The Conference Board of Canada

Economic Impact and Labour Market Outlook of Ontario's Engineering Technology Professionals

Presented to Ontario Association of Certified Engineering Technicians and Technologists (OACETT)

Prepared by
The Conference Board of Canada

Contents

Key findings

- Roughly 103,215 OACETT-supported technicians and technologists were employed across various industries in Ontario in 2024, making up 1.3 per cent of the province's total workforce. More than a quarter of these jobs are in the manufacturing sector (28.4 per cent), followed by professional, scientific, and technical services (23.3 per cent) and construction (11.7 per cent).

- In 2024, OACETT-supported occupations plus the businesses that employ them directly contributed $16.5 billion to Ontario's GDP, representing 1.9 per cent of the province's total GDP—roughly on par with the share of GDP in Ontario's accommodation and food services sector.

- Total labour income from OACETT-supported technicians and technologists reached $8.9 billion in 2024, with the manufacturing sector contributing the largest share at $2.3 billion.

- OACETT-supported technicians and technologists generated an estimated $6.4 billion in tax revenues across all three levels of government in 2024, including $3.3 billion in federal taxes, $2.6 billion in provincial taxes, and $0.5 billion in municipal taxes.

- The occupations supported by OACETT have slightly outpaced overall provincial employment growth, with an average annual growth rate of 2.0 per cent between 2015 and 2024, compared to the provincial average of 1.9 per cent over the same period.

- Employment growth for these occupations is expected to remain strong. The number of employed engineering and applied science technicians and technologists represented by OACETT is projected to rise by nearly 28,600 net new positions between 2025 and 2045, accounting for almost 3 per cent of total employment growth across the province.

- Four key occupations are projected to account for roughly 50 per cent of OACETT-supported employment by 2045: electrical and electronics engineering technologists and technicians, mechanical engineering technologists and technicians, drafting technologists and technicians, civil engineering technologists and technicians.

Introduction

The occupational group represented by OACETT spans a diverse range of roles, each requiring specialized skills and expertise. Technicians and technologists contribute to key sectors of Ontario's economy, driving innovation and delivering applied solutions that enhance productivity and competitiveness across many sectors, including manufacturing; professional, scientific and technical services; construction; utilities; and public administration.

About OACETT

Established in 1962 and legislated under the OACETT Act of 1998, the Ontario Association of Certified Engineering Technicians and Technologists (OACETT) is a self governing, non-profit association.[1] The association certifies, supports, and advocates for engineering technicians and technologists across Ontario. OACETT grants the designations of Certified Technician (C.Tech.) and Certified Engineering Technologist (C.E.T.), which are recognized province-wide by employers, governments, and the broader engineering community. In addition to upholding rigorous certification standards, OACETT plays a vital role in advancing professional excellence through continuing education, setting ethical and technical benchmarks, and promoting the contributions of certified technicians and technologists to Ontario's economy and society.[2]

This report provides a detailed economic portrait of a key segment of Ontario's skilled workforce: engineering and applied science technicians and technologists that are supported by OACETT. "OACETT-supported" refers to professionals working in occupations within the engineering and applied science disciplines in which OACETT offers certification. Although not all individuals are members, their roles align with the occupational categories and competencies recognized and supported by the association. We examine historical employment and wage patterns, forecast future labour market trends, and assess the economic impact of this group across the province—providing valuable insights for policymakers, employers, and industry leaders seeking to support and strengthen these key professionals.

[1] Legislative Assembly of Ontario, "Town of Richmond Hill Act, 1998."
[2] OACETT, "Who We Are."

Defining the occupational group of engineering and applied science technicians and technologists

The first step in our research was to define the types of workers included in the engineering and applied science technicians and technologists' occupational group that OACETT represents. To do this, we used data from Statistics Canada's 2021 National Occupational Classification (NOC) and Classification of Instructional Programs (CIP). Specifically, we identified workers in each 5-digit NOC occupation who held a postsecondary certificate or diploma below the bachelor level in the CIP categories for Technology (CIP 14) and Engineering/Engineering-related Technologies/Technicians (CIP 15).

OACETT then identified the occupations that closely matched the occupations held by members they represent. OACETT recognizes 15 distinct disciplines of registration, including Bioscience, Building, Chemical, Civil, Computer, Electrical, Electronics, Environmental, Geological, Geomatics, Industrial, Instrumentation, Mechanical, Mining, and Resources.[3] Based on this analysis, 53 occupations at the 5-digit NOC level were identified as being represented by OACETT. (See Appendix A for the complete list).

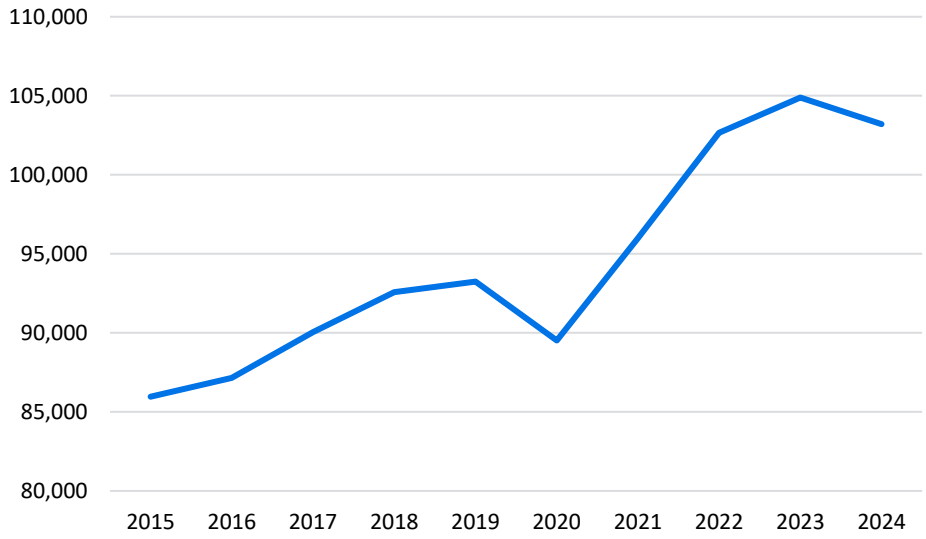
After identifying the specific occupations, we calculated the share of each 5-digit NOC occupation that would fall under the engineering and applied science technicians and technologists' group represented by OACETT. For some occupations, this share was 100 per cent. However, for most occupations, the share was smaller. For example, we estimated that 15.9 per cent of individuals employed as computer network and web technicians (NOC 22220) hold a postsecondary certificate or diploma in Technology or Engineering-related fields. As a result, we assumed that OACETT represents this same 15.9 per cent of all individuals in Ontario with this occupation. Appendix A provides a detailed overview of the methodology used to select these occupations and the respective share represented by OACETT.

[3] OACETT, "Disciplines of Registration."

Labour market trends for Ontario's technology professionals

In 2024, Ontario's workforce included approximately 103,215 engineering and applied science technicians and technologists across 53 occupational categories supported by OACETT. (See Chart 1.) Despite a slight decline at the onset of the COVID-19 pandemic, the OACETT-supported workforce has grown steadily since then. Between 2015 and 2024, this group slightly outpaced overall provincial employment growth, with an average annual growth rate of 2.0 per cent compared with the provincial average of 1.9 per cent over the same period.[4]

Chart 1: Steady growth in employment of OACETT-supported technicians and technologists in Ontario
(employment level, 2015–2024)



Sources: Statistics Canada; The Conference Board of Canada.

Overview of key occupations

More than half of OACETT-supported employment in 2024 came from four key occupations: electrical and electronics engineering technologists and technicians, mechanical engineering technologists and technicians, drafting technologists and technicians, and civil engineering technologists and technicians.

Electrical and electronics engineering technologists and technicians represented the largest share of the workforce supported by OACETT, with approximately 19,425 people employed

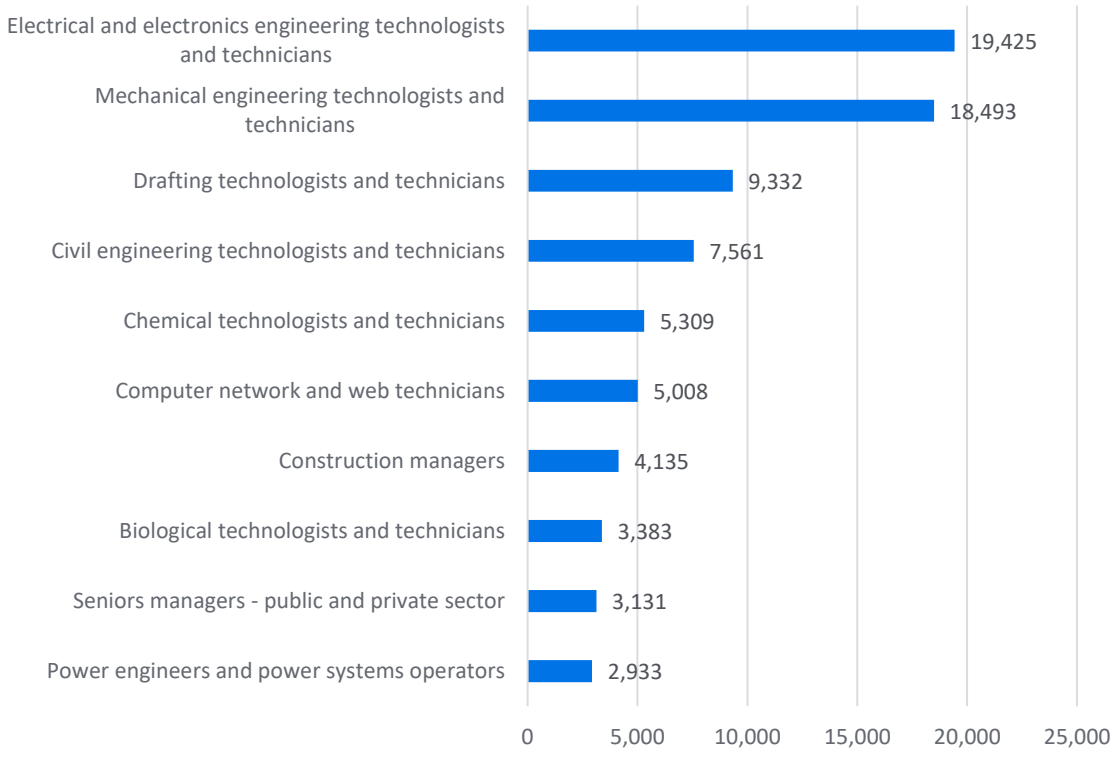
[4] All average annual growth rates are reported as compound annual growth rates.

(18.8 per cent). (See Chart 2.) Their prominence reflects the strength of Ontario's advanced manufacturing, information and communications technology, and energy sectors.

They were followed by mechanical engineering technologists and technicians (nearly 18,500 employed; 17.9 per cent), driven by demand in automotive and industrial manufacturing. Drafting technologists and technicians[5] (over 9,300; 9.0 per cent) and civil engineering technologists and technicians (nearly 7,600; 7.3 per cent) also accounted for significant shares, supporting engineering, construction, and infrastructure development across the province.

Chart 2: OACETT-supported roles in engineering dominate Ontario's technical workforce in 2024

(employment level, 2024)



Sources: Statistics Canada; The Conference Board of Canada.

Engineering technologists and technicians are key drivers of employment growth

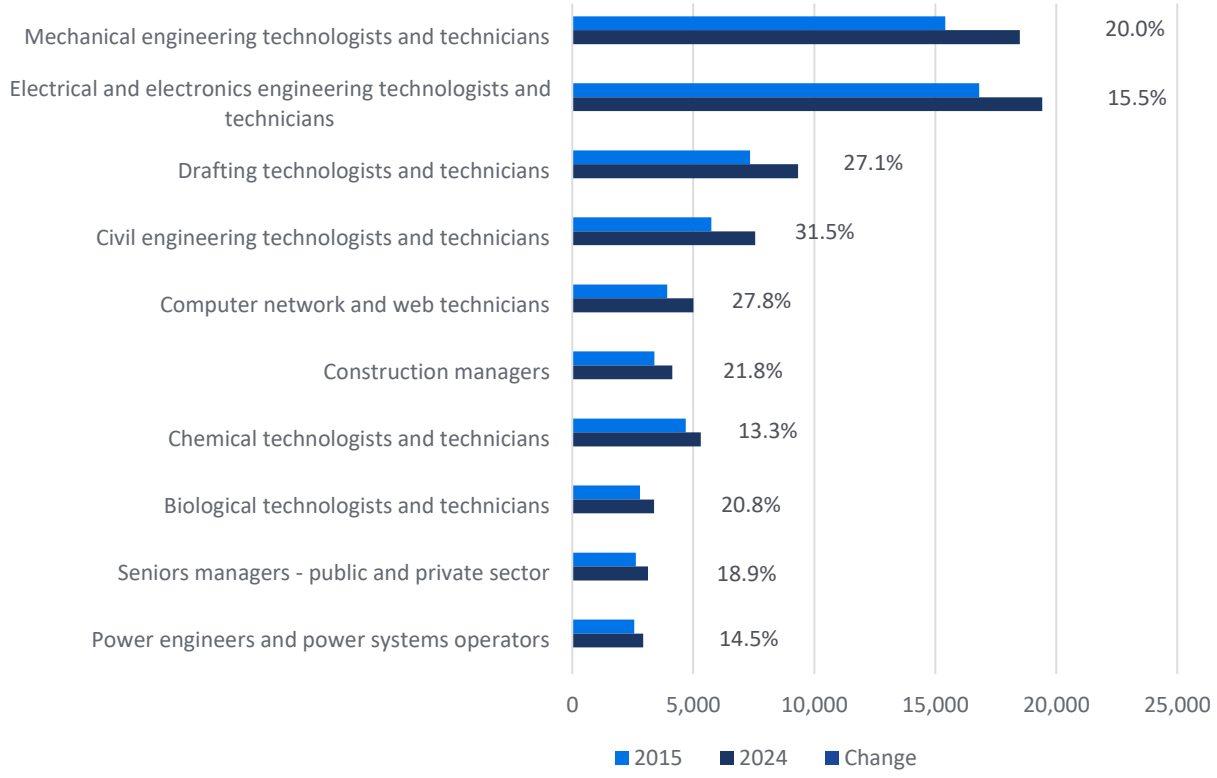
Between 2015 and 2024, employment in OACETT-supported occupations grew 20.1 per cent. In level terms, four occupations accounted for roughly 55.0 per cent of OACETT- supported

[5] The drafting technologists and technicians (NOC 22212) occupation includes building information modelling (BIM) technologists, computer-aided design and drafting (CADD) technologists, computer-assisted drafting (CAD) technicians, and other professionals who specialize in computerized drafting, modelling, and technical drawing to support engineering, architectural, and manufacturing projects.

employment growth: mechanical engineering technologists and technicians, electrical and electronics engineering technologists and technicians, drafting technologist and technicians, and civil engineering technologists and technicians. (See Chart 3).

Chart 3: Ten OACETT-supported occupations in the technicians and technologists group account for more than 75 per cent of employment growth

(employment growth, per cent, and level by occupation, top ten contributing occupations to OACETT employment growth)



Sources: Statistics Canada; The Conference Board of Canada.

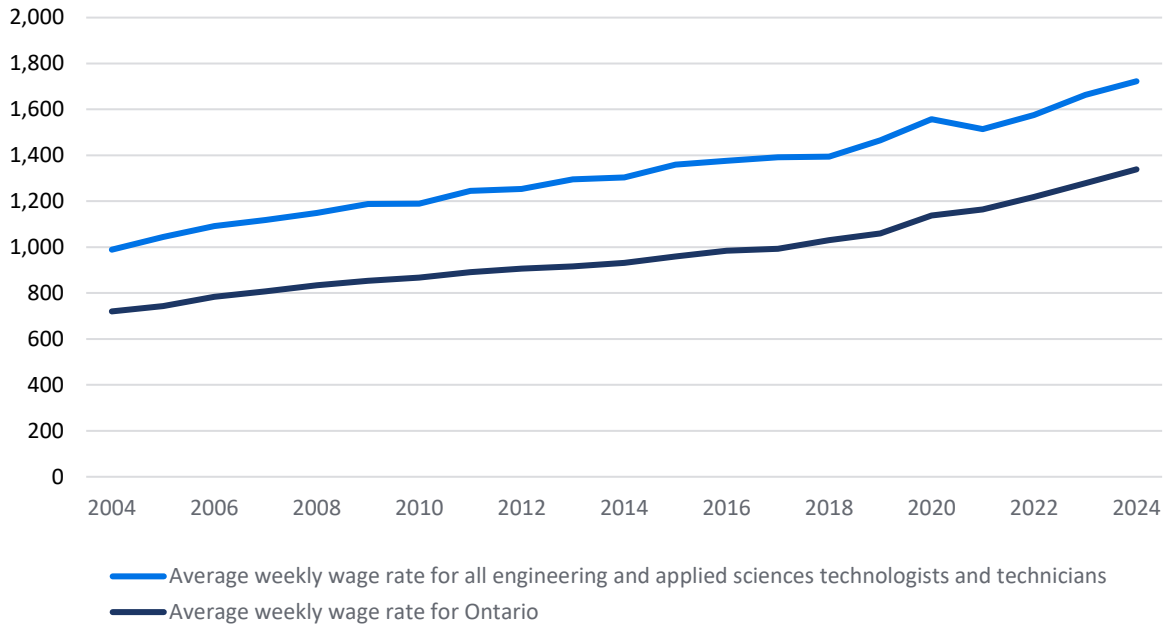
Employment growth among civil engineering technologists and technicians (31.5 per cent), computer network and web technicians (27.8 per cent), drafting technologists and technicians (27.1 per cent), and construction managers (21.8 per cent) has exceeded the 20.1 per cent average growth across all OACETT-supported occupations between 2015 and 2024. These trends reflecting the ongoing digitalization of the economy, the expansion of broadband infrastructure, rising demand for IT and digital infrastructure expertise, and construction management across Ontario's evolving economy.[6,7,8]

[6] Government of Ontario, "Building Digital Ontario."
[7] Government of Ontario, "Published Plans and Annual Reports 2024-2025: Ministry of Transportation."
[8] Council of Ontario Universities, "Partnering to Power Ontario's Digital Future."

Engineering and applied science technicians and technologists maintain a strong wage premium

Over the past twenty years (2004-2024), the average weekly wage rate for engineering and applied science technicians and technologists in Ontario has consistently exceeded the provincial average. On average, their weekly wages were 28.7 per cent higher than those of the broader Ontario workforce in 2024. (See Chart 4.)

Chart 4: Engineering and applied science technologist and technicians earned 28.7 per cent more than the provincial average in 2024
(average weekly wages, dollars)



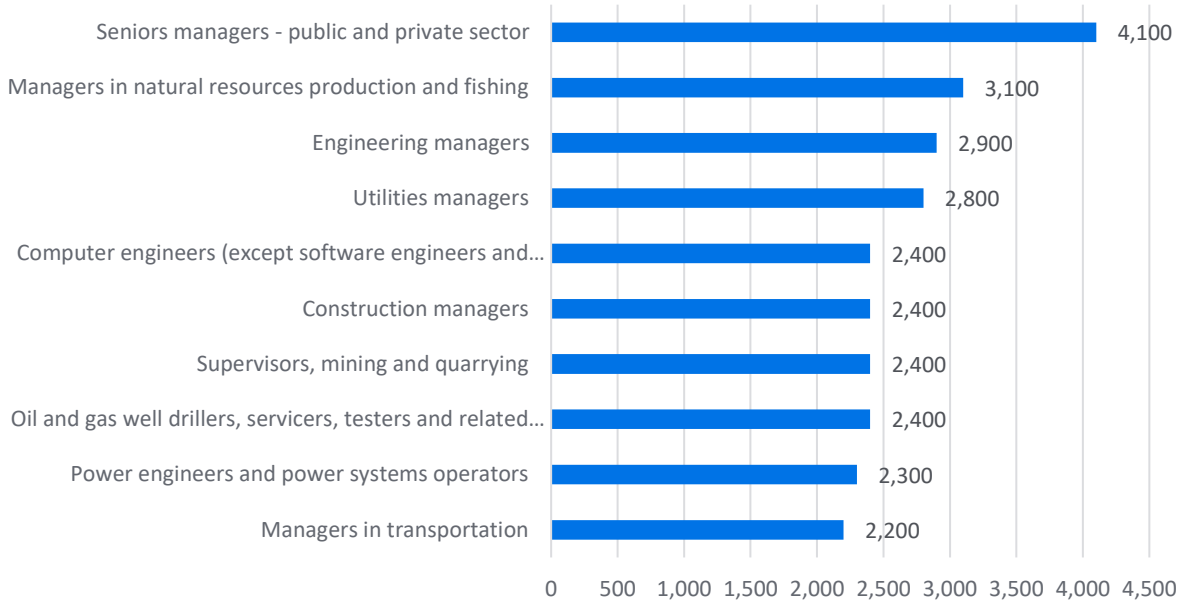
Sources: Statistics Canada; The Conference Board of Canada.

Average weekly wage rates for engineering and applied science technicians and technologists vary across occupations. The top three occupations with the highest weekly wages in 2024 were senior managers in both the public and private sectors, earning roughly $4,100, followed by managers in natural resources production and fishing ($3,100), and engineering managers ($2,900). (See Chart 5.)

These occupations consistently earn higher wages due to the advanced technical expertise, leadership responsibilities, and operational oversight they require. Many are embedded in industries characterized by elevated safety standards, regulatory complexity, and capital-intensive infrastructure, all of which contribute to higher compensation levels.

Chart 5: Highest paid occupations for engineering technicians and technologists include leadership and resource-driven roles, 2024

(average weekly wages, dollars rounded to the nearest hundred, 2024)

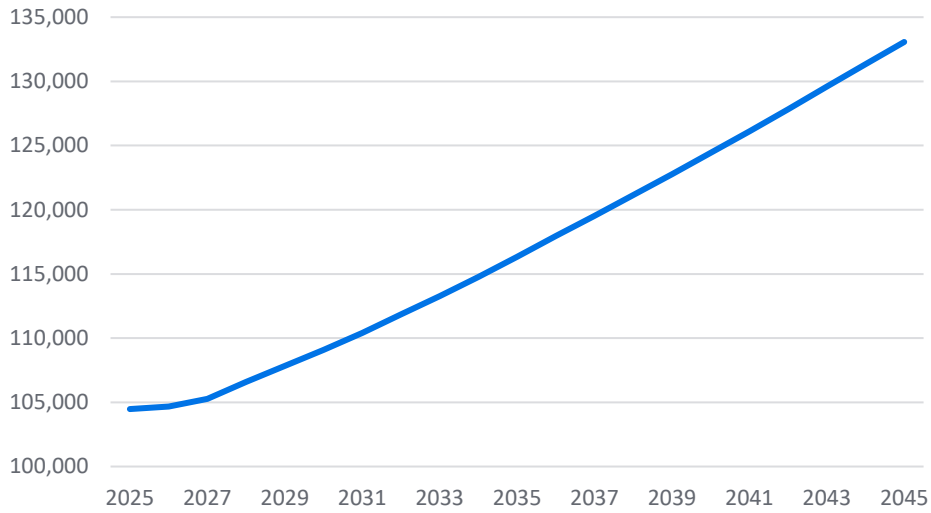


Sources: Statistics Canada; The Conference Board of Canada.

Long-term Labour Market Outlook for Ontario's Technology Professionals

In 2025, the number of employed engineering and applied science technicians and technologists supported by OACETT is expected to be approximately 104,500—representing a 21.5 per cent increase from 2015 levels. This total is expected to grow further, reaching about 116,300 by 2035 and nearly 133,100 by 2045. (See Chart 6.)

Chart 6: The number of engineering and applied science technicians and technologists supported by OACETT will surpass 133,000 by 2045
(employment level)

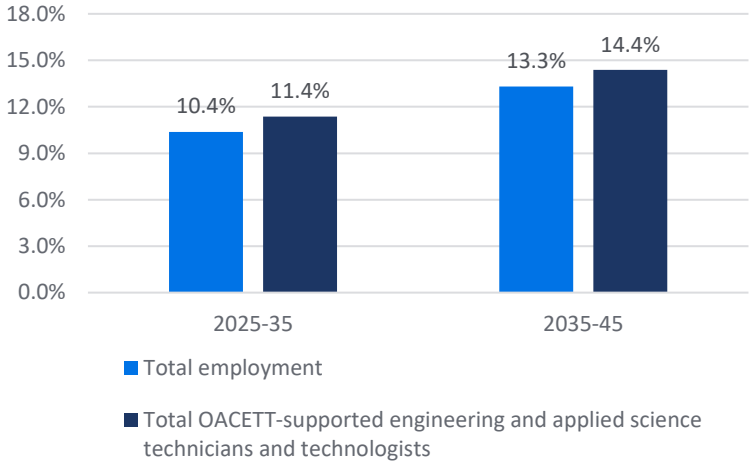


Sources: Statistics Canada; The Conference Board of Canada.

Technicians and technologists will outpace Ontario's employment growth

Across the two decades from 2025 to 2045, employment in occupations supported by OACETT is projected to expand slightly more than overall employment in Ontario. This stronger pace of growth highlights the sustained and increasing importance of technicians and technologists to the province's evolving labour market and innovation economy. (See Chart 7.)

Chart 7: OACETT-supported engineering, technicians, and technologist employment to slightly outpace total employment growth in Ontario
(percentage change)



Sources: The Conference Board of Canada; Statistics Canada.

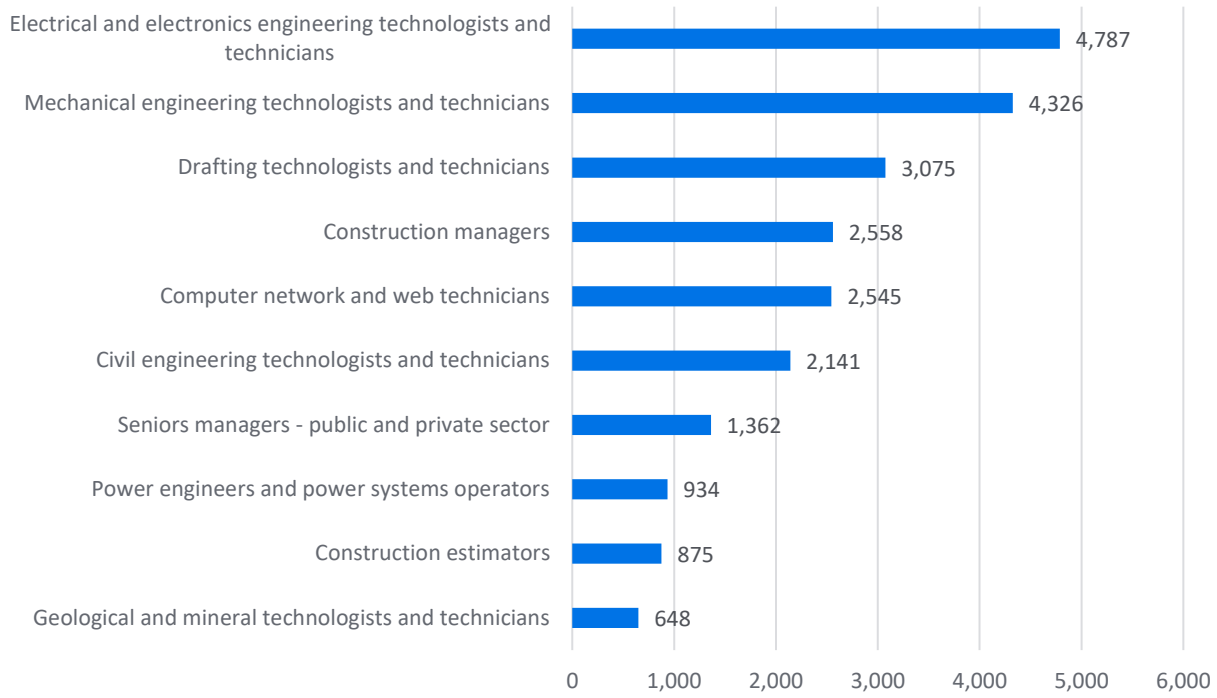
OACETT-supported occupations to add 28,600 net new jobs by 2045

The number of employed engineering and applied science technicians and technologists represented by OACETT is projected to increase by nearly 28,600 net new jobs by 2045, compared to 2025. Overall, the anticipated increase in OACETT-supported employees accounts for 1.4 per cent of the total expected employment growth in Ontario, which is roughly 2.6 million over the forecast period. This underscores the importance of skilled technical professionals as a key driver of overall employment growth in the province. As technological advancements and sector-specific investments continue to spur job creation, the demand for highly trained engineering and applied science technicians and technologists will be vital to sustaining Ontario's economic development and ensuring that its workforce is equipped for future challenges.

Growth in the number of people employed as electrical and electronics engineering technologists and technicians is expected to account for nearly 4,800, or 24.2 per cent, of the nearly 28,600 job gains between 2025 and 2045. This growth reflects ongoing investments in utilities, transportation, and communication systems across the province.[9,10] (See Chart 8.)

[9] Government of Ontario, "Published Plans and Annual Reports 2024-2025: Ministry of Transportation."
[10] Government of Ontario, "Ontario Launches Plan to Secure Energy for Generations."

Chart 8: Top ten occupations with the highest employment growth
(employment change, 2025 to 2045)



Sources: Statistics Canada; The Conference Board of Canada.

The role of mechanical engineering technologists and technicians is also significant, though more cyclical, with stronger contributions during the 2035–2045 period as manufacturing modernization and industrial transformation are expected to accelerate due to greater adoption of advanced AI and robotic technologies.[11,12] (See Appendix D, Table D2). In contrast, drafting technologists and technicians are expected to play a more prominent role during the 2025–2035 forecast period, supporting design and planning functions across the professional, scientific, and technical services; construction—particularly housing development; and manufacturing sectors.[13] As architectural and engineering projects become more complex and reliant on digital tools like Computer-Aided Design and Building Information Modeling, the demand for skilled drafts professionals will rise.[14]

Rounding out the top ten occupations with the highest employment growth are geological and mineral technologists and technicians, which is projected to experience continued increases over the forecast period. This growth is being driven by ongoing investments in resource extraction and processing industries and reflects broader efforts by Ontario and Canada to expand and modernize their resource sectors. Both levels of government are committing

[13] Government of Ontario, “Advanced Manufacturing Council Final Report.”
[14] Sharon, M., “Why BIM: The Key to Digital Transformation in Construction: Unlocking Efficiency and Innovation in Construction.”

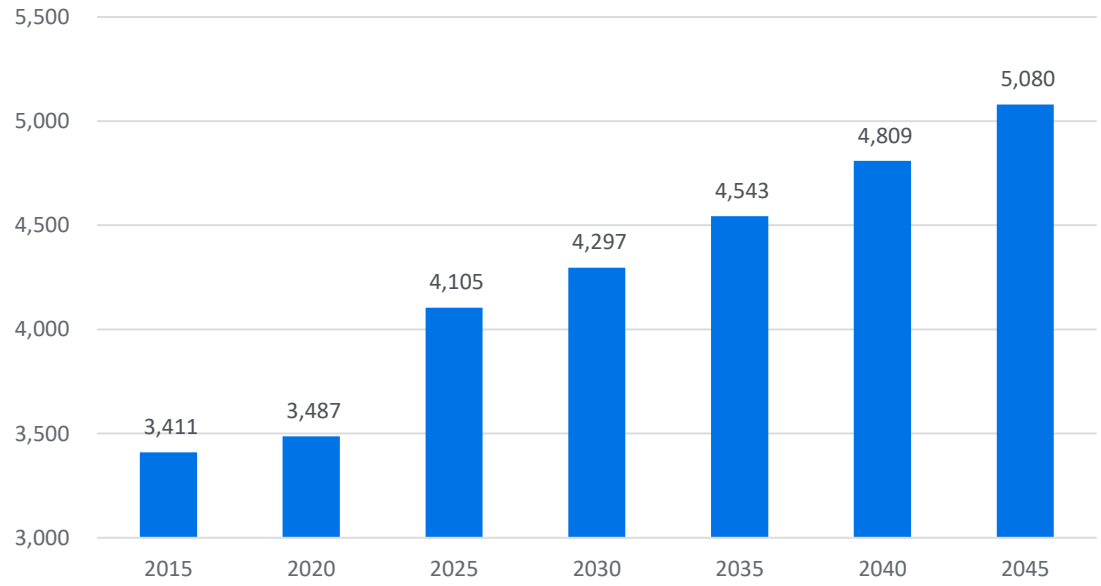
significant resources to mining and forestry, with a particular focus on critical minerals and the bioeconomy, through a combination of planned and ongoing projects.[15,16]

Steady growth in retirements of technicians and technologists

Retirements in OACETT-supported occupations are projected to continue increasing over the next two decades. Between 2015 and 2024 retirements rose 19.3 per cent from about 3,400 to over 4,000. Beginning in 2025, the pace accelerates from 10.7 per cent between 2025 and 2035 to 11.8 per cent between 2035 and 2045 with retirements expected to exceed 5,000 by 2045. (See Chart 9.)

This trend has important implications for technologists and technicians supported by OACETT. As experienced technologists and technicians exit the labour market, there will be a growing replacement demand for workers with the specialized expertise. In response, OACETT has an opportunity to streamline certification processes, attract new members, and advocate for consistent professional standards. The organization is well positioned to support prospective technologists and technicians—whether they are recent graduates or individuals pursuing new certifications—as they transition into occupations where their skills are in high demand.

Chart 9: Retirements in OACETT-supported occupations trends upwards through 2045
(number of retirements)



Sources: Statistics Canada; The Conference Board of Canada.

[15] Government of Ontario, “Ontario Investing $500 Million in Critical Minerals Processing: New Fund Will Support Made-in-Ontario Critical Mineral Supply Chain.”
[16] Natural Resources Canada, “Investing to Make Canada a Global Critical Minerals Superpower.”

Key sectors driving demand for technicians and technologists

The projected growth in employment for engineering and applied science technician and technologist occupations supported by OACETT between 2025 and 2045 reflects the evolving demands of Ontario's workforce, driven by technological advancements, sector-specific investments, and infrastructure development. At the 2-digit North American Industry Classification System (NAICS) level, professional, scientific, and technical services is expected to experience the highest employment increase for engineers, technicians, and technologists between 2025 and 2035, followed by construction and manufacturing. (See Table 1.) Together, these three sectors are expected to account for 78.1 per cent of employment growth in OACETT-supported occupations between 2025 and 2035, and 71.5 per cent between 2035 and 2045.

As industries increasingly rely on specialized skills, OACETT-supported occupations are projected to experience significant growth, fueled by both the expansion of established sectors and the emergence of new technologies. In particular, emerging technologies such as artificial intelligence (AI), automation, robotics, additive manufacturing, renewable energy technologies, and green technologies are reshaping various industries.[17] For instance, AI is extending beyond routine tasks to analyze data and recognize patterns, impacting even high-skill jobs.[18]

Automation and robotics are transforming manufacturing processes,[19] while investments in renewable and green technologies are driving the transition to sustainable practices in sectors like energy and construction.[20] These technological advancements are creating new roles and increasing demand for skilled professionals in engineering and applied sciences.

[17] Policy Horizons Canada, "Innovations Reshaping Our Society: Emerging Technologies."
[18] The Conference Board of Canada, "How AI is Shaping the Future of Work."
[19] Kaur, N., & Sharma, A. "Robotics and Automation in Manufacturing Processes."
[20] Natural Resources Canada, "The Canada Green Buildings Strategy: Transforming Canada's Buildings Sector for a Net-Zero and Resilient Future."

Table 1. Change in OACETT-supported employment by industry

(employment change)

Industry (2-digit NAICS)	Change in employment	
	2025-2035	2035-2045
Total increase in OACETT-supported occupations	**11,870**	**16,725**
54 Professional, scientific and technical services	4,770	5,379
23 Construction	3,182	4,089
31-33 Manufacturing	1,316	2,493
48-49 Transportation and warehousing	695	837
41 Wholesale trade	526	641
62 Health care and social assistance	407	502
56 Administrative and support, waste management and remediation services	284	260
52 Finance and insurance	237	318
91 Public administration	186	362
44-45 Retail trade	113	260
81 Other services (except public administration)	113	150
72 Accommodation and food services	100	121
51 Information and cultural industries	110	88
53 Real estate and rental and leasing	104	127
61 Educational services	29	113
11 Agriculture, forestry, fishing and hunting	12	94
55 Management of companies and enterprises	-1	-3
71 Arts, entertainment and recreation	-51	-22
21 Mining, quarrying, and oil and gas extraction	-129	502
22 Utilities	-133	415

Sources: Statistics Canada; The Conference Board of Canada

Economic Impact of Ontario's Technology Professionals

This section highlights the significant economic impact of Ontario's engineering and applied science technicians and technologists that are supported by OACETT, focusing on their vital contributions to GDP, employment, labour income, and government tax revenues. Through their specialized skills and expertise, these professionals play a key role in driving economic growth within the province.

To estimate the economic contribution of OACETT-supported technicians and technologists, we developed a methodology that links occupational employment and wage data with industry-level output measures. Since Statistics Canada reports output by industry rather than by occupation, wage ratios were used as proxies to approximate each occupation's share of industry output. By comparing the total wages of OACETT-supported occupations to overall industry wages, and applying these ratios to industry GDP, the analysis captures the value-added contribution of these professionals across Ontario's economy. For a detailed overview of the methodology used in this analysis, please refer to Appendix C.

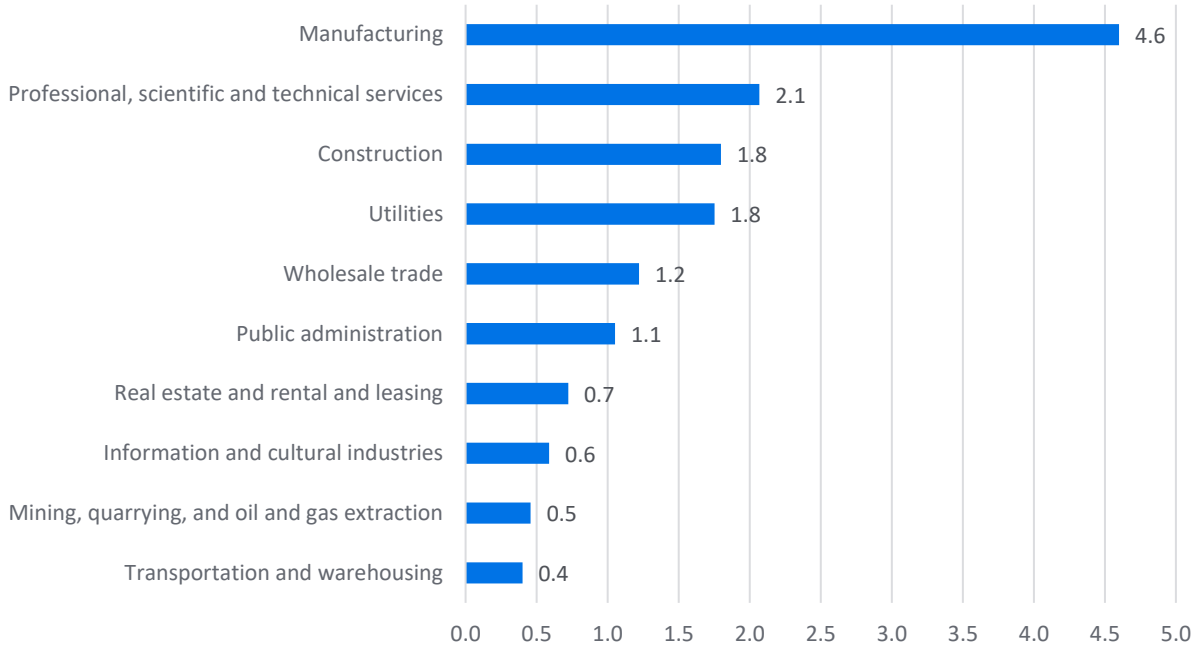
Ontario's technical workforce supported by OACETT contributed $16.5 billion to provincial GDP

In 2024, engineering and applied science technicians and technologists supported by OACETT and the businesses that employ them directly contributed $16.5 billion to Ontario's GDP. This accounts for 1.9 per cent of the province's total GDP—a share that surpasses their 1.3 per cent representation in overall employment. The GDP generated by OACETT-supported occupations is comparable to the output of Ontario's accommodation and food services sector and is about half the size of the province's mining, quarrying, and oil and gas extraction sector.[21]

At the sectoral level, the manufacturing sector leads in impact. Engineering and applied science technicians and technologists generated $4.6 billion in GDP, accounting for 27.8 per cent of the group's total GDP impact. (See Chart 10.) Professional, scientific and technical services follow with a $2.1 billion contribution, representing 12.5 per cent of the group's GDP impact. Other key sectors include construction, where technicians and technologists contributed $1.8 billion (10.9 per cent), and utilities, with a contribution of $1.8 billion, or 10.6 per cent, to the overall GDP impact generated by technicians and technologists supported by OACETT.

[21] Statistics Canada, "Table: 36-10-0402-02 Gross Domestic Product (GDP) at Basic Prices, by Industry, Provinces and Territories, Annual."

Chart 10: Manufacturing leads in impact
(direct GDP contributions by industry, $ billions, 2024 constant dollars)



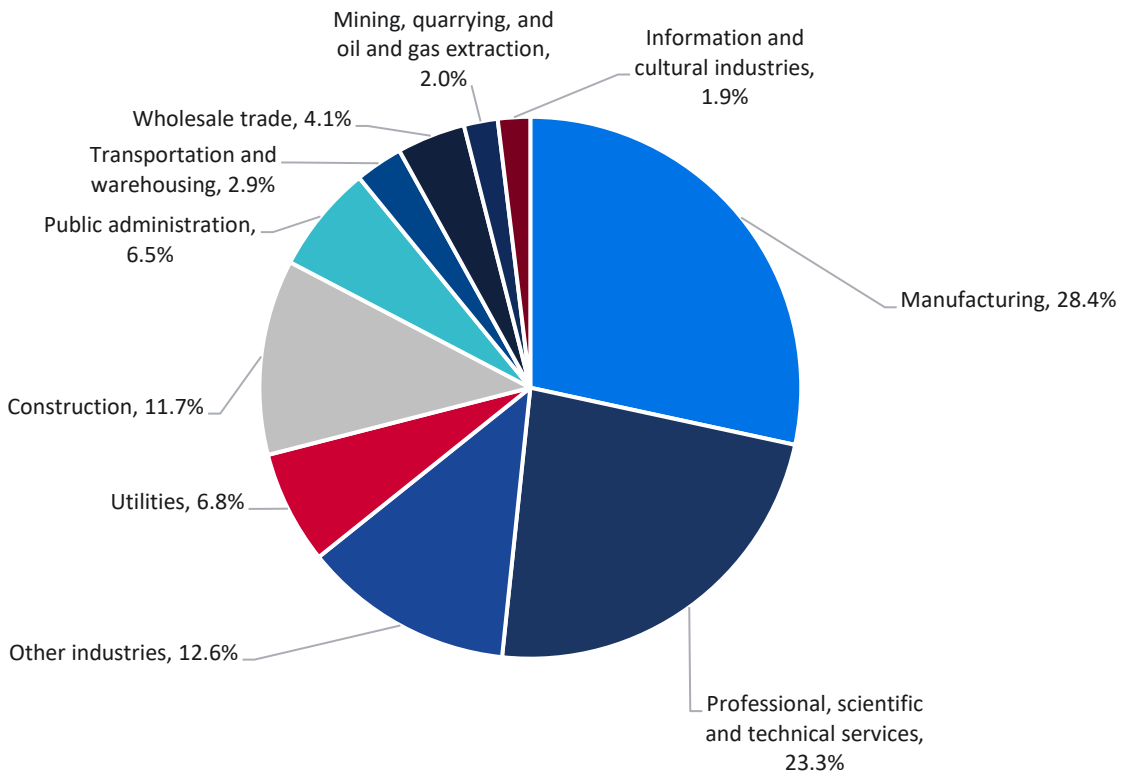
Source: The Conference Board of Canada.

OACETT-supported technicians and technologists anchor Ontario's key industries

As noted above, roughly 103,215 technicians and technologists supported by OACETT were employed across various industries in Ontario in 2024, making up 1.3 per cent of the province's total workforce. More than a quarter of these jobs are concentrated in the manufacturing sector, followed by professional, scientific, and technical services (23.3 per cent) and the construction sector (11.7 per cent). (See Chart 11.)

Chart 11: OACETT supported jobs for technicians and technologists supported by OACETT are concentrated in the manufacturing and professional, scientific and technical services sectors

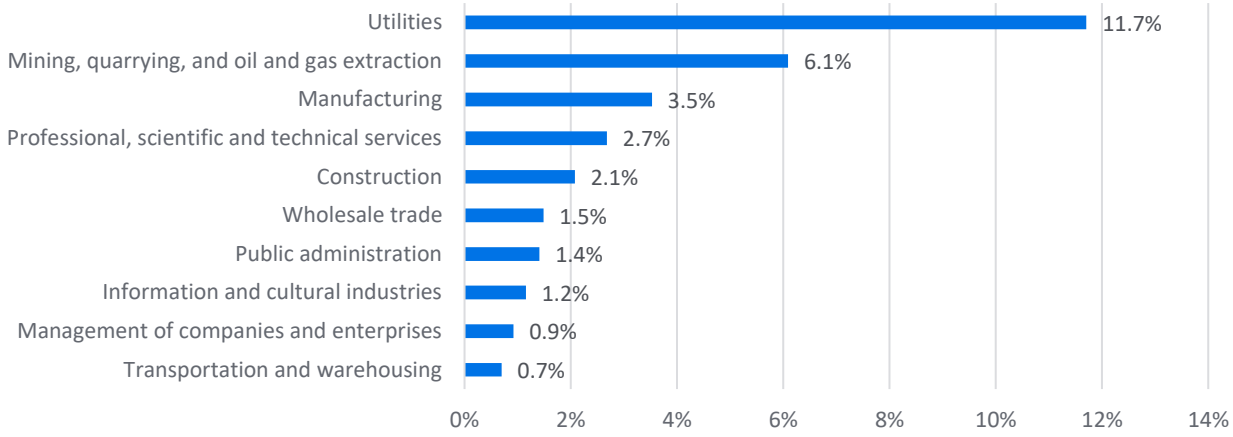
(direct employment, percentage share, 2024)



Source: The Conference Board of Canada.

A closer look at the proportion of OACETT-supported technicians and technologists within individual industries in Ontario reveals a clear pattern of specialization. The utilities sector stands out, with 11.7 per cent of its workforce comprised of technology professionals, followed by mining, quarrying, and oil and gas at 6.1 per cent. These high concentrations highlight the specialized nature of these industries, where technical expertise is not just supportive but foundational to day-to-day operations. (See Chart 12.)

Chart 12: Utilities is most technician- and technologist-dense sector in Ontario
(share of total sectoral employment, percentage, 2024)



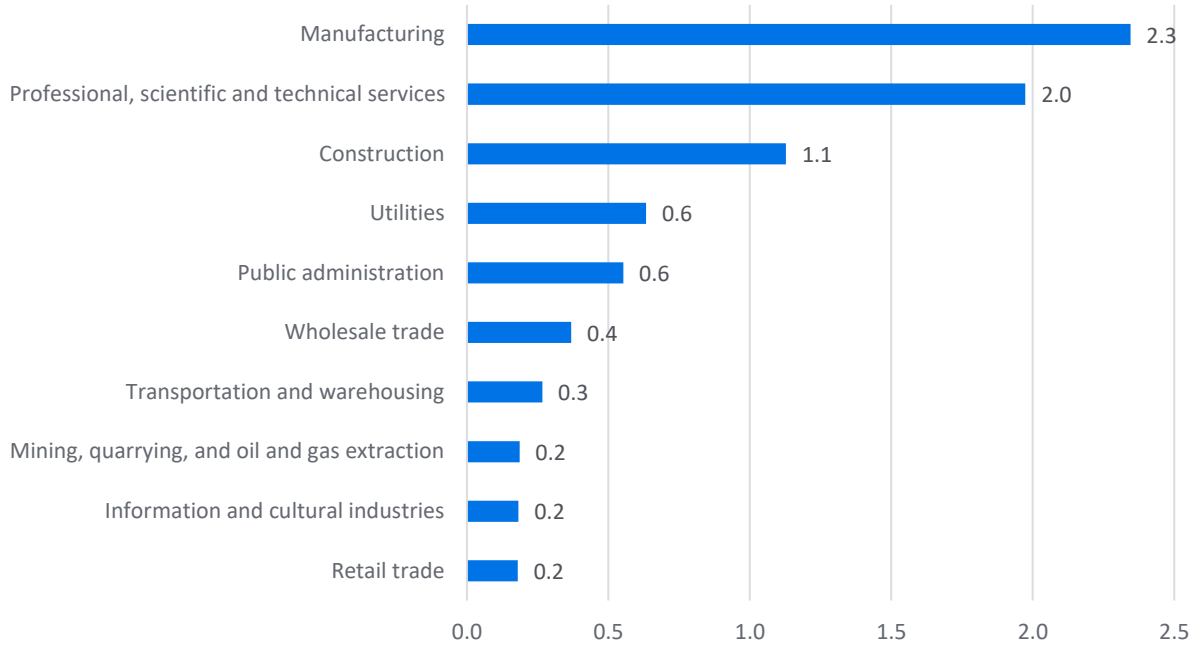
Source: The Conference Board of Canada.

In contrast, the manufacturing and professional, scientific, and technical services sectors have lower proportional shares, at 3.5 per cent and 2.7 per cent, respectively. These sectors feature a broader mix of occupational roles, ranging from production line workers to engineers and managers. However, due to the sheer size of these sectors in Ontario's economy, they collectively employed over 26,600 OACETT-supported technicians and technologists in 2024, making them the largest employment hubs for this group.

OACETT-supported technicians and technologists earned $8.9 billion in labour income

In 2024, total labour income from OACETT-supported technicians and technologists amounted to $8.9 billion, with the manufacturing sector contributing the largest share at $2.3 billion. (See Chart 13.) This underscores the central role of technicians and technologists in driving industrial productivity, automation, and innovation. The professional, scientific, and technical services sector followed closely, generating $2.0 billion, reflecting the increasing demand for specialized technical expertise in areas such as consulting, engineering design, and applied research.

Chart 13: OACETT-supported technicians and technologists within the manufacturing sector earn $2.3 billion in labour income
(labour income contributions, $ billions, 2024 constant dollars)



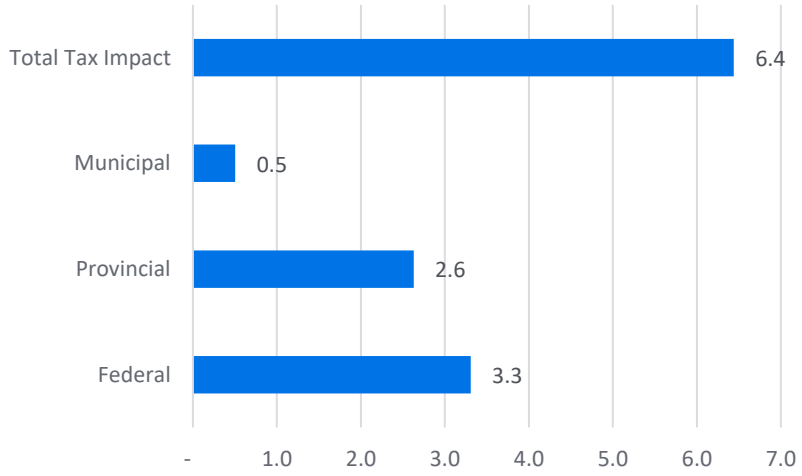
Source: The Conference Board of Canada.

In the construction and utilities sectors, OACETT-supported technicians and technologists contributed $1.1 billion and $0.6 billion in labour income, respectively, reflecting their significant role in energy infrastructure and large-scale development projects. The public sector also made a notable contribution, with $0.6 billion in labour income.

OACETT-supported technicians and technologists generate $6.4 billion in tax revenues

In 2024, OACETT-supported technicians and technologists generated an estimated $6.4 billion in tax revenues across all three levels of government in Ontario. This total includes $3.3 billion in federal taxes, $2.6 billion in provincial taxes, and $0.5 billion in municipal taxes. (See Chart 14.)

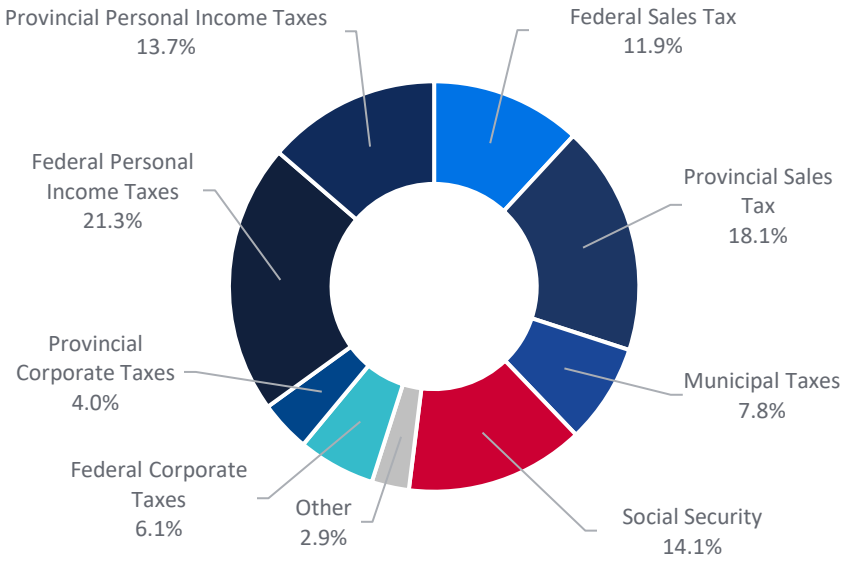
Chart 14: OACETT-supported technicians and technologists contributed $6.4 billion in government revenues
(government revenue, $ billions, 2024 constant dollars)



Source: The Conference Board of Canada.

A breakdown of the total fiscal impact by tax type shows that income taxes and sales taxes were the primary contributors to government revenue. (See Chart 15.)

Chart 15: Income taxes account for over 35 per cent of total government revenues
(government revenue by tax category, percentage share)



Source: The Conference Board of Canada.

Ontario’s Technical Workforce: Building the Future

Ontario’s engineering and applied science technicians and technologists, represented by OACETT, are a cornerstone of the province’s skilled workforce and innovation economy. As our findings illustrate, their contributions span a wide array of sectors, including manufacturing, professional, scientific and technical services, construction, energy, mining, quarrying, oil and gas extraction as well as the public sector. With employment growth surpassing the provincial average and wage premiums reflecting the high value of their expertise, these professionals are essential not only to key industries but also to Ontario’s long-term economic resilience.

Looking ahead, the long-term labour market outlook for OACETT-supported occupations remains strong. Employment is projected to rise from approximately 103,215 in 2024 to 133,100 by 2045. This growth will outpace overall employment expansion in Ontario, accounting for 2.8 per cent of total provincial job gains during the period.

In 2024 alone, OACETT-supported professionals contributed $16.6 billion to Ontario’s GDP—representing 1.9 per cent of the province’s total economic output. Their labour income reached $8.9 billion. This workforce also generated $6.4 billion in direct tax revenues across all levels of government, reinforcing their critical role.

OACETT-supported occupations play a vital role in Ontario’s economic development. Their technical expertise and sectoral relevance make them essential to the province’s competitiveness and productivity. Continued investment in certification, applied education, and policy will be key to sustaining the growth of these occupations and ensuring Ontario’s workforce is prepared for a rapidly evolving global economy.

Appendix A: Methodology for Selecting Occupations

Identifying the occupations represented by OACETT

To objectively identify the occupations represented by OACETT, the analysis relied on data from Statistics Canada Census Table 98-10-0404-01. This data table provides detailed data on occupations at the 5-digit NOC level categorized by major field of study.[22] Of particular relevance to this study, the dataset includes information on educational attainment, offering insights into the highest level of education achieved by individuals in each occupation. This allows for an understanding of the relationship between education, field of study, and employment patterns across different occupations.

The fields of study in the Statistics Canada Census Table are based on the Classification of Instructional Programs (CIP), a system used to categorize and organize academic programs and fields of study. The CIP provides a standardized method for classifying programs based on their subject matter, facilitating the collection, comparison, and analysis of educational data across institutions.

This data was instrumental in understanding the specific educational backgrounds and disciplines that are relevant to OACETT's representation.

Key Criteria

To accurately identify the occupations represented by OACETT, two criteria were established to guide the selection process. These criteria focused on the specific fields of study and educational qualifications that align with OACETT's membership:

1. **Field of Study**: The analysis concentrated on CIP 14–Engineering and CIP 15–Engineering/engineering-related technologies/technicians fields of study, which are aligned with the 15 disciplines represented by OACETT. CIP 14 encompasses programs that focus on the study of engineering principles, theories, and practices across a wide range of specialized fields. CIP 15 includes programs that prepare individuals for technical careers in various engineering fields. In addition to these fields, other disciplines related to engineering, technology, and technician roles were also included, such as construction management, biotechnology, chemistry, geosciences, science technologies, data processing, IT administration, and urban planning.

2. **Level of Education**: The level of study had to be postsecondary education below a bachelor's degree, specifically a college-level credential.

[22] OACETT disciplines were compared to the National Occupational Classification 2021 detailed definitions for each occupational category. This includes examples of job titles, the type and level of education required and common tasks.

Selection Thresholds

To refine the list of occupations that OACETT represents, specific selection thresholds were applied to ensure consistency and objectivity in the identification process. These thresholds were designed to capture both wholly and partially represented occupations based on the proportion of individuals employed in each occupation who meet the key criteria. For wholly represented occupations, a higher percentage of employees with the relevant educational background was required, while partially represented occupations allowed for more flexibility. The thresholds allowed for a nuanced distinction between occupations that OACETT fully represents and those where the representation is shared, ensuring a comprehensive analysis of the workforce. Specifically, the thresholds set were as follows:

- **Wholly Represented Occupations:** These occupations are fully represented by OACETT, and meet the following criteria:
    - Occupational title: Explicitly includes *technician* or *technologist*.
    - Educational alignment:
        - ≥10% of workers aged 25–64 meet both field of study and education level criteria.
        - ≥50% of those with relevant education hold a college-level credential.
    - Role nature: All job roles are assumed to be applied and technical.

- **Partially Represented Occupations:** These occupations are only partially represented by OACETT, meaning only a portion of the workforce is included based on education and field of study criteria. The broader criteria applied was as follows:
    - Occupational title: May or may not include *technician* or *technologist*.
    - Educational Alignment:
        - ≥10% of workers aged 25–64 meet both field of study and education level criteria.
        - ≥10% of those with relevant education hold a college-level credential.
    - Role nature: A large share of roles is assumed to be applied and technical, but not all.

For occupations fully represented by OACETT, all employees were included in the analysis, as these roles align most closely with OACETT's mandate and membership profile. For occupations that are only partially represented, the proportion included was based on the share of individuals whose fields of study align with OACETT's areas of representation, relative to all employees in that occupation. This approach ensures a realistic and nuanced representation of OACETT's reach across occupations, balancing title-based identification with actual educational and functional alignment. The tables below list the occupations that are fully and partially represented by OACETT.

Table A1: Wholly represented occupations

NOC code	Occupation
22100	Chemical technologists and technicians
22101	Geological and mineral technologists and technicians
22110	Biological technologists and technicians
22212	Drafting technologists and technicians
22213	Land survey technologists and technicians
22300	Civil engineering technologists and technicians
22301	Mechanical engineering technologists and technicians
22310	Electrical and electronics engineering technologists and technicians

Table A2: Shared representation occupations and weights

NOC Code	Occupation	Share (%)
22312	Industrial instrument technicians and mechanics	55.8
72603	Engineer officers, water transport	38.7
92100	Power engineers and power systems operators	32.1
93101	Central control and process operators, petroleum, gas and chemical processing	29.2
22302	Industrial engineering and manufacturing technologists and technicians	23.8
22233	Construction inspectors	22.2
92101	Water and waste treatment plant operators	19.8
22313	Aircraft instrument, electrical and avionics mechanics, technicians and inspectors	18.5
22230	Non-destructive testers and inspectors	18.1
92021	Supervisors, electronics and electrical products manufacturing	16.9
22220	Computer network and web technicians	15.9
22303	Construction estimators	15.2
92011	Supervisors, petroleum, gas and chemical processing and utilities	13.7
93100	Central control and process operators, mineral and metal processing	12.9
22231	Engineering inspectors and regulatory officers	12.7
82020	Supervisors, mining and quarrying	12.6
90011	Utilities managers	12.5
93102	Pulping, papermaking and coating control operators	12.5
22232	Occupational health and safety specialists	12.0
80010	Managers in natural resources production and fishing	10.4
70010	Construction managers	10.0
21220	Cybersecurity specialists	9.5
94203	Assemblers, fabricators and inspectors, industrial electrical motors and transformers	9.1
20010	Engineering managers	9.0
74204	Utility maintenance workers	9.0

NOC Code	Occupation	Share (%)
72203	Electrical power line and cable workers	8.9
21311	Computer engineers (except software engineers and designers)	8.8
93200	Aircraft assemblers and aircraft assembly inspectors	8.7
84100	Underground mine service and support workers	8.2
21399	Other professional engineers	7.6
92010	Supervisors, mineral and metal processing	7.5
94201	Electronics assemblers, fabricators, inspectors and testers	7.3
72501	Water well drillers	7.3
72404	Aircraft mechanics and aircraft inspectors	7.0
94104	Inspectors and testers, mineral and metal processing	6.4
82021	Contractors and supervisors, oil and gas drilling and services	6.4
22211	Industrial designers	6.2
94110	Chemical plant machine operators	5.5
22214	Technical occupations in geomatics and meteorology	5.2
32129	Other medical technologists and technicians	4.3
83101	Oil and gas well drillers, servicers, testers and related workers	4.1
21120	Public and environmental health and safety professionals	3.9
70020	Managers in transportation	3.0
00018	Senior managers - public and private sector	2.7
94140	Process control and machine operators, food and beverage processing	2.3

Appendix B: Detailed Overview of MOST

The Conference Board of Canada has developed a new labour market projection tool, the Model of Occupations, Skills, and Technology (MOST). MOST was used in this study to generate the labour demand outlook. Although it was not the focus of this project, MOST can also forecast vacancies, link the demand for occupations with specific skills, and isolate the impact of technological change on the demand for particular occupations and skills.

MOST has been developed using a wide variety of credible and regularly updated data sources, including the Conference Board's own national and provincial/territorial economic forecasts that span both the medium-term (five-year horizon) and longer-term (20-year horizon). MOST can generate detailed labour market projections that span both the medium term (five-year) and longer term (20-year) horizon. Notably, MOST offers a comprehensive picture of the Canadian labour market landscape that encompasses employment forecasts for over 400 distinct industries and over 500 occupations for each province and territory—all of which are tied to and consistent with Conference Board's national and provincial/territorial economic forecast models.[23]

Given that the Conference Board's economic and demographic projections are regularly updated, the projections presented in this report reflect a particular point in time, coinciding with the Conference Board's most recent economic and demographic perspective of labour markets in Canada. On this basis, base-case projections of MOST must remain consistent with the Conference Board's aggregate employment projections, which are interwoven within a broader range of economic, demographic, and fiscal assumptions devised to create the projections.

While these assumptions and caveats largely explain how the aggregate employment projections (primarily at the 2-digit NAICS level) are derived, there are considerable discrete movements to account for at the 3- and 4-digit NAICS levels as well as at the occupational level. In this respect, MOST, relies on a variety of sources to assist in adjusting the relative performance of industries at the 3- and 4-digit NAICS level to that of the more aggregate 2-digit NAICS level to which they fall under.

Various sources are used to make adjustments over historical periods where reported data at such a detailed level does not exist (or does not exist reliably) as well as over both the short- and longer-term future time horizons. While historical data for MOST is mostly informed by growth rates observed using annual labour force survey data from Statistics Canada at a national level, historical data at the provincial/territorial level are informed based on custom tabulations of the labour force data at these geographic levels.

---

[23] For additional information on MOST, visit https://www.conferenceboard.ca/future-skills-centre/tools/model-of-occupations-skills-and-technology-most/.

Appendix C: Methodology for Economic Impact Assessment

The complexity in measuring the output produced by a group of workers stems from the fact that an occupational category (e.g. engineering and applied science technicians and technologists) does not produce direct output. Statistics Canada does not provide output data by occupation since output is measured by industry. Indeed, output results from the combination of different factors of production such as labour and capital. As such, it is difficult to differentiate the output attributed to different occupational categories within an industry.

Yet, it is possible to estimate the amount of output associated with the work of an occupation in each industry by using wage data by occupation and by industry. Based on these data, we can calculate the ratio of wages paid to OACETT-supported technicians and technologists over total wages paid to all workers in each industry. We use this ratio as a proxy for the ratio of output associated with the work of technicians and technologists (and the capital they use) in each industry.

We used the average weekly wage rate of the occupational categories listed earlier from Statistics Canada's Labour Force Survey. For all the categories of technicians and technologists, we multiplied the average weekly wage rate in Ontario for that specific occupation by 52 to obtain the average annual wage rate and then multiplied the resulting amount by the number of OACETT-supported technicians and technologists for each of the categories in each industry in 2024. In this way, we obtain the total wages paid to each category of technicians and technologists in each industry in the provincial economy. We then calculated total wages paid to all employees in each industry in the same fashion. This number would be used as the denominator of the ratio.

Next, for each industry, we calculated the ratio of wages paid to technicians and technologists (aggregating the 53 types of OACETT-supported occupations) over the total wages paid in that industry in Ontario. We used this ratio as a proxy for the ratio of industrial output associated with the work of these occupations in each industry. Using Statistics Canada's input-output tables, we then multiplied each ratio to GDP in the respective industry to obtain the value-added in that industry attributed to technicians and technologists.

Overall, the study assesses the economic contribution of OACETT-supported technicians and technologists along with the technology used in their work. Based on our methodology, a technician working in a highly productive capital-intensive industry would have a larger economic contribution than a technician working in a labour-intensive industry with relatively low productivity (for a given wage).

Appendix D: Data tables

Table D1
Total OACETT-supported employment and engineering and applied science technicians and technologists' employment by occupation, select years
(number of jobs)

Occupational category	2015	2024	2025	2026	2027	2028	2029	2030	2035	2045	Percentage change 2015-25	Percentage change 2025-35	Percentage change 2035-45
Total employment	**6,860,246**	**8,144,883**	**8,221,222**	**8,245,102**	**8,283,581**	**8,377,780**	**8,467,815**	**8,562,019**	**9,073,929**	**10,280,800**	**19.8%**	**10.4%**	**13.3%**
Total engineering and Applied Science Technicians and Technologists	**85,962**	**103,216**	**104,475**	**104,666**	**105,274**	**106,591**	**107,848**	**109,080**	**116,345**	**133,069**	**21.5%**	**11.4%**	**14.4%**
00018 Senior managers - public and private sector	2,633	3,131	3,183	3,211	3,247	3,306	3,364	3,422	3,754	4,545	20.9%	17.9%	21.1%
20010 Engineering managers	1,261	1,581	1,592	1,606	1,625	1,654	1,684	1,712	1,856	2,196	26.3%	16.6%	18.3%
21120 Public and environmental health and safety professionals	248	306	318	318	320	323	327	331	357	419	28.6%	11.9%	17.6%
21220 Cybersecurity specialists	621	850	877	885	896	914	931	947	1,033	1,235	41.0%	17.9%	19.5%
21311 Computer engineers (except software engineers and designers)	1,131	1,442	1,483	1,508	1,523	1,547	1,572	1,595	1,716	1,992	31.2%	15.7%	16.1%
21399 Other professional engineers	108	134	138	141	143	146	150	153	168	205	27.9%	21.7%	21.8%
22100 Chemical technologists and technicians	4,686	5,309	5,390	5,346	5,319	5,330	5,345	5,348	5,530	5,884	15.0%	2.6%	6.4%
22101 Geological and mineral technologists and technicians	1,566	1,875	1,889	1,822	1,838	1,870	1,894	1,913	2,045	2,537	20.6%	8.3%	24.0%
22110 Biological technologists and technicians	2,800	3,383	3,514	3,473	3,450	3,457	3,465	3,481	3,624	3,941	25.5%	3.1%	8.8%
22211 Industrial designers	280	339	342	345	350	357	365	372	409	496	22.2%	19.5%	21.2%
22212 Drafting technologists and technicians	7,344	9,332	9,306	9,360	9,461	9,626	9,796	9,943	10,711	12,381	26.7%	15.1%	15.6%
22213 Land survey technologists and technicians	354	509	497	495	496	501	506	509	516	523	40.1%	3.8%	1.4%
22214 Technical occupations in geomatics and meteorology	115	154	156	157	158	161	163	165	175	198	36.1%	11.7%	13.2%
22220 Computer network and web technicians	3,919	5,008	5,126	5,211	5,287	5,400	5,513	5,623	6,226	7,671	30.8%	21.5%	23.2%
22230 Non-destructive testers and inspectors	212	250	258	256	256	257	258	259	263	268	21.4%	2.0%	2.1%
22231 Engineering inspectors and regulatory officers	284	350	357	355	353	353	353	355	366	390	25.5%	2.5%	6.6%
22232 Occupational health and safety specialists	762	939	975	974	980	992	1,003	1,016	1,094	1,286	28.0%	12.2%	17.6%
22233 Construction inspectors	992	1,294	1,269	1,278	1,288	1,303	1,316	1,329	1,403	1,569	28.0%	10.5%	11.8%
22300 Civil engineering technologists and technicians	5,750	7,561	7,508	7,582	7,663	7,791	7,905	7,999	8,509	9,649	30.6%	13.3%	13.4%

Table D1

Total OACETT-supported employment and engineering and applied science technicians and technologists' employment by occupation, select years

(number of jobs)

Occupational category	2015	2024	2025	2026	2027	2028	2029	2030	2035	2045	Percentage change 2015-25	Percentage change 2025-35	Percentage change 2035-45
22301 Mechanical engineering technologists and technicians	15,408	18,493	18,823	18,873	18,949	19,120	19,259	19,432	20,522	23,148	22.2%	9.0%	12.8%
22302 Industrial engineering and manufacturing technologists and technicians	2,352	2,553	2,580	2,593	2,594	2,607	2,609	2,620	2,734	2,999	9.7%	6.0%	9.7%
22303 Construction estimators	1,378	1,643	1,645	1,668	1,696	1,731	1,765	1,805	2,017	2,520	19.4%	22.6%	24.9%
22310 Electrical and electronics engineering technologists and technicians	16,812	19,425	19,812	19,869	19,942	20,179	20,436	20,668	21,954	24,599	17.8%	10.8%	12.0%
22312 Industrial instrument technicians and mechanics	765	846	865	846	849	858	867	876	922	1,057	13.1%	6.6%	14.6%
22313 Aircraft instrument, electrical and avionics mechanics, technicians and inspectors	309	444	394	406	406	413	421	428	449	484	27.3%	13.9%	7.9%
32129 Other medical technologists and technicians	75	90	89	89	88	88	88	89	92	100	20.0%	3.1%	8.7%
70010 Construction managers	3,395	4,135	4,192	4,249	4,334	4,442	4,539	4,655	5,261	6,750	23.5%	25.5%	28.3%
70020 Managers in transportation	525	655	632	641	647	659	671	684	759	922	20.3%	20.1%	21.6%
72203 Electrical power line and cable workers	314	390	420	419	420	427	435	444	494	584	33.9%	17.7%	18.2%
72404 Aircraft mechanics and aircraft inspectors	413	660	557	566	563	571	580	590	631	689	34.8%	13.2%	9.2%
72501 Water well drillers	19	18	19	19	20	21	22	23	27	28	-0.4%	46.2%	2.9%
72603 Engineer officers, water transport	36	49	49	51	50	50	51	52	57	69	35.9%	15.9%	21.5%
74204 Utility maintenance workers	186	221	223	223	225	229	232	235	250	277	19.7%	12.0%	10.7%
80010 Managers in natural resources production and fishing	161	176	170	159	159	162	162	161	167	205	5.2%	-1.5%	22.7%
82020 Supervisors, mining and quarrying	313	346	342	321	324	330	332	337	362	471	9.2%	6.0%	30.1%
82021 Contractors and supervisors, oil and gas drilling and services	12	13	12	11	11	11	12	11	12	14	2.0%	-2.4%	21.0%
83101 Oil and gas well drillers, servicers, testers and related workers	30	36	36	35	35	35	36	35	36	40	19.8%	1.4%	8.8%
84100 Underground mine service and support workers	101	107	105	97	98	99	100	100	107	138	4.0%	1.0%	29.5%
90011 Utilities managers	492	563	576	568	567	572	575	579	608	670	17.0%	5.6%	10.2%
92010 Supervisors, mineral and metal processing	199	189	203	206	217	230	239	249	302	476	1.7%	49.2%	57.5%
92011 Supervisors, petroleum, gas and chemical processing and utilities	583	651	667	660	662	668	673	677	719	808	14.4%	7.8%	12.3%
92021 Supervisors, electronics and electrical products manufacturing	229	234	224	227	230	234	238	241	262	292	-2.3%	16.9%	11.5%
92100 Power engineers and power systems operators	2,562	2,933	3,022	2,992	3,014	3,054	3,099	3,146	3,400	3,955	17.9%	12.5%	16.3%

Table D1

Total OACETT-supported employment and engineering and applied science technicians and technologists' employment by occupation, select years

(number of jobs)

Occupational category	2015	2024	2025	2026	2027	2028	2029	2030	2035	2045	Percentage change 2015-25	Percentage change 2025-35	Percentage change 2035-45
92101 Water and waste treatment plant operators	912	1,025	1,081	1,057	1,053	1,059	1,053	1,047	1,040	1,051	18.6%	-3.9%	1.1%
93100 Central control and process operators, mineral and metal processing	127	119	121	120	127	135	139	144	167	246	-5.2%	38.3%	47.8%
93101 Central control and process operators, petroleum, gas and chemical processing	1,676	1,820	1,854	1,799	1,777	1,760	1,743	1,713	1,665	1,548	10.6%	-10.2%	-7.0%
93102 Pulping, papermaking and coating control operators	26	23	18	18	19	19	20	21	20	16	-29.9%	11.2%	-20.4%
93200 Aircraft assemblers and aircraft assembly inspectors	132	160	153	152	147	144	141	141	133	117	15.7%	-12.7%	-12.2%
94104 Inspectors and testers, mineral and metal processing	69	67	73	74	76	78	79	81	90	117	7.1%	22.2%	30.6%
94110 Chemical plant machine operators	120	130	124	122	120	119	118	115	112	101	3.4%	-9.8%	-9.6%
94140 Process control and machine operators, food and beverage processing	565	650	635	633	625	620	619	622	628	624	12.4%	-1.1%	-0.6%
94201 Electronics assemblers, fabricators, inspectors and testers	489	496	475	474	471	473	478	481	492	480	-2.8%	3.5%	-2.3%
94203 Assemblers, fabricators and inspectors, industrial electrical motors and transformers	111	108	107	107	106	106	105	104	100	87	-3.1%	-6.4%	-13.5%

Table D2
Total OACETT-supported employment and engineering and applied science technicians and technologists' employment by ranking (2045), select years
(number of jobs)

Occupational category	2015	2024	2025	2026	2027	2028	2029	2030	2035	2045	Percentage change 2015-25	Percentage change 2025-35	Percentage change 2035-45
Total employment	**6,860,246**	**8,144,883**	**8,221,222**	**8,245,102**	**8,283,581**	**8,377,780**	**8,467,815**	**8,562,019**	**9,073,929**	**10,280,800**	**19.8%**	**10.4%**	**13.3%**
Total engineering and Applied Science Technicians and Technologists	**85,962**	**103,216**	**104,475**	**104,666**	**105,274**	**106,591**	**107,848**	**109,080**	**116,345**	**133,069**	**21.5%**	**11.4%**	**14.4%**
22310 Electrical and electronics engineering technologists and technicians	16,812	19,425	19,812	19,869	19,942	20,179	20,436	20,668	21,954	24,599	17.8%	10.8%	12.0%
22301 Mechanical engineering technologists and technicians	15,408	18,493	18,823	18,873	18,949	19,120	19,259	19,432	20,522	23,148	22.2%	9.0%	12.8%
22212 Drafting technologists and technicians	7,344	9,332	9,306	9,360	9,461	9,626	9,796	9,943	10,711	12,381	26.7%	15.1%	15.6%
22300 Civil engineering technologists and technicians	5,750	7,561	7,508	7,582	7,663	7,791	7,905	7,999	8,509	9,649	30.6%	13.3%	13.4%
22220 Computer network and web technicians	3,919	5,008	5,126	5,211	5,287	5,400	5,513	5,623	6,226	7,671	30.8%	21.5%	23.2%
70010 Construction managers	3,395	4,135	4,192	4,249	4,334	4,442	4,539	4,655	5,261	6,750	23.5%	25.5%	28.3%
22100 Chemical technologists and technicians	4,686	5,309	5,390	5,346	5,319	5,330	5,345	5,348	5,530	5,884	15.0%	2.6%	6.4%
00018 Senior managers - public and private sector	2,633	3,131	3,183	3,211	3,247	3,306	3,364	3,422	3,754	4,545	20.9%	17.9%	21.1%
92100 Power engineers and power systems operators	2,562	2,933	3,022	2,992	3,014	3,054	3,099	3,146	3,400	3,955	17.9%	12.5%	16.3%
22110 Biological technologists and technicians	2,800	3,383	3,514	3,473	3,450	3,457	3,465	3,481	3,624	3,941	25.5%	3.1%	8.8%
22302 Industrial engineering and manufacturing technologists and technicians	2,352	2,553	2,580	2,593	2,594	2,607	2,609	2,620	2,734	2,999	9.7%	6.0%	9.7%
22101 Geological and mineral technologists and technicians	1,566	1,875	1,889	1,822	1,838	1,870	1,894	1,913	2,045	2,537	20.6%	8.3%	24.0%
22303 Construction estimators	1,378	1,643	1,645	1,668	1,696	1,731	1,765	1,805	2,017	2,520	19.4%	22.6%	24.9%
20010 Engineering managers	1,261	1,581	1,592	1,606	1,625	1,654	1,684	1,712	1,856	2,196	26.3%	16.6%	18.3%
21311 Computer engineers (except software engineers and designers)	1,131	1,442	1,483	1,508	1,523	1,547	1,572	1,595	1,716	1,992	31.2%	15.7%	16.1%
22233 Construction inspectors	992	1,294	1,269	1,278	1,288	1,303	1,316	1,329	1,403	1,569	28.0%	10.5%	11.8%
93101 Central control and process operators, petroleum, gas and chemical processing	1,676	1,820	1,854	1,799	1,777	1,760	1,743	1,713	1,665	1,548	10.6%	-10.2%	-7.0%
22232 Occupational health and safety specialists	762	939	975	974	980	992	1,003	1,016	1,094	1,286	28.0%	12.2%	17.6%
21220 Cybersecurity specialists	621	850	877	885	896	914	931	947	1,033	1,235	41.0%	17.9%	19.5%
22312 Industrial instrument technicians and mechanics	765	846	865	846	849	858	867	876	922	1,057	13.1%	6.6%	14.6%
92101 Water and waste treatment plant operators	912	1,025	1,081	1,057	1,053	1,059	1,053	1,047	1,040	1,051	18.6%	-3.9%	1.1%
70020 Managers in transportation	525	655	632	641	647	659	671	684	759	922	20.3%	20.1%	21.6%

Table D2
Total OACETT-supported employment and engineering and applied science technicians and technologists' employment by ranking (2045), select years
(number of jobs)

Occupational category	2015	2024	2025	2026	2027	2028	2029	2030	2035	2045	Percentage change 2015-25	Percentage change 2025-35	Percentage change 2035-45
92011 Supervisors, petroleum, gas and chemical processing and utilities	583	651	667	660	662	668	673	677	719	808	14.4%	7.8%	12.3%
72404 Aircraft mechanics and aircraft inspectors	413	660	557	566	563	571	580	590	631	689	34.8%	13.2%	9.2%
90011 Utilities managers	492	563	576	568	567	572	575	579	608	670	17.0%	5.6%	10.2%
94140 Process control and machine operators, food and beverage processing	565	650	635	633	625	620	619	622	628	624	12.4%	-1.1%	-0.6%
72203 Electrical power line and cable workers	314	390	420	419	420	427	435	444	494	584	33.9%	17.7%	18.2%
22213 Land survey technologists and technicians	354	509	497	495	496	501	506	509	516	523	40.1%	3.8%	1.4%
22211 Industrial designers	280	339	342	345	350	357	365	372	409	496	22.2%	19.5%	21.2%
22313 Aircraft instrument, electrical and avionics mechanics, technicians and inspectors	309	444	394	406	406	413	421	428	449	484	27.3%	13.9%	7.9%
94201 Electronics assemblers, fabricators, inspectors and testers	489	496	475	474	471	473	478	481	492	480	-2.8%	3.5%	-2.3%
92010 Supervisors, mineral and metal processing	199	189	203	206	217	230	239	249	302	476	1.7%	49.2%	57.5%
82020 Supervisors, mining and quarrying	313	346	342	321	324	330	332	337	362	471	9.2%	6.0%	30.1%
21120 Public and environmental health and safety professionals	248	306	318	318	320	323	327	331	357	419	28.6%	11.9%	17.6%
22231 Engineering inspectors and regulatory officers	284	350	357	355	353	353	353	355	366	390	25.5%	2.5%	6.6%
92021 Supervisors, electronics and electrical products manufacturing	229	234	224	227	230	234	238	241	262	292	-2.3%	16.9%	11.5%
74204 Utility maintenance workers	186	221	223	223	225	229	232	235	250	277	19.7%	12.0%	10.7%
22230 Non-destructive testers and inspectors	212	250	258	256	256	257	258	259	263	268	21.4%	2.0%	2.1%
93100 Central control and process operators, mineral and metal processing	127	119	121	120	127	135	139	144	167	246	-5.2%	38.3%	47.8%
80010 Managers in natural resources production and fishing	161	176	170	159	159	162	162	161	167	205	5.2%	-1.5%	22.7%
21399 Other professional engineers	108	134	138	141	143	146	150	153	168	205	27.9%	21.7%	21.8%
22214 Technical occupations in geomatics and meteorology	115	154	156	157	158	161	163	165	175	198	36.1%	11.7%	13.2%
84100 Underground mine service and support workers	101	107	105	97	98	99	100	100	107	138	4.0%	1.0%	29.5%
94104 Inspectors and testers, mineral and metal processing	69	67	73	74	76	78	79	81	90	117	7.1%	22.2%	30.6%
93200 Aircraft assemblers and aircraft assembly inspectors	132	160	153	152	147	144	141	141	133	117	15.7%	-12.7%	-12.2%
94110 Chemical plant machine operators	120	130	124	122	120	119	118	115	112	101	3.4%	-9.8%	-9.6%

Table D2
Total OACETT-supported employment and engineering and applied science technicians and technologists' employment by ranking (2045), select years
(number of jobs)

Occupational category	2015	2024	2025	2026	2027	2028	2029	2030	2035	2045	Percentage change 2015-25	Percentage change 2025-35	Percentage change 2035-45
32129 Other medical technologists and technicians	75	90	89	89	88	88	88	89	92	100	20.0%	3.1%	8.7%
94203 Assemblers, fabricators and inspectors, industrial electrical motors and transformers	111	108	107	107	106	106	105	104	100	87	-3.1%	-6.4%	-13.5%
72603 Engineer officers, water transport	36	49	49	51	50	50	51	52	57	69	35.9%	15.9%	21.5%
83101 Oil and gas well drillers, servicers, testers and related workers	30	36	36	35	35	35	36	35	36	40	19.8%	1.4%	8.8%
72501 Water well drillers	19	18	19	19	20	21	22	23	27	28	-0.4%	46.2%	2.9%
93102 Pulping, papermaking and coating control operators	26	23	18	18	19	19	20	21	20	16	-29.9%	11.2%	-20.4%
82021 Contractors and supervisors, oil and gas drilling and services	12	13	12	11	11	11	12	11	12	14	2.0%	-2.4%	21.0%

Appendix E: Bibliography

Council of Ontario Universities. (2025). *Partnering to power Ontario's digital future.* https://ontariosuniversities.ca/wp-content/uploads/Partnering-to-Power-Ontarios-Digital-Future-August-2025.pdf

Government of Ontario. (2021, April 30). *Building digital Ontario*. https://www.ontario.ca/page/building-digital-ontario

Government of Ontario. (2024, October 3). A*dvanced manufacturing council final report*. https://www.ontario.ca/files/2024-10/medjct-advanced-manufacturing-report-2024-en-2024-10-03.pdf

Government of Ontario. (2025, April 23). *Published plans and annual reports 2024–2025: Ministry of Transportation*. https://www.ontario.ca/page/published-plans-and-annual-reports-2024-2025-ministry-transportation

Government of Ontario. (2025, May 29). *Ontario investing $500 million in critical minerals processing: New fund will support made-in-Ontario critical mineral supply chain*. https://news.ontario.ca/en/release/1005969/ontario-investing-500-million-in-critical-minerals-processing

Government of Ontario. (2025, June 12). *Ontario launches plan to secure energy for generations*. https://news.ontario.ca/en/release/1006043/ontario-launches-plan-to-secure-energy-for-generations

Kaur, N., & Sharma, A. (2025). Robotics and automation in manufacturing processes. In N. Kaur, G. S. Dhillon, S. Rani, & A. A. Elngar, *Intelligent manufacturing: Exploring AI, blockchain, and smart technologies in 4.0* (pp. 97–109). CRC Press.

Statistics Canada. (2025, May 1). *Table: 36-10-0402-02 - Gross domestic product (GDP) at basic prices, by industry, provinces and territories*. https://www150.statcan.gc.ca/t1/tbl1/en/cv.action?pid=3610040202

Legislative Assembly of Ontario. (1998, December 2). *Town of Richmond Hill Act, Bill Pr23, Mr Klees. https://www.ola.org/en/legislative-business/committees/regulations-private-bills/parliament-36/transcripts/committee-transcript-1998-dec-02#P58_2962*

Natural Resources Canada. (2025, January 7). *The Canada green buildings strategy: Transforming Canada's buildings sector for a net-zero and resilient future*. https://natural-resources.canada.ca/energy-efficiency/building-energy-efficiency/canada-green-buildings-strategy-transforming-canada-s-buildings-sector-net-zero-resilient-future

Natural Resources Canada. (2025, March 3). *Investing to Make Canada a Global Critical Minerals Superpower*. https://www.canada.ca/en/natural-resources-canada/news/2025/03/investing-to-make-canada-a-global-critical-minerals-superpower0.html

OACETT (n.d.a). Who we are. https://www.oacett.org/about-us/who-we-are

OACETT. (n.d.b). *Disciplines of Registration*. https://www.oacett.org/how-to-certify/disciplines-of-registration

Policy Horizons Canada. (2025, March 13). *Innovations reshaping our society: Emerging technologies. Government of Canada. https://horizons.service.canada.ca/en/2025/03/14/emerging-technologies/index.shtml*

Sharon, M. (2025). *Why BIM: The key to digital transformation in construction: Unlocking efficiency and innovation in construction*. Vocal Media. https://vocal.media/education/why-bim-the-key-to-digital-transformation-in-construction

The Conference Board of Canada. (2025, September 8). *How AI is shaping the future of work*. https://www.conferenceboard.ca/product/how-ai-is-shaping-the-future-of-work_sept2025/

Accessibility Officer, The Conference Board of Canada
Tel.: 613-526-3280 or 1-866-711-2262
Email: accessibility@conferenceboard.ca

The Conference
Board of Canada

Where insights meet impact

The Conference Board of Canada

conferenceboard.ca