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# Future-proofing the automotive workforce

Supporting Ontario's auto sector workers through the ZEV transition

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The PLACE Centre, which stands for Propelling Locally Accelerated Clean Economies, focuses on the complex challenges limiting clean economic growth in Canadian communities. Our core approach is “place-based,” meaning the PLACE team works with all levels of government, industry, and civil society organizations to ensure regions across Canada have the solutions needed to overcome the challenges they face in advancing clean economic growth. With this approach, the PLACE team can create practical, place-based recommendations where everyone involved can collaborate and work towards making progress in solving these problems. That way, every region and community across the country can be included in, and benefit from, Canada’s growing clean economy.

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[fsc-ccf.ca](http://fsc-ccf.ca)

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# Abbreviations

<b>ESP</b>	Employment service provider
<b>FSTP</b>	Federal Skilled Trades Program
<b>GM</b>	General Motors
<b>ICEV</b>	Internal combustion engine vehicle
<b>IRCC</b>	Immigration, Refugees, and Citizenship Canada
<b>LMIA</b>	Labour Market Impact Assessment
<b>NAICS</b>	North American Industry Classification System
<b>OEM</b>	Original equipment manufacturer
<b>OYAP</b>	Ontario Youth Apprenticeship Program
<b>OVIN</b>	Ontario Vehicle Innovation Network
<b>PNP</b>	Provincial Nominee Program
<b>PSI</b>	Post-secondary institution
<b>SME</b>	Small and medium-sized enterprise
<b>SPI</b>	Smart Prosperity Institute
<b>SWPP</b>	Student Work Placement Program
<b>ZEV</b>	Zero-emissions vehicle

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## Executive summary

Ontario's automotive sector is shifting towards manufacturing zero-emissions vehicles (ZEVs) through both new assembly and battery manufacturing plants and an evolving parts supply chain. As the sector changes, workers will feel the need to learn new skills, or potentially change roles. Our last ZEV report titled [Shifting Gears: How Ontario's push to manufacturing zero-emissions vehicles will impact the workforce](#) identified that the majority of skills gaps this shift will bring about are quite manageable. The amount of time it may take for a worker to upskill to new technologies will largely be measured in days and weeks, with rare cases requiring up to six months.<sup>1</sup> However, the current training and education system for the sector is going to make this process more challenging, costly, and stressful than it needs to be. Whether it's a failure to recognize the credentials of internationally-skilled professionals in a timely fashion, apprentices not receiving the supervision and management they need due to labour shortages, workers struggling to identify the training they need to gain (or regain) employment in the sector, or employers not offering needed supports for training for fear their workers may be poached, workers at every stage of their careers face numerous challenges.

These challenges are not abstract for an individual in the labour force. They will cost wages, consume time, cause stress, and potentially prevent workers from accessing needed training or support. If unaddressed at a sector level, these barriers and bottlenecks will slow down the rate at which the automotive industry can train its necessary workforce, making even small gaps in workers' skills and knowledge areas a legitimate obstacle to capturing the economic opportunity presented by ZEV and battery production.

Given the volume of change that is expected in a sector currently employing over 130,000 workers, tackling these challenges should be a priority for governments and stakeholders in Ontario, on par with ongoing investment attraction efforts.

### What challenges do workers face at different stages of their careers in the automotive sector?

#### Younger workers (aged 15–24)

- Younger workers have negative perceptions of the sector, which is seen as being dangerous, emphasizing repetitive manual labour, and offering low levels of economic security. While this is not aligned with current realities in the sector, it is informed by advice received from family members who have been adversely impacted by layoffs in previous economic cycles.
- Lack of exposure to skilled trades education is reducing interest in working in the sector. This is exacerbated by years of reduced investment in technical education from provincial governments, as well as a de-emphasizing of technical programming at the secondary school level. Despite recent steps taken by groups such as the Ontario Vehicle Innovation Network (OVIN), a government-funded group focused on skills and talent development for the automotive sector, and the re-introduction of a mandatory technological education credit to graduate from Ontario secondary schools, this perception abounds.

- A lack of gender diversity in the sector dissuades women from pursuing a career in the industry through a mix of subliminal messaging, cultural and workplace norms, and a lack of flexibility offered for accommodating responsibilities often expected of women (i.e., childcare).
- Insufficient settlement and support services for international students prevent those who wish to stay and work in Canada from learning critical fundamentals around workplace cultural norms. Companies also continue to place an emphasis on having Canadian work experience, which many international students do not have.

## Mid-career workers (aged 25–59)

- Terms of employment (responsibilities and benefits that come with a job including salary, benefits, and accountabilities) are not always friendly to all workers. Working mothers, for example, find balancing shift schedules with childcare responsibilities to be difficult enough that they often leave the sector. Employers cited inflexibility around shift schedules as a barrier to accommodation, but that more could be done to create flexibility.
- Many employers do not invest in corporate training for fear of workers being poached by other companies. In some cases, even if employers are willing to pay for it, they are not willing to compensate workers for time taken off to retrain. This creates a disincentive for workers to pursue the training needed to remain employed in a changing sector.
- Wages provided by small and medium-sized enterprises (SMEs) are not typically as high as wages offered by larger manufacturers, which frequently causes workers to shift towards larger employers that offer benefits negotiated by unions, such as higher wages, pensions, additional paid holidays, and more frequent cost-of-living adjustments. This can exacerbate labour shortages for small employers and increase the fears of poaching, which in turn can limit investments in skills training for workers.
- Newcomers to Canada with foreign skilled trades experience face high barriers to entry through existing immigration programs, which limits the number of skilled trades professionals that emigrate. For example, since its inception in 2013, the Federal Skilled Trades Program (FSTP), an immigration program dedicated to skilled trades workers, has never reached its maximum capacity. This is in part due to the time associated with processing applications and the number of steps required for applicants within the program, which leads many immigrants to come to Canada as international students instead.
- Policies that help overcome the barriers faced by different groups (such as women and economic immigrants) in working in the automotive sector are frequently not aligned with the challenges they face. This is largely because policy-makers do not currently collect data on hiring and retention rates for different groups. This lack of information leads to policies that are frequently based on assumptions and

anecdotes, meaning they then fail to tackle the challenges these groups face.

- A lack of settlement and integration services to help newcomers, their families, and employers who hire immigrant workers imposes costs on all parties. Workers often cannot find support to learn local languages or business norms, and companies are often asked to pay for services that they cannot afford (such as corporate housing or making transportation options available for staff), especially in regions where housing markets are unaffordable and public transit options to and from work sites are non-existent.

## Older workers (aged 60+)

- The primary justification given for wanting to keep aging adults in the workforce longer is to alleviate the pressures faced by employers and younger employees. However, it is unclear if steps are being taken to alleviate some of the challenges and discrimination aging adults often face in manufacturing roles. For example, older workers typically face greater difficulties working with older or outdated equipment since it is more physically strenuous to operate and maintain.<sup>2</sup> They may also face stereotyping and discrimination (i.e., ageism) from colleagues, as well as changes in social status that feel like a degradation of accomplishment and responsibility.<sup>3</sup>
- Workers experiencing layoffs or plant closures may have a harder time re-integrating into the workforce due to the social pressures and stereotypes identified above, alongside feelings of disrespect or betrayal that an individual may feel after being laid off by a company they had been employed at for decades. These challenges are leading many aging adults to look outside the sector, including service or retail roles that are less physically strenuous.
- Programs with evidence of high efficacy rates at finding placements for workers face high bureaucratic hurdles to receive funding support and have limited capacity to help the volume of workers who ask for support once they are operational. These programs include Unifor's Action Centres (which report 80%–95% placement rates for laid-off individuals) and tend to be disproportionately useful for older workers.

## Challenges faced by workers throughout their careers

- Wages influence workers throughout their careers. A 2019 report on wages from the Automotive Policy Research Centre identified that some production and skilled trades occupations wages across the North American Industry Classification System (NAICS) 3361 (Motor vehicle manufacturing) and NAICS 3363 (Motor vehicle parts manufacturing) were "... not keeping pace with wages in other sectors such as construction or utilities," and that wages were lower in parts production than in assembly.<sup>4</sup> While unions have tried to address this issue through collective bargaining,

stakeholders stated that the overall challenge remains.<sup>5</sup> Younger workers may find lower than average wages dissuade them from joining the sector in the first place. In the middle of their careers, workers may seek to upskill or change occupations to pursue higher-wage roles, especially as they may have bigger family responsibilities relative to earlier stages. Additionally, lower wages may make upskilling relatively more expensive, which stakeholders have noted limits the financial capacity for workers to undertake upskilling. For older workers, lower-than-expected wages may prompt earlier retirement decisions, such as reduced work hours or leaving the workforce entirely.

- Information asymmetry between employers and workers and students impacts everyone. This refers to the dearth or uncertainty of information about what various stakeholders need to do to better prepare and equip workers for the ZEV transition. Information asymmetry is felt most clearly around new investments that are set to create thousands of jobs. This issue affects workers at the exploration stage when their training institutions are unsure of what potential employers (original equipment manufacturers (OEMs), parts manufacturers, etc.) will want to see in their new graduates and are thus unsure how best to curate the curriculum so that the students' skills and knowledge are not outdated or deemed insufficient in the labour market. In the middle of their careers, a lack of information makes it difficult for workers to know what to upskill or reskill in, especially if they seek roles in new facilities.

Stakeholders stressed this tension was felt particularly amongst union workers in this phase of their career looking to upskill and improve their candidacy before interviewing for roles at new facilities, which the incoming Windsor battery manufacturing facility (i.e., NextStar Energy Inc.)<sup>6</sup> has already pledged to allow union members to do. Meanwhile, a lack of information may cause older workers to struggle to see how their current skill sets could be valued in the market, leading them to leave the workforce early and deprive younger workers of their expertise and mentorship.

## To address these challenges, this report recommends that governments do the following:

### To support younger workers (aged 15–24)

**The federal government should make international students eligible for the Student Work Placement Program (SWPP) to help international students get sector-relevant Canadian work experience and address employer concerns.**

This program offers funding to SMEs to hire co-op students and interns. Currently, international students are ineligible to receive funding, limiting their ability to get Canadian work experience while studying and reducing the likelihood they will remain in Canada after graduation.

**The federal government should adjust the proof of funds requirements for international students applying to skilled trades programs to make pursuing a technical education in Canada relatively more attractive for prospective applicants. Additionally, both federal and provincial governments should fund post-secondary institutions (PSIs) to administer settlement services for international students if/when they are capable of administering services more effectively than community organizations.**

When applying to Canadian educational programs, prospective students must illustrate "proof of funds" within their application to prove they have sufficient funding to support themselves while studying. To make skilled trades more attractive, proof of funds requirements for skilled trades students should remain fixed as requirements for university applicants increase over time. Additionally, more settlement services for international students should be administered by PSIs, instead of community non-profits, given students' familiarity with their institutions and their stronger understanding of the challenges faced by international students.

### To support mid-career workers (aged 25–59)

**The provincial government should give a mandate to local workforce planning boards to work with employers to proactively identify and support candidates from underserved and equity-deserving communities.**

To accomplish this, workforce planning boards should work with employment service providers (ESPs), PSIs, and community groups to identify networks of skilled professionals from equity-deserving communities, ensure that relevant job ads are shared with these groups, and connect with employers to ensure these applicants are being fairly considered.

**PSIs, who are already responsible for educating many workers through the ZEV supply chain, should develop short-term, targeted micro-credentials to support upskilling efforts for mid-career professionals, in partnership with employers.**

This pathway will be appropriate for many occupations, but not all. In some cases, such as with skilled tradespeople in Red Seal trades, expanding the scopes of practice would be a path to upskilling that better leverages existing knowledge, relationships, and resources. In this case, training would be led by a skilled trades group and not by PSIs. This points to the need for a suite of approaches depending on what will fit best for a given occupation.

**The provincial government should lower the costs (monetary and time) associated with having international credentials and experienced recognized for foreign workers looking to find roles in the automotive sector.**

Ontario has some of the highest costs in Canada for licensing assessments in a range of credentialed occupations,<sup>7</sup> and steps should be taken to more closely align with the monetary and time costs applicants face in other provinces.

**The application process for the FSTP should be amended to allow the two current phases of applying (applying to determine eligibility for the qualification exam and sitting for the exam to determine receipt of certificate of qualification) to be merged into one step.**

This would entail allowing applicants to write the exam right away instead of waiting to receive approval before a date to write can be set. Streamlining this process would reduce the time and uncertainty associated with this immigration stream, which has never reached its annual maximum intake capacity since its inception in 2013.

**To support older workers (aged 60+)**

**Provincial Adjustment Advisory Programs should allow for funding community-level adjustment programs, which would let programs like Unifor's Action Centres engage with a wider array of workers impacted by the ZEV transition.**

This would change the current model away from one focused on supporting workers impacted by facility-specific layoffs to focusing on workers' needs regionally (while remaining tied to workers within the automotive sector). This broadening of scope would better support workers amongst the increased levels of disruption expected in the years to come.

**The provincial government should create financial incentives for retiring tradespeople to return to colleges as instructors to ensure they can supervise/pass on knowledge to new students.**

This would allow students to benefit from the experience and wisdom of older professionals, help PSIs hire additional workers, and offer additional income and opportunities to workers looking to exit the workforce.







# Introduction

There is a shift underway in the automotive manufacturing sector from producing internal combustion engine vehicles (ICEVs) to ZEVs. Within the sector, these investments in emerging technologies will prove transformative for every aspect of the supply chain and those employed within it. In our previous report titled *Shifting Gears: How Ontario's push to manufacturing zero-emissions vehicles will impact the workforce*, we identified the specific changes in skills and knowledge that workers would need in order to keep up with changes in technologies and manufacturing processes.<sup>8</sup> In this follow-up work, we will identify, explore, and recommend solutions to tackle the challenges workers will face in filling new roles, learning new skills, and applying them in changing roles.

For workers, these challenges are not abstract—they are explicit, tangible, and will impact them at specific stages in their careers. For example, a young person seeking an apprenticeship may lose weeks of wages while they wait for delays in processing certifications and licenses. A mid-career immigrant may need to spend their savings to pay their bills and work for years in 'survival jobs' while waiting to have their international credentials and experience recognized. An experienced professional who already possesses 75% of the skills needed to work in roles in the clean economy supply chain may not see training or education programs developed specifically for workers like them and wrongly conclude this industry shift will cost them their jobs.

While these challenges are felt by workers, their impacts are also borne by stakeholders in the automotive sector. This is seen in labour shortages in the automotive manufacturing sector which limit employers' ability to meet demands or stay competitive, as well as employer complaints about the skills and quality of their new or recent graduate applicants and hires. Following the

announcements of incoming ZEV and electric battery plants, researchers also saw evidence of these challenges in the uncertainty expressed by union representatives and training institutions who said they needed to better prepare themselves, students, and staff to respond to these plants' upcoming labour needs.<sup>1</sup>

This report addresses the impacts of these changes to Ontario's automotive manufacturing sector by identifying the specific challenges workers will face when entering the sector, upskilling, and changing roles throughout their careers. If these challenges are appropriately addressed, then opportunities for workers can be placed within reach, and Ontario will realize the individual, industry, and economic benefits associated with taking action. If not, these challenges will remain obstacles to progress. To better understand what needs to be addressed to support the growth of ZEV production, this report takes a systems-level approach, detailing and analyzing the current situation, the challenges faced by workers, and the current steps being taken to address them. This analysis uses Donald Super's Life-span, Life-space Career Development Theory, a career-stage framework that breaks down a worker's professional life into five phases: Growth, Exploration, Establishment, Maintenance, and Disengagement. The issues workers face in each stage of their careers when entering the growing ZEV sector are discussed, recognizing that the same issue can look different depending on the stage of an individual's career. Finally, this report offers several recommendations for stakeholders to tackle the major obstacles faced by workers throughout their careers.

## Box 1

### Who makes up Ontario’s automotive workforce?

The analysis in this report details the challenges workers will face at different stages of their careers within the automotive workforce. As such, it is important to understand and recognize who makes up the workforce currently supporting Ontario’s automotive sector. As of 2021, 78% of Ontario’s automotive sector workforce is male.<sup>9</sup> Compared to other sectors, older workers (aged 55+) make up a much higher share of workers (26.5% versus a provincial average of 22.3%). Youth (aged 15–24) make up only 10.5% of employees within the automotive manufacturing sector.<sup>10</sup> The sector is dominated by full-time employment, with 98.5% of workers in full-time roles.<sup>11</sup> Within Ontario, over 93% of workers in the automotive sector are concentrated in five regions: Toronto (29.7%), Kitchener–Waterloo–Barrie (24.2%), Windsor–Sarnia (15.8%), London (12.7%) and Hamilton–Niagara Peninsula (11%).<sup>12</sup> At the time of writing, researchers could not find any publicly available information on the ethnic make-up of the automotive sector workforce in Ontario or data on the average educational attainment for workers within the supply chain. This report cites data from various sources, including 2021 Census data, the Labour Force Survey, and reports

from sector bodies to accommodate the information gaps researchers encountered. Data from any one source was not always available at the level of granularity needed to draw regionally relevant insights.

These individuals work in key occupations throughout the supply chain for both ICEVs and ZEVs. [Table 1](#) details the occupations within Ontario that are most relevant to discussions of the automotive sector. To gain a sense of the current composition of the provincial workforce (to learn more about the labour and skills outlook for these occupations), please read [Shifting Gears: How Ontario’s push to manufacturing zero-emissions vehicles will impact the workforce](#). When discussing the impact that policies, practices, or processes will have in workers at each stage of their careers, it should be recognized that the individuals being impacted are the assemblers, engineers, welders, and many others currently seeking sustained, high-quality employment in their professional lives. Many of the occupations are skilled trades, and as such, special focus is given in this report to challenges facing skilled trades professionals.

**Table 1. Total Number of workers employed in selected occupations across the automotive manufacturing sector in Ontario.**<sup>13</sup>

Occupation (NOC Title)*	Total employment (ON)
Material handlers (manual)	85,630
Motor vehicle assemblers	49,345
Software engineers and designers	47,365
Shippers and receivers	40,550
Manufacturing managers	30,740
Welders	26,090
Sales and account representatives, wholesale trade (non-technical)	25,930
Mechanical engineers	23,075
Construction millwrights and industrial mechanics	22,400
Machinists	13,560
Supervisors, supply chain, tracking and scheduling co-ordination occupations	11,955
Industrial engineering and manufacturing technologists	8,040
Industrial electricians	7,635
Tool and die makers	7,260

Occupation (NOC Title)*	Total employment (ON)
Industrial and manufacturing engineers	7,060
Supervisors, motor vehicle assembling	6,890
Mixing machine operators, plastics processing	6,350
Electronics assemblers	5,450
Metalworking machine operators	5,095
Labourers in metal fabrication	4,475
Mechanical assemblers	3,875
Labourers in rubber and plastic products manufacturing	3,145
Plastic products assemblers and finishers	2,210
Machine operators, mineral and metal processing	2,120
Supervisors, plastic and rubber products manufacturing	1,635
Other metal products machine operators	1,220
Supervisors, other mechanical and metal products manufacturing	1,015

\*National Occupational Classification Title

## Framework overview

To explain how systemic challenges in Ontario’s automotive and automotive parts sectors will impact workers at different stages in their lives and careers, this report uses a framework adapted from the previously-mentioned Donald Super’s Life-Span, Life-Space Career Development Theory, herein referred to as the Framework or the Rainbow Framework. The Framework was first developed in 1957 by Donald Super, and is also commonly referred to as ‘The Life-Career Rainbow’ or ‘Rainbow Framework’ due to the shape of Super’s illustration of his theory (see [Figure 1](#) below).<sup>14</sup> This framework is a segmental theory, as it draws from a few disciplines to best reflect various aspects of human/worker development,<sup>15</sup> including differential and developmental psychology and sociology.<sup>16</sup> While the Framework has undergone a number of adjustments since then by Super himself, the core roles, stages, and determinants have remained consistent.<sup>17</sup>

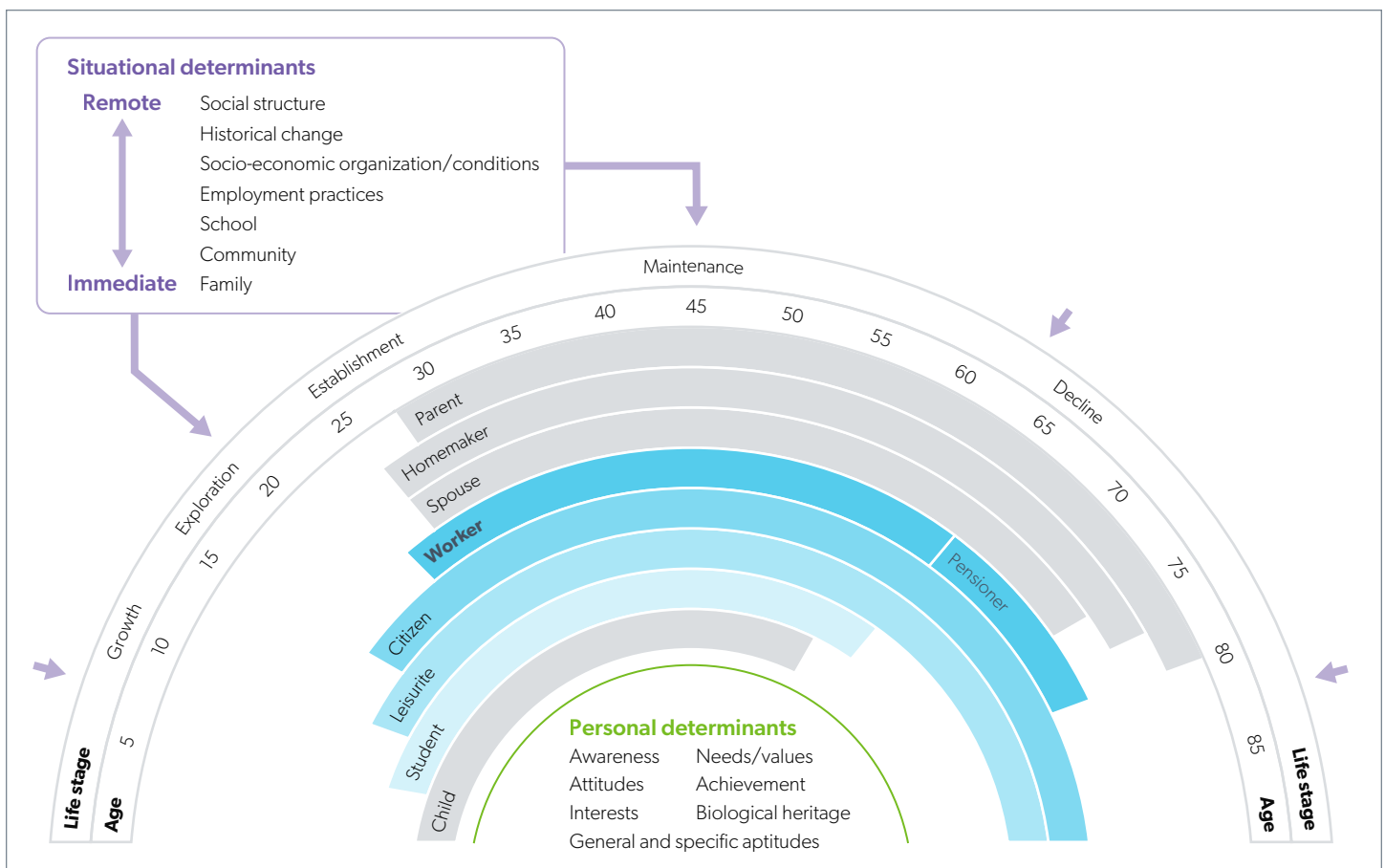
The Framework has five stages: Growth, Exploration, Establishment, Maintenance, and Disengagement, with each stage representing a different phase in a worker’s career.

1. **Growth occurs from ages 0–14**, and is characterized by development of self-concept, attitudes, needs, and the general world of work. This phase will largely be excluded from this report, as individuals are still in their very early years of schooling and not yet workers.

2. **Exploration occurs from ages 15–24**, and is characterized by “trying out” through classes and their early work experience, as individuals begin to develop a personal and professional identity. Skill development also typically begins at this point, as individuals apply what they are learning in their exploratory process to their work (and life) roles. This phase typically includes schooling and early entry in the workforce.
3. **Establishment takes place between ages 25 and 44 years**, and is characterized by further skill building and stabilization through work experience, career advancement, and job hopping. Overall, this phase sees an increase in work responsibilities.
4. **Maintenance occurs between the ages of 45 and 64.** At this stage of a worker’s career, there is often continual adjustment (upskilling) to improve job status and position, which can include job hopping or switching occupations within the career.
5. **Disengagement is the last stage of the Framework, and takes place from 65 years old onwards.** At this stage of the worker’s life, there is reduced output and productivity, and more preparation for retirement.

In addition to life stages, the Life-Career Rainbow also includes nine major roles people play throughout their lives across four principal theatres. Within this report, the majority of discussion

**Figure 1. Donald Super’s Life-Span, Life-Space Career Development Theory**



is dedicated to understanding how different career milestones overlay onto each stage of a worker's life, with minimal focus dedicated to what these stages mean from the roles occupied by individuals, or the theatres in which they occur.

However, they remain important to understand when conceptualizing how this segmental theory describes the evolution of a career. In the context of the Framework, a role is understood and defined both in terms of expectation (a combination of observers' expectations and how the role player thinks of the role) and performance (role player's satisfaction and observers' satisfaction with role player). The roles are: Child, Student, 'Leisureite' (idling and/or unemployed),<sup>18</sup> Citizen, Worker (either employed in the labour force or looking for work), Spouse, Homemaker, Parent, and Pensioner.<sup>19</sup> Theatres are defined as the environments in which expectations are set, and performances are conducted. The theatres are the Home, Community, School and the Workplace. Super acknowledges that these stages are not always pursued in a particular order nor played by everyone over the course of their lives, although this order is the identified norm for those who complete all within the context of this Framework.

Super identified two applications for the Rainbow Framework, both of which have relevance for this report. The first application is helping "students and adults see the interactive nature of the... occupations that make up a career and how self-actualisation can be achieved" through this combination of roles. The second application is "counseling... adolescents and adults to... analyse their careers and also plan for their career futures."<sup>20</sup> Both of these applications discuss a worker's career and role in society, making it a useful lens through which to understand how systemic and bigger picture issues in Ontario's auto sector affect every stage of its workers' careers and personal lives. Additionally, the Framework focuses more on supporting worker shifts motivated by a need or desire to adapt to changes in circumstance.<sup>21</sup> This makes the framework a good fit for understanding a shift within the automotive sector, where workers are considering their roles and future career prospects within a changing industrial landscape. The Rainbow Framework is already used by career development professionals in tests and assessments, making it a credible and evidence-based tool to understand the impacts of sectoral change on a worker's career.<sup>22</sup> Finally, stakeholders have identified that the age ranges identified within the Framework largely align with the average ages when workers in the automotive sector experience similar transitions, making this a useful resource for analyzing worker challenges.

## Application of the Rainbow Framework to challenges in the automotive sector

In this report, the main focus and application of the Life-Career Rainbow will be the life-career stages, which are adapted to apply to Ontario's automotive manufacturing sector workers. At each life-career stage, expectations and achievements of a worker are highlighted, along with the institutions and institutional challenges workers face at each stage.

In this report, the Growth stage of the Life-Career Rainbow is excluded due to the lack of professional milestones that typically occur within the age bracket as it is defined (ages 0–14). The Exploration stage covers the period from secondary school until apprenticeship or early years of work in the sector. This stage includes an overview of how the Ontario education system works, apprenticeship enrolment, and sector perception as a barrier to entry—especially from a youth perspective. The Establishment and Maintenance stages (which this report assumes ends at age 59) are combined in this report, given that both stages are made up of similar career events and milestones like skill building and career advancement. These two stages focus on mid-career professionals and the challenges they face, including the need to upskill. Finally, the Disengagement stage (which this report assumes begins at age 60) addresses the importance of work providing purpose and stability across workers' lives. It emphasizes themes such as retirement planning, the challenges that come from knowledge loss caused by retiring employees, and how employers try to get the best from these workers in this phase.

This report will also incorporate some of the Life-Career Rainbow's non work-related roles to illustrate how these sector changes and challenges can affect Ontario's automotive manufacturing sector workers beyond the workplace. This is especially true for members of equity-deserving communities such as women, newcomers to Canada, international students, and many others. The relevant roles for this report are student, worker, parent, and pensioner, while the most relevant environments that will be touched on are the workplace, school, and community. However, as noted, these will not be discussed in the same detail as challenges relating to life stages.

Although the Life-Career Rainbow provides a framework for segmenting auto workers' careers and the challenges they face at each stage, some issues will affect workers across multiple life-career stages. These issues will be given special focus within this report. One example is wages. At the exploration stage, lower wages may put people off from entering the sector. But at the establishment and maintenance stages, workers may seek to upskill or change occupations to pursue higher wage roles, especially as they may have greater family responsibilities, relative to earlier stages. While the motivation for higher wages remains consistent, workers will face different challenges (and have different motivations) at each stage in pursuit of this objective.

Another issue that has effects on workers across life-career stages is information asymmetry. This refers to the dearth or uncertainty of information about what various stakeholders need to do to better prepare and equip workers for the ZEV transition. This issue affects workers at the exploration stage when their training institutions are unsure of what employers (OEMs, parts manufacturers, etc.) want to see in their new graduates, and are thus unsure how best to curate the curriculum so the students' skills and knowledge are not outdated or deemed unnecessary or insufficient in the labour market. Information asymmetry affects workers at the establishment, maintenance and disengagement stages by making it difficult for them to know what to upskill or reskill in. This also affects ESPs who may be tasked with helping workers at this upskill or reskill stage, as they cannot properly help or direct the workers if what employers want is unclear to them.

## **Methodology: Data collection methods**

To understand where the automotive industry might be going in the coming decade, ZEV and battery manufacturing stakeholders in Ontario were asked to complete a survey for a foresight analysis. Respondents answered questions specific to their professional expertise, focusing on recruitment of workers, current context, and beliefs about the future of the sector between now and 2030. This foresight exercise provides an indication as to how the transition to ZEVs will impact the skills and knowledge requirements of the automotive workforce. Sixteen expert interviews were conducted with a variety of stakeholders, including educational institutions, industry associations, unions, and think tanks, as well as a number of informal discussions. In addition to the survey and expert interviews, Smart Prosperity Institute (SPI) also held workshops in London, ON and Windsor, ON in March 2023. Organized in collaboration with Workforce Windsor-Essex, Invest Windsor-Essex, the London Economic Development Council (LEDC) and the London Region Manufacturing Council (LRMC), the workshops had 64 attendees in total, comprising automotive sector employers, training institutions, provincial ministries and ESPs in both regions. These attendees participated in discussion groups which provided SPI with information on the automotive sector in the region, which will be referenced throughout the rest of this report.



# Exploration

## Life-stage overview

The exploration stage (aged 15–24) of the Life-Career Rainbow is where individuals try out different classes, interests, volunteer activities, and part-time work opportunities through which they develop self-concepts and identities and narrow down their interests and possible career choices.<sup>1</sup>

Historically, automotive sector workers in Ontario begin their journeys into the sector in secondary school (recognized in this report as starting in grade 9). This could be through a shop class where they developed an interest in the skilled trades and occupations within it, or from being streamed into an “applied” or non-university route in an Ontario secondary school.<sup>23</sup> Work transition programs for young people also exist at this stage. In Ontario, the Ontario Youth Apprenticeship Programme (OYAP) is “a school-to-work program that gives secondary school students the chance to explore and work in apprenticeship occupations,”<sup>24</sup> including those in the automotive manufacturing sector and related occupations in [Table 1](#). It is the most relevant work-transition program for apprentices entering the automotive sector. The OYAP is typically not a paid opportunity, but like other school-to-work programs provides students with a view of what to expect should they decide to enrol in a skilled trades apprenticeship, while also giving employers a chance to recruit and engage with youth early. By the end of secondary school, those interested in the automotive manufacturing sector could either enter the workforce directly, or enrol in apprenticeships. Other members of the automotive workforce, such as mechanical engineers or business managers, might require additional post-secondary education at the university level.

## Challenges and barriers facing students and workers at the exploration stage

### Attitudes towards perceived employment security and working conditions

The demographic challenges facing the automotive industry cannot be considered separately from the opinions held by youth towards automotive manufacturing employment. These attitudes exist within the context of the significant sectoral shifts in employment that have occurred across Canada in recent decades. From 2006 to 2016, the number of people employed in Ontario grew by close to half a million, with most sectors experiencing employment gains. However, employment in manufacturing suffered hugely, with a loss of 216,430 jobs.<sup>25</sup> Due to the automotive manufacturing’s importance to Ontario’s economy, job losses in the sector were keenly felt by community members, and often continue to attract media attention. These publicized declines in automotive manufacturing have informed public opinion about the sector and its employment security, and as such, impressions about the industry hamper talent attraction efforts.

These dynamics have led to an accepted reality within the sector: Manufacturing has an image problem with respect to attracting young new employees. Recent graduates are choosing to work outside of the manufacturing sector, in part due to their negative perception of the sector.<sup>26</sup> Jobs are often perceived as dangerous, low-tech, and involving repetitive manual work that lacks intellectual stimulation. However, this image is no longer accurate; while the automotive manufacturing industry of previous generations involved large amounts of physical and

manual labour, modern factories for making ZEVs are more akin to laboratories. Sector stakeholders have stressed that elements such as robotics, engineering, lower noise, and a high emphasis on health, safety, and fire standards are now embedded norms, and stressed they felt these attributes should be of great interest to students and new workers.<sup>27</sup>

There is also a view amongst youth that automotive sector jobs do not offer economic security and career stability. A 2019 survey of over 1,800 adults' opinions about Canada's automotive sector found that 59% believe jobs in the auto sector to be insecure, while 27% said auto sector jobs are "not secure at all."<sup>28</sup> Stakeholders attribute much of this perspective to the lived experience of youths' parents, grandparents, and even guidance counsellors, whose own experiences of economic downturns in the sector and falling wages have led them to discourage youth from joining the sector. Stakeholders claimed that parents have been advising their children in grade school and early in secondary school of the undesirability of a career in the skilled trades or automotive manufacturing sector, largely based on a historical image of what working in the sector entails.<sup>29</sup>

## Lack of exposure in the transition from school to employment

A lack of exposure to the skilled trades, coupled with a societal outlook that favours a particular type of postsecondary education (university) as the "best" option for young people, may contribute to the lack of youth awareness about the automotive industry's opportunities for skilled tradespeople.<sup>30</sup> Career and technical education-related course offerings are less common at secondary schools than they were in previous decades, which stakeholders attribute to declines in provincial investment in secondary school trades programs and trade shops.<sup>31</sup> Where trades and shop programs are available, they typically come with barriers to enrolment, such as limited seats, extra paperwork for students and transportation to other locations.<sup>32</sup> Additionally, secondary school manufacturing labs today often see students working on outdated equipment.<sup>33</sup> While this could be solved with additional investment, low interest is typically cited as a reason not to invest. As an example, stakeholders cited an example of a lack of interest in college welding programs that decreased provincial interest in spending more money on high-tech equipment.<sup>34</sup>

Under-investment in, and under-promotion of, the trades can become a cycle that leads to further deterioration in the quality of programming, which subsequently reduces interest, and leads to further reductions in investment, and so on. This cycle is not inevitable, nor is it purely a by-product of student preferences. Given the critical role secondary schools play in shaping the career choices of young people within the exploration stage, university promotion as a desirable track within secondary schools can certainly be attributed to having shaped perspectives. The primary consequence of a 'university-for-all inclination' is that it encourages students to pursue a university degree without a useful or comparable level of awareness about other postsecondary options that might better suit their interests, academic ability, or career aspirations. Work is being done to

ameliorate the perception of the automotive sector, along with the careers one could pursue within it. Stakeholders in London, ON reported that the LRMC frequently takes buses of secondary school students on tours of local production facilities. As part of this program, a survey is administered to students before and after the tour, asking them to rate their consideration of a manufacturing career on a scale from 1 (very unlikely) to 10 (most likely). Before the tour, typically less than 50% would say yes, largely due to the embedded perception and lack of awareness of the sector. After seeing the technology involved during the plant tour, the survey results increased on average to approximately 70% of participants indicating interest in pursuing a career in automotive manufacturing.<sup>35</sup> Similarly, St. Clair College in Windsor, ON, has hosted parents' nights with over 100 families to increase awareness for parents and promote the industry.<sup>36</sup> This involves tours of the colleges and tool shops in Windsor. Additionally, Workforce Windsor-Essex, a regional authority on workforce development also holds a 'Manufacturing Day' to showcase cutting-edge employers to secondary school students.

At the provincial level, the OVIN offers the Regional Future Workforce program which aims to address negative perceptions and stigma surrounding the sector, specifically targeting youth.<sup>37</sup> To do this, selected applicants such as post-secondary institutions, K-12 schools and school boards, student-focused non-profit organizations, and industry partners across Ontario can apply for up to \$500,000 of funding. To qualify, they must demonstrate a plan to target at least 500 students to get them excited to work in the sector.<sup>38</sup> Beyond simply funding initiatives, the provincial government is also changing curriculums in schools. Beginning in September 2024, Ontario will require a mandatory technological education credit for secondary school students to graduate.<sup>39</sup> In addition, young people will be permitted to start apprenticeships full-time starting from grade 11.<sup>40</sup>

Despite these efforts, negative perceptions still linger. The impact of this for young people at the exploration stage of their career life cycle is a reduced awareness of and access to the skilled trades and automotive industry. To avoid this trend creating a negative feedback loop and further depressing entry rates into the sector, the industry needs to be promoted in a better light. The transition to ZEV and battery manufacturing can be used to shape a vision for the sector that is higher-tech, with a heavy emphasis on STEM topics, robotics, and a work environment that is clean and laboratory-like. This transition presents an opportunity for the skilled trades career path to be promoted as being just as good as a degree, through media, college marketing efforts, open house days for students or learners to visit automotive production facilities, and attractive job postings that highlight available career pathways.

## Gender diversity

Women in the exploration stage of their careers face barriers when considering employment in these professions. One is a lack of representation that could dissuade more women from pursuing a career in the automotive and automotive parts sectors. According to Statistics Canada's Labour Force Survey, the proportion of women employed nationwide in trades,

transport, equipment operation, and related occupations in 2022 was 8.7%.<sup>41</sup> In Ontario, the proportion of women is only slightly better, at 9.5%.<sup>42</sup> Given slightly more than half of the Canadian population is female, that proportion reflects poorly on the manufacturing sector. The proportion of young women in the exploration stage of their career life cycle (aged 15–24) employed in the automotive sector is very low, with only 6% representation in assembly, and 7% in parts manufacturing.<sup>43</sup>

While stakeholders identified this trend was in large part due to fewer women being enrolled in skilled trades education programs, there are other reasons why women may decide not to pursue a career in the trades. The first relates to discrimination of women and girls within manufacturing environments and the skilled trades.<sup>44</sup> Stereotypes and biases are a big reason as to why there are still few women in trades, as there is an embedded (but accurate) perception that this sector is male-dominated, which presents a stigma for and from both men and women. Men are generally not accustomed to working with women in the trades, and stakeholders report that many male employees underestimate women and their capabilities in this field of work. Additionally, the preconceived notion that these workplaces are male-dominated and not overly friendly to women plays a role, as many women have only ever seen men in the skilled trades sector. This notion can affect how women are treated and perceived within the sector, while also sending subliminal messages to women considering the sector, that they do not belong there (an effect captured in research of similar workplaces that reduces the likelihood of women remaining in the sector, and reduces the future entry of women into the sector).<sup>45</sup> Some employers echo this, by voicing concerns that women in male-dominated environments may face greater sexism and harassment, or recounting historic incidents of events where these two malign forces were established and created harmful norms within automotive production facilities.<sup>46</sup> A second challenge women face is in balancing childcare with on-site work. In most families, mothers are still the primary caregiver for young children, and often responsible for managing the household. The nature of skilled trades work shifts, with its in-person and shift work requirements, can increase the difficulty of managing other household tasks, thereby reducing the feasibility of a mother having and maintaining a career in automotive manufacturing.

Efforts are being made across the sector to encourage more women to join the automotive industry. General Motors (GM) has employed human resources practices such as gender representative marketing campaigns, employing equal numbers of male and female assessors in the hiring process, and the use of simulations for assessing candidates (such as vehicle door-building). These simulations have been designed to reduce gender bias, with the aim of increasing the number of female workers in their plants.<sup>47</sup> Tactics like these have been effective in the past, as exemplified by GM's Oshawa plant reportedly hiring women as 50% of the 1,200 brought on board in their latest hiring round.<sup>48</sup> Stakeholders also told SPI that the Oshawa plant went from 100 workers to over 3,000 workers in the last 18 months, with a stated mandate of having 50% of those be women,<sup>49</sup> in line with GM's aspiration to be the most inclusive company in the

world (it should be noted that this is a stated GM commitment for this production facility).<sup>50</sup> As the GM CAMI assembly plant in Ingersoll, ON prepared for a new round of hiring in spring of 2023, stakeholders relayed that approximately 28% of its employees were women,<sup>51</sup> and to achieve a balanced workforce, almost all of those newly hired would need to be women. Through its 'Women @ Honda' initiative includes a plant tour and Q&A session, Honda Canada almost doubled its female proportion of production employees from 15.5% to 29%.<sup>52</sup>

Beyond corporate initiatives, there are also public and provincial initiatives for getting women into the skilled trades more generally. In the Windsor area, Women's Enterprise Skills Training uses government funding to offer a 42-week-long skilled trades program targeted at attracting women without prior experience into the skilled trades, with a particular focus on millwrights and machinists. Skills Ontario, an Employment Ontario program that partners with various stakeholders to provide youth with opportunities for skilled trades career exploration has seven young women's initiatives targeted at girls and women from grade five and up.<sup>53</sup>

## International students

International students are also in the exploration stage of their careers. The high level of education in the immigrant labour pool suggests that the automotive manufacturing industry will continue to draw from immigrants and international students as a source of labour for jobs that require post-secondary education, such as those in technical, engineering, and managerial positions. Our research shows that many of these roles will become of increasing importance in the shift to ZEV and battery manufacturing.<sup>54</sup>

However, the skills and educational profile of international students demonstrates an imbalance, as fewer are applying to study for skilled trades qualifications than are pursuing university education.<sup>55</sup> Additionally, international students report facing key barriers to joining the Canadian workforce upon graduation, some of which are the same barriers faced by newcomers more generally. Employers cite concerns about the lack of familiarity with Canadian workplace cultural norms and lack of 'Canadian work experience'<sup>57</sup> as limitations to hiring international students. This is because there is the prevailing perception from employers that without 'Canadian work experience', an employer cannot effectively assess international students' cultural nuance, language, or their ability to integrate into a business. In addition to this practice being considered discriminatory by the Ontario Human Rights Commission,<sup>56</sup> the Ontario Legislature also passed the Working for Workers Act in 2021, which codified the removal of this Canadian experience requirement for qualified applicants.<sup>57</sup> However, as relayed by training institution stakeholders during SPI workshops, obtaining 'Canadian work experience' is still a challenge international student graduates of Canadian auto sector related programs face.<sup>58</sup> In practice, this means being able to show experience of having worked in and familiarity with a Canadian work environment, meaning the practice continues as an established norm.



International students (and groups supporting international students) also reported that gaps in understanding what international students require to become employed reduce their attractiveness as candidates to employers. For example, many employers at SPI workshops said they would take “anyone that had a strong work ethic and who was willing to learn,” due to the skilled labour shortage.<sup>59</sup> However, others equated the challenges of hiring international students with the challenges of hiring foreign workers, stressing that hiring newcomers always required navigating complex immigration processes. This equivalence is not true in practice. While many newcomers to Canada do require employers to navigate immigration processes to hire, international students do not require any formalities to

work in Canada, as they are eligible for an open work permit upon graduation.<sup>60</sup> As such, hiring international students is simpler than many employers appear to believe. Despite this reality, stakeholders noted that the dissonance continues, and employers continue to hire fewer international students due to these beliefs. For as long as this remains the case, there is a risk that international students might return to their home countries if they struggle to find a job in Canada, resulting in the benefits of time and money invested in a Canadian education being lost to Canadian employers, while also exacerbating domestic labour shortages. The difficulties in finding their desired work limits international students’ ability to make progress during this exploration stage in their life.



# Establishment and maintenance

## Life-stage overview

The establishment stage (aged 25–44) of the Rainbow Framework is the stage in professional lives where workers having found an appropriate field, focus their efforts on establishing a permanent place in that field.<sup>61</sup> As noted, the establishment and maintenance stages of the Rainbow Framework are combined in this report. Both stages comprise similar career events, and milestones around skill building and career advancement occur in each. The priorities of individuals at this stage include promotions and salary raises as they progress in their careers, increasing their seniority within a particular organization and/or union, and securing benefits and pensions to safeguard their and their families' futures. Individuals at this stage of life are also likely to see the roles they play in environments outside the workplace change. From the establishment stage onwards, individuals are likely to become spouses, common-law partners and/or parents.<sup>62</sup> These non-work roles influence workers' career decisions. For example, workers may take jobs that allow them to live closer to children's schools or seek roles with stronger health benefits to reduce various healthcare costs. They may also look to increase their salaries to afford childcare, or care for sick or aging family members.

## Challenges faced by workers at the establishment and maintenance stages

### Terms of employment

Terms of employment are the responsibilities and benefits that come with a job, as agreed on between employer and employee. These include wages, work hours, job responsibilities and duties, paid vacation and other leave time, scheduling flexibility, and benefits (health and life insurance coverage, pensions and savings plans). At SPI workshops with ZEV manufacturing sector stakeholders, terms of employment for the sector's workers at this stage were a concern that came regularly, especially as related to the sector's ability to retain and attract as many workers as possible. The idea that job satisfaction, good work environment, and terms of employment correlate positively with employee retention is supported across human resources and employment and industrial relations literature.<sup>63</sup> The literature also emphasizes the negative relationship between job satisfaction and employee turnover.<sup>64</sup> As such, providing favourable terms of employment for workers in the establishment and maintenance stages of their careers can help balance their work and life satisfaction and responsibilities, and improve retention and attraction.

Parents, especially mothers, are one group of workers for whom favourable terms of employment and work-life balance are important. At the SPI workshops, stakeholders mentioned that plant production work shifts limited the sector's ability to retain employees who were mothers, as shift schedules made it difficult for them to both work and properly tend to their children.<sup>65</sup> Given the auto sector (and manufacturing as a whole) is a major

employer in the London and Windsor areas of Ontario, this problem sometimes affected both parents when they were employed in similar sectors, with stakeholders mentioning that in these cases, employees “basically organize their lives around those shifts.”<sup>66</sup> This setup makes it difficult for the sector’s workers to properly balance their work and life roles. From the stakeholders’ perspective, it also contributes to a loss of women employed in the sector because they leave the sector to find roles in industries that offer a better split between their work and family roles (through flexible shift scheduling and potential work-from-home/hybrid options), such as retail, food and accommodation, administrative and support services or health care and social assistance sectors. While the issue of better terms of employment for ZEV manufacturing sector workers affects both parents, societal and gender norms and expectations mean that the mothers typically end up having to make the adjustment. This limits both the range of productivity employers and businesses receive/attain, and the degree of satisfaction mothers employed in the sector can achieve, given their life roles as mothers, and career roles as workers. As such, addressing this concern around terms of employment for workers in the sector would be beneficial for multiple stakeholders.

Many of these broader terms of employment problems have also been noted by UNIFOR, a private-sector union that represents many Canadian automotive workers. At the time of writing this report, UNIFOR had recently secured a new three-year collective agreement with Ford Canada. The approach typically used by UNIFOR is to allow these new terms to form the basis for subsequent negotiations with other members of the “Detroit Big 3” of North American automotive manufacturers (a list that is made up of Ford, General Motors, and Stellantis, formerly Chrysler). A noteworthy inclusion was that UNIFOR leadership explicitly stated the terms of this new agreement were designed to “provide protections during the EV transition...”<sup>67</sup> These terms include ones that target wages and earnings such as general wage increases for each year of the agreement, higher hourly wages for production and trades workers and a quicker wage progression rate for workers (reduced from eight to four years).<sup>68</sup> There are also terms that in the agreement that address other terms of employment such as the introduction of two new paid holidays, the reintroduction of a cost-of-living allowance, increased health care benefit coverages, and productivity and quality bonuses for full- and part-time workers. There is also a chance that some of the terms of the agreement help address worker concerns around medium- to long-term security as the ZEV transition happens. These measures include the special EV transition measures for union members at the Ford Oakville Assembly plant, increased monthly benefit/pension rates for production and skilled trades workers, a 3% increase in employer contributions to retirement (defined contribution) plans, and changes to workers’ eligibility for, and payout shares of, the supplemental unemployment benefit.<sup>69</sup> While these terms will apply only to the union members at these automakers, the non-unionized automakers like Honda and Toyota that operate in Ontario can also be expected to match these terms to keep up with their competitors. It remains unclear to what extent these terms may address some of the concerns outlined above,

but many of the challenges identified in this report—including greater flexibility for working mothers, as an example—remain critical, as companies need to accommodate the needs of the individuals who make up their workforce.

### **No data collection on retention or hiring rates for different groups working in the automotive sector**

Policymakers rely on high-quality data to inform the development of policies that tackle social challenges. Yet, when it comes to discussing labour force participation rates for different groups in the automotive sector, very little meaningful data exists, forcing stakeholders to rely on anecdotes and intuition when making decisions. One example cited during SPI workshops was the dearth of data on retention rates for women in the automotive or skilled trades manufacturing sectors. While information exists on gender differences for apprenticeship completion rates and earnings post-apprenticeship, that does not cover those who may complete their apprenticeships and start work, but then stop working in the sector.<sup>70</sup> Anecdotally, stakeholders mentioned that in smaller studies they had done in businesses in the London–Sarnia area, retention rates for women in and around the sector were in the single digits.<sup>71</sup> Yet without sufficient data to understand the challenge, policymakers cannot take steps to address it, nor can businesses fully understand the scale of the challenge and what could be done to improve its current standing. A similar challenge is faced when discussing rates of labour force participation for economic immigrants within the automotive sector. Stakeholders agree that rates of labour-force participation are increasing for economic immigrants and this has implications for the support services they will need to provide to their staff (such as on-site translation, as one example), yet no data is collected that indicates the direction of this trend for the sector as a whole. As such, stakeholders report that policies offering supports, or aiming to address inequities, are often not aligned with the realities they face in their operations. One example cited was that too little support is given to employers who need to offer training on Canadian workplace cultural norms, such as wearing closed-toed shoes on production floors, which can create a need for longer and more expensive employer-led training on issues that go beyond the requirements of a specific role for employees to be able to perform. This challenge should be addressed, as it is the first step towards creating labour market policies that support the groups who want to work in the automotive sector, the employers who want to hire them, and the current and future needs of both these groups.

### **Barriers to entry into Canada for immigrants with foreign skilled trades qualifications**

Immigration is touted as one major way through which the skilled labour gaps in the automotive manufacturing sector are expected to be filled, with immigrants being the leading source of Canadian population growth since 2018<sup>72</sup> and also accounting for 80% of labour force growth in that period.<sup>73</sup> Close to two-thirds (64.2%) of Canada’s recent immigrants<sup>74</sup> were within

the core working age of 25 to 54 years old, putting them firmly in the establishment or maintenance stage of their careers.<sup>75</sup> Based on research and SPI workshops stakeholder feedback, this report has identified that these individuals can be held back in their life-career journeys before even coming to Canada, through barriers such as difficulties in applying to enter Canada, duplication of steps within the application process, and a lack of clarity around timelines to have their credentials recognized and approved.

There are a few pathways through which workers with foreign skilled trades qualifications enter the country. These workers typically enter through economic class pathways for permanent residency (also known as “landed immigrant status”), and receive visas based on their ability to become economically established in Canada.<sup>76</sup> Relevant examples of immigration classes and programs for skilled trades workers entering the country are the Express Entry Programs (comprised of the Federal Skilled Worker Program, FSTP, and the Canadian Experience Class Program) and the Provincial Nominee Program (PNP). The FSTP was established in 2013 and is targeted at skilled workers who are qualified and experienced in a skilled trade.<sup>77</sup> The requirements for admission under the FSTP include at least two years of verified full-time work experience, a valid full-time employment offer from a Canadian employer of at least one year (this can be substituted with a certificate of qualification from the provincial or federal regulator or ministry responsible for the applicant’s trade), a language test, and proof of funds for personal and family support. While there is no post-secondary education requirement associated with this immigration path, those with a post-secondary qualification can use it to boost their application’s chances, as the Canadian immigration system rewards human capital potential (which includes educational attainment), with more points towards selection for permanent residency. In June 2023, the federal government also unveiled the Economic Mobility Pathways Pilot targeted at skilled refugees and displaced persons.<sup>78</sup> This pathway aims to make it easier for refugees to apply by removing the Canadian work experience requirement in some cases, as well as allowing some applicants to get residency without needing a Canadian job offer. In August 2023, the federal government launched a new category-based selection for the Express Entry program, with skilled trades occupations being one of the selected categories for 2023.<sup>79</sup> This pathway aims to “...attract top global talent and help meet the need for tradespeople to support the economy.”<sup>80</sup> To qualify for permanent residency under this category-based trades selection, applicants still need to meet the minimum criteria for admission under the pre-existing Express Entry program.<sup>81</sup> In March 2023, the Ontario government announced a doubling of its PNP allotment for 2025 from 9,000 spots to 18,000, to allow sectors including the skilled trades to meet their labour needs.<sup>82</sup>

Despite these existing pathways and measures, workers still face challenges. A 2021 evaluation of skilled trades immigrants’ economic outcomes<sup>83</sup> notes that the FSTP had never reached its annual maximum capacity for applicants since its inception in 2013.<sup>84</sup> This indicates that simply applying to the program is either not of interest, or is potentially too burdensome, and

is screening out potential candidates before they even apply. Additionally, about 40% of skilled trades immigrants across all application pathways had pre-permanent residency Canadian work experience (these applicants have either accumulated experience between finishing school and applying for permanent residency, or they had worked while receiving an education in Canada). Both of these facts reflect points made by stakeholders, including recent entrants through other economic immigration pathways to Ontario, that recruiting eligible skilled trades immigrants directly from overseas was more difficult than it needed to be, because the rules are limiting for those without skilled trades work experience and/or education in Ontario or Canada, or because experience accumulated by those who had already worked in Canada was not being appropriately valued within their applications.

Another issue associated with immigrating as a skilled trades immigrant through the FSTP or PNP is that there is a lack of transparency around how long an application will take to approve, and how quickly an individual might be able to work in their field in Canada once they arrive. Given the requirements to get permanent residency through the FSTP, stakeholders stress that the practical route most skilled tradespeople were forced to take was to seek a certificate of qualification from Skilled Trades Ontario. Even if all the other program requirements were met, a certificate of qualification is still needed to work once an immigrant arrives, as employers will not hire workers without proof of qualification or certification recognized by the province. The process of receiving a certificate of qualification is yet another multi-step process. Applicants must first apply for a Trade Equivalency Assessment of their experience and qualifications for \$235.<sup>85</sup> If determined eligible, applicants then must sit for and pass a certification exam, after which they pay an additional fee to be issued the certificate of qualification. While the minimum financial costs are clear, the time aspect is not. Anecdotally, stakeholders noted that they were familiar with examples of review processes lasting from a few weeks, to almost two years.<sup>86</sup> Greater transparency and consistency would be welcome in this process.

This lack of clarity could be a contributing factor to the reduced intake through the FSTP and the increasing willingness of immigrants, especially those in the earlier maintenance stages at home, to immigrate as international students instead of established professionals. Stakeholders noted that entering as a student is a simpler task that many choose to pursue, even if workers are experienced professionals who could contribute to the workforce. This costs both employers in immediate need of labour, and the immigrants themselves of career progression and future earnings. While the government has tried to make it easier for foreign skilled trades workers to immigrate through the category-based stream, not enough has been done to address the time and cost issues faced by immigrant skilled trades workers with foreign experience and credentials. At the time of writing, the only difference between the requirements for the category-based selection and the Express Entry and PNP programs was the duration of the full-time work experience requirement, which is at least six months for the former, but at least two years for the latter. This incongruity should be addressed.

## Difficulties associated with hiring through government immigration programmes

Another immigration-related complaint employers at SPI workshops stressed was the bureaucratic complexity of hiring through an immigration program, and the level of effort it takes employers to hire through the job bank and help their foreign employees settle in. One stakeholder joked that “immigration lawyer” needed to be the first hire for any employer in the ZEV manufacturing sector.<sup>87</sup> Employers complained about the financial and administrative hassles of associated with completing a Labour Market Impact Assessment (LMIA), a required step in some immigration processes that allow employers hire temporary foreign workers. LMIA’s are required for employers to prove to Employment and Social Development Canada that there is a need for a temporary foreign worker to fill a role, and that there are no Canadians or permanent residents available to do the job.<sup>88</sup> Sometimes an LMIA can be completed to support a potential employee’s application for permanent residency through one of the aforementioned streams, which is known as a dual intent LMIA.<sup>89</sup> The potential employee must then meet the aforementioned requirements of the permanent residency pathways, which further limits the potential pool of foreign employees to those who already have Canadian experience and/or education. These immigration complexities create what stakeholders see as a ‘chicken and egg’ situation, whereby they need skilled trades workers in Canada, but cannot get them to immigrate without having prior Canadian experience and/or education. While a conglomerate or a large business may be able to bear the time and cost burdens of dealing with these processes (primarily by hiring immigration lawyers and specialized human resource professionals to manage this process on their behalf), SMEs are less able to do so, as they may not have the funds, knowledge, connections, or even legal departments to see these processes through. It also affects some of the qualified foreigners who are already in Canada, as employers may be put off from giving them a chance due to a perception or fear of having to go through what they think will be a protracted hiring and/or immigration process.

## Supports for workers through settlement services

The last immigration-related issue ZEV manufacturing sector workers (and employers) face in the establishment stage is around post-immigration and settlement workplace integration. Stakeholders at SPI workshops relayed that although the government has several immigration programs in place to help meet skilled labour needs, more could be done to support employers and employees within workplaces after landing in Canada, with cultural norms, workplace safety standards and settlement (housing, transport) being three challenges where additional supports were requested. In some cases, companies have begun offering services such as corporate housing, on-site translators and paid transit from major communities into production facilities to compensate for a lack of services. In some cases, these services make sense for companies to bear the costs of. For example, many production facilities are built on previous

rural or agricultural land, making it unlikely that a public transit route would be available for workers employed in this facility. Additionally, on-site translators and workplace safety training has historically been the responsibility of employers. However, in other cases, companies complain of a need to make investments themselves because of an absence of well-functioning services. One common complaint is the growing need to invest in corporate housing for workers, which some of the larger companies have indicated they are exploring, to ensure their future workers have access to housing in communities where there is currently a shortfall. While this is the norm in some sectors, it has not historically been the norm in Ontario’s automotive industry. SMEs at SPI’s workshops feared that their limited ability to provide housing for workers may make them less competitive in hiring than large businesses, especially if Ontario housing costs continue to increase past what SMEs can afford to compensate workers. Another example is the reality that a changing labour market may require additional supports such as courses or training in Canadian workplace cultural norms and safety standards for new workers, a cost employers may need to bear.

## Difficulties faced with accessing employee training to both upskill and reskill

Training and staying up to date with recent developments in the field are part of what all workers in the establishment and maintenance stages in any sector have to do to grow and strengthen their standings, and the same is true in the ZEV manufacturing sector. This training is also referred to as upskilling (learning new skills for to perform the same or a similar role) or reskilling (learning new skills to perform a new or different role). As referenced in *Shifting Gears*, our previous ZEV skills report, workers in some sectors throughout the supply chain will need to upskill to take on novel tasks and activities required for ZEV production.<sup>90</sup> Yet despite the understanding of the importance of employee training, there are still challenges to this training that were cited across SPI workshops and surveys. More than half (59%) of survey respondents identified financial cost as employers’ biggest barriers to supporting training, while 50% said the operational and time costs it takes to organize and deliver such training was the barrier holding back the growth of training initiatives.<sup>91</sup> In addition to the latter issue, both employers and labour stakeholders at SPI workshops raised the issue of the difficulty in getting workers off the shop floor or out of work to go carry out training instead. From the workers’ perspective, this may cost them wages, as many employers are not always willing to bear the cost of, or support this training. From the employer perspective (particularly SMEs), taking workers off the shop or production floor costs them both productivity from the absence of the workers, and money in cases where they would have to pay for the training.<sup>92</sup>

To help employers train new and existing employees, the federal and provincial governments have the Canada-Ontario Jobs Grant.<sup>93</sup> This funding provides up to \$10,000 per employee, to help employers cover training costs and can be renewed yearly if employers meet the condition that training directly results in an improvement or benefit for the employee (these benefits include

promotion, pay raise and/or title changes). The uptake of this grant remains unclear, but it could potentially be of use within the automotive sector, provided barriers to accessing funding were low enough that it did not dissuade SMEs from submitting applications.

The use of micro-credentials as a way to address these training concerns was also discussed in both workshops. Colleges and Institutes Canada (CICAN) defines a micro-credential as a “certification of assessed competencies that is additional, alternate, complementary to, or a component of a formal qualification.”<sup>94</sup> Micro-credentials were seen by stakeholders as a short-term measure to drive action until there is more certainty around the sector’s trajectory and skills expectations from employers, and longer formal programs can be developed (See information asymmetry discussion further below).<sup>95</sup> Amongst the advantages raised were that micro-credentials could be done in a short period of time, could help workers upskill without having to fully stop and go back to school for a diploma, and that they might be stackable (meaning they could be combined with each other or with other diploma programs should a worker decide to pursue a full degree). However, stakeholders also noted disadvantages with micro-credentials, describing them as a “short-term fix” that would not actually teach its holders enough skills to serve as a substitute for more formal education. Others raised issues with micro-credentials’ transferability, legitimacy, and a lack of recognition across regions and/or employers that a given micro-credential was useful or relevant to their operations. While countries like Australia and New Zealand have national frameworks for recognizing micro-credentials that aim to address some of these challenges, this is still in its early stages in Canada.<sup>96</sup> However, while this work is ongoing, micro-credentials are likely best

used in the sector in a limited, short-term manner to support urgent upskilling efforts for the occupations in greatest need. Additionally, industrial-skilled trades groups noted that the creation of micro-credentials may not be the best fit for their members. They noted that expansions of existing scopes of practice, and training efforts to support these new skills, would be a better fit for a number of skilled trades occupations, including those recognized under the Red Seal framework. This further highlights the importance of using micro-credentials only where stakeholders feel they are an appropriate and relevant approach, especially while the evidence base supporting their efficacy is being developed.

### **Failing to receive training if employers do not want to pay for it**

Stakeholders, especially SMEs, also noted a problem of employers not wanting to sponsor or financially support training for workers they feared would be poached. This is distinct from the debate around whose responsibility it is to pay for or otherwise support employee training, which is a separate issue.<sup>97</sup> Employers noted concerns that their efforts may be wasted if (or when) these workers are poached by the bigger companies, including larger production facilities moving and expanding their operations in Ontario. Given that employees’ knowledge and skills are important to keeping employers and businesses functional, taking measures to train employees as needed, is yet another step that if taken seriously, stands to benefit multiple sets of stakeholders within the ZEV manufacturing sector. As such, it is not something that should fall on just employees, but should be borne and shared by the sector at large.



# Disengagement

## Life-stage overview

The final stage of the Rainbow Framework discussed in this report is the disengagement stage. While Super has this stage starting at age 65, this report understands this stage to start at age 60, as Ontario stakeholders' have noted this is typically when automotive manufacturing sector workers start their planning retirements, or switching out to less physically demanding roles.<sup>98</sup> In the context of this report and Ontario's ZEV and automotive manufacturing workers, workers who fit into this section can be employed in any number of roles. However, what all these workers have in common are experiences, institutional and technical knowledge, and skills that offer value to their organization and their colleagues. If they are employed by one of the Detroit 3 automakers, workers in this stage are very likely to be members of a private sector union like Unifor. If not, they may not have the same pension security, which creates other pressures. While the Canadian retirement age is age 65 (Canada Pension Plan eligibility), for unionized autoworkers, eligibility for retirement before age 65 is possible, depending on whether a worker has met a number of requirements. These include the worker's age at retirement, the number of years of credited service, a permanent layoff, a physical or mental inability to work, or permanent lifelong disability. The biggest priority of workers at this stage is ensuring their pensions are sufficient for them and/or their families. When retirement is not possible or uncertain, they may seek a role they perceive as easier and less physically demanding jobs (sometimes still in and around the sector in consulting or part-time roles) to supplement pension benefits and fill their time.

Individuals at this stage of life will increasingly play the role of worker less, transitioning into less professionally-focused roles such as pensioner, parent, and grandparent.<sup>99</sup> They may also become more active in environments outside the workplace (community, school, home), as they have more time to engage in activities outside the workplace.<sup>100</sup> This involvement in other spaces supports the idea that work helps give people's lives structure and meaning, because they provide a focus for personal organization, daily/weekly routine, associates, friends, and other social supports.<sup>101</sup> In the absence of that work being professional/compensated, greater engagement in volunteering and other forms of non-compensated labour are often sought as substitutes.

## Challenges faced by workers at the disengagement stage

### Early retirement

The increasing proportion of workers nearing retirement in automotive manufacturing (and in skilled occupations within the sector) is a known and long-term concern for stakeholders across the sector. This trend is arguably the primary focus of any discussions of older workers within the automotive sector, largely due to the impacts this trend is expected to have on others (including employers and younger workers). In 2016, the Motor Vehicle Manufacturing and Motor Vehicle Parts Manufacturing subsectors had 18% and 21% of their respective workforces aged 55 and older.<sup>102</sup> At the SPI workshops, a London area manufacturing stakeholder mentioned that in a recently conducted survey, close to two-thirds of the area's manufacturing workforce was

within five years of retirement.<sup>103</sup> Lastly, almost two-thirds (62.5%) of surveyed respondents identified “an aging/retiring workforce” as a reason why they expected the ZEV manufacturing sector to have skills and labour shortages.<sup>104</sup>

To help deal with this retirement challenge, stakeholders mentioned how these older employees were asked to stay beyond retirement as consultants, independent contractors, or even in a part time capacity, as the employer would prefer them remaining on but taking on a smaller workload or some supervisory role, than having them do no work at all.<sup>105</sup> While many workers are amenable to this idea, and are interested in extending their careers for financial or identity-related reasons, workplace conditions (detailed below) also lead some to exit the sector early. In the case of early retirement in the sector, this mainly affects the employers, who do not get the maximum amount of time from these employees as they would like, while also losing these employees’ considerable technical and institutional knowledge. These early retirements can also impact incoming or potential apprentices, as these experienced employees could have supervised new hires or apprentices, which in turn contributes to the automotive manufacturing labour shortages, because employers cannot hire apprentices without enough staff to train them. Stakeholders reported that a somewhat ironic reason for some of the early disengagement and/or retirement from the automotive manufacturing sector was due to workers preferring to wait for incoming plants (Volkswagen in St Thomas, ON; Stellantis-LG in Windsor, ON) to begin hiring.<sup>106</sup> This is because they were confident that they would be hired in some capacity due to their experience, as well as an expectation of improved terms of employment at the new plants. All these issues that arise in the disengagement stage of a ZEV manufacturing sector worker’s life-career, also affect them outside the work environment. Not having certainty about their retirement plans and timing may affect workers’ ability to properly fulfill the role they would expect at this life stage (which includes pensioner and (grand) parent). It may also leave them unwilling to be connected or help a sector that is in serious need of these workers’ knowledge or presence to help guide new workers.

## Workplaces are not always designed for aging adults

As noted above, when discussing older workers, the primary manner in which an aging workforce is discussed in the automotive sector is a challenge companies and younger workers will need to navigate. However, if keeping older workers engaged and working was viewed as a core priority, more could be done to tackle the challenges and stereotypes faced by aging individuals looking to remain employed in the automotive workforce. Studies have identified that older workers self-reported facing several challenges in remaining in the workforce that their younger colleagues do not encounter, including: a work environment that imposes higher physical demands due to the use of older or outdated equipment; reduced speed creating challenges to produce the same volume of output in the time available to them; stereotyping and bias around their abilities and competencies for younger employees (often including

supervisors); and, negative impacts on self-esteem and morale as professional status and roles change.<sup>107 108</sup> While stakeholders in workshops and surveys did not discuss the challenges facing older workers specifically within the sector, it is likely steps can be taken to address some of these barriers, thereby making the objective of greater workforce participation for older workers a more attractive prospect.

Physical demands of certain roles are often greater for aging adults. One study of manufacturing workers in Germany identified that environments with lower rates of automation, traditionally thought of as being “better for jobs,” can create tougher working conditions for aging individuals, given that older and outdated equipment is often more physically demanding to operate and repair.<sup>109</sup> These environments typically require greater kneeling, bending, or working overhead, motions that are more physically demanding for older workers, and can create or exaggerate health issues such as back pain or knee problems. Similarly, the same study found that work stations that are noisy, or have poor lighting, can be harder for older workers to navigate.<sup>110</sup> Solutions cited speak to the importance of ergonomic design and the need to align work requirements with individual capacities in occupations where these impacts will be felt, while also highlighting that higher rates of automated equipment (as seen in ZEV production facilities) would likely be beneficial for workers looking to remain in less physically demanding roles while still continuing to contribute.<sup>111</sup>

Similarly, beyond changes in physical capacity, changes in social status and identity as a result of management demands, team changes, and stereotyping can be harmful to aging adults. Studies have found statements such as “you cannot shift an old tree without it dying” are phrases that are repeated in certain work environments, which speaks to both the stereotypes and personal challenges older workers face in adapting to changes.<sup>112</sup> In some cases, adjustment to a new team is accompanied by a loss of relative social status or a loss of a social or personal network that an individual may have had for over a decade.<sup>113</sup> In other cases, adjustments to new roles can be accompanied by a loss of status or title, which can make change feel like a degradation of personal accomplishment or position.<sup>114</sup> Managers or colleagues who are younger than workers may also unfairly stereotype an individual based on their perceived competence/ability (or incompetence/inability, in most cases). These instances of ageism may lead to shaming and social consequences if an individual becomes ill or requires support, which can create feelings of shame, and may even lead an individual to work in unsafe conditions, or past the point where it is healthy or safe for them personally, in an effort to counteract stereotypes.<sup>115</sup> This increases their risk of injury, and does little to make older employees feel like valuable contributors.

All of these factors need to, and should be addressed if companies in Ontario’s automotive supply chain want aging professionals to remain employed. It should not be the responsibility of older workers to delay their retirement and work in unsafe or discriminatory environments if companies are not willing to improve working conditions for aging individuals. As noted, little



discussion or focus was given by stakeholders as to the challenges older workers might face in remaining employed. While this does not in itself offer much indication of the state of readiness or affairs, it does indicate a lack of focus being dedicated to combatting these challenges.

## Helping older workers navigate labour adjustments

One key risk that workers in the disengagement phase of their careers face is the risk of getting laid off. While this is a risk for all workers, it may adversely impact older workers more, for many of the reasons cited in the previous section. Layoffs can happen for a variety of reasons including plant retooling, relocation or in-sourcing by OEMs of work previously done by independent parts suppliers. In the sector, the term “labour adjustment” is commonly used to refer to the management (i.e., policy measures and other supports) of either voluntary or involuntary job transitions.<sup>116</sup> Stakeholders that SPI spoke with expected labour adjustments as a result of the ZEV transition to mostly affect independent parts suppliers, especially those who manufacture or supply specialized engine parts that will no longer be needed in ZEVs.<sup>117</sup> Labour adjustments also add a sense of insecurity to their peers at other or similar parts suppliers across Ontario, who worry about meeting a similar fate. Stakeholders SPI spoke to noted that while options and avenues to help reskill or otherwise reintegrate these workers in to the sector exist, keeping or getting these workers interested in continuing their careers in the sector was proving difficult, as many felt disgruntled and disrespected when they lost their jobs.<sup>118</sup> Many of these individuals stressed they preferred to find work in other less physically demanding non-manufacturing sectors to supplement their pensions.

One solution is to create additional supports to help older workers find new work within the sector for those who are open to, or interested in, remaining in the automotive sector. There are a few resources to help laid-off automotive sector workers reskill or even find work in other sectors. The most recognizable are Action Centres, employment support centres that are created following a period of labour adjustment. In the automotive sector, this refers to support centres offering “adjustment advisory programming” administered by a private union provider (typically Unifor). The Ontario’s Ministry of Training Labour and Skills Development provides funding for these centres through the Adjustment Advisory Program—federal funds given to the province to run workforce development programs. While the provincial centres are more common, the Unifor model has evidence of higher efficacy for placement rates for laid-off workers. Unifor’s Action Centre’s use a peer-to-peer model that is staffed by current or former auto sector workers instead of government officials. This increased knowledge of the automotive sector, and the common existence of pre-existing personal relationships between support staff and workers seeking support, are two reasons Action Centre organizers credit their program’s success rates at placements (80%–95%) as being higher than comparable programs run through Employment Ontario (~50%).<sup>119</sup> The centres also offer additional training services by helping

workers without a secondary school diploma sign up for General Education Development certificates, and connecting them with Better Jobs Ontario (formerly Second Career), a provincial programme that provide workers with financial support and skills training for a range of roles, including ones outside the ZEV manufacturing sector.<sup>120</sup> There is no direct support provided through the Action Centre for post-secondary qualifications. Nonetheless, stakeholders were optimistic of entering arrangements with local colleges across Southwestern Ontario to incorporate basic computer and digital literacy into the training they provide at the Action Centres.<sup>121</sup> It should be noted that Unifor’s Action Centres are only meant for unionized workers at particular plants and locations that have been closed or laid off (such as labour adjustments at the Syncreon facility in Windsor, ON or Adient in Tillsonburg, ON).

Despite the touted success of the Action Centres, stakeholders shared concerns regarding the logistics of getting the Action Centres up and running. The primary concern was the negotiation process with the provincial ministry, which entails proving that union is running a program offering value and outcomes will be distinct from those already offered by the provincial ministry and related workforce training boards. This process can be time consuming and frustrating to deal with, especially since the funding for the centre is already earmarked by both federal and provincial governments. One stakeholder noted that setting up a previous Action Centre required over 20 meetings with various bureaucrats to show that the union would use this funding differently, thereby delaying work that the union could be doing to respond sooner to these workers’ needs, and adding to paper-work costs. Even after approval, stakeholders stressed that they were typically given funding for one year, and further approval processes were required to receive extensions. Stakeholders also expressed a concern that this program funding model limited their ability to provide support. Currently, Action Centres are only mandated to provide support to workers at a particular plant or facility that has experienced labour adjustments. This has led to cases of “needing to turn workers who come to us for support away, even if they have been unable to find support elsewhere.” While there are many other employment support programs led through provincial bodies and workforce planning boards, the success of Unifor’s Action Centres at helping automotive workers specifically, deserves greater examination. As the ZEV transition advances, supply chain disruptions may prove frequent enough that rapid and effective support is needed to connect workers with new opportunities, even just within the automotive section. This support may be needed faster than the current approvals timelines for Action Centres allows them to operate. To deal with this, developing an Action Centre whose mandate to support automotive workers was extended by community, rather than by facility, would be beneficial for impacted automotive workers.



# Challenges impacting workers throughout all stages of their careers

Many of the challenges discussed in this report will impact workers in more than one stage of their careers. This section details two of these challenges, and details how each will influence a worker at different stages.

## Wages

Wages have an influence throughout a worker's career in different ways. At the establishment and maintenance stages, workers may seek to upskill or change occupations to pursue higher wage roles, especially as they may have greater family responsibilities relative to earlier stages. At the disengagement phase, lower than expected wages may prompt earlier retirement decisions, such as reducing work hours or leaving the workforce entirely. While the motivation for higher wages remains consistent, workers will face different challenges (and have different motivations) at each stage in pursuit of this objective.

Wage rates pose a challenge for workers at different stages of their careers. In 2022, Ontario's manufacturing sector had lower average hourly wages (\$30.83) than the overall average hourly wage (\$32.94) across all industries for all workers (aged 15 and above).<sup>122</sup> More specific to the ZEV manufacturing sector, a 2019 APRC wage report found that some production and skilled trades occupations wages across NAICS 3361 (Motor Vehicle Manufacturing) and NAICS 3363 (Motor Vehicle Parts Manufacturing) were "... not keeping pace with wages in other sectors such as construction or utilities" and that wages were lower in parts production than in assembly.<sup>123</sup> Additionally, wages paid to youth in the automotive manufacturing sector are

declining relative to average wages in the sector.<sup>124</sup> Although the average hourly wage for Ontario workers aged 15–24 in the manufacturing sector has been higher than the overall labour market average every year since 2001, it has been lower than the hourly average for roles in sectors like utilities and construction, which require similar skills to manufacturing.<sup>125</sup> In that period of time, it has also been lower paying than the professional, scientific, and technical services, which also attract youth assessing their career options, especially those in larger urban areas with post-secondary qualifications. As such, paying lower average hourly wages than competing sectors makes it challenging for the ZEV manufacturing sector to attract new and/or younger workers in the exploration phase of their careers, especially those in the larger and denser urban areas where workers have more employment opportunities and the cost of living is higher (such as the Greater Toronto Area). The concept of "pay them and they will come,"<sup>126</sup> which some stakeholders mentioned during SPI workshops, is not an option for those employers in the sector who are SMEs with smaller margins, especially given the turbulent economic history of the industry. These trends are making the sector less attractive to students and new workers and contribute to making it harder to retain workers as they age out of the exploration stage and into the establishment stage.

The reality of lower-than-average earnings also impacts workers in the establishment stage and beyond (aged 25+), including older workers or workers near retirement. In 2022, prime-age (aged 25 to 59) manufacturing sector workers in Ontario made an average of \$31.99/hour, compared to the provincial average of \$35.59/hour for workers across sectors.<sup>127</sup> More specific to

the automotive manufacturing sector, the real earnings of vehicle manufacturing and parts manufacturing employees decreased by 18% and 21% respectively, between 2001 and 2018.<sup>128</sup> Stakeholders at SPI workshops identified older workers (aged 60 and over) as retiring early and collecting their pensions, or taking up similar paying but less physically-taxing jobs in other sectors like retail, which are seen as more attractive alternatives, instead of continuing to work in the automotive sector.<sup>129</sup> These lower wages are influencing decisions made by older workers, whom stakeholders stressed are often reducing their work hours and transitioning to part-time, or retiring early. In the establishment and maintenance phase of their careers, some workers are citing lower wages as a justification to spend extended periods not working in the sector, while they await the opening of large ZEV or battery production facilities, which they believe will offer higher wages. In some cases, these workers are upskilling or pursuing further education to support their candidacy for these roles, although it should be emphasized that many are simply opting to leave the workforce and re-enter once these facilities re-open at a later date.<sup>130</sup>

These challenges are compounded for employers by investments in other non-automotive sectors in Ontario as well, including by large employers like Maple Leaf Foods and Amazon, who are looking to pay (in some cases) higher wages. This creates competition and opportunities for high-value, high-paid jobs in the region, and increases the likelihood that workers get poached by other companies in the region, even if they are not in the same sector. This is a positive scenario if the metric for success is workers' earnings, but is increasingly disruptive for employers that are unready or unable to match such competitive wages. Areas such as Windsor, ON also have the added competition of being just across the border with Detroit, which will further elevate the wages offered by new battery manufacturers.

## Information asymmetry

Another issue that affects workers across life-career stages is information asymmetry. This refers to the dearth or uncertainty of information about what various stakeholders need to do to better prepare and equip workers for the ZEV transition. Information asymmetry is felt most clearly around new investments that are set to create thousands of jobs. Stakeholder feedback from SPI workshops showed that one of the biggest current limitations holding back workforce planning to deal with some of these impacts of the ZEV transition is the lack of transparency from OEMs and new facilities regarding their job descriptions and skills needs.<sup>131</sup> This uncertainty makes it especially difficult for local stakeholders, including ESPs, colleges, and unions, to know how best to train and prepare workers for the incoming change. With these ZEV and battery plants slated to begin production within the next year and a half, stakeholders fear that they will not have enough time to both adequately train new entrants into the sector and retrain current or transitioning workers. Although Stellantis-LG is working closely with St. Clair College in Windsor, ON to develop programs and training to staff the plant,<sup>132</sup> this is only one arrangement with one college

in one region, and may not be replicable in larger or more populous regions with more PSIs. Such an arrangement also leaves out ESPs and labour unions, who also have a part to play in training. Additionally, this arrangement will only support graduates with college diplomas, which does not include many of the engineering or computer science roles that our research has shown these facilities will require.<sup>133</sup>

Furthermore, while some OEMs have mentioned that they will have "preferential hiring" for union members, stakeholder feedback showed that it only applies to priority for interviews, not guaranteed jobs for transitioning workers.<sup>134</sup> This is not independently a challenge, but unions emphasized that the lack of transparency about skills needs made it difficult to support their members as they prepared for interviews. Without an understanding of skills and knowledge needs, it was unclear if workers should invest in training or upskilling, or which components of their skill sets should be emphasized. This lack of clarity is a major challenge for job seekers in all areas.

This uncertainty is felt by workers at all stages of their careers. This issue affects workers at the exploration stage when their training institutions are unsure of what employers (OEMs, parts manufacturers, etc.) want to see in their new graduates, and are thus unsure how best to curate the curriculum so the students' skills and knowledge are not outdated or deemed unnecessary or insufficient in the labour market. Additionally, students are unsure of which skills will be most in-demand for the jobs they seek, and may find it difficult to know which courses or knowledge areas to prioritize for them to land the roles they seek within the sector. Information asymmetry affects workers at the establishment, maintenance, and disengagement stages by making it difficult for them to know what to upskill or re-skill in, especially if they seek roles in new facilities. Stakeholders stressed this tension was felt particularly amongst union workers in these career phases being offered preferential interviews.<sup>135</sup> These individuals are currently attempting to determine whether they need to reskill or upskill to better position themselves to fill open roles, and the lack of information is creating stress and uncertainty about their future prospects as they simply await additional information. This can be understood as an opportunity cost to these workers, who are not spending time pursuing training or education (despite their stated preference to do so) in the face of uncertainty about what employers need. This also affects ESPs who may be tasked with helping workers at this stage upskill or reskill, as they cannot properly assist or direct the workers if what employers want, is unclear to them. Finally, information asymmetry impacts workers at the disengagement phase of their careers by impeding their ability to see how their current skill sets will be valued in the labour market, leading many to make retirement decisions based on a view of their own value that is not aligned with a future employers' training needs or expectations.



# Recommendations

To address the aforementioned challenges, this report makes the following recommendations for industry, governments, unions, and other groups to adapt their practices, processes, and objectives in the interest of supporting the future of the automotive sector workforce. These recommendations are meant to be in addition to several existing programs and steps already being taken by stakeholders to address these issues:

## Exploration:

**The federal government should make international students eligible for the SWPP to help international students get sector-relevant Canadian work experience, and address employer concerns.**

For international students and employers, there is a shared emphasis on the importance of finding experience in the Canadian job market. Students want to increase their employability, while employers want to find candidates who have experience working in a similar professional environment to theirs. One potential way to bridge this gap is to offer more co-op and work-learning terms for international students, which would help students get work experience, and ensure new graduates had credentials and experience that was more greatly valued by employers. However, many SMEs (which form a majority of businesses within the ZEV supply chain) rely at least in part on government funding from federal programs like the SWPP to hire students. International students are not currently eligible for funding support under this program. The federal government should change the terms of funding agreements to allow for businesses that engage international students to be eligible for federal funding support. This would help international students gain work experience in these specific industries throughout the ZEV supply chain, and businesses would be better able to recruit and attract international students who could eventually become permanent workers. A core reason why this is not currently the case is a political concern that federal funding

would go towards supporting workers who might then leave the country. This concern is misplaced, for two reasons: First, employers need additional labour today to support continued operations, and measures taken to lower barriers to employment for capable and talented individuals will benefit Canadian businesses, even if workers do not stay at a job long-term. This is especially pertinent when hiring students, as there are always questions around their desire to remain past the conclusion of an employment term. Second, a lack of Canadian job experience is already causing graduates who might want to stay and work in Canada to need to leave at the end of their degree or diploma programs, since they cannot find work in the Canadian labour market. Plugging this gap would likely increase the number of individuals who stay, thereby creating real benefits for businesses today, and for Canada's economy in the years to come.

**The federal government should adjust proof of funds requirements for international students making applications to skilled trades programs, to make pursuing a technical education in Canada relatively more attractive for prospective applicants, and fund PSIs to administer settlement services for international students.**

When applying to Canadian educational program (degree or diploma), prospective applicants from other countries have a number of steps they must take. One of these steps is to illustrate "proof of funds" within their application (officially titled "proof of financial support"), which involves showing proof of income from yourself or a family member that shows the student can fund at least one year's worth of cost of living in Canada.<sup>136</sup> In many cases, students are asked to show they have sufficient funds to cover their living expenses for the entire term of their degree or diploma program.<sup>137</sup> These requirements will differ depending on the respective cost of the degree or diploma program, as well as the cost of living in the region where the post-secondary institution is located (determined by whether the institution is inside

vs outside of Quebec).<sup>138</sup> This report recommends that, in order to make skilled trades programs more attractive to prospective international applicants already applying to Canadian colleges in droves, proof of financial support requirements remain fixed for a period of time moving forward. Requirements for degree programs should continue to increase with inflation. This would create a relative incentive for applicants to pursue a technical education in Canadian colleges, which often come with co-op or apprenticeship requirements, thereby giving them work experience, without compromising the spirit or intention of the proof of funds requirements. Additionally, this report recommends this step be paired with greater funding for settlement services for international students to Canada to be administered by PSIs. Given that PSIs are one of the first Canadian institutions students regularly encounter, and are often where students are most engaged, they are a natural fit to administer settlement services such as job search and finding supports, preparation and language training, amongst other important tasks for international students. The current system of relying on non-profit community organizations and ESPs can be difficult for students to navigate, especially for students at smaller institutions and/or towns (which includes colleges that offer auto and battery manufacturing-related programming). Therefore, the current system should be complemented by a greater engagement from PSIs, who have a stronger understanding of international students' specific needs. Additionally, funding PSIs would remove some of the burden on existing non-profits providing these services currently, thereby giving them more time, resource and energy to dedicate to supporting newcomers to Canada who enter through non-academic pathways.

## **Establishment and maintenance:**

### **Give mandate to local workforce planning boards to work with employers to proactively identify and support candidates from underserved and equity-deserving communities.**

When it came to advancing equitable outcomes, employers repeatedly emphasized that they could only hire the individuals who “saw and applied to our job postings.” However, multiple stakeholders identified that employers have approaches to promoting job opportunities that inadvertently limit the number and type of candidates they see: First, they often hire through traditional networks, reaching out to known associates or existing colleagues networks to promote roles. Second, they do not always connect with support organizations, such as provincial service providers, when aiming to promote job descriptions. While government support programs are not perfect, they can help employers find candidates outside their immediate networks. These often include individuals from underserved or equity-deserving communities who may have the skills employers seek, but do not fit into the stereotypical profile of an automotive worker, nor do they belong to existing professional networks within the sector. Employer behaviour can be attributed (in part) to a lack of awareness within the sector about local support programs, as well as the reality that many employers in the automotive sector (who are disproportionately SMEs) do not have the resources to substantively adapt hiring practices to the degree necessary to conduct outreach to equity-deserving communities. To ensure employers know where to find candidates beyond their usual networks, local

workforce planning boards' funding should come with an additional mandate to create networks and resources for local employers to hire candidates from these communities. This may help ensure that professionals from under-served communities are more readily considered for opportunities in the sector. Recognizing that many groups within communities provide these services already, this will likely require planning boards to engage with ESPs, PSIs, community groups, and non-profits to identify existing networks of job seekers, and ensure job postings are shared with this network of candidates. Additionally, to ensure individuals are being considered when they do apply, planning boards should engage directly with employers to ensure candidates are considered equitably alongside other applicants who may come from networks where they have historically found workers. In regions where planning boards may not have the capacity to administer this new mandate directly, collaboration should be sought with local chambers of commerce, who are well-connected with local businesses to support outreach and engagement efforts, and are keen to help businesses seeking to tackle their severe labour shortages.

### **PSIs, who are already responsible for educating workers through the ZEV supply chain, should develop short-term, targeted micro-credentials to support upskilling efforts for mid-career professionals, in partnership with employers.**

Micro-credentials, which are short-term training or education opportunities wherein the individual receives a credential to recognize their learning, are an increasingly popular solution to propose to many training and education challenges.<sup>139</sup> However, questions still exist about their efficacy, and the extent to which employers are interested in valuing and recognizing shorter-term training opportunities.<sup>140</sup> To overcome these two challenges, PSIs involved in training and education for ZEV workers should partner with businesses, and develop a series of targeted micro-credentials aimed at plugging immediate labour shortages within the sector for occupations where upskilling is identified as the missing piece to the ZEV transition. These credentials need to be developed in partnership with employers, since this is the primary way to ensure businesses will recognize and validate new credentials. Additionally, tailoring them towards business needs will make them more attractive for both workers and employers. This report recommends starting with only a small number of targeted micro-credentials that would be developed and supported over a three-year time period, given the need to focus these programs on occupations in urgent need of upskilling (such as automotive service and electronic accessory technicians, battery engineers and technicians). This smaller, short-term focus would allow micro-credentials to remain complementary to tried-and-true skills training and education methods that have a greater base of supporting evidence in favour of their efficacy, efficiency and future earnings benefits for workers. Over time, should the base of evidence supporting the efficacy of micro-credentials change, or if employers come to recognize and validate micro-credentials in more enthusiastic terms, the program could consider expansion. This report also notes that for some occupations in the ZEV space, including trades under the Red Seal framework, reliance on micro-credentials as a primary pathway for supporting upskilling may not be the best approach to take. In this case, industrial skilled trades stakeholders have noted that expansion of scopes of practice and required training would be a path to upskilling for tradespeople that better

leverages existing knowledge, relationships, and resources. In this case, training would be led by skilled trades group, and not by PSIs. This further illustrates the importance of micro-credentials being simply one option to support upskilling that should be used where appropriate and relevant, and of the importance of having a diversity of available approaches to support upskilling for individuals in a range of occupations.

**Lower the costs (monetary and time) associated with having international credentials and experience recognized for foreign workers looking to find roles in the automotive sector.**

A number of occupations in the ZEV supply chain are regulated or accredited, meaning they require occupational licensing to practice in Ontario. For workers looking to have their international experience recognized to practice in an accredited or regulated occupation in Canada, they can take one of two routes: take the default route by enrolling as apprentices if they have no experience in this trade or apply to challenge the trade exam if they have sufficient work experience in the given designated trade.<sup>141</sup> Both of these paths have time and money costs associated, however, these costs are often not transparently communicated, and can be high enough that many skilled professionals arriving in Canada are unable to fill roles in demand in their profession of choice. This report recommends costs be lowered for assessment of experience and expertise (i.e., sitting for an exam) in regulated occupations, and timelines associated with receiving licensing should be transparently communicated and adhered to. Ontario has some of the highest costs in Canada for licensing assessments in a range of credentialed occupations, including having the highest national cost for assessments for electrical engineers.<sup>142</sup> These costs should be brought more in line with other provinces, and the timelines associated with receiving licenses should be transparently communicated and adhered to.

**Applicants through the FSTP should see the current phases of application (applying to determine eligibility for the qualification exam and sitting for the exam to determine receipt of certificate of qualification) to be merged into one step.**

Stakeholders identified a number of major barriers stakeholders within the FSTP that are limiting the number of successful applicants who enter through the program. A 2021 evaluation of the FSTP found that the program had never reached its annual maximum capacity since its inception in 2013.<sup>143</sup> Stakeholders, including recent entrants through other economic immigration pathways to Canada, stressed that the time burdens associated with applying to the program were higher than other programs. This report recommends all applicants simply write the exam as part of their initial application. Both of these steps would reduce the time spent waiting by applicants, lower the costs associated with processing applications, and streamline the process by removing a review process that has been identified as adding time to application processes.

## Disengagement:

**Provincial adjustment advisory programs should allow for funding community-level adjustment programs, which would allow for programs like Unifor's Action Centres to engage with a wider array of workers impacted by the ZEV transition.**

The provincial government's adjustment advisory program was created to support workers undergoing career transitions. One of the aspects of the program is to fund and support regional hubs that can administer support and employment services, including an Action Centre program led by Unifor. These Action Centres have a mandate to connect workers seeking new roles with employment opportunities and offer additional services to those in transition. The Action Centre program reports high rates of effectiveness in finding job placements for workers seeking new roles (up to 85%–90% in some cases), and stakeholders have identified that the Centres are useful resources for workers in need of support. One challenge they currently face is that they have a mandate to support workers who have been adversely affected by specific closures or layoffs. While this may have proved sufficient in the past, all stakeholders agree that the transition to ZEVs will prove disruptive for businesses and workers alike. Plants are likely to open, others will close, and some will retool, all of which will impact jobs and skilled professionals. This report recommends that adjustment advisory programs begin to fund programs that work within communities, instead of simply focusing on specific plant closures. This way, if workers from multiple independent parts suppliers are adversely affected within the same geographic region, they can all seek support at an Action Centre. Stakeholders stressed that the current funding model means that some workers needing support end up being turned away from facilities, since it is not within the mandate of the Action Centres to lend support to them, even if they are automotive workers seeking support following a labour adjustment. As disruption increases in the years to come, this community-based approach will also likely prove more flexible to community needs, thereby reducing the effort required by provincial governments to continuously approve new sites and locations for adjustment support programs.

**Create financial incentives for retiring tradespeople to return to colleges as instructors to ensure they can supervise/pass on knowledge to new students.**

Workers nearing retirement age may be increasingly uncertain about how to continue contributing to their professional fields. Additionally, requirements for shift work prove difficult for an individual struggling with chronic pain or other health challenges. However, these individuals can still contribute as instructors to students in PSIs interested in entering the automotive sector. This contribution is still beneficial to the sector, as stakeholders noted the value of keeping older workers engaged in instructing the next generation of workers. To encourage their transition to teaching, this report recommends creating financial incentives for recent retirees to return to the workforce as instructors at PSIs, or mentors within union-led or other private training courses. This would allow students to benefit from the experience and wisdom of older professionals, help PSIs hire additional workers, and offer additional income and opportunities to workers looking to exit the workforce.



## Conclusion

A shifting automotive sector need not disadvantage workers within the province. Given the demand for labour and new investments into the sector, the economic outlook for professionals seeking roles in Ontario's automotive supply chain is arguably the strongest it has been in the last 20 years. However, as the industry is rapidly changing, so too is the employment landscape. Canada's workforce growth is now made up of 80% newcomers to the country.<sup>144</sup> Careers are no longer shaped primarily through an employee's loyalty to a single organization. The number of retirements is increasing, and digitization is driving a need for new skills amongst new workers. Companies that were engaged with for this research indicated their needs for new workers has become urgent, and the workers they were hiring were increasingly new to the country, have different backgrounds than in years past, and were looking for flexibility to help them balance their professional and personal demands.

Policymakers, industry leaders, and civil society stakeholders need to ensure they act swiftly to offer solutions. While almost none of the challenges stakeholders face throughout their careers are new, some are newly relevant for the automotive

sector, and taking the steps outlined in this report can help mitigate their adverse impacts. Addressing challenges like employment security, gender diversity within the sector, and the barriers faced by international students will help ensure the sector is more attractive to youth considering careers within the automotive supply chain. For more established workers, shifting terms of employment and the barriers faced by newcomers will prove two critical obstacles to overcome for employers and policymakers to plug labour shortages. And for workers considering retirement, the industry should ensure they are given opportunities to share their knowledge with students or younger workers, and not be asked to work in environments that place them at risk. If all these barriers to success are overcome, and the sector can be future proofed for workers to thrive, then the sector's clean economy transition can be one of prosperity for companies, workers, and Ontario at large. If not, the relatively small efforts required to train and upskill may be an insurmountable barrier to growth and decarbonization for Canada.

# Endnotes

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