EMPLOYMENT PROSPECTS 2023-28

LONDON REGION'S ADVANCED MANUFACTURING SECTOR

Smart Prosperity Institute

LONDON ECONOMIC DEVELOPMENT CORPORATION

APRIL 2023

ADVANCED MANUFACTURING DRAFT

Executive Summary

Like many other sectors of the economy, advanced manufacturing, which includes food processing, is experiencing a wave of retirements as Baby Boomers age into their 60s and 70s. In occupations where demand is growing, this combination of projected retirements and growth will lead to thousands of job openings in advanced manufacturing over the next six years.

Although domestic sources of recruits, including graduates of our postsecondary institutions, will meet some of this need, many new jobs must be filled through immigration. Making sure that federal immigration targets and provincial priorities are aligned with the labour market needs of advanced manufacturers in the London economic region will be critical to the sector's economic growth.

Employers in the London economic region are preparing for this wave of retirements, focusing resources on internal training and development and recruiting far and wide to fill positions. To successfully manage this transition, advanced manufacturers need help from all levels of government and postsecondary institutions.

Programs like those offered at local colleges, such as Fanshawe, not just in terms of the curriculum but in terms of enrolment, need to continue to meet the needs of these employers. The work of the provincial government to highlight the value of skilled trades in general and manufacturing, in particular, is helping, but a focus on reaching Ontario kids in late elementary and secondary school would aid in bringing outdated perceptions of manufacturing closer to the reality of advanced manufacturing in the London region.

To increase the talent pool from outside Canada, the province should consider expanding the list of eligible occupations to meet a broader range of needs in advanced manufacturing. Variation between provinces when it comes to critical occupations is a concern that may cause recruiting challenges for advanced manufacturers. Similarly, the federal list of global talent occupations (category B) is too limited to be useful for many occupations in advanced manufacturing. Generally, speeding up the immigration process would help advanced manufacturers as they manage through this transition.

Finally, to attract and retain workers in the London region, a focus must be placed on increasing the supply of attainable housing and transit options. The better public transit services these workplaces, the broader the range of places future (and existing) workers can live without the additional expense of owning a personal vehicle.

ADVANCED MANUFACTURING DRAFT

Employment Projections at a Glance

The London-St. Thomas area is projected to need thousands of additional manufacturing workers over the next six years to replace retiring workers and to keep pace with projected levels of employment growth based on past growth of those respective occupations. These projections do not consider the rapid rate of new manufacturing investments made in the area, including Volkswagen's announced electric battery manufacturing plant in St. Thomas and all the spinoff jobs it will create in the sector.

2022 to 2028
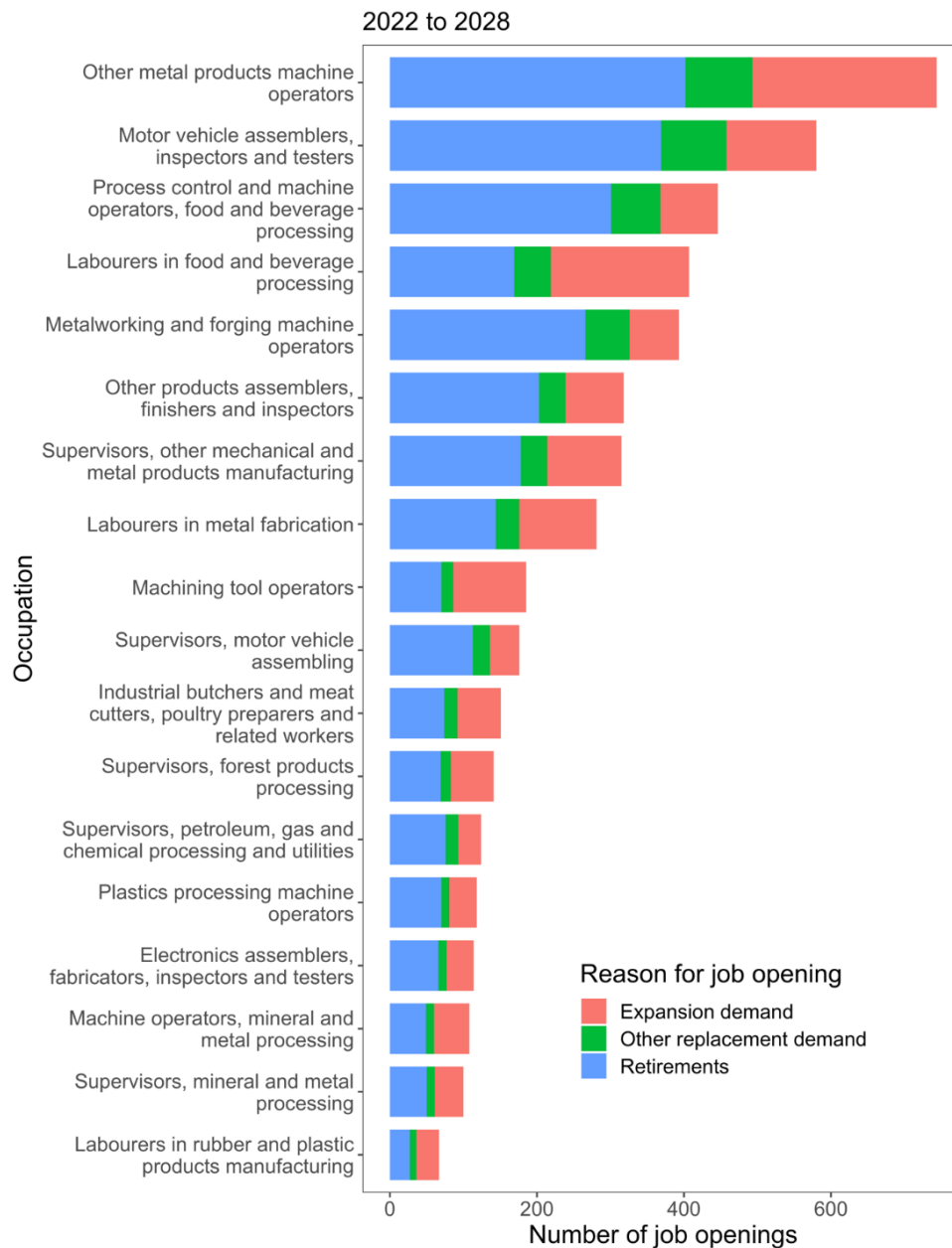
ADVANCED MANUFACTURING DRAFT

Five Key Points from This Report

1. Over the next six years, more than half of the projected thousands of job openings in crucial manufacturing occupations in the London economic region will open because of retirements. This turnover is a tremendous opportunity for mid-career workers and new grads entering manufacturing and a considerable challenge for advanced manufacturers. And these statistical projections do not include announced or anticipated investments made by manufacturers in recent months.

2. In combination with new positions needed to support growth, the domestic labour supply will be insufficient to fill all of these positions, meaning that skilled people worldwide will be needed in even greater numbers than they are today.

3. Immigration is likely to be a key recruitment source in most advanced manufacturing occupations but will be especially important in some occupations, particularly in food processing.

4. Further reforms to the immigration system are needed, particularly around the treatment of occupation classifications and skill levels.

5. Ensuring that we have housing and mobility options that are affordable and work for people who will be filling these jobs over the next six years is critical. A lack of housing and transit options hinders attracting and retaining employees, particularly entry-level ones. Advanced manufacturers need all levels of government and postsecondary institutions to work together in new ways to ensure that the education system, housing, transit and immigration are aligned.

ADVANCED MANUFACTURING DRAFT

Table of Contents

ADVANCED MANUFACTURING DRAFT

Introduction

Advanced manufacturing is a critical sector in the London economic region, accounting for more than 34,000 jobs.[1] More than 500 companies employ people in this sector, including food processing and aerospace, materials, automotive, transportation, defense and building products manufacturers.

Like many other sectors of the economy, advanced manufacturers are grappling with the demographic wave of Baby Boomers, only half of whom have aged into retirement as of 2021. Retirement rates are generally expected to increase over the next decade, with fewer working-age people for each retirement-age adult nationwide, reaching a historic low ratio of two working-age people for each retiree in 2035.[2] To increase the size of the Canadian labour force, the federal government has increased its targets for admitting new permanent residents, which will reach 500,000 per year by 2025.

These two general trends of an aging population and increasing working-age immigrants are well understood. But how do they vary at the local level and by occupation? Building on the Canadian Occupational Projection System (COPS) for 2019-2028, this report forecasts the expected number of job openings for critical occupations in advanced manufacturing in the London region until 2028.

To explore what employers are experiencing right now in terms of attracting and retaining talent, we facilitated a roundtable discussion with leading employers in the advanced manufacturing sector about these region-specific and occupation-specific forecasts for job openings and opportunities for public policy changes that would help in meeting expected demands for labour over the next six years.

---

[1] Source: LEDC, https://www.ledc.com/advanced-manufacturing. 2021 Census reports 17,220 jobs in London CMA in manufacturing and utilities; 2006 Census reports 19,980.

[2] Source: https://www.canada.ca/en/immigration-refugees-citizenship/news/2022/11/an-immigration-plan-to-grow-the-economy.html

London's Booming Advanced Manufacturing Sector

Spanning both sides of the 401 corridor and located halfway between the Greater Toronto and Hamilton region to the East and Windsor / Detroit to the West, the region has a strong network of suppliers in these industries.

As shown in Figure 1, employees of these companies, classified as occupations in manufacturing or utilities, live throughout the London economic region with relatively higher concentrations in the East and Southeast parts of the City of London and the core and Northern parts of the City of St. Thomas (orange and yellow on the map), close to major transportation corridors where significant clusters of manufacturers are located.

Like many other areas in the broader Great Lakes region, the manufacturing sector in the London CMA was heavily impacted by the 2009 recession – employment in the sector has declined by almost 14% from 2006 levels even as the overall population has increased by 19%.

Figure 1: Employment in manufacturing and utilities occupations, London Economic Region
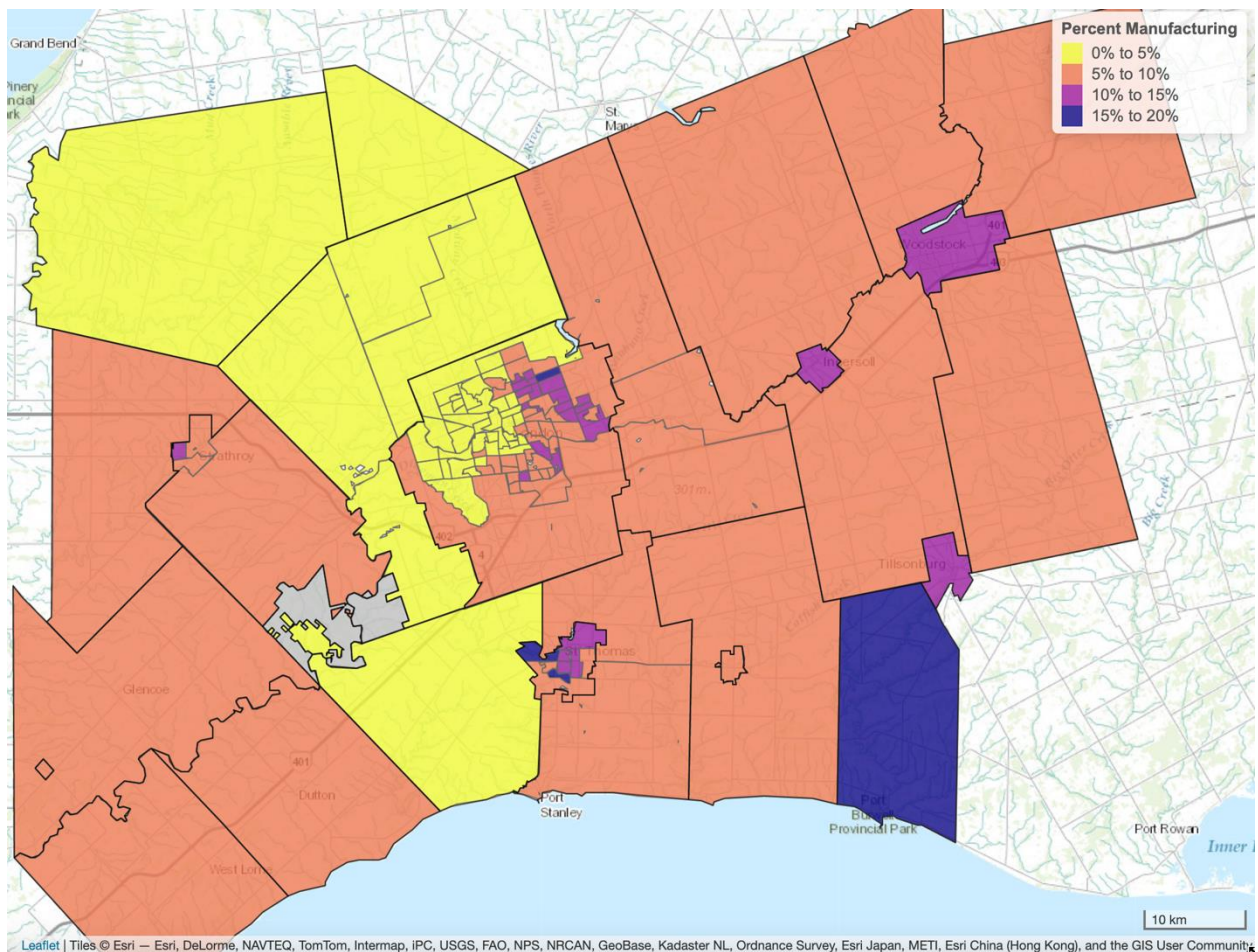
The London Region's Advanced Manufacturing Advantage

Volkswagen chose St. Thomas for their new "gigafactory" EV battery manufacturing facility, and it's not difficult to understand why the London area is so attractive to advanced manufacturers. In the words of the London Economic Development Corporation, the region has many advantages, including:

- Shovel-ready, fully serviced industrial lands
- Within two hours of three major U.S. border crossings - Sarnia / Port Huron, Windsor / Detroit, and Niagara / Buffalo
- Access to a manufacturing supply chain of Original Equipment Manufacturers (OEMs), Tiers 1-3, logistics, distribution, and warehousing
- Access to the North American railway system through CN and CP rail
- Talented workforce specializing in engineering, production, electrical, and quality assurance

Figure 2 shows the percentage of employment in manufacturing by Census Division. The eastern half of London, along with St. Thomas and Perth, Oxford, and Brant counties, have some of the highest concentrations of manufacturing in Canada.

Figure 2: Employment in manufacturing and utilities occupations, Southern Ontario
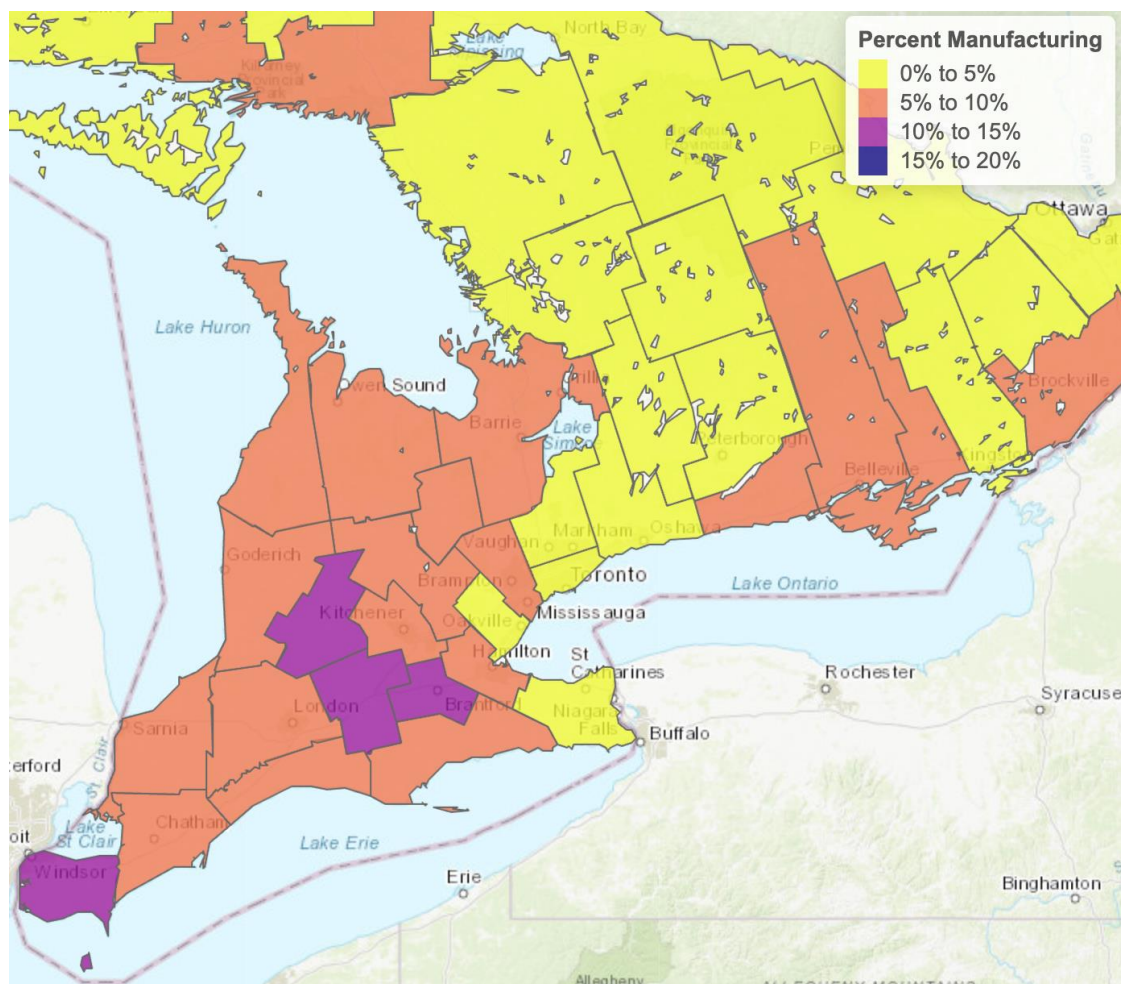
Employment Opportunities in London's Advanced Manufacturing Sector

The Elgin-Middlesex-Oxford area will need thousands of advanced manufacturing workers to replace retiring workers and keep up with projected expected demand. The Institutional Research team at Fanshawe College has developed employment projections at the occupational level for 2022-28; see Appendix B for details. The occupations include supervisors, operators and labourers across several different kinds of manufacturing;[3] see Appendix A for more information.

These projections, while vital, cannot capture the whole story. In particular, projecting expansion demand is particularly challenging, as models can only project forward past trends. They lack on-the-ground knowledge of upcoming investments and plant openings. Given the renewed interest in on-shoring manufacturing and producing the technologies needed to hit net-zero emissions, these are almost certainly underestimates of future employment growth.

Figure 3 provides projected job openings in manufacturing for the years 2022 to 2028 for the Elgin-Middlesex-Oxford region. The projections are broken down into three components: those that will occur due to retirement, those that will occur due to projected expansions, and those which occur for other reasons, which can include workers switching industries. Detailed breakdowns for each of the 18 occupations can be found in Appendix A.

An example will illustrate the general method of how the projections in Figure 3 were estimated. NOC 9221 is Supervisors in Motor Vehicle Assembling. At the national level, 19% of workers in NOC 9221 are expected to retire between 2022 and 2028. That translates to 113 forecasted retirements over the same period in EMO. Another 23 jobs in that same occupation are expected to open for other reasons. Combined with the estimate of expansion demand at the EMO level of 40 net new jobs, that results in a total of 176 total job openings between 2022 and 2028.

To put these projections into perspective, Figure 4 shows the number of people working in these occupations in Elgin-Middlesex-Oxford in 2022. In total, these 18 occupation codes include 19,513 jobs, with over 10,000 of those jobs in four NOC codes: 9522 (Motor Vehicle Assemblers, Inspectors and Testers), 9418 (Other Metal Products Machine Operators), 9461 (Process Control and Machine Operators, Food and Beverage Processing), and 9416 (Metalworking and Forging Machine Operators).

---

[3] Among the 18 NOCs, supervisory occupation NOCs start with 92; operator NOCs start with 94; assembler NOCs start with 95; and labourer NOCs start with 96.

Figure 3: Projected job openings in select manufacturing occupations in Elgin-Middlesex-Oxford, 2022 to 2028
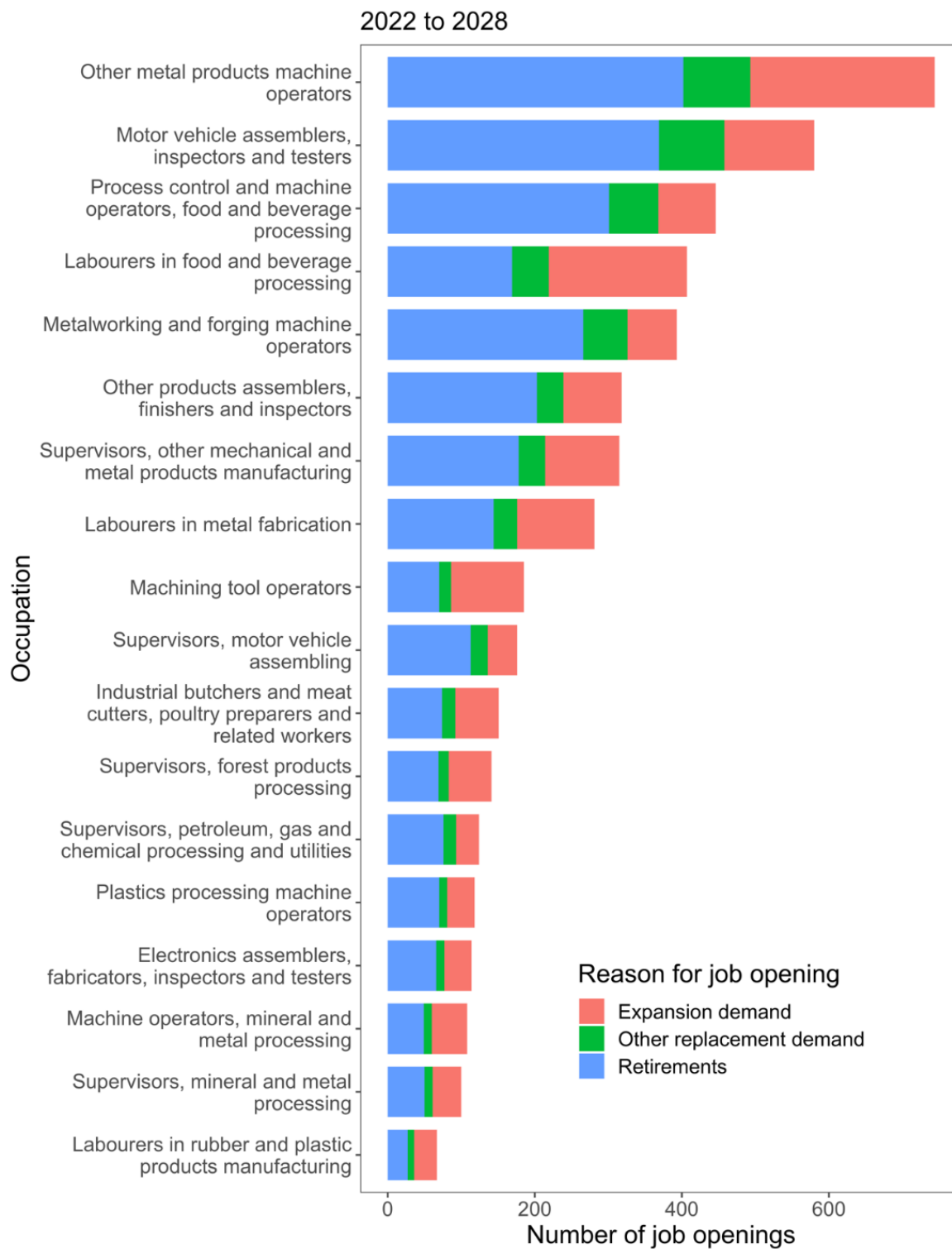
Figure 4: Number of Jobs in Select manufacturing occupations, Elgin-Middlesex-Oxford
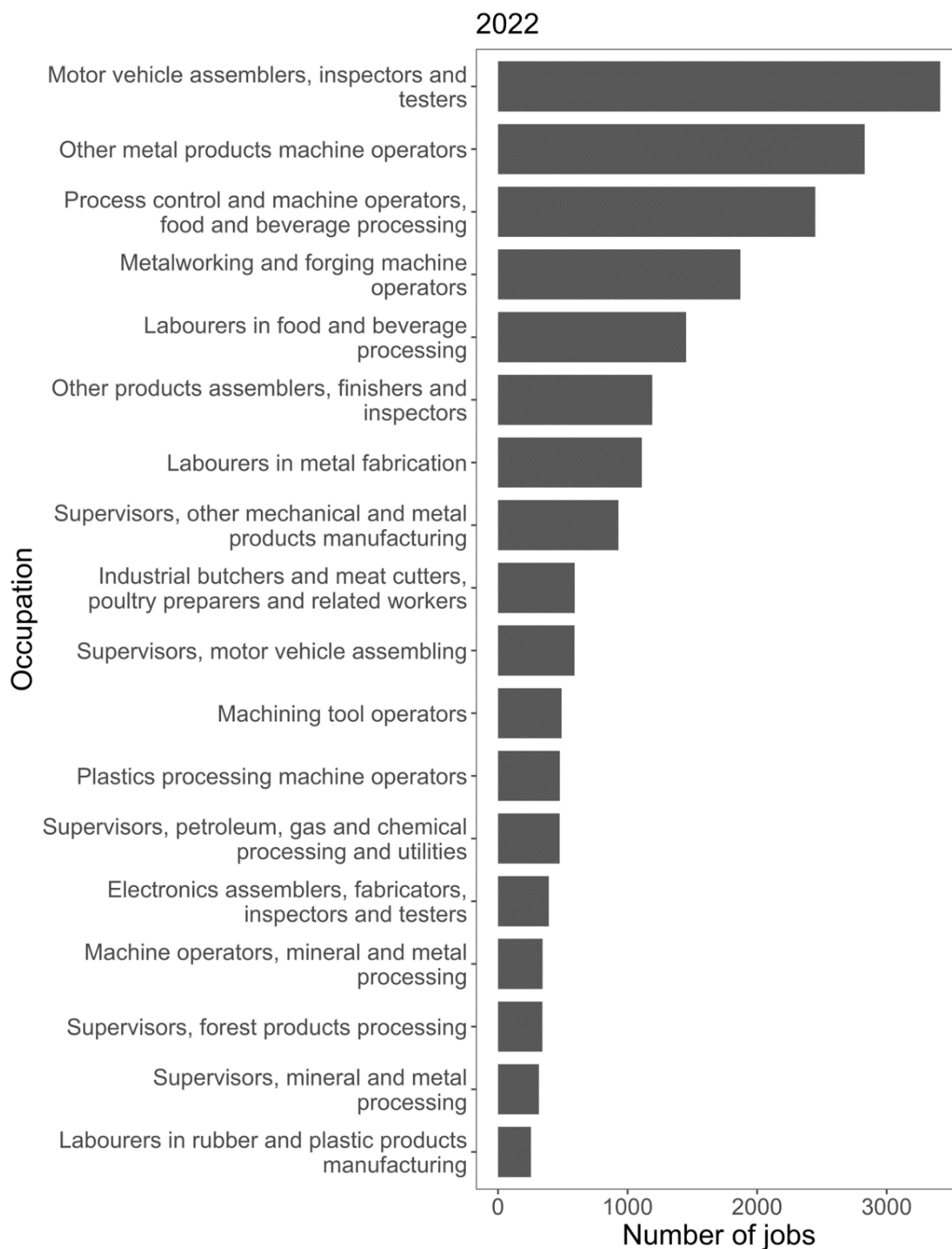
The number of job openings and their cause differ substantially between occupations. However, we can identify a few general trends:

Retirements will drive most of the job openings

Across the 18 occupations, as Baby Boomers reach retirement age between now and 2028, retirements are projected to account for between 38% and 68% of all job openings in EMO. In total numbers, retirements are projected to be particularly significant in terms of overall job openings for the following occupations:

- other metal products machine operators (9418): 402 expected retirements;
- motor vehicle assemblers (9522): 369 projected retirements;
- process control and machine operators (9461): 301 projected retirements; and
- metalworking and forging machine operators (9416): 266 projected retirements.

Almost **3,200 people in these occupations are projected to retire** over the next six years, representing a significant loss of experienced supervisors and workers.

The highest *rates* of retirement are in supervisory occupations (ranging from 16%-20%), with supervisors, other mechanical and metal products (9226) projected to have the highest retirement rate of the 18 occupations – one in five supervisors in this occupation is expected to retire over the next six years.

Expansion demand varies significantly

In addition to the job openings created through retirements, the expansion demand estimates calculated by Fanshawe College's institutional research team indicate that growing demand will drive additional job openings. The five highest areas of growth in terms of total job openings include:

- other metal products machine operators (9418): 251 new jobs to meet demand;
- motor vehicle assemblers (9522): 122 new jobs;
- labourers in food and beverage processing (9617): 188 new jobs;
- labourers in metal fabrication (9612): 105 new jobs; and
- supervisors, other mechanical and metal products (9226): 101 new jobs.

New employees will be a mix of new graduates and skilled immigrants, but the mix varies considerably by occupation

There are three general sources to fill these job openings: new graduates, immigrants, and people already working in other occupations.[4]

Supervisory occupations are the most likely to be filled by people working in other occupations (including more junior roles within the same organization), accounting for at least two-thirds of job openings. This statistic may be unsurprising because employers focus on internal development and training.

New graduates are projected to account for between one-quarter and four-fifths of all job seekers, depending on the occupation. New graduates are expected to account for a very high proportion of labourers. Besides motor vehicle assemblers, new graduates are expected to fill less than half of all remaining job openings.

Outside supervisory occupations, immigrants are projected to be a significant recruitment source. This is especially true in some occupations, like labourers in food and beverage processing, where immigrants are projected to fill the vast majority of positions. A detailed breakdown for each occupation can be found in Appendix A.

The View From Employers – Labour Market Challenges

LEDC convened a roundtable discussion facilitated by Smart Prosperity Institute at Fanshawe College's South Campus in London to understand advanced manufacturers' labour market challenges. Over a dozen people from different kinds of advanced manufacturers participated, and staff from LEDC, Elgin Middlesex Oxford Workforce Development Board and Fanshawe College participated.

Hiring for senior positions, many of which will be opening because of retirements, is challenging

The challenge of directly hiring a new person into a senior position is typical in different kinds of companies. Companies are hiring more junior employees and investing in training their existing employees to be ready to take on more senior positions. The upcoming retirement of many long-serving employees is recognized as a significant challenge over the next 5-10 years, putting pressure on internal training and development.

---

[4] Details of the projected breakdown of recruitment sources are provided in the Table 3 of the Data Appendix. Negative values indicate a net negative contribution – more people who are currently in the occupation leaving it than people who are in another occupation joining it – which puts the combined contribution of the other two sources – new graduates or immigrants – above 100%.

Supporting immigrants so they can succeed

"It's not as simple as just heading to Mexico and hiring some welders." Participants saw immigration as critical to meeting their labour market needs but also recognized that a lot needs to be done to ensure that immigrants are supported and successful when they settle in the London economic region. Employers are helping with many aspects of the immigration and settlement process, including finding housing, but the process can be slow. The rapid settlement of Ukrainian refugees came up as something that is working reasonably well.

Turnover is high in some junior positions, in part due to a lack of transit

Employers experiencing relatively high turnover in junior positions are concerned about mobility options for their workforce, especially public transit. Outside of London, the lack of public transit was mentioned as a competitive disadvantage that puts upward pressure on wages. Within the City of London, the lack of frequency of industrial transit routes and long walking distances from public transit stops on roads without sidewalks was highlighted for the same reason – it's hard to attract (and especially retain) workers when getting to work reliably and conveniently often requires the additional expense of owning a car.

Perceptions of manufacturing

Several participants identified perceptions of younger people about manufacturing as a career path – at the grade school level – as an essential challenge for recruiting in the medium term and expressed a desire to see the education system, not just colleges and apprenticeships but elementary schools and high schools, connecting young people with fulfilling careers in manufacturing at a time when so many people are projected to be retiring.

The View From Employers – How to Solve Labour Market Challenges

Participants shared positive stories of recruiting both domestic and international workers. Several participants mentioned hiring "farm grads" (young people who grew up on farms) who are optimistic, hard-working and have a general mechanical aptitude, making them very trainable on the job. Other participants shared successes recruiting recent international student graduates from Fanshawe College, several of whom already had experience working in their industry and have moved into more senior positions. One participant shared a success story of recently hiring seven Ukrainian refugees (representing just over 10% of its workforce).

Employers are investing in their people, marketing to potential future employees and using existing government programs. Participants firmly focused on investing in internal training and development of workers and cross-training people, so crucial positions are covered. Another mentioned dividing its marketing budget into campaigns focused on customers and campaigns focused on future workers – showing just how intense hiring is for some manufacturing occupations and how employers aim to shift perceptions of manufacturing amongst their target populations for recruiting. One participant found the STEM-focused young graduates program offered through the National Research Council of Canada Industrial Research Assistance Program (NRC IRAP) particularly helpful during the pandemic and made good use of the program.

However, employers identified several areas governments could focus on and where changes would benefit manufacturing in the region.

The provincial nominee program needs to work well for manufacturing

One employer shared a frustrating story of recruiting a very talented embedded firmware developer who was an international student and recent grad from Fanshawe College. The employer lost this employee to another province that was more welcoming to the employee's brother, who had the same skills. Instead of gaining another much-needed skilled worker, the employer lost the person they had already onboarded. Making sure that the Ontario Immigrant Nominee Program (OINP) is meeting the needs of the London region's manufacturers were identified as critically important.

Global Talent Stream Category B should be expanded

Innovations like the global talent stream are not helping address the labour market challenges many of these employers face. Participants highlighted that the relatively short list of global talent occupations is making it not beneficial for them as employers. Adding manufacturing occupations that are projected to be in high demand and where the domestic labour supply is projected to be insufficient to the list of Category B occupations would help.

More flexible approach to classification of skill level by NOC

The approach to classifying occupations into skill levels – with 0, A and B counting as "skilled" – has created friction at the employer level for job descriptions that could be classified as B or C. A broader or more permissive approach to classifying job descriptions into occupations and skill levels would help to make the process smoother for employers and employees. Appendix A provides the skill classifications for each of our 18 occupations.

Final Thoughts

Advanced manufacturers in the London economic region are managing a significant transition in their workforce. In addition to the opportunities created by growing demand, they are losing experienced, skilled personnel in various occupations. Many employers are investing in their existing workforce, cross-training and creating pathways for advancement within the company to bridge the gap between their most experienced and mid-career workers.

To successfully manage this transition, advanced manufacturers need help from all levels of government and postsecondary institutions. On the new graduates front, programs like those offered at colleges across Southwestern Ontario, not just in terms of the curriculum but in terms of enrolment, need to continue to meet the needs of these employers. The work of the provincial government to highlight the value of skilled trade in general and manufacturing, in particular, is helping, but a focus on reaching Ontario kids in late elementary and secondary school would aid in bringing outdated perceptions of manufacturing closer to the reality of advanced manufacturing in the London region.

On immigration, the priorities of the provincial nominee program are headed in the right direction. Still, the province should consider expanding the occupations to meet a broader range of needs in advanced manufacturing. Variation between provinces when it comes to critical occupations is a concern that may cause recruiting challenges for advanced manufacturers. Similarly, the federal list of global talent occupations (category B) is too limited to be useful for many occupations in advanced manufacturing. Generally, speeding up the immigration process would help advanced manufacturers as they manage through this transition.

On housing and mobility, advanced manufacturers need municipal governments to develop land use regulations that support new housing construction that is affordable and convenient for people working in advanced manufacturing. The better public transit services these workplaces, the broader the range of places future (and existing) workers can live without the additional expense of owning a personal vehicle.

By working together, the three levels of government can significantly help advanced manufacturers and drive local economic growth.

Appendix A: Data

As described in more detail in the "Job Openings in Advanced Manufacturing" section of this report, estimates of expansion demand for each are calculated by Fanshawe College's institutional research team using EMSI Lightcast software. Composite projections of job openings at the London economic region level due to retirements or other reasons are imputed from the national projections for each NOC.

Figure 5: Projected expansion demand (new jobs) 2022 to 2028, Elgin Middlesex Oxford economic region

Occupation (NOC Code)	Total Net New Jobs (% Change from 2022)
Supervisors, Mineral and Metal Processing (NOC 9211)	39 (12%)
Supervisors, Petroleum, Gas and Chemical Processing, and Utilities (NOC 9212)	31 (7%)
Supervisors, Forest Products Processing (NOC 9215)	58 (17%)
Supervisors, Motor Vehicle Assembling (NOC 9221)	40 (7%)
Supervisors, other mechanical and metal products (NOC 9226)	101 (11%)
Machine Operators, Mineral and Metal Processing (NOC 9411)	47 (14%)
Metalworking and Forging Machine Operators (NOC 9416)	67 (4%)
Machining Tool Operators (NOC 9417)	99 (20%)
Other Metal Products Machine Operators (NOC 9418)	251 (9%)
Plastics Processing Machine Operators (NOC 9422)	37 (8%)
Process Control and Machine Operators, Food and Beverage Processing (NOC 9461)	78 (3%)

Industrial Butchers and Meat Cutters, Poultry Preparers and Related Workers (NOC 9462)	59 (10%)
Motor Vehicle Assemblers, Inspectors and Testers (NOC 9522)	122 (4%)
Electronics Assemblers, Fabricators, Inspectors and Testers (NOC 9523)	37 (9%)
Other Product Assemblers, Finishers and Inspectors (NOC 9537)	80 (7%)
Labourers in Metal Fabrication (NOC 9612)	105 (10%)
Labourers in Rubber and Plastic Products Manufacturing (NOC 9615)	31 (12%)
Labourers in Food and Beverage Processing (NOC 9617)	188 (13%)

Figure 6: Composite projection of job openings, 2022 to 2028, Elgin Middlesex Oxford economic region

Occupation (NOC Code)	Reason for job opening			Total Openings (% of 2022 jobs)
	Expansion Demand	Retirement	Other	
Supervisors, Mineral and Metal Processing (NOC 9211)	39	50	11	100 (32%)
Supervisors, Petroleum, Gas and Chemical Processing, and Utilities (NOC 9212)	31	76	17	124 (26%)
Supervisors, Forest Products Processing (NOC 9215)	58	69	14	141 (41%)
Supervisors, Motor Vehicle Assembling (NOC 9221)	40	113	23	176 (30%)
Supervisors, other mechanical and metal products (NOC 9226)	101	178	36	315 (34%)
Machine Operators, Mineral and Metal Processing (NOC 9411)	48	49	11	108 (31%)
Metalworking and Forging Machine Operators (NOC 9416)	67	266	60	393 (21%)

Machining Tool Operators (NOC 9417)	99	70	16	185 (38%)
Other Metal Products Machine Operators (NOC 9418)	251	402	91	744 (26%)
Plastics Processing Machine Operators (NOC 9422)	37	70	11	118 (25%)
Process Control and Machine Operators, Food and Beverage Processing (NOC 9461)	78	301	67	446 (18%)
Industrial Butchers and Meat Cutters, Poultry Preparers and Related Workers (NOC 9462)	59	74	18	151 (26%)
Motor Vehicle Assemblers, Inspectors and Testers (NOC 9522)	122	369	89	580 (17%)
Electronics Assemblers, Fabricators, Inspectors and Testers (NOC 9523)	37	66	11	114 (29%)
Other Product	79	203	36	318 (27%)

Assemblers, Finishers and Inspectors (NOC 9537)			
Labourers in Metal Fabrication (NOC 9612)	105	144	32	281 (25%)
Labourers in Rubber and Plastic Products Manufacturing (NOC 9615)	31	27	9	67 (26%)
Labourers in Food and Beverage Processing (NOC 9617)	188	169	50	407 (28%)

Figure 7: Projected recruitment sources and skill category

Job Title (NOC Code)	Skill Category	Recruitment Source		
		New Graduates	Immigration	Other
Supervisors, Mineral and Metal Processing (NOC 9211)	B	29%	6%	65%
Supervisors, Petroleum, Gas and Chemical Processing, and Utilities (NOC 9212)	B	29%	6%	65%
Supervisors, Forest Products Processing (NOC 9215)	B	22%	6%	72%
Supervisors, Motor Vehicle Assembling (NOC 9221)	B	23%	4%	73%
Supervisors, other mechanical and metal products (NOC 9226)	B	23%	4%	73%
Machine Operators, Mineral and Metal Processing (NOC 9411)	C	44%	20%	36%
Metalworking and Forging Machine Operators (NOC 9416)	C	44%	20%	36%

Machining Tool Operators (NOC 9417)	C	44%	20%	36%
Other Metal Products Machine Operators (NOC 9418)	C	44%	20%	36%
Plastics Processing Machine Operators (NOC 9422)	C	39%	33%	28%
Process Control and Machine Operators, Food and Beverage Processing (NOC 9461)	C	69%	48%	-18%
Industrial Butchers and Meat Cutters, Poultry Preparers and Related Workers (NOC 9462)	C	33%	89%	-22%
Motor Vehicle Assemblers, Inspectors and Testers (NOC 9522)	C	54%	50%	-4%
Electronics Assemblers, Fabricators, Inspectors and Testers (NOC 9523)	C	40%	36%	25%
Other Product Assemblers, Finishers and Inspectors (NOC	C	34%	28%	38%

9537)				
Labourers in Metal Fabrication (NOC 9612)	D	61%	25%	15%
Labourers in Rubber and Plastic Products Manufacturing (NOC 9615)	D	83%	67%	-50%
Labourers in Food and Beverage Processing (NOC 9617)	D	72%	179%	-151%

NOC Titles, Codes and Descriptions

This is how each of the NOC Codes and Titles are described in the National Occupation Classification. The "More details" link will take you to the full description, which includes illustrative job titles.

Supervisors, Mineral and Metal Processing (NOC 9211)
Supervisors in this unit group supervise and coordinate the activities of workers engaged in mineral and metal processing and manufacturing. They are employed in mineral ore and metal processing plants such as copper, lead and zinc refineries, uranium processing plants, steel mills, aluminum plants, precious metal refineries, cement processing plants, clay, glass and stone processing plants and foundries. More details.

Supervisors, Petroleum, Gas and Chemical Processing, and Utilities (NOC 9212)
Supervisors in this unit group supervise and coordinate the activities of workers in the following unit groups: Petroleum, Gas and Chemical Process Operators (9232), Power Engineers and Power Systems Operators (9241), Water and Waste Treatment Plant Operators (9243).Chemical Plant Machine Operators (9421) and Labourers in Chemical Products Processing and Utilities (9613), They are employed by petroleum and natural gas processing, pipeline and petrochemical companies, chemical and pharmaceutical companies, electric power utilities, water and waste treatment utilities and in a range of other industries and institutions. More details.

Appendix B: Methodology

Building on the national Canadian Occupational Projection System (COPS), which covers 2019-2028, the Institutional Research team at Fanshawe College has developed forecasts at the Elgin-Middlesex-Oxford (EMO) level for eighteen occupation classifications within manufacturing.[5] The occupation classifications were selected to include occupations that are significant in overall employment in the region and to ensure variation in required skills and experience. The occupations include supervisors, operators and labourers across several different kinds of manufacturing.[6] See Appendix A for more information about the NOC codes and classifications.

Method of calculating forecasts at the Elgin-Middlesex-Oxford level

COPS provides national-level projections for 293 occupational groupings covering the more than 500 specific NOC codes. Using EMSI Lightcast Analyst software, Fanshawe College's Institutional Research team has estimated expansion demand at the EMO for each occupation. These estimates represent the number of new jobs required to meet expected changes in overall demand in the industry – in most cases, it is positive, but expansion demand could be negative. Overall, at the EMO level, expansion demand for these case occupations ranges from 3 to 4% at the low end to 20% at the high end from 2022 to 2028.

To estimate the number of job openings arising from retirements and other replacement demand, the rate of change for each component at the national level (2022 to 2028) has been applied to the baseline number of jobs in each occupation at the EMO level. Essentially, locally estimated expansion demand is added to estimates of the rates of retirements and other job openings at the national level to develop a composite projection of job openings at the EMO level. Although it would be preferable to develop EMO-level estimates of retirements and job openings for other reasons, data are unavailable.

An example will illustrate the general method. NOC 9221 is Supervisors in Motor Vehicle Assembling. At the national level, 19% of workers in NOC 9221 are expected to retire between 2022 and 2028. That translates to 113 forecasted retirements over the same period in EMO. Another 23 jobs in that same occupation are expected to open for other reasons. Combined with the estimate of expansion demand at the EMO level of 40 net new jobs, that results in a total of 176 total job openings between 2022 and 2028.

---

[5] Using classifications from the 2016 National Occupational Classification system. Appendix A provides a list of each NOC code, title and description as well as a link to more information about each NOC code.

[6] Among the 18 NOCs, supervisory occupation NOCs start with 92; operator NOCs start with 94; assembler NOCs start with 95; and labourer NOCs start with 96.