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**Christian Saint Cyr**

Publisher

Ontario Labour Market Report

# Technology Sector in Ontario



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"Talented individuals are to the innovation economy what mineral deposits are to the mining industry and factories are to the manufacturing industry. Talent underpins innovation and any strategy to grow the innovation ecosystem must have talent at its core."

- School of Public Policy & Governance  
University of Toronto



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The technology sector is one of Canada's fastest growing; since 2014, the Information and Communication Technology Sector (ICT) has grown 50% faster than the overall economy.



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The sector is particularly important to Ontario where, in 2016, ICT contributed \$34B to Ontario's economy, double Quebec which was the next closest province.

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As a sector that inherently relies on people, availability of appropriate talent is the key driver for growth of firms in the sector. Over 82% of Ontario firms in the sector identify their ability to engage, retain, and retrain for their talent needs as the most significant challenge affecting their ability to grow.






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The demand for technology workers is growing quickly with job growth at four times that of the overall economy. By 2016 there were more than 875,000 workers in the Canadian technology space ranking it fourth amongst major economic sectors. In Ontario, technology accounts for 6.2% of all provincial employment, just behind Quebec at 6.4%.





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Employees in the technology sector have much greater education attainment than the general population (51% vs 29% hold university degrees), have higher wages (\$67,000 vs \$48,000) while the workforce has a significantly younger profile.






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Toronto is the epicentre of Ontario's technology industry. In 2017, the city ranked first in North America for growth in technology jobs (22,000 net new jobs) beating traditional powerhouses such as San Francisco and New York (11,000 and 5,000 new jobs respectively). Today, about one in eight Toronto jobs (330,000 in total) are technology jobs.







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Despite the huge potential for Ontario's technology sector, it is also facing significant challenges. First is the impact of continuing and growing workers shortages. By 2021, it is estimated that 216,000 technology jobs will go unfilled across Canada. By that date, technology employment in Ontario is expected to reach 670,000 jobs with nearly one in six jobs unfilled. The result is both an immediate GDP hit of over \$10B annually but also a long term impact as technology firms that are unable to grow sufficiently fast, often die out.



The logo for the Labour Market Conference, featuring a dark grey circle with a red shadow effect. The text "Labour Market" is in a large, bold, white sans-serif font, and "CONFERENCE" is in a smaller, white sans-serif font below it.

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The logo for OLMR ONLINE, consisting of the words "OLMR" and "ONLINE" stacked vertically in a bold, white, sans-serif font, enclosed within a dark blue rounded rectangle with white borders.

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The logo for Greater Toronto, featuring a stylized red and white 'Y' shape to the left of the text "Greater Toronto" in a black sans-serif font.

**Y** Greater  
Toronto

A solid green vertical bar located in the top right corner of the slide.

The past five years alone have seen the emergence of Artificial Intelligence (AI), Block Chains, IOT, Augmented and Virtual Reality, and 3D printing. Such technologies are both an opportunity to grow new sectors but also a threat to existing sectors. Ontario's ability to ensure that these technologies are leveraged effectively and efficiently means that a strategy is required for training existing technology workers in a more dynamic manner.

The logo for FIRST WORK, Ontario's Youth Employment Network. The words "FIRST" and "WORK" are in a bold, sans-serif font, with "FIRST" in orange and "WORK" in blue. Below it, the text "ONTARIO'S YOUTH EMPLOYMENT NETWORK" is in a smaller, black, sans-serif font.

**FIRST WORK**  
ONTARIO'S YOUTH EMPLOYMENT NETWORK

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The technology space is struggling to become more inclusive and diverse. For example, only 16.5% of employees at Canada's largest ICT firms are women and just 5% of CEO's are women.





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Little Canadian data is available on employment of minorities into technology jobs but US studies showcase significant shortfalls in both cases with the situation exacerbated in more senior positions. And yet, minorities are significantly over-represented in job applicants to Toronto's technology firms. Engaging significantly underrepresented groups is both a social imperative but also, with such significant talent shortages, an economic necessity.





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The Ontario government has made some initial steps to address talent shortages. These include:

- Increasing the number of STEM graduates in Ontario by 10,000 annually
- Graduating an additional 1,000 Masters students in applied AI annually
- The Ontario Provincial Nominee Program has grown from 4,500 to nearly 7,000
- Creating 40,000 experiential learning opportunities over three years



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"Recognizing the pervasive nature of technology and its impact across all economic sectors, embedding additional technology training across disciplines is necessary. This would allow, for example, students coming out of social sciences and humanities to take on non-development jobs in the technology sector while also ensuring they are capable of identifying, and addressing, technology needs across society."



A circular logo with a dark grey center and a red outer ring. The text "Labour Market" is in large white font, and "CONFERENCE" is in smaller white font below it.

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"Experiential learning has proved a highly effective mechanism for transitioning into jobs. As such experiential learning opportunities should be significantly broadened to also specifically target mid-career individuals, and underrepresented groups."



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**Any Questions?**

