



CENGN Annual Report FY 2022 Sources

CEO Letter (Page. 4)

- To propel our economic growth and boost productivity, we must harness the power of digital technology, an already massive economic engine worth \$230 billion (ISED, [2020 Canadian ICT Sector Profile](#), 2020)

The Canadian Innovation Economy (Page. 12 and 13)

- **Canada's Tech Talent Stats**
 - o Canada has a strong specialty in the digital economy with over 899,000 people employed in Information Technology. This tech talent accounts for 5.6% of Canada's labour force (CBRE, [Scoring Canadian Tech Talent](#), 2022)
 - o In 2021, 2 Canadian cities ranked in top 10 spots on the list of Top Tech Talent markets, with Toronto in 4th place, and Ottawa in 10th place (CBRE, [Canada Flexes its Tech Talent Muscle](#), July 20, 2021)
 - o Over the past year, the number of tech jobs increased in six of Canada's eight major tech markets by an average of 16% (Betakit, [Latest CBRE Report Shows Canada Has Some Of The Fastest-Growing Tech Talent Pools In North America](#), July 15, 2021)
- **Digital Skills Shortage in Canada Stats**
 - o 55% of tech entrepreneurs are struggling to hire employees they need (BDC, [2021 Economic Outlook](#), 2021)
 - o 80% of businesses in Canada stated that they need more tech employees (Sobirovs Law Firm, [Tackling the Tech Talent Shortage in Canada – The Creative Way](#), March 28, 2022)
 - o ICTC predicts digital economy jobs will grow to reach 2.26 million in Canada by 2025 (ICTC, [Digital Talent Outlook 2025](#), 2021)
- **Canada's Digital Economy Stats**
 - o Canada's digital economy has emerged as one of the country's most powerful economic engines, growing roughly 40% faster than the overall GDP (Wealth Professional, [Five Growth Themes to Watch in Canada's Digital Economy](#), January 4, 2022)
 - o Over the next three years, the Canadian economy will need to fill 250,000 tech jobs (Communitech, [Talent Crunch: How Canada Can Get Ahead of It](#), May 4, 2022)
 - o Tech sector revenue is expected to grow by 5.3% in 2022, and forecasts show it will grow by a total of 22.4% in the 2021-24 period (CISION, [Canada's Tech Sector Fuels Growth Across the Economy: BDC Study](#), January 31, 2022)
- **Innovation in Smart Mining Stats**
 - o Smart mining operations are projected to triple by 2025, with 25% of mines having deployed autonomous operations by then (Mordor Intelligence, [GLOBAL SMART MINING MARKET - GROWTH, TRENDS, COVID-19 IMPACT, AND FORECASTS](#), 2022).

- +500% in mineral production by 2050 as sustainable energy technology increases in demand (The World Bank, [Climate-Smart Mining: Minerals for Climate Action](#), 2022)
- By 2023, the number of installed IoT devices in the mining sector is forecasted to reach 1.2 million, doubling the units that were installed by the end of 2018 (Berg Insight, [The Connected Mining Solutions Market](#), 2019)
- **Innovation in Smart Agriculture Stats**
 - On average, vertical farms use between 80% and 90% less water than conventional farms. Vertical farming plays an essential role in maximizing food production while reducing the resources required to cultivate crops. (Plant Renewed, [7 Reasons Why Vertical Farms Use Less Water](#))
 - Over 100 000 Canadian farms report using on-farm technologies, with close to 35 000 farms applying their technology towards precision agriculture (AIC, [An Overview of the Canadian Agricultural Innovation System](#), 2017).
 - New IoT tech can reduce agriculture energy costs by 35% (Medium, [Smart Farming – Advantages and Interesting Facts](#), September 4th, 2019).
- **Smart Health Stats**
 - More than 40% of Canadians use connected care technology to track one or more aspects of their health, indicating a growing desire for digital health care connectivity (Policy Options, [When Will Canadian Health Care Full Ride the Digital Connectivity Wave?](#), May 5, 2021)
 - 84% of Canadian telemedicine users will continue to use this service after the pandemic is over (Capterra, [The Future of Telemedicine in Canada: 84% of Patients Will Keep Using It](#), May 3, 2021)
 - Around 85% of Canadian medical practices are using electronic medical records, which enables timely information sharing, and integration of care through connectivity (Policy Options, [When Will Canadian Health Care Full Ride the Digital Connectivity Wave?](#), May 5, 2021)
 - Canada ranked 23rd in the 2021 World Index of Healthcare Innovation (FREOPP.org, [Canada: #23 in the 2021 World Index of Healthcare Innovation](#), June 25, 2021)
- **Manufacturing Stats**
 - Manufacturing and Robotics is a key driver in Canada’s economy and makes up 1.7 million jobs (Innovating Canada, [Future of Manufacturing + Robotics](#), 2021)
 - 77% of manufacturing companies are currently applying IoT to improve efficiency and enhance productivity (Plant, [2022 Manufacturing Outlook Report](#), 2022)
 - 83% of Canadian manufacturers have experienced some type of cyberbreach or attack (Plant, [2022 Manufacturing Outlook Report](#), 2022)
 - 50% of workers in manufacturing will need to learn new skills to keep pace with the integration of technology (Torys, [Chapter 3: Advanced Manufacturing and Supply Chains](#), October 4, 2021)
- **Canada Needs More Innovation Stat**
 - Canada sits in 11th place out of 16 countries with a grading score of C on the Conference Board of Canada’s Innovation Scorecard, ([The Conference Board of Canada, Innovation Report Card 2021](#))