

## The engineering profession's position

- In this rapidly changing and highly competitive world, improvements to research, development, and innovation (RDI) must remain a national priority. Industry and government investment in these activities contributes to both economic prosperity and quality of life, furthering the public interest. Innovation provides engineers with new ways of protecting the public through their work.
- RDI and associated new technologies must be developed in ways consistent with public health and safety and the public interest. Where engineering work is implicated in funding for research involving new technologies or the development of existing technologies for new public uses, this work must be done with the guidance of engineers who are licenced by one of the provincial and territorial regulators. Only engineers can take responsibility for engineering work.
- Investments in research and development are critical for driving economic growth and addressing social challenges, by spurring development of new products and services, strengthening competitive advantage, and increasing market participation.
- Investments in research and development are critical for attracting global talent to meet Canada's economic and social challenges.
- Investments in research and development should continue to spur innovation, and Canada should focus more resources and effort on commercialization and knowledge mobilization—areas in which the engineering profession is prominent.

## The challenge(s)

While Canada is a high performer on innovation metrics compared to smaller economies, Canada consistently underperforms other G7 countries. This underperformance is in part driven by lagging levels of research and development (R&D) expenditures in the private sector compared to other G7 countries.<sup>1</sup> The World Intellectual Property Organization's 2024 Global Innovation Rankings places Canada behind France, Germany, the United Kingdom, the United States, and Japan.<sup>2</sup>

In 2022, Canada's overall expenditures on R&D were just 1.81 per cent of GDP, well below the OECD average of 2.7% and far behind five other G7 peers.<sup>3</sup> RDI investments drive innovation and productivity, so Canada's

<sup>1</sup> Assessing Canadian Innovation, Productivity, and Competitiveness, ITIF, April 29, 2024, <https://itif.org/publications/2024/04/29/assessing-canadian-innovation-productivity-and-competitiveness/>

<sup>2</sup> World Intellectual Property Association. 2024 Global Innovation Index. [https://www.wipo.int/web-publications/global-innovation-index-2024/assets/67729/2000%20Global%20Innovation%20Index%202024\\_WEB2.pdf](https://www.wipo.int/web-publications/global-innovation-index-2024/assets/67729/2000%20Global%20Innovation%20Index%202024_WEB2.pdf)

<sup>3</sup> Statistics Canada. Gross domestic expenditures on research and development, 2022 (final). <https://www150.statcan.gc.ca/n1/daily-quotidien/241203/dq241203c-eng.htm>

underperformance in RDI metrics has real consequences for the economy. It also means that engineers in Canada have fewer opportunities to contribute to groundbreaking technological development in ways that safeguard the public while advancing economic productivity.

For this reason, Engineers Canada believes that the Government of Canada should leverage its position as the primary funder of basic research in Canada to provide national leadership on RDI. This focus is especially critical as Canada seeks to attract, build, and retain talent to support economic growth.

## How Engineers Canada has contributed

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Engineers Canada is supportive of and encourages all levels of government investment in and incentives for RDI in Canada, and strongly supports the streamlining of those funding opportunities to maximize the benefits to all Canadians. Engineers Canada also actively works to advance the attraction, retention, and equitable qualified people in Canada's high-productivity sectors through facilitating labour mobility and working to grow the engineering profession.

## Recommendations to the federal government

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Engineers Canada supports increased investments in RDI to facilitate Canada's continued advancement in innovation and productivity. Specifically, we urge the federal government to:

- Provide long-term and sustainable funding for basic and applied research through Canada's granting agencies, including expanded support for the Natural Sciences and Engineering Research Council.
- Work with research granting agencies and third-party funding organizations to reduce red tape and streamline the research funding process for innovative projects.
- Continue supporting commercialization and knowledge mobilization initiatives like Lab to Market programs to drive improved societal outcomes from RDI investments.
- Work with stakeholders to develop a strategic innovation agenda and framework to support the growth of incubators, accelerators, and emerging national networks for business and engineering innovation.
- Require that R&D proposals that meet the definition of engineering work properly involve engineers who are licensed by one of the provincial and territorial regulators wherever engineering work is implicated.

## How Engineers Canada will contribute

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With its network of expert volunteers, Engineers Canada will:

- Provide advice on funding priorities for RDI and productivity in existing and emerging engineering disciplines.
- Participate in government forums, national roundtables, and appear before House of Commons standing committees to advance RDI policies.
- Promote the importance of RDI to its many stakeholders, including engineers and engineering regulators, to foster technological advancement and address Canadian and global challenges through RDI.
- Provide advice in the early stages and facilitate the development of legislation and federal regulatory frameworks that promote RDI and productivity.

# About Engineers Canada

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Engineers Canada is the national association of the 12 engineering regulators that regulate engineering practice and license Canada’s more than 320,000 members of the engineering profession.