ENGAGING PEOPLE, EMBRACING TECHNOLOGY:

THE GREATER BAY OF QUINTE REGION'S STRATEGY TO ADVANCE MANUFACTURING

THE 2013 LABOUR MARKET PROJECT

AN INVESTIGATION INTO THE CURRENT LOCAL ASSETS AND PROJECTED REQUIREMENTS

EXECUTIVE SUMMARY

There has never been more of a need to prove that manufacturing in Ontario will continue to be globally competitive. With a strong Canadian dollar (averaging $1.04 US during the 2007 – 2013 period) and rising overall business costs—plus pressure from emerging markets—manufacturing demands constant innovation, the integration of new ideas and the adoption of up-to-date production processes. Despite these factors, Ontario's manufacturers remain determined to maintain their position as a leader in North American manufacturing.

In the Greater Bay of Quinte Region, manufacturers agree that innovation in technology and labour will be the ship that sails Canadian manufacturing past the threat of external pressures—keeping pace with internal expectations. To prepare, in 2007, the Greater Quinte Region Manufacturing Local Labour Market Report analyzed the next five years' challenges. The result was a 10-Point Action Plan, which has contributed to successes such as the development of the new Sustainable Skills, Technology and Life Skills Centre at Loyalist College and the creation of the Manufacturing Resource Centre, where best practices can be shared amongst the region's cluster.

In 2012, the community needed up-to-date labour market data for the local manufacturing sector (one of the region's largest employers). In a region that already has low unemployment, the rise of an aging workforce offered the threat of a tightening labour force. Further, changes in legislation, skills requirements and labour costs revealed the need to tackle impending changes with support from community partners. Before priorities could be identified, a survey of regional manufacturers was required to obtain current labour market data.

62 local manufacturers participated in the 2013 Labour Market Project: qualitative and quantitative surveys (February-June) and a working group symposium (June) to clarify a vision of the ideal future state of manufacturing in the Region. This report itemizes the research and the ensuing priority plan where locally driven solutions could have the most impact to address the identified challenges.

This project was initiated and delivered by the Quinte Economic Development Commission (QEDC) with funding from Employment Ontario and the Government of Canada. Mike Hewitt from QEDC's Manufacturing Resource Centre and Joe Mullin from Loyalist College were responsible for such high survey response rates and data analysis.

Prosperity in an increasingly challenging marketplace, requires a collective effort: from company management to community partners. The ensuing research and recommendations in the 2013 Priority Plan will help guide manufacturers' decision-making and offer ideas for public policy to ensure local manufacturers have what they need to lead manufacturing innovation and workforce development in Ontario.

Sincerely,

Chris King
Chief Executive Officer
Quinte Economic Development Commission

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INTRODUCTION

Several forces continue to shape Ontario's labour market, and yet with new repercussions. The risk of business loss in the manufacturing sector remains a very real and serious threat. In confirmation that the community's support and prioritization of manufacturing has worked, the Greater Bay of Quinte Region has fared better than some regions in Canada; but any degree of complacency now would be detrimental to future industry since emerging low-cost economies, like China and India, continue to issue a further challenge to Ontario manufacturers.

The Greater Bay of Quinte Region's traditionally strong cost advantages have been softened by currency exchange rates, and rising energy and transportation costs. Manufacturers are still adjusting to higher energy costs and the increased value of the Canadian dollar. Multinationals continually compare sites in order to remain competitive and become even more efficient globally.

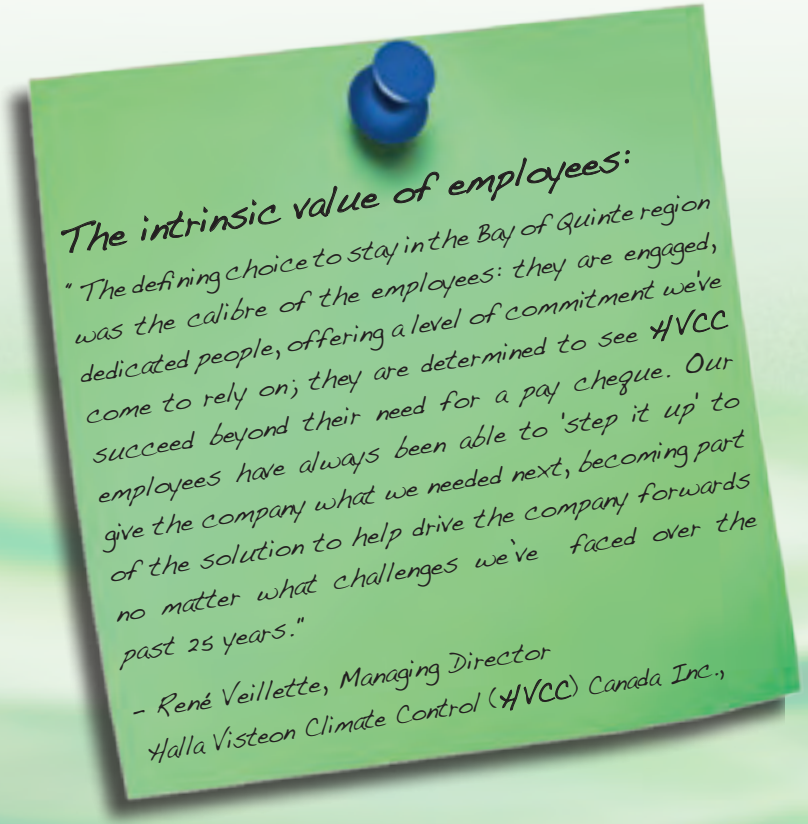
Canada has always been **a leader of manufacturing innovation**, and offers a high-skilled labour force. Furthermore, Canada's high quality of life is an asset to the labour recruitment processes, which aid the selection of the very innovative talent that keeps Canada a leader of industry. To compete globally, Ontario manufacturers must be leaders of innovation: adoption of new technologies to automate plant practices for precision and efficiency will complement the ability to offer **best practices for labour retention and growth.**

In the Greater Bay of Quinte Region, **the future availability of suitable employees** is a major concern. Local manufacturers frequently note that **a key component of their company's success is the quality of employees.** Previous projections about aging "baby boomers" creating labour shortages after 2010 are likely to come to fruition in the region in the aftermath of the 2008-2009 "Economic Reset". In 2001, one Canadian in eight was aged 65 years or over. By 2026, one Canadian in five will have reached age 65. In the Greater Bay of Quinte Region, the situation may be even more serious: the 2011 Census revealed that local populations for three categories (median age, 65+, and working age) are higher in this region than in Ontario and Canada.

If employers have to scramble for experienced workers in the years to come, they will experience even higher costs. To complicate the matter further, as companies move towards more technologically advanced systems and processes, there is further concern as to how many employees will be impacted by the increasing demands required to operate highly technical, modern equipment without a decrease in productivity.

While newer technologies will help Ontario manufacturers compete globally, **the demand for workers with advanced skills and technical knowledge** is sure to increase. In order to avoid interrupting operations in manufacturing facilities, while maintaining or increasing the number of Canadians on payroll, there is a need for blended workplace learning to help companies overcome current challenges associated with employee training. Furthermore, an increase in 'soft' and hard skills-based curriculum and a community-wide commitment to raising the perception of manufacturing will make it easier for employers to offer more jobs in the community.

The key objective of this 2013 project was to gather and analyze local labour market data. With this vital information, it is possible to help businesses and organizations responsible for labour force development maintain our region's leading edge in workforce skills. By addressing labour skills, and preparing for future requirements now, the Greater Bay of Quinte community aims to proactively develop the workforce thereby avoiding the potential for labour supply issues.



PROJECT METHODOLOGY

The Greater Bay of Quinte Region's manufacturing sector directly employs over 11,460 people (2011 Census). The 2013 Labour Market Project set out to obtain current labour and skills data regarding workforce shortages, and the impact projected over the next five years. The five specific areas to quantify and address were:

1. Determine the manufacturers' key human resource projections (both in numbers and skill sets required) for the next 5 years, thereby enabling inferences to be made about the larger industrial community, based on identified issues;

2. Identify trends in attracting and retaining labour, including identification of best practices for recruitment and retention;

3. Collate the impact previous, current and future economic, demographic and societal trends may have on manufacturers' ability to satisfy forecasted labour requirements;

4. Share lessons learned and best practices from successful companies about training, motivating and rewarding workers;

5. Create strategic action items to address the challenges and opportunities identified throughout the project.

During February to June 2013, over 62 manufacturers participated in one or both of a qualitative onsite survey (60) and a quantitative online survey (54). On June 20, 2013, the Quinte Economic Development Commission and Loyalist Training & Knowledge Centre presented the data collected, and facilitated a working group symposium to 65 attendees, who represented local manufacturers, community stakeholders, and local support agencies.

The outcome of the symposium was a detailed Priority Plan to unite community collaboration and guide decision-making over the next five years.

The Priority Plan *[pages 34-41]* addresses the identified skill and labour requirements in the manufacturing sector, a sector that continues to be a major economic driver in the community. There are **other industries in the region**, such as logistics, construction, and service contractors, not included in this survey **who will likely benefit** from the results given their shared: skill set requirements; local labour challenges; reliance on technology; and mandate for global competitiveness.

A tremendous volume of data was collected in association with this project. **Manufacturers have been very forthcoming with their labour market information** and were assured that only the total accumulation of data would be shared; at no time would their individual labour market and workplace training and development information be shared with others.

Much of this information has been included within this report and will be essential for community planning and curriculum development. The Greater Bay of Quinte Region has a track record of success through community collaboration; the strategic recommendations in the Priority Plan will help build on previous successes, with preliminary focus points to mitigate known future challenges.

Much of this information from this project can be utilized in company-led strategic initiatives. As a result of this project, employers who participated now have access to the following information:

- Summarized agglomerated regional data on both current and projected labour statistics;
- Known workplace training and development needs;
- Data relating to labour issues employers are facing.

While the Greater Bay of Quinte Region's **economic assets and support have resulted in extensive private sector investment and job creation** more work is needed to support local businesses and drive further growth in the economy. This document is a pathway for manufacturers and community partners to achieve the common goal of advancing manufacturing in the region.

GEOGRAPHICAL COVERAGE

Greater Bay of Quinte Region

The geographic area covered by this project is the Greater Bay of Quinte Region which includes the service territory of the Quinte Economic Development Commission (QEDC): Brighton, Quinte West and Belleville, as well as the manufacturers in surrounding communities. The Greater Bay of Quinte Region is strategically positioned off Highway 401, the major transportation route for all of southern Ontario, offering ready access to major markets in Canada and the United States.

The Greater Bay of Quinte Region's industrial base has over 380 companies including 150 manufacturers. The region is home to a diverse group of manufacturers ranging from large multi-nationals to small and medium sized companies. Key sectors in the region include food processing, plastics and packaging, advanced manufacturing, and logistics. Surrounding this cluster of manufacturers are a full range of support services such as warehousing, equipment fabrication and repair, transportation, product supply, customized training, co-packing and other support services.

The region is also noted for its spirit of cooperation, collaboration and team work. QEDC is an example of three municipalities working together on economic development for the betterment of the region. A key outcome of the 2007 Greater Quinte Region Manufacturing Local Labour Market Report led to the creation of the Manufacturing Resource Centre (a project of the Quinte Economic Development Commission that has operated thanks to funding provided by sources including the Eastern Ontario Development Program; Eastern Ontario Development Fund; Trenval Community Futures Development Corporation; and the Quinte Economic Development Commission). The funding sources needed to maintain the Manufacturing Resource Centre (MRC) and its activities are in place until the end of 2013.

Manufacturers in the region have praised the support that has been offered through the MRC, and have highlighted a need for sustained funding for this proven, highly valuable community asset.

EXTERNAL FORCES AFFECTING MANUFACTURERS

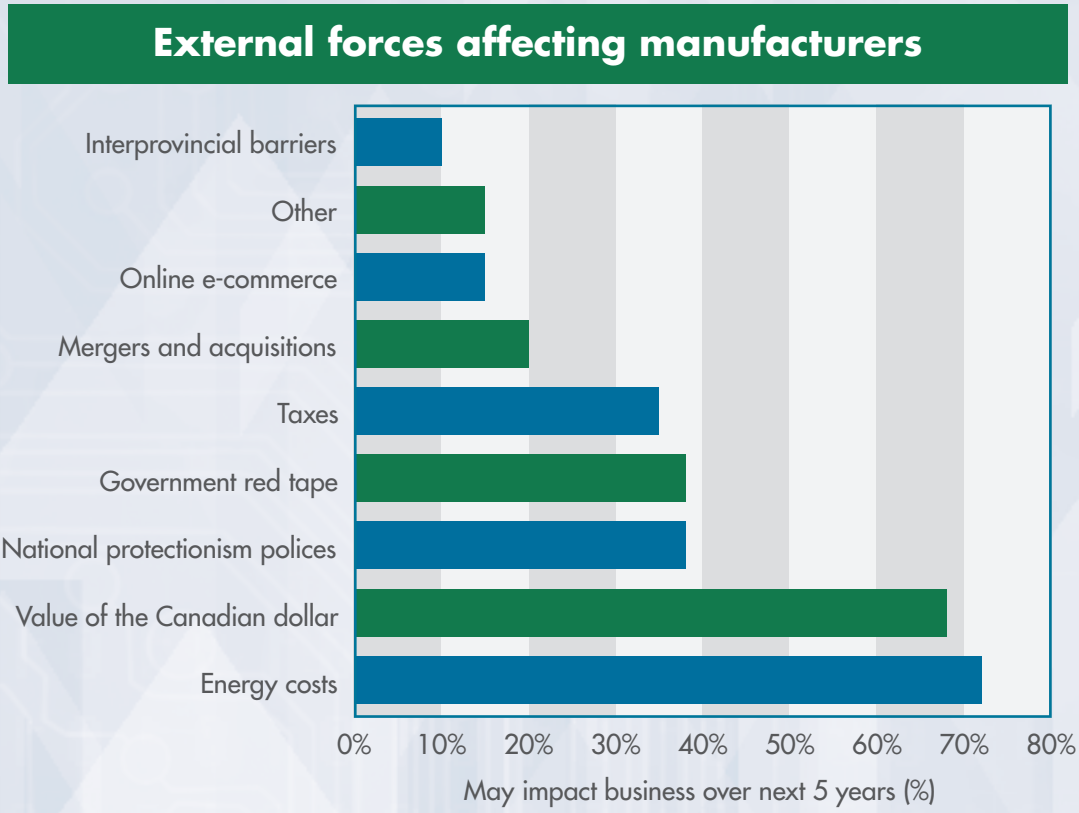
As part of the survey, local manufacturers identified the external forces impacting local facilities and business decisions; high energy prices and the strong dollar ranked highest *[Figure 1]*. In the face of issues over which they have little influence (the continued strength of the Canadian dollar; increasing competition from local and international markets; and rising energy costs—especially compared to what competitors pay) local manufacturers are compelled to shape their future by seeking to compete on advantages they can collectively and individually influence; the labour force, adoption of new technology, productivity improvement initiatives; and the communication of their needs to government officials.

Grateful for the level of support received from government so far, the manufacturing community would like to offer two suggestions for future supportive policies in order to mitigate the effect of external forces *[Figure 1]* affecting manufacturers.

Firstly, the onus is currently on manufacturers to pursue supportive public programs for which they are eligible. Yet, manufacturers already provide extensive, regular reporting to various government agencies; these details indicate for which funding programs a company might be eligible, or espouse a need for greater support. Having these programs offered to manufacturers based on the information they are already providing, or simply having the benefits automatically implemented, is one way to "remove red tape" and help manufacturers stay globally competitive. By removing the need for additional research and further paperwork, a greater level of efficiency could be attained by manufacturers.

Secondly, the manufacturing sector would like to encourage and welcome more regular communication, with opportunities for gathering feedback (just as this regional project and report has done) to help the government stay connected to current sector challenges.

Figure 1



WORKFORCE DEMOGRAPHICS & PARTICIPATION

WORKFORCE COMPOSITION

In order to effectively compare numbers between companies, a standardized list of occupational names commonly found in manufacturing facilities was created. To instil categorization, human resource requirements for all departments and positions within the organizations were collated into the list shown in *Figure 3*. This list also serves the dual purpose of revealing the diversity of skill sets currently required by the region. Where possible manufacturers were asked to fit their unique company positions into the list provided during the survey. If they had positions they felt were specific to their organization, or if they could not easily fit them into the survey that was provided, they could add them to the survey. In some cases these positions were eventually rolled up into a reduced list of positions to make the data more useable on a regional basis.

Figure 3 also shows the current and projected employment numbers and projected retirements for each role, the education required, and the number of positions which are outsourced to local suppliers.

REQUIRED EDUCATION & QUALIFICATIONS

Manufacturers were asked to provide information on the minimum level of education they required for each position *[Figure 2]*. The information that was provided when coupled with the results of the onsite survey, is very telling about the needs of manufacturing to have an educated workforce. In the Greater Bay of Quinte Region, the highest volume of work is offered to College graduates, followed by secondary school graduates. University graduates are also in high demand. There is very little place in today's regional manufacturing sector for employees who do not bring a Grade 12 or higher level of education to the workplace.

Figure 2

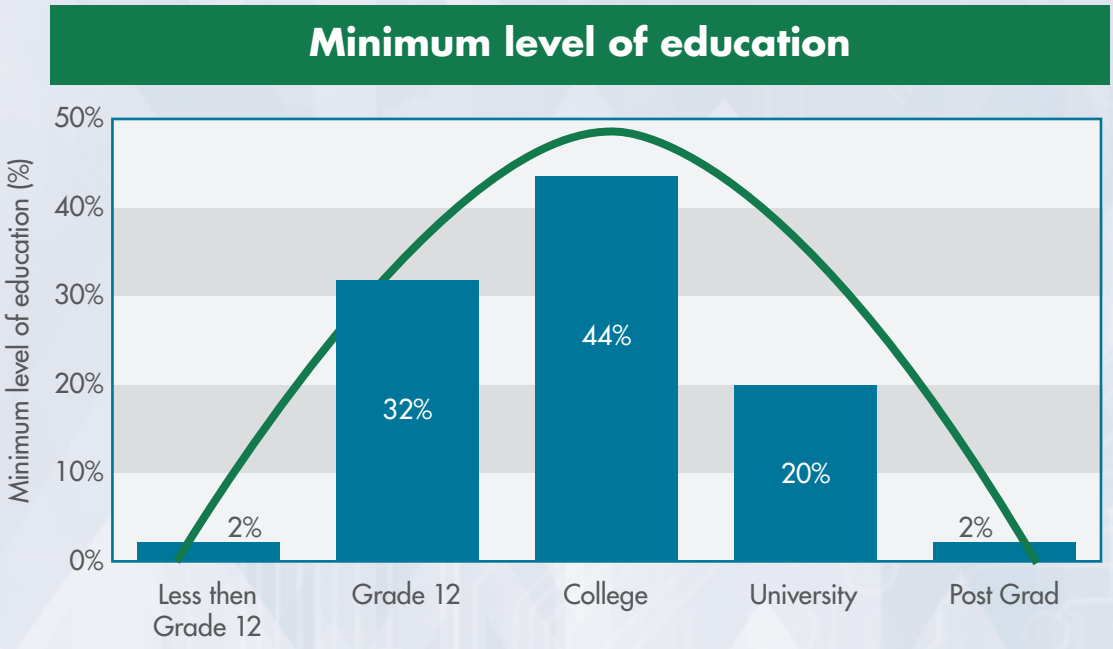


Figure 3 Employment and Education: Survey Data from the Greater Bay of Quinte Region

Number of Companies: 54		Current Employment	Employment Level Forecast (2013-2018)	Expected Retirements (2013-2018)	Net Change New Positions & Retirees	Position Currently Outsourced	Minimum level of education					
Department	**Position**						Less than Grade 12	Grade 12	College	University	Post Grad	Other Required Certification
Senior Management	General Manager	37	39	6	8			2	7	16	3	3
	Plant Manager	36	36	4	4			1	9	19	1	6
Human Resources	Human Resource Manager	25	27	1	3	2			11	15		10
	Human Resource Staff	28	35	1	8	1		5	10	3		4
	Payroll/Benefits Supervisor	5	7	1	3	2		3	9	3		4
	Payroll Staff	16	18	1	3	3		3	9	1		3
Accounting	Controller	27	26	6	5	2			4	16	4	10
	Accounting Manager	18	18	2	2	1		2	5	3	1	7
	Accounting Supervisor	13	13	1	1			2	8	1		4
	Accounting Clerk	59	64	1	6	3		4	18	1		5
	Financial Analyst	3	3		0			1	1		1	2
Purchasing	Purchasing Manager	16	17	3	4	2		1	9	5	2	5
	Purchasing Supervisor	10	10	1	1	1		2	3	3		3
	Purchasing Agent	29	30	2	3	2		5	9			4
Sales	Sales and/or Marketing Manager	25	33	3	11	2		1	11	8		2
	Sales Staff	61	70	4	13			4	16			2
Customer Service	Customer Service Manager	14	15	1	2	1		1	4	3		2
	Customer Service Representative	62	69	3	10	3		10	8	1		2
IT	IT Manager	11	10		-1	1			5	5		3
	IT Technician	24	27		3	10		1	10	1		3
Office Staff	Administrative/Executive Assistant	18	25		7	1		8	9			3
	Secretary/Receptionist	17	17	1	1	2		10	6			2
Health & Safety	Health & Safety Manager	10	13		3	1		4	5	3		5
	Health & Safety Staff	16	16		0			4	4	1		3
QA/QC/Improvement	Quality Manager	30	31	5	6	2		2	9	9	1	3
	TPM/Lean/Continuous Improvement	15	17		2	2		2	3	9		4
	Quality Supervisor	25	26	1	2			3	7	4		2
	Quality Technician/Technologist	79	95	2	18			8	16			3
	Line Inspector	55	57	1	3	1		8	2			1
Materials Movement	Warehouse Manager	20	21	2	3	1		4	6	5		1
	Warehouse Supervisor	57	64	3	10	1		6	12			2
	Shipper/Receiver	166	167	14	15	4		23	3			1
	Lift Truck Operator	389	460	19	90	60	3	17				4
	Drivers	8	2		-6			1				1
R&D	R&D Manager	19	18	2	1	1			3	6	2	2
	Product Development Engineer	36	40	1	5	1			5	4	1	5
	R&D Staff	42	45	2	5	1		3	6	2		2
	Designer/Draftsman	14	15		1				2	2		2
Production	Production Manager	46	51	5	10			6	14	7	1	3
	Production Planner/Scheduler	51	56	1	6			4	14	4		2
	Production Engineer	75	81	3	9	1		1	4	8	1	4
	Production Supervisor	145	165	8	28	1		9	14	3		3
	Lead Hand	245	263	3	21		1	20	3			4
	Production Operator	3182	3417	163	398	4	7	28	3			3
	Machine Operator	488	554	35	101		5	16	1			2
	General Labourer	554	661	39	146	31	5	20	3			2
	Sanitation	52	52	1	1			1				
Maintenance	Maintenance Manager	42	44	6	8	1		6	15	5		7
	Maintenance Supervisor/Planner	9	9						2			
	Industrial Electrician	254	267	16	29	12		3	20			13
	Machinist	77	82	1	6	2		2	5			4
	Millwright	146	165	11	30	17		4	16			14
	Plumber				0	1			3			2
	Refrigeration Engineer	15	17		2			1				
	Stationary Engineer	40	39	5	4	7		1	8			3
	Welder	41	48	2	9	2		3	2			4
	General Maintenance	30	33	5	8			5	3			4
	Custodian/Storekeeper/etc.	6	6	2	2			2				
Totals		7033	7706	400	1073	198	21	283	394	176	18	204

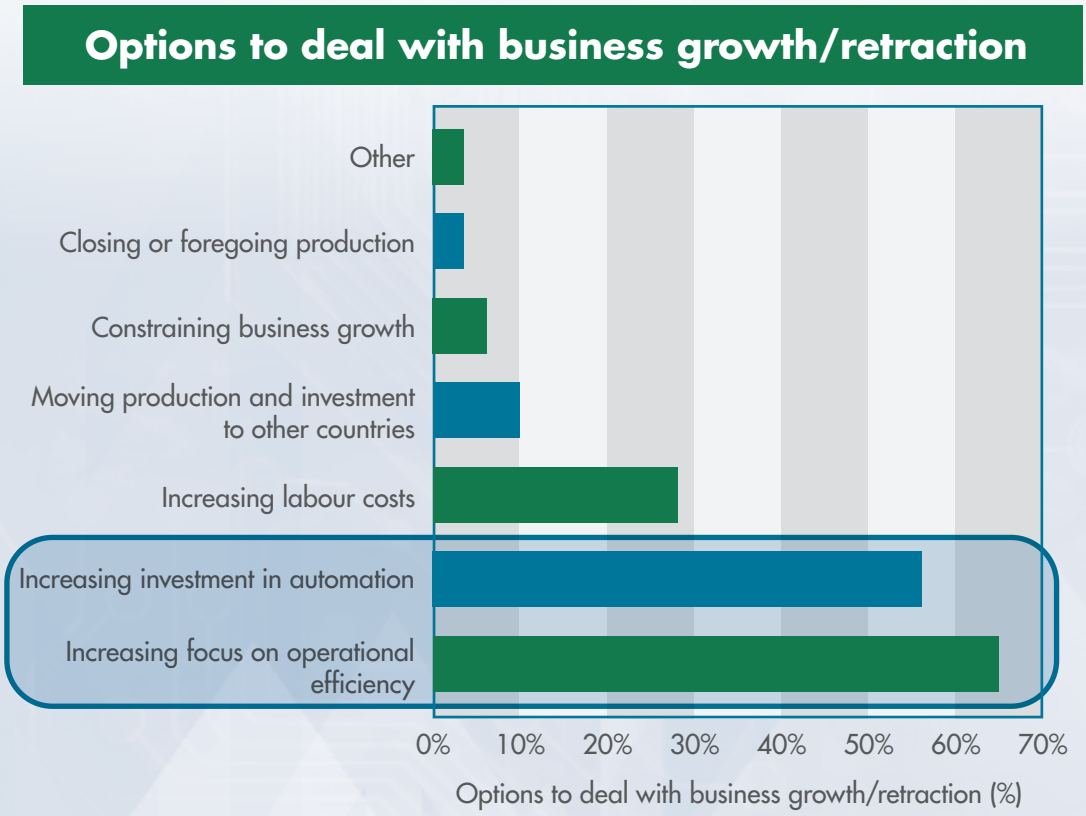
STRATEGIC FINDINGS

HOW TO INCREASE GROWTH AND AVOID RETRACTION

Despite external pressures, most of the surveyed employers remain optimistic and anticipate growth in most aspects of their business. It is further encouraging that all three levels of government, and the wider community, have indicated a commitment to support manufacturers in the region.

Manufacturers reported that their primary options for promoting business growth or avoiding business retraction are to invest in highly automated equipment in their facilities and to improve their operational efficiencies *[Figure 4]*. A change in the skill sets required is imminent for several factors, two of which are the projected increase in automation and operational efficiency.

Figure 4



PRESENT LABOUR CHALLENGES

The general public's perception of the sector is worrisome for employers in the manufacturing industry. The vast number of opportunities associated with employment in a modern day facility are not well understood. Improved communication is required so that enthused, motivated employees are drawn to positions which lead to exciting and rewarding employment.

Besides misperceptions of manufacturing careers, *Figure 5* indicates that the aging workforce, skills requirements, labour costs, and labour shortages are all significant challenges manufacturers currently face.

A lot of manufacturing jobs have already become highly automated. Manufacturers have expressed concern as to whether Ontario will be prepared to meet certain workforce challenges, including an adequate supply of workers equipped with the required technological skills. A greater majority of the workforce must become capable of working in a highly technical environment. With the use of automated equipment, already fewer labour intensive, manual positions may be required—and **successful, sustainable organizations will have less need for employees without high technical and soft skills**. Discussions with manufacturers revealed that as they automate processes and realize increased operational efficiencies, they become more competitive in the marketplace resulting in stable or even increasing employment levels.

Figure 5

PROJECTED LABOUR CHALLENGES (NEXT 5 YEARS)

In late spring 2013, Canada's job market was described as "staggering," "stunning," and "resilient." 95,000 new job opportunities were created in Canada in May 2013, far surpassing economists' estimate of a much more modest prediction of 15,000 new positions. In August 2013, the market was holding steady, however, prior to May 2013 the creation of jobs was reluctantly slow.

With such fluctuations in the economy, it is not surprising manufacturers find it difficult to predict what further challenges the years leading up to 2018 could bring. Manufacturers' assessment of projected internal and external factors reveal certain challenges they anticipate facing over the next five years *[Figure 6]*. The effect of age on the workforce (including retirements), changes to skill sets required and the shift in what people expect from their work experience (reflected in personal goals and work ethic) were identified as challenges.

Figure 6

THE IMPACT OF AN AGING WORKFORCE ON THE REGION (NEXT 5 YEARS)

EMPLOYMENT PROJECTIONS

Employment projections for the Greater Bay of Quinte Region *[Figure 7]* may seem moderate in comparison to many other Canadian communities but it should be noted that these numbers are based on the conservative forecast requirements known to the 54 companies who participated in the quantitative survey portion of the 2013 Labour Market Project. Projections have not been extrapolated to the other manufacturers in the region (representing approximately 4400 workers) or for non-manufacturing companies, such as those employing industrial electricians, that support manufacturers.

Figure 7

2013 - 2018 Employment Projections

Results for 54 companies	Full-time Employees	Part-time Employees	Temporary Employees	Provided as a Total	Expected Retirements 2013 - 2018
Current numbers (2013)	6380	179	461	13	
Forecast Levels (2018)	6975	240	407	84	400
Positive change (# of jobs)	665	67	15	71	
Negative change (# of jobs)	-70	-6	-69	0	
No Change (# of companies)	14	45	43	53	
Net jobs per category	595	61	-54	71	

Net jobs (all categories)	673
Net jobs + retirements	1073
Net jobs + retirements as % of current jobs	15.3%

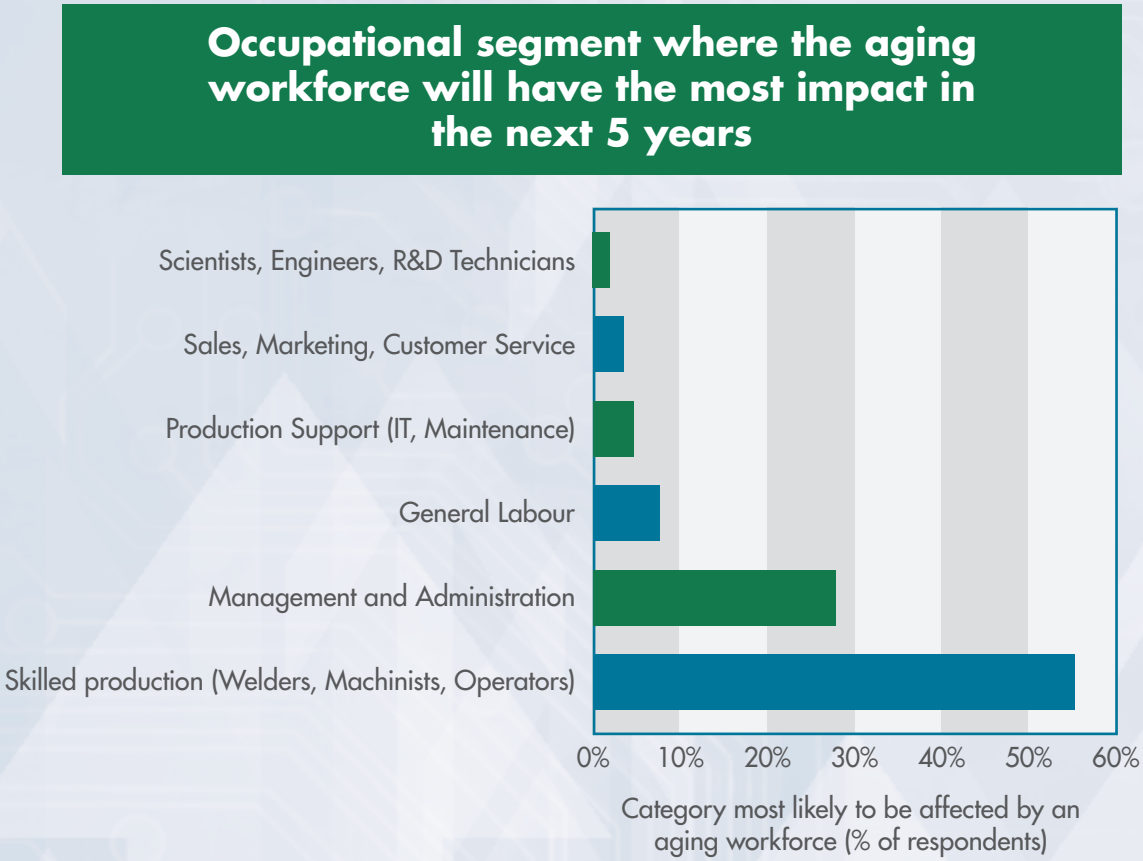
The 7,033 current jobs and the forecast increase to 7,706 jobs plus the replacement of 400 retirees does not take into account;
1) the approximately 4,400 manufacturing jobs in the region that were not included in the survey.
2) any new business locating to the region.
3) any unforeseen increases or reductions in staffing levels or plant closures.

OCCUPATIONAL SEGMENTS MOST IMPACTED BY AN AGING WORKFORCE

Manufacturers are on the path to increasingly automate their facilities over the next five years, a transformation which began several years ago. In order to remain competitive, companies will need to be even more innovative and in many cases they will increase the level of automation in production areas requiring staff to have a higher level of technical knowledge (and cognitive ability) than previously required. Local manufacturers are also not sure what impact the recent legislation banning mandatory retirement in Ontario will have on their business. Many employers have signalled a concern that they may see increased numbers of workplace related injuries or stress claims as senior employees adapt to changes in the workplace or continue to work later in their life.

Furthermore, many employers feel unprepared for the succession planning required to replace retiring employees. Top-of-mind *[Figure 8]* for employers is the impact on the Skilled Production segment (Welders, Machinists, Line Operators, etc.) but strategic planning for knowledge transference is also vital for many positions which have been held by long-term employees. Employees across a number of departments frequently have a bank knowledge of company culture, history and best practices experience which could create a significant knowledge gap if left unaddressed.

Figure 8



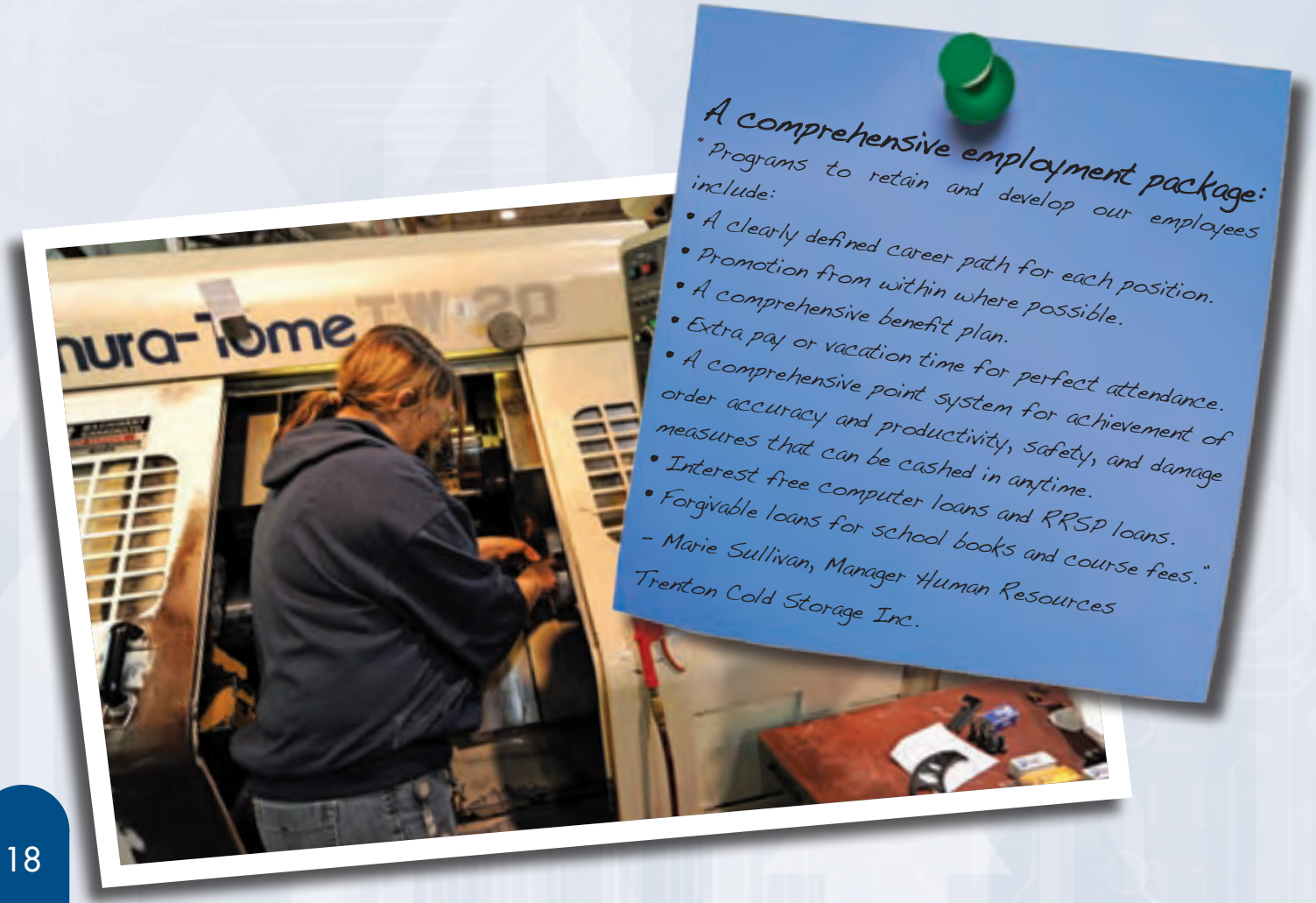
LOCAL REQUIREMENTS FOR LICENSED TRADESPERSONS

The critical shortage of Skilled Tradespersons in Canada is well publicized. The data collected from 54 local employers indicates that the Greater Bay of Quinte Region is not suffering the widespread shortages seen nationally. However as noted before, many of the other industries in the region that provide these skilled trades services to manufacturing, could not be included in this survey. The 54 local manufacturers participating in the quantitative survey collectively project that 12 Industrial Electricians and 9 Industrial Millwrights will need to be hired.

There are certain skills that were noted during discussions as being in short supply; Andy Vos (President of Millfab Millwrights, Fabrication and Trade Services in Belleville), among others, reported a critical shortage of Industrial Electricians who are capable of working with and programming PLC's (Programmable Logic Controller) and an overall shortage of Industrial Millwrights beyond the number being hired by manufacturers.

The collection of this data also led to a further realization on behalf of local employers; there is significant confusion with regards to the number of journeymen and apprentices required in workplaces. Ratios ONLY apply to the Construction Sector. Skilled Trades Ratios in Ontario DO NOT apply to employees working in the Industrial Sector.

Employers in the industrial sector can learn more about the ratio requirements in Ontario, and better understand the compulsory trades in Ontario, through the College of Trades Website (www.collegeoftrades.ca/trades/trades-in-ontario).

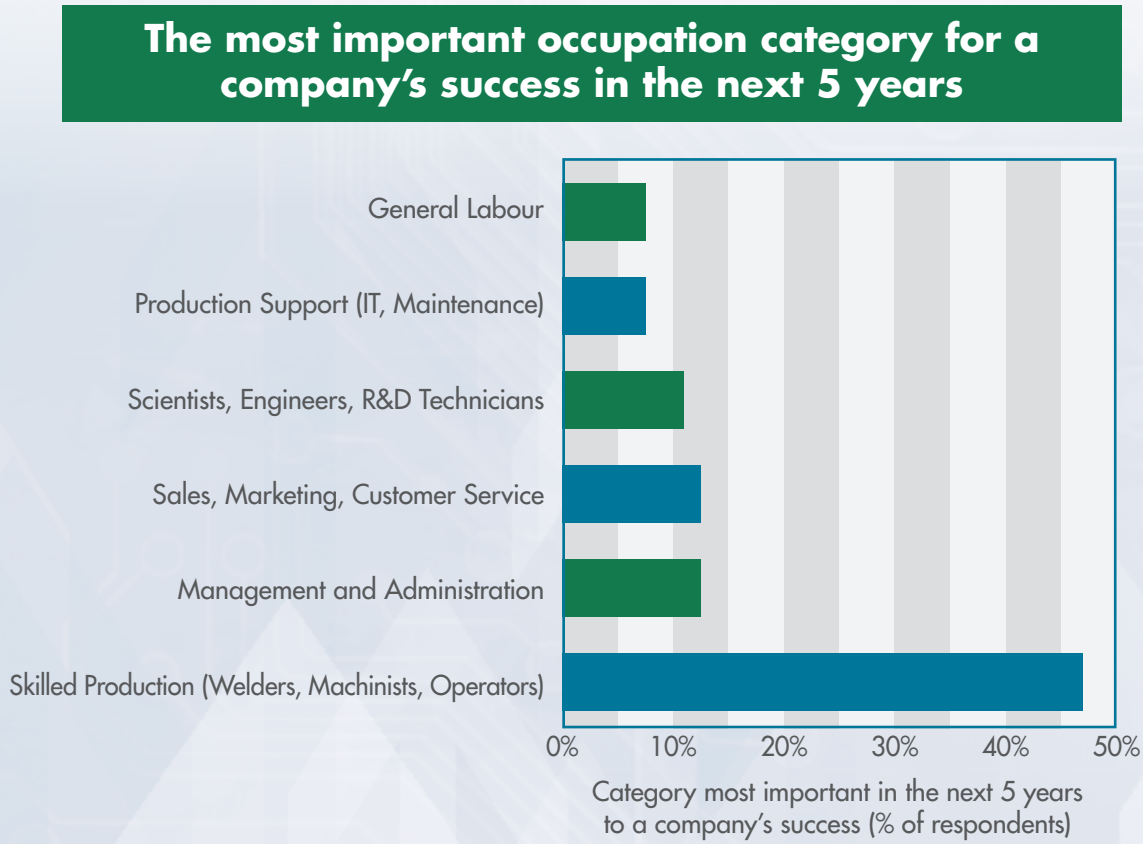


ESSENTIAL OCCUPATIONS: POSITIONS VITAL TO COMPANY SUCCESS

The employees responsible for operating and repairing the highly technological systems now found in manufacturing are becoming the most valuable assets in a company, raising expectations for all employees. In order to make high performing, globally competitive and sustainable production facilities, all labourers in the sector will be expected to be multi-skilled and versatile.

Positions like the General Labourer (who, in the past, were typically only required to have the ability to pack boxes, load machines and clean the workplace) will now often be expected to have proven technical skills; and in the future, be capable and willing to perform multiple high-level tasks within the workplace.

Figure 9



HIGHEST DEMAND JOBS

The skills manufacturers sought in the past have changed over the years, and will again. Over the next five years, employers will be putting more emphasis on hiring people who have proven technical skills, preferably those who have been exposed to equipment run by PLC's (Programmable Logic Controls), robotics, SCADA Systems (Supervisory Control And Data Acquisition) complemented by a strong mechanical aptitude.

The positions expected to be in greatest demand over the next five years have been identified by those surveyed *[Figure 10]* with the Production Operator position ranking highest.

Figure 10

2013 - 2018 Employment Projections

Positions with Greatest Increases

	Current Total	New Positions	Expected Retirements 2013 - 2018	Total Change (#)	Total Change from Current (%)
Production Operators	3182	235	163	398	12%
General Labourer	554	107	39	146	26%
Machine Operator	488	66	35	101	21%
Lift Truck Operator	389	71	19	90	23%

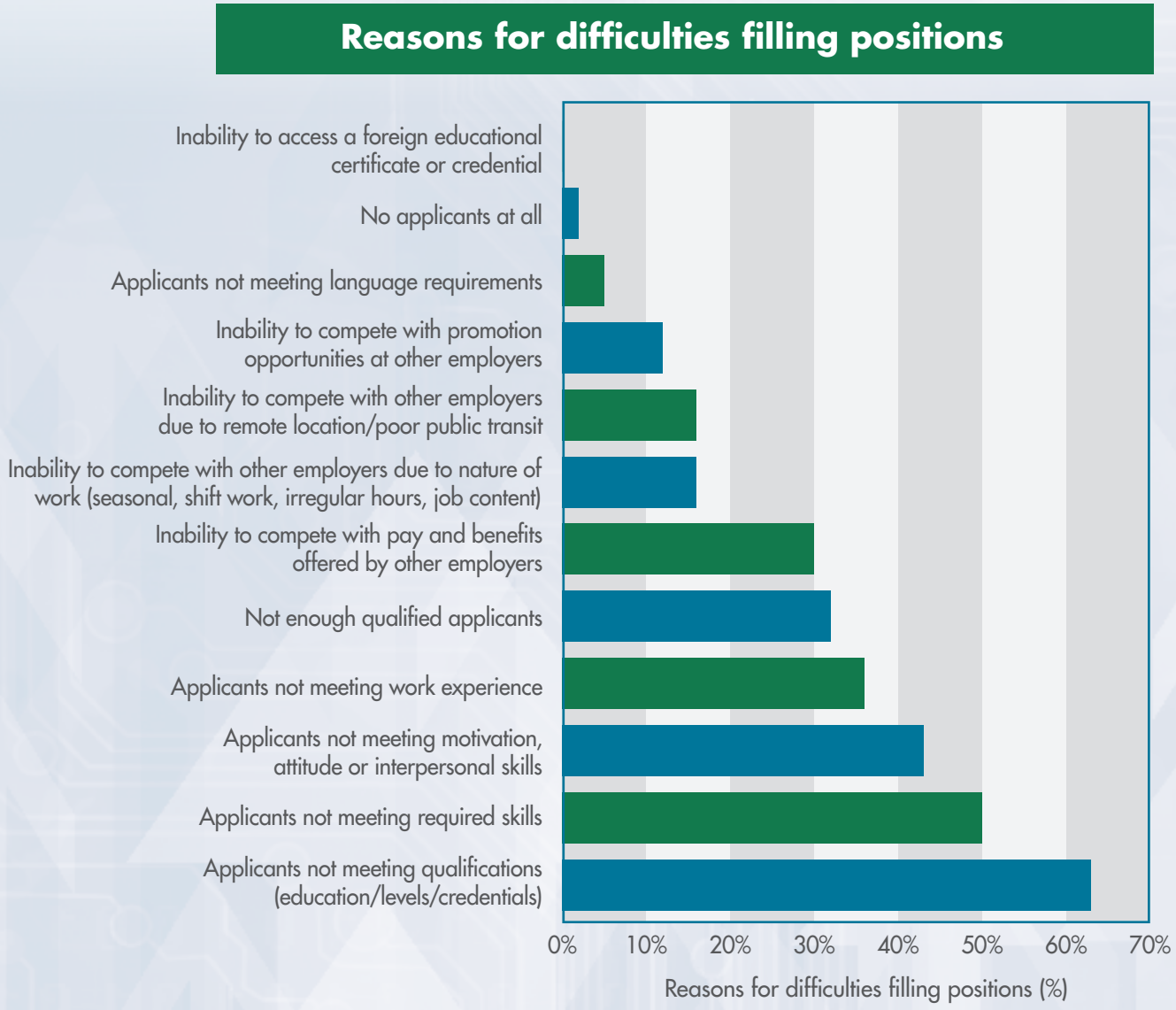
DIFFICULTIES SOURCING SUITABLE CANDIDATES

The top three hiring challenges manufacturing employers face stem from a difficulty finding people with the right skill sets for the available positions *[Figure 11]*.

Employers confirm there is **no shortage of applicants** for advertised positions; however, following national trends, finding candidates with the right education levels, required skill sets and **demonstrated positive interpersonal skills** can be a significant challenge.

In 2013, employers noted that ***most candidates do not have adequately refined soft skills to complement their technical abilities***. The difficulty is noted nation-wide. In The Globe and Mail Report on Business (March 6, 2013), 67% of senior executives cited a lack of soft skills (positive attitude; communication skills; a strong work ethic; teamwork) among job applicants.

Figure 11



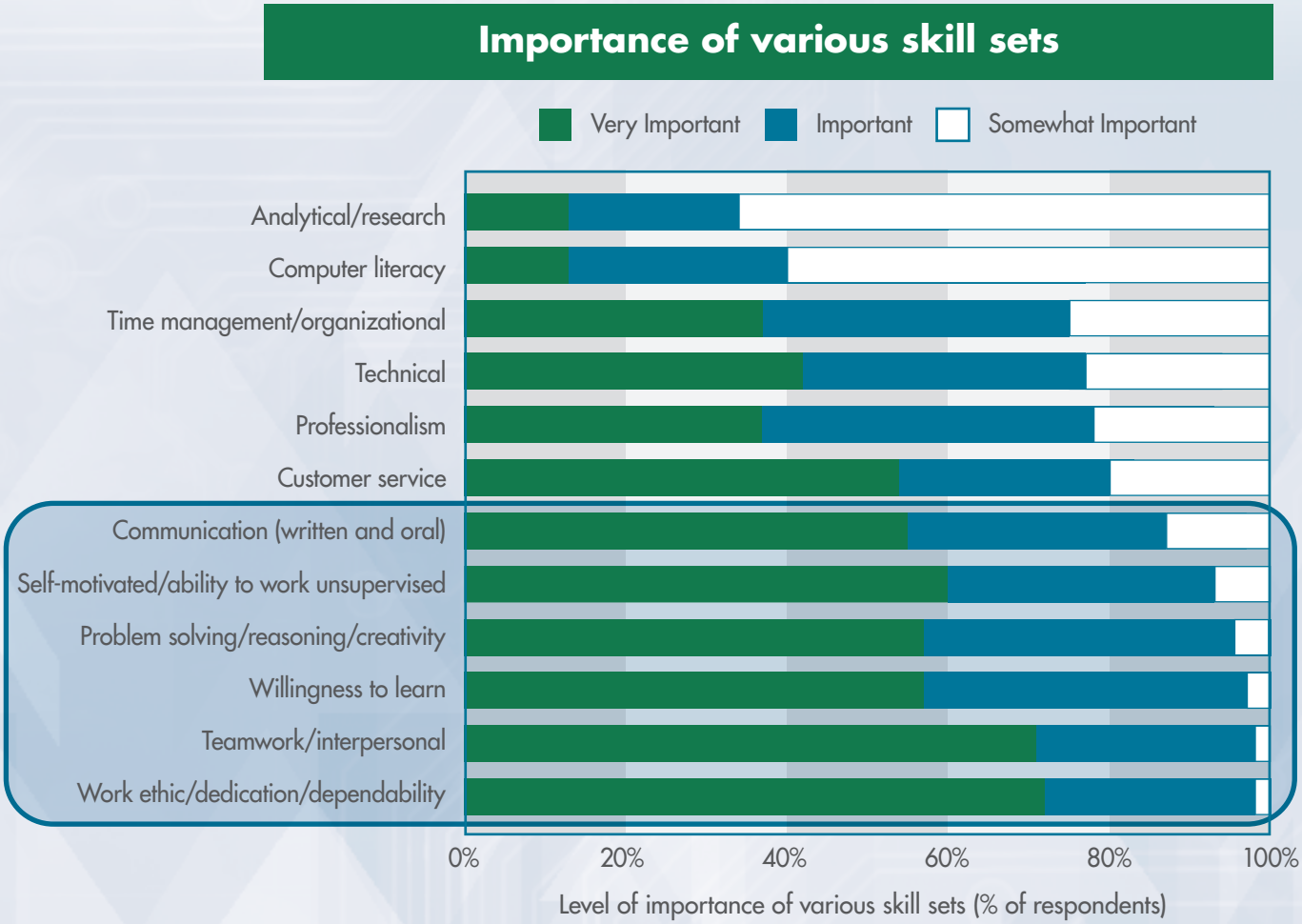
SOFT, TECHNICAL AND FOUNDATIONAL SKILLS

IMPORTANCE

While technical skills (commonly known as 'hard skills') in the training world are important, it appears that 'soft skills' are now at par, and in many cases, even more important to employers today. Having employees who are motivated to work well with others and communicate clearly and professionally, and who have a strong work ethic, respectful attitude, and willingness to learn are some of the soft skills sought in new hires.

Figure 12 shows a number of soft, technical and foundational skills that employers consider important to meeting daily business objectives. When combined with the information from *Figure 11*, which highlights projected challenges anticipated by employers, we can form an overall picture of the difficulties employers face trying to find employees with a well-rounded skill set. *Figure 13* reveals whether or not manufacturers considered the level of these skills to be an issue in their existing workforce or with new hires.

Figure 12



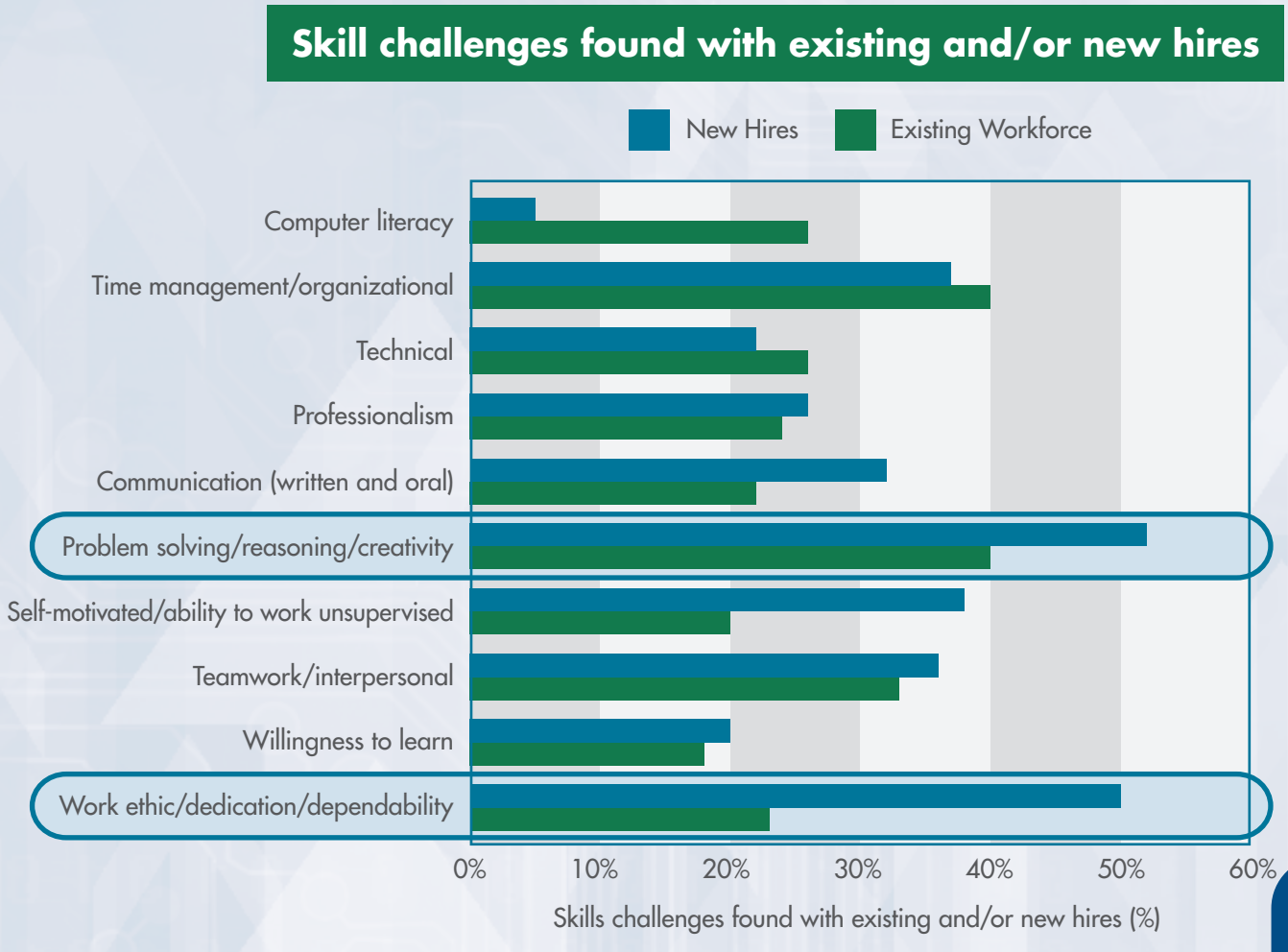
SKILLS CHALLENGES AFFECTING CURRENT EMPLOYEES AND NEW HIRES

Current Employees tend to have defined training plans in place which include required job specific hard skills. Some employers have identified opportunities to update soft skills and foundational skills for current employees who may be missing some of the essential skills often associated with a high performance work environment. Local Business Retention and Expansion reports repeatedly show that the incumbent workforce is praised for its dependable and trusted nature leading to the success of local industry.

New hires require strong soft skills and foundational skills. Manufacturers have confirmed the demand for skills like: literacy, mathematics, understanding and applying information and analysis, critical thinking, and acting logically to solve problems. Applicants without these foundational skills are deemed unsuitable for hire; the shortfalls are detected through preliminary screening.

In interviews, employers noted a concern about the expectations of newly hired employees. Often graduates from College/University, these students have excelled through their educational experiences, but do not always recognize the need to learn job specific tasks in the workplace. There may be room for the education system to better prepare future employees to come to the workplace with an attitude more open to workplace training requirements. Newly hired employees need to have an understanding that they will still need to demonstrate competence on the job and an ability to fit into the workplace culture.

Figure 13



STRATEGIES TO ADDRESS SKILL AND LABOUR SHORTAGES

Manufacturers utilize internal employee training and development programs as the primary method of addressing skill and labour shortages *[Figure 14]*. External training and certification programs are also very important to ensuring the organization's employees have the necessary skills. Flexible, responsive, and where possible, **locally delivered training programs** provide opportunities for employees to develop a solid foundation of specific skills the workforce requires.

In order to ensure training being offered by our educators is relevant, there needs to be a continuous link between the manufacturing community, and the various levels of the education system: from senior elementary school to high school guidance counsellors and teachers, to community college/university faculty and staff. The industrial sector needs to hold themselves accountable in helping to promote the **vast and rewarding career opportunities** offered within the sector.

Ensuring employers retain good employees necessitates regular communication between both parties. Higher-level discussions about workers' level of satisfaction with their positions must be initiated. Motivational factors such as employees feeling their contributions are appreciated, that their ideas and skill sets are fully utilized and that the workplace has a positive, upbeat atmosphere are all areas that can have a large impact as to **whether an employee performs well for the company or leaves** the organization. During the onsite interviews most manufacturers were able to provide examples of best practices related to employee engagement and appreciation. This indicates that employers are aware of the fact that the pay cheque is not the only motivator for their employees.

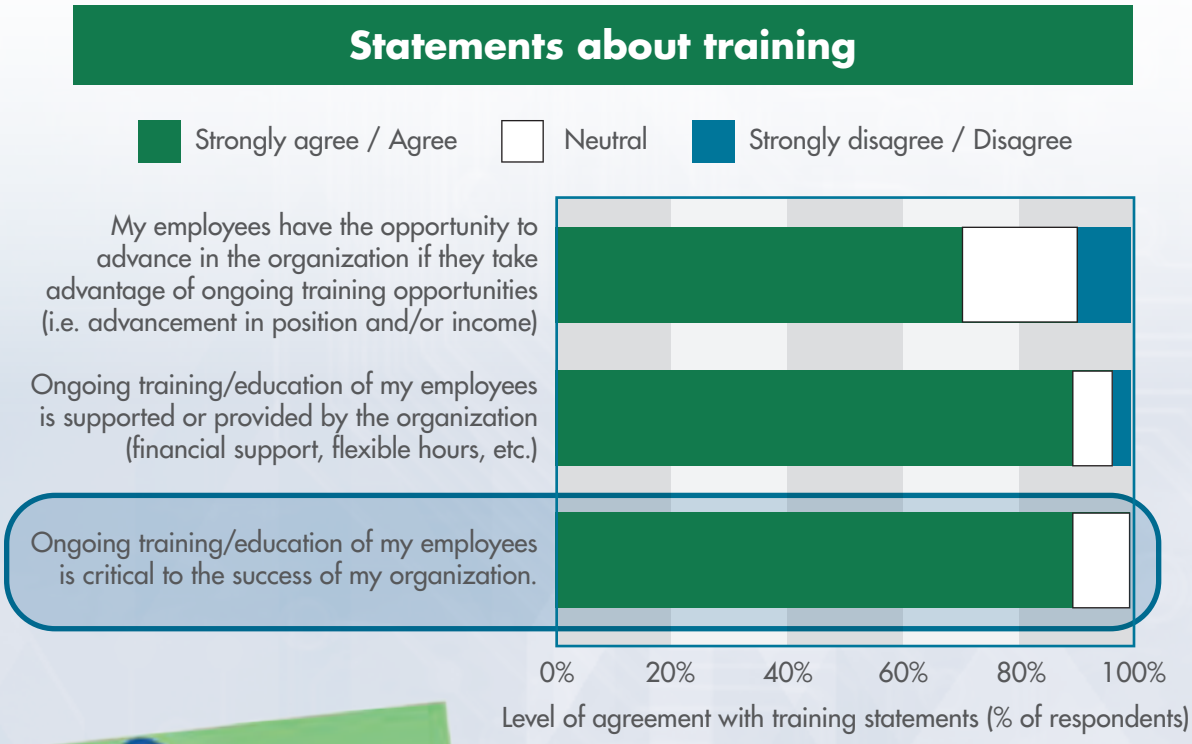
Figure 14

TRAINING

CURRENT TRAINING DELIVERY

As seen in *Figure 15*, employers strongly agree (90%), that ongoing training and education of their employees is critical to the success of their organization. However, there is a discrepancy between this belief and the amount of revenue annually spent on training *Figure 16*.

Figure 15



Soft skills development and flexibility:

"We have a diverse workforce so we provide soft skill training on inclusiveness and how to treat people.

Employees that are not in a key role can book time off in advance without any penalty but once an employee is on the schedule, they are responsible for showing up.

We sometimes utilize flexible shorter hour shifts to accommodate moms and dads that need to drop kids off and pick kids up from school or for College students that have a few hours to work in the evening."

– Kim Egan, Executive VP & CFO
GH Manufacturing Inc.

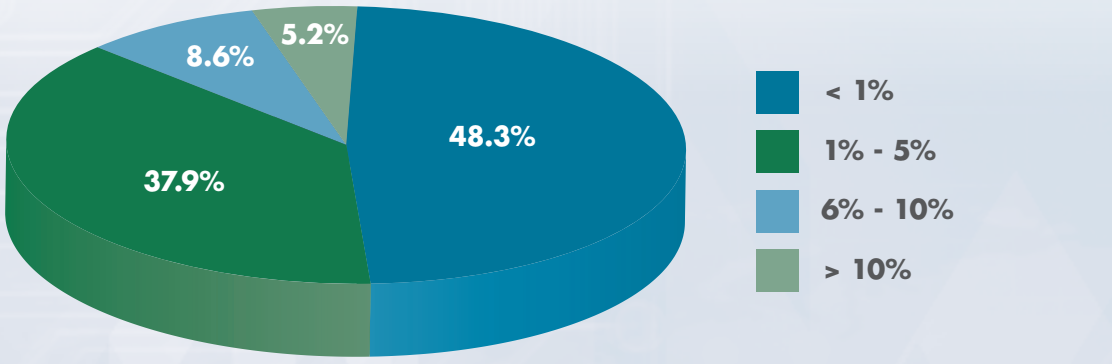
REVENUE SPENT ON TRAINING

A rather significant finding in the survey was the low percentage of revenue currently invested by local employers in the training and education of their employees *[Figure 16]*. 90% of employers surveyed agree that ongoing training and education is critical to the success of their organization and yet, 48% of those surveyed spend <1% of their revenue on training; 38% spend between 1% - 5%. However, employers have demonstrated an interest in increasing the amount of training provided to their employees.

It is inevitable: manufacturing facilities continue to introduce highly automated processes and increased operational efficiencies and therefore, the soft, technical and foundational skills of those operating the plant must also increase at the same rate.

Figure 16

Percentage of revenue spent on training (formal and on-the-job)



REASONS FOR LACK OF EMPLOYEE TRAINING

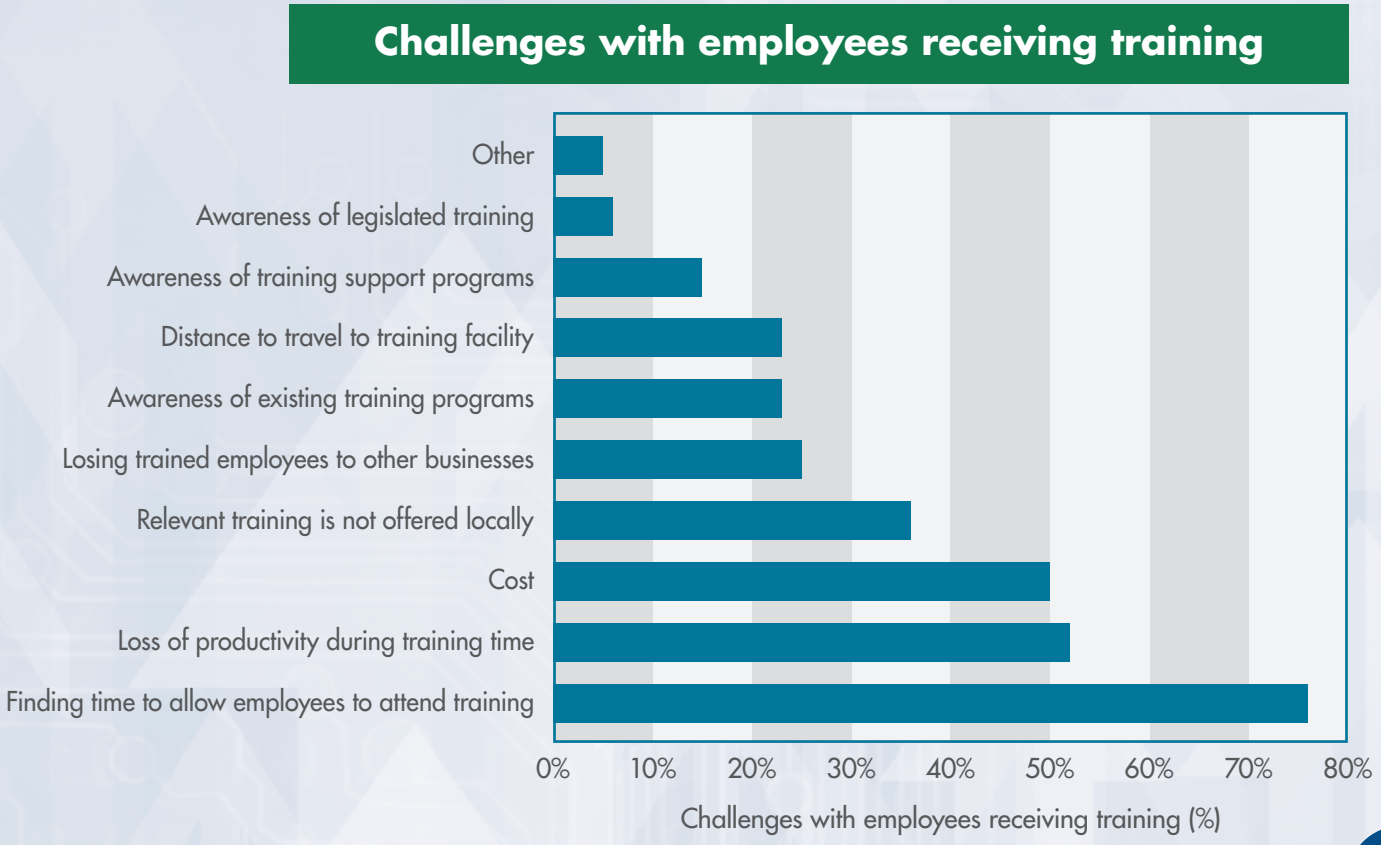
In the past, employers have had legitimate reasons for the lack of training and education offered to their employees. The majority (77%) of those surveyed, said that the difficulty was in finding time to allow employees to attend training; 52% of employers said that the loss of productivity during training was problematic; and 50% said that the costs associated with training was a limiting factor.

In order to be or remain a globally competitive and sustainable entity, advancing the skill sets of local employees is going to become absolutely necessary.

Employers requested an increase in training options so the workforce could acquire vital skills while the facility continues efficient operation. Employers would welcome the innovative development of flexible time and modes of workforce training and education. The workplace training most attractive to employers blends a variety of teaching methods and is accessible to the local workforce in a way that avoids loss of productivity.

For instance, many organizations run at full capacity for 24 hours of the day, seven days a week during peak periods. These organizations find it difficult to replace staff who require scheduled training, but timely, local or internet delivered training could help. For example, small segments done before, during or after work, or on scheduled or sudden downtime would be more flexible than typical training models currently allow. A community collaborative model built on principles of cost-effectiveness, employer commitment, and flexibility would help employers overcome the barriers and capitalize on opportunities for effective workplace training.

Figure 17



PREPARING FOR CHANGING SKILL SETS

Now that many traditional manufacturing jobs are becoming highly automated with more robots and rapid prototyping, successful and sustainable Canadian manufacturers will need to create a positive, high-performance culture at all levels of their organizations. There are already many countries outside of Canada that are offering competitive quality and pricing. Therefore, training the majority of the workforce to become capable of working in a highly technical, innovative and engaged environment will ensure the labour force is trained for jobs for the future, not jobs of the past.

The data in this document provides a snapshot of the current and projected (to March 2018) position requirements as forecasted by those participating in this study and operating within the Greater Bay of Quinte Region.

Kevin Kelly, the founding Executive Editor of Wired Magazine, has repeatedly stated in recent lectures, that there will be "more advancement in technology in the next four to five decades than in the past 450 years." According to several sources, a higher level of technical skills will be required to help manufacturers innovate to become more competitive through initiatives such as a higher level of automation and increased operational efficiencies.

Local manufacturers now mark an applicant's soft skills as equal, if not even more important, to their technical skills. One employer stated, **"With minimal technical skills, I can teach a person how to operate any piece of equipment we have in this building but, when it comes to their behaviour and how they work with others—it's another story."**

The Organisation for Economic Co-operation and Development (OECD) conducted a study revealing the wide range of skills innovation requires, the list includes: basic essential skills (reading, writing and math); technical skills; generic skills (like problem solving); creativity; soft skills (behaviour and how employees interact with others); management; and entrepreneurial skills.

Employees who are multi-skilled, driven to improve, and expand a variety of personal skills will be an essential component to a company's ability to innovate and compete. Surveyed regional employers have already indicated the importance of screening a candidate's soft skills, as well as their ability to learn new technical skills, in their future hiring practices.

Ontario's education system will also need to both adapt and improve continuously to retain its skills strength in the next several years. Manufacturers have expressed **concern that Ontario is not prepared to meet the foreseen workforce challenges**, resulting in an inadequate supply of workers equipped with very strong technical skills. Aside from technical expertise, soft skills such as creative problem solving, teamwork, effective communication, and the ability to adapt quickly to challenges in the workplace will be essential to many sectors of the economy.

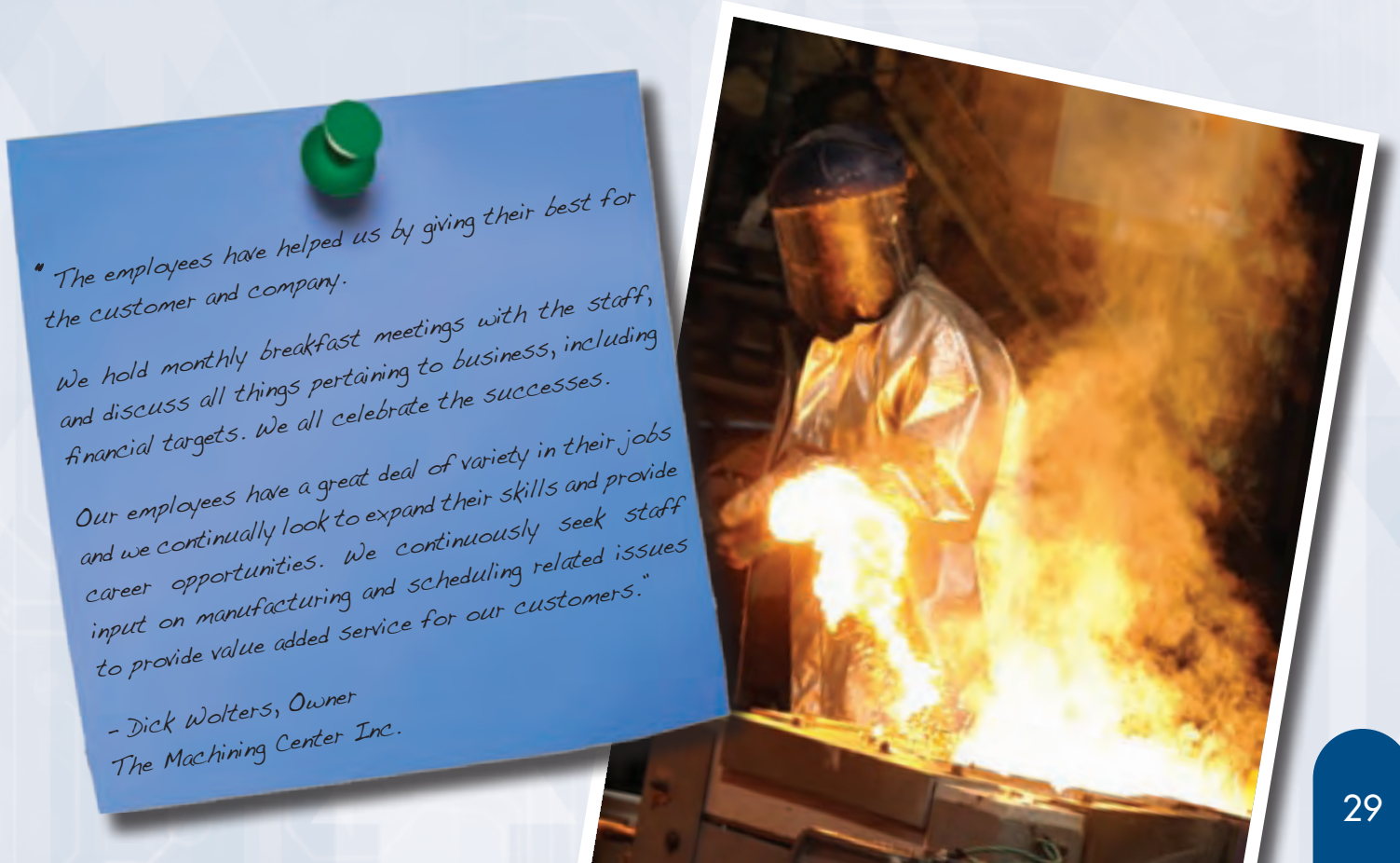
INNOVATION IN HIRING PRACTICES & EMPLOYEE ENGAGEMENT

Employers realize that to remain competitive everyone in their organization must work hard to find creative and innovative ways to work more efficiently. Innovation and creativity are only possible when the workplace environment is right. The new workplace culture will encourage/allow employees to:

- Learn new ways of thinking;
- Embrace and understand the need for constant change;
- Welcome the fact that continuous learning is a part of the culture;
- Be provided with the opportunity to apply their knowledge and skills;
- Receive recognition for helping the company innovate.

All employees need to embrace change; employers noted that the willingness to learn multiple skills and perform multiple duties within any given shift was essential to the company's success. Encouraging employees to come forth with suggestions to improve the workplace is also required.

Employers recognize that their employees will need to be allowed to make more decisions on their own; in many cases this will be a shift from the current culture that exists within their organizations. It was noted during the employer interviews associated with this report, that it is the employer's responsibility to create the culture that allows their employees to fully utilize their skills, and an environment that thrives on creativity and innovation at every level. Lots of encouragement and praise will be needed in many workplaces in order to reap the benefits where employees take on additional responsibilities.



FUTURE TRAINING:
FILLING THE SKILLS GAP

The rate of success at which the region's manufacturers attract future business (thereby creating employment opportunities) will depend on both the effectiveness of management and their employees. The need for employers to increase the amount of training they provide their employees, in order to cope with the technological changes needed to remain competitive in the future, is paramount.

To maintain its skills strength as a major pillar in the creation of Ontario's highly-skilled labour force, in the next several years, Ontario's education system will similarly need to adapt and improve continuously. Aside from technical know-how and foundational skills, more soft skills such as creative problem-solving, teamwork, effective communication, and the ability to adapt quickly to challenges in the workplace could be more obviously woven into current curricula.

It will be of the greatest benefit if provincial and federal policies similarly encourage development of the current and future workforce's soft, technical, and foundational skills.

SUCCESS THROUGH PARTNERSHIPS AND COLLABORATION

The success the Greater Bay of Quinte Region has had since 2007 at addressing labour market challenges reveals the importance of community partnerships. The regional culture of partnerships was in evidence at the June 2013 Labour Market Project workshop when representatives from 17 non-manufacturing agencies took part in the daylong event in support of the regional manufacturing sector.

The Quinte Economic Development Commission (QEDC) and Loyalist College have an established track record of partnership directed at supporting existing and new manufacturers. Loyalist College has a history of working with industry partners to develop programming (through Loyalist Training & Knowledge Centre, LTKC) whether to better prepare graduating secondary students, to retrain workers for their industry, or to provide customized training to increase productivity. LTKC and their staff have a business approach and ability to react at the speed of business, making it a key asset to the region.

The Quinte Business Development Centre (at Loyalist College) is an example of federal, provincial and local economic development focussed agencies working to support businesses and entrepreneurs from one location. The agencies, including QEDC, that are collocated at the Quinte Business Development Centre work together to provide much of the support new and existing businesses need as they grow. With extensive contacts in federal, provincial and local organizations these agencies can assist manufacturers with a variety of issues including training employees and accessing financing, funding, and research assistance.

In their offering of resources and time, the Quinte Manufacturers Association (QMA) and QEDC have made this research possible. The QMA's primary mission is to help local manufacturing leaders in the Greater Bay of Quinte Region improve their capabilities, competitiveness and sustainability; this project has identified the key areas where manufacturers need community support over the next five years to meet these objectives.

Sustainable Skills, Technology and Life Sciences Centre

Parrott Centre Library

NEXT STEPS FOR ADVANCING MANUFACTURING

OPERATIONAL AND STRATEGIC PLANNING

During such tumultuous times for industry, the need to integrate Operational and Strategic Planning (two typically different planning methods) has become essential.

"Operational Planning" focuses on the day-by-day and month-by-month planning within a facility. On the other hand, "Strategic Planning" focuses on the overall direction the organization is taking in response to the changing environment. The Strategic Plan outlines the path to achieving the shared, long-term goals (deemed important by all stakeholders) to keep the business viable and sustainable.

During the interview process of the 2013 Labour Market Project, several manufacturers came to realize that strategic planning was lacking in the daily struggle to manage operations. For example, several employers admitted to not reviewing their succession planning since the last labour market study in 2007. And many of the attendees in the 2013 June symposium were shocked to realize that over the next 5 years, 40% of the region's expected new hires will replace retiring employees; in many cases, replacement of these roles can take years to transfer knowledge in order to avoid a detrimental gap in succession.

As part of the 2013 Labour Market Project, participant employers and community stakeholders made a list of goals and a proposed sequence of actions to address these obstacles. For example, manufacturers recommended an action item to address the absence of strategic succession planning: "Create a strategic planning cycle for manufacturers to enable long-term strategic decision-making, complementing their near-term focus on production and customer needs."

Based on the outcomes identified in this report, and continued support from community partners and government policy, the sector will be able to move forward with new and innovative programs and strategies to continue to push the Greater Bay of Quinte Region into a leading position as an innovator of manufacturing.

THE 2013-2018 PRIORITY PLAN:

WORKING TOWARDS INNOVATION IN TECHNOLOGY AND LABOUR PRACTICES

During the June 2013 symposium, participants brought into focus a vision of an ideal state of manufacturing in the Greater Bay of Quinte Region. Innovation in technology and best labour practices are the first steps towards achieving the ideal future state, thereby keeping the region's economy healthy. In the following pages, along a continuum of five obvious priorities, the Priority Plan outlines the employers' vision, with a preliminary list of focus points for action that will help the region become more globally competitive and sustainable.

The only way to achieve any of these priorities is with continued community collaboration. By sharing the workload required to make innovation a reality, these partnerships give the entire region a structure for action. For instance, organizations like QEDC and LTKC have previously used innovative collaboration to facilitate vital regional skill development, enabling manufacturers to keep the focus on their facilities and the safety of their employees.

In the ideal future state for each priority, the manufacturers, QEDC, the Manufacturing Resource Centre, education partners, government and government agencies continue to work together. In effort to better address these priorities, as well as any others which may arise over the next five years, the sector welcomes supporting partners' continued help, feedback and suggestions. The focus points for action are dynamic, and will continually be updated by QEDC in pursuit of the community's shared goal: helping the region stay strong.

5 OVERARCHING PRIORITIES

- **Priority for manufacturing support:** Local support systems coordinate timely activities and resources to help manufacturers grow their facilities, markets and people.
- **Priority for achieving global manufacturing competitiveness:** Employers and employees are equally creative and focussed on improving deliverables for customers and the community.
- **Priority for managing labour supply and demand:** The region will attract and retain employees with the right skills, and offer them rewarding, fulfilling long-term employment.
- **Priority for employee technical skill development:** Manufacturers and secondary and post-secondary schools in the region will have the equipment and curriculum to adequately prepare the workforce's technical skills.
- **Priority for soft skills development:** From elementary school to workplace training, the region will have the leadership and curriculum to adequately prepare the workforce's soft skills.

PRIORITY FOR MANUFACTURING SUPPORT

EMPLOYERS' VISION FOR THE FUTURE: Greater Bay of Quinte manufacturers have a sustainable regional manufacturing support system to assist with coordination of activities and accessing resources and programs to increase competitiveness, viability and performance. Government support programs are predictable, long-term, easily and readily accessible, well-communicated and aligned with manufacturers' requirement for continuous upgrading of plant equipment, workforce skills and development of new products and markets.

PRELIMINARY FOCUS POINTS FOR ACTION:

1. All agencies and the community recognize the importance of local manufacturing's significant contributions to the region.
    i. Community stakeholders help officials from government and non-government agencies that provide support to, or influence manufacturing, understand the needs of manufacturers through increased interaction:
        a. Increase two way communication between manufacturers and these officials so they are welcomed to site tours, events, and other opportunities for dialogue, and are aware of future needs and opportunities to support manufacturing
        b. Collate and communicate industry's infrastructure needs including telecommunications, electricity, water, sewer, and transportation, etc. to municipal, provincial, and federal governments
    ii. Quinte Economic Development Commission (QEDC) and supporting partners coordinate the collection and publishing of regional data to provide an immediate and long-term view of manufacturing needs so partners can align resources and programs to support these goals.
    iii. Community stakeholders and manufacturers collate and communicate data that shows manufacturers' contributions to the community and vice versa.
    iv. Community stakeholders and manufacturers work together to raise the perception of manufacturing in the public including for young adults.

2. Improve and quicken access to grants, funding and other government assistance through a local 'one-stop shop'.
    i. The community has one continuous long-term local resource for support, a resource that builds ongoing relationships and trust with manufacturers to ensure effective two way communication between manufacturers and community stakeholders.
        a. Secure funding to ensure long-term local source for support across all sector issues, helping industry continue to innovate and share best practices.
        b. Extend funding for QEDC and any applicable community stakeholders to complete further resource gathering projects so that a long-term strategic view of sector performance and viability needs are not neglected in the midst of manufacturer operations.

ii. Simplify access and reporting requirements for grants, funding and government assistance, by utilizing current company information already on file thus removing the need for manufacturers to provide additional paperwork to receive vital support in equipment upgrades, workforce skills, development of new products and development of new markets.
iii. Government and funders ask for sector feedback as to how to ensure faster, more timely delivery of support.
iv. Funding is arranged according to a sustainable, predictable model (such as the EODP) to help companies strategically plan for future support, enabling proactive long-term decisions for the region and better use of funds.
v. Answers to manufacturers' requests for support are fast, responsive and offer alternative suggestions where necessary.

3. Encourage financial institutions to become less restrictive when providing funding to the manufacturing sector.
   i. Collate, communicate and provide data to financial institutions to illustrate manufacturing start-up, expansion and operational needs; product development/commercialization cycle; market development realities; and diverse sector specific challenges.
   ii. Promote government lenders (BDC, Community Futures Development Corporations) and programs that do support manufacturers.

4. Non-government organizations work with the manufacturing sector to ensure decisions have a positive impact on the manufacturing sector, and recognize the importance of the sector given the Manufacturers' Multiplier Effect on the economy.
   i. Encourage non-government organizations to solicit manufacturers' and community feedback, which can be coordinated through economic development agencies like QEDC.
   ii. Organizations such as PEO, HRPAO, CFIA and trade associations that impact manufacturers implement a system to regularly solicit feedback from the manufacturing community prior to legislation additions or changes.

5. All levels of government focus on understanding and working towards reducing the impact of legislation, regulations and inspections on the manufacturing sector.
   i. The government solicits and obtains sector feedback before introducing or changing legislation in an attempt to support the shared goal of global competitiveness and long-term job creation and retention.
   ii. The sector has adequate chance to respond, as a community, to the effects of changes to legislation, regulations and inspections, collated through regional organizations like QEDC and the Quinte Manufacturers Association (QMA).
   iii. The government and industry work towards pinpointing non-value added "red tape" and inspections so that they can be removed from company processes in order to not detract from goals of global competitiveness.
   iv. Encourage government agencies to ensure their inspectors uniformly interpret and apply legislation to provide a consistent and predictable operating environment.
   v. Encourage more flexible legislation timelines and approval processes to allow for changing company needs within the global marketplace. Government approval processes need to match the speed of business so that manufacturers do not miss growth and investment opportunities.

PRIORITY FOR ACHIEVING GLOBAL MANUFACTURING COMPETITIVENESS

EMPLOYERS' VISION FOR THE FUTURE: Greater Bay of Quinte manufacturers are efficiently and ethically managing resources (money, time, people) to create successful, competitive, sustainable, profitable, high-performing facilities, to the betterment of the region's manufacturers and communities. The local workforce is focussed on innovation, continuous improvement, creativity and value added activities for customers, companies, and communities.

PRELIMINARY FOCUS POINTS FOR ACTION:

1. Manufacturers and supporting partners proactively recognize and prepare for the effect external forces can have on their businesses.
    i. Collect and publish, on an ongoing basis, up-to-date regional data to identify regional threats and opportunities.
    ii. Increase manufacturers' access to the knowledge, skills and capabilities to efficiently, quickly and easily move products across national borders.
    iii. Manufacturers are assisted with analyzing and defining their global core competencies and developing and implementing a global marketing and development strategy.
    iv. Develop world-wide networks, supported by technology and advanced communication, to enhance local manufacturers' activities.
    v. Create a strategic planning cycle for manufacturers to enable long-term strategic decision-making, complementing their near-term focus on production and customer needs.
    vi. Provide and promote cross-cultural training and integration in the workplace to capitalize on global opportunities.

2. Provide support for manufacturers to create diverse customer bases.
    i. Assist manufacturers to access support to enter new markets, retain current markets and identify relevant product offerings for these market opportunities.

3. Help manufacturers focus on new product creation and process development.
    i. Facilitate the creation and effective use of a standardized product development cycle involving all relevant and impacted stakeholders.
    ii. Assist manufacturers to access research assistance, such as Loyalist College's applied research capabilities, and relevant government programs to develop new product offerings.
    iii. Companies have the means to manage the product development cycle so that products are continually at all stages of the cycle (from idea through to production).
    iv. Employees, and students, are trained on activities that foster creative thought and are given support to test, assess and implement creative thought in the workforce (such as through offering suggestions for greater efficiency or innovation).
    v. Local employers work together to establish standardized incentive schemes for employees to encourage individual creative thought, innovation and continuous improvement.

4. Help manufacturers focus on continuous improvement and value-adding activities to improve competitiveness.
    i. Loyalist College and other stakeholders are able to provide training and resources to help manufacturers identify and remove non-value-added activities, and develop and implement continuous efforts.
    ii. Employees and companies are supported in their efforts to identify and focus on the value-adding needs of internal and external customers.

5. Automated technology is used, where appropriate, to drive company performance.
    i. Funding supports and encourages investment in new technologies and automation that improves competitiveness.
    ii. Companies commit to new technologies and automation investment as needed to increase global competitiveness.

6. Employees have highly developed technical and relevant soft skills to make the best use of technology, thereby rising above global manufacturing challenges.
    i. Help each employer have the means to develop and implement long-term training plans.
    ii. Company training plans are coordinated with Loyalist College, Loyalist Training & Knowledge Centre (LTKC) and others to ensure local delivery of as much training as possible.
        a. Loyalist College, LTKC and others continue to develop and offer the delivery of relevant, much-needed programs.
        b. Loyalist College, LTKC and others offer the diverse and flexible training methods the sector has indicated they require.
    iii. Local secondary schools and Loyalist College, including their manufacturing programs, work to create a base of fundamental, technical and soft skills candidates for employment by regional manufacturers.
    iv. Local secondary schools prepare graduates for manufacturing programs at Loyalist College.

7. Working collaboratively, local manufacturers promote the competitiveness of the region's industrial companies.
    i. Community organizations facilitate creative versus competitive interactions within and between local companies.
    ii. Establish a local inter-company network for identifying global best practices that would be reflected, where possible and appropriate, in standardized policies and procedures.
    iii. Local manufacturers open their facilities, whenever possible, to other plants' management to share best practice and benchmarking initiatives to improve the overall performance of the manufacturing sector.

PRIORITY FOR MANAGING LABOUR SUPPLY AND DEMAND

EMPLOYERS' VISION FOR THE FUTURE: The Greater Bay of Quinte Region will have motivated, productive, flexible, reliable and healthy employees who have the right skills for the right position so they are able to achieve their full potential.

- The supply will include a solid base of local workers complemented by the ability to attract workers from outside the region (including new Canadians and foreign trained professionals) to meet any local skill or labour gaps that cannot be addressed locally.
- A diverse and growing manufacturing sector will provide a variety of career opportunities and pathways for local workers including new graduates, and incumbent workers.

PRELIMINARY FOCUS POINTS FOR ACTION:

1. Manufacturers and the community continue to develop a stable, less transient industrial workforce.
    i. Community partners work to attract new investment in the region to provide a stable base of manufacturing career opportunities.
    ii. The community works to promote community attractiveness (in lifestyle and opportunities) which encourages long-term residence.
    iii. The community works to promote opportunities in the manufacturing sector to the region's potential workforce, including youth, new Canadians and those outside the region.

iv. Manufacturers understand and have the means to create a positive work culture at all levels of the organization, one that provides opportunities for all employees to advance their skills, contribute to the company and utilize their innovative ideas.
    a. Companies provide employees with a positive, rewarding and stable work environment.
    b. Manufacturers focus on improving employees' health, wellness and welfare.
    c. Employees are encouraged to be proud of their company, products and their value-added contributions.
    d. Employers invest in developing all employees to have the right skills for the right position, encouraging employees to remain with their employer.
    e. Employers work together to share best practices on how to create and maintain a positive work culture.
    f. Employers have the means to recognize and reward innovative ideas at all levels of the organization.
    g. Community partners and manufacturers work with economic development organizations to attract new investment in the region, providing a stable base of manufacturing career opportunities. Local manufacturing and community leaders are engaged through a structured ambassador program, as well as investment specific opportunities, to help with the identification of strategically aligned companies from outside the region that can be targeted for investment attraction, and to assist with recruitment efforts.

2. Manufacturers are able to prepare for retirements and people leaving the company.
    i. Companies have the support to continue to develop succession and temporary replacement plans to effectively deal with employee turnover and temporary vacancies associated with normal attrition and unforeseen vacancies.
    ii. Companies support knowledge transfer and skill development, offering job variety for employees, thereby creating a balanced and sustainable workforce.
    iii. Manufacturing's support partners collate and publish data about labour trends and future labour requirements.
    iv. Employers develop effective Human Resources policies and practices to manage an aging workforce; including knowledge transfer and skills upgrading.

3. The workforce is composed of local residents and people new to the region.
    i. Resources are developed to communicate with and to encourage local residents (incumbent, students and recently arrived residents) to train and apply for manufacturing positions.
    ii. Resources are developed to help employers attract employees from outside the region or outside the country to fill in gaps around specific skill sets and unfilled positions.

4. The community works to align educational objectives with manufacturers' needs.
    i. Manufacturers work with Loyalist College and other local training organizations to resolve training challenges.
    ii. Loyalist College and other training organizations develop even more responsive, flexible and effective models for workplace training that addresses current obstacles to investing time and money on training.
    iii. The community works to integrate the development of foundational skills and soft skills into the curriculum at all levels of school, for the betterment of the region.
    iv. Secondary and post-secondary schools deliver technical skills training aligned with manufacturers' needs.

5. Manufacturers communicate with community stakeholders, the general public, and governments about the importance of manufacturing to the local economy and the value of the viable and challenging careers offered in the sector.
    i. Create a "Made in Quinte" program to add pride to, and raise awareness of, products manufactured in the Greater Bay of Quinte Region.
    ii. Manufacturers increase engagement with community stakeholders, the general public, and government officials through increased plant tours, meetings and community activities.
    iii. Manufacturing representatives regularly visit secondary and post-secondary schools to communicate career paths and opportunities in manufacturing.

iv. Employers organize plants tours, and where possible, work placements, for students at secondary and post-secondary levels.
v. Manufacturers and community stakeholders communicate to government the need for support focussed on job creation and retention, employee development, product innovation, increasing operational efficiencies and expanding operations.
vi. Manufacturers and community stakeholders work together to promote the opportunities for careers in the manufacturing sector to the public.

6. The local manufacturing community has a functioning network that allows industry to easily source labour as required.
   i. A skills data base (of internal and external talent) is created and managed by a community organization so that companies can share and better source the required skills, talents and resources when necessary.

PRIORITY FOR EMPLOYEE TECHNICAL SKILLS DEVELOPMENT

EMPLOYERS' VISION FOR THE FUTURE: Greater Bay of Quinte Region manufacturers' multi-skilled employees acquire technical skills via a blended training approach which includes: hands-on, collaborative, in-class, on-the-job, third party, and virtual training supported by structured funding.

PRELIMINARY FOCUS POINTS FOR ACTION:

1. Make current accredited, technical training available locally with flexible delivery options to encourage use.
   i. Supporting stakeholders, such as Loyalist College, develop and deliver flexible training modes to meet varying schedules of the workforce and industry through scheduled or unscheduled, virtual and on-line training augmented by on-site, equipment-specific training.
   ii. Supporting stakeholders help manufacturers' current and future workforce have access to up-to-date and relevant equipment for secondary, post-secondary and corporate training requirements.
   iii. Supporting stakeholders assist companies to access structured funding to establish or upgrade, where practical, manufacturers' conventional or virtual training facilities.

2. Programs for required skilled trades are located at Loyalist College or as close to the Greater Bay of Quinte Region as possible to minimize disruption to manufacturing operations and to provide local training for students.
   i. Manufacturers and Loyalist College collaborate to prioritize which skilled trades and technology-specific programs are required in the region.
   ii. Loyalist College delivers as many of the identified programs as possible with adequate manufacturing support.
   iii. Manufacturers provide a critical mass of apprenticeships to justify local delivery.

3. Manufacturers have the ability to fully utilize apprenticeships to meet current and future skills demand.
   i. Community stakeholders frequently provide clear easy-to-understand information on the apprenticeship program to all manufacturers.
   ii. Manufacturers and industrial service companies invest in apprentices to address their skilled trade requirements.
      a. Companies invest in developing their own apprentices, as opposed to only recruiting qualified trades people that were developed by other employers.
      b. Manufacturers working with MTCU and other stakeholders to identify barriers and solutions to develop and retain apprentices including investigating alternate apprenticeship models like sharing apprentices.

4. Manufacturers develop technical skills and cross-train employees to maximize productivity.
    i. Assess operating budgets and make allowances for the future development of the workforce.
    ii. Manufacturers and stakeholders incorporate technical problem-solving skills into internal and external employee education programs.
    iii. Help ensure workers are cross-functionally engaged (e.g. come to understand how various production and business functions are intertwined in theory and company practice.)
    iv. Help employees learn advanced computer, electrical and instrumentation skills, and how to develop/troubleshoot automated processes through on-the-job training or similar.
    v. The process for in-house/on-the-job training is defined and standardized by in-house employees who are skilled and capable of transferring knowledge and skills; best practices are shared between companies.
    vi. Community stakeholders help the region's manufacturers create a competency model defining roles within regional manufacturing facilities.

5. Encourage structured and consistent stakeholder funding to be available to support the development of technical and transferable/portable skills.
    i. Community stakeholders, in partnership with manufacturers, collate and communicate sector feedback about the need for, and benefits of, locally administered technical skills development funding that is timelier, flexible, easily accessible and aligned with manufacturers' needs.
    ii. Community stakeholders communicate sector needs to government and encourage the creation of a defined, timely process for various government agencies to provide funding that meets the needs of local technical skills development.
    iii. A lead community stakeholder coordinates the communication of information on available funding for skills development to manufacturers so they understand the process and resources available to access all levels of funding. This stakeholder would also coordinate the claim process for collective funding programs to reduce the burden on manufacturers.

6. Community stakeholders assist manufacturers to cooperatively improve the overall technical skills of the collective regional workforce.
    i. Community stakeholders facilitate technical skills related networking opportunities for manufacturers, including means to share best practices within and between companies.
    ii. Loyalist Training & Knowledge Centre (LTKC) and other training providers deliver training sessions for multiple manufacturers.
    iii. Community stakeholders collate manufacturing training resources and opportunities for further development and sharing of skills, expertise and best practices.
    iv. Manufacturers collaborate with post-secondary institutions and local secondary schools to identify local technical training needs (aligned with the region's demands) that could be included in school curriculum.
    v. Community stakeholders encourage students to acquire a range of skill sets, valuable to the region's various sectors.

PRIORITY FOR SOFT SKILLS DEVELOPMENT

EMPLOYERS' VISION FOR THE FUTURE: Greater Bay of Quinte Region manufacturers have an engaged workforce with the soft skill capabilities required to achieve and maintain a responsible, collaborative environment.

PRELIMINARY FOCUS POINTS FOR ACTION:

1. Employers learn how to further increase employee engagement.
    i. Local companies participate in a process, such as the 12-Step Engagement Report Card, to identify areas of engagement that need improvement leading to improved business performance and results.
    ii. Management, supervisors and employees are trained to function within high-performing teams.
    iii. Management and supervisors learn skills for encouraging employee empowerment and improving attendance.

2. Help employees fully understand and remain committed to the company's mission, vision and values.
    i. Teach corporate employees and other leaders in the organization how to match their actions with their stated mission, vision and values.
    ii. Companies are taught how to recognize and correct behaviours that are not aligned with the company's mission, vision and values.
    iii. Manufacturers deliver open book information sessions sharing financials and strategic plans with employees, encouraging cross-functional engagement by employees.
    iv. Companies and their employees receive the support needed to align their moral, ethical and business responsibilities.
    v. Management receives the required support to create clearly articulated mission, vision and values.

3. Encourage respectable and civil behaviour in the workplace.
    i. Corporate values are established that include a focus on respect, honesty, and integrity.
    ii. Workforce training, policies, programs and environment:
        a. Encourage respect for one another's cultural diversity.
        b. Encourage respect for individuals with disabilities or mental health challenges.

4. Excellent soft skills are modelled and fostered.
    i. Employee development includes raising the awareness that soft skills are equally as important as technical skills to ensure continued success of the business.
    ii. Companies provide adequate resources to develop a management team trained in soft skills.
    iii. Management demonstrates soft skills to employees, encouraging widespread replication and provides opportunities for employees to improve soft skills.

5. Co-operative interactions are encouraged at every level of the organization, regardless of employee position.
    i. Company leadership must actively listen to employees while encouraging two-way collaboration.
    ii. Management implement an 'open door' policy to encourage two-way communication between management and employees.
    iii. Manufacturers develop and implement processes for utilizing employees in problem resolution and for recognizing employees for their contributions.

6. Employers learn how to actively and consistently show gratitude towards employees.
    i. Companies create and implement meaningful employee recognition programs and share best practices.
    ii. Manufacturers create and implement mechanisms for ownership of success (e.g. stock options, profit sharing, etc.).

7. Stakeholders and manufacturers work collaboratively to improve the overall soft skills of the collective regional workforce.
    i. Community stakeholders facilitate the sharing of best practices and case studies between companies and stakeholders.
    ii. Community stakeholders work at increasing the development of soft skills in educational curriculum.

CONCLUSION

The Greater Bay of Quinte Region continues to have a robust manufacturing community and there is a strong commitment to ensure future success. As demonstrated in 2007, and again in 2013, the region's business and community leaders are willing to put their time, money and effort into developing and implementing purposeful strategies and action plans.

With most of Ontario struggling to maintain its manufacturing prowess, the Greater Bay of Quinte Region's continued success will not be easy. It is important that the local community stakeholders work collaboratively to implement the strategic priorities identified in this report. This will help regional manufacturers have the necessary numbers of properly skilled people at all levels of their organizations.

The 5 Priorities and recommended preliminary actions are a starting point for future decision-making on behalf of manufacturers, educational institutions and makers of legislation. Working together, the Greater Bay of Quinte Region's 380 plus regional industrial companies will be properly resourced to help the community achieve:

- An increase in technical and soft skills in the labour force to promote the attraction of investment.
- A strengthened manufacturing sector.
- Attraction of new residents, and retention of current employees.
- Retention, expansion and attraction of manufacturers leading to the creation of jobs.
- Continued pride in a traditionally strong community.

The information contained within this report will be invaluable as manufacturers and stakeholders continue with their commitment to advancing manufacturing in the Greater Bay of Quinte Region. Collaborative workforce efforts will allow the region to continue to contend in a challenging marketplace and maintain the region's strong position as a leader in North American manufacturing.

In the past, the Greater Bay of Quinte Region has been very fortunate to have seen growth within the manufacturing sector. **This growth is not coincidental but rather, attributed to the many innovative initiatives within the community**. As long as improvement is continually sought, there is no reason to believe that the region will be unable to sustain its impressive track record.

Thank you to the 62 participating companies

Agrium Advanced Technologies
Alliance Custom Fabrication
Anamet Canada Inc.
Autosystems (Magna Mirrors & Closures)
Beclawat Manufacturing Inc.
Berry Plastics Canada Inc.
Bioniche Life Sciences Inc.
Canada Cordage Inc.
Canadian Blast Freezers Ltd.
Continental Conveyor (Ontario) Limited
CpK Interior Products Inc. (Belleville)
Deca Cables Inc.
Domtech Inc.
Drossbach N.A.
Durabla Canada Ltd.
Electro Cables Inc.
Essroc Canada Italcementi Group
fin-aire Incorporated
Fracan Inc.
GH Manufacturing Inc.
GlobalMed Inc.
Goodyear Napanee
Halla Visteon Climate Control Canada
Impacto Protective Products Inc.
Kellogg Canada Inc.
Kennametal Stellite
Kilmarnock Enterprises
L-3 Communications CMRO
Metro Paper Industries
MKR Cabinets
Mrs. B's Country Candy
Nestlé Professional
NOD Apiary Products Ltd.
Norampac - Belleville
Norampac - Trenton
Ogden Technical Associates Inc.
OMG Belleville Limited
Ontario Truss and Wall
Parmalat Canada Black Diamond Cheese
Pentair Thermal Management
Pepsico QTG - Trenton
PolyCello
Procter & Gamble Inc.
R.R. Donnelley
RC Industrial Services Inc.
Redpath Sugar Ltd.
Reid's Dairy Company Ltd.
Research Casting International
Santa Maria Foods Ltd.
Saputo Dairy Products Canada GP
Sigma Stretch Film
Sonoco Canada Corporation - Trent Valley
Sprague Foods Limited
Stegg Limited
Strathcona Paper
The Machining Center Inc.
TrenTech
Trenton Cold Storage Inc.
Triangle Fluid Controls
Trulife Ltd.
Universal Fan & Blower Ltd.
Vantage Foods (ON) Inc.

PROJECTS LIKE THIS REQUIRE A TEAM APPROACH.

The following groups were a part of this collaborative initiative:

Bay of Quinte
QUINTE ECONOMIC DEVELOPMENT COMMISSION
Competitive
Innovative
Supportive

MRC
MANUFACTURING RESOURCE CENTRE

MANUFACTURERS QUINTE ASSOCIATION

TRENVAL
Business Development Corporation
A Community Futures Development Corporation
Canada

LOYALIST
MY COLLEGE • MY FUTURE

Leap!
College Loyalist
Training & Knowledge Centre
Skills that WORK.

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