

MARCH 2018

UNDER PRESSURE

SKILLED TRADES
IN HAMILTON



Workforce Planning Hamilton
Planification de main d'oeuvre de Hamilton



Ontario

UNDER PRESSURE: SKILLED TRADES IN HAMILTON

Project Lead | Viktor Cicman

Writing/Editing | Judy Travis

ACKNOWLEDGEMENTS

Workforce Planning Hamilton would like to thank all labour market stakeholders for their support and the time that they contributed to this report. Employers who gave of their valuable time to answer our questions and participate at consultations were especially appreciated. Other stakeholders also contributed their valuable perspectives to our work. Our goal was to present the voice of the community and we could not do this without you.

Please contact Workforce Planning Hamilton to obtain this report in a larger print format.



*This project is funded in part by the Government of Canada and the Government of Ontario.
Ce projet est financé en partie par le gouvernement du Canada et le gouvernement de l'Ontario.*

*This document may be freely quoted and reproduced without obtaining the permission of Workforce Planning Hamilton provided that no changes whatsoever are made to the text and Workforce Planning Hamilton is acknowledged as author. The information presented in this report is current at the time of printing.
The views expressed in this report do not necessarily reflect those of the Government of Canada or the Government of Ontario.*

CONTENT

01

INTRODUCTION

02

METHODOLOGY

03

LABOUR MARKET INFORMATION

Educational Breakdown | Gender Breakdown | Age Breakdown | New Hires to Near-Retirees Ratio

08

OCCUPATIONAL PROFILES

Industrial Trades pg. 8 | Construction Trades pg. 11 | Motive Power Trades pg. 13

15

CONSULTATIONS - KEY FINDINGS

21

RECOMMENDATIONS

26

CONCLUSION

27

APPENDIX A

28

APPENDIX B & C

29

APPENDIX D



INTRODUCTION

The skilled trades are vital to Hamilton's workforce. Manufacturing and Construction rely heavily on skilled trade workers, and this type of work has always been important to Hamilton. These industries and these jobs have helped Hamilton convey the image of the 'ambitious city'. Despite and, in fact, because of advances in technology, skilled trade workers continue to be valued in the modern labour market. With an older than average workforce and a high number of retirements pending across many trades, it is time to take a closer look at this sector.

This project, UNDER PRESSURE: EXPLORING SKILLS GAPS IN THE TRADES, explored the availability of skilled trade workers in the Industrial, Construction, and Motive Power trades. Our goal was to delve into the specific concerns and experiences as they relate to hiring skilled trade workers. This project mentions but does not scrutinize the apprenticeship system. We wanted to identify the 'pressure points' in the skilled trade system and develop local strategies that address these issues. In addition, we created profiles of occupations in the skilled trades that are in most demand. These profiles aim to assist job seekers who are interested in getting into the trades.

Workforce Planning Hamilton's (WPH) previous research revealed recruitment challenges in the Manufacturing, Construction and Motive Power industries. According to the 2018 Employer One Survey¹, Manufacturing and Construction employers in particular are more likely to have difficulty finding qualified workers and have hard-to-fill positions. Occupational needs vary between high and low skilled jobs, but skilled trade occupations are in strong demand in these industry sectors. These are high skilled positions that employers across Hamilton want to fill, but which take a significant amount of time to train for. It can take up to five years for an apprentice to become a certified journeyman.

The project involved data analysis using the most up-to-date information from the 2016 Census data, as well as the 2011 National Household Survey, Vicinity Job Postings, and Job Bank Occupational Outlook. Consultations were also completed over the course of months with employers, trade unions, service providers and other labour market stakeholders. The next section explains the methodology in greater detail. Workforce planning boards have the advantage of combining data with local knowledge, which helps provide a detailed look into skilled trades.

Our findings show that while many of the challenges and issues raised were common to all three trade sectors, it is difficult to find one clear and comprehensive story for the skilled trades as a whole. There is some evidence of a potential shortage as the number of people with an **Apprenticeship, trades certificate or diploma** declined over the last five years. In addition, many of the skilled trade occupations show a much older workforce, so in the coming years a shortage could become more severe, especially as the demand continues to grow due to technological changes in the workplace. Many of the skilled trades also have very low jobless rates. These age dynamics and low jobless rates are most evident in the Industrial trades.

In the consultation, employers expressed concerns about the apprenticeship stream not being emphasized enough in high schools, especially compared to the university stream. This is where they feel the shortage begins as, due to a negative image of trade occupations, not enough academically inclined students are entering the trades. In addition, a common concern by employers is regarding both soft and technical skills of apprentices. Even in some trades where there is a higher number of youth, their limited skills make it a challenge for employers to hire. Labour market stakeholders brought up the fact that apprentices and young people need help getting started in the trades and employers may not actually be investing enough in apprenticeship training.

The skilled trades apprenticeship system is a complex system. Many of the issues identified are not local but are related to the broader skilled trades system. The Ontario government released its new apprenticeship strategy in the course of the preparation of this report. This provides our community an enhanced opportunity to see solutions to some of the bigger issues while, at the same time, we work to solve our local challenges.

The remainder of the report is broken down into the following sections: 1) Methodology, 2) Labour Market Information, 3) Occupational Profiles, 4) Consultation Findings, and 5) Recommendations.

¹ The Employer One Survey is an annual survey that Workforce Planning Hamilton conducts. It consists of labour market questions such as most hiring occupations, recruitment challenges, training practices, etc. Every January hundreds of local employers answer the survey, which gives us vital local labour market information.

METHODOLOGY

ANALYSIS APPROACH

The data used in this project is the 2016 Census data, 2011 National Household Survey, Vicinity Job Postings, Job Bank Occupational Outlooks, and Talent Neuron. The two censuses were utilized in the labour market information section. This helped identify trends over the last five years. The 2016 Census provided the following information for the skilled trades: age, unemployment rate, and number of people employed. Geographically it covered the Hamilton Census Metropolitan Area (CMA), which includes Hamilton, Burlington, and Grimsby.

By examining data on the most employed skilled trade occupations in the Manufacturing and Construction industries, we identified 15 occupations in Industrial trades and 16 in the Construction trades. While some Industrial trades apply to other sectors, we wanted to emphasize the trades in each industry as these two industries report many recruitment challenges. The Labour Market Information section analyses most employed skilled trades occupations.

Motive Power cannot be categorized into one predominant industry sector, so we aggregated all six Motive Power skilled trade occupations from the industries that they work in. A breakdown of the occupations by each sector can be found in the Appendix B, C and D.

Also, the occupations are given classification numbers using the National Occupational Codes (NOC). In the report some occupations have this acronym with a number after the title. This way the reader can research the occupation further on Statistics Canada.

CONSULTATIONS

The consultations were completed over the fall and winter of 2017 by way of focus groups and interviews. WPH approached more than 50 employers, of which 21 were available to be interviewed. We spoke with employers across the three trade sectors, as well as four associations, multiple trade unions, service providers, and select labour market stakeholders. At an event held in February 2018, we reviewed our consultation findings with employers, service providers, and education stakeholders and discussed local recommendations.

The information shared by service providers is from consultations conducted in the summer of 2017 for the 2017 Labour Market Plan. It included questions about the apprenticeship program that relate to this project.

OCCUPATION PROFILES

WPH created occupational profiles by selecting the skilled trade occupations showing the strongest employment demands. These particular occupations have an older workforce, so more opportunities will be available in the future. Their unemployment rates are low, and these occupations will grow over the next few years. We also conducted consultations to ensure these occupations were mentioned in the interviews.

Job Postings were gathered using Vicinity Jobs. This data collects from online job postings that include location, industry, occupation, type of employment, duration of employment and job posting source. Though the data uses appropriate sources and is obtained with a concrete methodology, some limitations exist. There are many unknown categories in all of the datasets because not all job postings provide details. Talent Neuron, another online job posting aggregator, gathered the information on Certification and Skills of the trade occupations.

The Job Bank Occupational Outlook data is provided by the Canadian Job Bank, which provides outlooks for 2017 to 2019 for each occupation in each province, territory and economic region. The Canadian Job Bank uses the ratings *Good*, *Fair*, and *Limited*. The economic region covered was Hamilton-Niagara Peninsula. Canadian Job Bank uses a combination of different data sources to come up with projections. A more technical explanation can be found on the Job Bank website jobbank.gc.ca.

Finally, we use the definition of a shortage rather than mismatch, because to become a certified journey person takes a number of years of training, and it is unlikely for someone with skills in another field to easily enter the skilled trades.

LABOUR MARKET INFORMATION

Labour market information using data analysis is crucial to understanding the opportunities in the skilled trades in Hamilton. The data, obtained from the 2016 Census data and the 2011 National Household Survey, provides a detailed look into skilled trades in Hamilton and which occupations could be seeing shortages. Education, gender, age, and unemployment rates are analysed below.

EDUCATIONAL BREAKDOWN

Education levels help us understand the skill levels of our workforce. The table below shows the shares for the highest level of education for core working age adults (25 to 64 years) from 2011 to 2016.

6.7%
Among 25 to 64 year olds, an **Apprenticeship or trades certificate or diploma** represents the smallest share at 6.7%. This share has decreased by 1.9 percentage points from 2011 to 2016

▼ 745
The sub-category **Certificate of Apprenticeship or Certificate of Qualification** had decreased by 745 over the last five years, from 14,620 in 2011 to 13,875 in 2016

unchanged
Among 25 to 34 year olds, those with a **Certificate of Apprenticeship or Certificate of Qualification** remained virtually unchanged over the last 5 years

HIGHEST EDUCATION LEVEL, 25 TO 64 YEARS OLD, HAMILTON CMA, 2016²

EDUCATION LEVEL	2011	2016	PERCENTAGE POINT CHANGE
No certificate, diploma or degree	10.9%	10.3%	-0.6%
Secondary (high) school diploma or equivalency certificate	24.6%	24.9%	0.3%
Apprenticeship or trades certificate or diploma	8.6%	6.7%	-1.9%
College, CEGEP or other non-university certificate or diploma	26.4%	27.6%	1.2%
University certificate or diploma below bachelor level	4.1%	2.1%	-2.0%
University certificate, diploma or degree at bachelor level or above	25.4%	28.4%	3.0%

Source: 2016 Census, 2011 National Household Survey

² There are certain issues to mention when comparing the 2011 National Household Survey (NHS) to the 2016 Census. The NHS was a voluntary survey while the Census was mandatory; the comparison was not exact. In addition, the educational question was slightly changed to avoid double counting. However, Statistics Canada did confirm that the trend noticed here was found in other data sources and was for the province as a whole. Therefore, the trend can be shown but the exact number should be taken with caution.

Gender Breakdown

The skilled trades are dominated by males. Looking at the broad skilled trade occupations in Industrial, Electrical and Construction trades (NOC 72) only **3% of workers are female**. The gender breakdown varies depending on the trades, but the broad occupational group NOC 72 employs the vast majority of Industrial and Construction trade workers, which is relevant to this report.

3%

of workers are female

ADVANCING WOMEN IN THE TRADES

For employers interested in hiring more women in the skilled trades please visit

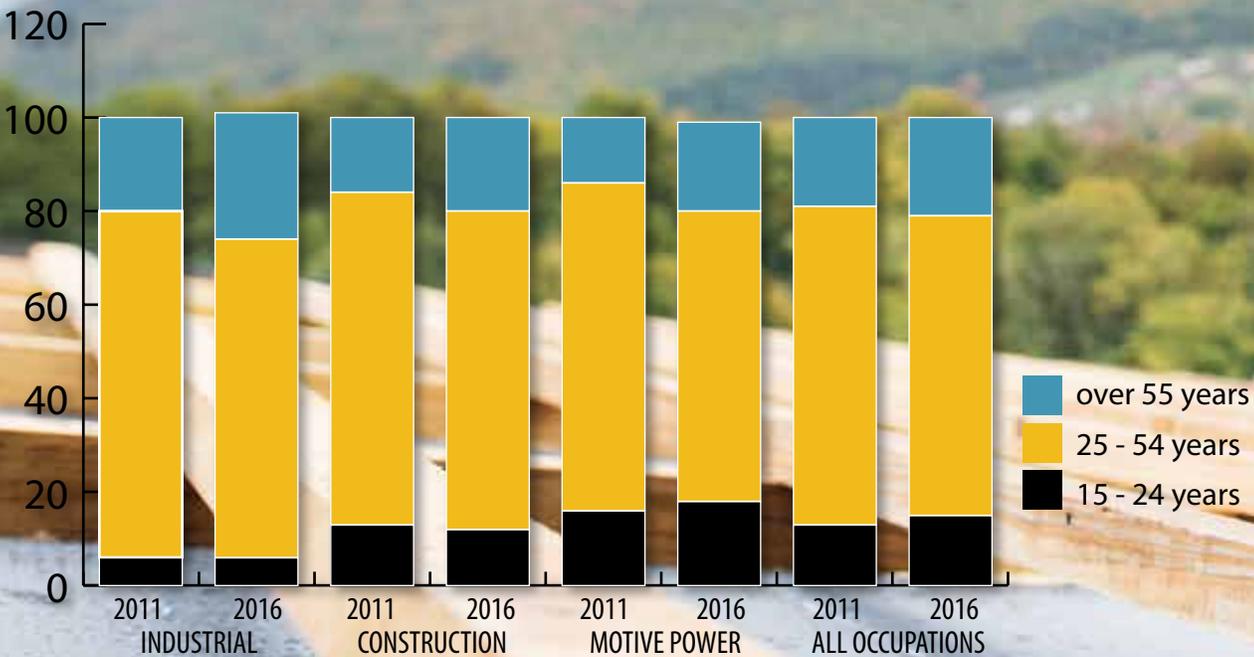
AdvanceWomenInTrades.com.

The site provides free tools, templates, and workplace posters to help recruit, retain and advance women in your workplace.

Age Breakdown of Top Skilled Trade Occupations

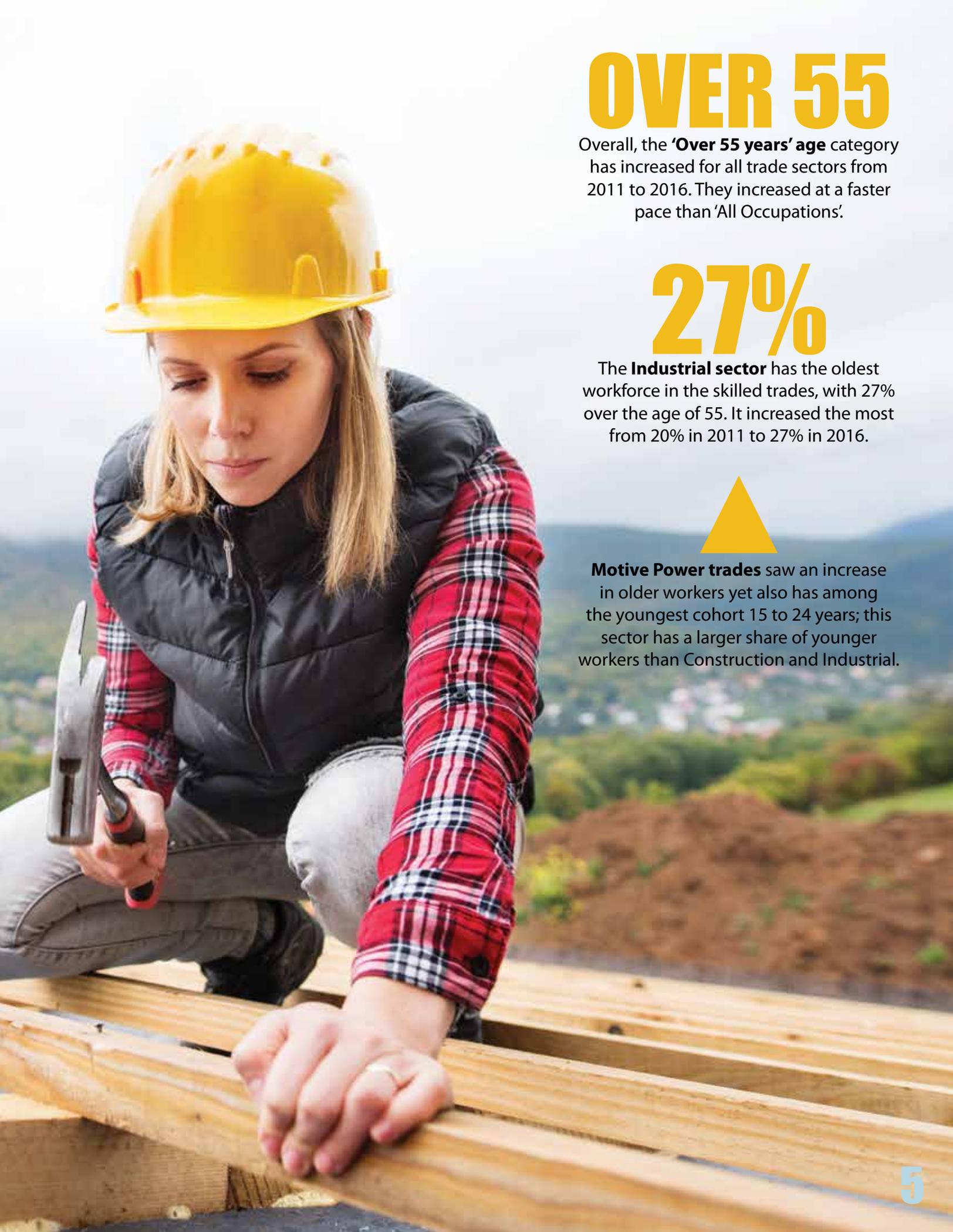
Using the most employed skilled trade occupations described in the Methodology, the table below looks at age dynamics over the five-year period 2011 to 2016. It offers insight into the future and whether the trade sector is attracting enough younger people.

The shares are calculated by averaging the age breakdown by each occupation. This means each occupation is given equal weight.



Source: 2016 Census, 2011 National Household Survey

Note: The Motive Power Trade Sector is a smaller sector and lists only 4 occupations. Two other sectors are included in further analysis, but their numbers are too low for age analysis.



OVER 55

Overall, the **'Over 55 years' age** category has increased for all trade sectors from 2011 to 2016. They increased at a faster pace than 'All Occupations'.

27%

The **Industrial sector** has the oldest workforce in the skilled trades, with 27% over the age of 55. It increased the most from 20% in 2011 to 27% in 2016.

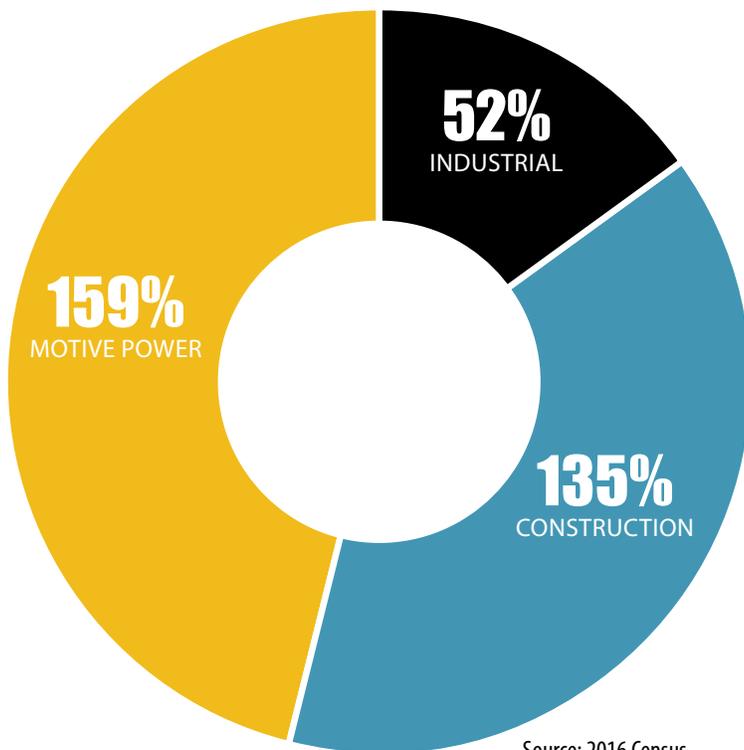


Motive Power trades saw an increase in older workers yet also has among the youngest cohort 15 to 24 years; this sector has a larger share of younger workers than Construction and Industrial.

New Hires to Near-Retirees Ratio Among Top Skilled Trade Occupations

Another way to look at age dynamics is to examine the new hires to near-retirees ratio. This ratio is created by dividing the number of workers in the 20 to 29 age group (new hires) by the over-55 age group (near-retirees) for each of the top skilled trade occupations. The number below is the average for the most employed skilled trade occupations by each sector.

This ratio gives us a way of studying the age dynamics of a trade sector. A ratio of 1 means there are exactly the same number of new hires and near-retirees. Less than 1 means there are fewer new hires than near-retirees, which could mean a potential labour shortage in the coming years.



INDUSTRIAL TRADES

Industrial trades has an older workforce compared to the other trade sectors. There is an average of about half of the replacements needed.

▲ 100%

The averages for Construction and Motive Power overall are above 100%. This shows the trade sectors in general do not seem to have age concerns. However, a few occupations have a large share of younger workers, which makes the average higher. The averages for specific occupations vary and a full list can be found in the Appendix B, C and D.

CONSTRUCTION TRADES

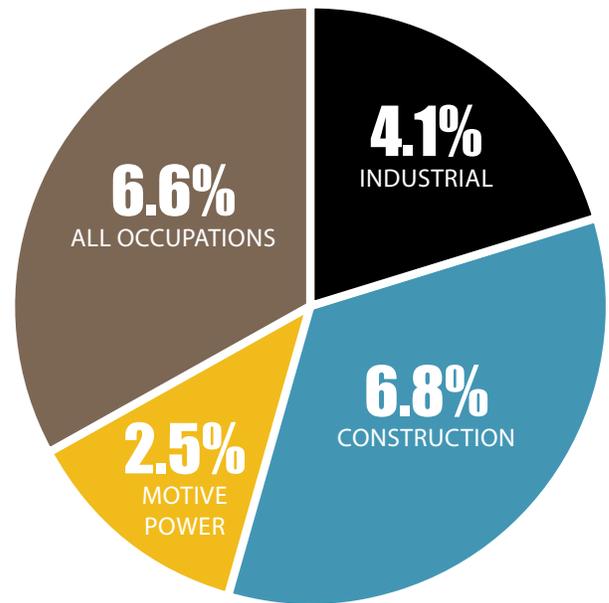
The Construction trades in particular have certain occupations with an older workforce that may become more challenging to fill, particularly those found in the Occupational Profile.



Unemployment Rate Among Top Skilled Trade Occupations

The unemployment rate or jobless rate for an occupation represents the number of people currently looking for work in a given occupation divided by the total number of people in that job (employed and unemployed). This percentage reveals the number of people looking for work in a given occupation.

The number below is the average unemployment rate for the most employed skilled trade occupations in each trade sector.



MOTIVE POWER & INDUSTRIAL

The unemployment rates are lowest for Motive Power (2%) and Industrial (4%).

HARD TO FIND JOBS

Motive power and Industrial trade employers may have a harder time finding workers for vacancies as most trained in this field are already working.

UNEMPLOYMENT RATE FOR CONSTRUCTION ABOVE AVERAGE

The unemployment rate for Construction is slightly above the average for all occupations. This is driven by a few occupations that have high unemployment rates, which push the average up.

This section features OCCUPATIONAL PROFILES. It looks at the skilled trade occupations that are showing the strongest employment demands. Many of these have an older workforce, so more opportunities will be available in the future, have low unemployment rates, and are growing over the next three years. These occupational profiles give a brief overview of the skilled trades and can be used as a first step for job seekers interested in the trades, as the profiles help identify which trades are in demand in Hamilton.

SKILLED TRADE OCCUPATIONS – INDUSTRIAL TRADES

The following Industrial skilled trades are showing opportunities today and into the near future. They have many people near retirement, low jobless rates, strong wage growth, and are expected to grow over the coming years. While many Industrial trades people work in Manufacturing, they are also employed in a variety of other industries.

Transport truck drivers (NOC 7511)

The apprenticeship program associated with this occupation is Tractor-Trailer Commercial Driver. These drivers operate tractor-trailers for commercial purposes to transport goods, products and materials across provincial, national and international routes.

Two certificates that are important to have for Transport truck drivers are:

- Transportation of Dangerous Goods
- Tanker and Hazardous Material Endorsement

The time frame to become certified: 2000 hours of on-the-job work experience.

Median Income	\$48,850
Number Employed in 2016	5,130
Total Job Postings (2017)	263
Outlook (2017 to 2019)	Good
Unemployment Rate	3.8%

Welders and related machine operators (NOC 7237)

A Welder permanently joins pieces of metal or manufactured parts using metal filler and heat and/or pressure; builds structures and repairs broken or cracked parts according to specifications; and carries out special processes, such as welding studs and brazing.

The time frame to become certified is 5,280 hours of on-the-job work experience and 720 hours of in-school training.

Median Income	\$53,139
Number Employed in 2016	2,190
Total Job Postings (2017)	261
Outlook (2017 to 2019)	Fair
Unemployment Rate	5.0%

Construction millwrights and industrial mechanics (NOC 7311)

A few apprenticeship programs work in this occupation but the main ones are Construction millwrights, who lay out, receive & install machinery, mechanical equipment and other automated and robotic systems; and Industrial mechanics, who work on industrial machinery, mechanical equipment and components.

The time frame to become certified is the same for both of these trades: 7,280 hours of on-the-job work experience and 720 hours of in-school training.

Median Income	\$76,970
Number Employed in 2016	1,925
Total Job Postings (2017)	352
Outlook (2017 to 2019)	Fair
Unemployment Rate	4.0%

Machinists and machining and tooling inspectors (NOC 7231)

There are a few apprenticeship programs that work under this occupation. The most common is General Machinist, which cuts, shapes and finishes metal to make precision machined parts and components used in all areas of manufacturing. Computer Numerical Controlled (CNC) Machinist is the most in need in the Hamilton region.

The time frame to become certified is 7,280 hours of on-the-job work experience and 720 hours of in-school training.

Median Income	\$62,208
Number Employed in 2016	1,085
Total Job Postings (2017)	160
Outlook (2017 to 2019)	Fair
Unemployment Rate	5.7%

Industrial electricians (NOC 7242)

An Industrial electrician lays out, inspects, assembles, installs, troubleshoots, repairs and maintains electrical fixtures, apparatus, control equipment and wiring for industrial electrical systems.

The time frame to become certified is 8160 hours of on-the-job work experience and 840 hours of in-school training.

Median Income	\$91,730
Number Employed in 2016	775
Total Job Postings (2017)	47
Outlook (2017 to 2019)	Fair
Unemployment Rate	8.9%

Tool and die makers (NOC 7232)

A Tool and die maker designs, creates, repairs and tests prototypes and production tools such as dies, cutting tools, jigs, fixtures, gauges and specialty tools using various metals, alloys and plastics.

The time frame to become certified is 7,280 hours of on-the-job work experience and 720 hours of in-school training.

Median Income	\$62,233
Number Employed in 2016	390
Total Job Postings (2017)	18
Outlook (2017 to 2019)	Fair
Unemployment Rate	2.5%

Skills and Certifications

Certifications common across Industrial Trades:

- Driver's License
- First Aid Certification
- Hazardous Material Certification
- Be able to comply with employer standards such as International Standard Organization (ISO) 9001

A few common skills across Industrial Trades:

- Mathematical & analytical skills
- Attention to detail
- Reading Blueprints
- Team player
- Good communication skills
- Problem solving ability
- At work consistently & on-time

Source: Skilled Trades: Talent Neuron

Steps to Entering the Trades

- 1** Research skilled trades that you are interested in. You can visit the Ontario College of Trades website for more information collegeoftrades.ca
- 2** Research companies that are hiring related to your trade. You can visit the Canada Job Bank that has job postings and more occupational information at jobbank.gc.ca
- 3** Find a sponsor (employer, union) that would be willing to invest in your apprenticeship training. You can speak to employers that are hiring based on previous research and visit the Apprentice Search website apprenticesearch.com

The next steps involve a mix of on-the-job training and schooling. This varies depending on the trade. The final step to becoming a certified Journey person is writing your Certificate of Qualification exam.

SKILLED TRADE OCCUPATIONS – CONSTRUCTION TRADES

The following Construction skilled trades are showing opportunities today and into the near future. They have many people near retirement, low jobless rates, strong wage growth, and are expected to grow over the coming years.

Carpenters (NOC 7271)

A Carpenter constructs, renovates and repairs structures made of wood, steel, concrete and other materials in the residential, commercial and industrial construction sectors and in related industries.

The time frame to become certified in this trade is 6,480 hours of on-the-job work experience and 720 hours of in-school training.

Median Income	\$51,372
Number Employed in 2016	2,130
Total Job Postings (2017)	77
Outlook (2017 to 2019)	Fair
Unemployment Rate	5.7%

Construction millwrights and industrial mechanics (NOC 7311)

A few apprenticeship programs work in this occupation, but the main ones are Construction millwrights, who lay out, receive & install machinery, mechanical equipment and other automated and robotic systems; and Industrial mechanics, who work on industrial machinery, mechanical equipment and components.

The time frame to become certified is the same for both of these trades: 7,280 hours of on-the-job work experience and 720 hours of in-school training.

Median Income	\$76,970
Number Employed in 2016	1,925
Total Job Postings (2017)	352
Outlook (2017 to 2019)	Fair
Unemployment Rate	4.0%

Plumbers (NOC 7251)

A Plumber installs, repairs and maintains piping systems, fixtures and other plumbing equipment used for water distribution, drainage and waste disposal.

The time frame to become certified in this trade is 8,280 hours of on-the-job work experience and 720 hours of in-school training.

Median Income	\$59,946
Number Employed in 2016	890
Total Job Postings (2017)	54
Outlook (2017 to 2019)	Fair
Unemployment Rate	2.7%

Heating, refrigeration and air conditioning mechanics (NOC 7313)

A Refrigeration and Air Conditioning Systems Mechanic works on refrigeration, cooling and combined heating cooling combination systems including geo-exchange systems in residential, industrial, commercial, and institutional settings.

This occupation can require additional certificates such as: Heating Ventilation and Air Conditioning (HVAC) certification, Refrigeration Technicians License, and Gas-Heat Certification.

The time frame to become certified in this trade is 8,160 hours of on-the-job work experience and 720 hours of in-school training.

Median Income	\$67,685
Number Employed in 2016	810
Total Job Postings (2017)	58
Outlook (2017 to 2019)	Good
Unemployment Rate	4.7%

Steamfitters, pipefitters and sprinkler system installers (NOC 7252)

The two main apprenticeship programs that work in this occupation are: Steamfitter which lays out, assembles, maintains and repairs piping that carries water, steam, fluids, gases, chemicals and fuel for heating, cooling, lubricating and process piping systems; and Sprinkler and Fire Protection Installer which lays out, installs, maintains, modifies, inspects and tests fire protection systems, including water-based and specialty fire suppression systems in a variety of environments.

The time frame to become certified as a Steamfitter is 8,280 hours of on-the-job work experience and 720 hours of in-school training.

The time frame to become certified as a Sprinkler and Fire Protection Installer is 6,480 hours of on-the-job work experience and 720 hours of in-school training.

Median Income	\$89,563
Number Employed in 2016	320
Total Job Postings (2017)	10
Outlook (2017 to 2019)	Fair
Unemployment Rate	3.0%

Skills and Certifications

Certifications common across Construction Trades:

- Driver's License
- First Aid Certification
- Hazardous Material Certification
- Construction Safety Training System
- OSHA Fall Protection Certificate

A few common skills across Construction Trades:

- Mathematical & analytical skills
- Attention to detail
- Reading Blueprints
- Team player
- Good communication skills
- Problem solving ability
- At work consistently & on-time

Source: Skilled Trades: Talent Neuron

Steps to Entering the Trades

- 1** Research skilled trades that you are interested in. You can visit the Ontario College of Trades website for more information collegeoftrades.ca
- 2** Research companies that are hiring related to your trade. You can visit the Canada Job Bank that has job postings and more occupational information at jobbank.gc.ca
- 3** Find a sponsor (employer, union) that would be willing to invest in your apprenticeship training. You can speak to employers that are hiring based on previous research and visit the Apprentice Search website apprenticesearch.com

The next steps involve a mix of on-the-job training and schooling. This varies depending on the trade. The final step to becoming a certified Journeyperson is writing your Certificate of Qualification exam.

SKILLED TRADE OCCUPATIONS – MOTIVE POWER TRADES

The following Motive Power skilled trades are showing opportunities today and into the near future. They have many people near retirement, low jobless rates, strong wage growth, and are expected to grow over the coming years.

Automotive service technicians, truck and bus mechanics and mechanical repairers (NOC 7321)

A few apprenticeship programs allow you to work in this occupation. The two main ones are: Automotive Service Technician which performs preventive maintenance, diagnoses problems and repairs vehicle systems in cars and light trucks; and Truck and Coach Technician which inspects, repairs and maintains commercial trucks, emergency vehicles, buses, road transport vehicles, performing work on structural, mechanical, electrical and electronic systems.

The time frame to become certified for Automotive Service Technicians is 6,500 hours of on-the-job work experience and 720 hours of in-school training.

The time frame to become certified for Truck and Coach Technician is 6,000 hours of on-the-job work experience and 720 hours of in-school training.

Median Income	\$53,439
Number Employed in 2016	2,820
Total Job Postings (2017)	134
Outlook (2017 to 2019)	Fair
Unemployment Rate	1.2%

Motor vehicle body repairers (NOC 7322)

The two main apprenticeship programs that allow you to work in this occupation are: Auto Body and Collision Damage Repairer, which repairs and/or replaces frame and structural components, mechanical components, interior, electrical components, plastic and composite panels and sheet metal panels; and Auto Body Repairer, which repairs the body of motor vehicles, motor coaches, trucks or truck-trailers, including preparing vehicles for refinishing and repairing vehicle bodies and components.

The time frame to become certified for Auto Body and Collision Damage Repairer is 7,280 hours of on-the-job work experience and 720 hours of in school training.

The time frame to become certified for Auto Body Repairer is 5,520 hours of on-the-job work experience and 480 hours of in-school training.

Median Income	\$53,989
Number Employed in 2016	545
Total Job Postings (2017)	15
Outlook (2017 to 2019)	Fair
Unemployment Rate	2.7%

Heavy-duty equipment mechanics (NOC 7312)

A Heavy Duty Equipment Technician inspects, diagnoses, troubleshoots, repairs, and verifies the repair of heavy-duty equipment. They work on different types of heavy-duty equipment such as draft shaft drive axle assemblies, final drive, structure components and accessories, tires, wheels, frames and undercarriages, and ground engaging equipment and attachments.

The time frame to become certified is 6280 hours of on-the-job work experience and 720 hours of in-school training.

Median Income	\$67,414
Number Employed in 2016	290
Total Job Postings (2017)	38
Outlook (2017 to 2019)	Good
Unemployment Rate	3.4%

Skills and Certifications

Certifications common across Motive Power Trades:

- Driver's License
- First Aid Certification
- Hazardous Material Certification

A few common skills across Motive Power Trades:

- Mathematical & analytical skills
- Attention to detail
- Troubleshooting
- Preventive Maintenance
- Team player
- Good communication skills – Customer relations
- Problem solving ability
- At work consistently & on time

Source: Skilled Trades: Talent Neuron

Steps to Entering the Trades

- 1** Research skilled trades that you are interested in. You can visit the Ontario College of Trades website for more information collegeoftrades.ca
- 2** Research companies that are hiring related to your trade. You can visit the Canada Job Bank that has job postings and more occupational information at jobbank.gc.ca
- 3** Find a sponsor (employer, union) that would be willing to invest in your apprenticeship training. You can speak to employers that are hiring based on previous research and visit the Apprentice Search website apprenticesearch.com

The next steps involve a mix of on-the-job training and schooling. This varies depending on the trade. The final step to becoming a certified Journeyman is writing your Certificate of Qualification exam.

About the Data

Description of each trade is gathered from Ontario College of Trades information.

Unemployment Rate, Number of People Employed and Median Income were gathered from the 2016 Census. The geographic area covered was the Hamilton Census Metropolitan Area (CMA), which includes Hamilton, Burlington, and Grimsby. Median Income refers to people who worked 49-52 weeks in a year.

Job Postings Data is gathered from Vicinity Jobs. This data collects from online job postings that include location, industry, occupation, type of employment, duration of employment and job posting source.

Outlook data is from the Canadian Job Bank, which provides outlooks for 2017 to 2019 for each occupation in each province, territory and economic region. The rating system is Good, Fair, and Poor. Hamilton-Niagara Peninsula is the economic region. Canadian Job Bank uses a combination of different sources to come up with projections. More detail can be found on the Job Bank website jobbank.gc.ca.

CONSULTATIONS – KEY FINDINGS

Workforce Planning Hamilton combines data analysis with local knowledge, as this approach gives a comprehensive picture. Through consultations we were able to gather information we would have missed by focusing on data alone. The purpose of the consultations was to hear directly from employers and labour market stakeholders, hear the local perspective, and learn about their experience in recruiting trades. We also wanted to confirm that our data analysis was accurate.

The following outlines our key findings from the consultations. The majority of concerns raised apply across all three trade sectors. Despite differences in their labour market profile, employers shared similar concerns. Some issues were unique to certain trade sectors. This is discussed below. The findings are broken down into employer and labour market stakeholder concerns. While employers were a major focus for our project, other labour market stakeholders raised important issues for skilled trades as well.



Key Finding #1

Recruitment challenges/shortages of experienced skilled trade workers

Employers in all three trade sectors have difficulty finding experienced skilled trade workers. Finding an applicant who has 10 to 15 years of experience is very challenging for most employers. These skill gaps are affecting the productivity of businesses. Employers suggested various reasons for the shortage of experienced workers. Things like the perception that the trades as a career destination are being neglected by youth, or the perception that employers themselves are not investing enough to create an adequate supply of experienced workers, are impacting the supply of skilled trade workers. Employers agree that the focus should be on the future and on fixing the shortage of experienced workers.

Construction employers had the widest variation in recruitment challenges for experienced skilled trade workers. It depended on a number of factors such as the occupation, the size of the employer, and the type of construction (residential or institutional). There was conflicting data for many top skilled trade occupations as only some had an aging workforce with a low unemployment rate. The cyclical nature of the construction business has a role to play in this variation. Based on consultations and data from the Ontario Construction Association, residential construction employers have a more challenging time finding skilled trade workers.

The experiences started to differ when we looked at apprentices. Industrial trades have the most difficulty finding apprentices. Employers expressed concerns that not enough young people are willing to enter the Industrial trades. This is confirmed by our data: while the share of youth aged 15 to 24 has remained unchanged over the last 5 years, employers identified shortages.

The consultations also revealed the importance of versatility, among new hires, in a high skilled environment. Many manufacturing companies operate in highly skilled environments, therefore workers need to understand how to work on different machines and communicate with staff effectively. They must be versatile, since supply chains can change quickly. Versatility is a difficult skill to find among apprentices and experienced workers.

Construction Trade Sector Unions

The construction trade unions carefully control the flow of new apprentices to certain skilled trades to ensure the availability of skilled workers. Their work is predominately in the commercial and institutional (ICI) construction sector. The trade unions suggest that there is no skilled trade shortage in their sector and have numerous unemployed workers at any given time. Employers have a steady number of new applicants, and they screen applicants carefully for required skills and abilities. They also have a very high completion rate (the percentage of apprentices that become certified journey persons). This model seems to be successful in giving apprentices the skills required to become certified and providing the talent needed for construction contractors.

HIGHLIGHTS OF OUR FINDINGS

All trade sectors have difficulty finding experienced skilled trade workers.

- Construction trade occupations mentioned: High End Cabinet Makers (millwork), Glazier Metal Mechanics, HVAC mechanics;
- Residential Construction occupations mentioned: Plumbers, Refrigeration and Air Mechanics, Ironworkers and Structural Metal Fabricators and Fitters
- Industrial trade occupations mentioned: Millwrights, Industrial Mechanics, CNC Machinists, Welders, Tool and Die Makers
- Motive Power trade occupations mentioned: Automotive Service Technicians, Heavy Duty Equipment Mechanics

Construction employers showed the greatest variation in recruitment challenges but residential construction occupations were most difficult to fill.

Construction trade unions help with the flow of labour to the ICI construction sector, and do not see a skilled trade shortage.

There appeared to be greater labour market challenges in industrial trades, namely a shortage of apprentices and experience among skilled trade workers.

Workers who are versatile, adaptable, and able to work on different machines are in high demand.

PROMISING PRACTICE

INTERNAL HIRING AND TRAINING

The difficulty in finding experienced workers has led some employers to change their hiring and training practices. These employers will look to their best performers internally for apprentices. Internal training helps them find the most talented applicants, who will need to work at an entry-level position, show dedication and commitment, and show interest in receiving more training. Internal training also helps develop workers that are versatile and adaptable and understand different work environments.

Key Finding #2

Image of trades is negative

Throughout all of our consultations the issue of a stigma related to the skilled trades was consistently raised. Employers see this as the first issue that needs to be addressed, as it affects the long-term supply of skilled trade workers. Specifically the stigma they refer to includes but is not limited to: trades being a 'dirty job'; no career progression; not academically challenging; only males should enter the trades; and other misconceptions. These misconceptions have a long history but many employers feel they are still common in society.

Employers did mention a potential cause—the removal of shop classes at high schools in the early 2000s. These classes gave youth an introduction to the skilled trades and built a positive image of the trades. The focus for Ontario then changed to postsecondary and training youth for University, with the goal of developing the highly skilled workforce needed to compete in the marketplace. As a result, employers say, the skilled trades were no longer considered such a viable employment option.

Both employers and labour market stakeholders feel that even people who help youth decide on their careers, such as guidance counselors and parents, hold these negative views. Employers worry that when high school students decide which stream to take (university, college, or apprenticeship) they don't have enough information to make a knowledgeable decision. For example, the Ontario Youth Apprenticeship Program (OYAP) has only one person in charge of the program for each school board. This involves promoting the program, working with youth and employers, visiting multiple schools, administration work, and other tasks. In a large city such as Hamilton, there are 26 secondary schools. While the OYAP is well run considering its challenges, the program is too large to be effectively run with such a small staff.

Labour shortages are a complex issue that incorporates societal perceptions of construction trades, wages, type and location of work and availability of new workers (both young people and new immigrants). The union approach to managing their supply is just one small piece of the puzzle.

— Construction labour market stakeholder

HIGHLIGHTS OF OUR FINDINGS

Negative attitudes towards skilled trades continue to shape interest, understanding and uptake on these career opportunities.

The removal of shop classes had a significant impact on skilled trades.

There is a lack of knowledge regarding skilled trade professions.

OYAP has too small a staff to run the program effectively in a city as large as Hamilton.

PROMISING PRACTICE

CO-OP IS EFFECTIVE IN FINDING POTENTIAL WORKERS

Some Motive Power employers take on co-op students from high schools that still offer co-op for Motive trades. It is a good way for young people to get to see the industry and learn skills before they do an apprenticeship. These students learn what is involved in the skilled trades and see the potential for a successful and meaningful career. Employers also said some of the co-op students came back later as apprentices and still work for them today.

The skilled trades are not taken seriously enough at the high school level and many people see it as a career of last resort. This is a highly technical field that requires very good math and science skills.

— Industrial trade employer

Key Finding #3

Skills of all types (essential, soft, technical) in apprentices were a concern among employers

Apprentice skills are a common concern across all trade sectors. While some skilled trades have a lot of youth entering, such as Automotive service technicians, employers still have difficulty hiring an apprentice. Soft skills are a major concern as work ethic, punctuality, communication and teamwork skills were identified as lacking in youth. Employers feel that many youth have a sense of entitlement and expect to advance quickly. They suggested that perhaps the school system, where youth are not allowed to fail, was a potential cause for the lack of soft skills. It is their perception that teachers guide students through the system, even those who might not have earned their way to the next level. Employers feel that young people bring this attitude to the workplace, many thinking they are ready to work but still needing a great deal of coaching.

WPH has seen, in past studies of this kind, that soft skills are a problem across all sectors and sizes. Though not particular to the skilled trades it is an important, complex issue that appears to be generational. An upcoming WPH Soft Skills initiative will highlight the skills needed and what employers expect from young workers.

Regarding technical skills, employers feel that many youth are lacking these when they apply for apprenticeship opportunities. New entrants often lack the basic technical training required for an apprenticeship. As mentioned earlier, the discontinuation of shop classes may be another reason for a lack of these skills. These classes not only gave youth an introduction to the trades but built awareness of the career. Employers also mentioned that the OYAP program is not in line with College programs, which further contributes to the skills gap.

Overall employers identified that skilled trade candidates with high level academic skills were not inclined to pursue a skilled trade career despite the fact that this is what is required. This links to Key Finding #2, that stigma is associated with the trades.

HIGHLIGHTS OF OUR FINDINGS

Employers agree that soft skills are a problem among apprentices – particularly work ethic, punctuality, and communication skills.

Many youth are viewed as over-confident, having high wage and advancement expectations.

Many employers see a need for greater preparation for the workplace in high schools.

PROMISING PRACTICE YOUTH IN CONSTRUCTION

LiUNA 837 in partnership with the City of Hamilton launched an exciting and innovative new pilot program that builds soft skills in youth (ages 18 to 29). After participating in a 10 week program that builds both basic technical and soft skills, the youth have a placement opportunity as a Construction craft worker. No previous experience is required, only the motivation to complete the training. This allows youth who do not have the appropriate skills to gain entry into an industry. Hiring and training through the city reduces costs for employers and helps them find motivated individuals that may otherwise have been overlooked due to lack of skills.

Youth soft skills are a major concern. Many young applicants give negative first impressions, as during interviews they do not wear the appropriate attire or communicate professionally.

— *Motive trade employer*

Key Finding #4

Smaller employers are not competitive in the skilled trade labour market

Small businesses have certain challenges that larger employers do not. Small employers in the trades feel that hiring skilled trade workers, whether apprentices or experienced, can be difficult.

The small employer can't necessarily afford to pay the high wages that a larger employer can offer. And because top talent can leave to work for larger employers for higher wages, poaching is a major concern. This is a deterrent to training, as small employers must consider the possibility of the employee leaving after completing his or her apprenticeship.

During training there are additional challenges. The prolonged absence for in-school training of one or two apprentices means a major loss of time and productivity when those employees represent a large percentage of the workforce. Furthermore, small employers also worry about not being able to offer the full range of training required by the training standard for apprentices to be fully certified.

This issue was mentioned frequently in the Motive Power sector. Non-compliance with trades registration in the Auto body and Collision Repair sub-industry is a major problem. Many apprentices in this sub-industry are not moving to the appropriate stages they require to become certified.

HIGHLIGHTS OF OUR FINDINGS

Small employers are concerned about poaching.

Release time for in-school training is a challenge for small employers.

Small employers express concerns about the steady availability of work, and the inability to teach the full scope of trades.

Non-compliance in trade certification was high in the Autobody and Collision Repair sub-industry.

Looking internally for apprentices is more difficult for a small employer.

Some employers do not have the capacity to train. Small firms may not be conducive for apprenticeship training.

— Labour market stakeholder

INTERNATIONALLY TRAINED SKILLED TRADE WORKERS ARE LESS AVAILABLE

Over the years, internationally trained professionals trained in the European skilled trades system have always been a vital source of labour for skilled trades, and this has provided a pool of highly skilled workers for employers to recruit from. However, over the last decade or so immigration from Europe has been slowing. At the same time, governments have made it more challenging to import foreign workers. Extensive paperwork is required to prove that there are no workers available in Canada. Employers argue that this makes hard-to-fill positions even harder to fill. Many employers stated they now avoid looking for ITPs but still have hard-to-fill positions that local talent cannot fill.

Key Stakeholder Issues

The following two concerns were raised by other labour market stakeholders, including service providers, associations, and education (see Appendix A for a list of stakeholders). These findings help create a more comprehensive picture of skilled trade issues. There are many stakeholders involved in the skilled trades beyond employers. We need to hear their voices in this discussion.

Key Finding #5

Young people/new apprentices need more support to navigate a skilled trades career pathway

Navigating career pathways in the skilled trades is an issue identified by other labour market stakeholders. However, it is not unique to them and many employers also agree that young people and apprentices need help in understanding how to access a skilled trade career. Despite the fact that there are many openings for skilled trades, youth still have difficulty finding an apprenticeship. For youth with not a great deal of job search experience, finding a skilled trade apprenticeship is sometimes like looking for a needle in haystack.

Another issue identified by skilled trade partners is that youth don't always have a realistic picture of what to expect in the skilled trades. Their expectations regarding wages and type of work don't match workplace realities. When they have questions, there are not many places for them to get answers. As mentioned in Key Finding #2, certain stereotypes in the trades inform their decisions.

Further complicating a skilled trade career pathway for youth are two additional issues.

1) Transportation is a concern for some young people especially in the construction sector. Without access to a car, many young people cannot get to their job site. This creates an issue for employers hiring youth as many construction job sites are out of the way and inaccessible by public transportation.

2) The cost of tools is prohibitive for young Motive power apprentices. Apprentices in Motive Power trades, particularly Automotive service technicians, must acquire their own tools when they go to work for an employer. This can be very expensive. New apprentices earning lower wage rates find it difficult to purchase the tools that they need to do all the tasks required of them.

HIGHLIGHTS OF OUR FINDINGS

Youth do not understand career pathways or options in skilled trades.

Some youth have difficulty finding an employer apprenticeship sponsor.

Many youth/new apprentices do not know where to go with questions about apprenticeship.

Transportation is a concern for young people in construction.

Cost of tools is a challenge for young Motive Power apprentices.

Key Finding #6

Employers may not be investing enough in apprenticeship training

In the consultations, labour market stakeholders noted that employers generally look for certified journey persons or level three and four apprentice students to fill their openings, and expressed their concern that employers are not investing in training new apprentices. Employers suggest that they prefer highly skilled individuals and are not interested in training young apprentices.

It is difficult to disentangle the issues here. As noted in Key Finding #4 some employers—small firms in particular—have challenges offering the full training for apprentices. There is, however, evidence that employers may not be investing enough in any training. A report by the Canadian Chamber of Commerce noted that from 2006 to 2010 Canadian employers decreased the amount of direct training employees received, and they were consistently behind United States employers in terms of money spent on training.³ Likewise a recent document from the Canadian Apprenticeship Forum found that Canadian companies are investing less in training than other countries.⁴

Our evidence shows that some skilled trade occupations have a much older workforce. The absence of young workers in the labour market profile suggests that employers are not investing enough in training young people. Furthermore, the Employer One Survey data shows that only about half of employers have a succession plan in place.

It is worth noting that some employers were not aware of the range of training available at Mohawk College and the flexible schedules offered for apprenticeship training. Limited knowledge of training opportunities may be one reason why employers do not invest enough in training.

HIGHLIGHTS OF OUR FINDINGS

Labour market stakeholders mentioned that employers are putting too much emphasis on certified workers and level 3 or 4 apprentices. Employers are insistent on hiring licensed journey persons instead of having to train.

There is some evidence that Canadian employers are not investing enough in apprenticeship training, or in training in general.

Lack of information on training opportunities may be one reason for the training gap.



RECOMMENDATIONS

The recommendations outlined on the next pages reflect the community's response to the common challenges identified in the data and consultation research. Throughout our process key stakeholders, including employers, shared their ideas and best practices that could be adopted and broadly applied.

The skilled trades system is complex and involves many stakeholders including employers, job seekers, educational institutions and service providers. In our recommendations, WPH has looked at local solutions that would improve the availability of skilled trades workers locally. The four recommendations below are designed to address skilled trade challenges in Hamilton.

It is worth noting that the Ministry of Advanced Education and Skills Development over the past year has updated its Apprenticeship Strategy. In developing these recommendations, WPH has taken into account the provincial recommendations and looked for ways to support and enhance with provincial initiative. The actions recommended here are not intended to duplicate the work of the Ministry.

ONTARIO APPRENTICESHIP STRATEGY

The Ontario Government is working to modernize the apprenticeship system in Ontario. They understand that the skilled trades are an important part of Ontario's workforce and are facing outstanding pressures. From shifting demographics and new technologies, to globalization, Ontario's Apprenticeship system needs investments to make sure it is competitive in the 21st century.

In the report the government also states that, "Our vision is an apprenticeship system that is easy to join, navigate and complete. It's a system where apprenticeship is a valued and respected part of the postsecondary education system. Where everyone – regardless of their age, gender or background – can access and progress through an apprenticeship of their choice and pursue the career of their dreams."

In 2017 the Ontario government held province-wide consultations with a cross section of the apprenticeship community. Over 1000 people took part in the working sessions. Based on these consultations, the Ontario government will implement these five goals and key short term initiatives:

1. Promote apprenticeship – Make the apprenticeship system a respected postsecondary pathway and ensure students have all the information and resources they need to pursue it.
 - Marketing outreach activities to various groups such as students, guidance counselors, and parents
 - Review OYAP program to support clearer pathways
 - Increase the number and kinds of experiential learning
2. Support and retain apprentices – Increase completion rates of apprentices, making the apprenticeship system transparent and accountable for outcomes
 - Help apprentices better connect to training opportunities and find a sponsor
 - Improve skills assessment for apprentices and provide opportunities for them to upgrade their skills
 - Improve customer service strategy for employers and apprentices
3. Engage and support employers and sponsors – Employers increase apprenticeship training and ensure the pathway develops the talent they need
 - Transform Apprenticeship Training Tax Credit into the new Graduated Apprenticeship Grant for Employers (GAGE)
 - Expand the use of group sponsorship and shared apprenticeship models
4. Increase participation of underrepresented groups – Increase the number of people taking skilled trades from underrepresented groups so that it more closely reflects the province's demographics.
 - Financial bonus through the new GAGE program for training from underrepresented groups
 - Reach underrepresented groups through planned outreach and marketing
 - Working group to find ways to support apprentices from underrepresented groups
5. Update the apprenticeship system through digital enhancements – Provide client centered and seamless service to apprentices and employers using up-to-date digital technology
 - Launch apprenticeship web portal as a one-stop location
 - Provide labour market information for a skilled trade section of the provincial site

Recommendation #1

Increase the number of youth participating in the Apprenticeship Program

It is clear from the consultations and data that not enough youth are entering the trades.

The data shows the number of people aged 25 to 34 with an apprenticeship has stayed about the same over the last five years, but the demand for skilled trades continues to grow. As well, the age profile for certain skilled occupations shows a much older workforce especially in the Industrial trades.

An increase in youth will be essential to employers, as retirements will only continue. It is important not only that more youth apply to the program, but that more youth complete the program.

Many of the employers consulted felt that students who were entering the trades did not have the right educational background. Students with strong academic backgrounds were desired since the trades have become technologized. Career and labour market information is an important aspect in getting more youth to participate.

In school youth can be divided up into three main groups that would need separate actions: middle school youth (grades 7 to 8); high school youth with a focus on grade 9 and 10, when they decide on a career path; and youth out of school aged 18 to 29.

KEY ACTIONS INCLUDE

- 1. Perform an environmental scan to determine what resources are available to youth that support skilled trade career pathways.** Also determine what, when and how this information is made available to students. Identify gaps in the resources available and produce material that can help youth understand what the trades involve. Review materials to ensure that it is accessible to different age groups.
- 2. Connect with guidance counselors to make sure they know the most up-to-date information in the skilled trades.** While it is important to know what materials are available to youth, it is also important to make sure guidance counselors are knowledgeable about the trades and understand the ins and outs of this career pathway.
- 3. Highlight local success stories of young skilled trade workers.** These stories will address the negative image associated with the trades and give youth and parents more insight into what a career in the trades can look like. Stories could be highlighted in newspapers, social media, and potential TV commercials. Outreach programs led by apprentices and journeypersons are another option. Success stories should highlight underrepresented groups to demonstrate that everyone can have a career in the trades.

Dollars and Sense Guide by Workforce Planning Hamilton

Workforce Planning Hamilton released its newly updated Dollars and Sense Guide in December 2017. It lists employment services, tax and training credits, incentives and supports for employers. Taking advantage of the listed programs will allow employers to defray costs associated with training apprentices and hiring youth, summer students, and other candidates. In addition to the incentives and supports listed in this guide, Employment Ontario Employment Service Providers are available to assist employers through every step of the hiring process. For more information about the Dollars and Sense Guide please visit the Workforce Planning Hamilton website workforceplanninghamilton.ca

Of particular interest to employers is the Graduated Apprenticeship Grant for Employers (GAGE). This grant supports employers by providing financial incentives throughout the apprenticeship training to meet key milestones such as each level in the training. In addition, employers will receive a premium for hiring from underrepresented groups and/or skilled trades for which increased demand is projected. For more information please visit the Ontario website ontario.ca/page/graduated-apprenticeship-grant-employers.

Recommendation #2

Increase employer participation in experiential learning, and encourage employers to provide more training opportunities

Employers have a crucial part to play in addressing many of the concerns mentioned. The time is right for employer involvement as the Ministry of Education is updating its curriculum to include more experiential learning opportunities. The Ministry is expanding the Specialist High Skills Majors Program, a career-focused program designed to provide sector-based experience, to make it available to 25% of grade 11 and 12 students in the next three years to expose more high school students to opportunities in the workforce. One quarter of all students will be provided with one experiential learning opportunity. There will be increased opportunity for skilled trade employers to showcase their workplaces and skilled trade careers.

Furthermore, employers need to be encouraged to offer workplace training and apprenticeships to train the next generation of skilled trade workers. WPH's EmployerOne survey highlights the fact that employers are generally unaware of the training incentives available through Employment Ontario services. These credits and incentives can potentially reduce the cost of training and the burden on the employer.

In addition, because small employers have more difficulty providing training and co-op placements for students, the community needs to ensure that these employers do not miss opportunities to attract talented youth.

KEY ACTIONS INCLUDE

- 1. Expand the pool of engaged skilled trade employers providing experiential learning and other career exploration opportunities.** In addition to co-op and other workplace experiences, this pool of employers could provide workplace tours or be available for speaking engagements. This could include support for smaller employers who don't always have the opportunity to participate in these opportunities.
- 2. Develop localized promotional resources that provide labour market and other information on skilled trades in Hamilton and are accessible to both students and jobseekers.** Labour market information is a critical element in this action item. Informing job seekers and students on the who, what and where of skilled trade opportunities is a critical step in addition to providing information on the process of registering in a skilled trade.
- 3. Ensure employers have the most up-to-date information on training incentives and programs.** Training incentives and tax credits can reduce the burden of training a new worker. Employers are not always aware of what is available and how to access these resources. Employment Ontario service providers are available to support employers with their applications and assist with the paperwork involved. Also, some employers need more information on how Mohawk College can meet their training requirements.
- 4. Explore shared apprenticeship models for smaller employers.** Shared apprenticeship models, while not widely available, have proven useful training models for smaller skilled trade employers. In a shared apprenticeship model the apprentice is signed to a consortium of employers and may work for a number of these employers, gaining the full range of experience to be certified in their trade. For small employers this offers the opportunity to offer apprenticeship training. Construction trade unions are an example of a shared apprenticeship model.

PROMISING PRACTICE HAMILTON SKILLED TRADES APPRENTICESHIP CONSORTIUM (HSTAC)

The membership of the HSTAC consortium is a group of employers, colleges, government training consultants, and USW representatives along with Canadian Skills Training & Employment Coalition representatives from within the local steel making community, meeting to discuss and support mutually beneficial apprenticeship issues while drawing on the resources of all the members. HSTAC provides many supports to manufacturing employers in the Hamilton area.

- Provides apprenticeship support to HR departments
- Arranges co-op placements and internships with community colleges
- Provides direct assistance with start-up and the administration of apprenticeship programs e.g. Contracts, forms, training schedules, monitoring
- Provides information on how to apply for tax credits and subsidies
- Provides mentoring skill development and support

Recommendation #3

Monitor the Ontario Apprenticeship Strategy

As the Ontario Apprenticeship Strategy (OAS) rolls out we will carefully monitor and track their initiatives. Where feasible, working with skilled trade partners, we will support and seek out local opportunities to enhance this work. This province-wide initiative provides an excellent opportunity to address the broader issues in the apprenticeship system identified in our research.

The following actions laid out in the OAS report actions that align and reflect our local WPH research:

- Marketing outreach activities to various groups such as students, guidance counselors, and parents
- Review OYAP program to support clearer pathways
- Increase the number and kinds of experiential learning
- Expand the use of group sponsorship and shared apprenticeship models
- Reach underrepresented groups through planned outreach and marketing
- Provide labour market information for a skilled trade section of the provincial website

KEY ACTIONS INCLUDE

1. **Track and follow the implementation of the Ontario Apprenticeship Strategy.** Share information about the implementation of the strategy with our community partners.
2. **Explore opportunities to support the Ontario Apprenticeship Strategy with local initiatives.** Where possible, piggy-back on OAS initiatives to create a local awareness and impact for the strategy.

Recommendation #4

Create a Skilled Trades Council that brings together industry, education and other stakeholders to support ongoing dialogue about skilled trade issues.

Many of the actions involve participation from multiple stakeholders including employers, educational institutions, service providers, and associations. This council can track progress on the actions recorded in this report and on the broader Ontario Apprenticeship Strategy. They can also keep their finger on the pulse of the skilled trade workforce. Communication among the stakeholders is vital.



CONCLUSION

The Under Pressure: Skilled Trades in Hamilton project has revealed a number of challenges associated with the apprenticeship system and skilled trade occupations in Hamilton. The data and our consultations suggest that an aging workforce, changing technology, and a shortage of skilled workers have created significant recruitment challenges for employers. Employers are concerned about the profile of the trades especially among young workers. However, the Ontario Apprenticeship Strategy provides new opportunities to mobilize around skilled trade issues.

The issues uncovered in our data analysis and consultations show that experienced skilled trade workers are difficult to find. Many occupations have low unemployment rates, and certain occupations have an older workforce. Also, the number of people pursuing an apprenticeship training option is declining. While the story varies from employer to employer and by size and sector, there is clear evidence of shortages.

Other concerns expressed by skilled trade stakeholders in our consultations further complicate this situation. The skills of youth, both soft and technical, are very much on the mind of employers. Also noted in our consultations was employers' perception that there is a lack of promotion of skilled trade career pathways. Other skilled trade partners suggested that employer attitudes to training limit access to skilled trade careers. Generally there seemed to be a limited awareness of how to pursue a skilled trade career.

The recommendations are a response to these concerns and highlight key initiatives the community can engage in locally. Making labour market information on skilled trade careers and other skilled trade resources available in a user-friendly format for new labour market entrants is one critical element. So are stronger connections to local skilled trade employers to allow for career exploration and awareness. Keeping our finger on the pulse of the Ontario Apprenticeship Strategy is vital to achieving our goals.

Clearly the apprenticeship system and skilled trades in Hamilton need the support and collaboration of multiple partners to help address the issues. The time is ripe for a new and invigorated approach to the promotion and support of skilled trade employment. These jobs built the city, are vital to its major industries, and should be emphasized in the years ahead.

APPENDIX A

The following information includes the list of employers and labour market stakeholders that were consulted in the course of this project.

Employers

Industrial Trades:

ACS Valves
ARaymond
ArcelorMittal Dofasco
Canada Bread
Maple Leaf Foods
Stackpole International
Tinnerman Manufacturing
Tube-Mac Piping Technologies Ltd.
Walters Inc.
Westdale Machine

Construction Trades:

Besseling Mechanical
Crescent Cabinet Company Limited
Fabristeel Ltd.
L.J. Barton Mechanical Inc.
Rankin Construction Inc.
United Glass Services

Motive Power:

Barton Auto Parts
Cino Auto Repair
Glendale Autopro and Tirecraft
Liftow Limited
Russell Automotive

Associations and Unions

Collision Association
Hamilton-Brantford Building Trades Council
Ontario Construction Secretariat
Hamilton & District Heavy Construction Association (HAND)
Ontario College of Trades
Hamilton Home Builders Association

Service Providers

City of Hamilton Employment Services
College Boreal
Employment Hamilton
Goodwill Employment Services
Industry Education Council
Mohawk College Employment Services
PATH Employment Services VPI Inc
Wesley Employment Services
YMCA Employment Services
YWCA Employment Service

Education

Mohawk College - School of Skilled Trades & Apprenticeship
Ontario Youth Apprenticeship Program – Hamilton
Wentworth District School Board
Ontario Youth Apprenticeship Program – Hamilton
Wentworth Catholic District School Board

APPENDIX B

Labour Force Characteristics – Manufacturing/Industrial Trades

Occupations	Total	20 to 29 years	Over 55 years	Ratio	Unemployment Rate
7511 Transport truck drivers	5,130	380	1880	20%	3.8%
7237 Welders and related machine operators	2,190	405	550	74%	5.0%
7311 Construction millwrights and industrial mechanics	1,925	240	655	37%	4.0%
9461 Process control and machine operators, food, beverage and associated products processing	1,160	185	245	76%	3.7%
7231 Machinists and machining and tooling inspectors	1,085	115	265	43%	5.7%
7371 Crane operators	1,000	175	210	83%	2.0%
7521 Heavy equipment operators (except crane)	870	170	235	72%	9.8%
7242 Industrial electricians	775	90	240	38%	8.9%
9416 Metalworking and forging machine operators	740	105	200	53%	2.0%
9417 Machining tool operators	410	45	90	50%	2.4%
7232 Tool and die makers	395	40	95	42%	2.5%
7252 Steamfitters, pipefitters and sprinkler system installers	320	30	85	35%	3.0%
7381 Printing press operators	315	25	85	29%	0.0%
7272 Cabinetmakers	265	40	50	80%	0.0%
7235 Structural metal and platework fabricators and fitters	250	40	85	47%	9.3%

Source: 2016 Census

APPENDIX C

Labour Force Characteristics – Construction Trades

Occupations	Total	20 to 29 years	Over 55 years	Ratio	Unemployment Rate
7511 Transport truck drivers	5130	380	1880	20%	3.8%
7611 Construction trades helpers and labourers	3415	1095	430	255%	12.1%
7271 Carpenters	2130	540	315	171%	5.7%
7311 Construction millwrights and industrial mechanics	1925	240	655	37%	4.0%
7241 Electricians (except industrial and power system)	1585	285	370	77%	9.5%
7441 Residential and commercial installers and servicers	1160	335	180	186%	6.4%
7294 Painters and decorators (except interior decorators)	900	200	190	105%	8.6%
7251 Plumbers	890	255	145	176%	2.7%
7521 Heavy equipment operators (except crane)	870	170	235	72%	9.8%
7313 Heating, refrigeration and air conditioning mechanics	810	210	165	127%	4.7%
7284 Plasterers, drywall installers and finishers and lathers	520	95	80	119%	7.9%
7291 Roofers and shinglers	480	155	45	344%	5.8%
7233 Sheet metal workers	360	95	55	173%	10.0%
7252 Steamfitters, pipefitters and sprinkler system installers	320	30	85	35%	3.0%
7272 Cabinetmakers	265	40	50	80%	0.0%
7236 Ironworkers	255	70	40	175%	14.8%

Source: 2016 Census

APPENDIX D

Labour Force Characteristics – Motive Trades

Occupations	Total	20 to 29 years	Over 55 years	Ratio	Unemployment Rate
7321 Automotive service technicians, truck and bus mechanics and mechanical repairers	2820	605	455	133%	1.2%
7322 Motor vehicle body repairers	545	100	140	71%	2.7%
7312 Heavy-duty equipment mechanics	290	65	75	87%	3.4%
7535 Other automotive mechanical installers and servicers	245	110	25	440%	7.4%
7334 Motorcycle, all-terrain vehicle and other related mechanics	85	20	35	57%	0.0%
7335 Other small engine and small equipment repairers	50	25	15	167%	0.0%

Source: 2016 Census

Workforce Planning Hamilton Business, Labour & Community: Planning for Prosperity

Since 1997 Workforce Planning Hamilton has provided planning, partnerships and projects that highlight local labour market trends and support workforce development.

WPH is a member of Workforce Planning Ontario, a network of 25 labour market planning areas across Ontario.

Our evidence-based approach relies on key industry sector and demographic data combined with local intelligence from employers and other local partners to develop a strategic vision for Hamilton.

Log on to WPH's website at www.workforceplanninghamilton.ca and you will:

Discover our community **Projects and Partners** that promote labour force development

Learn about local labour market trends, opportunities, and priorities in our **Publications**.

Connect to **Links** on training, employment, and labour market information.



Workforce Planning Hamilton
Planification de main d'oeuvre de Hamilton

117-77 James Street North
Hamilton, Ontario, L8R 2K3
Telephone: 905- 521-5777
Fax: 905- 521-9309

Email: info@workforceplanninghamilton.ca
Website: www.workforceplanninghamilton.ca

