

Canada's Innovation Strengths and Priorities

"Innovation is, simply put, the understanding that better is always possible. It is the key that unlocks possibilities and opportunities. From urban centres to rural farms, from researchers looking to secure new patents to entrepreneurs working to bring their products to market, innovation is what allows Canadians to adapt to change and prepare for the future."

-Budget 2017

Canada is a world leader in science, technology and innovation, and is recognized as one of the most innovative and competitive economies in the world.

- 1st in the OECD highest share of university or college graduates among working-age population.
- #1 in the G-7 for higher-education sector R&D performance.
- \$15.4 billion of STI-related R&D spending is by Canadian businesses.
- 500,000 students graduate from Canada's colleges and universities each year.
- The availability of qualified engineers in the labour force in Canada is greater than in any other G7 country.
- 55.2% of workers have completed post-secondary education — the highest proportion of all OECD member countries.
- #2 in the G-7 for attracting venture capital financing.
- Canada generates over 4% of global knowledge, despite accounting for just .5% of the world's population.

- Canada's performance is consistently strong in measures related to the quality of education, market regulation, and social factors.
- Entrepreneurs make up 17% of the labour force.

Budget 2018 – Next Steps in the Innovation and Skills Plan

Budget 2018 builds on the Innovation and Skills Plan by transforming and re-tooling Canada's innovation programs to better support Canada's innovators.

- The **Canadian Trade Commissioner Service** of Global Affairs Canada is designated one of the four flagship platforms supporting innovation with a focus on providing the customized support needed by Canadian businesses to succeed and grow.
- The **Trade Commissioner Service's Business Women in International Trade (BWIT)** program received extra funding to better connect businesses owned by women with international market opportunities, including to help Indigenous women.
- Significant new investments are made to support Canadian scientists and researchers, including
 - to implement a **Digital Research Infrastructure Strategy** to harness **big data**,
 - to reinforce the **College and Community Innovation Program**,
 - to create a **new tri-council fund** to support research that is international, interdisciplinary, fast-breaking and higher-risk to accelerate Canada's transition to a more modern approach to research.

- A new **Women Entrepreneurship Strategy** will be implemented to help women entrepreneurs scale up their businesses.

Budget 2017 - Building a prosperous and innovative Canada

The Innovation and Skills Plan is an ambitious effort to make Canada a world leading centre for innovation, to help create more good, well-paying jobs, and help strengthen and grow the middle class.

- **~ \$ 2 B to Strengthen Research and Science** through ISED and other science-based departments and agencies (Natural Resources, Fisheries, Agriculture, Environment/Climate Change)
- **Clean tech** – Accelerate the growth of clean tech companies and support Clean tech R&D, demonstration and adoption (\$2.2 billion)
- **Pan-Canadian A.I. Strategy** – Retain and attract top academic talent in the field of artificial intelligence, and increase the number of post-graduate trainees and researchers in this area - \$125 M (5 years)
- **Quantum/ICT** – Support the expansion of broadband networks in rural Canada - \$500M and funding the institute of Quantum Computing - \$10 M (2 years)
- **Superclusters** – Support a small number of business-led innovation agglomerations with the greatest potential to accelerate economic growth – \$950 M (5 years)

- **Six priority areas prioritized** to expand growth and create jobs: Advanced manufacturing; Agri-food; Clean technology; Digital industries; Health/bio-sciences; and Clean resources.
- Establishment of **Innovation Canada**, a new platform led by Innovation, Science and Economic Development Canada that will coordinate and simplify the support available to Canada's innovators.
 - Innovation Canada will serve as a one-stop shop for Canada's innovators and innovation programs.
- **Chief Science Advisor** - Prime Minister Justin Trudeau and Minister of Science Kirsty Duncan announced the successful candidate for Canada's Chief Science Advisor on 26 September 2017.
 - Dr. Mona Nemer is highly respected in the scientific community and has credentials and experience in the academic and public policy domains.
- **Fundamental Science Review** - Launched in June 2016, the independent review of federal funding for fundamental science final report was released in April 2017.
 - The Government of Canada is reviewing these recommendations thoroughly, as we pursue our goal of ensuring federal support for fundamental research is strategic and effective.
- **Inclusive STEM Policies** - The Government of Canada is committed to promoting equity and equality in our society.
 - An inclusive approach to science brings a diversity of perspectives that enrich the research environment, and the overall research community, and better reflects the full range of Canadian talent.

Innovation Expertise in Canada

Canada has a long history of investing in R&D, funding industry and academic partnership programs, implementing innovation friendly policies and regulations and encouraging private-sector advancement of science and technology. All of that is proof of Canada's commitment to commercialization, industry-driven research and becoming an innovation partner to the world.

Sector	Areas of expertise
Environment and agriculture	<ul style="list-style-type: none">• Water — health, energy, security• Biotechnology• Aquaculture• Sustainable methods of accessing energy and mineral resources from unconventional sources• Food and food systems• Climate change research and technology• Disaster mitigation
Information and communications technologies (ICT)	<ul style="list-style-type: none">• New media, animation and games• Communications networks and services• Cybersecurity• Advanced data management and analysis

Sector	Areas of expertise
	<ul style="list-style-type: none">• Machine-to-machine systems• Quantum computing• Machine learning and artificial intelligence
Health and life sciences	<ul style="list-style-type: none">• Neuroscience and mental health• Regenerative medicine• Health in an aging population• Biomedical engineering and medical technologies
Advanced manufacturing	<ul style="list-style-type: none">• Automation (including robotics)• Lightweight materials and technologies• Additive manufacturing• Quantum materials• Nanotechnology• Aerospace• Automotive
Natural resources and energy	<ul style="list-style-type: none">• Responsible development and monitoring in the Arctic

Sector

Areas of expertise

- Bioenergy, fuel cells and nuclear energy
- Bio-products
- Pipeline safety

Key National Strategies

- [Innovation and Skills Plan](#) - building a better Canada so that all Canadian have the jobs, skills and learning to solve global challenges and strengthen communities.