

January  
2015



# PUTTING THE PUZZLE TOGETHER:

Skills Alignment  
in Hamilton's  
Transforming  
Economy



Workforce Planning Hamilton  
Planification de main d'oeuvre de Hamilton

**EMPLOYMENT  
ONTARIO**

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## ACKNOWLEDGMENTS

Workforce Planning Hamilton (WPH) recognizes and thanks those individuals and organizations that assisted with this project.

Special thanks to our Advisory Team Members who lent their considerable expertise to the project:

Leah Morris	Adult Basic Education Association
Monica Sahagun Morales	Collège Boréal
Wally Stadnicki	Employment Hamilton
Kristen Gray	Goodwill
Radenka Lescesen	Immigrant Women's Centre
Gisela Oliveira	McMaster University
Joyce Filice	Mohawk College
Richard Wikkerink	Redeemer University
Carla Klassen	Social Planning and Research Council
Tara Aronson	vpi Inc.
Stephanie Taylor	Wesley Urban Ministries

Project Design: Judy Travis, Executive Director

Research and Development: Sarah Hosick

**EMPLOYMENT  
ONTARIO**

This Employment Ontario project is funded by the Ontario Government.

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The issues addressed in this report are whether the available workers have the kinds of skills and training that Hamilton employers need and how job seekers can be better prepared with the right skills to succeed.

## INTRODUCTION

It is no secret that labour markets everywhere are evolving. Increased uses of technology, globalization, and pressures of innovation have all contributed to the emergence of the 'knowledge economy' - where the quantity, quality and accessibility of information plays an important factor in economic growth and prosperity. In Hamilton, there has been a shift away from traditional manufacturing to a highly-diversified economy, including advanced manufacturing. This has meant that the skills necessary to compete and succeed in today's labour market have also changed.

From 2001-2011, employment in occupations typically requiring post-secondary education increased over 10% in Hamilton. Comparatively, employment in occupations that do not typically require post-secondary education decreased 1.6% during the same time period.<sup>1</sup> From Workforce Planning Hamilton's 2014 Hire Learning Survey (HLS), 67% of Hamilton employers surveyed indicated that skill requirements are expected to continue to increase to a moderate or significant extent over the next five years.

Additional results from the HLS found that the majority of Hamilton employers find recruitment a somewhat challenging issue, yet in 2013 there were 25,700 unemployed people searching for work in the Hamilton CMA.<sup>2</sup> What are emerging are potential skills gaps or skill mismatches: individuals are searching for work, while employers are searching for workers, but the skills of the workforce may not meet or match the requirements of employers.

This report will delve into how skills are increasing across sectors in Hamilton and how this impacts prevalent occupations in the local labour market. Job seekers can then retrain or upgrade their skills to better match the demands of today's job market. In the current innovative climate, the potential of workers of all skill-levels must be tapped, including those groups with barriers to employment such as youth, persons with disabilities, Aboriginals, immigrants and older workers.

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<sup>1</sup> EMSI's Analyst

<sup>2</sup> Statistics Canada, Labour Force Survey

## METHODOLOGY

In order to determine where potential skill gaps or mismatches are in Hamilton, this report uses several data sources. Economic Modeling Specialists International's (EMSI) Analyst tool was used to analyze occupations over time. Analyst uses several data sources including Canadian Business Patterns, Census and National Household Survey, Labour Force Survey, Canadian Occupational Projections System and demographic data in order to estimate employment and other indicators. Employment Ontario client and Second Career data provided by the Ministry of Training, Colleges and Universities for the year April 2013-March 2014 was included as a comparator when possible to help service providers better understand their clients' needs in the context of skills alignment. Local employer insight about recruitment challenges and mismatches was collected through the 166 responses from Workforce Planning Hamilton's 2014 Hire Learning Survey, as well as an additional 63 employer interviews from the 2014 Labour Market Plan.

Data evidence was presented before an advisory team consisting of representatives from employment services, education, literacy, and social planning organizations in Hamilton.<sup>3</sup> The advisory team validated the findings and established recommendations for how to better prepare job seekers to gain the skills required by employers.

### What are skill gaps, shortages and mismatches?

Skill gaps, shortages and mismatches all refer to the overall balance of demand and supply of labour with different skill levels. A common definition of skill gaps and shortages is the difference between the skills needed for a job versus those skills possessed by a prospective worker, while a skills mismatch as defined by the Conference Board of Canada refers to those that are employed in occupations that do not utilize the full extent of their education and skills<sup>4</sup> (either individuals have been educated in areas for which there is little demand or they work for employers who are unsure about how to engage the full range of their skills). There could be both skill gaps and skill mismatches occurring in Hamilton's labour market which can lead to both unemployed workers and dissatisfied employers.



<sup>3</sup> See Appendix A for a list of advisory team members and organizations.

<sup>4</sup> Munro, Daniel and Stuckey, James. The Cost of Ontario's Skills Gap. The Conference Board of Canada, 2013.

## LITERATURE REVIEW

The notion of a skills gap or skills mismatch is not unique to Hamilton. There have been various studies conducted related to provincial, national and international skill gaps and their effects on the economy.

To put it simply, it has been found that skills protect employment. The Survey of Adult Skills (PIAAC), which assesses the proficiency of adults aged 16 and over in literacy, numeracy and problem-solving in technology-rich environments, found that low-skilled individuals are increasingly likely to be left behind as the demand for skills continues to shift toward more sophisticated tasks, and as jobs increasingly involve analyzing and communicating information. As technology increases throughout all aspects of life, these individuals with poor literacy and numeracy skills are more likely to have difficulty navigating the job market.<sup>5</sup> In fact, the Conference Board of Canada found that 81% of jobs lost in Ontario during the last recession were lost by people who lack post-secondary credentials.<sup>6</sup> While the labour market is recovering from the economic downturn and there are 900,000 more Canadian workers employed since the height of the recession, the unemployment rates for younger workers and the long-term unemployed remain particularly high.<sup>7</sup>

The Conference Board of Canada conducted an extensive study on the province's skill gap in 2013 that included a survey of 1,538 Ontario employers (59 of which were located in Hamilton). It found that skill gaps are particularly affecting industries such as manufacturing, health care, professional, scientific and technical services and financial services. Moreover, skills gaps and mismatches are projected to increase in some areas (generally high-skilled work) and unemployment is expected to rise in others (low-skilled work).

Benjamin Tal (CIBC) proposed that occupations with genuine skills shortages will have both low unemployment rates and rising wages. Tal found that this is the case for more than 20% of total employment at the national level - including occupations in health, mining, advanced manufacturing and business services.<sup>8</sup> Many of the occupations identified by Tal as showing signs of skills shortages are prevalent in Hamilton.

Skill shortages if not properly addressed will lead to slower economic growth and increased difficulty for unemployed workers to find jobs. In other words, "unless we adopt proactive policies now, we will face a world in which there will be a lot of people without jobs and simultaneously an even larger number of jobs without people" (Rick Miner).<sup>9</sup>



<sup>5</sup> Skilled for Life? Key Findings from the Survey of Adult Skills, Organisation for Economic Cooperation and Development, 2013

<sup>6</sup> Munro, Daniel, Need to Make Skills Work, Presentation for Workforce Planning Hamilton, December 2013

<sup>7</sup> Bergevin, Philippe, Who is still standing in line? Addressing a Mismatch of Skills and Jobs in the Canadian Labour Market, C.D. Howe Institute, 2013

<sup>8</sup> Tal, Benjamin, The Haves and Have Nots of Canada's Labour Market, CIBC, 2012

<sup>9</sup> Miner, Rick, People without jobs, Jobs without People, Miner Management Consultants, 2010



# 25

## CIBC's Identified **25** Occupations Showing Signs of Skills Shortages in Canada

- Managers in engineering, architecture, science and information systems
- Managers in health, education, and social and community services
- Managers in construction and transportation
- Auditors, accountants and investment professionals
- Human resources and business service professionals
- Professional occupations in natural and applied sciences
- Physical science professionals
- Life science professionals
- Civil, mechanical, electrical and chemical engineers
- Other engineers
- Professional occupations in health
- Physicians, dentists and veterinarians
- Optometrists, chiropractors, and other health diagnosing and treating professionals
- Pharmacists, dieticians and nutritionists
- Therapy and assessment professionals
- Nurse supervisors and registered nurses
- Technical and related occupations in health
- Medical technologists and technicians (except dental health)
- Technical occupations in dental health care
- Other technical occupations in health care (except dental)
- Psychologists, social workers, counselors, clergy and probation officers
- Supervisors in mining, oil and gas
- Underground miners, oil and gas drillers and related workers
- Supervisors in manufacturing
- Supervisors in processing occupations

Source: Tal, CIBC, The Haves and Have Nots, 2012

# SKILLS ANALYSIS OF HAMILTON

For much of this analysis, education levels will be used as a proxy for skill level. The National Occupational Classification (NOC) categorizes occupations into four skill levels (A, B, C, and D) depending on the level of education that is typically required to perform the job.

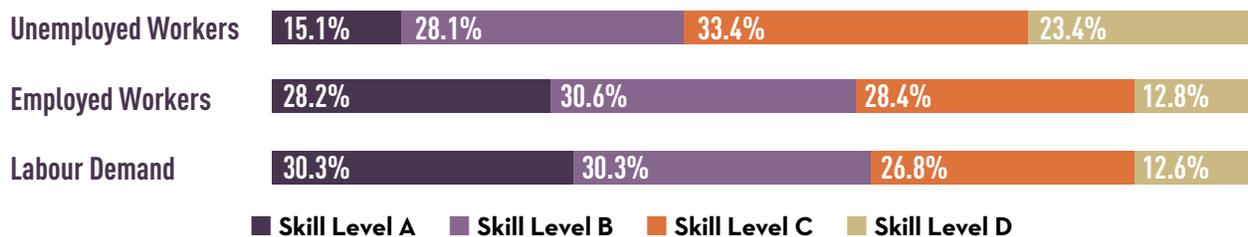


## At a broad level, do the skills that Hamilton residents have match the skills that Hamilton employers need?

From the 2011 NHS, Hamilton's labour supply (the sum of employed and unemployed workers living in Hamilton) amounted to over 266,000 people. On the other hand, Hamilton's labour demand (the number of people working in Hamilton) totaled 192,855. While labour supply seems much higher than labour demand, note that labour demand only includes those workers with a usual place of work or work at home – workers that do not have a home base would not be included in the labour demand numbers. For example, a truck driver that does not have a usual work location would not be included in Hamilton's labour demand as they do not necessarily work in Hamilton most of the time.

By comparing the skill level distribution of Hamilton's labour demand and labour supply (employed and unemployed) populations, we can see at a broad level if residents' skill levels are proportionally matched to the types of jobs that are available in the community. As shown in Figure 1, there is a slightly higher proportion of Skill Level A jobs in Hamilton (30.3%) than there are employed residents (28.2%). Figure 1 also shows that there is a much higher proportion of workers in lower-skilled occupations that are unemployed.

**FIGURE 1.** Labour Demand and Supply in Hamilton by Skill Level Distribution, 2011 National Household Survey



IF THE SKILL LEVEL IS...  
**Skill A**  
THEN THE EDUCATION LEVEL REQUIRED IS TYPICALLY...  
**University**

IF THE SKILL LEVEL IS...  
**Skill B**  
THEN THE EDUCATION LEVEL REQUIRED IS TYPICALLY...  
**College or Vocational School**

IF THE SKILL LEVEL IS...  
**Skill C**  
THEN THE EDUCATION LEVEL REQUIRED IS TYPICALLY...  
**Secondary School/  
Occupation-specific Training**

IF THE SKILL LEVEL IS...  
**Skill D**  
THEN THE EDUCATION LEVEL REQUIRED IS TYPICALLY...  
**On-the-job training  
is usually provided**



How does the skill level distribution of Employment Ontario- Employment Service Clients compare to the overall labour demand and supply distribution?

FIGURE 2. Skill Level Distribution of Employment Ontario Employment Service Clients, April 2013-March 2014.



Employment service agencies in Hamilton serve a higher proportion of clients without postsecondary education. As the literature review found that skills protect employment, the importance of academic upgrading and proper training for clients with barriers to employment must be emphasized. Consultations with the employment and training community for the 2014 Labour Market Plan found that there is resistance in pursuing this training. This may be because of a perceived negative stigma, immediate need for employment income or lack of understanding of what skills are truly required. Increasing awareness of literacy and basic skills training options (part-time, in-class, online, etc) is important so clients know they can access upgrading while still pursuing employment. Without proper education, jobs that some clients must take are low-skilled, low-income positions that are not sustainable long-term. Similar challenges are faced by Ontario Works recipients, where many are low-skilled and among the long-term unemployed. Helping low-skilled long-term unemployed workers find their place in the local labour market is essential to the community’s future prosperity.

### Displaced Workers: Effects of Hamilton’s Diversifying Economy

With Hamilton’s economy shifting away from traditional manufacturing to a highly-diversified economy, the types of skills required by employers have changed. Many traditional manufacturing workers were laid off, and employment in the broad manufacturing sector has decreased 26% (approximately 16,000 workers) since 1996 in the Hamilton CMA.

While many of these workers have found success in other areas of the labour market, some workers have become displaced and require skills training/upgrading to find their next career. Employer consultations for the 2014 Labour Market Plan revealed that many employers are willing to train those workers who are engaged and able to learn. It is important for applicants to demonstrate how skills they learned in their previous jobs can transfer to the job they are applying for.

Programs such as the Canada-Ontario Job Grant and Second Career may help to address the skills mismatch that has been created from the displaced manufacturing workers.



## Skills Protect Employment: The Case for Academic Upgrading

We have noted the differences in the distribution of the skill levels employers are looking for and the skill levels Hamilton residents have to offer. However, the case for academic upgrading and training goes beyond matching skill distributions. From the 2011 NHS, it is clear that individuals working in higher skilled occupations fare better in the labour market than those in low-skilled occupations. Table 1 shows that Skill Level A and B occupations have lower unemployment rates and higher employment rates than Skill Level C and D occupations.

TABLE 1. Unemployment and Employment Rates by Skill Level, Hamilton, 2011 National Household Survey

Skill Level	Total Unemployed	Total Employed	Unemployment Rate (Weighted Average)	Employment Rate (Weighted Average)
A	2,380	68,550	3.5%	90.6%
B	4,450	74,365	6.7%	87.8%
C	5,265	69,030	7.4%	85.2%
D	3,685	31,130	10.8%	78.7%
Not Applicable*	7,315			

\*Unemployed persons who have never worked for pay or in self-employment or who had last worked prior to 2010 were not categorized to a skill level occupation.



Many employment service clients find themselves having to take low-skilled and/or low-paying jobs. Skills upgrading would help job seekers find employment in occupations that offer long-term sustainable employment.

## Increasing Skills Requirements over Time

Not only do higher skilled occupations fare better in the labour market, but employment in these occupations has also seen the highest growth over the past decade. From 2001-2011, overall employment increased 5.1% in Hamilton. As shown in Table 2, skill level B and C occupations are the most prevalent occupation types in Hamilton; however, much of the increase was experienced by Skill Level A occupations. This further indicates job seekers may be better able to find an employment match should they continue to upgrade their skills.

TABLE 2. Employment Change by Skill Level, Hamilton, Analyst

Skill Level	Employment % Change 2001-2011	Employment Absolute Change 2001-2011
A	21.8%	8,657
B	3.6%	2,183
C	-2.8%	-1,693
D	1.4%	351

### Future projections also place importance on skilled occupations

Projected employment levels through to 2020 show that post-secondary occupations are expected to continue to grow. While Skill Level D occupations are also projected to see a sizeable increase in employment, they make up only a small portion of available jobs and are typically lower paid with higher turnover. As with any projection, caution should be taken when interpreting information and should only be used to assess overall trends. The projected increase in higher skilled occupations are substantiated by the results from the Hire Learning Survey that found 67% of employers expect skill requirements to increase to a moderate or significant extent over the next five years. The most common skills identified to increase included digital technology, critical thinking and technical skills such as those needed in the skilled trades.

**Table 3.** *Projected Employment Change by Skill Level, 2011-2020, Analyst*

Skill Level	Projected Employment % Change 2011-2020	Projected Employment Absolute Change 2011-2020
A	10.2%	4,925
B	9.1%	5,750
C	0.9%	515
D	10.5%	2,667

With these projections in mind, it is important for workers to embrace continuous learning and take advantage of any on-the-job training offered by employers. Knowing how to build upon their transferable skills can help workers navigate career pathways and find long-term sustainable employment.





For details on the actions established to address soft skill development in Hamilton, check out the 2014 Labour Market Plan.

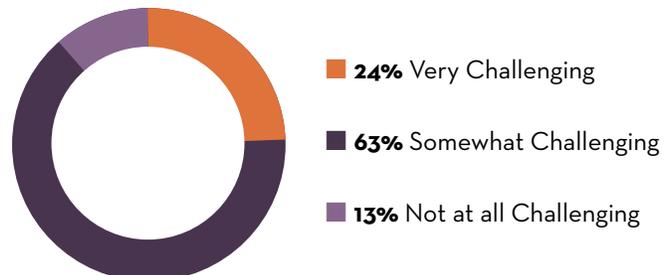
### Recruitment Difficulties: What occupations and skills do Hamilton employers have trouble finding?

It has been shown that skill requirements have increased in Hamilton and are expected to continue to increase over the next several years. However, do employers really have difficulty finding workers?

Overall, the majority of Hamilton employers surveyed find that recruitment is a somewhat challenging issue. By far the number one reason identified by employers that makes recruitment challenging is too few qualified candidates apply (as indicated by 69% of employers in the sample). In particular, technical and higher-skilled occupations, including skilled trades and information technology professionals, were the most difficult occupations to find qualified candidates. Furthermore, employers indicated that candidates who are the most competitive are those who are multi-skilled, meaning candidates who can demonstrate that they excel in several different skill areas.

Workforce Planning Hamilton delved deeper into the recruitment and skills difficulties during the 63 employer interviews for the Labour Market Plan. A key theme that emerged beyond the difficulty of finding qualified candidates was the lack of adequate soft skills in both applicants and workers. This issue persisted across all industries, with the most commonly identified soft skill gaps being communication, positive attitude and a strong work ethic. Soft skills development was established as a priority for Hamilton's labour market for the next few years, and several actions to address this issue have been proposed and are underway.

#### In general, does your organization find recruitment a challenging issue?



# ADDRESSING THE SKILLS MISMATCH

## Second Career

The Second Career program helps to address the skills mismatch by providing laid-off workers with skills training for high-demand fields and financial support. The program supports skills development for many different Skill Level B and C occupations (see Table 4 for Hamilton's top Second Career occupations). Second Career is a cost-sharing grant provided on the basis of need, providing up to \$28,000 for tuition, books, instruction costs, transportation and a basic living allowance. The Ministry of Training, Colleges and Universities reports that 93% of students have graduated, and 74% have found jobs within one year of graduation.<sup>10</sup>

During the 2013-14 fiscal year, there were 326 Second Career clients in Hamilton. Approximately 38% of the clients had no postsecondary education at intake, but upon completion of the program will be trained for a higher-skilled occupation. Table 4 shows the top 9 skills training programs Second Career clients were enrolled in during that time period in Hamilton. Occupations with low unemployment rates and high participation rates are potentially good occupations for clients to consider for finding employment in Hamilton after completion of the program.

**TABLE 4.** Top 9 Skills Training Programs for Second Career Clients in Hamilton, 2013-14

	Skill Level	Unemployment Rate (2011 NHS)	Participation Rate (2011 NHS)
Heavy Equipment Operators (Except Crane)	C	14.8%	93.1%
Welders and Related Machine Operators	B	4.0%	93.4%
Transport Truck Drivers	C	6.0%	96.5%
Social and Community Service Workers	B	6.0%	94.4%
Accounting and Related Clerks	C	4.5%	92.6%
Computer Network Technicians	B	7.5%	94.9%
Home Support Workers, Housekeepers and Related Occupations	C	5.8%	91.1%
Medical Administrative Assistants	B	0%	97.7%
Receptionists	C	6.7%	90.5%

For more information about Second Career visit <http://www.tcu.gov.on.ca/eng/secondcareer/>.

<sup>3</sup> MTCU Second Career Questions and Answers <http://www.tcu.gov.on.ca/eng/secondcareer/>



## Introducing the Canada-Ontario Job Grant

The Canada-Ontario Job Grant was recently launched to help ensure Ontario's workforce continues to develop the right skills and knowledge for the economy. The grant can provide funding to train individuals identified by an employer (current employees or new hires). Support for an individual's training costs under the Canada-Ontario Job Grant is shared between the government and the employer.

Together, programs such as Second Career and the Canada-Ontario Job Grant help to better prepare our workforce with the right skills and training that employers need. As the Canada-Ontario Job Grant continues to gain momentum, it will be important to evaluate its effectiveness in addressing a skills mismatch.



For more information about the Canada-Ontario Job Grant  
visit <http://www.tcu.gov.on.ca/eng/eopg/cojg/index.html>.

## SPOTLIGHTS ON SECTORS OF INTEREST

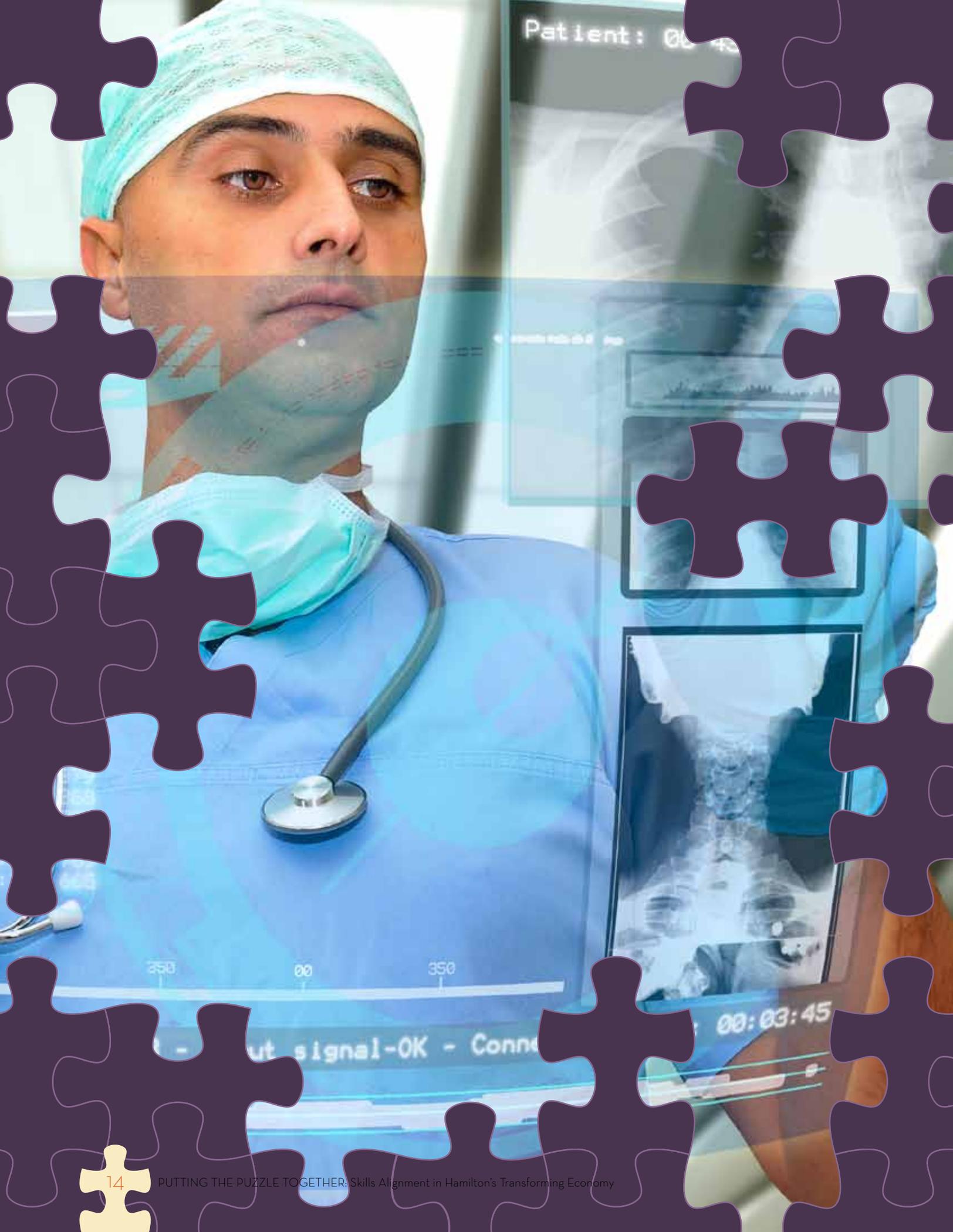
While recruitment difficulties and skills mismatches may affect a variety of industries, based on the data analysis and in consultation with the advisory team, five sectors with evidence of a skills mismatch were chosen to spotlight. These brief profiles are meant to act as a foundation to begin discussions on how different industries are affected by increasing skills requirements. Each sector is facing its own skill mismatches, with some industries having more recruitment difficulties than others. As employers in different industries have unique needs, a sectoral approach to job development and training is key to ensuring job seekers are undertaking the right types of training.

The industries chosen to spotlight and the rationale for each are presented below.

INDUSTRY	RATIONALE
<b>Health Care and Social Assistance</b>	<ul style="list-style-type: none"> <li>• Health care and social assistance has become the second highest industry of employment in the Hamilton CMA and has seen 5% growth in employment since 2008 (Labour Force Survey).</li> <li>• Interviews with Hamilton health care employers found that they have challenging recruitment issues.</li> <li>• The Conference Board of Canada also identified health care as an industry particularly affected by skills gaps in its recent skills report.<sup>11</sup></li> </ul>
<b>Manufacturing</b>	<ul style="list-style-type: none"> <li>• Hamilton has traditionally been known as a manufacturing hub; however, as identified through the HLS and employer interviews the type of manufacturing work and skill levels required are changing.</li> <li>• The Conference Board also identified manufacturing as an industry particularly affected by skills gaps.</li> <li>• Advanced manufacturing remains a key cluster for economic development.</li> </ul>
<b>Professional, Scientific and Technical Services</b>	<ul style="list-style-type: none"> <li>• This industry has seen tremendous growth over the past five years in the Hamilton CMA (34.5% employment increase compared to 1.1% increase overall).</li> <li>• The Conference Board also identified professional, scientific and technical services as an industry particularly affected by skills gaps.</li> </ul>
<b>Finance, Insurance, Real Estate, Leasing</b>	<ul style="list-style-type: none"> <li>• This industry has also seen strong employment growth over the past five years in the Hamilton CMA (9.5% increase).</li> <li>• Identified by the Conference Board as an industry particularly affected by skills gaps</li> </ul>
<b>Construction</b>	<ul style="list-style-type: none"> <li>• Employment in construction has seen strong growth in the Hamilton CMA, increasing 6.3% since 2008.</li> <li>• Employment in Hamilton is more heavily concentrated in construction than Ontario.</li> <li>• Building permits continued to see strong growth in 2013, with over \$1.03 billion in construction value.<sup>12</sup> This may indicate continued demand for construction services.</li> </ul>

<sup>11</sup> Munro, Daniel and Stuckey, James. The Cost of Ontario's Skills Gap. The Conference Board of Canada, 2013.

<sup>12</sup> Marr, Lisa. Hamilton's building boom continues in 2013, The Hamilton Spectator, January 7, 2014.



Patient: 0042



# HEALTH CARE and SOCIAL ASSISTANCE

SKILLS REQUIREMENTS AND CHALLENGES



INDUSTRY NUMBER EMPLOYED (2011 NHS)



## Health Care and Social Assistance



## All Industries



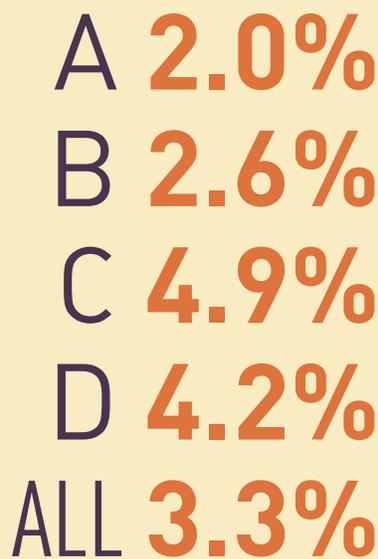
■ Skill A ■ Skill B ■ Skill C ■ Skill D

- Skill A** - university education typically required
- Skill B** - college or vocational training
- Skill C** - secondary schooling or occupation-specific training
- Skill D** - on-the job training typically provided



## RECRUITMENT DIFFICULTIES

SKILL LEVEL UNEMPLOYMENT RATE



Key themes from employer consultations:

- Finding qualified candidates for experienced and highly-skilled roles is the most difficult
- Roles that are part-time and/or shift work (both high and low skilled jobs) pose recruitment challenges as many workers are looking for full-time employment



Just over 11% of online job vacancies in Hamilton were in Health Care and Social Assistance from April 2013-March 2014.



## INCREASING SKILLS REQUIREMENTS

As the population ages, the demand for health care services is expected to increase. Along with increased demand for services, health care and social assistance employers in Hamilton have indicated that skill requirements of their employees are also expected to increase over the next five years.

What skills in particular do health care and social assistance employers expect to increase?

- Digital technology - especially in regards to documentation and communication
- Customer service
- Oral communication



Source: HLS, Employer Interviews

## KEY TAKEAWAYS

- Health care is a highly-skilled industry, with a high proportion of occupations that require post-secondary occupations
- Employment in this industry is expected to grow through to 2020
- Job seekers looking for work in this industry need to be able to adapt to changing technology, have the technical skills for the job and have a personable and caring nature



## FUTURE EMPLOYMENT OUTLOOK (ANALYST)





SKILLS REQUIREMENTS AND CHALLENGES

# MANUFACTURING

INDUSTRY	NUMBER EMPLOYED (2011 NHS)
Manufacturing	29,670
All Industries	243,080



## Manufacturing



## All Industries



■ Skill A ■ Skill B ■ Skill C ■ Skill D

- Skill A** - university education typically required
- Skill B** - college or vocational training
- Skill C** - secondary schooling or occupation-specific training
- Skill D** - on-the job training typically provided



## RECRUITMENT DIFFICULTIES

SKILL LEVEL	UNEMPLOYMENT RATE
A	2.8%
B	4.8%
C	6.8%
D	11.1%
ALL	6.1%

Employer interviews revealed that skilled trades (motive, industrial and construction) are the most difficult occupations to recruit for. Many skilled trades have an older than average workforce and as these workers retire, the demand for these occupations is expected to increase.



Almost 19% of online job vacancies in Hamilton were in the manufacturing industry from April 2013-March 2014.





## INCREASING SKILLS REQUIREMENTS

Employer surveys and consultations revealed that as manufacturing becomes more advanced, the skills required to succeed in this industry are increasing.

What skills in particular do manufacturing employers expect to increase?

- Digital technology (as procedures become more automated and advanced)
- Problem-solving
- Multi-tasking



Source: HLS, Employer Interviews

## KEY TAKEAWAYS

- The skills needed to succeed in manufacturing are changing. Employers are looking for multi-skilled workers who can adapt quickly to changing environments.
- Hamilton employers are having difficulty finding skilled trades and other highly-skilled workers and anticipate an increased demand for skilled trades workers in the near future.



## FUTURE EMPLOYMENT OUTLOOK (ANALYST)

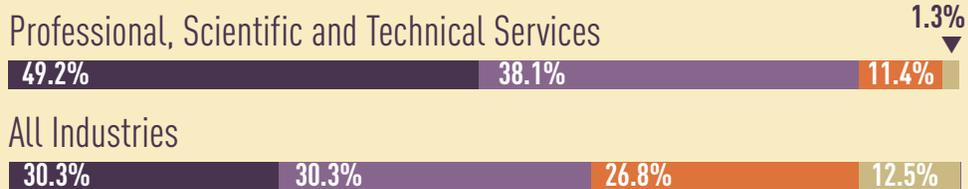
The type of work available in the manufacturing industry is expected to continue to change over the next several years. While employment overall is expected to decrease in manufacturing, future jobs will require workers to be highly skilled and able to adapt to changing technology.



SKILLS REQUIREMENTS AND CHALLENGES

# PROFESSIONAL, SCIENTIFIC and TECHNICAL SERVICES

INDUSTRY	NUMBER EMPLOYED (2011 NHS)
Professional, Scientific and Technical Services	13,955
All Industries	243,080



■ Skill A ■ Skill B ■ Skill C ■ Skill D

- Skill A** - university education typically required
- Skill B** - college or vocational training
- Skill C** - secondary schooling or occupation-specific training
- Skill D** - on-the job training typically provided



## RECRUITMENT DIFFICULTIES

SKILL LEVEL	UNEMPLOYMENT RATE
A	2.7%
B	6.1%
C	3.2%
D	8.9%
ALL	4.6%

Professional, scientific and technical services is a highly skilled industry. Many businesses in this sector are small firms that require very specialized skill sets from their employees. Consultations with employers in this industry revealed that finding employees with both the academic background and relevant experience is the most difficult challenge.



Approximately 4% of online job vacancies in Hamilton were in the professional, scientific and technical services industry from April 2013- March 2014.



# SKILLS REQUIREMENTS AND CHALLENGES



## INCREASING SKILLS REQUIREMENTS

Professional, scientific and technical services include firms in accounting, architecture legal and technical services.

What skills in particular do professional, scientific and technical services employers expect to increase?

- Digital technology
- Problem-solving/troubleshooting
- Multi-tasking



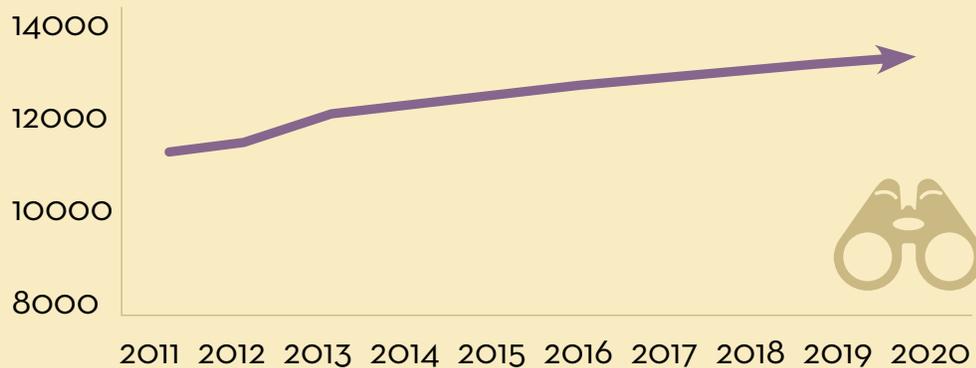
Source: HLS, Employer Interviews

## KEY TAKEAWAYS

- This industry has higher than average educational requirements
- It is important for job seekers to do their career research and choose the right educational program for occupations in this industry
- Being able to adapt to new technology and problem-solving abilities are critical for success in this industry



## FUTURE EMPLOYMENT OUTLOOK (ANALYST)





# FINANCE, INSURANCE, REAL ESTATE and LEASING

SKILLS REQUIREMENTS AND CHALLENGES



INDUSTRY	NUMBER EMPLOYED (2011 NHS)
Finance, Insurance, Real Estate and Leasing	15,015
All Industries	243,080



## Finance, Insurance, Real Estate and Leasing



## All Industries



■ Skill A ■ Skill B ■ Skill C ■ Skill D

- Skill A** - university education typically required
- Skill B** - college or vocational training
- Skill C** - secondary schooling or occupation-specific training
- Skill D** - on-the job training typically provided



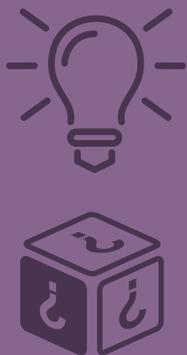
## RECRUITMENT DIFFICULTIES

SKILL LEVEL	UNEMPLOYMENT RATE
A	2.0%
B	3.2%
C	3.7%
D	5.8%
ALL	3.4%

Finance and insurance makes up over two-thirds of employment in this industry. Prevalent occupations in this industry typically require postsecondary education. Employer consultations from this industry revealed that employers require their employees to be adaptable and quick learners, no matter their skill level. Candidates who can demonstrate these abilities will be the most competitive.



Approximately 7% of online job vacancies in Hamilton were in the finance, insurance, real estate and leasing industry from April 2013- March 2014.



## INCREASING SKILLS REQUIREMENTS

Skill requirements in finance, insurance, real estate and leasing are increasing. Many employers indicate they will train for the technical skills required for a position if the applicant has the right soft skills.

What skills in particular do Finance, Insurance, Real Estate and Leasing employers expect to increase?

- Computer skills (general office programs)
- Multi-tasking



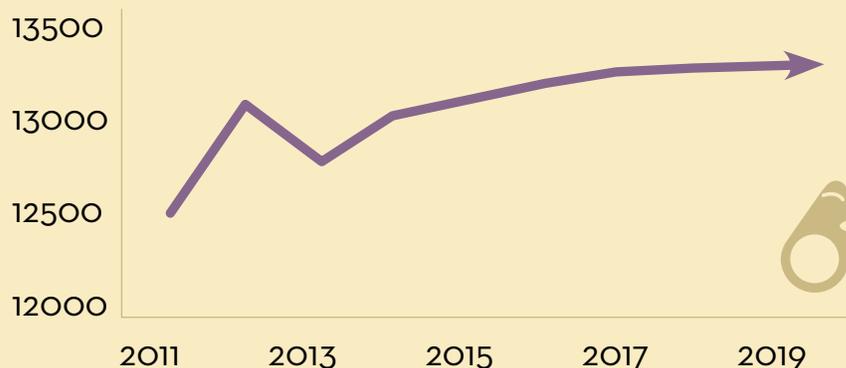
Source: HLS, Employer Interviews

## KEY TAKEAWAYS

- This industry has higher than average educational requirements
- Many of the prevalent occupations (e.g. insurance brokers, real estate agents) have specific credentials that workers need to acquire to succeed in their career
- Being able to adapt quickly to new technology and keeping up with new industry developments are critical for success in this industry



## FUTURE EMPLOYMENT OUTLOOK (ANALYST)





# CONSTRUCTION

INDUSTRY	NUMBER EMPLOYED (2011 NHS)
Construction	15,995
All Industries	243,080



## Construction



## All Industries



■ Skill A ■ Skill B ■ Skill C ■ Skill D

- Skill A** - university education typically required
- Skill B** - college or vocational training
- Skill C** - secondary schooling or occupation-specific training
- Skill D** - on-the job training typically provided



## RECRUITMENT DIFFICULTIES

SKILL LEVEL UNEMPLOYMENT RATE

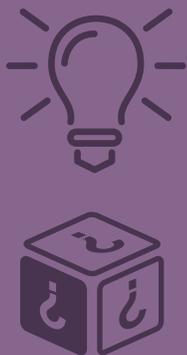
A	2.0%
B	8.5%
C	6.1%
D	9.8%
ALL	3.3%

The biggest recruitment difficulties in construction (as identified by Hamilton employers) are occupations in the skilled trades. Finding workers with the proper credentials and experience can be difficult, especially for employers with niche functions.

2%

Just over 2% of online job vacancies were for the construction industry in Hamilton from April 2013- March 2014. Many construction jobs are also found through methods beyond internet job ads, such as word of mouth, and through college programs.





## INCREASING SKILLS REQUIREMENTS

Skill requirements in construction can vary depending on the specific occupation and employer. However, common themes from employer interviews included an increase in the emphasis for adaptable and multi-skilled workers with excellent soft skills.

What skills in particular do construction employers expect to increase?

- Technical skills (in particular those required by skilled trades)
- Technology (as processes can become more advanced)
- Problem-solving



Source: HLS, Employer Interviews

## KEY TAKEAWAYS

- Employment in the construction industry is expected to see strong growth in future years.
- Employers particularly point to the skilled trades as the occupations that are the most difficult to recruit for, due to lack of skilled applicants applying.
- Employers identified that many applicants are lacking in the right soft skills for their jobs.



## FUTURE EMPLOYMENT OUTLOOK (ANALYST)



## VIEWING OCCUPATIONS AS A SET OF SKILLS: CAREER PATHWAYS AND TRANSFERABLE SKILLS

It is clear that increasing and evolving skill requirements are a new reality of the labour market; however, attaining postsecondary education is not the only way to find long-term sustainable employment. Career pathways can take many forms and transferable skills can also help address skills gaps and mismatches by providing workers with the skills employers need, without necessarily needing to undertake a formal educational program.

There is no one correct way to find and establish a career. Career pathways make it possible for workers to leverage skills learned on the job to progress to higher skilled levels of employment, either within the same industry or in a different line of work. Workers can identify skills they have learned at one job and match them with the skills required at a higher or complementary level of employment. For example, customer service skills learned through an entry-level role are still essential if one wants to progress to a supervisory or management role. Through on-the-job training and experiences, workers are able to earn an income while simultaneously building their skill sets. Studies such as Essential Skills Ontario's From Better Skills to Better Work have found that career pathways and ladders appear to be the most encouraging in assisting under-skilled individuals who have been on social assistance for long periods of time find their long-term sustainable career path.<sup>13</sup> Providing ongoing job support alongside learning opportunities allows workers to progress to higher-skilled opportunities, regardless of their educational background starting point.

### Identifying Transferable Skills

Employer consultations revealed that demonstrating transferable skills will help workers be competitive in today's job market. Employers recognize that people will work for a variety of companies across different sectors and the skills learned in one job can be applied to others.

Workers can identify their transferable skills by analyzing each of their previous jobs they've held to discover what skills were used to accomplish those jobs. Valuable skills can also be developed through volunteer or other life experiences that can be applied in employment settings. Once transferable skills are identified, job seekers can then be able to describe how their skills obtained throughout their experiences can make them a good fit for the new position.



Career pathways and transferable skills benefit both workers, who can get jobs at higher skill levels, and employers, who will have access to reliable sources of skilled labour.



Transferable skills are the talents a person gathers throughout their career, volunteer and other life experiences which can be applied to a new job or career.

<sup>13</sup> From Better Skills to Better Work, Essential Skills Ontario, 2013.

Being able to demonstrate transferable skills can be of particular importance when workers are looking to switch occupations or industries. If someone works in or was laid-off from a downsizing industry, they may wish to concentrate their new job search in one of Hamilton’s high growth industries, such as health care or professional, scientific and technical services. For example, being able to show that problem-solving abilities developed in a manufacturing environment are the same as what is needed to solve any issues that arise in other industries can help someone be a competitive applicant even without direct industry experience.

### Viewing Occupations as a Set of Skills - Examples

The following examples are not meant to be an exhaustive list of all the different types of skills one might develop in a job. Instead, it is meant to highlight at a very general level the types of skills that employers value for career progression either within an industry or across industries. Job seekers should think of the specific roles and responsibilities they have held and what skills they have developed that can be applied in future positions. To be successful in a job search, employers will want candidates to be able to demonstrate each skill with concrete examples from past experiences.

Occupation	Example Duties	Example Transferable Skills Developed (Across- and/or Within Industries)
Construction trades helpers and labourers (Skill Level D)	Assist tradespersons in construction activities	Teamwork
	Load and unload construction materials, and move materials to work areas	Time management
	Mix pour and spread materials such as concrete or asphalt	Safety awareness
Customer service representative (Skill Level C)	Answer enquiries from customers and investigate complaints	Read and follow directions
	Receive payments and customer orders	Attention to detail
	Promote goods or services	Problem-solving
Administrative officers (Skill Level B)	Oversee and co-ordinate office administrative procedures and review, evaluate and implement new procedures	Customer service
	Establish work priorities, delegate work to office support staff, and ensure deadlines are met and procedures are followed	Digital technology
	Assemble data and prepare periodic and special reports, manuals and correspondence	Sales
		Interpersonal
		Organizational skills
		Business management (including decision-making)
		Leadership
		Digital technology
		Analytical skills





## Nine Essential Skills that are Transferable to All Jobs

- Reading
- Document Use
- Numeracy
- Writing
- Oral Communication
- Working With Others
- Thinking
- Computer Use
- Continuous Learning

Essential skills are used in nearly every job at varying levels of complexity. Developing high-level essential skills helps all job seekers become more competitive regardless of industry or occupation. Workers can use the essential skills as a starting point when thinking about what other transferable skills they have developed.

For more information about essential skills and to explore careers by essential skills visit the Working in Canada website [http://www.jobbank.gc.ca/es\\_all-eng.do](http://www.jobbank.gc.ca/es_all-eng.do).



Be sure to check out the job seeker companion piece to this report - Viewing Your Job as a Set of Transferable Skills, available on Workforce Planning Hamilton's website [www.workforceplanninghamilton.ca](http://www.workforceplanninghamilton.ca)





## HOW CAN JOB SEEKERS BE BETTER PREPARED TO SUCCEED IN THE LABOUR MARKET? ADVISORY CONSULTATION RESULTS AND RECOMMENDATIONS

Workforce Planning Hamilton brought together representatives from organizations in Hamilton's employment and training network to serve as the Advisory Committee for this project, providing their insights and guidance throughout its development.<sup>14</sup>

Based on the findings described within this report, the Advisory Committee established the following recommendations to increase awareness of the impacts of increasing skills requirements amongst employers and job seekers, as well as the challenges facing training and skills upgrading.

### PUTTING THE PUZZLE TOGETHER: **SECTOR-SPECIFIC SKILLS MISMATCHES**

**Recommendation 1.** Conduct further research into Hamilton's sector-specific skills mismatches and recruitment difficulties so job seekers will know how to prepare for these jobs.

The 2014 Hire Learning Survey and 2014 Labour Market Plan revealed that employers typically do not have an overall recruitment difficulty, but instead specific occupations and skill sets are challenging to find. The spotlights on the sectors of interest found in this report show that the skills mismatch affects each industry differently. Therefore a skills analysis lens should be incorporated into future work when consulting with Hamilton employers on a sector-by-sector basis. By exploring the specific skills gaps or shortages employers in each sector currently see and what they anticipate in the future training programs can then be customized so workers will know how to best prepare for these jobs.

*Recommendation 1a. Develop a coordinated approach for connecting employers and educators, so as to better align training programs with employer-identified skills mismatches within educational institutions.*

Building upon the sector-specific employer consultation results from Recommendation 1, educators need to be aware of how to include these findings into training and educational programs. In addition to sharing this report, a separate tool for educators could be developed to help them incorporate evolving skills requirements into learning plans. Plans for future action that addresses this recommendation were developed through the 2014 Labour Market Plan's priority *Understanding Increasing and Evolving Skills Requirements*.

<sup>14</sup> See Appendix A for a list of Advisory Committee members.

## PUTTING THE PUZZLE TOGETHER: EMPLOYER INVESTMENT IN SKILLS DEVELOPMENT

**Recommendation 2.** Develop a strategy to better engage employers in the benefits of investing in training and development of their employees.

As shown in this report, employment in high-skilled occupations is expected to increase in Hamilton through to 2020. Employers need to be aware of the return on investment (ROI) in providing training and development for their employees. The 2014 Labour Market Plan also identified a similar need for action to identify best practices that can be adopted at the local level, including a marketing piece for employers with recommendations for how to adopt training. Supportive initiatives, such as the Canada-Ontario Job Grant, are available to help employers provide more training to their own employees. WPH will also be undertaking further work to help engage employers about the benefits of training and development in 2015.

## PUTTING THE PUZZLE TOGETHER: GOVERNMENT FUNDED SKILLS DEVELOPMENT PROGRAMS

**Recommendation 3.** Ensure government funded skills development programs keep current with evolving skills requirements and do not create barriers to skill development opportunities.

Government funded programs can present some barriers to skills upgrading and development. For example, the Second Career program discussed earlier in this report does not include training for Skill Level A occupations, even though demand for these occupations are expected to grow in Hamilton. Programs such as Employment Insurance (EI) can make it difficult for individuals to pursue academic upgrading or other training while collecting EI benefits, as certain approvals and criteria need to be met. Skills development programs are an integral component to successful skills alignment and need to stay current with the labour market's evolving skills requirements.

## PUTTING THE PUZZLE TOGETHER: CONTINUOUS LEARNING

**Recommendation 4.** Develop strategies to encourage job seekers to embrace continuous learning as a way to develop in-demand skills.

There is a need to examine the perceptions, barriers and best practices to support continuous learning. As shown in this report, employer consultations revealed that transferable skills are a valuable asset to navigating career pathways. Developing strategies, tools and resources that encourage continuous learning amongst job seekers and students of all ages will help address current and future skills mismatches.

## PUTTING THE PUZZLE TOGETHER: NAVIGATING CAREER PATHWAYS

**Recommendation 5.** Develop a companion piece to *Viewing Your Job as a Set of Transferable Skills* that focuses on career pathways.

This report has shown that there is no one correct career pathway, and workers can transfer their skills to different occupations and industries. Using real life examples, job seeker material should be developed that highlights the different ways to find career success, including non-traditional pathways.

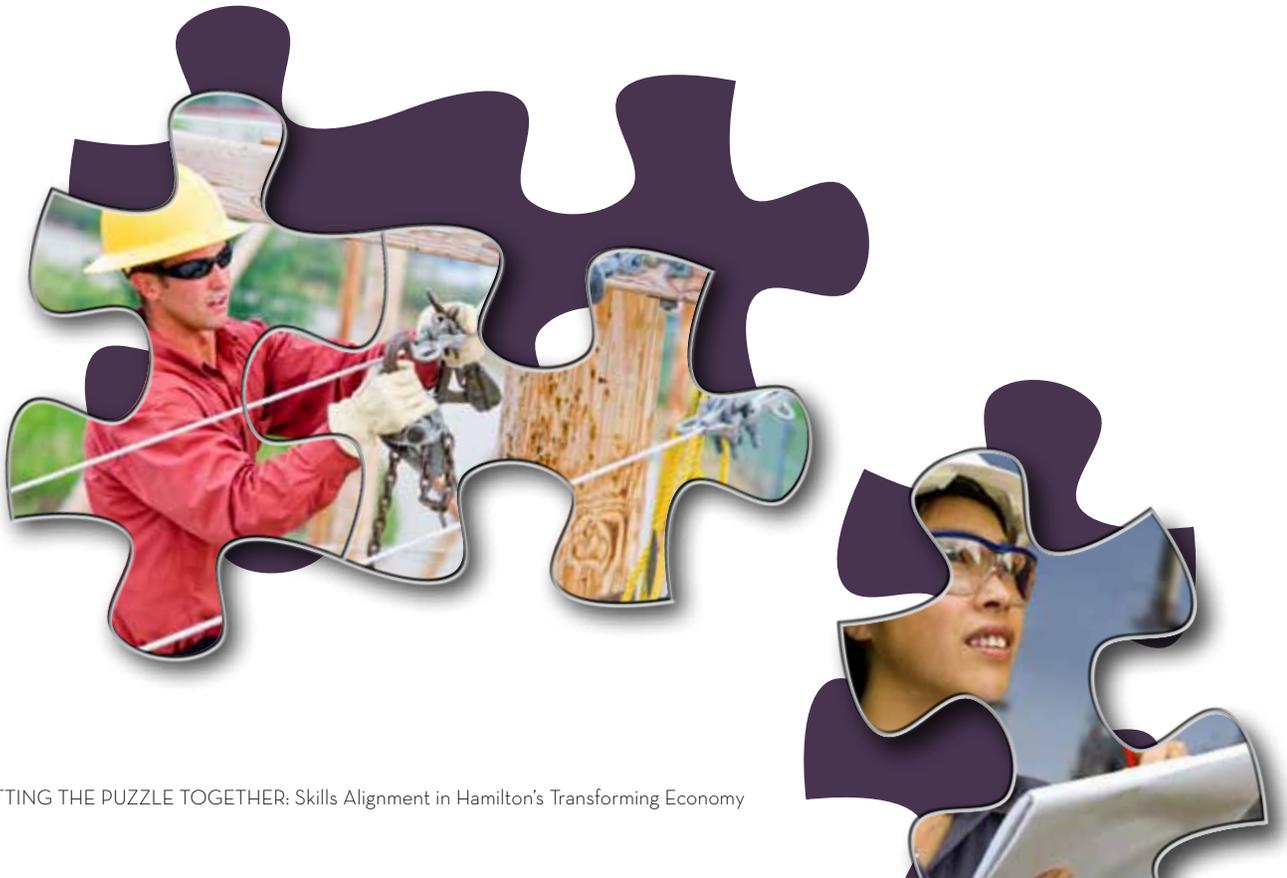




## CONCLUSIONS

It is clear that Hamilton's labour market and the skills required are evolving. As the demand for skilled occupations is expected to increase in the coming years, it is more important than ever to ensure our workforce is properly trained and aligned with the right skills. Through the data presented in this report and employer consultations throughout the past year, evidence points towards a skills mismatch rather than a skills shortage in Hamilton. In particular, skills mismatches affect different industries, and further research into sector-specific strategies to address mismatches is required.

It is also important to note that while skills have been shown to protect employment, entry-level low-skilled jobs are still available in the labour market. While they make up a smaller proportion of jobs in Hamilton's labour market, the demand for low-skilled occupations is also expected to increase in the coming years. There are jobs available to suit different needs; however, job seekers must be able to demonstrate their transferable skills no matter what the skill level. As Hamilton's economy continues to diversify, viewing occupations as a set of skills becomes even more important to finding the right career match.



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## APPENDIX: ADVISORY TEAM MEMBERS

Leah Morris	Adult Basic Education Association
Monica Sahagun Morales	Collège Boréal
Wally Stadnicki	Employment Hamilton
Kristen Gray	Goodwill
Radenka Lescesen	Immigrant Women's Centre
Gisela Oliveira	McMaster University
Joyce Filice	Mohawk College
Richard Wikkerink	Redeemer University
Carla Klassen	Social Planning and Research Council
Tara Aronson	vpi Inc.
Stephanie Taylor	Wesley Urban Ministries





# 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.

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**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](mailto:info@workforceplanninghamilton.ca)  
Website: [www.workforceplanninghamilton.ca](http://www.workforceplanninghamilton.ca)

Workforce Planning Hamilton is funded by Employment Ontario

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