



CANADIAN
MANUFACTURERS
& EXPORTERS

**WE'RE HIRING:
MANUFACTURING
WORKFORCE
SURVEY REPORT**

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ABOUT US



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ABOUT CANADIAN MANUFACTURERS & EXPORTERS

Since 1871, we have made a difference for Canada's manufacturing and exporting communities. Fighting for their future. Saving them money. Helping manufacturers grow.

The association directly represents more than 2,500 leading companies nationwide. More than 85 per cent of CME's members are small and medium-sized enterprises. As Canada's leading business network, CME, through various initiatives including the establishment of the Canadian Manufacturing Coalition, touches more than 100,000 companies from coast to coast, engaged in manufacturing, global business, and service-related industries.

CME's membership network accounts for an estimated 82 per cent of total manufacturing production and 90 per cent of Canada's exports

CME-MEC.CA

PARTNER MESSAGE



DON MATTHEW
Partner & National Sector Leader,
Manufacturing
KPMG in Canada

This summer, KPMG in Canada joined forces with Canadian Manufacturers & Exporters (CME) to conduct a national Manufacturing Workforce Survey (MWS). Building on the Canada-wide Industrie 2030 study, our intent was to spotlight the workforce challenges impacting today's industry employers. What follows is an analysis of our findings and strategies for bridging current workforce gaps.

Manufacturing is not alone in its skilled talent struggles. However, as one of Canada's largest employers and contributors to the economy, the sector's need to address its workforce challenges is arguably stronger than most. Without the right people and skills to propel the newest technologies, innovations, and global strategies, Canadian organizations are at a real risk of becoming outmoded and outcompeted in the world arena. While automation and machine learning may offer some relief, they too bring demand for new skills and people who can lead the way.

There are several obstacles to overcome if the industry hopes to bring its workforce back on track. These include: a lack of adequate engagement and training among Canada's youth, talent mobility barriers, underutilized demographics, as well as a deficiency of career support and incentives. The good news is that while 2019's MWS survey reveals nothing short of a workforce crisis, it also provides insights and 'boots-on-the-ground' perspectives, helping bring real solutions to the table.

Within the pages ahead, we've included a multi-pronged strategy for replenishing Canada's manufacturing workforce in ways that are both realistic and sustainable. They include creating new career paths for Canadian youth, enhancing public and private sector collaboration, boosting investments in skills development, and taking greater advantage of economic immigration. If there is a common theme among all these approaches, it's that the industry needs to take the lead in promoting the sector, engaging all available talent, and keeping them in the field.

It's a landmark challenge – one that will define the health and longevity of Canada's manufacturing community. Through our ongoing work with the CME, one thing remains clear: Canadian manufacturers are never ones to shy away from taking the bold steps necessary to come out ahead.

Before we dive into the results from the 2019 WMS report, I want to thank CME for involving KPMG in this critical industry initiative. Our collaboration on Industrie 2030 outlined the issues and opportunities driving Canada's manufacturing organizations over the next decade. And, I'm confident this report continues that good work by offering a clear vision on how to move beyond the obstructions in this industry's immediate path.

Make no mistake, while technology may dominate the conversation, it is the people in the boardroom and production floor who will ultimately push Canada ahead in the global manufacturing race.

WORKFORCE FOR THE FUTURE COUNCIL

Created in 2019, the Workforce for the Future Council is comprised of CME members from across Canada. It advises CME on the overall approach to help promote and create the workforce of the future by:

- Advocate with government and the industry to help drive goals and objectives for inclusion and diversity in the workforce;
- Developing innovative strategies to attract and retain a more diverse workforce;
- Identifying and removing barriers to employment, through established practices in recruitment, hiring, and training that will foster a climate of equity and inclusion focused on women and under-represented groups; and
- Identifying ways to help drive skills upgrading to meet the needs of the 21st century manufacturing workforce.

The Workforce for the Future Council led the development and execution of the National Manufacturing Workforce Survey that was conducted in the Summer of 2019. Based on the survey findings and the deliberations of the Council, this report summarizes the goals and recommendations that will enable manufacturers to create the workforce of the future.

COUNCIL MEMBER

Rhonda Barnet (Chair)
Allison Gifford
Aylin Lusi
Beatriz Rodriguez
Caroline Maso
Charles Deguire
Charles Ruecker
Christian Michaud
Christian Reid
Craig Tonini
Dave McHattie
Herman Hansen
Jeanette Patell
Joao Dasilva
Jonathan Charlebois
Judi Nyeste
Kim Gobeil
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Tenaris Canada
Boeing Canada
GE Canada
Siemens Canada
Kruger Inc.
Suncor Energy Inc.
KDC Knowlton
Louisbourg Seafoods
ArcelorMittal Dofasco
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ArcelorMittal Dofasco
Héroux-Devtek
Rockwell Automation
Rockwell Automation
ABB
Rockwell Automation
Siemens Canada

EXECUTIVE SUMMARY

CME surveyed over 225 manufacturers from across Canada from small to large companies and the results are troubling:

- More than 85 per cent of manufacturers struggle to fill vacancies
- Canada's youth are increasingly unprepared and uninterested in working in manufacturing
- Employers lack the capacity to invest in skills and training, and
- Current immigration levels are simply not meeting Canada's workforce needs

Labour and skills shortages are holding back manufacturing, and by extension, Canada's economic prosperity. To reverse course, the following bold actions are needed:

ATTRACTING & RETAINING YOUTH

Not enough young Canadians are choosing to pursue a career in manufacturing. The education system puts a premium on university paths at the expense of skilled trades. As a result, students are not connected to the jobs available.

Solution: Promote manufacturing and realign the education system to create 150,000 new full-time jobs for youth in manufacturing.

UPSKILLING CANADIANS

Manufacturers are struggling to keep up with the cost of training. Upskilling workers is the first step businesses must take in order to invest in automation, new machinery and equipment. When this does not happen, innovation and competitiveness suffer.

Solution: Create incentives for employers to enhance investments in training.

LEVERAGING IMMIGRATION

Manufacturers are increasingly using immigration to supplement their workforce but there are not enough immigrants to meet the demand. Temporary worker programs are increasingly becoming burdensome and costly to use.

Solution: Reform Canada's immigration system to bring in 500,000 economic class immigrants.

GOALS & RECOMMENDATIONS

GOAL 1: Create 150,000 New Full-Time Jobs for Youth in Manufacturing

- Promote Careers in Manufacturing to Youth
- Refocus Canada's Education System to Connect Youth to Jobs
- Create Regional Industry Councils
- Expand efforts to attract women and under-represented groups into manufacturing

GOAL 2: Double Employer Investment in Worker Training

- Create an Employer Training Tax Credit
- Help Employers Expand Work-Integrated-Learning Offerings
- Invest more in management training capacity

GOAL 3: Increase Economic Immigrants to 500,000 a Year

- Update Canada's immigration point system to align to employer needs
- Expand current Provincial Nominee Program
- Better leverage Canada's post-secondary system
- Enhance Temporary Foreign Worker Program

INTRODUCTION

Manufacturing is one of Canada's largest industries by almost any measure. As a cornerstone of the advanced economy, the sector creates wealth by turning natural resources into value-added products, making it a leading contributor to the Gross Domestic Product. As the largest export sector, manufacturing ties Canada to global markets as it has for decades. But most importantly, it is an industry that employs more than almost all other sectors, pays higher than average wages, and offers employment to every skill-set imaginable.

Collectively, the sector, and its dependent supply chains, account for one-third of economic activity in Canada and 30 per cent of government revenues. Manufacturing drives Canadian prosperity for the 1.7 million Canadians who work directly in the industry, the thousands of communities that have manufacturing plants in them, and every province that relies on the sector for wealth generation.

However, despite its long history and economic importance, manufacturing is not immune to the headwinds that all global businesses will face in the years ahead. Accelerated globalization brought on by increasing free-trade agreements has caused manufacturers to rethink global supply chains and plant locations. Technology itself is reshaping how manufacturers operate, and the skills required of their employees, while creating new business opportunities and innovations. With the free movement of capital, the ability to create the right business environment to attract domestic and foreign investment is essential for long-term success.

These three pillars of growth – business environment, technology and innovation, and skills – must remain in balance to achieve long-term success. Unfortunately, Canada is simply not keeping up with our global competitors. Our business environment is far too expensive for modern advanced manufacturing. Technological innovations, while often created in Canada, are being commercialized and implemented by industry in competing jurisdictions. Increasingly, manufacturers struggle to find and retain the right talent to help their operations grow. All of this has led to a state where investment in Canadian industrial machinery, equipment, and technology is declining, and along with it, our ability to innovate and compete internationally.

In 2016 CME completed coast-to-coast consultations as part of its Industrie 2030 strategy on the future of manufacturing. Through that exercise, skills and labour shortages were identified as one of the top concerns of industry leaders. In CME's 2018 Management Issues Survey, skills and labour shortages were identified as

the top concern of executives with 70 per cent of respondents stating they had existing skills shortages. Based on these responses, and the priority placed on this one pillar of the three core pillars of growth, CME conducted an in-depth survey on labour and skills shortages in the summer of 2019. Our goal was to better understand the challenges facing the industry and to begin developing a path forward.

In CME's 2019 Manufacturing Workforce Survey, more than 85 per cent of respondents stated they have a skills and labour gap; a 15-point jump in just one year. That means that more than eight in ten employers in Canada's industrial sector struggle with skills and labour shortages. What was originally a concern has become a full-blown crisis. In turn, it fuels manufacturing's poor business investment, hampers their ability to invest in and adopt the latest technologies, and affects their ability to compete globally.

The difficulty of course is that skills, labour, and training challenges are multifaceted, multi-jurisdictional, and multiplying. And, while the solutions to these challenges are complicated, and often long term in nature, it is essential that we collectively pursue action, and urgently. Any delay will lead to the continued deterioration of manufacturing in Canada and to the prosperity that all Canadians enjoy.

Based on our research, CME has identified three objectives for Canada that should form the basis of our collective approach to dealing with skills and labour shortages. These objectives are as follows:

1. Create 150,000 new full-time jobs for youth in manufacturing;
2. Double employer investments in workforce training; and
3. Increase economic immigrants to 500,000 a year.

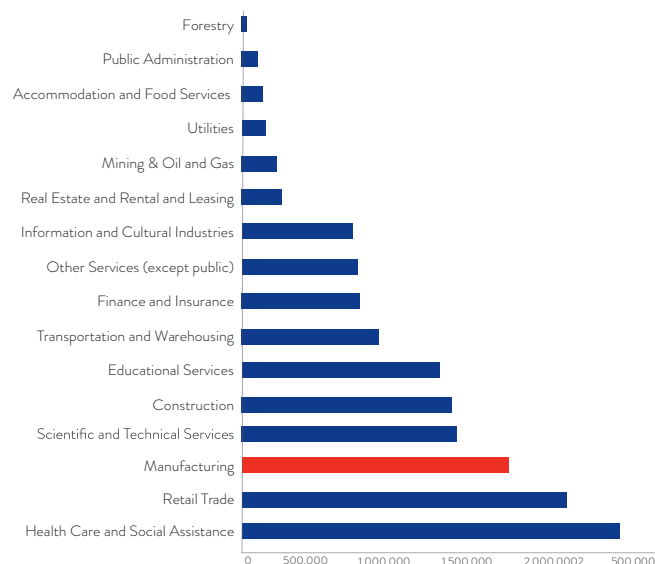
These three objectives, or pillars of CME's skills strategy, contain a number of practical recommendations and actions for government, our educational and training institutions, and of course industry itself. Ultimately, the aim is to provide a plan to address persistent labour and skills shortages in Canadian manufacturing, create the workforce for the future, and guide our economy and our country onto a path to continued prosperity. This plan will enable manufacturing to thrive and encourage Canadians to be part of the sector. We're hiring - hiring for the workforce of today and for the workforce of the future.

THE STATE OF MANUFACTURING IN CANADA

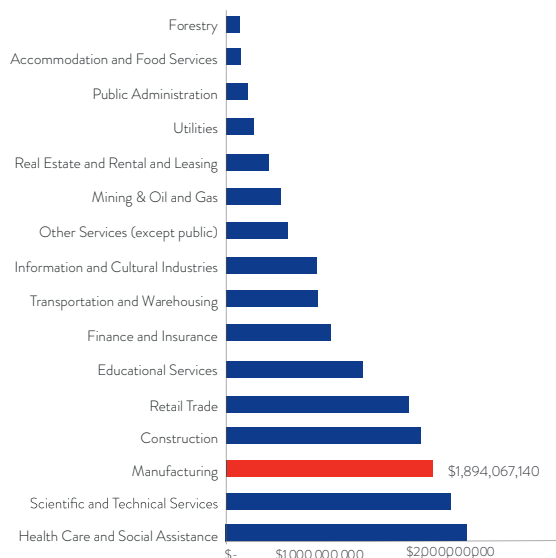
Manufacturing is a critical component of the Canadian economy by almost every measure. Jobs, business investment, international exports, and economic wealth creation are all driven by the sector. The industry accounts for 11 per cent of Canada's gross domestic product (GDP) and two-thirds of its global exports.

From an employment standpoint, manufacturing is one of the largest employers in the country, directly providing 1.7 million jobs and representing nearly 10 per cent of Canada's total workforce. In fact, the sector only trails health care and retail operations in total employment across the country. Importantly, and unlike some other top employment sectors, the careers are high-paying and stable. Manufacturing boasts an unemployment rate more than two-points lower than the national average (3.6 per cent compared to 5.8 per cent) and the third highest total weekly payroll with nearly \$1.9 billion in wages paid.

EMPLOYEES BY SECTOR



TOTAL WEEKLY PAYROLL BY SECTOR



Source: Statistics Canada

But despite the industry's clout in terms of employment, it is struggling to keep up with its global peers in terms of investment and competitiveness. Labour shortages and challenges with skills and training are driving this worrying trend. In many ways, the manufacturing sector's labour problems are Canada's labour problems.

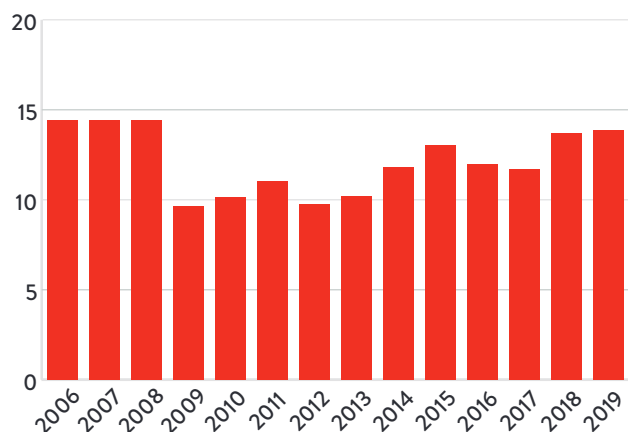
At a basic level, labour shortages limit innovation and growth by preventing businesses from operating at optimal capacity. In the Manufacturing Workforce Survey, manufacturers expressed frustration that labour supply issues, from recruitment and retention, to finding high-quality workers, to chronic absenteeism, were limiting their ability to produce goods as efficiently and effectively as possible. This impacts production, competitiveness and, ultimately, profitability. That, in turn, leaves businesses with less money available to invest in new machinery, equipment, and technologies.

Investment in capital, machinery and equipment (M&E), and technology adoption in Canada lags most other advanced economies. The result has been slower productivity gains and a gradual erosion of manufacturing competitiveness across the country. According to the results of CME's 2018 Management Issues Survey, only 40 per cent of businesses report that they presently use advanced manufacturing technologies; moreover, investments in these and other types of machinery and equipment are headed in the wrong direction.

According to Statistics Canada, manufacturers intended to spend \$14 billion on M&E in 2019. That total is effectively unchanged since 2015 and is four per cent less than they invested in 2007, even without accounting for the effects of inflation.

FLAT M&E EXPENDITURES IN CANADIAN MANUFACTURING

(\$billions)

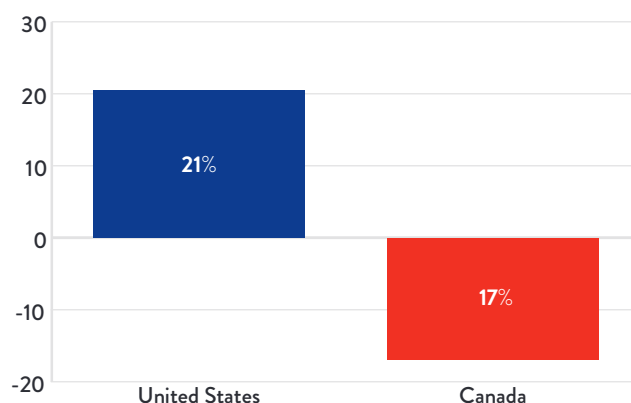


Source: Statistics Canada

Note: 2019 data reflect investment intentions

MANUFACTURING INVESTMENT IN MACHINERY AND EQUIPMENT

(% growth, 2007-2016)

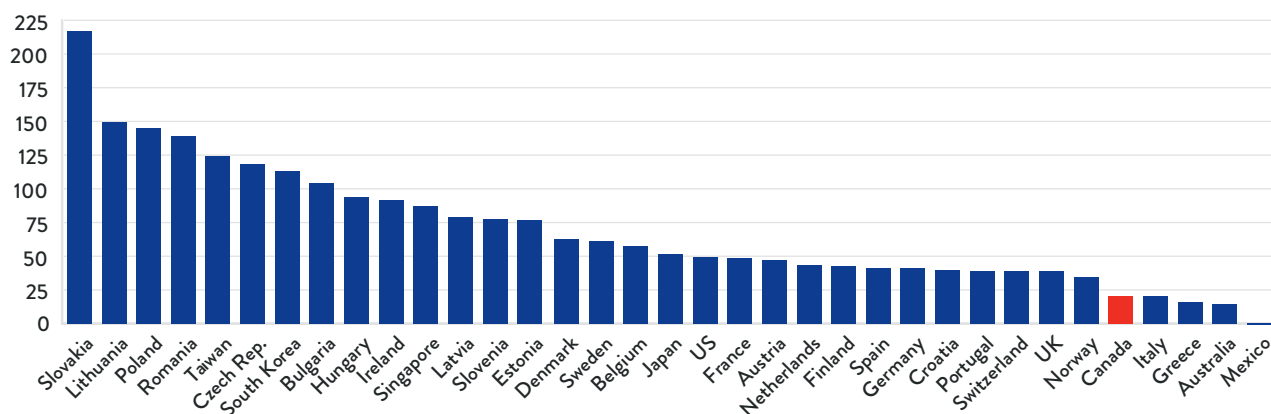


Source: US Census Bureau, Statistics Canada

Meanwhile, many other OECD countries have seen manufacturing investment increase significantly in recent years. Most importantly, there is a wide gap in investment trends between Canada and the United States. In the decade leading up to 2016 (the most recent year for which US data is available), US manufacturing investment in new equipment rose by 20 per cent. Over that same 10-year period, Canadian manufacturing investment fell by 17 per cent.

This chronic under-investment in capital and lagging innovation are undercutting manufacturing competitiveness and hurting productivity growth in Canada. Over the last 15 years, labour productivity in Canadian manufacturing has increased by about 20 per cent. Meanwhile, productivity in the US has grown by nearly 50 per cent, and it has more than doubled in locations like South Korea, Taiwan, and Eastern Europe. In fact, since 2002 Canada has the poorest record in manufacturing productivity growth of any country in the G-7, save Italy.

MANUFACTURING PRODUCTIVITY GROWTH - 2002-2017 (%)



Source: Conference Board

From an economic standpoint, the warning lights are flashing red. Eighty-five per cent of manufacturers say they struggle to fill vacant jobs in addition to a laundry list of other training and skills woes. When a job cannot be filled, or worker productivity isn't maximized, it starves a business of its ability to meet current production mandates, let alone grow. This causes a hit to their earnings and triggers a vicious cycle of under-investment, declining competitiveness, and declining business. Labour and skills shortages must be addressed to break this negative feedback loop.

NATIONAL MANUFACTURING WORKFORCE SURVEY

In 2016, CME went across the country interviewing manufacturers to develop a strategy for the future of the sector. The result was *Industrie 2030*, an initiative with the objective to create a roadmap to double Canada's manufacturing output and value-added exports by 2030. A series of five sub-reports were later published, each providing detailed analysis and recommendations. One of these reports, *Building a Strong and Skilled Workforce for Growth*, identified four main objectives:

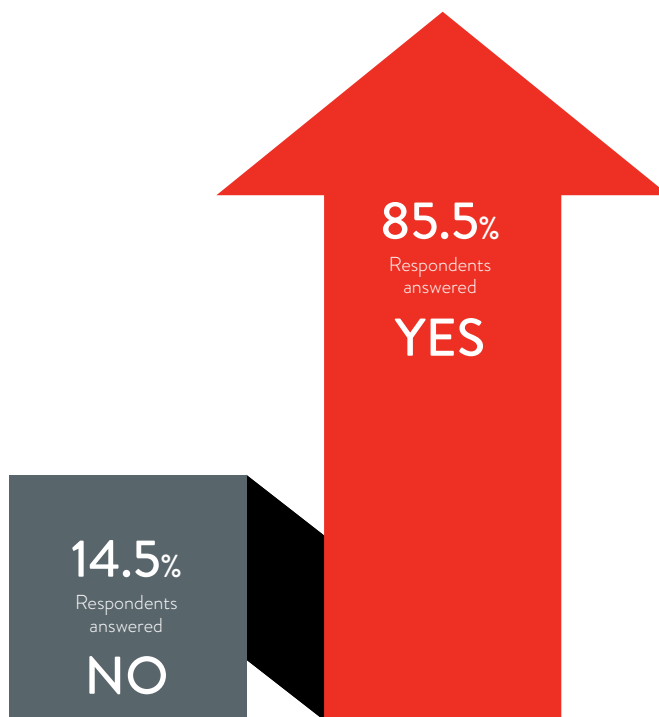
1. Improve engagement of youth, women, and the under-represented in manufacturing careers to grow the domestic skilled labour pool;
2. Strengthen linkages between industry and post-secondary institutions to improve the alignment of skills and the needs of industry;
3. Expand government support for business-led training initiatives and management leadership development; and
4. Improve access to foreign-trained workers.

Fast-forward to July 2019, with CME conducting the national Manufacturing Workforce Survey (MWS) as a follow up to the initial *Industrie 2030* report. This new research gave us valuable insights into manufacturers' skills, labour/hiring, and training challenges; and served as a status update on the progress of our recommendations from 2016. Regrettably, there is still a lot of work to be done.

The 2019 MWS was completed by 220 individuals representing a range of sizes and types of manufacturers from all regions of the country. More than 70 per cent of respondents were from companies with under 200 employees and 55 per cent were from Ontario or Quebec, which is representative of the country's manufacturing distribution as a whole.

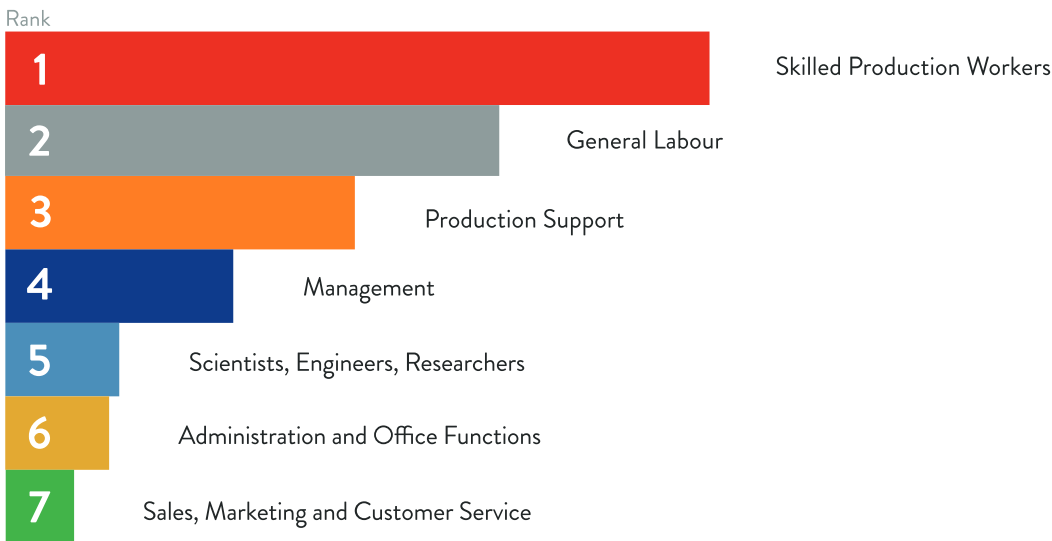
The most important takeaway from the MWS, was that 85 per cent of respondents said that they had difficulty in recruiting and filling job vacancies. When asked what specific jobs they had the most difficulty with, the most pressing need was skilled production workers and general labour, followed by a range of skilled workers including management, engineers, and production support.

DOES YOUR COMPANY HAVE DIFFICULTY RECRUITING & FILLING VACANT JOBS?



Source: 2019 CME Manufacturing Workforce Survey

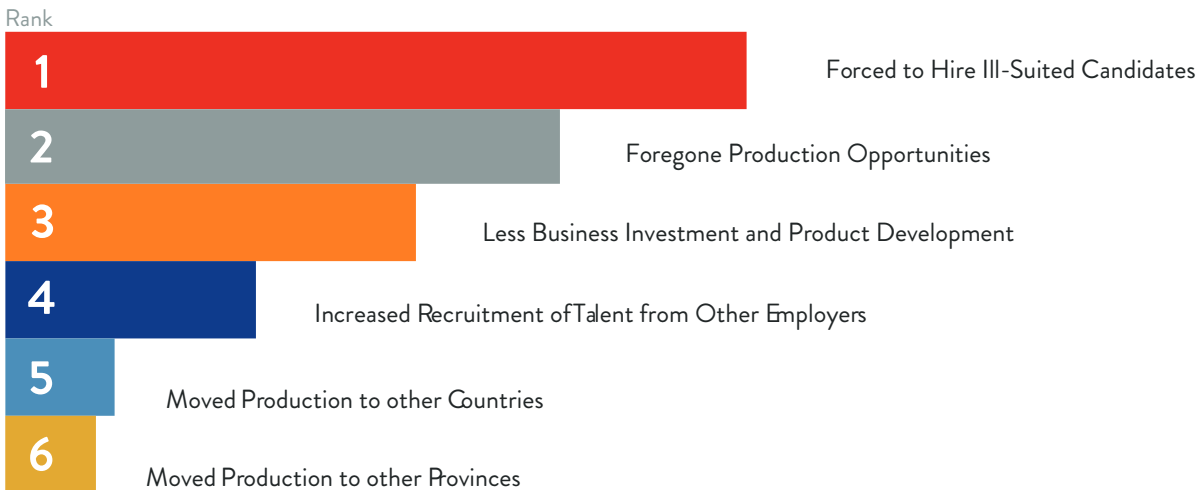
WHICH POSITIONS ARE THE MOST CHALLENGING TO FILL?



Source: 2019 CME Manufacturing Workforce Survey

The impact of the skills shortages are wide ranging for respondents. Most notably, companies said that they were forced to fill positions with people who were generally unqualified or ill-suited for the position, which would require significant upskilling and training of the employee. While training is a possible solution to this problem, the next closest ranked impacts are detrimental to economic growth and to the manufacturing sector. Companies note their response to skills shortages is to decline new customer orders and delay investment in new products and processes. Most troubling is that some companies are having to move production to other jurisdictions in order to fulfill customer orders given current skills shortages.

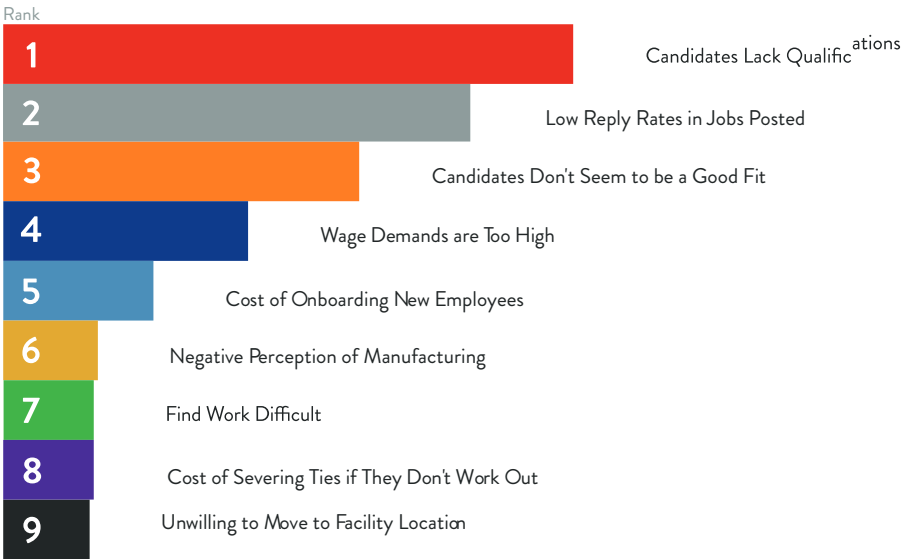
HOW HAVE LABOUR AND/OR SKILLS SHORTAGES IMPACTED YOUR BUSINESS?



Source: 2019 CME Manufacturing Workforce Survey

This is not to say that manufacturers are not trying to fill their labour needs. However, when trying to fill positions, companies are increasingly finding that too few people are applying and when they do, they are unqualified for the available positions. These gaps persist despite aggressive actions taken by manufacturers, including increasing wages, partnering with recruiting agents and post-secondary institutions, attempting to hire internationally, increasing training budgets, and increasing workplace flexibility.

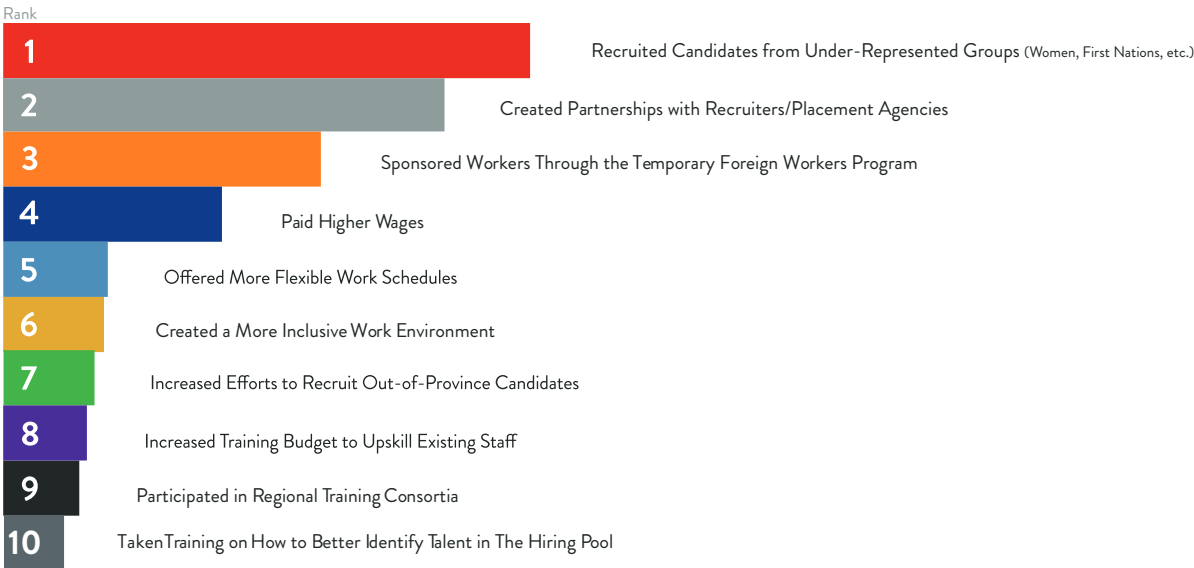
WHEN HIRING NEW EMPLOYEES, WHAT ARE THE BIGGEST BARRIERS YOU FACE?



Source: 2019 CME Manufacturing Workforce Survey

One of the most often discussed solutions to labour shortages is leveraging technology, and automation equipment in particular. However, based on the results of the MWS and ongoing discussions with CME members, there is growing concern that technology is exacerbating the skills gap, rather than helping to solve it.

WHAT STEPS HAVE YOU TAKEN TO OVERCOME THESE BARRIERS?

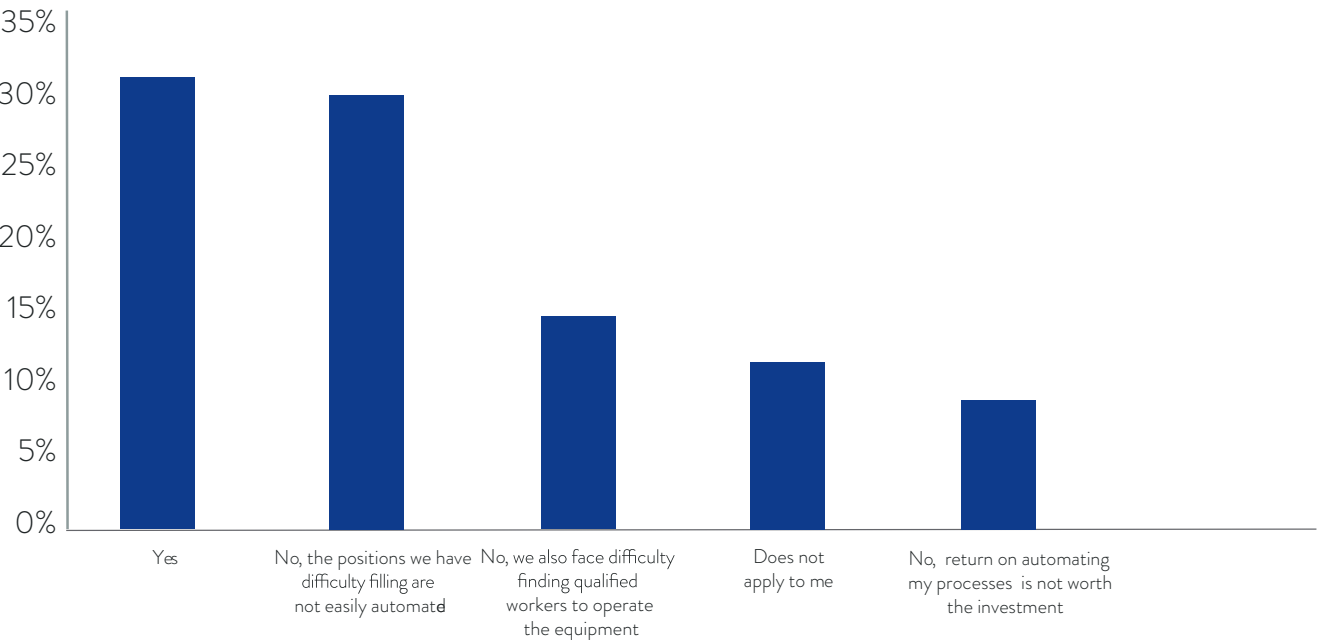


Source: 2019 CME Manufacturing Workforce Survey

Certainly, for a segment of respondents (33 per cent) and companies more generally, automation technology is only a partial solution. Some tasks can be automated, and technology can be used to augment and support workers. However, over 66 per cent of respondents to the survey said that technology either doesn't help them or does not apply to their operations. The reason for this is straight-forward. Either the technology is not available to automate certain tasks (custom fabrication for example), is cost prohibitive and the return on investment is uncertain, or the employer will still require skilled workers to operate the technology and they cannot secure those skills.

The biggest challenge that manufacturers note regarding the skills gap is the available talent and the skills being taught through Canada's post-secondary institutions. Respondents to the MWS overwhelmingly (60 per cent) noted that they did not believe recent post-secondary graduates were taught the skills their business needed. When asked what skills were missing most often, the responses varied. Leading the rankings was a mix of soft skills, including basic business skills and overall ability to function in a professional work environment, including punctuality and generally acting in a professional manner. Next on the list was technical capabilities required to function in the job.

IS AUTOMATING YOUR MANUFACTURING PROCESS A FEASIBLE SOLUTION FOR YOUR COMPANY TO ADDRESS CHRONIC LABOUR SHORTAGES?



Source: 2019 CME Manufacturing Workforce Survey

COMPANY EFFORTS TO ADDRESS SKILLS SHORTAGES

Are you providing the following?

Work Integrated Learning

84% of respondents answered **YES**

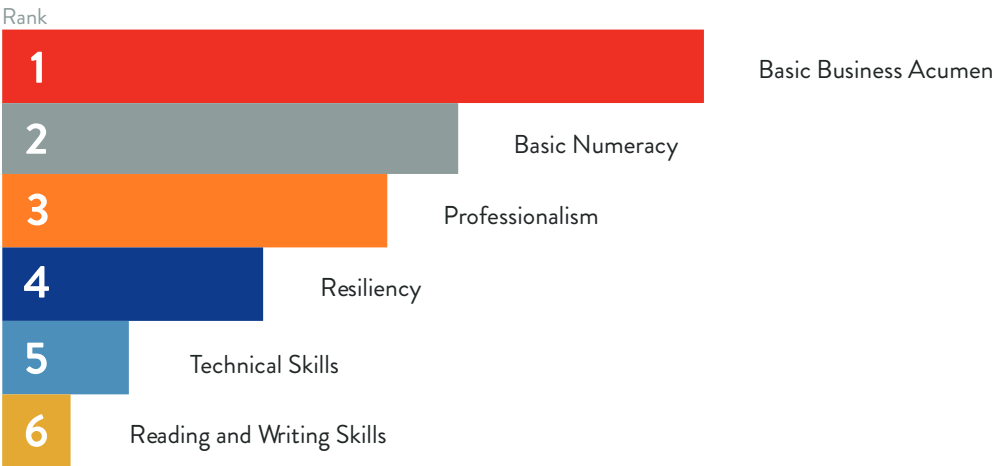
Training

92% of respondents answered **YES**

This reality is leading companies to invest to solve gaps in the education system. Increasingly, companies are implementing a range of work-integrated learning opportunities and doing direct training of their employees. We were pleased to see that 84 per cent of respondents provided work-integrated learning and 92 per cent provided training to their employees.

A significant portion of the training budget of companies is going towards skill development and process improvement. In fact, out of the eight specific areas asked about in the survey, four of the top five responses were aimed at these areas, with health and safety training as the only other area with the same level of response. While it is encouraging that companies are spending on improving processes to be more competitive, at the same time, it further illustrates the gaps in the existing training system, and highlights the ongoing shift towards advanced manufacturing and the use of more automation equipment and technologies.

WHAT SKILLS ARE RECENT POST-SECONDARY GRADUATES MISSING THE MOST?

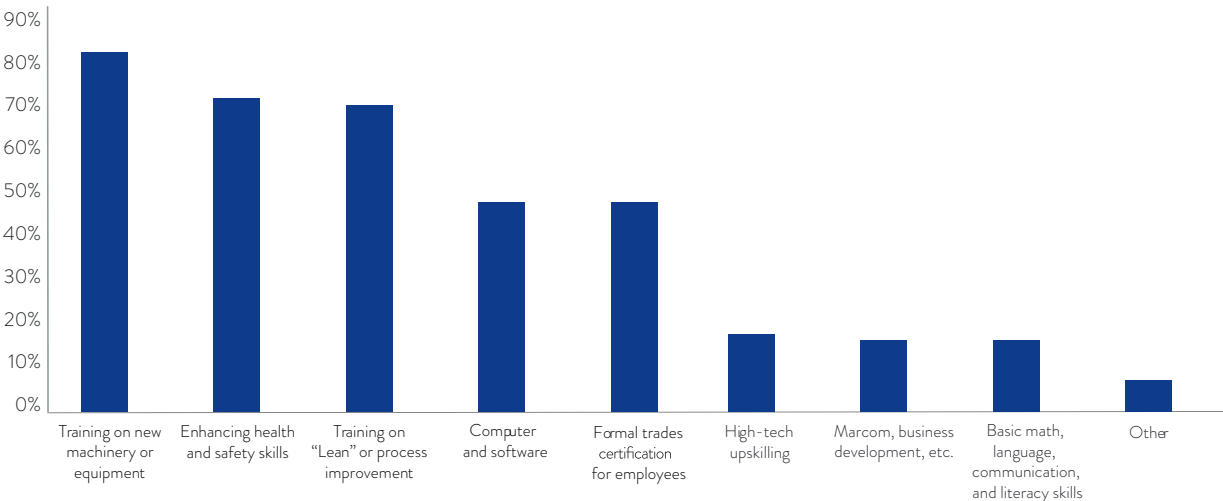


Source: 2019 CME Manufacturing Workforce Survey

Despite these positive results, companies appear to be spending just enough on training to get by, and not necessarily enough to grow their operations. When asked about the level of training spent per-employee, roughly 54 per cent of respondents stated they spent less than \$300. Fifty-six per cent of respondents stated they had no plans to increase their training budget moving forward.

While manufacturers are rightfully doing their part and are making significant investments in filling their skills and labour gaps, they also believe government action is necessary. In the short term, the sector ranks a range of actions for government starting with increasing financial support to companies for training and hiring workers. They also note that improving access to qualified immigrant workers is critical given the lack of domestic supply of talent.

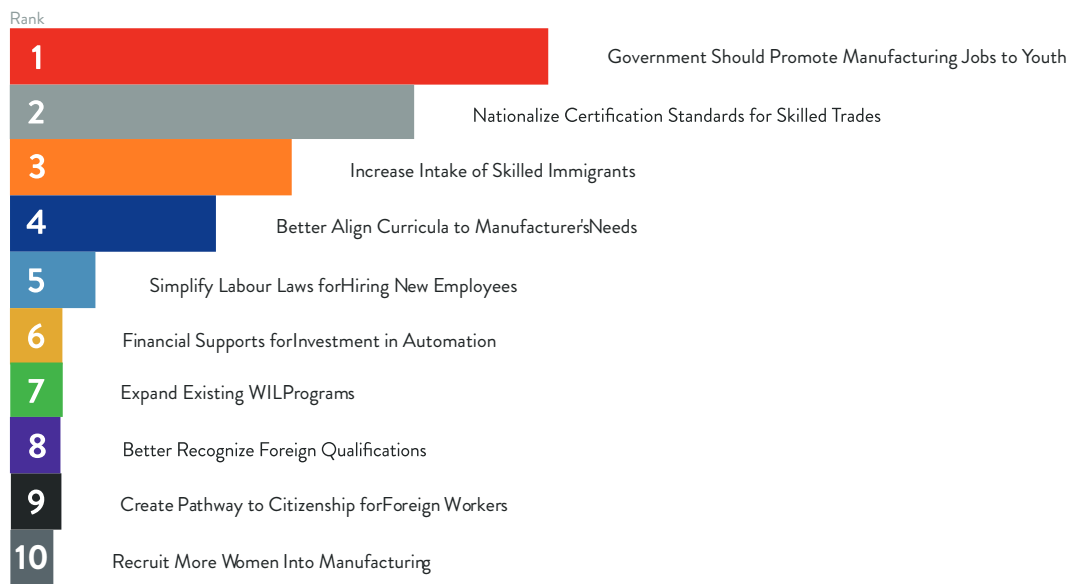
WHAT KINDS OF TRAINING HAVE YOU INVESTED IN?



Source: 2019 CME Manufacturing Workforce Survey

In the long-term, however, manufacturers believe the most important step for governments to take is to better promote skilled trades to Canada's youth to improve the pipeline of people coming into the sector. Next on their priority list is for governments to harmonize and streamline the regulatory system around training and certifying skilled workers. And, maybe most critical on their list of priorities is to improve alignment between industry needs and post-secondary institutions.

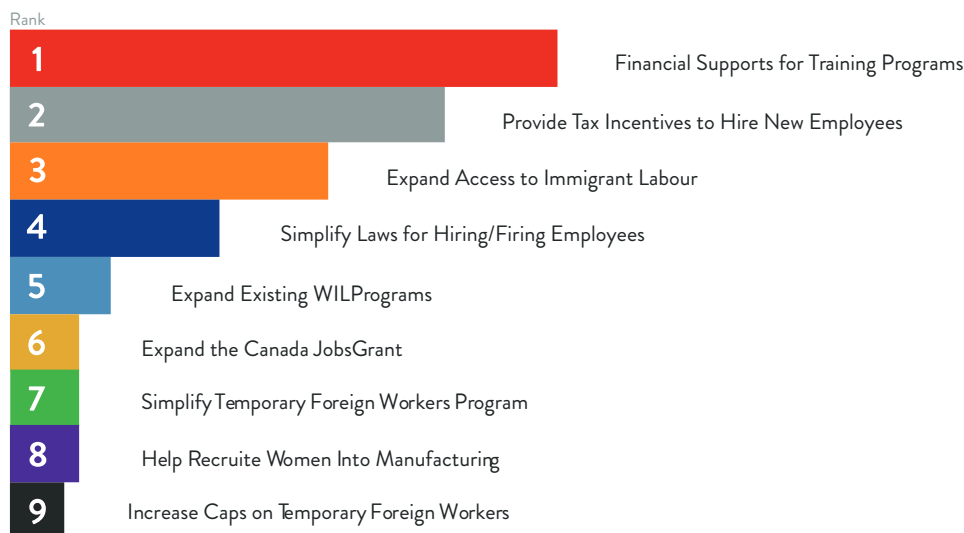
WHICH OF THE FOLLOWING GOVERNMENT ACTIONS DO YOU THINK WOULD BE MOST HELPFUL IN ADDRESSING LABOUR & SKILLS SHORTAGES IN THE LONG TERM?



Source: 2019 CME Manufacturing Workforce Survey

It is these priorities and the corresponding recommendations that make up the bulk of the rest of this report, and forms CME's core strategy for addressing the critical skills and labour shortages that plague our sector. These may not be all the necessary steps, but they form the basis for strong actions that must be taken in partnership between industry, governments, and our education system to allow the manufacturing sector to invest, grow, and remain the driver of Canada's prosperity.

WHAT SHOULD GOVERNMENT DO TO HELP YOU ADDRESS IMMEDIATE LABOUR AND SKILLS SHORTAGES?



Source: 2019 CME Manufacturing Workforce Survey

CREATE 150,000 NEW FULL-TIME JOBS FOR YOUTH MANUFACTURING

Canada's youth unemployment rate (ages 15 – 24) stood at over 11 per cent at the end of 2018. While this rate is near historical averages, and is one of the better rates globally, it remains nearly double the national unemployment average of 5.8 per cent, and still leaves over 300,000 youth without meaningful employment. Furthermore, out of this total, a significant portion of the work is in temporary, part-time jobs. According to Statistics Canada, out of the 2.45 million employed youth in the country, 1.12 million are in part-time service jobs. The numbers are even worse when other factors, such as race, gender, socio-economic class, and geographic location, are layered onto that. Suffice to say that young people struggle when it comes to securing employment and participating fully in the workforce.

As a result, youth are the largest cohort of the informal work economy, better known as the “gig economy.” According to research done by the Bank of Canada, upwards of 30 per cent of Canada's entire workforce work in the gig economy. Staggeringly, that number is almost 60 per cent for youth. The same research found that more than half of those currently doing this work would prefer to move to a permanent, full-time position, at the same rate of pay. Manufacturing jobs, particularly in the skilled trades, are the exact opposite of gig jobs. They are, for the most part, stable, financially rewarding, and permanent.

CME is clearly not advocating for Canada's youth to begin full-time careers in a skilled trade at age 15. Further, we understand that most Canadians start their careers in service jobs that provide valuable skills training that can be leveraged for future career opportunities. However, is it unreasonable to aim to cut 150,000 youth from the ranks of the unemployed? Is it possible to stream more youth towards the skills needed by Canadian manufacturers to begin their careers at a younger age?

“Our education system does a disservice to Canada's youth if it is unconcerned with ensuring that their schooling leads directly to gainful employment.”

This is not to say this will be easy. Much has been written in the past by CME and other groups about the challenges of attracting youth into careers in the sector and skilled trades more generally. While we do not need to rehash those arguments here, it is critical to point out some of these challenges, so we understand the pathway forward. At its root, these challenges are a mix of cultural and educational:

- Manufacturing is viewed as an old, dirty, dying industry; not the technologically advanced, global, modern industry that it is today.
- It is a sector that is seen as simply bashing metal, not as being focused on driving innovative solutions to solve some of society's greatest social challenges, including climate change and health care.
- Skilled work and the trades are seen as low-paying jobs for the under-educated.
- Shop classes, the forum that exposed students to career paths in welding, mechanics, or as machinists, have declined over time due to funding cuts and difficulties finding adequate faculty and equipment.
- Due to educational requirements for teachers, few educational role-models have exposure to, or understanding of, modern skilled trades and manufacturing to be able to effectively guide students. This is especially true of young women who are often discouraged from pursuing technical and STEM-related education and training.

Our actions must aim to overcome these challenges. CME believes that by setting a target to create 150,000 new full-time jobs for youth in manufacturing, government and industry could begin to address Canada's chronic workforce issues and provide much needed workers to our critical sectors. We believe this target should begin to be addressed through the following actions:

RECOMMENDATIONS

Promote Careers in Manufacturing to Youth

There are essentially two avenues to pursue in the promotion of manufacturing jobs to youth. One is government-funded campaigns, and the second is to support manufacturers' efforts to promote the industry to youth in their local communities.

Manufacturers were clear in the MWS that government promotion of the industry is essential to reverse the negative impression that youth have of the sector. They

simply felt like they could not do it on their own. Over 55 per cent of manufacturers ranked this as their first choice for long-term government action to curb youth labour attraction difficulties. This was also the number one solution overall, ranking higher than fundamental changes to the immigration, education, and legal systems to make it easier for employers to recruit workers. This is a telling result and conveys the depths of the public relations problem employers believe the industry suffers from.

In the 2019 Federal Budget, the Government announced funding for the promotion of skilled trades as well as funding for developing a new strategy to promote the skilled trades. This is a great start, however the funding for the campaign is only for two years. It will require much more time to reverse these trends and the government should extend the funding for this program.

However, enabling manufacturers to promote their own industry to youth is a more direct way of achieving positive outcomes. Regional Industry Councils (more details on these below) could be the vehicle through which government funds are deployed. They would then develop tailor-made youth outreach strategies for their local area. Three marquee programs to accomplish this would be:

- Organizing and hosting “manufacturing fairs” in local elementary/high schools;
- Organizing “If you can see me, you can be me” talks in local schools where recent youth hired by local manufacturers would speak to students and share their experience in the industry; and,
- Organizing and hosting “Open Doors” events where students would visit local manufacturing facilities.

The main rationale behind these approaches is to expose youth to the potential of a manufacturing career and to leverage new industry recruits to spread the message to their peers. The Open Doors program has a proven track record but was only funded for a short period of time by a few provincial governments. They are low cost, engaging, and effective ways to promote the industry, and government should consider funding them on a permanent basis and on a national scale.

Refocus Canada's Education System to Connect Youth to Jobs

Simply put, Canada's primary and secondary school systems do not do enough to prepare Canada's youth for the world of work, nor does it effectively transition them from the school system into the workforce. Canada's education system's strength relative to its global peers is

not in dispute here, in fact, we should be grateful to live in a society that values and funds education to the degree that we do. The issue is one of alignment between what is taught and how it is taught, and the employment demands of the economy. Our education system does a disservice to Canada's youth if it is unconcerned with ensuring that their schooling leads directly to gainful employment.

To that end, the education system must do more to expose students to all the types of job possibilities available to them. At the primary level, this can be accomplished by actively promoting manufacturing to youth in school to show youth that manufacturing exists as a viable option for a rewarding career. This then would be expanded on at the high school level with the gradual re-implementation of practical learning (shop class, or a modern version thereof) that exposes and encourages people to pursue skilled trades.

A recent green paper by the New Brunswick government called for exactly this approach, and CME will be encouraging its implementation. In addition to proposing grouping students by aptitude rather than by age, it also wants to rebalance teaching towards the skilled trades instead of solely focusing on the university route. In other words, the school system can promote both options as being equally meritorious rather than framing the university path as the only option to achieve economic success. This falls in-line with Germany's approach to education as well. There, multi-track school curricula allow students to specialize in streams best suited to their abilities, thereby engendering a more positive view of manufacturing work.

At the college/university level, the challenge becomes one of adequately connecting students to the world of work during their schooling and then transitioning them to the workforce afterwards. Work integrated learning (WIL) opportunities is a solution. WIL programs accomplish two fundamental things for youth, it gives valuable work experience and connects them to a job after graduation.

The data is clear that students who go through a WIL experience have better outcomes in terms of finding a job and securing a higher initial salary. Yet, despite this clear evidence of success, not all post-secondary institutions believe in, or offer WIL programs. This is misguided. Provincial governments fund post-secondary institution through public dollars. Student workplace placement outcomes should determine their funding, rather than tying it solely to the number of students enrolled at the institution. This would structure the education system in a way that's focused on producing desired employment outcomes that are beneficial for

the economy. Governments across Canada could also consider mandating, or tying funding to, implementation of WIL type programming for students.

Create Regional Industry Councils

The second piece to tackling youth unemployment is to better coordinate academia and employers and to create a structure to manage these interactions. This structure would ideally bring together key players, such as employers, government, and academia, in a setting to discuss, plan, and address workforce issues. This could be accomplished by creating Regional Industry Councils (RICs) across Canada.

Populated with local representatives and acting as the central authority in their communities could help address the myriad challenges manufacturers face; primarily with recruiting, but also training and skills. RICs would also bring communities together by engaging marginalized groups. In other words, they would form the basis upon which all other skills, training, and labour programing in a region could stem from.

RICs would also create ties between industry and the academic community. This ensures that new graduates have relevant and up-to-date skills – an issue of concern given the rapid pace of technological change in manufacturing. Emphasizing these ties also supports the broader innovation agenda by connecting with the students for enhanced research and development opportunities.

Eliminate Restrictions on Interprovincial Movements of Apprentices

Internal trade barriers between the provinces further compound the skills shortages situation for manufacturers. Rigid provincial credentialing regimes act as barriers to the free flow of labour within Canada. While the new Canadian Free Trade Agreement allows certified trade workers to move freely, this same right is not extended to skilled-trades apprentices. As a direct result, youth are disproportionately disadvantaged by this policy.

Restricting the free flow of apprentices must end. Such restrictions unfairly exclude youth from the job market, starve employers of additional talent that they need, aggravate youth employment struggles, and limit their ability to pursue career opportunities. The federal government should work with the provinces and territories on a coordinated effort to allow the benefits of the Canada Free Trade Agreement to apply equally to certified trades professionals and apprentices.

Expand Efforts to Attract Women and Under-Represented Groups into Manufacturing

Manufacturers stand to gain by recruiting more diverse workforces. Investing in integration, setting up inclusive workplaces, and offering specific training are critical steps in order to attract more workers from these groups.

In 2018, CME with support from Women and Gender Equality Canada, the Government of Alberta, and several generous private sector partners, launched a campaign under the banner of Women in Manufacturing (WIM). Our collective goal is to increase the number of women in the sector by 100,000 within five years. To date, CME has completed a study with detailed recommendations on these specific challenges, launched a diversity toolkit to help employers better integrate women into their workforce, have created regional WIM councils, launched a national scholarship program, and are launching Open-Doors events in the fall of 2019.

While this is a good start, more funding to coordinate activities and further support the promotion of WIM would help achieve much more.

In addition, a concerted effort should also be placed on recruiting and then upskilling Indigenous peoples, second career Canadians, and recent immigrants. These groups are also affected by cultural biases that prevent more active participation in the manufacturing workforce. More outreach to these groups needs to be done, however, support systems are needed as well to enhance their participation in the manufacturing workforce. This could again be accomplished using the RIC system. CME is currently working on a pilot project to enhance the Essential Skills programs that assist women, Indigenous peoples and new immigrants to obtain entry-level positions in manufacturing. Investing in training equips these groups with the basics to be able to take on positions within manufacturing companies. In time, manufacturers could support and expand such programs Canada wide.

GOAL 2

DOUBLE EMPLOYER INVESTMENT IN WORKER TRAINING

Certain skills cannot be learned in the classroom and, in many cases, there is no substitute for on-the-job training. The challenge is ensuring that workers not only improve their general skills, but also expand those skills to adapt to new technologies, equipment, and processes. In many ways, investing in skills training is the critical first step in the implementation of advanced manufacturing. Without upskilling their workforce first, manufacturers will not invest in new machinery and equipment or automation because their employees will not be able to use, or work with, the new technology.

As highlighted earlier, Canadian manufacturers lag their global competitors on business investment and in labour force productivity. This is directly tied to declining investments in training. The question is, how do you entice and assist manufacturers to spend more resources on employee training?

According to the MWS, over 90 per cent of companies offer skills training and development to their workers. For the most part, this training focuses on new machinery and equipment, enhancing basic health and safety skills, process improvement training, and formal trades certification. Significant resources are being spent in recent years to help workers keep up with rapid changes in the manufacturing sector. Automation and robotization require constant upskilling on very compressed timetables. Still, employers think it is worth it, as only five per cent said it was not worth the cost.

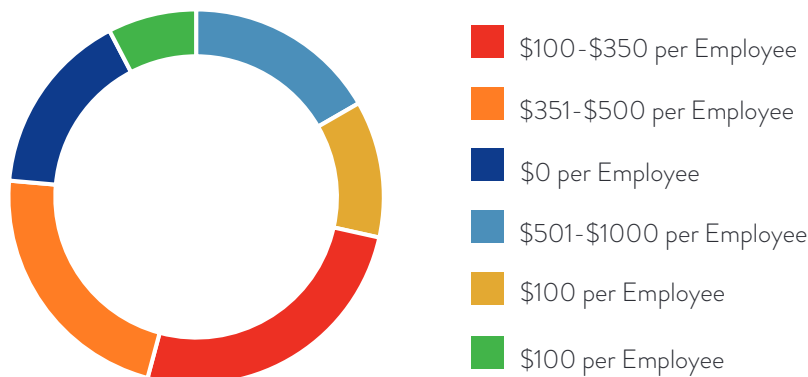
There are further examples in the MWS that demonstrates manufacturers' dedication to employee training. Employers are willing to go without a worker for long periods of time for them to get the training that they need. Less than 15 per cent allowed employees to leave for only one day; meaning that the vast majority will relinquish an employee for a week or more to complete training. The willingness to pursue employee education is there, the challenge is being able to fund it.

Many manufacturers reported that the uncompetitive business environment in Canada constrains their ability to invest in skills training. Increasing regulatory burdens and increasing costs of doing business suck up funds that otherwise would go towards investments in worker training.

This is of particular concern for small and medium-sized manufacturers who might not have as much money to spend as larger companies. More than half of employers said they allocate over \$350 per employee for training and just under 10 per cent pay \$1,000 or more. However, almost a third can't afford more than \$100 per employee in training. So, while employers invest in training, are happy to do it, and would like to keep on doing it, the well inevitably runs dry.

There are several other obstacles that prevent workplace training from taking place. First among these is a general dissatisfaction with the training programs currently available. Another major issue for manufacturers is concern about

HOW MUCH DID YOUR ORGANIZATION ALLOCATE TO EMPLOYEE LEARNING AND DEVELOPMENT IN THE LAST YEAR?



Source: 2019 CME Manufacturing Workforce Survey

the return on investment for workforce training. Investing in workers creates more productive and more valuable employees. However, some companies have an incentive to free ride: rather than invest in training themselves, they will wait for someone else to do the training and then recruit that employee. The result is that businesses have a strong disincentive to invest in training because they may end up paying the costs but not realize the benefits.

Government support for workforce training has also been sporadic and inconsistent. Over the years, federal and provincial governments have introduced dozens of pilot projects or temporary programs to assist businesses in this area. However, these programs are seldom sustained beyond a few years, or they focus on training within a specific industrial sector. This habit needs to be broken.

RECOMMENDATIONS

Create an Employer Training Tax Credit

A more consistent, long-term, and broad-based system of government support is needed. While CME lobbied for the creation of the Canada Job Grant, these types of assistance have limits. That is because applying for a grant requires knowledge of the program in addition to time and resources to dedicate to the administration of them. After all of that, it is not guaranteed that the employer will be awarded any funds.

The solution is to have governments incentivize companies to invest directly into their training by utilizing the current tax code. A general training tax credit could be given to any company that invests in training- whether it occurs inside the company or is done by third parties. The tax credit's applicability would be more universal, it would be targeted to achieve desired training outcomes, and

most importantly, the training that would occur would be tied to what the company needs. Leveraging the tax code to get manufacturers to invest in worker training is critical to laying the foundations for the implementation of advanced manufacturing processes. If governments want to maximize the effects of other programs designed to incent investments in M&E, such as the immediate tax-write off of M&E investments, it needs to encourage manufacturers to invest in training. A direct tax credit for training expenses will accomplish this.

Help Employers Expand Work-Integrated Learning Offerings

According to the MWS, many manufacturers said that expanding existing WIL programs would help them address skills and labour shortages and would help reduce the skills gap for students. Many manufacturers already embrace WIL, but smaller and medium-sized enterprises (which make up most of manufacturing companies) simply do not have the resources to fund such activities.

WIL opportunities also provide a valuable leg up for students to gain work experience and ease their entry into the workforce. Moreover, most manufacturers report that they try to hire as many WIL students as they can after graduations, as they have already been vetted and assessed.

The issue is that this is not happening enough. Although the 2019 Federal Budget announced sizeable investments in expanding the number of WIL positions across Canada, and to promote careers in trades, these initiatives do not go far enough to defray the costs incurred by employers. A direct and permanent subsidy for student wage costs is critical to ensure that employers can plan and build WIL systems long-term.

It is also essential that business groups be leveraged and funded, to be able to engage employers and assist them with the administrative burden of applying for, and accessing, these funds. This will help ensure that government investments have maximum impact on getting students to connect with employers.

Invest More in Management Training Capacity

Because of its cultural roots, the issue of management training is more complicated than technical and basic skills training. One of the most common observations made about business culture in Canada is that while we are world-class entrepreneurs, engineers, service providers and problem-solvers, we lack the ability or interest in creating large, world-class companies. As an example, there are very few cases of Canadian business leaders who have built a truly global business out of a small or medium-sized company. A far more common scenario is that of the Canadian entrepreneur who identifies a niche product, gap or need and builds a small business to meet that need. The company expands up to a certain point but is then bought out by a foreign enterprise.

Statistics on business establishments in Canada confirm that this is more than just a story we tell ourselves. Generally speaking, Canada has a high proportion of small and medium-sized enterprises, and relatively few home-grown large companies, and a significant degree of foreign ownership. This is a major factor behind the relatively low levels of research and development, innovation and commercialization that take place in Canada.

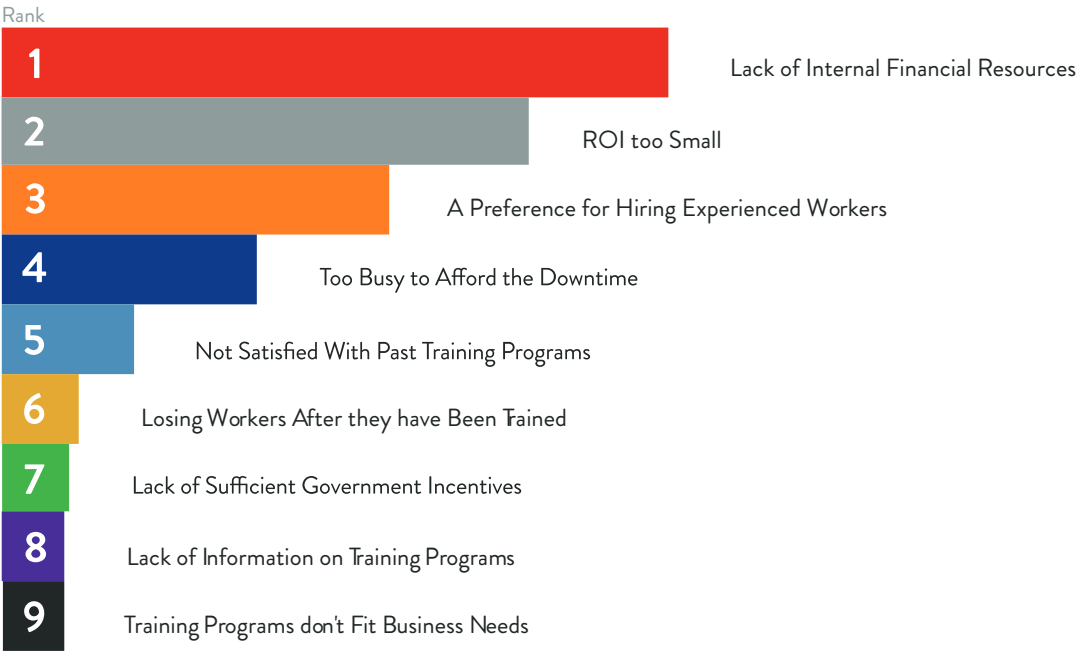
One of the reasons why Canada has a culture of entrepreneurship, but not of risk-taking or creating global companies is a lack of world-class management training. Business operations become more complex as a company grows. An entrepreneur can be successful at building a business up to a certain size, but at a certain point in that process, management skills become more important than technical know-how. Without a strong knowledge of business management theory and techniques, that person is unable to take the next step. It then becomes easier to sell than it is to grow.

To address this problem, we recommend a substantial expansion of the quality, and availability of management training available for Canadian manufacturing leaders. This training should be done through existing post-secondary institutions with the full support and involvement of the manufacturing sector.

Canadian manufacturers should work with post-secondary institutions to create new programs to support management training. The emphasis of these programs should be on entrepreneurship, leadership (at the group and company level), and combined technical and management training (such as combined engineering and MBA programs).

In addition, we must support the growth and development of entrepreneurs and smaller companies through direct support programs. The federal government has created accelerator and incubator programs that could fill some of this role. Private sector programs should also be created to link experienced manufacturing executives with new executives and entrepreneurs for ongoing and personal guidance and support.

WHY HAVE YOU NOT INVESTED IN WORKFORCE TRAINING?



Source: 2019 CME Manufacturing Workforce Survey

INCREASE ECONOMIC IMMIGRANTS TO 500,000 A YEAR

Immigration is as critical to Canada's long-term economic health today as it was when the country was founded. Earlier, it was detailed how CME believes we can maximize participation in the workforce from Canada's current population. However, no matter how successful those efforts are, Canada will continue to require immigration to fill gaps that Canadians cannot or will not fill for a variety of reasons.

One of the primary issues is that, as Canada's population continues to age, and birth rates remain low, the domestic population is stagnating. In short, foreign workers are needed simply to replace the existing workforce as it retires. Given that most immigrants are on average younger, they help mitigate Canada's demographic challenges. Immigration can also alleviate Canada's worsening retiree to worker ratios. In 2012, the worker-to-retiree ratio was 4.2 to one and it will be two to one by 2036.

Canada has, admirably, increased total immigration totals recently. In 2019, Canada will accept roughly 300,000 new immigrants, an increase from the roughly 250,000 accepted per year on average during the previous decade. That number is expected to rise even further to 350,000 people per year by 2021. While this is a positive trajectory, it is inadequate to fill current labour shortages.

More concerning however is the share of economic class immigrants continues to decline as a percentage of the overall totals and in real numbers. This undermines the efficacy of the system for employers to fill their labour needs. In 2015, 170,000 economic class permanent residents were admitted in 2015, but this number declined to 159,000 by 2017 and when final numbers are in for more recent years, we expect that downward trend to continue.

By prioritizing economic class immigration, Canada will be better positioned to integrate this larger volume of immigrants into the workforce. Research from the University of Toronto's Rotman School of Management found generally positive impacts of immigration on the economy but that these effects were higher when the immigrants were better integrated. Research shows that of all the classes of immigrants Canada admits on any given year, economic class immigrants have higher success rates at integrating and landing a job. This increase in immigration would help lessen the country's labour shortages and provide a larger pool of workers for employers to pick from.

In order to realign Canada's immigration system to meet employer needs, Canada should increase the number of economic class immigrants to 500,000 a year and ensure that the percentage of total annual immigration remain higher than one per cent of Canada's total population moving forward. All other classes of immigration (family and humanitarian) would be in addition to the 500,000 target.

RECOMMENDATIONS

In addition to this broad-based target, Canada needs to improve its system for attracting and maintaining foreign workers to ensure the system is effective for filling the skills and labour shortages faced by manufacturers. The following actions should be taken:

Update Canada's Immigration Point System to Align to Employer Needs

CME was a strong advocate for the creation of the Express Entry immigration system over the past decade and worked on its implementation. We fully agree with and support its approach and how we link the skills of immigrants to the needs of some businesses. However, there is a major flaw in the program that must be addressed as we expand the pool of immigrants. We must re-examine the points system and how we classify "high-skill" and "low-skilled" jobs.

For manufacturers, their labour and skill shortages cross the spectrum. As mentioned previously, the most in demand positions are general labour and skilled production workers. But because the main system, and even the Express Entry System, ranks candidates on a preference scale, most applicants admitted are exclusively from the "high-skilled" pool. Most "low-skilled" candidates don't get selected even though this has been identified as a skill class that manufacturers have a high demand for. If the economy needs welders, why do we prioritize engineers simply because they are perceived as a more valuable asset?

The root problem here is one of program design. If the entire purpose of economic class immigration is to ensure that once landed in Canada immigrants are employed and contributing, then Canada's system should be modified to directly tie immigration to jobs available, rather than a preference scale based on generic work occupation codes.

Furthermore, if Canada maintains the "high-skill" vs. "low-skill" approach, these classifications, and which occupations fall into each category, should be reviewed, with industry input, on an annual basis.

Double Provincial Nominee Program Levels

The Provincial Nominee Program is a stream of immigration designed to allow individuals who have the skills, education, and work experience to contribute to the economy of a specific province or territory and who want to become permanent residents of Canada. Each province and territory have their own streams (immigration programs that target certain groups) and requirements. The program is operated by the provincial and territorial governments in partnership with the federal government through Immigration, Refugees and Citizenship Canada (IRCC) and every province is allotted a certain number of immigrants under the program every year.

This program is ideal for manufacturers as provinces and territories set criteria based on the labour needs of the various sectors within their region. Because they have this control, they are better positioned to be responsive to the local immigration needs of industry. However, while the program is well received, it is limited in scope. The federal government should expand and double the current thresholds to allow more immigration through this stream. This takes on even more importance if the government dramatically increases immigration levels in Canada, as suggested.

Better Leverage Canada's Post-Secondary System

Colleges and universities currently welcome large numbers of foreign students across Canada. Students may work while they are here studying, or only for a limited amount of time after studying, under the Post-Graduation Work Permit (PGWP) program. At some schools, the population of foreign students easily surpasses 25 per cent of the student population. The system is excellent at attracting high-quality foreign students as they have become major sources of direct funding for the post-secondaries. However, these students are not being recruited or trained, in most cases, based on the local labour needs of business. Further, once in the system as a student, most of their work experience does not count as necessary Canadian work experience towards their residency status.

CME believes the better approach is for Canadian post-secondary institutions to leverage their recruitment abilities to bring foreign talent to Canada, train individuals on the specific needs of local employers, create relevant job placements to gain Canadian work experience, and expedite those candidates' immigration applications.

Enhance the Temporary Foreign Worker Program

The Temporary Foreign Worker Program (TFW) is not meeting the demands that employers have for short-term immigrant labour. Typically, the program gives manufacturers across Canada access to skilled and unskilled workers. However, the program is struggling to keep up with the demand of the current labour shortage.

The first bottleneck is the requirement to conduct labour market impact assessments. These take time to complete and manufacturers often find them redundant. If they are going through the immigration process, logic dictates that they tried to hire locally first as it is much easier, less time consuming, and less costly. Nevertheless, this is a step they must complete. Another issue is the 10 per cent limit per plant for foreign workers coming through the TFW program. Often, manufacturers require much more and quickly exhaust this quota. Cumulatively, these challenges add to the administrative burden and cost of using the program.

There is much to be gained by simplifying and adapting the TFW program. Manufacturers dedicate significant resources to recruiting and training workers, investing thousands of dollars to on-board just one foreign worker. These costs include employee screening, recruitment, travel, settlement, training, and complying with the requirements of the program. By improving the reliability and lowering the costs of the program, it will enhance the TFW as a key tool for business.

The federal government should also explore ways to expedite entry for temporary foreign workers coming into Canada on short-term work assignments, including:

- A trusted employer program that pre-approves qualifying companies to bring temporary workers into the country;
- Streamlining the Labour Market Impact Assessments with an eye to reducing redundancies; and
- Reverse the 10 per cent cap on how many low-wage employees a company can hire through the TFW program.

Administrative and process improvements to the TFW program should be mandated by the government as well. Moreover, the TFW should be used as a springboard for more liberal entry of immigrant workers and for creating a pathway to permanent citizenship. By facilitating this trajectory to permanent residency through the program, the government avoids issues of temporary worker mobility and of displacing current Canadians from potential job markets.

CONCLUSION

Manufacturing is a critical component of the Canadian economy. The industry accounts for 11 per cent of Canada’s gross domestic product (GDP), two thirds of our global exports, and 1.7 million jobs.

However, eight out of 10 employers in Canada’s industrial sector are struggling with skills and labour shortages. What was originally a concern has become a full-blown crisis. It is fueling manufacturing’s poor business investment and competitiveness performance and causing Canada to fall further behind its global peers. Addressing the skills, labour, and training problems of the manufacturing sector is therefore critical to ensuring our future collective prosperity. To accomplish this, the following bold action is needed:

GOALS

Create 150,000 new full-time jobs for youth in manufacturing

Double employer investment in worker training

Increase economic immigrants to 500,000 a year

RECOMMENDATIONS

- Promote Careers in Manufacturing to Youth
- Refocus Canada’s Education System to Connect Youth to Jobs
- Create Regional Industry Councils
- Expand Efforts to Attract Women and Under-Represented Groups in Manufacturing
- Create an Employer Training Tax Credit
- Help Employers Expand Work-Integrated-Learning Offerings
- Invest More in Management Training Capacity
- Update Canada’s Immigration Point System to Align to Employer Needs
- Double Provincial Nominee Program Levels
- Better Leverage Canada’s Post-Secondary System
- Enhance the Temporary Foreign Worker Program

The recommendations summarized above form a plan to address chronic labour and skills shortages in Canadian manufacturing, create the workforce for the future, and put Canada’s economy on a path to continued prosperity. To do this, the message that manufacturers want everyone to know is very straightforward: **We’re hiring!**



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