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).
- **Innovation in Smart Agriculture Stats**
  - +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)
  - 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 electronical 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)

- **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*)

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