

# The High Skill Labour Market in Peel and Halton

Report on the Peel-Halton High Skill Good Jobs Research Project



May 2017

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Published by the Peel Halton Workforce Development Group, May 2017

Report prepared by: Ben Earle Consultant

For more information contact:

The Peel Halton Workforce Development Group  
6755 Mississauga Road, Suite 415  
Mississauga, ON, L5N 7Y2  
email: [info@peelhaltonworkforce.com](mailto:info@peelhaltonworkforce.com), telephone: 905.306.9588

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This project is funded in part by the Government of Canada and the Government of Ontario

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## Executive Summary

Local economic development and labour market planning in Ontario is increasingly influenced by a shifting and dynamic economic landscape, characterized by:

1. The rise of globalization, where Ontario businesses increasingly operate within a global economic framework, and are therefore competing for both consumers and talent in a global marketplace, and;
2. A fundamental shift to a technology-driven knowledge economy, where knowledge and information, and the technology that supports their development, dissemination, and use, have displaced labour and resource production as the primary economic drivers.

The impacts of these trends have been made more prevalent by rapid innovation in technological advancement and demographic change, leading to a fundamental change in the broad nature of work in advanced industrial societies. One result has been a growing demand for a workforce that is highly skilled and adaptable to both technological change, and the demands of a dynamic and shifting workplace and market.

Despite the growing impact and importance of these trends, little attention has been paid to their impacts at the local level in Ontario, resulting in a paucity of local Labour Market Information (LMI) in the high-skill labour force, and high-skill jobs.

### The Peel-Halton High-skill Jobs Research Project

Due to the growing importance of the high-skill workforce locally in Peel and Halton, and in response to the dearth of local research on the subject, the Local Employment Planning Council, led by the Peel-Halton Workforce Development Group, initiated a study of the high-skill labour market in these communities. The goal of the project was to complete an analysis of the pathways and obstacles to high-skill occupations in Peel and Halton, and assess the relationship between precarious employment and the development of the high-skill labour market in these communities. This research was intended to inform the actions of local stakeholders in labour market planning, including government, employment service organizations, employers and employer groups, and training and education institutions and organizations (including groups representing skilled trades).

This project was guided by the following six questions:

1. How can the Regions of Peel and Halton attract, support, and retain employers who require workers for high-skill positions?
2. How are employers recruiting candidates for high-skill positions, and what challenges are they facing?
3. To what extent are the requirements of local hard-to-fill high-skill jobs aligned with the competencies of job seekers, training programs, and postsecondary curricula? Subsequently, how does this level of alignment affect employment outcomes?

4. What supports and deterrents do job seekers experience as they attempt to access local high-skill positions? Which population groups are disproportionately affected by obstacles to high-skill positions?
5. What is the impact of unfilled high-skill jobs on the prevalence of precarious employment?
6. How will facilitating the movement of workers from low skill to high-skill positions improve local labour market outcomes?

A multi-method qualitative research approach, designed to assess local experiences with and in the high-skill labour market, was undertaken to address these questions, and included:

1. The collections and review of secondary data on the relevant demographics and labour market in Peel and Halton Region, along with an analysis of relevant national and provincial trends affecting the local labour market.
2. The completion of a qualitative research process that included perspectives from across the local labour market, including:
  - a. Interviews with employers in high-skill industries;
  - b. Focus groups with job seekers in high-skill industries;
  - c. Interviews with recent employees (those hired in the past 2 years) in high-skill industries;
  - d. Focus groups with employment service providers who serve both job seekers and employers in high-skill industries.

While acknowledging the fact that the high-skill labour market cuts across the economy, this project focused on four key sectors in Peel and Halton: (1) Finance and Insurance, (2) Health Care and Social Assistance<sup>1</sup>, (3) Advanced Manufacturing, and (4) Professional, Scientific, and Technical Services.

The following outcomes were achieved by this research project:

1. Completion of 3 focus groups with 16 participants representing local employment service providers based in communities in Peel (Mississauga and Brampton) and Halton (Burlington).
2. Completion of 23 employer interviews with employers across the target sectors and industries, including:
  - 9 representatives from the Manufacturing Sector and related service (e.g. skilled trades groups);
  - 7 representatives from the Professional, Scientific, and Technical Services Sector;

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<sup>1</sup> In the NAICS (2017), Health Care is grouped as sector with Social Assistance. Due the exploratory nature of this project, and the nuanced complexities of both Health Care and Social Assistance industries, it was determined to focus on Health Care industries within this sector, excluding those that may be classified as Social Assistance.

- 5 representatives from the Finance and Insurance Sector;
  - 2 representatives from the Healthcare Sector.
3. Completion of 2 job seeker focus groups, with 7 participants.
  4. Completion of 12 recent employee interviews.

## Findings

There were 20 findings from this research project.

1. The high-skill labour force in Peel and Halton is highly educated and supports a strong high-skill labour market.
2. Local Employers are accessing available programs and services to support the training of employees. However, there is a gap in the use of these programs for the training of new employees.
3. There is an absence of financial supports, outside of education loan programs, to support those who want to upgrade skills and education, but who do not have the support of an employer.
4. Although local employment service programs are highly subscribed, job seekers indicate both a lack of knowledge about the kinds of programs available to them, and confusion over their eligibility to access these programs.
5. Although employers who have worked with employment service providers are generally happy with the services, they did express concern regarding a lack of consistent communication and responsiveness to their unique needs from the service providers.
6. Both non-profit and private employment service and recruitment programs put a lot of effort into finding and developing candidates that meet the full suite of qualifications required by local high-skill employers.
7. Program and service accountability requirements and pressures impact on the nature of service provided by non-profit employment service providers.
8. The most successful employment programs and services are those that develop and maintain ongoing, engaged, and dynamic relationships with employers and industry partners.
9. Employers in the high-skill sectors that were engaged in this project are looking for a combination of technical skills, education, and strong soft skills in areas like critical thinking, communication, management, and emotional intelligence.
10. Changing attitudes toward internationally trained professionals has opened many new opportunities for these individuals, and have led to employers more willing to hire someone without Canadian experience. What is paramount is an ability to adjust to the Canadian Context.



11. Small and medium sized businesses are reluctant to participate in international recruitment to fill skills gaps as they are not willing or able to engage in the rigors of the immigration system. This limits their pool to locally available individuals.
12. There is a gap in the availability of individuals in some skilled trades with a high level of experience and skills in Peel and Halton.
13. Recruitment in most high-skill fields is driven by internal and industry networking. Further, larger high-skill employers focus on internal skills development rather than external recruitment for more advanced skill sets. This limits the opportunities for mid-career professionals attempting to enter the local high-skill labour market.
14. Employers are less willing to train employees in the development of technical skills. Instead they recruit these skills and then train employees in the soft skills required to enhance productivity and workforce performance.
15. There is a growing recognition that training programs for highly skilled employees needs to consider multiple factors such as culture, education background, and generational differences in reception to training paradigms.
16. The growth of the high-skill labour market in Peel has resulted in a reduction in the availability of good, low skill jobs in the community (such as those previously available in manufacturing). This trend has resulted in an increase in employment precarity at the low skill end of the labour market.
17. There are limited pathways to increased skill development. Those that do exist are based on the achievement of advanced education and credentials that may not be obtainable to workers facing multiple barriers to education and employment.
18. There are limited local supports available to fully support an individual engaging in a job search in the high-skill labour market. This is a concern given that many of these roles are highly specific, requiring targeted education, technical training, and specific experience pathways. These factors can lengthen the job search process, and thus create fiscal and other pressures in the lives of job seekers.
19. The trend of credentialing previously uncredentialed employment opportunities is disproportionately affecting low skilled populations who have barriers and limited pathways to employment in the high-skilled labour market.
20. There is a growing demand for post-secondary institutions to meet the specific demands of the labour markets that they serve. Further, the role of local education institutions in supporting local labour markets needs to be clear to students, prospective students, and to community and industry partners.



## Summary and Recommendations

Based on these findings, the following recommendations were made:

1. The local manufacturing sector has undergone a significant and dynamic shift over the past few decades, where the impact of a reduction in the workforce has been tempered by ongoing strong economic contributions to the local economy. Therefore, the community should undertake to develop a more nuanced understanding of the changes to the local manufacturing sector, with a focus on the impact of developing advanced manufacturing in existing and emerging local industries.
2. Employers, large and small, in Peel and Halton are providing training opportunities for current employees, as they develop business models that are responsive to the changing economy. These programs are increasingly recognizing the nuanced training needs of the workforce. However, small to medium sized businesses generally struggle to provide comprehensive employee development programs. Therefore,
  - Efforts should be undertaken to work with employers to develop a detailed understanding of their internal training programs so that a more comprehensive understanding of both training needs, programs, and of local skills misalignment can be developed.
  - Opportunities for cooperation between employers in the delivery of employee training and development should be explored. Opportunities for small to medium sized businesses to collaborate in employee development programs would reduce the burden on individual companies for training, while also encouraging community wide development of a high-skilled workforce.
  - Community leadership development programs should be established to help develop local business leaders and the soft skills of the high-skill workforce in Peel and Halton. Examples include programs such as Leadership Niagara and Leadership Durham.
3. Employment Service providers in Peel and Halton provide a vast range of programs and services to both those seeking employment and to employers. These services are generally well received by those who participate fully in them. However, gaps do exist, and some individuals and businesses who may benefit from the support that these services provide are unable to access them. Therefore,
  - Research should be undertaken to more fully understand the barriers that high needs job seekers face to transitioning, entering, or re-entering the high-skill workforce in Peel and Halton. The focus should be on those with multiple social, training, and economic barriers to employment.
  - Efforts to better connect Employment Service providers and employers across the community should be undertaken to ensure that employers have access to

existing supports and that service providers have the most comprehensive network of opportunities for job seekers.

- The LEPC should work with and support employment service providers in the development of new and innovative programs and services that respond to the current demands, and recruitment pathways, of the high-skill labour market. This could build on current programs, such as those that provide internship and cooperative employment opportunities. The goal should be to better align employment services that prepare individuals for employment, and the recruitment pathways currently used by employers in high-skill industries.
4. Immigrants are a strong and growing part of the local high-skill labour market, especially in Peel. These individuals come to the local workforce with advanced training in science, technology, and engineering. However, they may lack the social and cultural experience required to be successful in the Canadian workplace. Increased awareness and recognition of the experience and credentials of internationally trained individuals has led to more opportunity for new Canadians in the local high-skill labour market. Employers are now more willing to provide opportunities to these individuals. However, these opportunities are often at the entry level, and often so despite the high-skill level and experience brought by the individual employee. Therefore,
- Local programs that provide new Canadians with support in the recruitment process, in particular those that provide opportunities for on-the-job experience in the Canadian context, should be expanded.
  - Efforts should be undertaken to expand existing local opportunities for on-the-job training in the Canadian context for new Canadians. These interventions should be implemented as early in the settlement process as possible. Local settlement and employment service providers should take the lead in these efforts.
  - Further research that focuses specifically on the current situation faced by new Canadians in the local high-skill labour market should be undertaken to help establish a detailed understanding of current pathways and barriers to employment for this population in the community.
5. Skilled trades are in demand in Peel and Halton, and for the most part, employers can meet the skill demands that they have in these areas. However, there is a gap in filling some of those positions that require highly trained and experienced trades people to fulfill highly technical and complex operations. These roles require trades people with advanced skill sets and experience. There are efforts being undertaken by some trades groups to address this gap in their training and apprenticeship models, but these efforts will not address any immediate gaps. Therefore,
- The LEPC needs to fully engage local trades groups to ensure that there is a community wide understanding of any current or projected gaps in skilled

trades. These efforts could then inform specific, community driven, programs to support the development of skilled trades in Peel and Halton.

- The LEPC should engage and support trades groups that are developing innovation in their training and apprenticeship programs, with a focus on developing locally relevant programs to support industry needs in Peel and Halton.
6. Those who are unemployed and who have a gap or lag in skills that are relevant to the local high-skill labour market have little external support for training or education. They face the prospect of paying for training and upgrading themselves, which may be difficult depending on their income source, or taking on roles that fall below their base skill level. Therefore,
- Employment and social service providers should ensure that there is comprehensive, community-wide understanding and cooperation in regard to the training opportunities and supports available to low-income and unemployed individuals.
  - The LEPC should convene a local group of employment service providers, social service providers, employers, and education institutions and government officials to explore this issue further, map out existing opportunities, and explore new ideas to address this concern.
  - Opportunities for community-based skill development and upgrading should be explored and supported.
7. Employers in Peel and Halton generally recruit externally through some established pathways, including directly from education institutions for entry level positions (especially in healthcare, professional, and information technology industries), and through established professional networks (including via employee referral programs) for mid-career and senior management roles. These pathways are difficult for those job seekers who are disconnected from local networks to access, especially for those who are seeking work at the mid-career level. Therefore,
- The LEPC should work with existing business and industry groups in Peel and Halton (e.g. chambers of commerce) to develop networking and industry engagement opportunities that allow all available high-skill workers opportunity to access the labour market.
  - Employment services that connect mid-career professionals to employers via internship and other workplace placement programs should be expanded.
8. The growth of the high-skill labour market, especially in the manufacturing sector, has reduced the available opportunities for those with low or limited skills. The latter issue is forcing low skilled workers into increasingly precarious role in the service and retail sector. Therefore,

- The LEPC should explore opportunities to advocate for improvement in these low-skill sectors, including support for more full-time roles, flexibility in working hours, and higher wages. Further, the LEPC should support efforts to educate low skill workers on their employment rights and responsibilities.
- Further research on pathways to skill development for low skill individuals should be undertaken.
- Community programs that support incremental skill development (e.g. Career Ladders) should be explored and developed.

### Concluding Statement

This research and report has attempted to fill a basic gap in the available local labour market information on high-skill jobs and the high-skill workforce. The project has not been designed to answer all questions, but does provide a good starting point for analysis of existing conditions and experiences. This will allow for the development of targeted actions to address some of the issues identified, but should also guide more detailed explorations and research on the high-skill labour market in Peel and Halton.

## Introduction

When communities consider economic development and labour market planning at the local level in Ontario, they are increasingly faced with the realities of a shifting economic landscape<sup>2</sup>, including:

1. The rise of globalization, where Ontario businesses increasingly operate within a global economic framework, and are therefore competing for both consumers and talent in a global marketplace, and;
2. A fundamental shift to a technology-driven knowledge economy<sup>3</sup>, where knowledge and information, and the technology that supports their development, dissemination, and use, have displaced labour and resource production as the primary economic drivers.

These realities have been made more prevalent by the combination of innovation in technological advancement and significant demographic change in Canada and other advanced industrial societies<sup>4</sup>. The result has been a fundamental change in the broad nature of work in these societies, with growing demand for a workforce that is highly skilled and adaptable to both technological change, and the demands of a dynamic and shifting workplace and market<sup>5</sup>. This workforce is generally characterized by advanced levels of education, training, and credentials in fields and areas that support a technology driven knowledge economy<sup>6</sup>. This has been the case in Canada and Ontario, with attention being paid to these shifts and their impacts on the labour market in recent publications by the federal<sup>7</sup> and provincial<sup>8</sup> governments.

Despite the growing impact and importance of these trends on both global and local labour markets, little attention has been paid to the emerging and growing high-skill workforce, and

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<sup>2</sup> These changes have been described as the Fourth Industrial Revolution by the World Economic Forum, 2016, *The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution*, Available Online at: [http://www3.weforum.org/docs/WEF\\_Future\\_of\\_Jobs.pdf](http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf).

<sup>3</sup> Organization for Economic Co-Operation and Development, 1996, *The Knowledge-Based Economy*, Available Online at: <https://www.oecd.org/sti/sci-tech/1913021.pdf>; Smith, Keith, 2002, *What in the 'Knowledge Economy'?: Knowledge Intesity and Distributed Knoweldge*, United Nation University, Institute for New Technologies Discussion Paper Series, no. 2002-6, Available Online at: <http://www.intech.unu.edu/publications/discussion-papers/2002-6.pdf>; Powell, Walter W., and Snellman, Kaisa, 2004, *The Knowledge Economy*, *Annual Review of Sociology*, 30: 199 – 220, Available Online at: [http://web.stanford.edu/group/song/papers/powell\\_snellman.pdf](http://web.stanford.edu/group/song/papers/powell_snellman.pdf).

<sup>4</sup> Organization for Economic Co-Operation and Development, 2016, *The State of the North American Labour Market: Report Prepared for the 2016 North American Leaders Summit*, Available Online at: <https://www.oecd.org/canada/The-state-of-the-north-american-labour-market-june-2016.pdf>, Page 23; Department of Finance Canada, 2012, *Economic and Fiscal Implications of Canada's Aging Population*, Available Online at: <http://www.fin.gc.ca/pub/eficap-rebvpc/eficap-rebvpc-eng.pdf>.

<sup>5</sup> World Economic Forum, 2016, *The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution*, Available Online at: [http://www3.weforum.org/docs/WEF\\_Future\\_of\\_Jobs.pdf](http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf).

<sup>6</sup> A more comprehensive discussion of the definition and characteristics of the high-skill workforce and high-skill jobs in the context of this research project is provided later in this report.

<sup>7</sup> Department of Finance Canada, 2014, *Jobs Report: State of the Canadian Labour Market*, Available Online at: <http://www.budget.gc.ca/2014/docs/jobs-emplois/pdf/jobs-emplois-eng.pdf>,

<sup>8</sup> The Premier's Highly Skilled Workforce Expert Panel, 2016, *Building the Workforce of Tomorrow: A Shared Responsibility*, Available Online at: <https://www.ontario.ca/page/building-workforce-tomorrow-shared-responsibility>.

the opportunities and challenges that this presents, at the local level in Ontario. This trend is true in Peel and Halton, resulting a paucity of local Labour Market Information (LMI) on the high-skill labour force, and high-skill jobs, in these communities.

### The Peel-Halton High-skill Jobs Research Project

Due to the growing importance of the high-skill workforce locally in Peel and Halton, and in response to the dearth of local research on the subject, the Local Employment Planning Council, led by the Peel-Halton Workforce Development Group<sup>9</sup>, commissioned this initial study to provide a baseline assessment of the pathways and obstacles to high-skill occupations in Peel and Halton, and to complete an analysis of the relationship between precarious employment and the development of the high-skill labour market. The research and report is intended to help broadly inform the actions of local stakeholders in labour market planning, including government, employment service organizations, employers and employer groups, and training and education institutions and organizations (including groups representing skilled trades).

### Guiding Questions

This project has been guided by the following six questions:

1. How can the Regions of Peel and Halton attract, support, and retain employers who require workers for high-skill positions?
2. How are employers recruiting candidates for high-skill positions, and what challenges are they facing?
3. To what extent are the requirements of local hard-to-fill high-skill jobs aligned with the competencies of job seekers, training programs, and postsecondary curricula? Subsequently, how does this level of alignment affect employment outcomes?
4. What supports and deterrents do job seekers experience as they attempt to access local high-skill positions? Which population groups are disproportionately affected by obstacles to high-skill positions?
5. What is the impact of unfilled high-skill jobs on the prevalence of precarious employment?

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<sup>9</sup> The [Peel Halton Workforce Development Group \("PHWDG"\)](#) was established in 1996 as a not-for-profit community-based organization working to develop solutions to local labour market needs and issues. Local Employment Planning Councils provide communities with the expertise and local labour market information to improve coordinated planning of employment and training services and meet community needs. The LEPC acts as a hub to connect employers, different levels of government, service providers, trainers and other local partners to facilitate awareness of current labour market conditions and promote discussion in order to find targeted, relevant, need-based employment and training solutions for our community.

The LEPC will help to:

- Improve employer participation rates in employment and training programs;
- Improve rates of service coordination amongst local service providers;
- Increase service coordination rates amongst EO providers operating in the community; and
- Improve integrated local planning of EO and non-EO services amongst service providers.

6. How will facilitating the movement of workers from low skill to high-skill positions improve local labour market outcomes?

### Methodology

To address the guiding questions a multi-method research approach was implemented, utilizing both secondary data collection and analysis and the collection of primary qualitative data from the community. This approach included:

1. The collections and review of secondary data on the relevant demographics and labour market in Peel and Halton Region, along with an analysis of relevant national and provincial trends affecting the local labour market.
2. The completion of a qualitative research process that included perspectives from across the local labour market, including:
  - a. Interviews with employers in high-skill industries;
  - b. Focus groups with job seekers in high-skill industries;
  - c. Interviews with recent employees (those hired in the past 2 years) in high-skill industries;
  - d. Focus groups with employment service providers who serve both job seekers and employers in high-skill industries.

Recruitment of participants in the research process was targeted to provide a cross section of input from the target sectors and industries. While acknowledging the fact that the high-skill labour market cuts across the economy, this project focused on four key sectors<sup>10</sup> in Peel and Halton: (1) Finance and Insurance, (2) Health Care and Social Assistance<sup>11</sup>, (3) Advanced Manufacturing, and (4) Professional, Scientific, and Technical Services.

Further acknowledging the complexity and nuance within each of these sectors, the project was designed to provide an aggregate of information on pathways and obstacles to high-skill jobs across sectors in the community, rather than focus on cross-sector analysis and comparison.

To narrow the target population further, an assessment of the economic impact of each of the four identified sectors was completed using available industry and business directory data. This analysis is detailed in Appendix A and a summary table of the identified target industries is provided in Figure 1.

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<sup>10</sup> These sectors were identified in advance of the research study, with expert input from the Peel Halton Workforce Development Group and members of the Peel Halton Local Employment Planning Council. They were chosen based on their assumed importance to the local economy. Sectors were defined according to the North American Industry Classification System (2017). Details on the NAICS may be found online at: <http://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&TVD=307532>.

<sup>11</sup> In the NAICS (2017), Health Care is grouped as sector with Social Assistance. Due the exploratory nature of this project, and the nuanced complexities of both Health Care and Social Assistance industries, it was determined to focus on Health Care industries within this sector, excluding those that may be classified as Social Assistance.



**Figure 1: Identified Target Industries by Economic Sector**

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<b>Manufacturing (NAICS 31 – 33)</b>	<b>Finance &amp; Insurance (NAICS 52)</b>
331317-Aluminum Rolling, Drawing, Extruding and Alloying	522220-Sales Financing
336110-Automobile and Light-Duty Motor Vehicle Manufacturing	524111-Direct Individual Life, Health and Medical Insurance Carriers
325999-All Other Miscellaneous Chemical Product Manufacturing	523930-Investment Advice
336410-Aerospace Product and Parts Manufacturing	524129-Other Direct Insurance (except Life, Health and Medical) Carriers
311615-Poultry Processing	<b>Professional, Scientific, &amp; Technical Services (NAICS 54)</b>
325410-Pharmaceutical and Medicine Manufacturing	541690-Other Scientific and Technical Consulting Services
332321-Metal Window and Door Manufacturing	541330-Engineering Services
334410-Semiconductor and Other Electronic Component Manufacturing	541380-Testing Laboratories
336390-Other Motor Vehicle Parts Manufacturing	541710-Research and Development in the Physical, Engineering and Life Sciences
311111-Dog and Cat Food Manufacturing	<b>Health Care (NAICS 621- 623)</b>
311614-Rendering and Meat Processing from Carcasses	6215 - Medical and Diagnostic Laboratories
325610-Soap and Cleaning Compound Manufacturing	6221 - General Medical and Surgical Hospitals
326198-All Other Plastic Product Manufacturing	6231 - Nursing Care Facilities
332319-Other Plate Work and Fabricated Structural Product Manufacturing	
332999-All Other Miscellaneous Fabricated Metal Product Manufacturing	
333920-Material Handling Equipment Manufacturing	
334220-Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing	
334512-Measuring, Medical and Controlling Devices Manufacturing	

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Upon completion of the industry analysis, a targeted interview and focus group recruitment matrix was applied to help ensure diversity of perspectives in the research process. This is detailed in Appendix B.

Once the participant selection matrix was complete, a qualitative research approach was applied using a grounded methodology. This approach meant that a broad set of questions were posed, focusing on the participants experience in the local high-skill labour market, as either an employer, service provider, or employee (see Appendices C, D, E, and F for the interview and focus group guides used in this project). As data collection progressed, themes were identified, providing the findings of the research. These findings are contextual, and based on the experiences of those interviewed, providing a good assessment of the current experience of those in Peel and Halton who are engaged in the high-skill labour market and economy.

## Outcomes

The following outcomes were achieved by this research project:

1. Completion of 3 focus groups with local employment service providers based in communities in Peel (Mississauga and Brampton) and Halton (Burlington).
  - a. There was a total of 16 participants in these focus groups, all employees of local employment service organizations, including front-line service providers (e.g. job developers and counsellors), program managers, and one senior executive.
2. Completion of 23 employer interviews with employers across the target sectors and industries.
  - a. This included:
    - i. 9 representatives from the Manufacturing Sector and related services (e.g. skilled trades groups) from the following industry groups: skilled trades organizations; fabricated metal product manufacturing, machinery manufacturing; chemical manufacturing, and computer and electronic product manufacturing.
    - ii. 7 representatives from the Professional, Scientific, and Technical Services Sector from the following industry groups: engineering services, offices of accountants, human resources consulting, and administrative management and general management consulting services.
    - iii. 5 representatives from the Finance and Insurance Sector from the following industry groups: sales financing, personal and commercial banking, and insurance agencies.
    - iv. 2 representatives from the Healthcare Sector, including the following industry groups: medical and diagnostic laboratories, and nursing care facilities.
  - b. Of the employer representatives interviewed:
    - i. 13 represented companies with 1 – 99 employees, 8 represented companies with 100 – 499 employees, and 2 represented companies with 500 or more employees.
    - ii. 9 represented companies with less than \$1 million in annual sales, 9 represented companies with between \$1 million and \$5 million in annual sales, and 5 represented companies with greater than \$5 million in annual sales.
3. Completion of 2 job seeker focus groups.
  - a. There was a total of 7 participants in these focus groups, representing the following employee groups: accounting/bookkeeping, skilled trades, engineering, logistics and supply chain management, and computer science.

- b. Of these participants, only 1 was a recent graduate, the remaining participants had greater than 5 years working experience, with 4 having greater than 10 years working experience.
  - c. Participants had been out of work for an average of 8 months, with 2 being out of work for more than 1 year.
- 4. Completion of 12 recent employee interviews.
  - a. Recent employee participants represented the following employee groups: accounting/bookkeeping, skilled trades, engineering, logistics and supply chain management, computer science, management consulting, and laboratory services.

In addition to these formal research activities, several informal conversations were held with local service providers and business leaders through the local chambers of commerce. These discussions helped to provide additional information and context to the research findings. Further context to the research has been provided by a review of existing research and commentary on the knowledge economy, the impact of technology on the labour market, and the high-skill labour market in the Canadian context.

#### Limitations

As a qualitative research project, caution needs to be applied when attempting to generalize findings to all players in the local high-skills labour market. This project was designed to provide a contextual summary of local experience as a starting point to intervention and guidelines to help focus future research and analysis. In this respect, the project has been successful. However, as a cross section analysis, the process was not designed to capture all experiences and opinions, so caution needs to be applied when generalizing findings across the local labour market. This limitation is addressed in those recommendations focused on further research and analysis of key points of concern raised through the research process.

Pertaining to secondary data, not all relevant data is available at the local level (i.e. Peel Region and Halton Region). This is a common concern with Labour Market Information in Ontario and is not unique to this study or to the community in Peel and Halton. This presents limitations in developing a complete picture of local context.

The data analysis and finding presented here need to be contextually considered and presented in terms of these limitations.

## Context: High-skill Jobs, Labour Market and Economic Change

To situate the Peel-Halton High-skill Good Jobs Research Project, a review of relevant contextual data, recent research, and commentary was completed. The outcomes of this are presented in this section.

### Defining High-skill Jobs and the High-skill Workforce

At the outset of this project, a working definition of high-skill jobs and a high-skill workforce was developed to help focus and guide project activities. As the project progressed, input from project advisors and participants helped to adjust and refine the definition, providing local context to how these occupations and the workforce that supports them are described and thought of.

### National Occupation Classification (NOC)

As a starting point, and from a technical perspective, high-skill jobs are those classified under the National Occupation Classification (NOC) system<sup>12</sup> as:

- Skill Type 0 (zero) – management jobs.
- Skill Level A — professional jobs. People usually need a degree from a university for these jobs (e.g. doctors, dentists, architects).
- Skill Level B — technical jobs and skilled trades. People usually need a college diploma or to train as an apprentice to do these jobs (e.g. chefs, electricians, plumbers).

### The Knowledge Economy and Employment

The Organization for Economic Co-Operation and Development (OECD) defined a knowledge-based economy as, “economies which are directly based on the production, distribution, and use of knowledge and information”<sup>13</sup>. There is some criticism of this broad approach to defining the knowledge economy, with one commentator noting that nearly all economic activity at some point depends upon the creation, sharing, and use of information and knowledge<sup>14</sup>. The defining characteristic in the definition appears to be the nature and position of knowledge and information in the economy, with a knowledge-based economy being one in which knowledge becomes the primary driver of production, supplanting both capital (infrastructure) and labour<sup>15</sup>. In addition, the contemporary knowledge-economy is directly linked to the advent of

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<sup>12</sup> Details on the National Occupation Classification (NOC) system are available online at:

<http://noc.esdc.gc.ca/English/noc/welcome.aspx?ver=16>.

<sup>13</sup> Organization for Economic Co-Operation and Development, 1996, *The Knowledge-Based Economy*, Available Online at: <https://www.oecd.org/sti/sci-tech/1913021.pdf>, Page 7.

<sup>14</sup> Smith, Keith, 2002, *What in the 'Knowledge Economy'?: Knowledge Intensity and Distributed Knowledge*, United Nations University, Institute for New Technologies Discussion Paper Series, no. 2002-6, Available Online at: <http://www.intech.unu.edu/publications/discussion-papers/2002-6.pdf>.

<sup>15</sup> Drucker, Peter, 1998, 'From capitalism to knowledge society', in D. Neef (ed.), *The Knowledge Economy*, (Woburn, MA: Butterworth), p. 15.

the Information Age<sup>16</sup>, the information society<sup>17</sup> that this has created, and the information and electronic technology that drives its development<sup>18</sup>.

### Defining the High-skill Workforce

Given these conditions, work in the technology-driven knowledge economy is knowledge intensive, dynamic, and integrate high-technology across roles and occupations. Therefore, employment is characterized by an increasing demand for more highly skilled and adaptable workers<sup>19</sup>.

Building on this, a recent report from the Premier's Highly Skilled Workforce Expert Panel in Ontario<sup>20</sup> identified several specific workforce characteristics that were deemed to be vital to the current knowledge economy in Ontario, indicating that a high-skilled workforce:

- Has advanced levels of training, education, and credentialing (the latter being most common in regulated sectors such as health care and financial services);
- Is adaptable with an ability (and willingness) to learn, and can engage in continuous job growth, training in new technologies and procedures, and education upgrading or credentialing;
- Is diverse and dynamic, bringing a breadth and depth of social, cultural, as well as education and training experiences to the economy;
- May have a strong foundation in math, science and technology, but also includes those trained in the arts, humanities, social sciences, management and administration;
- Includes those in the skilled trades and advanced manufacturing sectors;
- Includes entrepreneurs.

The Expert Panel further states that, in Ontario:

*Our highly skilled workforce is diverse and vibrant. It consists of skilled tradespeople and engineers, musicians and artists, entrepreneurs and innovators, scientists and*

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<sup>16</sup> The Information Age has been characterized by the shift from traditional industry to an economy based on information computerization.

<sup>17</sup> An information society is characterized as a society in which the creation, distribution, use, integration and manipulation of data and information is a significant economic, political, and cultural activity.

<sup>18</sup> World Economic Forum, 2016, *The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution*, Available Online at: [http://www3.weforum.org/docs/WEF\\_Future\\_of\\_Jobs.pdf](http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf).

<sup>19</sup> Smith, Keith, 2002, *What in the 'Knowledge Economy'?: Knowledge Intensity and Distributed Knowledge*, United Nations University, Institute for New Technologies Discussion Paper Series, no. 2002-6, Available Online at: <http://www.intech.unu.edu/publications/discussion-papers/2002-6.pdf>; World Economic Forum, 2016, *The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution*, Available Online at: [http://www3.weforum.org/docs/WEF\\_Future\\_of\\_Jobs.pdf](http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf); The Premier's Highly Skilled Workforce Expert Panel, 2016, *Building the Workforce of Tomorrow: A Shared Responsibility*, Available Online at: <https://www.ontario.ca/page/building-workforce-tomorrow-shared-responsibility>.

<sup>20</sup> The Premier's Highly Skilled Workforce Expert Panel, 2016, *Building the Workforce of Tomorrow: A Shared Responsibility*, Available Online at: <https://www.ontario.ca/page/building-workforce-tomorrow-shared-responsibility>, p. 10.

*farmers, public servants and health care workers, and those that work in retail and in hospitality, to name but a few*<sup>21</sup>.

Although this workforce is diverse, requiring diverse skill sets and abilities, the work of the Expert Panel does indicate that in Ontario it is significantly supported by those with backgrounds in science, technology, engineering and mathematics (STEM) fields. This does not preclude the importance of diversity in skill sets, with strong critical thinking and problem-solving skills, especially in the management of knowledge-based workplaces, maintaining importance. However, the latter roles also require a growing technical skill set that allows this section of the workforce to understand and manage within the knowledge economy.

#### Respondent Definitions of a High-Skill Workforce

Turning to the participants in this research project, including employers, employees, and employment service providers, we see general agreement with the above descriptions of a high-skill workforce and high-skill jobs. Specific responses did vary based on respondent perspective and industry, with those in more technical industries and roles providing definitions based more in hard skills and technical knowledge. However, a dominant feature across definitions was a focus on soft-skills in the workforce, and the ability to learn, adapt, and solve problems in the workplace.

This latter point is consistent with the findings of recent international<sup>22</sup> and Canadian<sup>23</sup> surveys that indicates a strong focus on soft-skills development in the high-skill labour market. These skills include communications and presentation, critical thinking and problem solving, teamwork, and emotional intelligence. As one participant in this project, and HR manager with responsibility for employee development, stated:

*We have little trouble finding candidates, internal or external, who possess the technical skills that we require. Where we struggle, find it hard, is finding the combination...a mix of technical know-how with soft-skills, like critical thinking and people skills.*

Respondents in this study viewed a high-skilled workforce as one that possesses advanced levels of education and training, with strong technical and technological skills, an ability to learn, use knowledge and data, and work well in engaged, people driven workplaces.

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<sup>21</sup> The Premier's Highly Skilled Workforce Expert Panel, 2016, *Building the Workforce of Tomorrow: A Shared Responsibility*, Available Online at: <https://www.ontario.ca/page/building-workforce-tomorrow-shared-responsibility>, p. 10.

<sup>22</sup> World Economic Forum, 2016, *The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution*, Available Online at: [http://www3.weforum.org/docs/WEF\\_Future\\_of\\_Jobs.pdf](http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf).

<sup>23</sup> McKinsey & Company, 2015, *Youth in Transition: Bridging Canada's path from education to employment*, Available Online at: [http://www.cacee.com/Library/docs/Youth\\_in\\_transition\\_Bridging\\_Canadas\\_path\\_from\\_education\\_to\\_employment\\_2.pdf](http://www.cacee.com/Library/docs/Youth_in_transition_Bridging_Canadas_path_from_education_to_employment_2.pdf); Business Council of Canada, 2016, *Developing Canada's future workforce: a survey of large private-sector employers*, Available Online at: <http://thebusinesscouncil.ca/wp-content/uploads/2016/03/Developing-Canadas-Future-Workforce.pdf>.

## Economic Labour Market Trends

This research is timely, as Canadian communities experience the opportunities and challenges of the shift to a technology-driven knowledge economy, and the increasing demand for new, advanced skills and education in the workforce<sup>24</sup>. In the *Future of Jobs Survey*, undertaken by the World Economic Forum<sup>25</sup>, the key socio-demographic and technological drivers of this change were identified by respondents. The most significant drivers of change, relevant to the Canadian context, are presented in Figure 2.

Although there is a strong emphasis on technological drivers, such as the advancement of mobile internet and cloud technology, and the growth of analytics and Big Data, there is also a strong focus on demographic shifts, such as the aging population, and the environmental impacts of climate change and resource depletion. These trends are impacting business development across sectors, changing the nature of work, as well as consumer relationships, and shifting the primary labour market demand away from unskilled labour to a highly skilled, dynamic and flexible global workforce.

**Figure 2: Primary Drivers of Change by Significance, as reported by the *Future of Jobs Survey*<sup>26</sup>**

Driver of Change	Share of Survey Respondents Rating Driver as a Top Trend
<b>Demographic and Socio-Economic Drivers of Change</b>	
Changing work environments and flexible work arrangements, enabled by new technologies, and leading to workplace innovation, reductions in full-time employee pools, and the growth of the <i>gig economy</i> .	44%
Climate change, natural resource constraints and the transition to a greener economy, driving innovation, but also placing global restrictions on available resources for production.	23%
New consumer concerns about ethical and privacy issues, relating to purchasing decisions, forcing industry to adjust practices to meet consumer demands and expectations.	16%
Longevity and aging societies, affecting the available workforce in advanced economies, resulting in negative pressures on productivity.	14%
<b>Technological Drivers of Change</b>	
Mobile internet and cloud technology, enabling the spread of internet-based service models that do not require a local presence.	34%
Advances in computing power and Big Data, leading to advances in information processes and analysis.	26%
The Internet of Things, allowing for the tracking and analysis of the use of everyday items.	14%
Crowdsourcing, the sharing economy and peer-to-peer platforms.	12%
Advanced robotics and autonomous transport.	9%
Artificial intelligence and machine learning.	7%
Advanced manufacturing and 3D printing.	6%

<sup>24</sup> Department of Finance Canada, 2014, *Jobs Report: State of the Canadian Labour Market*, Available Online at: <http://www.budget.gc.ca/2014/docs/jobs-emplois/pdf/jobs-emplois-eng.pdf>, Page 39.

<sup>25</sup> World Economic Forum, 2016, *The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution*, Available Online at: [http://www3.weforum.org/docs/WEF\\_Future\\_of\\_Jobs.pdf](http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf), p. 6-8.

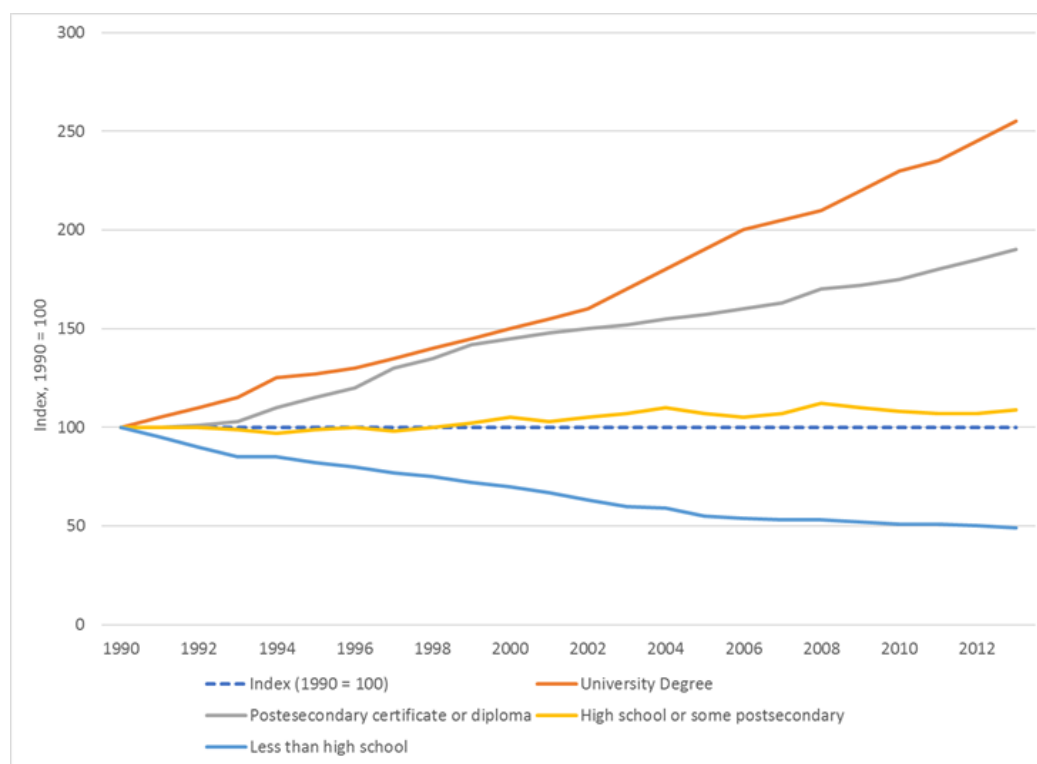
<sup>26</sup> Source: Future of Jobs Survey, as presented in World Economic Forum, 2016, *The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution*, Available Online at: [http://www3.weforum.org/docs/WEF\\_Future\\_of\\_Jobs.pdf](http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf), p. 6-8. See this report for a full account of these drivers and their impact on global economies.



## Canadian Context

Employment growth in Canada has been driven by an increasingly educated workforce, responding to the demands of ongoing technological advancement and globalization<sup>27</sup> (Figure 3). This trend is expected to continue, with approximately 67% of the job openings across Canada between 2014 and 2024 projected to be in occupations requiring advanced levels of education or in management<sup>28</sup> (Figure 4).

**Figure 3:** Employment Growth by Level of Education, Canada, 1990 to 2013<sup>29</sup>



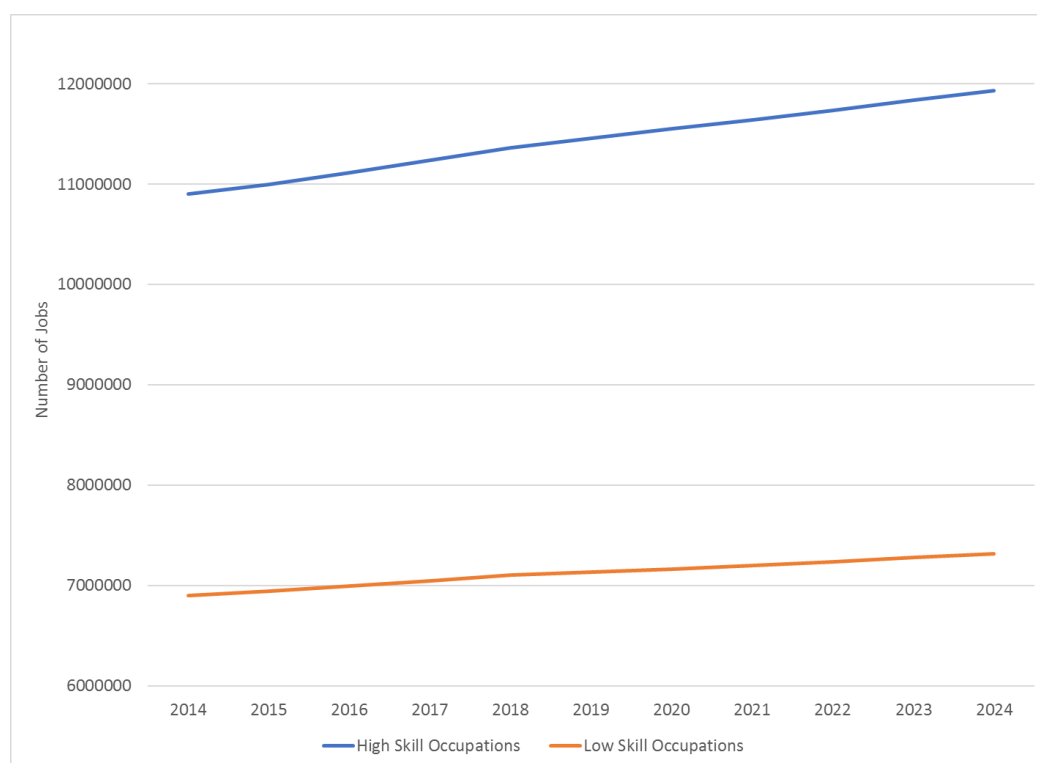
**Note:** The data is indexed to a starting point of 100 in 1991. Change year-over-year from this point represents a percentage increase in the growth of the employment by education level. This method of presentation allows for a comparative analysis of diverse data points.

<sup>27</sup> This period has been described as the Fourth Industrial Revolution (World Economic Forum, 2016, *The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution*, Available Online at: [http://www3.weforum.org/docs/WEF\\_Future\\_of\\_Jobs.pdf](http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf)), and is characterized by rapid advancement of technology, especially electronic and computer technology, and the growing impact of this advancement on the economies of both advanced and emerging industrial nations. Contributing to this is the ongoing process of economic globalization, characterized by increased global economic, cultural, political, and social connections.

<sup>28</sup> Employment and Social Development Canada, *Canadian Occupation Projection System, Employment Projections*, Available Online at: <http://occupations.esdc.gc.ca/sppc-cops/content.jsp?cid=occupationdatasearch&lang=en>, Accessed on April 12, 2017.

<sup>29</sup> Reproduced from Department of Finance Canada, 2014, *Jobs Report: State of the Canadian Labour Market*, Available Online at: <http://www.budget.gc.ca/2014/docs/jobs-emplois/pdf/jobs-emplois-eng.pdf>, p. 39.

**Figure 4: Occupation Projections by Skill Level, Canada, 2014 to 2024<sup>30</sup>**



### *Population Aging*

Although Canada has a relatively high labour market participation rate, when compared to other advanced industrial nations in particular<sup>31</sup>, the aging population in Canada is forcing gradual reductions in this rate. For example, between 2009 and 2014, it is estimated that population aging has reduced the labour market participation in Canada by 1.2%<sup>32</sup>. This downward trend is expected to continue as the Baby Boom Generation reached retirement age and starts to leave the workforce<sup>33</sup>.

### *Education and Skills*

In Canada, 51% of working adults aged 25 – 64 years have attained some level of post-secondary education, making Canadians the most highly educated workforce among OECD nations<sup>34</sup>. This includes 12% of Canadians who had attained an apprenticeship certificate or

<sup>30</sup> Source: Employment and Social Development Canada, *Canadian Occupation Projection System, Employment Projections*, Available Online at: <http://occupations.esdc.gc.ca/sppc-cops/content.jsp?cid=occupationdatasearch&lang=en>, Accessed on April 12, 2017. Note: Using the 2011 National Occupational Classification (NOC), High-skill Occupations are those coded 0, A, or B, and Low Skill Occupation are those coded C and D.

<sup>31</sup> Department of Finance Canada, 2014, *Jobs Report: State of the Canadian Labour Market*, Available Online at: <http://www.budget.gc.ca/2014/docs/jobs-emplois/pdf/jobs-emplois-eng.pdf>, p. 13.

<sup>32</sup> Department of Finance Canada, 2012, *Economic and Fiscal Implications of Canada's Aging Population*, Available Online at: <http://www.fin.gc.ca/pub/eficap-rebvpc/eficap-rebvpc-eng.pdf>, p. 14.

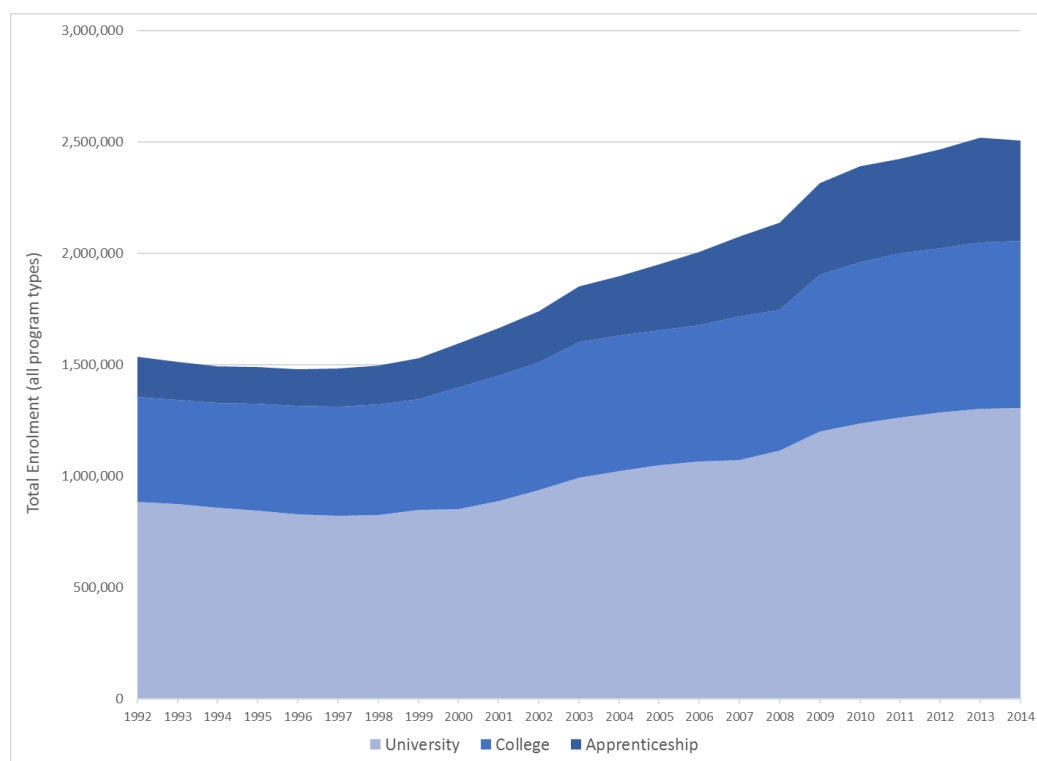
<sup>33</sup> Ibid, p. 12

<sup>34</sup> Department of Finance Canada, 2014, *Jobs Report: State of the Canadian Labour Market*, Available Online at: <http://www.budget.gc.ca/2014/docs/jobs-emplois/pdf/jobs-emplois-eng.pdf>, p. 22.

other trades certificate or diploma<sup>35</sup>. Younger Canadians are even more educated, with 57% of those aged 25 to 34 years having post-secondary education<sup>36</sup>.

These rates of education have been driven by increasing enrollment in post-secondary programs in Canada since the early 1990's (Figure 5a), with growth occurring at all levels and across program types. Although most enrollments are in university undergraduate programs over this period, there has been growth at all levels. For example, the total number of registrations and completions in apprenticeship programs increased by 50% between 2000 and 2011<sup>37</sup>. However, Canada still lags other OECD nations in apprenticeship completions, with only 50% of registered apprentices completing their programs over this same period<sup>38</sup>.

**Figure 5a: Post-Secondary Enrollment, Canada, 1992 to 2014**<sup>39</sup>



<sup>35</sup> Department of Finance Canada, 2014, *Jobs Report: State of the Canadian Labour Market*, Available Online at: <http://www.budget.gc.ca/2014/docs/jobs-emplois/pdf/jobs-emplois-eng.pdf>, p. 22.

<sup>36</sup> Ibid.

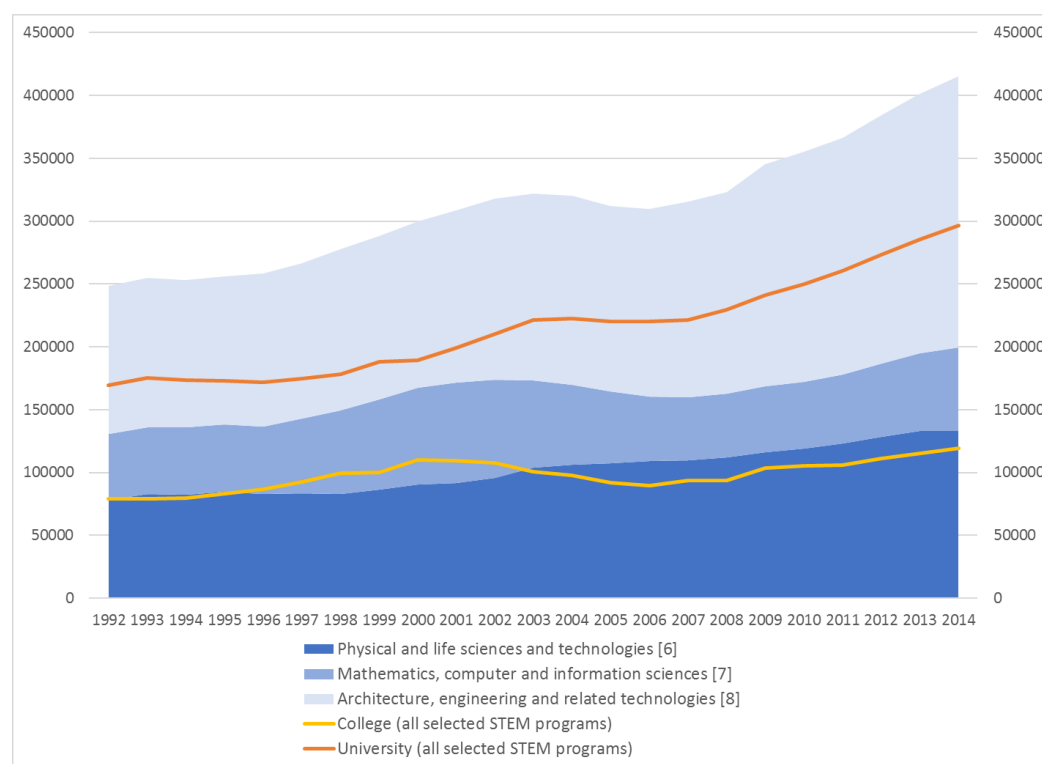
<sup>37</sup> Ibid, p. 24

<sup>38</sup> Ibid.

<sup>39</sup> Statistics Canada. Table 477-0019 - Postsecondary enrolments, by registration status, Pan-Canadian Standard Classification of Education (PCSCE), Classification of Instructional Programs, Primary Grouping (CIP\_PG), sex and student status, annual (number), CANSIM (database). (accessed: May 30, 2017 ); and, Statistics Canada. Table 477-0053 - Registered apprenticeship training, registrations, by age groups, sex and major trade groups, annual (number), CANSIM (database). (accessed: May 30, 2017 )

Despite high levels of post-secondary education attainment in Canada, Canadian universities are graduating fewer students from science, technology, engineering, and mathematics (STEM) programs as compared to other OECD nations<sup>40</sup>. This is concerning as it is these skills that form the foundation of the knowledge-economy and a strong high-skill workforce. Despite this, enrolment in specific STEM programs has been steadily on the rise in Canada at both the college and university level for several decades (Figure 5b).

**Figure 5b:** Post-Secondary Enrollment, Canada, by select STEM Field & Institution Type 1992 to 2014<sup>41</sup>



National data indicates that at very least there is a misalignment between the skills sets of those who are unemployed and specific sectors in the knowledge-economy. In 2014, there was a job vacancy rate across sectors in Canada of 4.2%, up from 3.1% in 2009<sup>42</sup>. At the same time, in early 2014 the unemployment rate in Canada was 7%, up by 1% from the same time in 2009<sup>43</sup>. Therefore, although there were more people available for work, there was a corresponding increase in the number of positions remaining vacant over this period. The Department of Finance indicates that this may be a result of economic uncertainty, but may

<sup>40</sup> Department of Finance Canada, 2014, *Jobs Report: State of the Canadian Labour Market*, Available Online at: <http://www.budget.gc.ca/2014/docs/jobs-emplois/pdf/jobs-emplois-eng.pdf>, p. 26.

<sup>41</sup> Statistics Canada. Table 477-0019 - Postsecondary enrolments, by registration status, Pan-Canadian Standard Classification of Education (PCSCE), Classification of Instructional Programs, Primary Grouping (CIP\_PG), sex and student status, annual (number), CANSIM (database). (accessed: May 30, 2017).

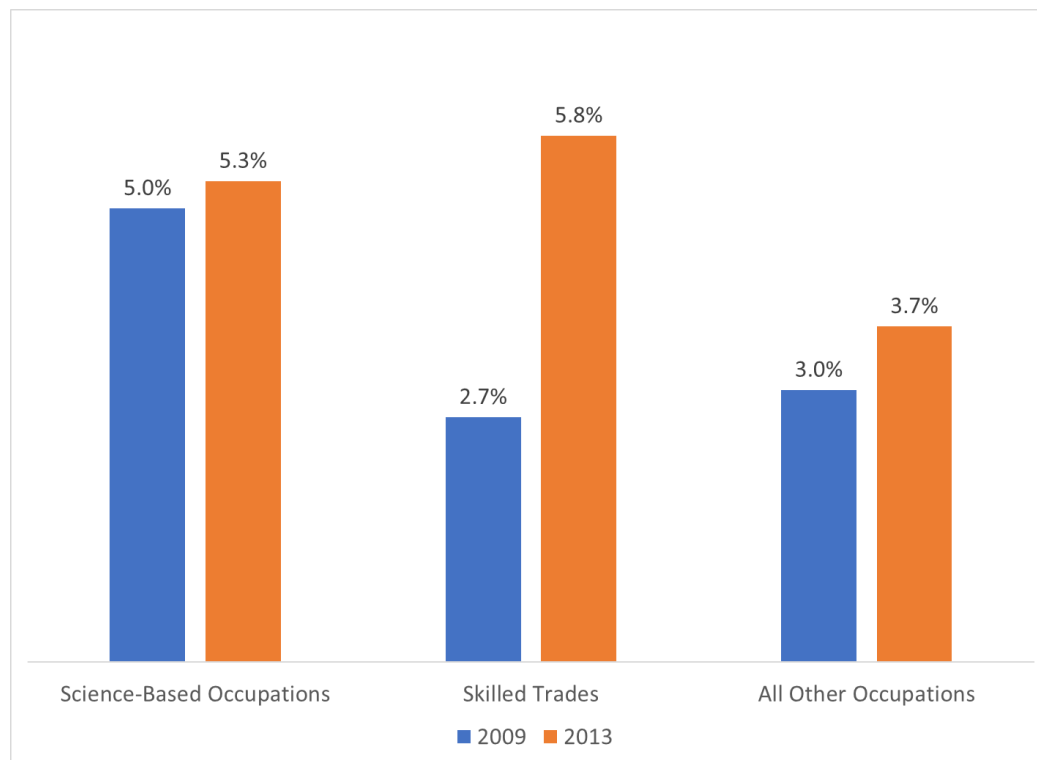
<sup>42</sup> Department of Finance Canada, 2014, *Jobs Report: State of the Canadian Labour Market*, Available Online at: <http://www.budget.gc.ca/2014/docs/jobs-emplois/pdf/jobs-emplois-eng.pdf>, p. 30.

<sup>43</sup> Ibid.

also indicate that there is a misalignment of skills between those seeking employment and those seeking employees<sup>44</sup>.

The latter point is supported by data that indicates a rise in vacancy rates in some high-skill occupation groups over the period of 2009 to 2013 (Figure 6), and by data that suggest that 33% of the unemployed population in Canada has either a skill or geographic mismatch with locally available jobs<sup>45</sup>.

**Figure 6: Job Vacancy Rate in Canada for Select High-Skill Occupation Groups, 2009 and 2013<sup>46</sup>**



<sup>44</sup> Ibid.

<sup>45</sup> Department of Finance Canada, 2014, *Jobs Report: State of the Canadian Labour Market*, Available Online at: <http://www.budget.gc.ca/2014/docs/jobs-emplois/pdf/jobs-emplois-eng.pdf>, p. 34.

<sup>46</sup> Source: Number of online job postings: Wanted Analytics Inc.

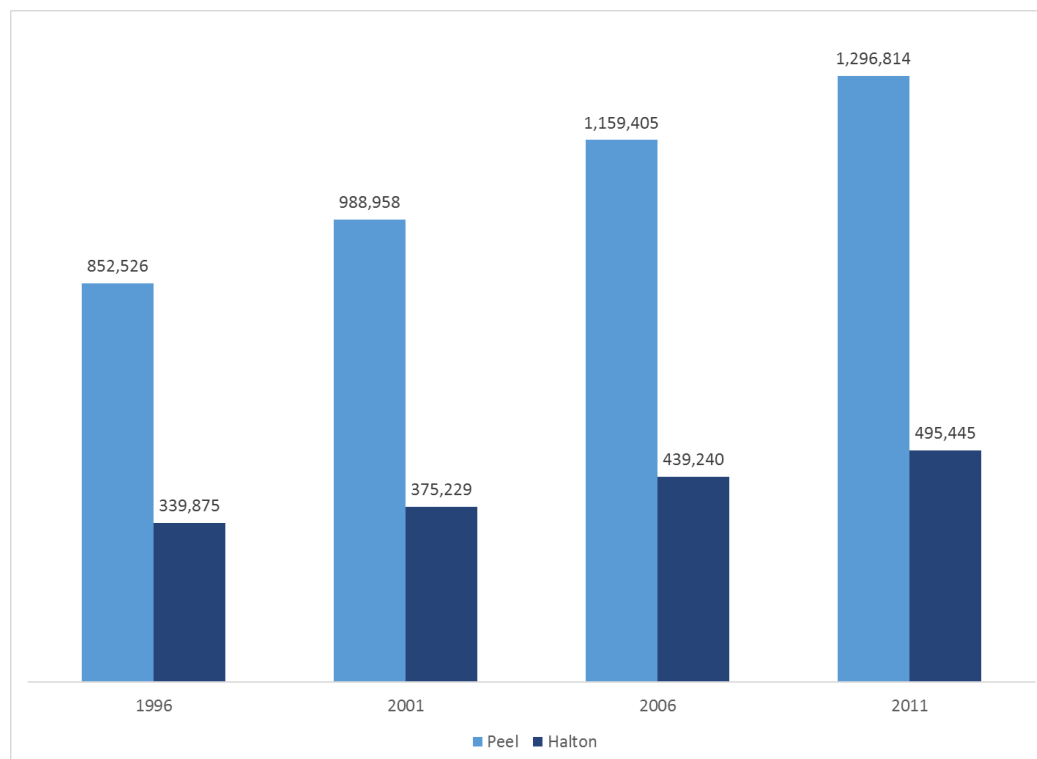
## Peel and Halton

A review of some of the demographic and economic trends in Peel and Halton provides the local context affecting the high-skill labour market.

### *Population Growth, Immigration, and Aging*

The population in both Peel and Halton has been consistently on the rise since 1996 (Figure 7), driving suburban and urban development, and demographic transition, across the community.

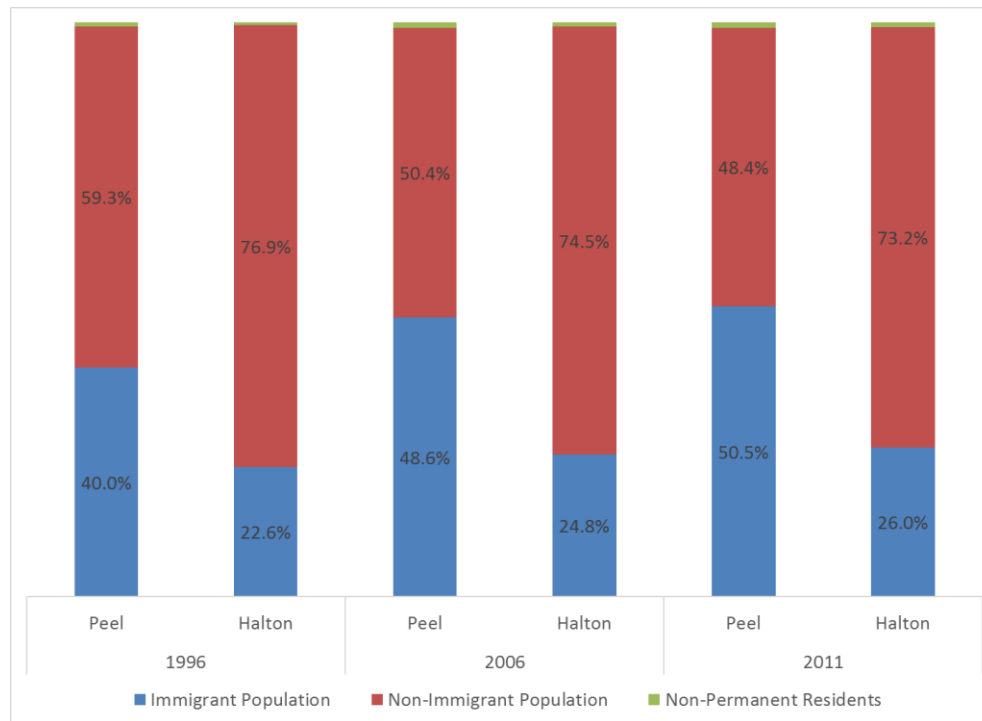
**Figure 7: Population Change in Peel and Halton, 1996 to 2011**<sup>47</sup>



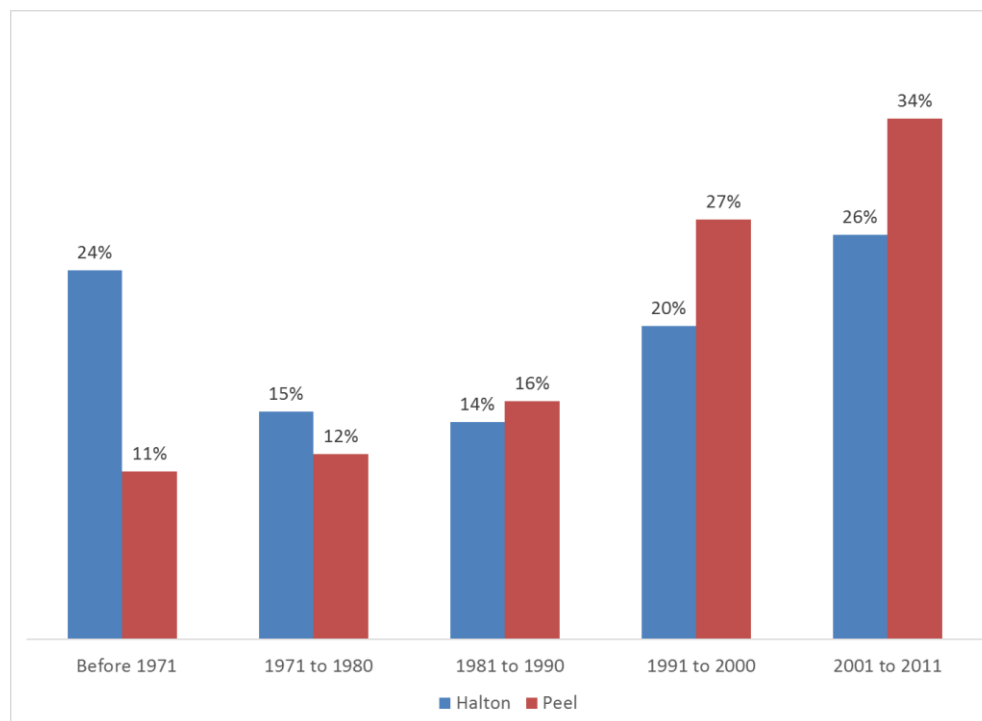
Peel Region has experienced more rapid growth than Halton, and this has been supported by a growing immigrant population in this community (Figure 8). Between 1996 and 2011, the immigrant population in Peel increase from 39.9% of the population to 50.5% of the population. Over the same period, the immigrant population in Halton increased modestly, from 22.6% of the population to just 25.9% of the population. Further, the immigrant population in both Peel and Halton is relatively new (Figure 9), with 34% of immigrants in Peel and 26% of immigrants in Halton having immigrated between 2001 and 2011.

<sup>47</sup> Source: Statistics Canada, Census of the Population, 1996, 2001, 2006, and 2011

**Figure 8: Percent Population in Peel and Halton by Immigration Status, 1996, 2006, and 2011<sup>48</sup>**



**Figure 9: Percent Immigrant Population by Time of Arrival in Peel & Halton<sup>49</sup>**



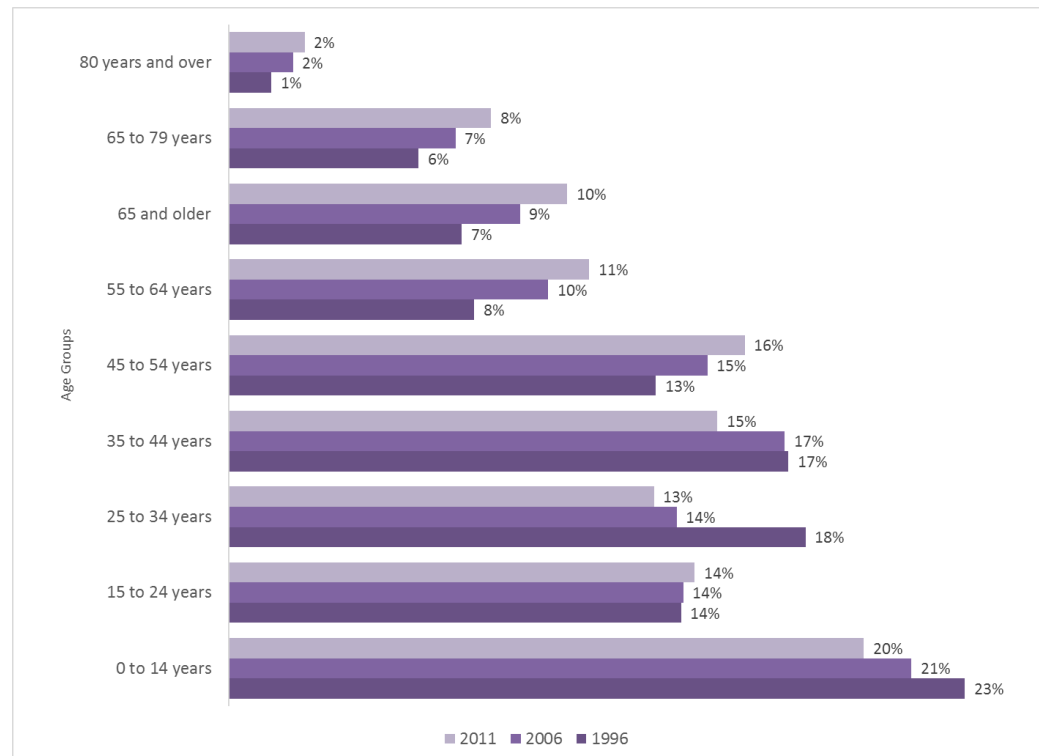
<sup>48</sup> Statistics Canada, Census of the Population, 1996, 2006, and 2011.

<sup>49</sup> Statistics Canada, Census of the Population, 2011

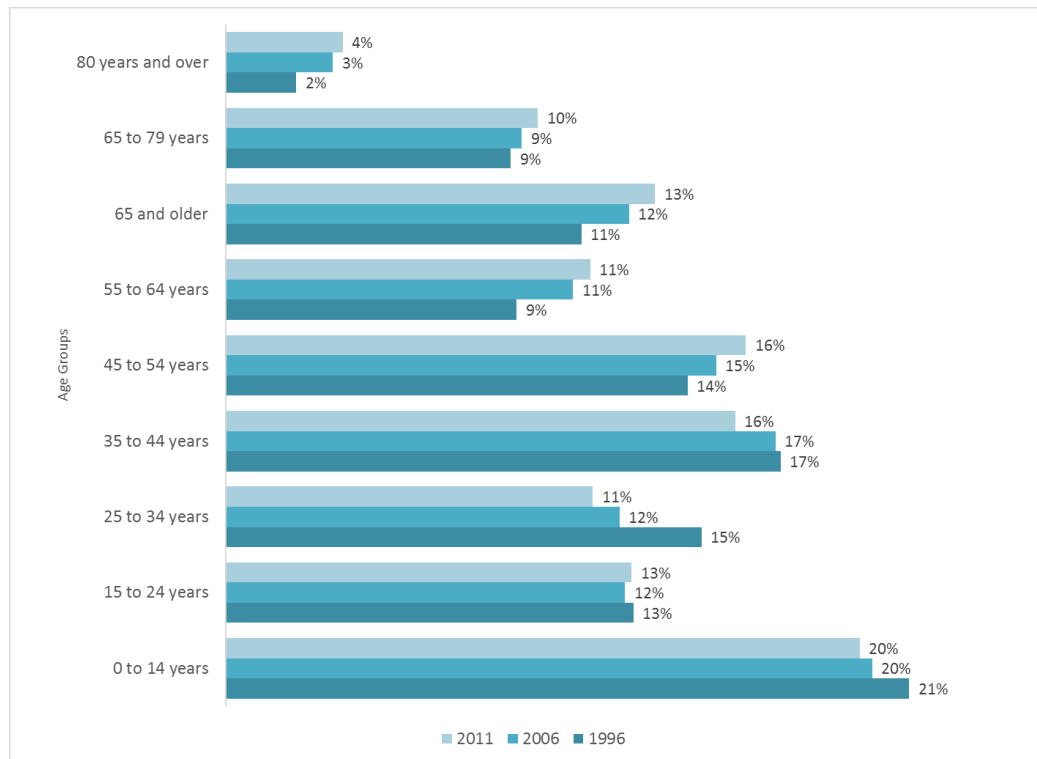


When we look at the aging summary for the community we can see a general aging trend as older age groups have increased since 1996 (Figures 10a and 10b). In Peel there has been a concurrent stabilization of some younger age groups, indicating that the aging trend, although apparent, is being mitigated in some parts of this community. This data is important to the local context of a high-skill labour force given the impact that aging has on the available labour force in a community. However, in some parts of Peel and Halton, this appears to not be a major concern, as the influx of new immigrant communities may be mitigating some of this shift.

**Figure 10a: Population by Age Group in Peel, 1996, 2006, and 2011**



**Figure 10b: Population by Age Group Halton, 1996, 2006, and 2011**



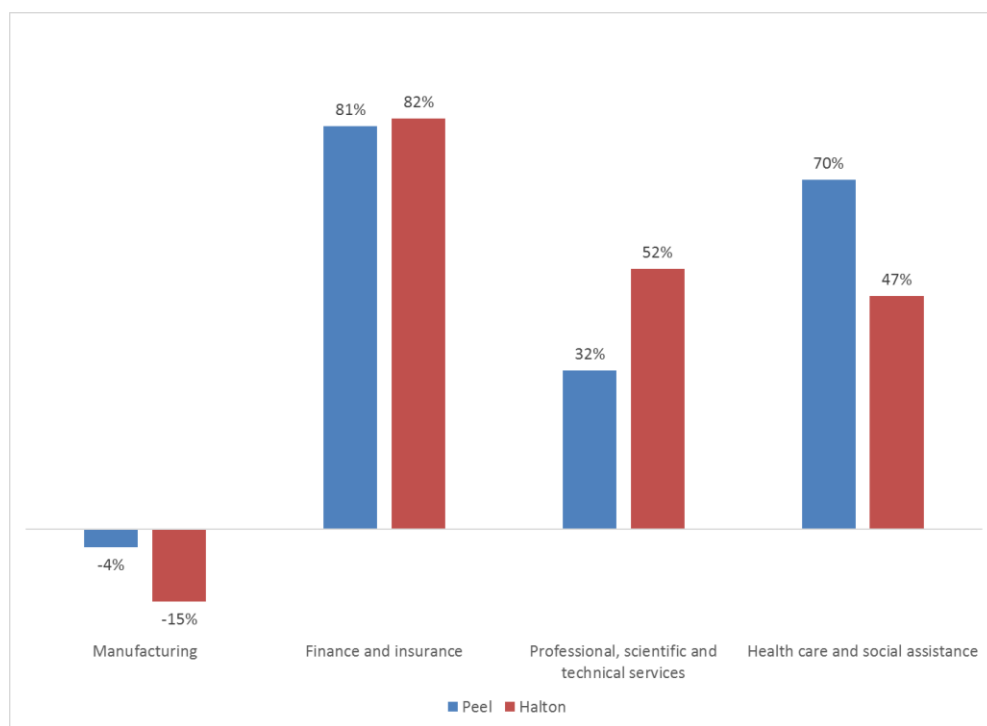
### *Labour Force*

Both Peel and Halton have been affected by a shifting workforce, demonstrated by the growth of the workforce in the target sectors of this project (Figure 11). These shifts, characterized by significant growth in knowledge and technology driven sectors with a subsequent decline in the more traditional manufacturing base of the community, is indicative of provincial trends in Ontario<sup>50</sup>.

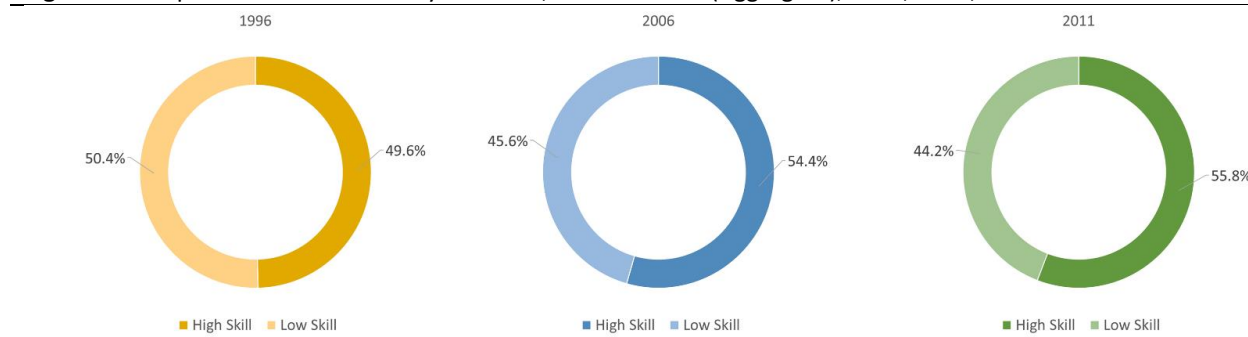
At the same time as the labour market has been shifting, the local labour force that is in high-skill occupations has been increasing, with the proportion of the workforce in high-skill occupations reaching 55.8% in 2011 (Figure 12). This trend is further reflected when we look at occupations in Peel and Halton (Figure 13). We see a mirror of Canadian and provincial trends, with a rise in high-skill jobs requiring advanced education, in particular university education (NOC Level A and Level B), and a subsequent decline in both management occupations (NOC Level O) and low skill occupations (NOC Level C and Level D).

<sup>50</sup> Social Planning Network of Ontario, 2010, *Ontario's Social Landscape*, Available Online at: <http://www.spno.ca/images/stories/pdf/reports/ontario-social-landscape-2010.pdf>, p. 65.

**Figure 11: Growth in workforce by selected sectors in Peel and Halton, 1996 to 2011<sup>51</sup>**



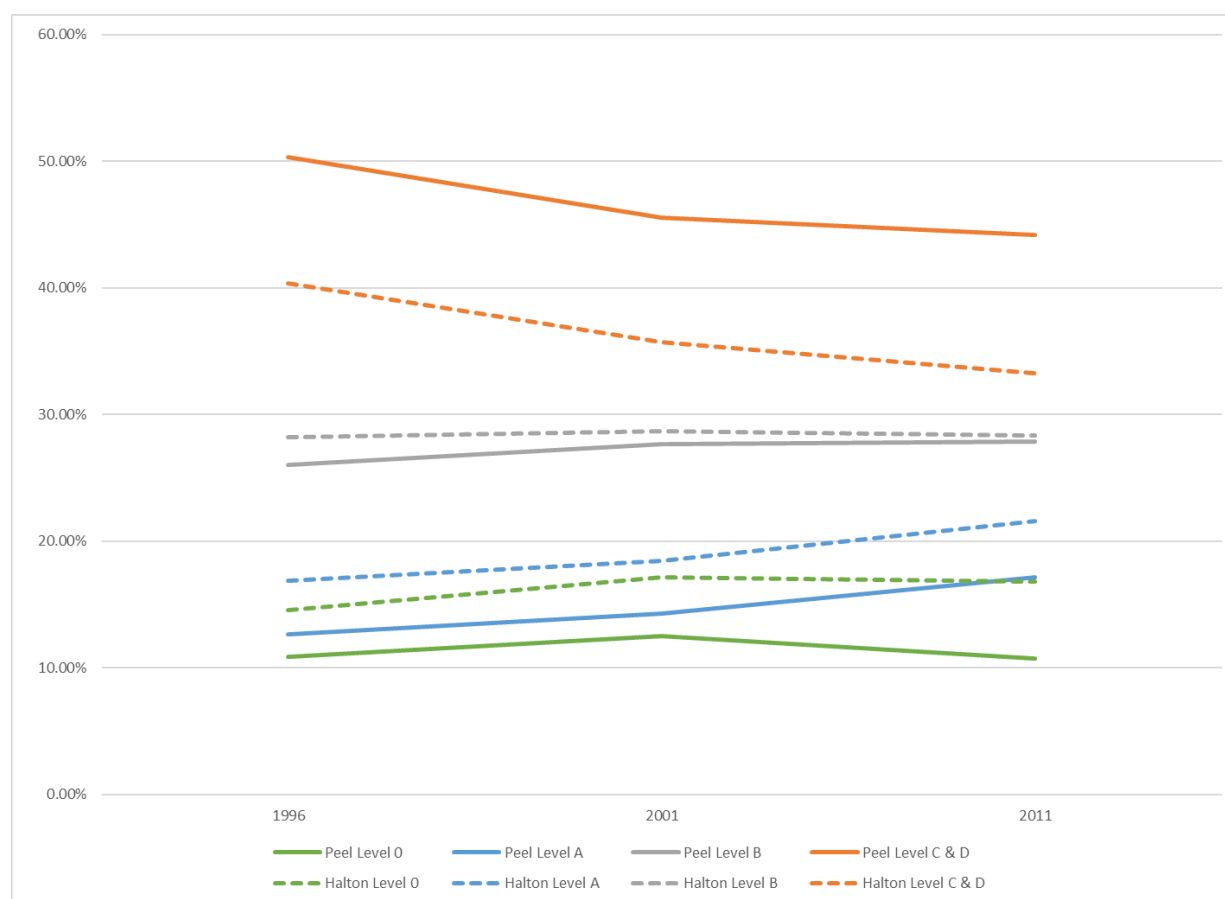
**Figure 12: Proportion of Workforce by skill level, Peel & Halton (Aggregate), 1996, 2006, and 2011<sup>52</sup>**



<sup>51</sup> **Source:** Statistics Canada, 1996 Census, Community Profiles, Statistics Canada 2011, National Household Survey, Community Profiles. Confirm citation details. **Note:** Using the 2011 National Occupational Classification (NOC), High-skill Occupations are those coded O, A, or B, and Low Skill Occupation are those coded C and D.

<sup>52</sup> **Source:** Statistics Canada 2011, National Household Survey, Community Profiles.

**Figure 13:** Occupation Skill Level by NOC in Peel and Halton, 1996<sup>53</sup>, 2001<sup>54</sup>, 2011<sup>55</sup>



The population in Peel and Halton are highly educated, 56% of the population in Peel, and 62% of the population in Halton having achieved some form of postsecondary credential (Figure 14). Although most of the population in both Peel and Halton have been educated in Canada, 38% of the population in Peel do have international diplomas or degrees.

**Figure 14:** Proportion of Population in Peel and Halton by Highest Level of Education and Age Group, 2011

	Total Population		Age 15-24		Age 25-44		Age 45-64		Age 65 +	
	Peel	Halton	Peel	Halton	Peel	Halton	Peel	Halton	Peel	Halton
Less than High School	17%	13%	33%	35%	15%	4%	27%	7%	25%	23%
High School Diploma	27%	25%	28%	40%	29%	17%	32%	24%	12%	27%
<b>Postsecondary Education</b>	<b>56%</b>	<b>62%</b>	<b>9%</b>	<b>24%</b>	<b>45%</b>	<b>79%</b>	<b>37%</b>	<b>69%</b>	<b>9%</b>	<b>51%</b>
Apprenticeship or Trades	11%	9%	7%	6%	32%	6%	43%	9%	18%	19%
College Diploma	32%	35%	10%	40%	43%	33%	38%	36%	9%	35%
University certificate or diploma below bachelor level	11%	8%	11%	9%	43%	6%	37%	8%	10%	11%
<b>University certificate, diploma or degree at bachelor level or above</b>	<b>46%</b>	<b>48%</b>	<b>7%</b>	<b>44%</b>	<b>50%</b>	<b>54%</b>	<b>36%</b>	<b>47%</b>	<b>7%</b>	<b>35%</b>
Bachelor's degree	61%	64%	9%	84%	51%	65%	34%	61%	6%	57%
University certificate, diploma or degree above bachelor level	39%	12%	4%	10%	49%	13%	38%	12%	8%	13%

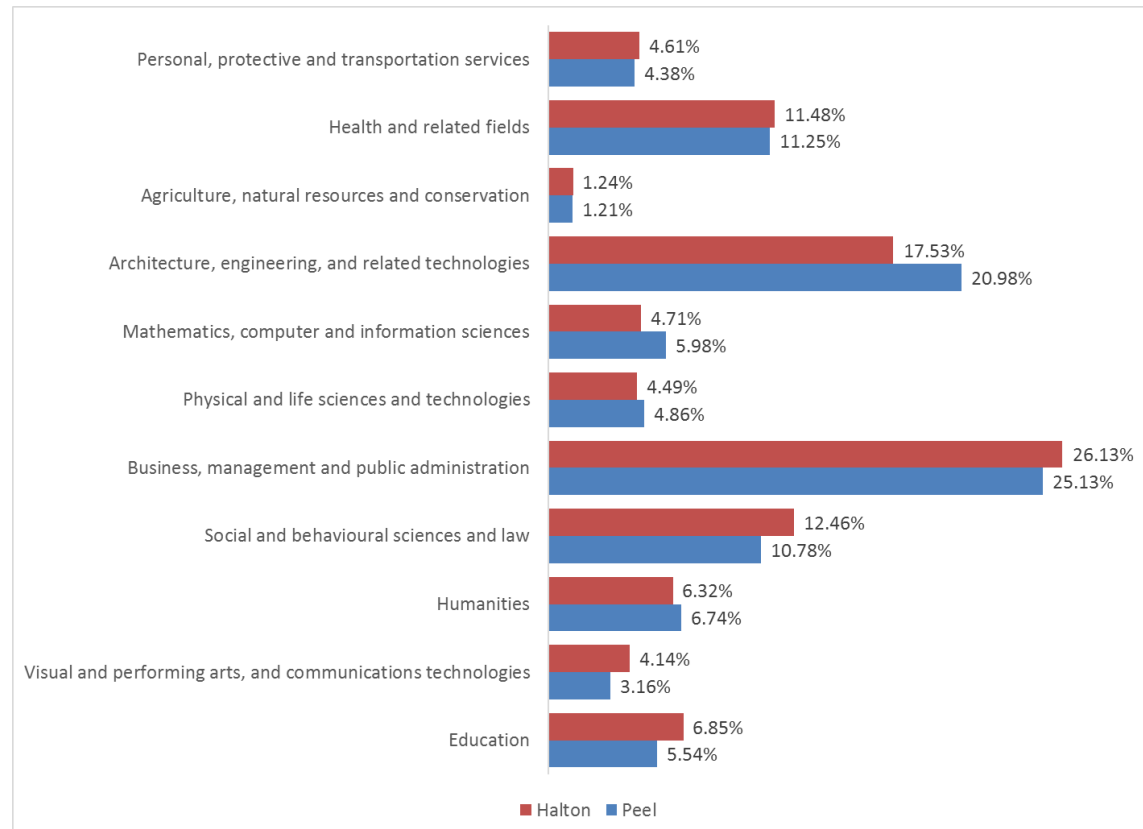
<sup>53</sup> Source: Statistics Canada, 1996 Census of Population, Statistics Canada Catalogue no. 95F0181XDB96001.

<sup>54</sup> Statistics Canada, 2006 Census of Population, Statistics Canada Catalogue no. 92-591-XWE

<sup>55</sup> Source: Statistics Canada, 2011 National Household Survey, Statistics Canada Catalogue no. 99-012-X2011051.

The fields of study of those with post-secondary credentials are also supportive of the high-skill labour market and economy (Figure 15). In both Peel and Halton, there are high numbers of graduates from business and management, as well as from engineering and technology programs. However, there are relatively low numbers of those trained in mathematics, computer and information science.

**Figure 15: Proportion of Population with Post-Secondary Credentials by Field of Study in Peel and Halton, 2011<sup>56</sup>**

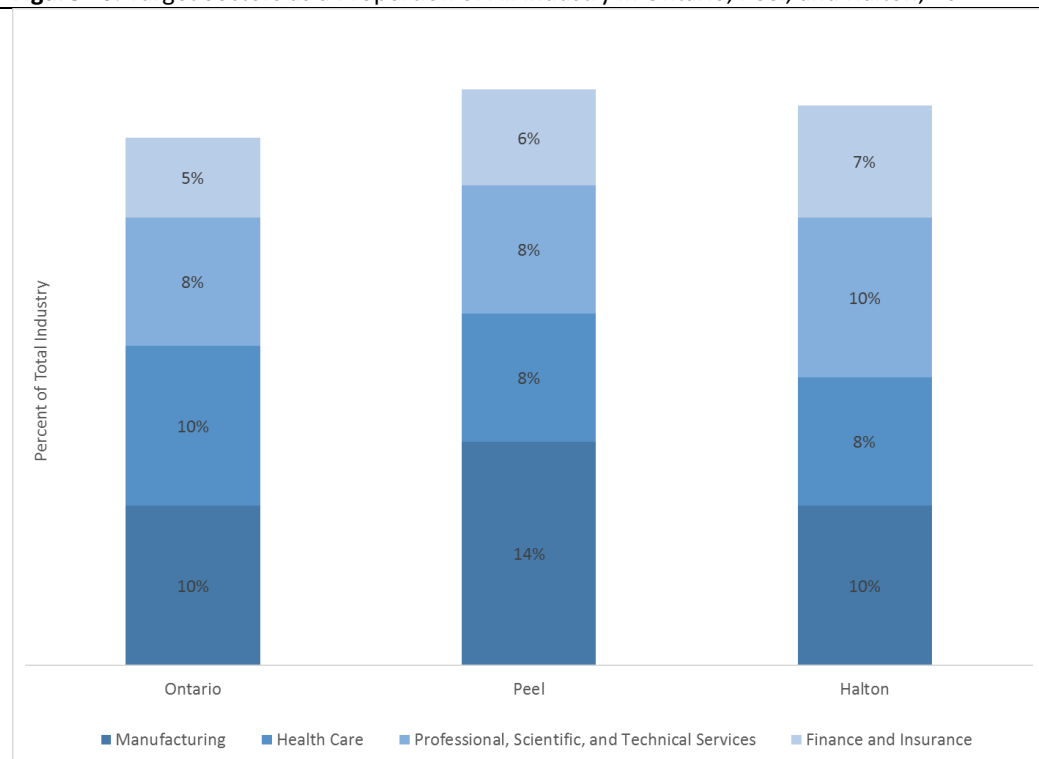


<sup>56</sup> Source: Statistics Canada 2011, National Household Survey, Community Profiles.

## Industry Profiles

This project targeted four industries that rely on a high-skill workforce, Advanced Manufacturing, Healthcare, Finance and Insurance, and Professional, Scientific, and Technical Services. As in Ontario, manufacturing is a primary industry in both Peel and Halton (Figure 16).

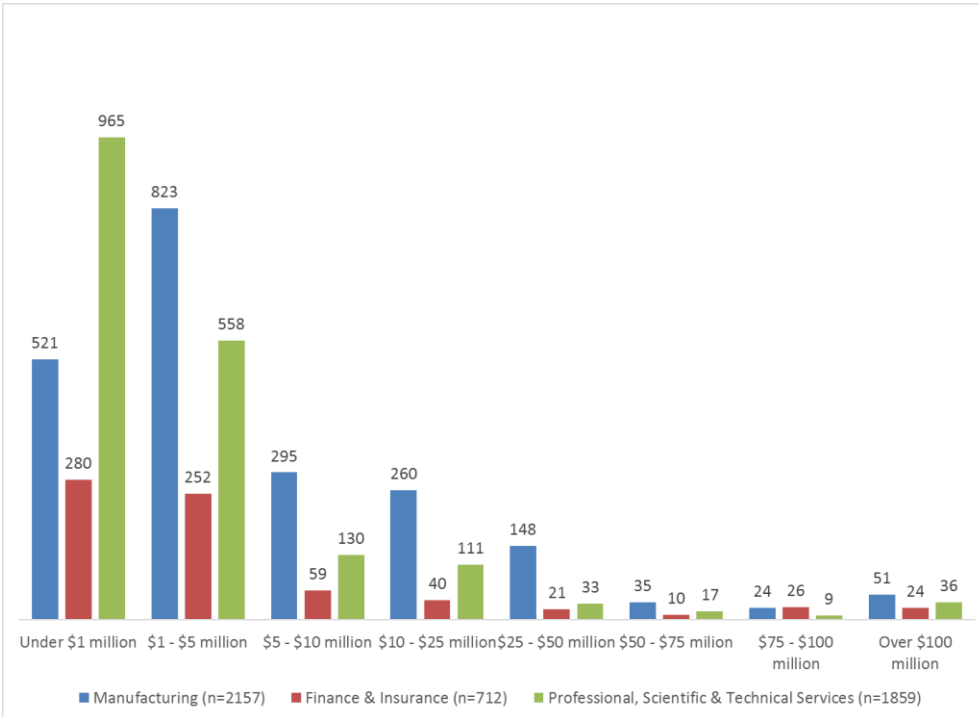
**Figure 16:** Target Sectors as a Proportion of All Industry in Ontario, Peel, and Halton, 2011<sup>57</sup>



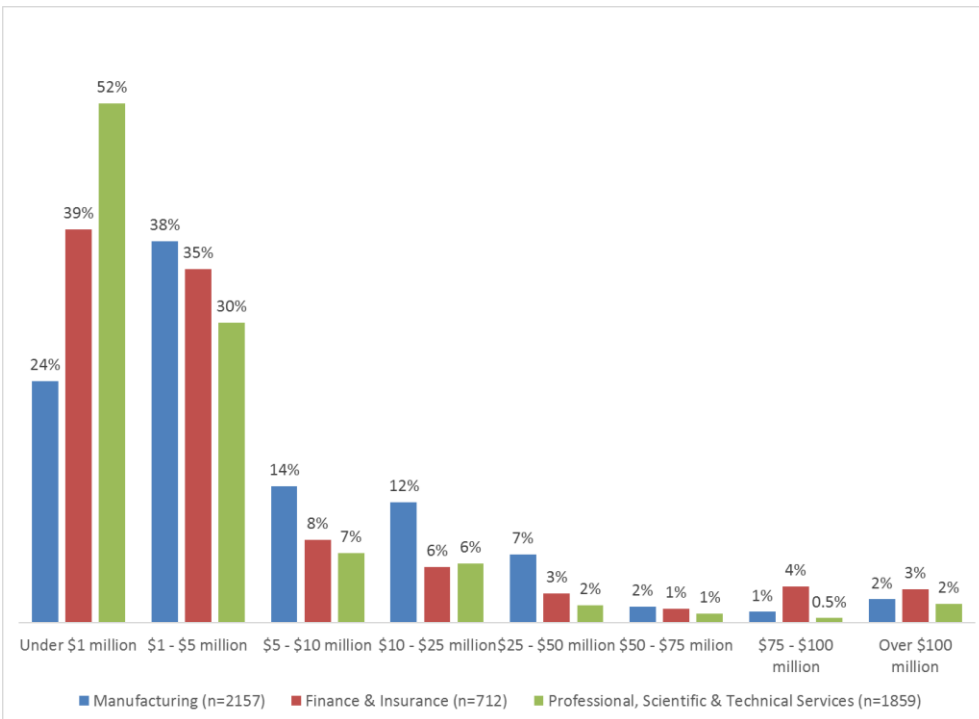
As identified in Figure 11 (p. 23), there has been significant growth in the workforce across these four sectors. Manufacturing has generally been on the decline, with workforce reductions of 4% in Peel, and 15% in Halton between 1996 and 2011. At the same time, significant increases have occurred in the other target sectors over this period, with the workforce in finance and insurance increasing by 81% in Peel and 82% in Halton, the workforce in professional, scientific, and technical services increasing by 32% in Peel and 52% in Halton, and the healthcare and social services sector increasing 8by 70% in Peel and 47% in Halton. These changes are indicative of the significant shift away from a traditional economic base in manufacturing toward a more dynamic labour market and economy, driven by knowledge and technology based occupations and industries.

Reviewing the annual sales data available on the target sectors indicates that most businesses that make up these sectors in Peel and Halton have annual revenues under \$10 million, indicating that the local economic impact of these sectors is driven by a number of diverse companies, with a few larger corporations making up the balance (Figure 17 and Figure 18).

<sup>57</sup> Source: Statistics Canada, 2011 National Household Survey, Statistics Canada Catalogue no. 99-004-XWE



**Figure 17<sup>58</sup>:**  
Number of  
Businesses by  
Annual Sales  
Range and Sector  
in Peel and Halton  
(Aggregate),  
2015<sup>59</sup>



**Figure 18<sup>60</sup>:**  
Proportion of  
Businesses by  
Annual Sales  
Range and Sector  
in Peel and Halton  
(Aggregate),  
2015<sup>61</sup>

<sup>58</sup> Note: Healthcare and Social Services omitted due to limited data available on annual sales and revenue.

<sup>59</sup> Source: Scott's Business and Industrial Online Directory.

<sup>60</sup> Note: Healthcare and Social Services omitted due to limited data available on annual sales and revenue.

<sup>61</sup> Source: Scott's Business and Industrial Online Directory.



## Findings and Recommendations

The following section provides the summary of research findings, followed by and recommendations for community action. These findings are based on data collected and analyzed from all sources.

### Findings:

1. The high-skill labour force in Peel and Halton is highly educated and supports a strong high-skill labour market.

A review of the secondary data presented in this report, indicates that the workforce in Peel and Halton is in general, highly educated, skilled, and fully engaged in the knowledge economy. This is supported by industry data that shows a rapidly shifting economy that, based in the growth of industries in the finance and insurance, healthcare, and professional, scientific and technology sectors. However, the data also indicates that the traditional manufacturing base of the local economy is still strong, despite reductions in the workforce over the past 20 years. This latter point may be indicative of the move in the manufacturing sector toward automation and advanced, technology driven, modes of production.

2. Local Employers are accessing available programs and services to support the training of employees. However, there is a gap in the use of these programs for the training of new employees.

In speaking with both employers and employment service providers, it was determined that local employers are accessing available training subsidy programs, such as the Canada Ontario Job Grant, to support employee skill development. This appears to be especially true for small to medium sized businesses, who may not have significant employee training budgets.

Although employers across sectors indicated that they had accessed training subsidy programs, the programs were being largely used to support the development of professional and management skills. For example, small to medium sized accounting companies indicated high use of these programs to encourage credential development among their non-credentialed, but experienced employees.

When asked, few companies indicated use of these programs to support training of new hires. This appeared to be based on the perceived risk involved; even though the financial cost of training was subsidized, employers appeared unwilling to invest time in training an employee that was unknown to their work environment. As one participant from an accounting firm stated:

*The investment [in training] is more than financial. We need to make time, mentor, and support the process. We can't take risks with new employees because we do not know them.*

Employment service providers addressed this concern by highlighting the availability of volunteer and co-operative programs that may then be bridged into a training program if an employment offer is made. These service providers indicated that in their experience these kinds of arrangements had met with success. However, there are currently a limited number of employers in Peel and Halton taking advantage of these pathways to recruitment and training. As one employment service provider stated:

*We would love to get more clients into co-op placements, but it is sometimes hard to convince [employers] to take them on. They need to make a commitment, and they don't always have the ability to.*

While the number of employer participants who had engaged in co-op, intern, or volunteer programs for non-school-registered job seekers, was not high in this study, those who had engaged in these programs indicated strong support for them. They believed that because these programs allowed both the employer and employee to test out a working relationship, reducing the risks for the employer, while also allowing the employee to develop skills and experience, that they were a valuable tool in the recruitment process. As one employer indicated:

*They [placement programs] let me test someone, see if they fit and can do the job.*

3. There is an absence of financial supports, outside of education loan programs, to support those who want to upgrade skills and education, but who do not have the support of an employer.

Although many of the job seekers and recently hired individuals we spoke to indicated that programs such as the Canada Ontario Jobs Grant were great initiatives that could open up training opportunities, they also indicated frustration with the lack of options for those looking to upgrade skills who are either unemployed or who do not have a supportive employer. This was most expressed by those who indicated that they had expired credentials and were struggling to find work commensurate with their education and experience due to the lapsed credentials. These individuals were looking to renew and upgrade, but lacked the resources to pay for the required programs and testing to do so. As one job seeker in a technology field indicated:

*My experience is out of date. I know what I need, but I can't afford to keep up, so it's out of date.*

When asked directly if external financial support would be of benefit in this case, this same participant stated:

*Of course. I want to upgrade. I have the basics, just need to upgrade. If I had help I could do it.*

4. Although local employment service programs are highly subscribed, job seekers indicate both a lack of knowledge about the kinds of programs available to them, and confusion over their eligibility to access these programs.

Both job seekers and those who have recently found work in the high-skill labour market indicated that, at least at the outset of their jobs search, they had little knowledge of what programs and services were available to them and how these programs and services may support them in their job search. As was indicated during discussions with recent employees:

*I never used services before. I always just had a job, or applied for them with the company. But it is different now, and there is help through employment programs. I just had no idea that they could help me, in my situation. I did not even know that there were programs for me to use.*

This was further supported by a job seeker, who said:

*I never thought that employment programs were for people like me. You have an idea that they are for people who are down and out, people without an education. I am trained, I have a career, so I had no idea that [employment programs] could help... they are helping me now.*

Further, only about half of the recently employed individuals engaged indicated that they had accessed a non-profit employment service, indicating that, as they were attempting to find a high-skilled job, they did not believe that these services were appropriate for them. Some of these individuals did work with industry specific recruiters.

5. Although employers who have worked with employment service providers are generally happy with the services, they did express concern regarding a lack of consistent communication and responsiveness to their unique needs from the service providers.

Business leaders who had engaged employment service providers did express appreciation for the services offered, and most did indicate that these programs did ultimately assist them in filling vacant positions in their companies. For example, one employer from a manufacturing company stated:

*They [employment service provider] were very good. They helped find a few good people who we have hired. It made it easier for us. We knew that we would get good people, and we had to put in less time.*

However, there was some concern that these service providers were not fully responsive to the needs and timelines of the employers. For example, one individual from a professional services firm indicated that they had to make repeated calls without follow up before they received a response regarding their employee search process. Further, some employers who had worked with non-industry specific recruiters and employment service providers, indicated that multiple candidates put forward did not even meet the basic skill or experience criteria of the open position. It should be noted, that these same employers did ultimately find the right candidate through their work with these organizations. However,

this issue presents a concern regarding screening and efficiency in the services being offered to employers.

In response, some of the service providers who participated in this project indicated that they need to address these kinds of concerns by viewing the employer as a client in the same way that they view the job seeker as such. One employment service organization leader indicated that this was a message that they were building into their service provision model, but that it was not always easy given that most service organizations were founded with, and continue to operate under, a community services mandate that puts members of the community ahead of local business.

6. Both non-profit and private employment service and recruitment programs put a lot of effort into finding and developing candidates that meet the full suite of qualifications required by local high-skill employers.

In looking at the alternative view to finding 3 above, employment service providers and recruiters indicated that they sometimes struggle to develop a strong pool of candidates for the high-skill, high-demand jobs that employers are filling. For example, one service provider stated:

*I think that we are always playing catch up, you know. Trying to meet the needs of employers and clients at the same time. It is hard to build and maintain a good group of clients to meet the demands of employers... Things just change so quickly, and we do not always have what employers want.*

In general, service providers agreed that this was impacted by two noted trends:

First, the most highly-skilled individuals can engage in the labour market via networking and professional communications without the support of service providers. This idea was supported in discussions with those who had been recently employed in the local high-skill labour market, with those who had spent the shortest time seeking their new roles also indicating that they had strong professional networks and regularly engaged with colleagues in their own and related industries. For example, one recent employee with a professional credential stated:

*I thought about going to a recruiter, but it made more sense, for me at least, to just talk to my network. This is how it is... it is who you know. So I found opportunities this way. I mean a service may have helped, but I did not need to go there.*

Second, given the high proportion of new Canadians with high-levels of education in the local high-skill labour market, many of the programs and services available are designed to support them as they access and integrate into the Canadian labour market. Although these individuals do tend to possess a high level of technical ability and professional experience in international markets, those who access employment programs and service tend to lack experience in the Canadian context. This presents a barrier to employment that needs to be addressed, and is the focus of many employment service providers in Peel and Halton. As one service provider stated:

*Canadian context is our main focus. We have so many smart people, who have never worked in Canada. Businesses want this. They want someone that they know can work in this environment. So we spend a lot of time on this.*

7. Program and service accountability requirements and pressures impact on the nature of service provided by non-profit employment service providers.

Although non-profit employment service providers are generally well connected to the community, providing them with advanced knowledge of local labour market trends and needs, they can struggle to adequately respond to these conditions due to the restrictions and requirements of government funded employment programming. Service providers we spoke to did indicate the value and impact of the services that they are funded to provide, but also expressed that a more dynamic program design could allow them to support more individuals achieve success.

For example, during one focus group discussion, participants indicated that they had turned prospective clients away from programs that they may have benefited from because they did believe that they had a high probability of success (in this case measured by the achievement of full employment commensurate with previous experience). As one participant in this group stated:

*I have targets to meet, and they are measured by outcomes. Sometimes I know that a prospective client will not be able to achieve these outcomes, at least not now. But they could still benefit from the program, so this is hard. We have to refer them to other services, more basic programs that will get them a job, but not always in their field.*

As noted in the quotation, these individuals are often referred to more remedial programming that are not necessarily designed for those with high levels of education, credentials, and professional experience. Such programs focus on general employability rather than on employability in a field or role commensurate with education and experience. The service providers indicated that this led to frustration on the part of the client, as they often felt demeaned, disrespected and hopeless. For example, one participant stated:

*How would we like it if we had to work in an entry level job when we have 10 years of experience and a graduate degree? But sometimes this is what we have to do because they have never worked in Canada. It is not ideal.*

8. The most successful employment programs and services are those that develop and maintain ongoing, engaged, and dynamic relationships with employers and industry partners.

Both employers and service providers indicated that the success of programs in placing high-skill employees and meeting the needs of high-skill employers is based on the strength of the relationship between service provider and industry.

During a focus discussion with service providers, it was indicated that they had most success in finding and developing strong candidates in the local industries that they understood the

best and with who they had strong relationships. Further, an employer participant stated that they believed that this was a reciprocal relationship, where they met with the most success when they were engaged in supporting the organizations that were helping them recruit and develop talent. For example, one service provided by a local organization brings industry leaders and employers together with advanced level clients who are ready to enter the high-skill labour market for networking and mentoring opportunities. Employers who participated in these kinds of programs believed that it resulted in them getting better candidates when they were recruiting as the organization understood their needs better, but that they also understood the nature of the programs that candidate had participated in.

9. Employers in the high-skill sectors that were engaged in this project are looking for a combination of technical skills, education, and strong soft skills in areas like critical thinking, communication, management, and emotional intelligence.

Employers who participated in this project indicated that they did not have trouble finding the hard, technical skills that they required in their workforce. Large employers tend to hire graduates directly from college and university programs, with the baseline skills that they require, and then train employees as they advance in their career. Small to medium size employers tend to rely on professional networks to fill more advanced skill gaps as they do not feel that they always have the resources to invest in employee development. To fill entry level roles, these smaller employers indicated that they took advantage of placement programs for both students and mid-career professionals (especially programs for internationally trained professionals) as way to reduce the risk of a bad hire.

When looking for talent, employers of all sizes indicated that they start with an assessment of technical skills, but base final hiring decisions on the soft skills of candidates. There are indications that this is true across the high-skill labour market, except in those roles that have highly specific in the technical skill set required (for example advanced roles in computer programming and software coding).

10. Changing attitudes toward internationally trained professionals has opened many new opportunities for these individuals, and have led to employers more willing to hire someone without Canadian experience. What is paramount is an ability to adjust to the Canadian Context.

Across all groups that were engaged, it was apparent that there is more willingness than in the past for employers to not consider international education and experience as a barrier to employee recruitment. As one employer stated:

*I care a little less about where someone was trained. At least less than I did when I first started hiring people. What matters is will they fit. Can they do the job? If we can get to this, then we will go for it.*

An employment service provider indicated that:

*We have less trouble with employers and our newcomer clients these days. There seems to have been a shift in thinking a little... not sure why. But it is good. We can get people in the door at least. Based on their skills and not where they developed them. This is a positive change.*

Some concerns do remain, such as a lack of recognition of international education institutions (and thus the nature of education or credentials achieved) and a lack of recognition of international companies (and thus a lack of understanding of the relevance and content of previous experience). For example, an employment service provider stated:

*We do have some employers who may like a client but who have trouble understanding what they bring to the table. This is because they don't recognize their school, or past employers.*

This was backed up by an employer in the accounting field who said:

*We have had applicants who look great on paper. But I don't know where they worked. If they have only worked [internationally] then I don't know the companies, or the professional experience that they got while there.*

What mattered most to employers was the ability of a new hire to translate this international education and experience to the Canadian context. Some service providers have responded by developing programs focused on supporting this transition for job seekers and new hires. Job seekers, employers, and recent hires all indicated that it is proficiency in soft skills (such as problem solving, communication, and critical thinking) that were the key to an internationally trained professional being hired and successful in the labor market.

The remaining challenge is to have more employers take a chance on internationally trained professionals, either by hiring them or by engaging in co-op, internship, and mentoring programs that mitigate employer risk and allow for contextual experience. Several new immigrant job seekers and recent employees that participated in this project expressed frustration with entry level and remedial roles well below their skill and experience levels. They felt as though they were entering the workforce for the first time again.

11. Small and medium sized businesses are reluctant to participate in international recruitment to fill skills gaps as they are not willing or able to engage in the rigors of the immigration system. This limits their pool to locally available individuals.

Although several small employers in very specific scientific and technical industries indicated that they may be able to meet their productivity needs by recruiting internationally, they were unwilling to do so due to the perceived rigors of the immigration system. For example, one employer indicated that they had international colleagues whom they would consider recruiting, if they did not perceive the risks involved with the international recruitment process as too great. They stated:

*We have to make an investment in the employee when they come from abroad. We take on responsibility, we have to manage parts of the immigration process, and make sure that we*



*are doing things right. We don't have this knowledge in our company, so it becomes onerous. It is not worth it for us [to hire international candidates].*

This perceived risk was financial, but also due to the small nature of their business and their inability to absorb the turmoil that can be created by an unsuccessful hire. For example, another employer from an engineering firm stated:

*If we hired [internationally], what if they did not work out? What would we do? Who would be responsible? It is too much.*

12. There is a gap in the availability of individuals in some skilled trades with a high level of experience and skills in Peel and Halton.

In speaking with representatives of several skilled trades organizations, as well as employers who hire skilled trades people, it was indicated that although there are low skilled workers available, in some trades there is a lack of highly skilled and experienced individuals to support the demands of highly technical roles. For example, an individual from the welding profession indicated that they had little trouble filling basic role, such as fence welding, but had much more difficulty filling some constriction roles that required the welder to have detailed knowledge of mathematics and geometry, combined with advanced welding knowledge and experience.

Participants indicated that one perceived reason for this dearth of high-skilled trades people in some trades is a result of a rote and unengaging apprenticeship process that limits skill development and discourages completion. They further indicated that more successful apprenticeship training could start at the secondary school level, focusing in development of the practical baseline skills required, and then moving the apprentice into a more dynamic training program where they are exposed to multiple role and skill sets.

13. Recruitment in most high-skill fields is driven by internal and industry networking. Further, larger high-skill employers focus on internal skills development rather than external recruitment for more advanced skill sets. This limits the opportunities for mid-career professionals attempting to enter the local high-skill labour market.

In speaking with employers, and specifically with those within companies who are responsible for recruitment and/or employee development, it was indicated that high-skill employers prefer known quantities. This results in a focus on internal development rather than external recruitment for more advanced roles within companies. Where the skills cannot be developed internally, many employers turn to referrals from existing employees, thus relying on initial assessment of fit to be done by the referring employee.

This trend was predominant among the larger employers that were engaged, across sectors. It was also apparent with some small employers who were working in very specific and technical areas. For example, a small advanced manufacturing firm that focuses on dye development, required very specific skills and experience, so they either train existing employees or hire referrals from similar companies, both locally and outside the community. This was also the case with a small actuary firm that preferred to training mid-



level to senior employees for more advanced role, while hiring new graduates when a vacancy arose. This allowed them to ensure fit with the company while avoiding the risk of investing in a more experienced, but unknown, employee.

14. Employers are less willing to train employees in the development of technical skills. Instead they recruit these skills and then train employees in the soft skills required to enhance productivity and workforce performance.

Employers that participated in this project indicated that they had little difficulty in finding those trained in the technical areas that they required (some exceptions do include at the higher end of the skilled trades and in some healthcare and scientific speciality areas). As a result, they are less willing to provide training in these areas unless it is tied to a specific job advancement for a strong employee. As one employer participant with a human resources role stated:

*We can find great candidates right out of school with the technical skills we need. So we don't provide this kind of basic training. We will upgrade, but we tend to focus on building soft skills, such as critical thinking, emotional intelligence, and leadership skills.*

The one exception to this appears to be in professional services, such as accounting, where employees can be hired without professional credentials and then engaged in technical upgrading to achieve a designation (e.g. CA, CPA).

15. There is a growing recognition that training programs for highly skilled employees needs to consider multiple factors such as culture, education background, and generational differences in reception to training paradigms.

Employers that provide training and development opportunities for employees indicated a growing recognition of the generational and cultural differences in reception and application of training programs. This has led, in some instances, to the development of more nuanced training programs that provide variation based on employee demographics and context. Large employers are more likely to be in a position to implement these kinds of training regimes, although employers of all sizes in this study indicate their understanding of these concerns. One employer representative who developed training programs for a large firm stated:

*We have had to be really creative in the development of training. There are so many difference across our employees. Millennials respond to very different tactics than our more experienced employees. So we adapt and make it interesting for all groups because we want them to actually apply what they are learning.*

16. The growth of the high-skill labour market in Peel has resulted in a reduction in the availability of good, low skill jobs in the community (such as those previously available in manufacturing). This trend has resulted in an increase in employment precarity at the low skill end of the labour market.

Employment service providers who participated in focus discussions indicated that they were seeing a growing number of individuals at the low end of the skill spectrum who were

struggling to find steady, well-paid employment in the community. These are individuals who are being displaced by the growth of a labour market that requires high-skill levels, with opportunities increasingly limited to precarious employment in retail and service industries.

This trend was not limited to low skilled individuals. In speaking to some high-skilled job seekers who faced barriers to employment (such as language, disability, or time out of the work force in a highly technical career field), they indicated that they were increasingly faced with limited opportunities in non-precarious and temporary opportunities.

17. There are limited pathways to increased skill development. Those that do exist are based on the achievement of advanced education and credentials that may not be obtainable to workers facing multiple barriers to education and employment.

Current educational and workplace pathways to skill advancement are largely based in traditional models that lead to general or specific credentialing prior to employment. In speaking to an employment service provider with expertise in literacy and adult education, this model of skill advancement can limit the opportunities for those who may have general aptitude for a specific employment pathway, but who lack some of the skills required to complete a diploma, degree, or formal apprenticeship program.

A solution to this concern could be pathways to recognition of skills that do not require official credentials. One service provider provided an example of this in the high-tech sector, where advanced computer programmers do not always need advanced degrees to secure good jobs. They simply need to demonstrate an aptitude and skill set for the requirements of the employer.

18. There are limited local supports available to fully support an individual engaging in a job search in the high-skill labour market. This is a concern given that many of these roles are highly specific, requiring targeted education, technical training, and specific experience pathways. These factors can lengthen the job search process, and thus create fiscal and other pressures in the lives of job seekers.

Both job seekers and those who were recently employed who participated in this project indicated that the financial and social pressures of being unemployed affected their job search process. This was specifically true for those seeking employment in more specific and highly specialized fields in the technology and scientific fields. Although these individuals did eventually find good jobs, the focused nature of their careers extended the job search process.

19. The trend of credentialing previously uncredentialed employment opportunities is disproportionately affecting low skilled populations who have barriers and limited pathways to employment in the high-skilled labour market.

Some employment service providers raised a growing concern with the phenomena of occupational credentialing of previously uncredentialed professions (such as hair dressing). Although these professions have often required training, they have not always required a

licensing or credentialing process be completed in order to practice. One participant indicated that this was a result of the growing demand for high and recognizable skills in the workforce, and that this trend was now affecting skilled roles across the labour market.

21. There is a growing demand for post-secondary institutions to meet the specific demands of the labour markets that they serve. Further, the role of local education institutions in supporting local labour markets needs to be clear to students, prospective students, and to community and industry partners.

Across all groups engaged in this project, it was apparent that post-secondary institutions play an important, but changing role in the development of a highly skilled local workforce.

Participants from all groups indicated that they felt that local institutions were doing a good job connecting specific programs to local needs. However, they also recognized that educational institutions cannot be expected to serve the demands of the local economy alone. One reason for this, as expressed by an employer in the actuary industry, is that professionals in the high-skill labour market rely on institutional expertise to train strong new entrants into their profession. This requirement precludes local schools from adapting to the full demands of the local labour market.

Participants did indicate that they did believe that the local community and local industries did need to work with education institutions to develop skill training pathways supportive of the local economy. These institutions could be locally based, but may not be if the pathways demand target and specific training programs.

Some participant from employment service providers indicated concern with changes occurring to post-secondary institutions as they strive to meet the demands of the high-tech, high-skilled labour market. For example, when colleges move to become degree granting institutions, thus increasing entrance and graduation requirements, this isolates segments of the population training opportunities and thus limits their possible engagement in the changing labour market.

## Summary and Recommendations

Based on this research and the data presented in this report, the following recommendations are made to guide next steps in the community:

1. The workforce in Peel and Halton is highly educated and supports a dynamic high-skill labour market in the target sectors that were the focus of this research. The one sector that appears to have undergone the most dynamic shift is the local manufacturing sector, where the impact of a reduction in the workforce has been tempered by ongoing strong economic contributions to the local economy. Therefore, the community should undertake to develop a more nuanced understanding of the changes to the local manufacturing sector, with a focus on the impact of developing advanced manufacturing in existing and emerging local industries.

2. Employers in Peel and Halton are providing training opportunities for current employees, as they develop business models that are responsive to the changing economy:

- Large employers are building these practices into their human resources programs, providing a combination of in-house training and on-the-job experience for employees. These programs increasingly recognize the nuanced training needs of their workforce, impacted by demographic and generational differences.
- Small to Medium sized businesses generally struggle to provide comprehensive employee development programs, but some are accessing external programs that have been established to assist in the skills development process, such as the Canada-Ontario Jobs Grant.
- In General, employer training programs among those that we spoke to tend to be focused on either soft skill development (i.e. communications, leadership development) or on technical skill upgrading in response to technology upgrades.

Therefore, it is recommended that:

- Efforts be undertaken to work with employers to develop a detailed understanding of their internal training programs so that a more comprehensive understanding of both training needs, programs, and of local skills misalignment can be developed.
  - Opportunities for cooperation between employers in the delivery of employee training and development should be explored. Opportunities for small to medium sized businesses to collaborate in employee development programs would reduce the burden on individual companies for training, while also encouraging community wide development of a high-skilled workforce.
  - Community leadership development programs be established to help develop local business leaders and the soft skills of the high-skill workforce in Peel and Halton. Examples include programs such as Leadership Niagara and Leadership Durham.
3. Employment Service providers in Peel and Halton provide a vast range of programs and services to both those seeking employment and to employers. These services are generally well received by those who participate fully in them. However, gaps do exist, and some individuals and businesses who may benefit from the support that these services provide are unable to access them.

Therefore,

- Research be undertaken to more fully understand the barriers that high needs job seekers face to transitioning, entering, or re-entering the high-skill workforce

in Peel and Halton. The focus should be on those with multiple social, training, and economic barriers to employment.

- Efforts to better connect Employment Service providers and employers across the community should be undertaken to ensure that employers have access to existing supports and that service providers have the most comprehensive network of opportunities for job seekers.
  - The LEPC should work with and support employment service providers in the development of new and innovative programs and services that respond to the current demands, and recruitment pathways, of the high-skill labour market. This could build on current programs, such as those that provide internship and cooperative employment opportunities. The goal should be to better align employment services that prepare individuals for employment, and the recruitment pathways currently used by employers in high-skill industries.
4. Immigrants are a strong and growing part of the local high-skill labour market, especially in Peel. These individuals come to the local workforce with advanced training in science, technology, engineering, and mathematics. However, they may lack the social and cultural experience required to be successful in the Canadian workplace. Increased awareness and recognition of the experience and credentials of internationally trained individuals has led to more opportunity for new Canadians in the local high-skill labour market. Employers are more willing than in the past to provide opportunities to these individuals; however, these opportunities are often at the entry level despite the high-skill level and experience brought by the individual employee. One employer in this study even indicated that he handles new Canadian hires in the same way that he handles new graduates, assuming that they will require the same level of support to integrate into the workplace.

Therefore,

- Local programs that provide new Canadians with support in the recruitment process, in particular those that provide opportunities for on-the-job experience in the Canadian context, should be expanded.
- Efforts should be undertaken to expand existing local opportunities for on-the-job training in the Canadian context for new Canadians. These interventions should be implemented as early in the settlement process as possible. Local settlement and employment service providers should take the lead in these efforts.
- Further research that focuses specifically on the current situation faced by new Canadians in the local high-skill labour market should be undertaken to help establish a detailed understanding of current pathways and barriers to employment for this population in the community.

5. Skilled trades are in demand in Peel and Halton, and for the most part, employers can meet the skill demands that they have in these areas. However, there is a gap in filling some of those positions that require highly trained and experienced trades people to fulfill highly technical and complex operations. These roles require trades people with advanced skill sets and experience. There are efforts being undertaken by some trades groups to address this gap in their training and apprenticeship models (for example the CWB Group<sup>62</sup>), but these efforts will not address any immediate gaps.

Therefore,

- The LEPC needs to fully engage local trades groups to ensure that there is a community wide understanding of any current or projected gaps in skilled trades. These efforts could then inform specific, community driven, programs to support the development of skilled trades in Peel and Halton.
  - The LEPC should engage and support trades groups that are developing innovation in their training and apprenticeship programs, with a focus on developing locally relevant programs to support industry needs in Peel and Halton.
6. Those who are unemployed and who have a gap or lag in skills that are relevant to the local high-skill labour market have little external support for training or education. They face the prospect of paying for training and upgrading themselves, which may be difficult depending on their income source, or taking on roles that fall below their base skill level.

Therefore,

- Employment and social service providers should ensure that there is comprehensive, community-wide understanding and cooperation in regard to the training opportunities and supports available to low-income and unemployed individuals.
  - The LEPC should convene a local group of employment service providers, social service providers, employers, and education institutions and government officials to explore this issue further, map out existing opportunities, and explore new ideas to address this concern.
  - Opportunities for community-based skill development and upgrading should be explored and supported.
7. Employers in Peel and Halton generally recruit externally through some established pathways, including directly from education institutions for entry level positions (especially in healthcare, professional, and information technology industries), and through established professional networks (including via employee referral programs) for mid-career and senior management roles. These pathways are difficult for those job

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<sup>62</sup> Canadian Welders Bureau

seekers who are disconnected from local networks to access, especially for those who are seeking work at the mid-career level.

Therefore,

- The LEPC should work with existing business and industry groups in Peel and Halton (e.g. chambers of commerce) to develop networking and industry engagement opportunities that allow all available high-skill workers opportunity to access the labour market.
  - Employment services that connect mid-career professionals to employers via internship and other workplace placement programs should be expanded.
8. The growth of the high-skill labour market, especially in the manufacturing sector, has reduced the available opportunities for those with low or limited skills. The latter issue is forcing low skilled workers into increasingly precarious role in the service and retail sector.

Therefore,

- The LEPC should explore opportunities to advocate for improvement in these low-skill sectors, including support for more full-time roles, flexibility in working hours, and higher wages. Further, the LEPC should support efforts to educate low skill workers on their employment rights and responsibilities.
- Further research on pathways to skill development for low skill individuals should be undertaken.
- Community programs that support incremental skill development (e.g. Career Ladders) should be explored and developed.

## Concluding Statement

This research and report has attempted to fill a basic gap in the available local labour market information on high-skill jobs and the high-skill workforce. The project has not been designed to answer all questions, but does provide a good starting point for analysis of existing conditions and experiences. This will allow for the development of targeted actions to address some of the issues identified, but should also guide more detailed explorations and research on the high-skill labour market in Peel and Halton.



## Appendix A: Sector and Industry Impact Analysis Summary

1. The Tables presented below provide an impact analysis of 3 target sectors for the Peel-Halton High-skill Jobs Research Project. These sectors are, (1) Manufacturing, (2) Finance and Insurance, and (3) Professional, Scientific, and Technical Services. Data was gathered using Scott's Directories Ontario Business Prospector (2014).
2. The purpose of this analysis was to provide guidance to the selection of target industries, and ultimately businesses and companies, for the qualitative research process being employed by this project.
3. By completing a detailed impact analysis, the research team can engage in a targeted recruitment process. This will allow the research team to ensure that research efforts are focused on the most relevant respondents to the community in question. This is a standard recruitment approach in grounded qualitative research.
4. A final target sector for this project, Health Care and Social Assistance, is not presented in the table data. This is because the Scott's directory for the selected Region's had insufficient data on the businesses in this sector to complete an analysis here. Other methods will be employed to determine the appropriate target industries for this research project.
5. Details on the analysis framework are provided below:
  - a. As a first step, a database for each sector was developed by gathering the relevant sub-sector codes and sorting for geography by Census Division (i.e. Region of Peel, Region of Halton).
  - b. Sectors, sub-sectors, and industries were identified using the North American Industry Classification System (NAICS) for Canada.
  - c. The database for each sub-sector or industry was populated with 3 key data points for each of the 3 target sectors. This included:
    - Data on the number of employees per business in each sub-sector or industry;
    - The square footage of space occupied by businesses in each sub-sector or industry, and;
    - The annual sales range per businesses in each sub-sector or industry.
      - As the dataset provided only a range for sale per business, a numerical Sales Score was assigned to each range by the research team to provide a weighting mechanism to the analysis of sales in each sub-sector and industry (see Table 5 below for this weighting matrix).
  - d. In addition to these 3 data points, 3 additional data points were created by the research team to assist in the analysis of each sub-sector or industry impact. This includes:
    - A tabulation of the number of businesses per sub-sector or industry;
    - The calculation of the Average Sales Score for each sub-sector or industry, and;
    - The calculation of the Median Sales Score for each sub-sector or industry.
  - e. These 6 data points are identified in the tables below as:
    - Number of Businesses
    - Number of Employees
    - Square Feet Occupied
    - Sales Score
    - Average Sales Score
    - Median Sales Score
  - f. Given the size and complexity of the Manufacturing Sector, the analysis was completed in 2 stages:
    - The first stage assessed the local impact of 21 manufacturing sub-sectors. Upon completion of this stage, the top 50% of these subsectors (i.e. those with the highest impact) were identified and industries from these sub-sectors were selected for analysis in stage 2.
    - The second stage assessed the local impact of the selected manufacturing industries.
  - g. Once each data set was tabulated, a weighted score of 1 – 4 was assigned to each data point for each sub-sector or industry. This scoring was based on a ranking analysis that ranked the data points for sub-sector or industry by quartile, with those above the 75<sup>th</sup> percentile scoring highest (4) and those below the 25<sup>th</sup> percentile scoring lowest (1).
    - Non-responses were assigned a score of 0 and these data points were removed from the sub-sector and industry analysis.
  - h. After all weight scores were assigned, a total Impact Score (out of 24) each sub-sector or industry group was calculated, and then sub-sectors r industries ranked accordingly. The tables presented below show the outcome of this analysis for each of the 3 specified sectors.
  - i. To finalize the selection process, the 90<sup>th</sup>, 75<sup>th</sup>, and 50<sup>th</sup> (median) percentiles for the Impact Scores for each sub-sector and industry in each sector table was calculated.
6. Now, based on the calculations outlined above, we are recommending that research recruitment efforts first focus on those industries with an Impact Score in the 90<sup>th</sup> for each of the target sectors, and then move to those with an impact score between the 75<sup>th</sup> and 90<sup>th</sup> percentiles as required to complete the research process. Based on this, we are recommending that we focus on companies in the following industries in each target sector:
  - a. Manufacturing:

**331317-Aluminum Rolling, Drawing, Extruding and Alloying**  
**336110-Automobile and Light-Duty Motor Vehicle Manufacturing**



**325999-All Other Miscellaneous Chemical Product Manufacturing**  
**336410-Aerospace Product and Parts Manufacturing**  
**311615-Poultry Processing**  
**325410-Pharmaceutical and Medicine Manufacturing**  
**332321-Metal Window and Door Manufacturing**  
**334410-Semiconductor and Other Electronic Component Manufacturing**  
**336390-Other Motor Vehicle Parts Manufacturing**  
**311111-Dog and Cat Food Manufacturing**  
**311614-Rendering and Meat Processing from Carcasses**  
**325610-Soap and Cleaning Compound Manufacturing**  
**326198-All Other Plastic Product Manufacturing**  
**332319-Other Plate Work and Fabricated Structural Product Manufacturing**  
**332999-All Other Miscellaneous Fabricated Metal Product Manufacturing**  
**333920-Material Handling Equipment Manufacturing**  
**334220-Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing**  
**334512-Measuring, Medical and Controlling Devices Manufacturing**

b. Finance and Insurance:

**522220-Sales Financing**  
**524111-Direct Individual Life, Health and Medical Insurance Carriers**  
**523930-Investment Advice**  
**524129-Other Direct Insurance (except Life, Health and Medical) Carriers**

c. Professional, Scientific, and Technical Services:

**541690-Other Scientific and Technical Consulting Services**  
**541330-Engineering Services**  
**541380-Testing Laboratories**  
**541710-Research and Development in the Physical, Engineering and Life Sciences**

d. Health Care and Social Assistance:

This sector was not analyzed through this process due to a lack of data available to complete the analysis as described above.

In lieu of this, we do recommend the following:

- That we focus on the 3 healthcare sub-sectors that make up this sector (Ambulatory Healthcare Services, Hospitals, and Nursing and Residential Care Facilities), leaving social assistance for future analysis.
- That within these three sub-sectors, we focus on three industry groups that best fit with the balance of the analysis being developed here (i.e. those industry groups most likely to require large scale engagement and recruitment if high-skill employees), including:

**6215 - Medical and Diagnostic Laboratories**  
**6221 - General Medical and Surgical Hospitals**  
**6231 - Nursing Care Facilities**

**TABLE 1: PEEL-HALTON MANUFACTURING SUB-SECTOR IMPACT ANALYSIS**

NAICS	Subsector	# of Businesses	# of Employees	Square Feet Occupied	Sales Score	Average Sales Score	Median Sales Score	IMPACT SCORE	
311	Food manufacturing	4	4	4	4	4	3	2	21
325	Chemical manufacturing	3	3	3	3	4	3	2	18
332	Fabricated metal product manufacturing	4	4	4	4	4	1	1	18
333	Machinery manufacturing	4	4	4	4	4	1	1	18
336	Transportation equipment manufacturing	2	4	4	4	3	3	2	18
326	Plastics and rubber products manufacturing	3	3	3	4	4	2	1	17
331	Primary metal manufacturing	2	2	2	3	2	3	3	15
334	Computer and electronic product manufacturing	3	4	2	2	3	2	1	15
322	Paper manufacturing	2	2	2	3	2	2	3	14
323	Printing and related support activities	4	3	3	2	4	1	0	14
337	Furniture and related product manufacturing	3	3	3	3	3	1	1	14
339	Miscellaneous manufacturing	4	2	2	3	3	1	1	14
324	Petroleum and coal product manufacturing	1	2	2	1	1	4	4	13
327	Non-metallic mineral product manufacturing	2	3	2	2	2	2	1	12
335	Electrical equipment, appliance and component manufacturing	3	2	2	2	2	2	1	12
312	Beverage and tobacco product manufacturing	1	1	1	1	1	4	3	11
321	Wood product manufacturing	2	1	1	2	2	1	1	9
313	Textile mills	1	1	1	1	1	1	1	6
314	Textile product mills	1	1	1	1	1	0	0	4
315	Clothing manufacturing	1	1	1	1	0	0	0	3
316	Leather and allied product manufacturing	0	0	0	0	1	0	0	1

90th Percentile

75th Percentile

Median

**TABLE 2: PEEL-HALTON MANUFACTURING INDUSTRY IMPACT ANALYSIS**

PrimaryNAICS	# of Businesses	# of Employees	Square Feet Occupied	Sales Score	Average Sales Score	Median Sales Score	IMPACT SCORE
1 331317-Aluminum Rolling, Drawing, Extruding and Alloying	2	4	4	4	4	4	22
2 336110-Automobile and Light-Duty Motor Vehicle Manufacturing	2	4	4	4	4	4	22
3 325999-All Other Miscellaneous Chemical Product Manufacturing	3	4	4	4	4	3	21
4 336410-Aerospace Product and Parts Manufacturing	2	4	4	4	4	4	21
5 311615-Poultry Processing	2	4	2	4	4	4	20
6 325410-Pharmaceutical and Medicine Manufacturing	3	4	4	4	4	3	20
7 332321-Metal Window and Door Manufacturing	3	4	4	4	4	3	20
8 334410-Semiconductor and Other Electronic Component Manufacturing	3	4	4	4	4	3	20
9 336390-Other Motor Vehicle Parts Manufacturing	2	4	4	4	4	4	20
10 311111-Dog and Cat Food Manufacturing	1	3	4	3	4	4	19
11 311614-Rendering and Meat Processing from Carcasses	2	4	4	4	4	3	19
12 325610-Soap and Cleaning Compound Manufacturing	3	4	4	4	4	3	19
13 326198-All Other Plastic Product Manufacturing	4	4	4	4	4	2	19
14 332319-Other Plate Work and Fabricated Structural Product Manufacturing	4	4	4	4	4	2	19
15 332999-All Other Miscellaneous Fabricated Metal Product Manufacturing	4	4	4	4	4	2	19
16 333920-Material Handling Equipment Manufacturing	4	4	4	4	4	2	19
17 334220-Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing	2	4	3	4	4	4	19
18 334512-Measuring, Medical and Controlling Devices Manufacturing	4	4	4	4	4	2	19
19 311919-Other Snack Food Manufacturing	1	3	4	2	4	4	18
20 311940-Seasoning and Dressing Manufacturing	2	4	4	3	3	2	18
21 311990-All Other Food Manufacturing	3	4	3	4	4	2	18
22 332319-Other Printing	4	4	4	4	4	1	18
23 325210-Resin and Synthetic Rubber Manufacturing	1	3	3	3	4	4	18
24 325510-Paint and Coating Manufacturing	3	3	4	4	4	2	18
25 326114-Plastic Film and Sheet Manufacturing	2	3	4	3	4	2	18
26 331490-Non-Ferrous Metal (except Copper and Aluminum) Rolling, Drawing, Extruding and Alloying	1	3	3	3	4	4	18
27 332329-Other Ornamental and Architectural Metal Product Manufacturing	4	4	4	4	4	1	18
28 332510-Hardware Manufacturing	2	3	4	3	3	3	18
29 332710-Machine Shops	4	4	4	4	4	1	18
30 332810-Coating, Engraving, Cold and Heat Treating and Allied Activities	4	4	4	4	4	1	18
31 332910-Metal Valve Manufacturing	3	3	4	4	4	2	18
32 333416-Heating Equipment and Commercial Refrigeration Equipment Manufacturing	3	4	4	4	4	2	18
33 333519-Other Metalworking Machinery Manufacturing	4	4	4	4	4	1	18
34 333990-All Other General-Purpose Machinery Manufacturing	4	4	4	4	4	1	18
35 336370-Motor Vehicle Metal Stamping	1	4	2	3	4	4	18
36 339950-Sign Manufacturing	4	4	4	4	4	1	18
37 311511-Fluid Milk Manufacturing	1	3	3	2	4	4	17
38 311821-Cookie and Cracker Manufacturing	1	3	3	2	4	4	17
39 325190-Other Basic Organic Chemical Manufacturing	1	3	2	3	4	4	17
PrimaryNAICS	# of Businesses	# of Employees	Square Feet Occupied	Sales Score	Average Sales Score	Median Sales Score	IMPACT SCORE
40 331110-Iron and Steel Mills and Ferro-Alloy Manufacturing	2	3	3	4	3	2	17
41 332210-Cutlery and Hand Tool Manufacturing	3	4	4	4	1	1	17
42 333310-Commercial and Service Industry Machinery Manufacturing	3	4	3	4	2	1	17
43 336120-Heavy-Duty Truck Manufacturing	1	4	2	2	4	4	17
44 339110-Medical Equipment and Supplies Manufacturing	4	4	3	4	1	1	17
45 339990-All Other Miscellaneous Manufacturing	3	4	4	4	1	1	17
46 311224-Oilseed Processing	1	2	3	2	4	4	16
47 311420-Fruit and Vegetable Canning, Pickling and Drying	2	3	2	3	3	3	16
48 325189-All Other Basic Inorganic Chemical Manufacturing	2	2	3	3	3	3	16
49 326111-Plastic Bag and Pouch Manufacturing	2	3	3	3	3	2	16
50 326160-Plastic Bottle Manufacturing	1	3	3	3	3	3	16
51 326196-Plastic Window and Door Manufacturing	1	3	3	2	4	3	16
52 331210-Iron and Steel Pipes and Tubes Manufacturing from Purchased Steel	1	2	2	4	4	3	16
53 333413-Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing	3	4	3	3	2	1	16
54 333619-Other Engine and Power Transmission Equipment Manufacturing	2	3	3	3	3	2	16
55 333910-Pump and Compressor Manufacturing	3	3	3	4	2	1	16
56 334110-Computer and Peripheral Equipment Manufacturing	2	3	3	3	3	2	16
57 311410-Frozen Food Manufacturing	1	3	3	2	3	3	15

PrimaryNAICS	# of Businesses	# of Employees	Square Feet Occupied	Sales Score	Average Sales Score	Median Sales Score	IMPACT SCORE
58 326140-Polystyrene Foam Product Manufacturing	1	3	3	3	3	2	15
59 331221-Cold-Rolled Steel Shape Manufacturing	1	2	3	2	4	3	15
60 331523-Non-Ferrous Die-Casting Foundries	1	3	3	2	4	2	15
61 332118-Stamping	2	3	4	3	2	1	15
62 332311-Prefabricated Metal Building and Component Manufacturing	1	3	4	3	2	2	15
63 332410-Power Boiler and Heat Exchanger Manufacturing	2	3	2	2	3	3	15
64 333120-Construction Machinery Manufacturing	2	3	3	3	2	2	15
65 336360-Motor Vehicle Seating and Interior Trim Manufacturing	1	3	1	2	4	4	15
66 311225-Fat and Oil Refining and Blending	1	1	2	2	4	4	14
67 311920-Coffee and Tea Manufacturing	1	3	3	2	3	2	14
68 323114-Quick Printing	3	3	2	4	1	1	14
69 325520-Adhesive Manufacturing	1	2	3	2	3	3	14 Median
70 311211-Flour Milling	1	2	1	2	4	3	13
71 311515-Butter, Cheese, and Dry and Condensed Dairy Product Manufacturing	1	2	1	2	4	3	13
72 311611-Animal (except Poultry) Slaughtering	1	2	1	2	4	3	13
73 311814-Commercial Bakeries and Frozen Bakery Product Manufacturing	2	3	2	3	2	1	13
74 323120-Support Activities for Printing	2	3	3	3	1	1	13
75 325120-Industrial Gas Manufacturing	1	2	0	2	4	4	13
76 325130-Synthetic Dye and Pigment Manufacturing	2	2	2	2	3	3	13
77 325314-Mixed Fertilizer Manufacturing	1	2	2	2	4	2	13
78 326122-Plastic Pipe and Pipe Fitting Manufacturing	1	2	1	2	4	3	13
79 326193-Motor Vehicle Plastic Parts Manufacturing	1	3	3	2	3	1	13
80 332720-Turned Product and Screw, Nut and Bolt Manufacturing	2	3	3	3	1	1	13
81 332991-Ball and Roller Bearing Manufacturing	1	2	3	2	3	2	13
82 336330-Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing	1	2	2	1	4	3	13
83 311930-Flavouring Syrup and Concentrate Manufacturing	1	2	2	2	3	2	12
84 323113-Commercial Screen Printing	3	2	2	3	1	1	12
85 323115-Digital Printing	3	2	2	3	1	1	12
86 323116-Manifold Business Forms Printing	1	2	2	1	3	3	12
87 325620-Toilet Preparation Manufacturing	2	3	2	2	2	1	12
88 326121-Unlaminated Plastic Profile Shape Manufacturing	1	2	0	1	4	4	12
89 331420-Copper Rolling, Drawing, Extruding and Alloying	1	1	1	1	4	4	12
90 333611-Turbine and Turbine Generator Set Unit Manufacturing	1	1	1	1	4	4	12
91 334290-Other Communications Equipment Manufacturing	1	3	2	2	2	2	12
92 339910-Jewellery and Silverware Manufacturing	2	2	2	3	2	1	12
93 339920-Sporting and Athletic Goods Manufacturing	2	3	2	3	1	1	12
94 311221-Wet Corn Milling	1	1	0	1	4	4	11
95 325320-Pesticide and Other Agricultural Chemical Manufacturing	1	1	1	1	4	3	11
96 325910-Printing Ink Manufacturing	1	2	2	2	2	2	11
97 326220-Rubber and Plastic Hose and Belting Manufacturing	1	2	2	2	2	2	11
98 331222-Steel Wire Drawing	1	1	1	1	4	3	11
99 332314-Concrete Reinforcing Bar Manufacturing	1	2	1	1	3	3	11
100 333511-Industrial Mould Manufacturing	2	2	2	3	1	1	11
101 336211-Motor Vehicle Body Manufacturing	1	2	2	2	2	2	11
102 311230-Breakfast Cereal Manufacturing	1	1	0	1	4	3	10
103 311340-Non-Chocolate Confectionery Manufacturing	1	2	1	2	2	2	10
104 311811-Retail Bakeries	2	2	2	2	1	1	10
105 326150-Urethane and Other Foam Product (except Polystyrene) Manufacturing	1	2	2	2	2	1	10
106 326290-Other Rubber Product Manufacturing	2	2	2	2	1	1	10
107 331514-Steel Foundries	1	2	2	2	2	1	10
108 331529-Non-Ferrous Foundries (except Die-Casting)	1	2	3	2	1	1	10
109 332439-Other Metal Container Manufacturing	1	1	1	1	3	3	10
110 333130-Mining and Oil and Gas Field Machinery Manufacturing	1	2	2	2	2	1	10
111 334610-Manufacturing and Reproducing Magnetic and Optical Media	1	2	1	2	2	2	10
112 336310-Motor Vehicle Gasoline Engine and Engine Parts Manufacturing	1	2	1	2	3	1	10
113 336510-Railroad Rolling Stock Manufacturing	1	1	2	1	3	2	10
114 326191-Plastic Plumbing Fixture Manufacturing	1	1	1	1	3	2	9
115 331511-Iron Foundries	1	1	1	1	3	2	9

PrimaryNAICS	# of Businessses	# of Employees	Square Feet Occupied	Sales Score	Average Sales Score	Median Sales Score	IMPACT SCORE
116 332420-Metal Tank (Heavy Gauge) Manufacturing	1	1	1	2	2	1	8
117 332431-Metal Can Manufacturing	1	1	1	0	1	3	8
118 336350-Motor Vehicle Transmission and Power Train Parts Manufacturing	1	1	1	2	2	1	8
119 326210-Tire Manufacturing	1	1	1	0	1	2	7
120 336212-Truck Trailer Manufacturing	1	1	1	1	1	2	7
121 311710-Seafood Product Preparation and Packaging	1	1	1	1	1	1	6
122 311911-Roasted Nut and Peanut Butter Manufacturing	1	1	1	1	1	1	6
123 331313-Primary Production of Alumina and Aluminum	1	1	1	1	1	1	6
124 332611-Spring (Heavy Gauge) Manufacturing	1	1	1	1	1	1	6
125 332619-Other Fabricated Wire Product Manufacturing	1	1	1	1	1	1	6
126 333110-Agricultural Implement Manufacturing	1	1	1	1	1	1	6
127 334210-Telephone Apparatus Manufacturing	1	1	1	1	1	1	6
128 336320-Motor Vehicle Electrical and Electronic Equipment Manufacturing	1	1	1	1	1	1	6
129 336340-Motor Vehicle Brake System Manufacturing	1	1	1	1	1	1	6
130 336612-Boat Building	1	1	1	1	1	1	6
131 336990-Other Transportation Equipment Manufacturing	1	1	1	1	1	1	6
132 339930-Doll, Toy and Game Manufacturing	1	1	1	1	1	1	6
133 339940-Office Supplies (except Paper) Manufacturing	1	1	1	1	1	1	6
134 311119-Other Animal Food Manufacturing	1	1	0	1	1	1	5
135 325991-Custom Compounding of Purchased Resins	1	1	0	1	1	1	5
136 334310-Audio and Video Equipment Manufacturing	1	1	0	1	1	1	5

**TABLE 3: PEEL-HALTON FINANCE & INSURANCE INDUSTRY IMPACT ANALYSIS**

Primary NAICS	# of Businessses	# of Employees	Square Feet Occupied	Sales Scores	Average Sales Score	Median Sales Score	IMPACT SCORE
522220-Sales Financing	4	4	3	4	4	3	22
524111-Direct Individual Life, Health and Medical Insurance Carriers	4	4	4	4	3	2	21
523930-Investment Advice	4	4	4	4	2	2	20
524129-Other Direct Insurance (except Life, Health and Medical) Carriers	3	4	1	4	4	4	20 90th Percentile
522111-Personal and Commercial Banking Industry	4	4	4	4	1	1	18
522299-All Other Non-Depository Credit Intermediation	3	3	3	3	3	3	18
523120-Securities Brokerage	3	3	3	3	3	3	18
524122-Direct, Private, Automobile Insurance Carriers	2	4	2	3	4	3	18
524210-Insurance Agencies and Brokerages	4	4	4	4	1	1	18 75th Percentile
523920-Portfolio Management	3	4	2	3	3	2	17
522310-Mortgage and Non-mortgage Loan Brokers	4	3	3	3	2	1	16
524123-Direct, Public, Automobile Insurance Carriers	1	4	3	2	3	2	15
524124-Direct Property Insurance Carriers	2	3	1	2	3	3	14 Median
523990-All Other Financial Investment Activities	3	2	2	2	2	2	13
524291-Claims Adjusters	3	3	2	3	1	1	13
522390-Other Activities Related to Credit Intermediation	2	4	1	2	2	1	12
523130-Commodity Contracts Dealing	2	2	1	2	2	2	11
524299-All Other Insurance Related Activities	2	2	2	2	1	1	10
522130-Local Credit Unions	3	2	1	1	1	1	9
523910-Miscellaneous Intermediation	1	1	1	1	2	2	8
522329-Other Financial Transactions Processing and Clearing House Activities	1	1	0	1	2	2	7
524112-Direct Group Life, Health and Medical Insurance Carriers	1	1	0	1	2	2	7
524125-Direct Liability Insurance Carriers	1	1	0	1	2	2	7
522321-Central Credit Unions	1	1	0	1	1	1	5
523110-Investment Banking and Securities Dealing	1	0	0	0	0.0	0	1

**TABLE 4: PEEL-HALTON PROFESSIONAL, SCIENTIFIC, & TECHNICAL SERVICES INDUSTRY IMPACT ANALYSIS**

Primary NAICS	# of Businesses	# of Employees	Square Feet Occupied	Sales Score	Average Sales Score	Median Sales Score	IMPACT SCORE
541690-Other Scientific and Technical Consulting Services	4	4	4	4	4	4	24
541330-Engineering Services	4	4	4	4	4	3	23
541380-Testing Laboratories	3	4	4	4	4	4	23
541710-Research and Development in the Physical, Engineering and Life Sciences	3	4	4	4	4	3	22
541611-Administrative Management and General Management Consulting Services	4	4	4	4	4	3	21
541619-Other Management Consulting Services	4	4	4	4	4	3	21
541620-Environmental Consulting Services	3	3	3	3	4	4	21
541110-Offices of Lawyers	4	4	4	4	4	2	20
541212-Offices of Accountants	4	4	4	4	4	2	20
541514-Computer Systems Design and Related Services (Except Video Game Des	4	4	4	4	0	0	12
541430-Graphic Design Services	4	3	4	4	4	2	19
541940-Veterinary Services	4	4	4	3	4	2	19
541215-Bookkeeping, Payroll and Related Services	2	3	3	2	3	4	18
541612-Human Resources Consulting Services	3	3	3	2	3	3	18
541860-Direct Mail Advertising	2	3	3	3	3	3	18
541310-Architectural Services	3	3	3	3	3	2	16
541320-Landscape Architectural Services	2	3	3	2	3	3	15
541810-Advertising Agencies	3	3	3	2	3	2	15
541910-Marketing Research and Public Opinion Polling	1	3	3	2	1	4	15
541370-Surveying and Mapping (except Geophysical) Services	1	2	2	2	2	3	14
541410-Interior Design Services	3	2	2	2	3	1	13
541990-All Other Professional, Scientific and Technical Services	3	2	2	2	3	1	13
541190-Other Legal Services	3	2	2	1	3	1	12
541350-Building Inspection Services	2	2	2	2	2	2	12
541920-Photographic Services	3	2	2	2	2	1	12
541930-Translation and Interpretation Services	2	2	2	2	2	2	12
541360-Geophysical Surveying and Mapping Services	1	1	1	1	1	3	11
541850-Display Advertising	1	1	3	3	1	2	11
541490-Other Specialized Design Services	1	2	2	2	1	2	10
541213-Tax Preparation Services	2	1	1	1	2	1	9
541420-Industrial Design Services	1	1	1	2	1	2	9
541840-Media Representatives	1	1	1	1	1	2	9
541340-Drafting Services	1	1	1	1	1	2	8
541820-Public Relations Services	1	1	1	1	1	2	8
541870-Advertising Material Distribution Services	1	1	1	1	1	1	7
541899-All Other Services Related to Advertising	1	1	1	1	1	1	7

## Appendix B: Interview and Focus Group Participant Selection Matrix

### Employer Interviews

The following Matrix has been established to assist in the selection of 20 representatives of local high-skill employers in the target industries. The purpose of this Matrix is to assist the research team in narrowing our participant recruitment to focus on those industries that best represent the target sectors in Peel and Halton.

Selection of potential sector participants will be based on the assessment of:

1. Local Labour Market Impact (determined by the assessment of information input into the Matrix in Table 1 below);
2. Their need for High-skill employees (as defined by the agreed upon definition for this project);
3. Their fit into the diversification Matrix as outlined in Table 2 below.

Once this assessment is completed, a shortlist of potential employer participants will be developed. This will be reviewed with the PHWDG team to ensure fit and familiarity, which will facilitate engagement in the interview process.

We are suggesting a Matrix that will assist in determining the level of impact of the subsectors and industry groups in each sector category. Level of impact is defined in terms of labour market impact, so those factors that represent the labour market directly are weighted higher than the other considered factors. This is reflected in the proposed scoring categories.

The proposed level of analysis is at the NACIS Subsector Level.

<b>Table 1: Labour Market Impact Matrix</b>					
<b>Sector</b>	<b># of Businesses (by Subsector)</b> 1 = < 50 businesses 2 = 50 – 100 businesses 3 = > 100 businesses	<b># of Employees</b> 1 = 1 – 99 employees 2 = 100 – 499 employees 3 = > 500 employees	<b>Facility Size</b> 1 = < 10000 sq. feet 2 = 10000 – 50000 sq. feet 3 = > 50000 sq. feet	<b>Sales</b> 1 = < \$1,000,000 2 = \$1,000,000 - \$5,000,000 3 = > \$5,000,000	<b>Impact Score</b> 3 - 9
Finance and Insurance					
Manufacturing					
Health Care & Social Assistance					
Professional, Scientific, & Technical					

The goal of the Diversity Matrix is to ensure representation of as many business types in the research process as possible.

<b>Table 2: Participant Diversity Matrix</b>				
<b>Sector</b>	<b>Location (municipality)</b>	<b>Size (by # of employees)</b> 1 = 1 – 99 employees 2 = 100 – 499 employees 3 = > 500 employees	<b>Subsector or Industry Group</b> (based on an assessment of the primary subsectors or groups in Peel /Halton, top 5)	<b>Are there other categories that you feel need to be represented in our sample?</b>
Finance and Insurance				
Manufacturing				
Health Care & Social Assistance				
Professional, Scientific, & Technical				

### Recent Employees

As agreed upon by the group, as recent employee will be defined in this project as *an employee within the high-skilled workforce (subject to definition that we all agree on) who has been employed in their current role for no more than two years.*

The general recruitment strategy will use word of mouth and connections with local employers, employment service providers, and via community spaces and online forums. However, some input from the Committee would be appreciated to ensure that the research team is fully aware of local avenues for recruitment.

We will use a general diversity matrix to assess participants and ensure that we get a cross section of the group represented in the research. Criteria will include:

1. Location of workplace
2. Sector/Subsector/Industry Group

3. Career Tenure (e.g. time since graduation, or time in current role)
4. Those with and without formal credentials
5. Those employed by Employer Participants and those employed by other employers

#### **Job Seekers**

Job Seekers will be defined as those individuals who are actively seeking employment in high-skill occupations at local employers representative of the target sectors/industry groups.

These individuals will be recruited for the focus groups through community partners in the employment services, placement, and temporary work industries. We may also want to recruit recent or upcoming graduates who will be entering this labour market from local post-secondary institutions. We will also use some advertising and social media strategies to engage those who may not be accessing formal job search support services.

We will use a general diversity matrix to assess participants and ensure that we get a cross section of the group represented in the research. Criteria will include:

1. Location of residence
2. Sector/Subsector/Industry Group targeted for employment
3. Career Tenure (e.g. time since graduation, or time in current role)
4. Time out of work
5. Those with and without formal credentials
6. Those who have accessed a broad range of services and supports, versus those who have not.

#### **Employment Service Providers**

Employment Service providers will be defined to include non-profit/government employment service programs (e.g. EO providers), as well as local for profit recruiters, and placement organizations that serve the high-skill labour market in Peel and Halton. Examples of the latter categories include Robert Half in the Finance and Insurance Sector, and Onico Solutions in the IT industry.

Recruitment will be via direct communication with relevant employees in the target organizations.

We will use a general diversity matrix to assess participants and ensure that we get a cross section of the group represented in the research. Criteria will include:

1. Location of business/service
2. Sector/Subsector/Industry Group supported
3. Non-Profit and For-Profit services
4. Type of service provided



# Appendix C: Employer Interview Guide

## Introduction:

Are you okay if I record our discussion? This will only be for the research team at my company as all your responses are confidential. All recordings will only be kept by us for the duration of the project.

## Consent to record? Yes/No

## STATE DATE/TIME AND PLACE OF INTERVIEW. HAVE PARTICIPANT STATE NAME, COMPANY AND JOB TITLE.

I want to begin by thanking you for taking the time to speak with me today. The purpose of this interview is to listen to your perspective on the high-skill labour market in Peel/Halton.

You have completed a brief preliminary questionnaire, thank you. This provides us with some background on your company/organization.

This interview will last for about 45 minutes, depending on the length of your responses. I do have a guide for my questions, but the process will be informal as we just have a conversation. As you respond I ask you to think about the experiences of your current company in this community.

This interview is one of twenty that we are doing with local employers. The purpose of these interviews is to (1) help the Peel-Halton Local Employment Planning Council to develop a deeper and more complete understanding of the High-skill labour market in Peel and Halton, focusing on the factors that are driving the increased demand for these roles locally, and to help us gain an understanding of the pathways available to High-skill job opportunities in Peel and Halton.

I want to remind you that your participation is voluntary. If there are any questions that you do not want to answer, for whatever reason, just tell me and we will move on. If you wish to end the interview at any time before we are done, just let me know and we will do so.

All your responses are confidential and will not be attributed to you in anyway.

## Do you understand this? Yes/No

Do you have any questions before we begin?

## A1.2 Defining High-skill Jobs, High-skill Needs, and Challenges

- (1) To begin, I would like to ask you, in your own words, how would you define a high-skill job?
  - a. Probe 1: What are the defining characteristics of a high-skill worker in your company/industry (sector)?
  - b. Probe 2: What are the general skill sets required by these workers in your company/industry (sector)?
  - c. Probe 3: What are the specific skill sets required by these workers in your company/industry (sector)?
  - d. Probe 4: Have the defining characteristics of high-skill jobs changed over time in your company/industry (sector)?
    - i. Probe 4.1: If yes, how so?
- (2) As someone who manages/oversees the hiring process, in your opinion, does your company face challenges when trying to find employees with the skill sets that you require?
  - a. Probe 1: What is the nature of these challenges?
  - b. Probe 2: Are there specific roles/skills that are harder to fill than others?
  - c. Probe 3: How has your company managed/overcome these challenges?
    - i. Probe 3.1 What strategies have you used to address the challenges in filling high-skill positions in your organization?
  - d. Probe 4: Do you believe that these challenges are general in your industry (sector)?
    - i. Probe 4.1: Do you think that there is a difference in your company's experience in recruiting for high-skill jobs as compared to other businesses in your sector?
      1. Probe 4.1.1: If yes, why do you think that your experience is different?

2. Probe 4.1.2: If no, why do you think that your industry (sector) struggles to fill these roles?
- e. Probe 5: Do you think that your industry/sector faces challenges in hiring for high-skill jobs that are not faced by other industries (sectors)?
  - i. Probe 5.1: If yes, what are these unique challenges?

### **A1.3 Workforce Skills**

- (3) Thinking about the workforce in general, in your experience are prospective employees coming to your company and industry with the skills that they require to be successful?
  - a. Probe 1: If not, what do you do, if anything, to build these skills and ensure success?
  - b. Probe 2: If yes, what do you think is the reason for this readiness (i.e. what are these prospective employees doing to ensure success)?
- (4) In general, what kinds of post-secondary training do high-skill workers require (or come to your company) to be successful in your company?
  - a. Probe 1: Do you believe, in general, that the local workforce (in Peel and Halton) is coming to your organization with these credentials?
- (5) Outside of specific credential requirements, what post secondary training do you believe helps to make your high-skill employees more successful?
  - a. Probe 1: Do you believe, in general, that the local workforce (in Peel and Halton) is coming to your organization with these skills?
- (6) What kinds of soft (non-academic/training) skills do high-skill workers require to be successful in your company?
  - a. Probe 1: Do you believe, in general, that the local workforce (in Peel and Halton) is coming to your organization with these skills?
- (7) In your opinion, are current post secondary program from which you draw your high-skill workforce relevant to your company's and industry's needs?
  - a. Probe 1: If no, what can be done to address this? (what can schools do?)
  - b. Probe 2: If no, what is the potential impact on your company/industry?

### **A1.4 Recruitment and Retention of High-skill Workers**

- (8) Looking at your company's process, how do you attract and recruit high-skill employees?
  - a. Probe 1: What is your general recruitment strategy?
  - b. Probe2: What is the specific recruitment process that you follow?
  - c. Probe 3: What is your general rate of success?
- (9) Thinking about the local workforce (in Peel and Halton), do you believe that there is enough local talent with the high-skills that your company needs available to you?
  - a. Probe 1: If no, how have you addressed this gap in your recruitment process?
- (10) Looking at your company's process, how do you ensure that you retain high-skill employees?
  - a. Probe 1: What is your general retention strategy?
  - b. Probe2: What is the specific retention process that you follow?
  - c. Probe 3: What is your general rate of success in retaining these employees (turnover)?
- (11) Do you believe that there are any additional steps/strategies that your company/industry could employ to better attract the high-skill workforce that you require?
  - a. Probe 1: If yes, what are these steps/strategies?

- b. Probe 2: Who may need to be involved in these steps/strategies?

#### **A1.5 Community Attraction and Retention**

- (12) In your opinion, does the community that you are in affect your ability to recruit and retain your high-skill workforce?
  - a. Probe 1: If yes, how so (i.e. what specific community factors affect this ability)?
- (13) In your opinion, what can be done to improve the community's (Region's) ability to develop, attract and retain a high-skill workforce?
  - a. Probe 1: What community wide initiatives/strategies could be employed to support the development of a high-skill workforce that would help your company succeed?
  - b. Probe 2: Who needs to be involved and how?
- (14) Why is your company located here (i.e. what were the reasons for your business opening in Peel/Halton)?
  - a. Probe 1: Have conditions changed since you made the decision to locate here?
  - b. Probe 2: What would be the reasons that may, hypothetically, cause your company to move out of this Region?
- (15) What can the community do to encourage the development of high-skill industries and businesses in Peel/Halton?
  - a. Probe 1: What can government do (local, provincial, federal)?

#### **A1.6 Other Input**

- (16) Do you have anything else to add to our conversation? Anything that we missed that you feel is important to the discussion of high-skill jobs in Peel and Halton?

#### **Thank you and end recording**

Debrief comments and information on follow up.

## Appendix D: Recent Employee Interview Guide:

### Introduction:

Are you okay if I record our discussion? This will only be for the research team at my company as all your responses are confidential. All recordings will only be kept by us for the duration of the project.

### Consent to record? Yes/No

### STATE DATE/TIME AND PLACE OF INTERVIEW. HAVE PARTICIPANT STATE NAME, COMPANY AND JOB TITLE.

I want to begin by thanking you for taking the time to speak with me today. The purpose of this interview is to listen to your perspective on the high-skill labour market in Peel/Halton.

You have completed a brief preliminary questionnaire, thank you. This provides us with some background on your company/organization.

This interview will last for about 45 minutes, depending on the length of your responses. I do have a guide for my questions, but the process will be informal as we just have a conversation. As you respond I ask you to think about the experiences of your current company in this community.

This interview is one of twenty that we are doing with local employees in the high-skill labour force. The purpose of these interviews is to (1) help the Peel-Halton Local Employment Planning Council to develop a deeper and more complete understanding of the High-skill labour market in Peel and Halton, focusing on the factors that are driving the increased demand for these roles locally, and to help us gain an understanding of the pathways available to High-skill job opportunities in Peel and Halton.

I want to remind you that your participation is voluntary. If there are any questions that you do not want to answer, for whatever reason, just tell me and we will move on. If you wish to end the interview at any time before we are done, just let me know and we will do so.

All your responses are confidential and will not be attributed to you in anyway.

### Do you understand this? Yes/No

Do you have any questions before we begin?

### A2.2 Defining High-skill Jobs, High-skill Needs, and Challenges

- (1) To begin, I would like to ask you, in your own words, how would you define a high-skill job?
  - a. Probe 1: What are the defining characteristics of a high-skill worker in your company/industry (sector)?
  - b. Probe 2: What are the general skill sets required by these workers in your company/industry (sector)?
  - c. Probe 3: What are the specific skill sets required by these workers in your company/industry (sector)?
  - d. Probe 4: Have the defining characteristics of high-skill jobs changed over time in your company/industry (sector)?
    - i. Probe 4.1: If yes, how so?
- (2) As an employee, in your opinion, do companies in your sector appear to struggle to find employees with the skill sets that they require?
  - a. Probe 1: What is the nature of these struggles?
  - b. Probe 2: Do you think that there are there specific roles/skills that are harder to fill than others?
  - c. Probe 3: In your experience, what have companies done to managed/overcome these challenges?
  - d. Probe 5: Do you think that your industry/sector faces challenges in hiring for high-skill jobs that are not faced by other industries (sectors)?
    - i. Probe 5.1: If yes, what are these unique challenges?
- (3) As a high-skill worker, what challenges have you faced in finding employment?
  - a. Probe 1: What challenges have you faced in looking for employment in Peel/Halton?
  - b. Probe 2: Do you think that these challenges are unique to your industry/sector?

- i. Probe 2.1: If yes, how so?

### **A2.3 Workforce Skills**

- (4) Thinking about the workforce in general, in your experience are prospective employees coming with the skills that they require to be successful?
  - a. Probe 1: If yes, what do you think is the reason for this readiness (i.e. what are these prospective employees doing to ensure success)?
  - b. Probe 2: If no, what do you think are the reasons for this gap in skills?
- (5) Do you believe that you have the skills that you require to meet employer demands?
  - a. Probe 1: If not, why?
  - b. Probe 2: If not, what has the impact been on your job search and career?
  - c. Probe 3: What do you do, personally, to build these skills and ensure success?
- (6) In general, what kinds of post-secondary training do high-skill workers require (or come to your company) to be successful in your industry/sector (the job that you do)?
  - a. Probe 1: What credentials do you have? Where and when do you receive them?
    - i. Probe 1.1: How have these credentials helped you in your job search/career?
    - ii. Probe 1.2: Have these credentials ever hindered your job search or career?
  - b. Probe 2: Do you believe, in general, that the training you received while earning these credentials adequately prepared you for your career path?
    - i. Probe 2.1: If yes, how so?
    - ii. Probe 2.2: If no, why not, and what have you done to overcome this?
- (7) Outside of specific credential requirements, what post secondary training do you believe helps to make employees in your industry/sector more successful?
  - a. Probe 1: Do you believe, in general, that your colleagues in the local workforce possess these skills?
  - b. Probe 2: How have you developed these skills?
- (8) What kinds of soft (non-academic/training) skills do high-skill workers require to be successful in your industry/sector?
  - a. Probe 1: Do you believe, in general, that your colleagues in the local workforce possess these skills?
  - b. Probe 2: How have you developed these skills?
- (9) In your opinion, are current post secondary programs from which your newer colleagues are graduating relevant to your industry's needs?
  - a. Probe 1: If no, what can be done to address this? (what can schools do?)
  - b. Probe 2: If no, what is the potential impact on your company/industry?

### **A2.4 Recruitment and Retention of High-skill Workers**

- (10) Looking at your current company's process, how do they attract and recruit high-skill employees such as yourself?
  - a. Probe 1: In your experience, how does this compare to other companies that you have either worked for or been considered for employment by?
  - b. Probe 2: Does a company's recruitment process matter to you?
    - i. Probe 2.1: If yes, why and how?

- ii. Probe 2.2: If n, why not?
  - c. Probe 3: When you are in the process of being interviewed/recruited by a company, what is the most important thing that you look for?
    - i. Probe 1: Is there something that will make or break your decision to pursue employment with a company?
- (11) Thinking about the local workforce (in Peel and Halton), in your opinion, what is the level of competition that you face for positions with local employers?
- a. Probe 1: What are the implications of the high (or low) competition?
  - b. Probe 2: How do you set yourself apart in the face of this competition? What is your job search strategy?
- (12) In your experience, how have companies worked to ensure that they retain high-skill employees?
- a. Probe 1: How does your current employer compare to others that you have worked for?
  - b. Probe2: What do you look for in deciding to stick with a company over time?
- (13) Do you believe that there are any additional steps/strategies that your company/industry could employ to better attract the high-skill workforce that they require?
- a. Probe 1: If yes, what are these steps/strategies?
  - b. Probe 2: Who may need to be involved in these steps/strategies?

#### **A2.5 Community Attraction and Retention**

- (14) What has attracted you to the community that you live in?
- a. Probe 1: Why do you want to live in Peel/Halton?
  - b. Probe 2: What factors would lead to you considering moving away from this community?
  - c. Probe 3: How important is a local job (a job close to home) to you?
- (15) In your experience, what community supports are available to assist high-skill workers, such as yourself, as you seek local employment?
- a. Probe 1: What supports, if any, did you take advantage of in your most recent job search?
    - i. Probe 1.1: Were these supports useful to you in your job search?
  - b. Probe 2: Are there supports that you could have used that you could not find or access locally? What are these supports?
- (16) Thinking about your most recent job search, were there any challenges that affected our ability to find employment locally?
- a. Probe 1: What was the nature of these deterrent?
  - b. Probe 2: How did you overcome them, if at all?
  - c. Probe 3: What can the community or employers do you help job seekers overcome these challenges?
- (17) In your opinion, what can be done to improve the community's (Region's) ability to develop, attract and retain a high-skill workers such as yourself?
- a. Probe 1: What community wide initiatives/strategies could be employed to support the development of a high-skill workforce that would help your company succeed?
  - b. Probe 2: Who needs to be involved and how?
- (18) What can the community do to encourage the development of high-skill industries and businesses in Peel/Halton?
- a. Probe 1: What can government do (local, provincial, federal)?

#### **A2.6 Other Input**

(19) Do you have anything else to add to our conversation? Anything that we missed that you feel is important to the discussion of high-skill jobs in Peel and Halton?

**Thank you and end recording**

Debrief comments and information on follow up.

# Appendix E: Employment Service Provider Focus Group Guide:

## Introduction:

I want to begin by thanking all you for taking the time to speak with me today. The purpose of this interview is to listen to your perspective on the high-skill labour market in Peel/Halton.

You have completed a brief preliminary questionnaire, thank you. This provides us with some background on your company/organization.

This focus group will last for about 1 hour, depending on the length of your responses. I do have a guide for my questions, but the process will be informal as we just have a conversation. As you respond I ask you to think about the experiences in this community.

This focus group is one of three that we are doing with local employment service providers who support workers and employers in the high-skill labour market in Peel and Halton. The purpose of these focus groups is to help the Peel-Halton Local Employment Planning Council to develop a deeper and more complete understanding of the High-skill labour market in Peel and Halton, focusing on the factors that are driving the increased demand for these roles locally, and to help us gain an understanding of the pathways available to High-skill job opportunities in Peel and Halton.

I want to remind you that your participation is voluntary. If there are any questions that you do not want to answer, for whatever reason, just tell me and we will move on.

All your responses are confidential and will not be attributed to you in anyway.

## Do you understand this? Yes/No

Do you have any questions before we begin?

### A3.2 Defining High-skill Jobs and the Local Labour Market

- (17) To begin, I would like to ask you, in your own words, how would you define a high-skill job?
- a. Probe 1: What are the defining characteristics of a high-skill worker?
  - b. Probe 2: What are the general skill sets required by these workers?
  - c. Probe 3: What are some of the specific skill sets required by these workers?
  - d. Probe 4: Have the defining characteristics of high-skill jobs changed over time in your experience?
    - i. Probe 4.1: If yes, how so?
  - e. Probe 5: In your experience, what are employers looking for when they seek High-skilled workers?
    - i. Probe 5.1: In your opinion, has this changed over time?

### A3.3 Job Search Strategies and Challenges

- (18) All of you support workers who are seeking employment in high-skill occupations, what are the general strategies and job search processes that you encourage these workers to follow?
- a. Probe 1: What is your general approach to job search strategies for these clients?
  - b. Probe 2: Are you aware of the key local employers in your sector?
  - c. Probe 3: What additional services and supports have you generally referred clients to in support of their job search?
- (19) What are the primary challenges faced by your high-skill clients in finding employment?
- d. Probe 1: What do you think are the biggest challenges in finding high-skill work in Peel/Halton?
  - e. Probe 2: Do you think that these challenges are unique to an industry/sector?
    - i. Probe 2.1: If yes, how so?
  - f. Probe 3: What strategies or supports do you generally recommend, if any, to help overcome these challenges?
- (20) Do you believe that there are enough supports in place in Peel/Halton to help high-skill job seekers connect with local employers in their industry?



- g. Probe 1: What supports would you like to see to improve these connections?
- h. Probe 2: What can employers do?
- i. Probe 3: What can government or community organizations do?

(21) In your experience, what recruitment strategies have local employers used to attract and recruit high-skill employees?

- j. Probe 1: What is your opinion of these strategies? Do they work?

#### **A3.4 Precarious Work**

(22) Most of you have clients who have been out of work, or at least working outside of your industry, for sustained periods, what has the impact of this situation been on these clients?

- a. Probe 1: How has it impacted them personally?
- b. Probe 2: How do you think it has impacted their career prospects, in the short and long term?

(23) In your opinion, what is the impact of having highly trained and skilled individuals be out of work for sustained periods of time?

- a. Probe 1: What is the impact on the community/economy?

(24) In your experience, are local employers generally engaging in practices that encourage precarious work?

- a. Probe 1: If yes, what are some of these practices (without naming individual companies)?
- b. Probe 2: Do you have any insights as to why these practices persist locally?

(25) In your opinion, what can be done to address precarious working conditions?

#### **A3.5 Other Input**

(26) Do you have anything else to add to our conversation? Anything that we missed that you feel is important to the discussion of high-skill jobs in Peel and Halton?

#### **Thank you and end recording**

Debrief comments and information on follow up.

## Appendix F: Job Seeker Focus Group Guide

### Introduction:

I want to begin by thanking all you for taking the time to speak with me today. The purpose of this interview is to listen to your perspective on the high-skill labour market in Peel/Halton.

You have completed a brief preliminary questionnaire, thank you. This provides us with some background on your company/organization.

This focus group will last for about 1 hour, depending on the length of your responses. I do have a guide for my questions, but the process will be informal as we just have a conversation. As you respond I ask you to think about the experiences in this community.

This focus group is one of three that we are doing with local employment service providers who support workers and employers in the high-skill labour market in Peel and Halton. The purpose of these focus groups is to help the Peel-Halton Local Employment Planning Council to develop a deeper and more complete understanding of the High-skill labour market in Peel and Halton, focusing on the factors that are driving the increased demand for these roles locally, and to help us gain an understanding of the pathways available to High-skill job opportunities in Peel and Halton.

I want to remind you that your participation is voluntary. If there are any questions that you do not want to answer, for whatever reason, just tell me and we will move on.

All your responses are confidential and will not be attributed to you in anyway.

### Do you understand this? Yes/No

Do you have any questions before we begin?

### **A3.2 Defining High-skill Jobs and the Local Labour Market**

(27) To begin, I would like to ask you, in your own words, how would you define a high-skill job?

- a. Probe 1: What are the defining characteristics of a high-skill worker?
- b. Probe 2: What are the general skill sets required by these workers?
- c. Probe 3: What are some of the specific skill sets required by these workers?
- d. Probe 4: Have the defining characteristics of high-skill jobs changed over time in your experience?
  - i. Probe 4.1: If yes, how so?
- e. Probe 5: In your experience, what are employers looking for when they seek High-skilled workers?
  - i. Probe 5.1: In your opinion, has this changed over time?

### **A3.3 Job Search Strategies and Challenges**

(28) All of you support workers who are seeking employment in high-skill occupations, what are the general strategies and job search processes that you encourage these workers to follow?

- k. Probe 1: What is your general approach to job search strategies for these clients?
- l. Probe 2: Are you aware of the key local employers in your sector?
- m. Probe 3: What additional services and supports have you generally referred clients to in support of their job search?

(29) What are the primary challenges faced by your high-skill clients in finding employment?

- n. Probe 1: What do you think are the biggest challenges in finding high-skill work in Peel/Halton?
- o. Probe 2: Do you think that these challenges are unique to an industry/sector?
  - i. Probe 2.1: If yes, how so?
- p. Probe 3: What strategies or supports do you generally recommend, if any, to help overcome these challenges?

(30) Do you believe that there are enough supports in place in Peel/Halton to help high-skill job seekers connect with local employers in their industry?

- q. Probe 1: What supports would you like to see to improve these connections?
- r. Probe 2: What can employers do?
- s. Probe 3: What can government or community organizations do?

(31) In your experience, what recruitment strategies have local employers used to attract and recruit high-skill employees?

- t. Probe 1: What is your opinion of these strategies? Do they work?

#### **A3.4 Precarious Work**

(32) Most of you have clients who have been out of work, or at least working outside of your industry, for sustained periods, what has the impact of this situation been on these clients?

- a. Probe 1: How has it impacted them personally?
- b. Probe 2: How do you think it has impacted their career prospects, in the short and long term?

(33) In your opinion, what is the impact of having highly trained and skilled individuals be out of work for sustained periods of time?

- a. Probe 1: What is the impact on the community/economy?

(34) In your experience, are local employers generally engaging in practices that encourage precarious work?

- a. Probe 1: If yes, what are some of these practices (without naming individual companies)?
- b. Probe 2: Do you have any insights as to why these practices persist locally?

(35) In your opinion, what can be done to address precarious working conditions?

#### **A3.5 Other Input**

(36) Do you have anything else to add to our conversation? Anything that we missed that you feel is important to the discussion of high-skill jobs in Peel and Halton?

