Canada's Mineral Processing Ecosystem (2019)

Canada

Total Population: 37,408,826 (StatCan, 2019)
Gross Domestic Products
GDP: $2,213 B (2018) (Budget 2019)
Global GDP Ranking: 10th (World Bank, 2017)
Real GDP Growth: 1.9% (2018) (Budget 2019)
Five sectors account directly and indirectly contributed $97 billion, or 5%, to Canada's total nominal GDP (2017).
Mining, oil and gas extraction sector contributed a GDP value of $47.0 billion, an increase of 8.2% from the 2017 total of $43.5 billion (NRCan). The metal mining sector is about 4% of the Canadian economy (2018).
Gross Expenditures on Research and R&D
GERD: $34.5 B (StatCan, 2018)
GERD/GDP: 1.55% (2018), OECD average: 2.37% (2017)
OECD GERD/GDP Ranking: 20th (OECD, 2017)
R&D Expenditure per Capita: $927 (2018)
Total full-time (FTE) research personnel: 225, 790 (2016)
22,170 fewer research personnel from 2015
Total # of Businesses:
1,158,097 (StatCan, Dec 2018; public sector not included)
Micro (0-4): 67,143 (5.8%)
Small (5-99): 1,046,553
Medium (100-499): 18,511
Large (500+): 1,954
Exports (Goods/Services): $662 B (Chief Economist, 2017)
Domestic Exports of Mineral and Metal Products: $97.5 B (2017)
Imports (Goods/Services): $711 B (Chief Economist, 2017)
Total Imports of Mineral and Metal Products: $81.8 B (2017)

Relevant Budget 2019 Updates

A. Key Innovation Initiatives
- Establish and operate the Strategic Science Fund starting in 2022-23

B. Key Trade Initiatives
- Launch an Export Diversification Strategy **($1.5 B over 6 years)** to help Canadian businesses access new markets and increase Canada's revenue exports by **30% by 2025** (Pat Economic Statement, 2018).

C. Key Skills Plan Initiatives
- **$1.9 B over 5 years** towards expanding the Student Work Placement Program
- **$40 M over 5 years** towards supporting Indigenous post-secondary education
- Launch Canada's new international education strategy with **$148 M over 5 years**
- **$225 M over 5 years** to the Canada Research Coordinating Committee to establishing new permanent Global Talent Stream Program (as part of the Global Skills Strategy)

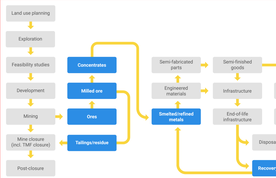
D. Key Regulatory/Policy Initiatives
- **$215.1 M over 5 years**, with **$5.1 M per year ongoing**, shared between Health Canada, CFIA, Environment and Climate Change Canada, CNSC for "Strengthening Innovation in Regulatory" that will design "Regulatory Roadmaps" grouped in three main areas:
  1) Creating a user-friendly regulatory system
  2) Modernizing regulatory approaches
  3) Facilitating greater cooperation and reducing duplication

E. Key Environment and Clean Tech Initiatives
- **$1.65 B (2019-20)** towards "Reducing Energy Costs Through Greater Energy Efficiency". These investments are part of the Green Municipal Fund, managed by the Canadian Municipalities (FCM) through the Green Municipal Fund as three main initiatives. Two relevant initiatives:
  - Collaboration on Community Energy Retrofits **$960 M**
  - Support for Large Scale Retrofits **$690 M**
- **$151.25 M over 5 years** and **$8.28 M per year ongoing** to 4 departments (main recipient: Public Safety) in order to better predict and respond to environmental threats, improve emergency management, and assess the condition and resilience of critical infrastructure

F. Key Cybersecurity Initiatives
- **$80 M over 5 years** to Shared Services Canada (main recipient: CSE) to protect critical cyber systems including in the finance, telecommunications, energy and transport sectors
- **$80 M over 4 years** to ISED to support three or more Canadian cybersecurity networks that are led by post-secondary institutions to bolster R&D and commercialization partnerships and attract talent
- **$30 M over 5 years** in cyber investments with the goal towards protecting Canadian democratic EVAL CSE, GAC, Heritage Canada)

G. Key Social Initiatives
- **$14.8 over 5 years** for advancing reconciliation with Indigenous communities
- **$1.3 B (2018-19)** to new infrastructure funding for **rural communities** through a municipal top-up

Scope of Work within the Minerals and Metals Value Chain



Federal Government

Prime Minister | Cabinet | Parliament | Parliamentary Committees

Privy Council Office (Mandate Tracker) | Treasury Board of Canada Secretariat | Department of Finance Canada

Total Federal Intervention and Enhancement of Research and Innovation (Budget 2018 Stimulus)
Total S.T.I. Enhancement: $5.07 B
Total Research Granting Council Enhancement: $1.04 B
Federal government (total science): $3.99 B (2016, latest)
GERD from federal personnel from 2015

Environment Expenditures on Research and Development
GERD: $2.04 M (Science, 2018)
GovERD/GDP: 0.11% (OECD, 2017)
OECD average: 0.20% (2017)
OECD Rank: GovERD/GDP: 24th (for 2016)

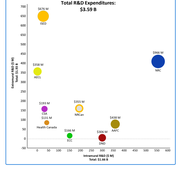
A New Innovation and Skills Plan

Budget 2019
1. Flagship platforms to streamline federal innovation support programs:
   1. Industrial Research Assistance Program
   2. Innovation Science Suite
   3. Canada Tech Commercialization
   4. Regional Development Agencies
2. Supplements to create a world-leading innovation economy:
   1. NRC's Future Energy Systems
   2. Digital Technology Supercluster
   3. Artificial Intelligence Manufacturing Supercluster
   4. Protein Industries Supercluster
   5. Ocean Supercluster

7 Economic Strategy Tables to bolster industry-government collaboration:
1. Research of the Future Table
2. Clean Technology Table
3. Digital Table
4. Advanced Manufacturing Table
5. Agri-Food Table
6. Clean Resources Table
7. Tourism Table

Science-Based Departments and Agencies (SBDA)

R&D Expenditures (2018-19)
Total R&D Expenditures: $3.59 B


$870 M
$1.04 B
$1.04 B
$1.04 B