, interdisciplinary teams and networks to ensure that Canada can respond to the challenges of the future and take full advantage of the knowledge and expertise it needs to thrive in a globalized society.

**Outcome:** Access to and integration of global scientific and engineering knowledge and expertise that will have benefits to Canadian society.