MANUFACTURERS' OUTLOOK 2014

Pursuing opportunities for growth

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PLANT
ADVANCING CANADIAN MANUFACTURING

Sponsor's message

At Grant Thornton LLP, we are once again proud to support **PLANT** magazine's annual Manufacturers' Outlook Survey. This study gives our country's manufacturers an opportunity to voice their views and experiences from the past year, as well as a forum for sharing their goals and expectations for the year to come.

What's clear from the results is that Canadian manufacturers believe their industry is in growth mode. And they're looking to invest in new employees, new lines of business and new geographic markets, while focusing on improving sales, controlling costs and increasing productivity. Investing in innovation and process improvement – while managing the many other risks that could impact their businesses – will be critical to the future success of all manufacturers.

While the study has a clearly optimistic flavour, it did uncover a number of themes that manufacturers continue to see as challenges. There is a consensus that while our manufacturers produce high quality products, the costs to produce that quality need to be lowered in order to enhance competitiveness. It is also generally agreed that expanding to new geographic markets will open up significant opportunities to increase revenues, although the uncertainties that come with foreign expansion make it an anxious proposition for many.

Overall, there's also an understanding of the need to focus on long-term strategy and risk management. However, many have been so focused on ensuring that the company continues to operate in the near-term, their ability to truly focus on their long-term objectives has been hampered. For those that can continue to grow, improve their productivity, proactively manage their risks and implement sound strategies, the opportunities are endless.

At Grant Thornton, we are very excited by the prospect of a bright future for the Canadian manufacturing industry. As in the past, our manufacturers have clearly shown they are up to the challenges they've been dealt in this ever-changing global economy. And as a firm dedicated to serving the manufacturing industry, we're committed to putting our knowledge and strength behind helping manufacturers unlock their potential for growth.

Jim Menzies
National Leader
Manufacturing and Distribution
Grant Thornton LLP

Executive Summary

The entrepreneurial fire continues to burn brightly among Canadian manufacturers. This year may conclude in a somewhat less than stellar fashion but modest growth of 2.3% is predicted over the next five years. Manufacturers – mostly SMEs – appear eager to engage, and the results of this year's Manufacturers' Outlook Survey suggest that they are preparing to do so.

The survey, conducted by Bramm Research for PLANT, in partnership with sponsor Grant Thornton LLP, is based on 450 completed replies from senior executives leading Canadian manufacturing operations, and has a margin of error of +/- 4.5%, 18 times out of 20.

Most of the companies fall into the small to medium category (five to 499 employees) and 13% account for the rest (500 employees or more). Averaging their annual sales for 2013 shows an increase from last year's sample ($68.6 million) to $86.8 million with anticipated sales of $91.3 million in 2014.

Almost two-thirds of the respondents (64%) expect orders to increase as well as the dollar value of sales (62%), 44% are expecting higher profits and 32% anticipate higher pricing.

New this year are more detailed questions related to skills. Respondents identified areas where they are experiencing shortages and leading the list is production for 53% of them, followed by general labour (35%), management (29%), engineering (28%), R&D (20%) and production support (19%).

More than two-thirds of the companies are looking internally to meet their skills needs, 37% are using agencies, 30% are hiring from other companies, 29% are making use of apprenticeship and other programs and 23% are networking. Sixty-nine per cent say they will deliver training through coaching and mentoring, and 68% will run inhouse workshops. Much farther down the list for 36% is training from third-party providers.

More companies anticipate hiring in over the next three years (58% compared to 54% in 2013), and adding new lines of business (43% from 39%). Although the majority of companies continue to trade close to home, 36% plan to enter new geographic markets and 33% intend to expand their plants.

Priorities over the next three years are investments in machinery and equipment (76%), which 62% are tying to improving productivity for growth, and more than half of the respondents intend to invest just short of $1 million. Other significant growth plans include pursuing new customers in North America (56%), investing in new product development (46%) and developing new supplier relationships (40%). Other priorities are training (55%) and hiring staff (49%). Thirty-two per cent are investing in research and development and are allotting 1% to 3% of revenues.

Biggest challenges continue to be increasing sales for 61% compared to last year's sample of 57%, controlling and reducing costs (58%) and improving productivity (47%), which is a top investment priority for 44%.

Access to external financing continues to be the biggest growth constraint according to 49% of the respondents, while 71% intend to finance using internally generated cash flow. The ability to engineer and customize is seen as the top competitive advantage by 67%, closely followed by leaner manufacturing and a focus on continuous improvement, and the use of innovative technologies (56%).

Sixty-two per cent of companies are currently making most of their sales in Canada and the US (27%) but business is going up by nano steps in other regions and countries such as Western Europe (2.6%) and China (almost 2%). Over the next three years 40% plan to pursue new markets in the US, 39% in Canada, 16% in Mexico, 13% in Brazil and 13% in other South American countries.

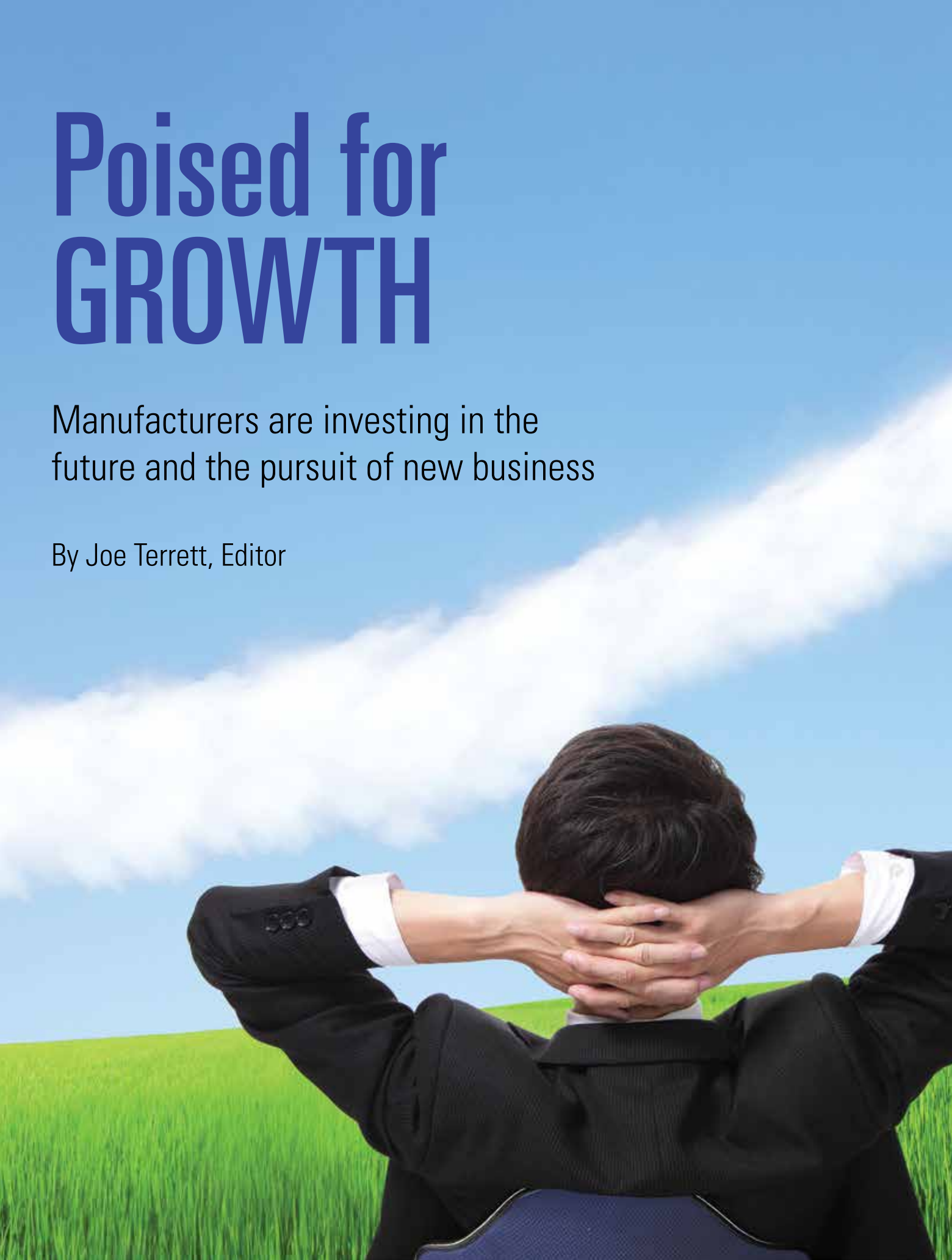
The survey results show Canadian companies are stepping up their game as they anticipate better business to come, but a recent industry report cautions they are at risk of losing out on growth opportunities if they don't look abroad to the US and foreign markets in 2014. The world beckons and awaits a response.

Joe Terrett
Editor
PLANT

Poised for GROWTH

Manufacturers are investing in the future and the pursuit of new business

By Joe Terrett, Editor



Business prospects are improving for manufacturers. It's been a hard, slow slog since the recession of 2008-09, but Canadian companies are watching their US markets return to vitality, and even the EU is showing signs of life after last year's recession.

The results of **PLANT's** 2014 Manufacturers' Outlook Survey indicate the leaders of Canadian companies are not suffering from diminished confidence, and they're looking ahead to capitalize on better times, but there's still work to be done, notably stepping out from their Canada/US comfort zone.

The survey, conducted by Bramm Research for **PLANT** in partnership with sponsor Grant Thornton LLP, an accounting and advisory firm with offices across Canada, polled 450 senior executives from across Canada who completed the survey in September and October, with a margin of error that's +/- 4.5% 18 times out of 20.

Outlook 2014 Panellists and guests

Front L-R: David McPhail (Memex Automation), Gerald Bramm (Bramm Research), Dorin Radu (Nelson Industrial), Tiffany Shaffer (Grant Thornton), Brian Astl (Lind Equipment), Rosanna Lamanna (Grant Thornton). Back L-R: Don Simpson (Siemens Canada Ltd.), Thomas Beach (Handling Specialty), Al Diggins (EMC), Jim Menzies (Grant Thornton), Ted Mallett (CFIB), and Sheila Scott (Grant Thornton).

Brian Astl
President
Lind Equipment Ltd.
Markham, Ont.
Manufactures and distributes static grounding, hazardous location and industrial work lighting, portable power and GFCI products.

Thomas Beach
President
Handling Specialty
Grimsby, Ont.
Designs and manufactures custom engineered material handling equipment.

Al Diggins
President
Excellence in Manufacturing Consortium
Owen Sound, Ont.
Not-for-profit organization for manufacturers that facilitates the global competitiveness of its members.

Ted Mallett
Vice-president and chief economist
Canadian Federation of Independent Business
Toronto/Ottawa
The voice of small business in Canada.

Dave McPhail
CEO
Memex Automation
Burlington, Ont.
Provides factory floor data communications and efficiency systems.

Jim Menzies
National Leader, Manufacturing and Distribution
Grant Thornton LLP
Toronto
Accounting and advisory firm, Outlook sponsor.

Dorin Radu
Corporate managing director
Nelson Industrial Inc.
Pickering, Ont.
Designs and manufactures high quality, precision fabricated metal products.

Don Simpson
Vice-president of operations for the RuggedCom product line
Siemens Canada Ltd.
Concord, Ont.
Designs and manufactures rugged communications equipment for harsh environments.

Most (87%) of their companies are small and medium enterprises (SMEs), 83% of them privately owned, and 66% of those firms are family owned. Just 26% identified themselves as subsidiaries of a multinational company. Annual revenues for the entire group will average $86.8 million this year and they're forecasting revenues of $91.3 million next year.

As in previous surveys, the respondents' overall confidence is steady as they head into 2014.

"Overall, manufacturers seem to view their major opportunities and challenges as having remained consistent over the past several years," said Jim Menzies, Grant Thornton's national leader, manufacturing and distribution. "Investing in machinery and equipment, hiring more people and continuing to innovate consistently top the list of opportunities while increasing sales, reducing/controlling costs, and improving productivity consistently appear at the top of their list of challenges."

The responses show 64% of companies expect orders to increase, 62% are looking at sales dollar values rising, while 44% are banking on higher profits and 32% anticipate higher pricing.

The top challenge for almost two thirds (61%) of the companies continues to be increasing sales and orders, followed by reducing costs (58%), improving productivity (47%), staffing, training and finding workers with the right skills (45%) and pressures on pricing (40%).

The top competitive advantages noted by last year's sample were quality, service, flexibility and the ability to engineer and customize. This year quality and service registered near the bottom of the list. Top advantage for 67% is the ability to engineer and customize, followed by leaner manufacturing and continuous improvement (64%), use of innovative technologies (56%) and flexibility (53%).

Over the next three years 76% will invest in machinery and equipment, training (55%), hiring staff (49%), technology (48%) and R&D (48%).

Companies recognize the importance of environmental issues, but they are evenly split on whether investing in green initiatives represents a cost or a revenue opportunity. Most initiatives (59%) will involve recycling more materials, energy efficiency (50%) and reducing scrap (50%). Seventy per cent agree not being green is a risk to their brands and reputations, but just 36% include green measures in their business strategies, 30% do so informally and 36% do not. Only 16% are actively engaged in reducing their carbon footprint, 37% are somewhat engaged and 46% are not engaged at all.

Analysts have been predicting modest growth of 2.3% over the next five years and as was the case last year, manufacturers appear to be eager to engage. The challenge will be to take their businesses to the next level, which was the theme of an executive roundtable Oct. 29 featuring eight panellists representing a variety of Canadian businesses.

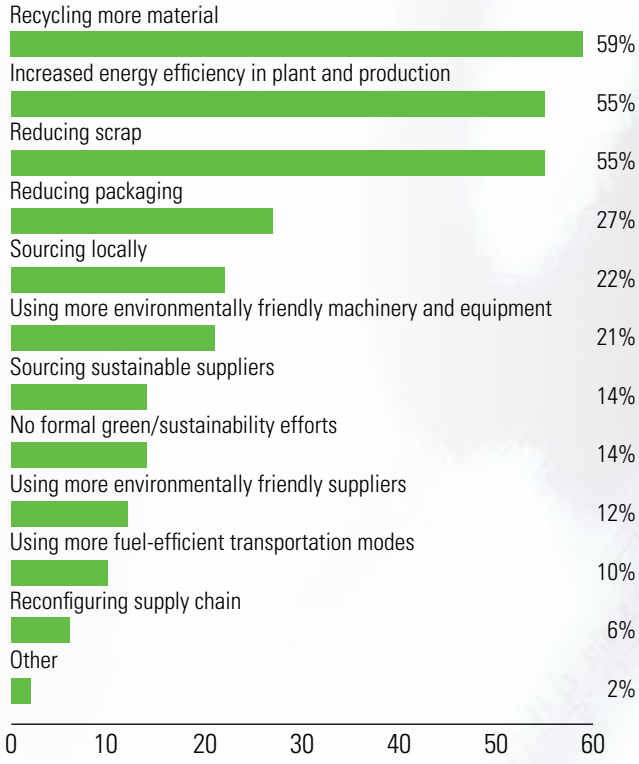
To add some economic context, panellist Ted Mallett, vice-president and chief economist of the Canadian Federation of Independent Business (CFIB), provided a forecast.

He was just back from a private sector economists'

Green Efforts in 2014

Total Responses 450

Top three green projects in 2014 will be recycling more material, increasing energy efficiency and reducing scrap.



BUSINESS OUTLOOK

Entry into New Markets in Next 3 Years

Total Responses 450

Top markets for entry in the next three years are the US, Canada, Mexico and Brazil.

US	40%
Canada	39%
Mexico	16%
Brazil	13%
Other Central and South America (excluding Mexico/ Brazil)	13%
China	12%
United Kingdom	10%
India	9%
Germany	9%
Western Europe (excluding Italy, UK, France, Germany, Switzerland)	9%
Russia	9%
Other	9%
Other Asia (excluding China, Korea and India)	8%
France	8%
Australia/New Zealand	7%
Japan	5%
Korea	5%
Central and Eastern Europe (excluding Czech Republic, Poland, Russia)	5%
Italy	3%
Switzerland	3%
Poland	3%
Czech Republic	2%

Source of Business by Country

Total Responses 450

Most revenue comes from North America, two-thirds of that from Canada.

Canada	62%
US	27%
China	1.9%
Mexico	1.4%
Other	0.8%
Western Europe (excluding Italy, UK, France, Germany, Switzerland)	0.8%
Other Asia (excluding China, Korea and India)	0.7%
Other Central and South America (excluding Mexico/ Brazil)	0.7%
Germany	0.6%
Japan	0.5%
Australia/New Zealand	0.5%
UK	0.5%
India	0.4%
Italy	0.4%
Brazil	0.4%
Russia	0.3%
Korea	0.3%
France	0.2%
Central and Eastern Europe (excluding Czech Republic, Poland, Russia)	0.2%
Poland	0.2%
Switzerland	0.1%
Czech Republic	0.1%

Biggest Business Challenges

Total Responses 450

Top business challenges over the next three years will be increasing sales, controlling or reducing costs, improving productivity, staffing, and pressures on pricing.

Increasing sales/orders	61%
Controlling/reducing costs	58%
Improving productivity	47%
Staffing – training/finding skilled workers	45%
Pressures on pricing	40%
Value of the Canadian dollar	30%
Developing new products	26%
Entering new markets	25%
Gaining market share in NA	25%
Tougher competition in key markets	23%
Quality	22%
Economic conditions that impact Canada	21%
Costs of key inputs	19%
Supply chain, logistics issues	17%
Regulations: red tape, associated costs	16%
Gain market share globally	15%
Impending retirements	14%
Accessing new/advanced technology	13%
Environmental issues, regulations	13%
Investing in R&D, commercialization	12%
Border issues	8%
Accessing credit/financing	6%
Barriers to foreign markets	6%
Attracting investment/product mandates	4%

Key Growth Measurements

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Companies are investing in machinery, technology and other productivity measures. PHOTO: THINKSTOCK

roundtable in Ottawa, where he had a chance to hear a range of opinions about Canada's prospects, and he said there was unanimity among the group that 2014 is going to be better than this year.

(As of Nov. 21, the Bank of Canada is forecasting 2.3% growth in 2014 and 2.6% in 2015, compared to 1.7% for 2013.)

"Interest rates are going to stay low for quite some time, especially in the US and Canada is going to follow in that sense," said Mallett, whose organization speaks for Canada's small businesses. "Inflationary pressures are relatively stable. That's a major source at least when prices are uncertain that adds a tremendous amount of uncertainty to business planning so of course we're happy to see that. The tax environment, at least at the federal level, looks fairly stable, which is good. But we're concerned about some of the provincial noises that we hear and things like where corporate taxes are going, at least in Ontario and possibly Québec."

The CFIB also tracks members' level of confidence "and we're coming back to levels of optimism that we had really seen in 2005-06, when the economy was humming along pretty nicely."

He noted the exchange rate as an important issue for manufacturers, who are being counselled not to count on a devaluation.

"Basically we're going to be seeing a 90 cent to a parity dollar for the foreseeable future. We've seen a very stable currency, which is perhaps better than having a low currency that's unstable… At least it's staying there within a fairly narrow range. And we haven't seen this lack of variation for quite some time. Swings from 80 cents to $1.10 within the space of a year or two are poison for business planning, whether you like the low dollars or high dollars."

As for the world economy, he said the US is bouncing back, China and Asia are "doing okay" although there is some concern about Japan, and Europe is on the way to recovery, although he warns of potential fiscal surprises from parts of Eastern Europe.

Engaging in business growth

The Outlook survey shows the top five growth strategies for 65% of the companies are investing in machinery, technology and other productivity processes, pursuing new customers in North America (56%), investing in product development (46%), developing new supplier relationships

(40%) and expanding current facilities (33%).

This year's panel featured entrepreneurial companies that are pursuing growth in a variety of ways.

Don Simpson, vice-president of operations for the RuggedCom product line at Siemens Canada Ltd. in Concord, Ont., highlighted the once small Canadian manufacturer's recent acquisition (completed in October) by the German industrial giant.

The company began in the founder's basement 10 years ago and gained fame designing and manufacturing rugged routers and switches for harsh industrial environments in world markets.

The secret to its success? High quality, time to market, doing things quickly, doing them right the first time, and for the right price, said Simpson.

"We're going through a morphing phase now. The two worlds are completely different, but the synergies are obvious. I think the opportunities are really endless for us."

Thomas Beach, president of Handling Specialty in Grimsby, Ont., heads up a company that designs and manufacturers highly customized lifting equipment for aerospace, automotive, nuclear, entertainment and energy markets. He and a partner sold the business to the Whiting Corp., a manufacturer of heavy-duty overhead cranes and railcar maintenance equipment based in Monee, Ill. Now Handling Specialty has a longer reach into world markets. Its motto, "We build big things to help others to build big things," and one of the markets it has tried to move into is oil and gas, but not so successfully. However, Beach said there's opportunity in the movement of oil and gas.

"There are over 80,000 tanker cars in the back-log right now because they don't have pipelines. So the railway becomes the pipeline."

More growth is anticipated in shipbuilding, an industry that's getting $35 billion worth of investment over the next 20 years, and energy markets. "We're doing a lot of work in turbines and we've received our first nuclear project with the Darlington refurbishment."

While what they do is big, Beach is all for staying small. "We like being agile and flexible. That is one of our competitive advantages."

Dave McPhail's business is all about productivity leading to growth. He's the CEO of Memex Automation in

Key Business Issues

Total Responses 450

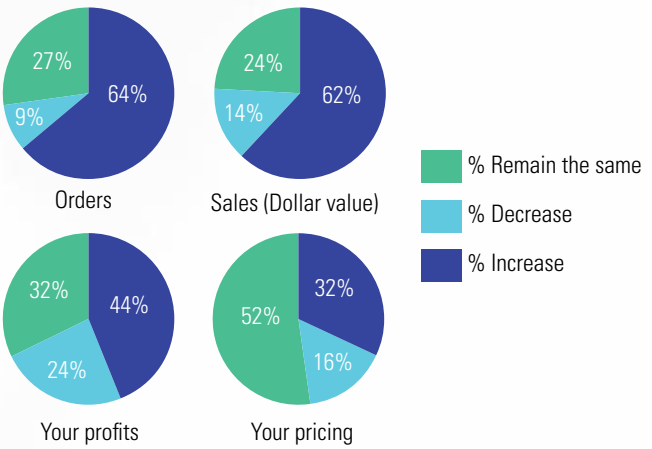
Top of mind are improving productivity, pursuing North American markets and long-term planning.

	Strongly agree	Somewhat agree
Improving productivity is a major issue for my company	44%	46%
Pursuing North American markets is a priority over global markets	40%	38%
In addition to planning for the short term, I would characterize my company as aggressively planning for future opportunities in the longer term.	35%	50%
Pursuing new geographic markets is an important strategy for my company	32%	42%
My company has a strong culture of innovation	29%	54%
My company's production is scaleable so that we can adjust quickly to market fluctuations	22%	55%
Environmental issues and sustainability are strategic concerns	18%	44%
Canada's pursuit of international trade partnerships and agreements with the EU and various Asian countries will benefit my company	14%	34%

2014 Business Growth

Total Responses 450

Two-thirds of respondents say orders and sales will increase in 2014, and almost half are optimistic about profits.



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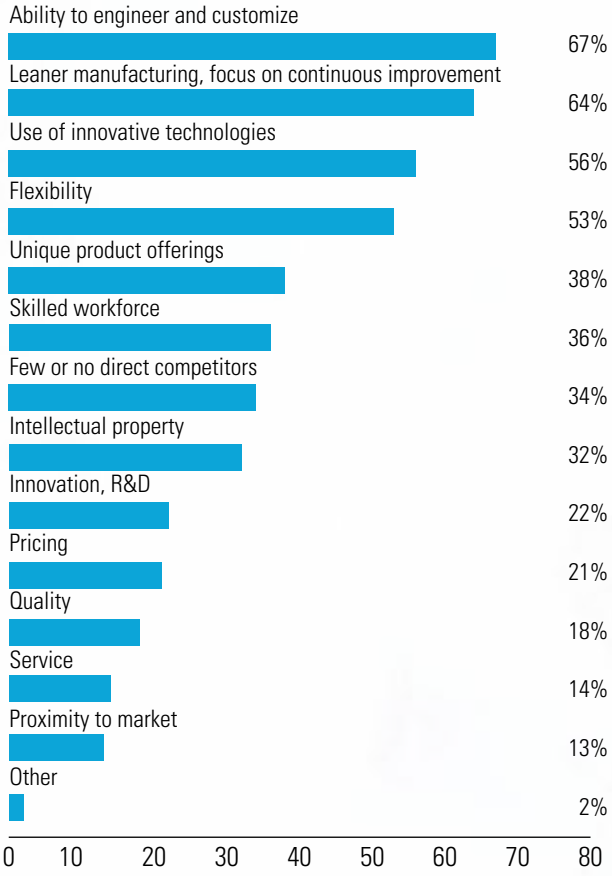
Competitive Advantages

Total Responses 450

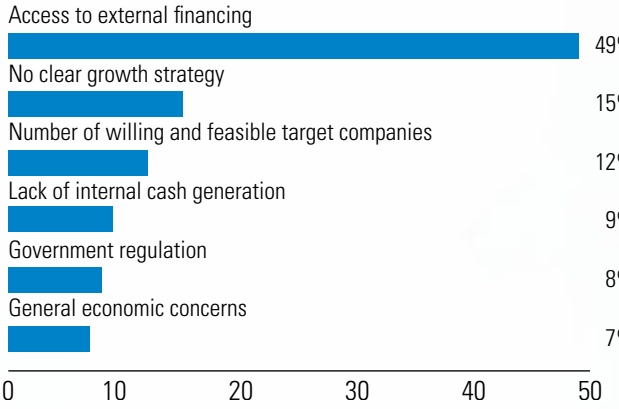
Competitive advantages are engineering and customizing, leaner manufacturing and innovative technologies.



Most Significant Growth Constraints

Total Responses 450

Access to external financing is the most challenging constraint to business.



Burlington, Ont., which develops software for factory floor data communications and efficiency systems, but it also manufactures the hardware to go with it.

He bought the company in 2008 as the economy slid into chaos, but five years later, Memex is thriving, although access to capital has been challenging.

"We just came off record revenue this year and we have a unique challenge: we have to develop the market in addition to the product. We have to tell manufacturers what they don't know and do all the marketing."

Post roundtable, the company was awaiting approval from the Toronto Stock Exchange to trade publicly on its Venture Exchange.

Rather than seeking out lower cost help in developing countries, Memex does all its development work and manufacturing in Canada.

"We graduate great people here and they all deserve to get a job. Yes, it's more expensive to develop software. Your dollar doesn't go as far as it would have if you went somewhere else; but I'll argue that you get a better product in the end."

Memex is setting up an operation in the US "because we found people [there] like to buy from US companies." And the company is expanding into Europe, where he sees a lot of opportunity.

"I'm kind of excited about the next chapter because we are a small for now, but we're growing."

Dorin Radu, corporate managing director of Nelson Industrial Inc., said the family-owned designer and manufacturer of high quality, precision fabricated metal products in Pickering, Ont. is growing at a decent pace and moving in a positive direction.

About 50% of what the company sells is proprietary products. The other 50% is contractual work for other, bigger OEMs.

"What we managed to do in the last decade or so is to add sophistication to our business [with] better methods of controlling the processes and increasing the variety of our products without necessarily sacrificing the bottom line. Coming out of this recession…we are better positioned."

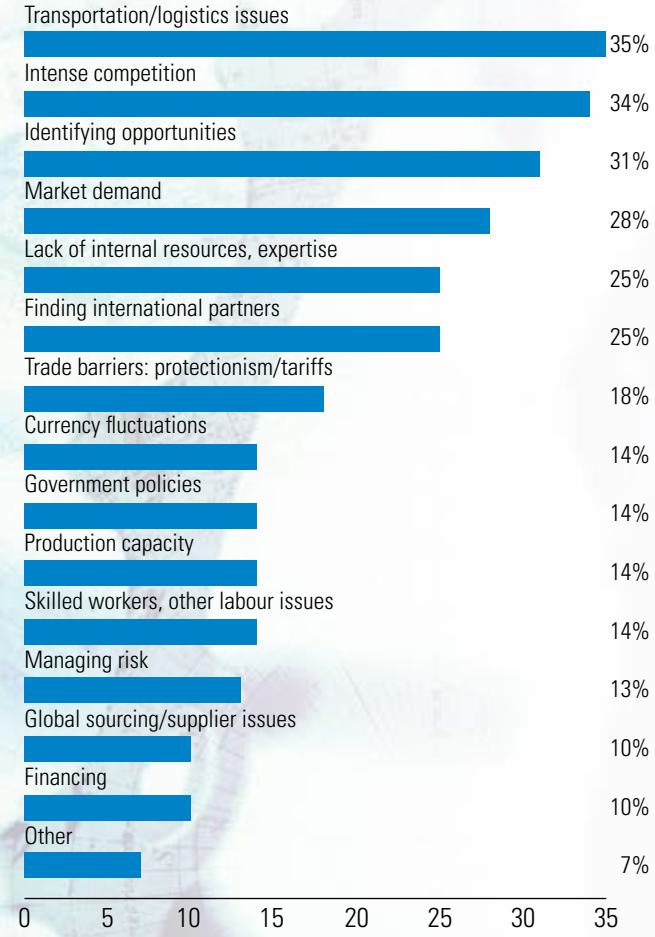
The company outsources large volume and stable products for manufacture in China, which provides a platform for the custom, speciality items that continue to

BUSINESS OUTLOOK

Constraints to Increasing Revenue Outside North America

Total Responses 450

Greatest constraints to increasing revenue outside North America are transportation/logistics issues, competition and identifying opportunities.



Growth Plan Over the Next 3 Years

Total Responses 450

Top five components of growth strategies are: investments in machinery, technology, and other productivity processes; new North American customers; new product development; new supplier relationships; and expanding facilities.

Invest in machinery, equipment, technology and other processes to improve productivity	65%
Pursue new customers (North America)	56%
Invest in new product development	46%
Develop new supplier relationships	40%
Expand current facilities	33%
Develop strategic alliances, joint-ventures, and/or partnerships	30%
Strengthen supply chain links and relationships	28%
Pursue new customers (global)	28%
Concentrate on current customers/ opportunities over pursuing new business	25%
Enter foreign markets	21%
Focus on future (longer term) opportunities	22%
Open new manufacturing or service locations	19%
Diversify industries served, markets	18%
Acquire companies	18%
Use third-party sales and distribution channels	14%
Focus on reshoring opportunities in the US	12%
Utilize online marketing, commerce channels, SEO optimization, social media	12%
Export products/sell services directly into new markets	10%
No growth activities planned	3%
Other	1%

"What we've seen in our industry is actually a really unsophisticated set of competitors who aren't taking advantage of this next wave of lighting technology. We can do that. So, we're now at the point where we're designing our own LED products. We've pushed LED technology to a place that it's never been before."

— Brian Astl

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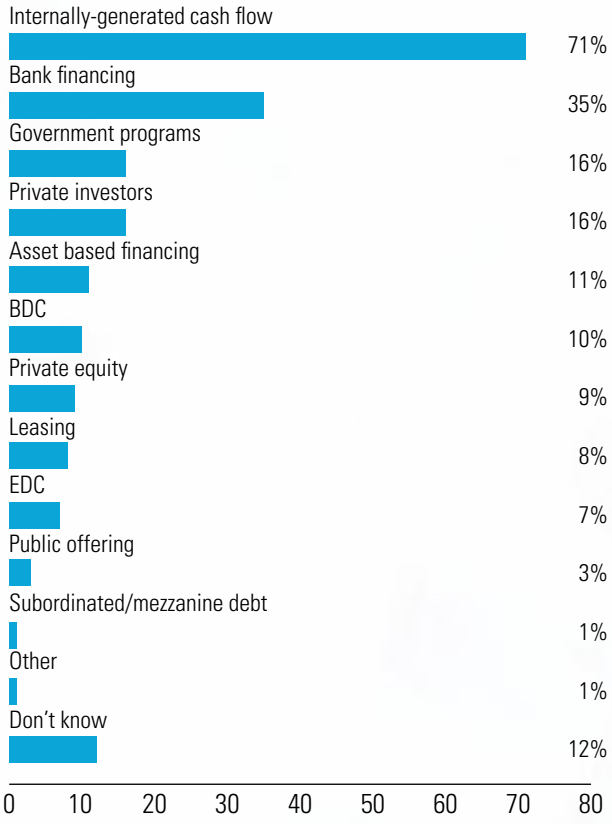
Financing Methods Over the Next 3 Years

Total Responses 450

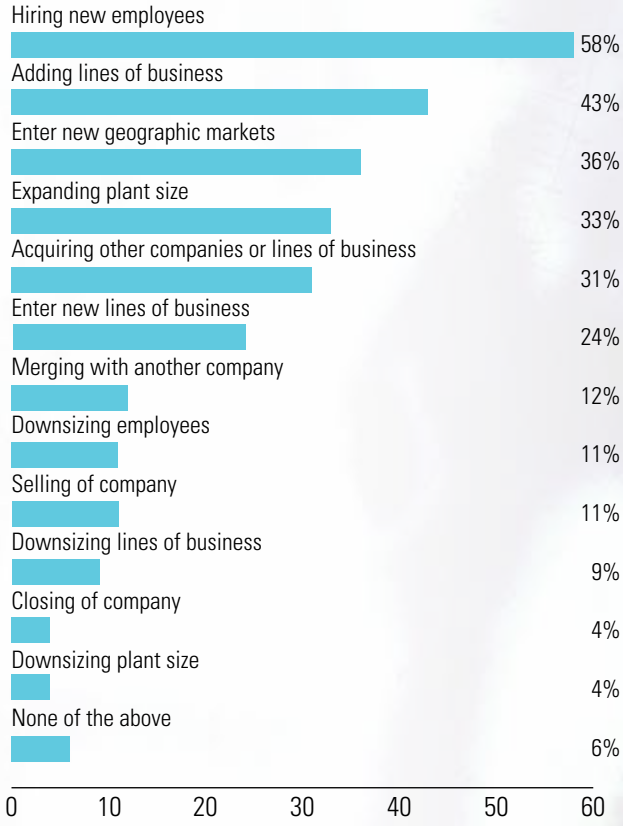
Top financing choices for growth are: internally from cash flow; banks; government programs; and private investors.



Anticipated Changes in the Next 3 Years

Total Responses 450

Top five changes over the next three years are hiring employees, adding lines of business, entering new geographic markets, and expanding plant size.



be designed and equipped with features in Canada. "We managed to increase our market share just by diversifying our offering and becoming a more attractive supplier of choice to our customers."

The company is more optimistic this year than last, "but I do not necessarily see an explosion in terms of opportunities."

Brian Astl, president of Lind Equipment Ltd. in Markham, Ont., bought the company with a business partner and other investors six years ago. At the time, it was a successful but sleepy operation that was essentially a master distributor of US-made electrical and industrial lighting products. The new regime has transformed the still smallish company into a manufacturer and distributor of static grounding, hazardous location and industrial work lighting, portable power and GFCI products that is reaching beyond North America.

"Not all of our stuff is made in Canada," said Astl. "There are some commodity-type products we source overseas. But when you get into some of the higher tech, higher spec products like explosion-proof and hydro-secure lighting, we make those in North America, where it's close to home and we can keep an eye on the quality and make sure all the specs are being respected."

He also identified an opportunity using LED technology for portable industrial lighting. "What we've seen in our industry is actually a really unsophisticated set of competitors who aren't taking advantage of this next wave of lighting technology. We can do that. So, we're now at the point where we're designing our own LED products. We've pushed LED technology to a place that it's never been before."

There are challenges, especially from big distributors that are sourcing commodity-type, private label products from cheap manufacturing centres overseas and selling them at a huge discount.

"They don't do any of the design. They don't do a lot of the marketing work. So there are reasons why they can sell them at a lower price. Our challenge is that in some areas we're competing against our customers, so what we've tried to do is stay out of that world, because I don't think it's a battle that you can win."

He knows the innovative products they develop will eventually be "knocked off" and white-labelled by a distributor, "so we need to keep thinking about what the next evolution is going to be and continue to push out and stave off our traditional competitors."

The Excellence in Manufacturing Consortium (EMC) helps companies either grow and thrive at a sustainable, globally competitive level.

"We've got 55 original consortiums (meaning geographic groupings) of manufacturers throughout the country that gives you a pretty broad read on what's going on in the world," said Al Diggins, its president who is based at EMC's headquarters in Owen Sound, Ont.

"Feedback from some of the regional people indicates it's a good, solid optimistic world we're in now in different places. You go down to London and Woodstock, it's just booming on the automotive side. …One thing the recession did do was take a lot of highly levered companies off the

Just say "Go!"

Productivity growth from all levels of your organization

By Matt Powell, Assistant Editor

Don Simpson is a firm believer that productivity growth requires input from all levels of a manufacturer's value chain to unleash the innovation that exists within its workforce.

Simpson is the vice-president of operations for the RuggedCom product line at Siemens Canada Ltd., a Concord, Ont.-based manufacturer of communications networking products for applications in harsh environments.

"Cross-functional teams can do amazing things, and once productivity issues are identified, strategies and action plans should be created to leverage that talent within all functions of the organization," he says.

PLANT's 2014 Manufacturers' Outlook Survey reveals that 70% of respondents identify productivity improvement as very important. Manufacturers see the value of investing in projects that will improve productivity, but fewer of them are confident with the way it's being measured. And those challenges are most prominent on the shop floor.

Simpson says revenue and bottom line are good indicators if one is impacting the other, but they're too broad to identify the root cause of productivity issues.

"If you develop a strategy to fix it that's too broad, it becomes too complex. If it's too narrow, you may miss the mark," he says. It's all about saying "Go!" Just make sure you have a plan.

"There are those who resist change, but if you keep at it, people buy in."

Siemens improved productivity by developing process improvements with input from all levels of the organization. It overhauled manufacturing processes, compressing its three production lines into one and converting from batch production to a single-piece flow.

"Nobody goes to work wanting to do anything less productive, but

Continued on page 16

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street and I think those that are left are a lot healthier."

Healthier and very interested in improving their productivity, a key business issue for 90% of the companies, while 85% see themselves aggressively pursuing long-term opportunities and 83% characterize themselves as having a culture of innovation. But when it comes to pursuing new markets, 77% are more interested in what North America has to offer.

Doing business close to home

Indeed, as in past surveys, most of their revenue comes from North America. Breaking it down further, 62% comes from Canada, 27% from the US, 2.6% from the EU, almost 2% from China and less than that from all other markets. Looking ahead three years, North America is still the preferred region for market expansion (40% to the US and 39% to new markets in Canada), followed by Mexico (16%), Brazil (13%), other South American countries (13%), China (12%) and the UK (10%).

Menzies found the reluctance of manufacturers to expand or sell outside of North America surprising, given the "significant" opportunities some Canadian companies have enjoyed in emerging markets.

"Understandably there are challenges and constraints when considering expansion or selling outside of North America; however, there are now a number of Canadian companies that have a track record of success. As a result, manufacturers do have access to the insight they've gained."

Grant Thornton works with companies that are trying to expand into emerging markets. "What we're also seeing is that Canadian companies just don't seem to be getting their share of some of the real growth that's going on in places such as South East Asia."

He pointed out China's younger generation is affluent. "There are 200 million to 300 million people there with

Don Simpson discusses productivity gains.

PHOTO: STEPHEN UHRANEY

lots of resources and they're not looking to purchase poor quality products."

So why aren't Canadian companies going there? For McPhail, it's about intellectual property (IP).

"We spend an inordinate amount of money developing a product, proving it and getting it to market. The IP has to be paid for before we actually make a decent profit. If I sell it to the Chinese market I don't want it coming back to Canada cannibalized [going for] a quarter of what it cost."

Astl identified another reason small manufacturers are reluctant to venture abroad: the huge market next door.

"One of the things that we've all grown up with is the idea that there's this massive market right near us. We speak the same language. They understand us. We understand them. This cultural myopia develops around, 'Okay, how am I going to make it big? Well, all I have to do is get 1% of the American market.' The reality of course is that it's not that simple for anybody to compete in the US. It's not very simple for US manufacturers to compete in the US, which is the most sophisticated, competitive market in the world."

He said many fail to succeed there because they're not ready for the competition, and because they don't have world-leading products. "They fail because they're treading in on the territory of someone who's bigger and happy to defend it by bringing down their margins to crush people who are coming in…If we can get out of that mindset that the only place to go to get real big growth is south of the border, we will do ourselves a big favour," said Astl, whose company exports to destinations all over the world besides the US, including Europe, Asia, South America, Russia and Cuba.

Of course, he acknowledged other markets pose their own challenges. "But if you're willing to spend the time to learn, edit your products accordingly and play the red tape game, there are spots where we can create really competitive products here in Canada that can be world-beaters."

One thing RuggedCom did when it went out to world

Improving productivity

Continued from page 15

sometimes they're not enabled to do that. Releasing a company's true culture must enable productivity improvements, and that has to start at the top and work its way down."

After a year of hard work, improving line efficiency and utilization reduced overall assembly and test times for high volume product line by 66%. The overhaul resulted in higher throughput velocity and enhanced the company's ability to respond to sudden customer demands.

"We had to identify through our entire supply chain where improvements were necessary and that yielded hugely in a fairly short period of time," says Simpson.

Implementing the plan

The company invested heavily in automation as a function to boost efficiency and streamline the way its lines operate, including the way workers interact with parts and machines. Quality and throughput data is displayed on LCD screens in real time to keep workers on pace. Stack lights indicate any problems, which are addressed in real time by a "pit crew." Fixing faults in real-time makes the probability of running duplicate errors very small, Simpson says.

"Everybody services a line, and all functions that create a role in the supply chain service the line."

Siemens spent six months working on paper, starting with a value stream map of its existing processes, involving all functional areas of the operation and brainstorming where it could make improvements.

Some of the highly configured products the company makes don't go down the line in the same way, so it needed a process robust enough to handle changes on the fly. A time and motion study revealed it was more efficient to have operators handling different elements at the same time rather than building one unit at a time.

"Project management was a big part of the equation to ensure all the groups were aligned, to establish objectives and timelines, and to drive results," he says. "We manufacture on site, so that gives you an

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Logistics issues impact the cost of manufacturing in China.

PHOTO: THINKSTOCK

intimate connection between customer requirements and how you fulfill those through manufacturing and tight lead times."

All levels of the business had a role. The engineering department applied its expertise in process, test and software development, automation, and time and motion studies. Manufacturing and quality teams contributed their deep knowledge of existing processes to develop refinements by leveraging lean and six sigma strategies. And staff members were rotated through single line processes to learn each other's roles.

"An investment of a few hundred thousand dollars has allowed us to leverage the talent we have in-house to come up with innovative ways that will ultimately save the company millions of dollars," says Simpson.

"Never think you've done enough," he advises. "Constantly seek out ways to improve, and that requires everybody from the micro to macro level."

markets was put hundreds of regional sales managers on the payroll.

"That's a big investment but having them on the ground working with perspective customers and carrying the flag [in terms of] what RuggedCom and their products represented has paid off," said Simpson.

He described China as a tough place to do business, but there's another side to the coin. Contract manufacturing is safer to pursue as long as there's no IP involved.

"If you can protect your IP and just leverage the value-added component, it's a very compelling case. And we were successful in green-fielding operations over there, or creating joint ventures with folks that knew China."

As Radu observed, it's not always possible to protect your IP. Nelson Industrial bids on construction projects around the world. During that process, it's necessary to disclose manufacturing solutions in conceptual materials to show how they fit into the functionality of the project and comply with various standards. The idea is to win over the architect, but it's the contractor who gets the project.

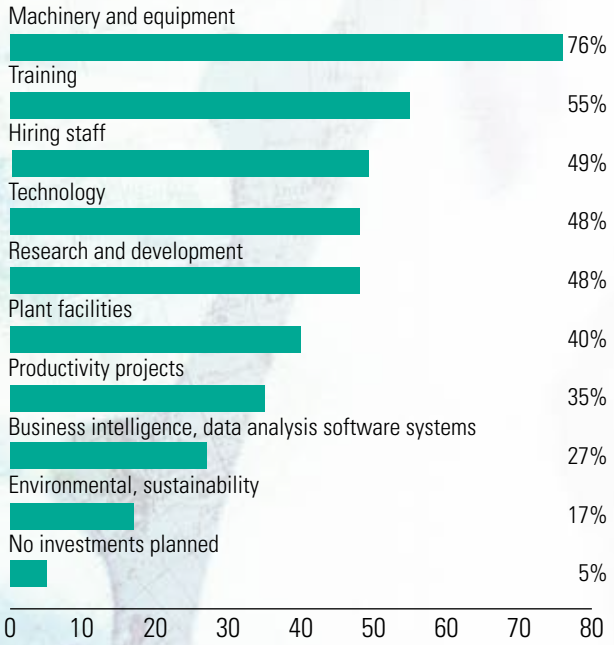
"So the architects favoured our product, took our suggestions and forwarded them for bidding to other places and presented us with a, 'Yes, the product is yours, as long

INVESTMENT

Types of Investment in the Next 3 Years

Total Responses 450

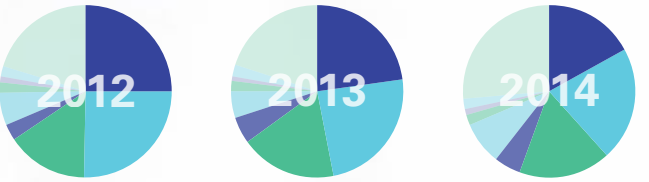
Top investment choices will be in machinery and equipment, training, hiring staff, technology and R&D.



Investment in Expansion, Upgrades, or New Facilities

Total Responses 450

Companies that invested up to $1 million in 2013 for expansion, upgrades or new facilities will be investing less in 2014. Companies that spent between $1 million and $5 million plan to increase their investments.



	2012	2013	Forecast 2014
None	25%	23%	17%
Up to $99,999	25%	24%	21%
$100,000 to $499,999	15%	18%	17%
$500,000 to $999,999	3%	5%	5%
$1,000,000 to $4,999,999	6%	5%	8%
$5,000,000 to $9,999,999	2%	2%	2%
$10,000,000 to $19,999,999	1%	1%	1%
$20,000,000 or more	2%	2%	2%
Don't know/not sure	20%	20%	26%

Investment in New Machinery, Equipment, or Technology

Total Responses 450

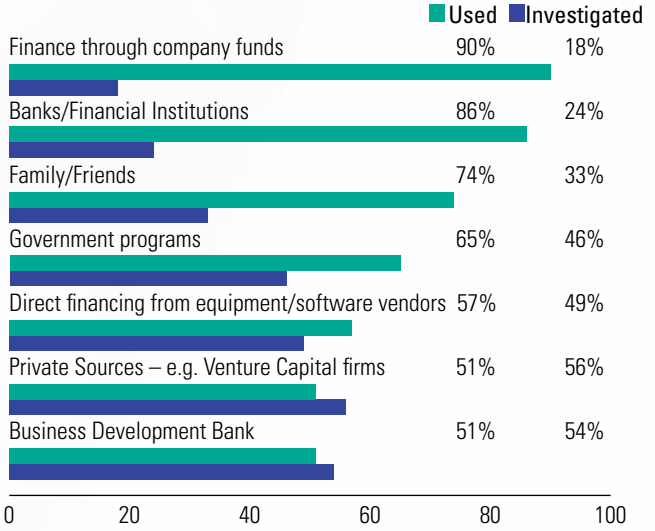
Just over half of the respondents intend to spend less than $1 million on new machinery, equipment and technology in 2014.

	2012	2013	Forecast 2014
None	11%	13%	7%
Up to $99,999	27%	25%	23%
$100,000 to $499,999	24%	24%	22%
$500,000 to $999,999	6%	7%	10%
$1,000,000 to $4,999,999	11%	12%	12%
$5,000,000 to $9,999,999	3%	3%	3%
$10,000,000 to $19,999,999	1%	1%	2%
$20,000,000 or more	2%	2%	3%
Don't know/not sure	15%	14%	18%

Financing for Capital Purchases

Total Responses 450

Preferred sources of financing for capital purchases are: company funds; banks/FIs; family/friends; and government programs. Most investigated sources were direct vendor financing, private sources and BDC.



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as you make it for this price because we have alternative solutions in China.'"

But he also noted increased traffic from Australian companies, which he sees as a developed channel for transmitting products into the South Asian markets.

"They seem to have more credibility or appeal in those markets and we are more comfortable dealing with Australians, given the language and level of standards and regulations. It's fresh on our plate, but it may be a way of penetrating a market to which we do not otherwise have access."

Beach's company has ventured to China, but what could have been a game changer for Handling Specialty turned out to be a disappointment.

The company was quoting on an underwater stage lift system for a large entertainment company in Macau. It took a couple of months to put a deal together, and at the end of the process, they had to tack a 23.7% value-added tax onto the $30-million project.

"We went to contract. They would not write it in English. And dispute resolution had to be attended to in Beijing. At that time it was unacceptable, so we stepped away from it."

As it turns out, some manufacturing is on its way back to North America. A Boston Consulting Group survey of manufacturing firms across a broad range of industries with sales of more than $1 billion shows the percentage of those who are bringing production back to the US from China or "actively considering it" has risen from 37% last year to 54% this year.

The top three factors cited as driving future decisions on production locations were labour costs (cited by 43%), proximity to customers (35%) and product quality (34%). Other leading factors include access to skilled labour, transportation costs, supply-chain lead-time and ease of doing business. Higher exports resulting from improved US competitiveness in manufacturing could create 2.5 million to 5 million factory and related service jobs by 2020.

McPhail said companies have to look at designing a product here, manufacturing it there and putting the inventory on a boat to bring it back. "Look at all the lifecycle costs of the product and what it costs to support it; and what happens if it's defective? Then look at what it costs to manufacture it here. Look at the productivity increases in the manufacturing sector."

Agreed, said Beach. Handling Specialty has a company in China with a laser cutter. Cutting steel is the fabric of his business. "We give them drawings to quote and we go down the street to a laser guy in Stoney Creek, add up all the ancillary costs and it's actually more cost-effective to do business down the street."

Automation and technology eliminates a lot of manual labour, added Radu.

"If this recession did something good for all of us, it forced us to look more aggressively at technological advancements, so we're coming out of it now better equipped to reconsider offshore strategies. Raw materials are a global commodity and technology is available to them almost at the same price as it is to us. The only true differentiator is how many man-hours you put into the job. If you reduce that, that doesn't necessarily create extra jobs

"We're maintaining equipment on an ongoing basis. It's a whole other revenue stream that carries a higher market value. We've done a terrific job of that. We have contracts from four years ago to take care of the equipment that we sold."

— Thomas Beach

here, but it does create extra revenue or margins."

The jobs it does create are higher end, said McPhail. "Rather than paying someone minimum wage, somebody gets paid $25 an hour to babysit the equipment. It's a different class of job."

With Canada and the EU hammering out the details of the Comprehensive Economic and Trade Agreement (CETA), the focus on global exports shifts to another potentially lucrative market of 500 million. But will it have tangible benefits for Canadian manufacturers?

Definitely, said Mallett. "Our members are solidly in favour of the new agreement. There are technical aspects and it may change some of the costs for importation of components as well as opening our markets for products. But it reminds us we do live within a global community and it's important to be able to build products for [markets] worldwide."

He cited the automotive sector, noting virtually every product is going to be built as a world product. "The chassis or the base vehicles you build for four or five models are designed to be built in any country and sold in any country."

Ontario: Is it worth the investment?

Any discussion about taking manufacturing growth to a higher level has to include Ontario and how attractive it may or may not be for investment. It's where much of Canada's manufacturing resides, and companies, especially smaller ones, have issues with the costs of operating there. Although corporate taxes are relatively low, the workforce is well educated and infrastructure is good, the current Liberal government is responsible for an energy strategy that has driven up costs for industry and it's considering raising corporate taxes as it struggles with a growing deficit. Yet there's $1.1 billion of waste resulting from the capricious cancellation of two natural gas power plants in Oakville and Mississauga, and nearby states across the border are lowering the cost of labour with the adoption of right to work laws. Nationally, CFIB's Small Business Provincial Tax Index ranks Ontario third last and Quebec last in terms of tax-friendliness to business.

Beach declared his love for Ontario, but he cautioned that there are pros and cons to operating a business in the province.

Risky business

Manage it as a tool for growth

By Matt Powell, Assistant Editor

More manufacturers are increasingly adopting risk management strategies, and Jim Menzies thinks that's a very good thing.

PLANT's 2014 Manufacturers' Outlook Survey reveals that 50% of respondents are pursuing formal risk management processes. This participation has been inching up since 2009 (35%); 2010 (48%); 2011 (44%); and 2012 (48%), and although Menzies sees this as promising, he also notes that 50% of manufacturers haven't adopted risk strategy, which not only exposes them but can also hamper their ability to grow.

"Some manufacturers are still operating very much on a short-term basis; they aren't operating in as sophisticated a manner as they could be," says Menzies, a partner and national leader for manufacturing and distribution at Grant Thornton LLP in Toronto. "Although many companies will acknowledge the need to take a longer-term approach to managing their business, not enough of them are actually taking the time to look at the bigger picture and identify where their important risks lie."

He described it in relation to the big picture notion of not being able to see the forest for the trees.

"It's hard to climb to the top of the tallest tree in order to see the forest, when you are in the middle of a hurricane."

It's understandable that some manufacturers have been managing

Presence of a Formal Risk Management Process

Total Responses 450

	Yes	No	Not sure
2013	50%	32%	18%
2012	48%	31%	21%
2011	44%	34%	22%
2010	41%	31%	20%
2009	35%	30%	27%

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with a short-term focus through the recently difficult times. Now that the so-called hurricane has subsided somewhat, Menzies believes that manufacturers are in a position to enhance their management sophistication and strategize for the longer term.

"There are essentially two fundamental concepts underlying any risk management process," Menzies says. "First, companies need to assess the significance of the various business risks they face. Secondly, they need to assess the likelihood of each of those risks actually occurring." Once these two factors have been determined, companies need to put the appropriate processes and controls in place and reduce those risks to an acceptable level, then continue working down the list.

Many companies accomplish this assessment through the use of formal business risk maps, while others will hire third party risk consultants to help them through a comprehensive company-wide process. Companies need to determine a method most appropriate for them; not having a risk management process should not be an option.

While risk management and developing a growth strategy aren't always directly related, assessing risks help to identify areas that constrain growth, such as the inability to find skilled workers or difficulty in accessing financing. In not having access to financing, Menzies suggests that "the companies with a longer-term approach to managing their businesses are building personal and trusting relationships with their bankers before they need the funding, are sharing financial details with them regularly, and are shopping for bankers that are attuned to their industry." This helps to put them in a position to grow.

This year's survey shows 58% of respondents are most concerned about their ability to control and reduce costs, improve productivity (47%) and find skilled workers (45%). These factors, along with others such as supply chain and logistics, entering new markets and dealing with regulatory issues, should be managed proactively by all manufacturers, Menzies says. Not only will this help to ensure the company's future existence, it will also help to unlock its potential for growth.

Sounds like it's a good time to climb that tallest tree.

Jim Menzies emphasizes the importance of building a trusting relationship with bankers. PHOTO: STEPHEN UHRANEY

Methods of Mitigating Risk

Total Responses 450

Identify risks	65%
Maintain quality	58%
Long-term planning	49%
Be lean	47%
Insist on official paperwork for orders	46%
Know risks to customer/suppliers	43%
Monitor credit record of customers/suppliers	40%
Long-term contracts with suppliers/customers	39%
Monitoring internal financial indicators	37%
Insurance	34%
Formal audits and checks	30%
Diversify product offerings	26%
Set up contingency plans	25%
Currency hedging	24%
Third party accreditation/certification	24%
SWOT analysis	22%
Set up internal alert signals	18%
Formal risk management plan	17%
Other	0%

Electricity costs in Ontario are an issue for manufacturers. PHOTO: THINKSTOCK

"If you really want to sway or move the needle to a much more positive platform, the government's participation is absolutely critical. Because I think the entrepreneurship is alive and well."

Mallett reminded panellists of a "sleeper" element – municipalities, where you can find "some of the most asinine tax policy in Canada with respect to property taxation and regulations and zoning."

CFIB's 2013 *Communities in Boom* report rates local economic areas according to their entrepreneurial characteristics. He said most governments tend to regard business as a cash machine; a revenue source rather than a resource for economic growth.

"What I'm trying to do is wake up the municipal world to the idea that entrepreneurship is there under their noses and if they let it happen, that's how to generate their growth and success."

This year's results earned him a phone call from a business owner in Duncan BC, which finished last of the 107 municipalities polled.

"She'd been trying for 25 years to get local government to understand that it was not helping by trying to keep [a local] pulp and paper mill going and banking it's success on that one industry; not a winning strategy over a longer

"What I'm trying to do is wake up the municipal world to the idea that entrepreneurship is there under their noses and if they let it happen, that's how to generate their growth and success."

— Ted Mallett

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"There's a manufacturer in North Bay. In August his bill was $146,000 and 52% of that was global adjustment. It had nothing to do with the power coming in the door. We're paying for the windmills."

— Al Diggins

period of time. What they had to do was support the other businesses."

Electricity costs are certainly a concern for companies such as Nelson Industrial that are running heavy equipment. The fabricator mitigated energy costs by being creative with operating hours.

Radu said the plant is open 120 hours a week, but with a weekend shift starting Friday through Sunday, and 10-hour day and night shifts Monday through Thursday, leaving three hours in the evenings to do maintenance, systems backup and other jobs.

EMC is doing its bit to alleviate the burden of energy costs. It established an energy-buying group in 2008 (**www.emccanada.org**, go to Services, pull down "Energy") that is currently saving members between 15% and 40% off retail pricing. It has also set up the EMC Sustainable Energy Initiative, which helps companies find ways to lower their costs (same link).

"In looking at establishing our energy purchasing we found out a lot of manufacturers didn't realize their power bill was more than their payroll," said Diggins.

A group of up to 20 manufacturers pick the price that they would like to see over, say a three-year period. "So far we've been lucky, we've beat that price every time."

EMC identifies the company's consumption trends and maps out a strategy, then tailors a program for electricity/natural gas and aggregates consumption with other members, which goes to competitive tender.

But Diggins complains the global adjustment that's helping to pay for the province's renewable energy strategy is killing Ontario manufacturers.

"There's a manufacturer in North Bay. In August his bill was $146,000 and 52% of that was global adjustment. It had nothing to do with the power coming in the door. We're paying for the windmills."

Financing: A barrier to capital investment

Menzies was intrigued by the response to the question regarding external financing. Access continues to be the biggest growth constraint, according to 49% of the executives, while 71% intend to finance using internally generated cash flow, 35% said they would go to banks, 16% cited government programs and 16% said they would seek private investors.

Commenting on the survey results after the roundtable, he said, "In a country that has come through a worldwide economic recession in relatively good shape with a stable financial system, it surprises me that the extension of credit is still a such a significant hurdle in fostering growth to so many manufacturers."

As in past roundtables, financing is an issue for panellists. Several of the executives related continuing frustration dealing with banks.

"If you talk to anyone who is an entrepreneur they're going to have an ingrained dislike for banking, at least in Canada," said Astl. "If you have somewhere south of $2 million in EBITDA, most banks … will only lend against hard assets or receivables, and then they factor it down. If you want to invest in R&D, or in something that doesn't have that hard collateral against it and you're below that $2

"We graduate great people here and they all deserve to get a job. Yes, it's more expensive to develop software. Your dollar doesn't go as far as it would have if you went somewhere else; but I'll argue that you get a better product in the end."

— Dave McPhail

million or so, [financing] is a hard thing to find."

McPhail noted the shortage of venture capital in the Canadian marketplace.

"In the US there are all kinds of venture capitalists that will take the minority position in the company, put a person on your board, work with you and actually help you grow. We're devoid of that ecosystem here in Canada. And it hurts guys that are trying to get a leg up or start."

He highlighted another concern. Banks are not interested in financing losses, but a high-tech company like his that starts from nothing is going to encounter some losses on the way up.

"You can't make a profit every quarter for every fiscal year. You actually burn through some capital because that's just what it takes; and the sources of funding for burning through money just aren't available in this country."

Diggins has been trying to address the banker issue through EMC. He has been on a quest to find what he calls "old fashioned bankers" who understand manufacturing. So far, he has two banks interested in forming a group that focuses on manufacturing.

"I was involved in financing manufacturers so it's a sensitive issue for me and I get calls from guys who say, 'My balance sheet's upside down, I've nowhere to go, I can't find a banker. My banker got transferred.' Some of these guys just need to have a good banker or a good source."

He described a company in the Kitchener-Waterloo area that consists of two businesses, run by two "young" guys who want to buy it from the owner, but they can't get a deal.

"Have they got enough equity in it? A fair amount … but this deal's going to fall flat unless they really prostrate themselves. And they don't want to do that. So, I'm connecting the guys to these banks to test drive this thing to see if [the bankers] are going to be real or not."

Astl is thankful his business is located in the Greater Toronto Area because the banks understand a little bit more about acquisition financing. "But those people are downtown. And I would hate to be in the situation where the fellow in Kitchener-Waterloo is probably talking to a local branch person who puts the data into the computer and comes back with a 'no'."

The Kitchener-Waterloo scenario reminded him that as baby boomers retire there will be a massive number of small businesses in a position to change hands over the next 10 years, some with assets that banks will lend against, and some without.

"You're going to find a lot of businesses that are thriving and employing people that are struggling to make the transition to the next generation, or the next owner." That's something government policy makers should be thinking about, he warned.

Productivity and innovation challenges

The survey results show 97% of manufacturers see productivity as important, and the four most challenging areas are shop floor operations for 64%, marketing and sales for 39%, purchasing for 31% and shipping logistics for 29%.

Seventy-one per cent measure productivity by product output, while 56% use financial measurements and 87% are very or somewhat satisfied with the method they use,

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but only a third are game to use third-party expertise to do so. Most (74%) favour employee training to improve productivity, 59% have invested in technologies, 49% have applied automation solutions, and 46% have applied lean, Six Sigma and other continuous improvement measures.

Thirty-two per cent are investing in research and development and are allotting 1% to 3% of revenues, 27% aren't sure what they are going to spend and 47% plan to take advantage of the SR&ED tax credit. Seventy-two per cent say collaboration is important. Fifty-three per cent say key influencers in the process are suppliers and 38% say other companies in the industry. Academic institutions are key for just 17%.

Manufacturers have long been accused for lagging in productivity improvement and innovation. A Conference Board of Canada analysis of productivity said that while Canada has been ahead of the US in the use of cutting edge physical capital and labour composition growth, there has been zero growth in multi-factor productivity (MFP) growth over a 32-year period. MFP looks at a combination of production inputs such as labour, materials and capital: more comprehensive than labour productivity, but harder to measure.

This ignited a discussion on the nature of productivity and its relationship to innovation, and what innovation actually represents.

Mallett declared there's a lot of alarmism in the productivity debate. He challenged the commonly held belief that smaller companies are less productive than larger ones. "No-one has ever come up with any defensible argument or evidence to show that there is a productivity difference," he said. "In fact, it's almost impossible to measure because of supply chain issues. You can't measure productivity by sector, because there's so much inter-relation. And by that extension you can't do it by size of firm either because you've got small supplier big customer, big supplier to small processor and so on. Who owns that productivity gain when the whole supply chain is actually changing?"

As for innovation, most people think of products rather than aspects of process. "You can innovate in terms of how you integrate a service with your product, you can innovate in terms of how you deliver to customers."

That struck a chord with Beach, whose company makes its living innovating day-to-day because of the nature of its high-end engineering and customization work. But the company has also been innovative in the way it integrates the professional services group. "We're maintaining equipment on an ongoing basis. It's a whole other revenue stream that carries a higher market value. We've done a terrific job of that. We have contracts from four years ago to take care of the equipment that we sold."

Simpson noted the importance of continuous innovation.

As part of Siemens, there has been a lot of investment on the manufacturing side that has reduced production time by two thirds. "What took us three lines to do, we can do in one line and that's innovation at the floor level. It's pulling together cross-functional groups that typically don't work or see what they do together. If you can get everything lined up and drive to a common goal, whether

"Understandably there are challenges and constraints when considering expansion or selling outside of North America; however, there are now a number of Canadian companies that have a track record of success. As a result, manufacturers do have access to the insight they've gained."

— Jim Menzies

PRODUCTIVITY AND INNOVATION

Most Challenging Areas for Productivity Improvement

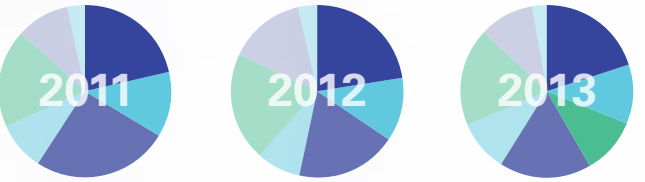
Total Responses 450

Productivity improvements are most challenging on the shop floor, in marketing and sales, purchasing, and shipping/logistics.

Improving Productivity: Planned Steps

Total Responses 450

There has been a greater focus on productivity measures in 2013 than in 2012, but less so than 2011.

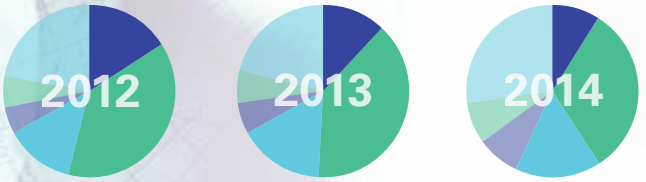


	2011	2012	2013
Employee training	28%	19%	23%
Lean, Six Sigma, other CI measures	16%	10%	13%
Specialization of product offering	n/a	n/a	12%
Investing in technologies	33%	16%	20%
Outsourcing manufacturing	12%	7%	11%
Automation	24%	17%	21%
Outsourcing support roles	13%	4%	12%
None	4%	7%	3%

Percentage of Revenue Spent/Planned for R&D and Commercialization

Total Responses 450

About a third of companies plan to spend 4% to 10% of revenue on R&D and commercialization. Another third will spend 1% to 3% and the remaining third will spend nothing or have not yet decided on an amount.

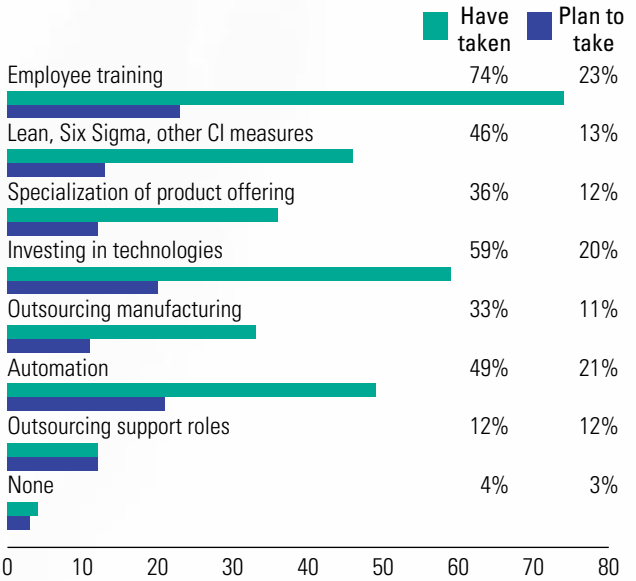


	2012	2013	2014
0%	16%	12%	9%
1%-3%	38%	39%	32%
4%-6%	13%	16%	16%
7%-10%	5%	6%	8%
More than 10%	6%	6%	8%
Don't know	22%	21%	27%

Steps Taken/Planned to Improve Productivity

Total Responses 450

Most companies are improving productivity through employee training, Six Sigma or other CI measures, product specialization, and investing in technology.



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Automation is contributing to productivity gains. PHOTO: THINKSTOCK

it's innovating a process or product, that's something that I tell my staff, 'Never think you've done enough. Constantly look for ways to improve, from the micro level up to the macro level.'"

Productivity improvement is in McPhail's wheelhouse. The statistic that stuck out for him was the 64% who cite the shop floor for productivity challenges. "I'm encouraged by that statistic because it means people recognize there is a challenge."

He often runs into manufacturers at seminars who believe they are running lean manufacturing operations. But few are actually monitoring what's happening on the shop floor. They're not as lean as they think. He tells them, "If you can't measure, you can't manage it."

Meanwhile, his company continues to innovate. It's next piece of software is going to take the shop floor data and the ERP costing data and paint a picture in dollars and cents, but in real time. This means if a machine isn't contributing its (for example) $250 and hour in income, it will be evident at the time when something can be done about it, rather than a day later when the income is lost. Keep the machine running and so will the profits," he said.

"If this recession did something good for all of us, it forced us to look more aggressively at technological advancements, so we're coming out of it now better equipped to reconsider offshore strategies."

— Dorin Radu

Skills shortage: Myth or reality?

There are differing views among the pundits and analysts concerning the "skills shortage."

In the world of manufacturing, companies rate it as a top concern. **PLANT's** survey and a survey by Canadian Manufacturers & Exporters (CME) indicate companies are having a hard time finding the people they need. A survey by employment agency Randstad Canada identifies shortages in manufacturing, automation, energy and utilities. Skills shortages was the number one problem for Canadian businesses in 2012 and is considered the biggest barrier to competitiveness for 2013, according to the Canadian Chamber of Commerce; and the Conference Board of Canada says Ontario is losing out on billions of dollars in economic activity and tax revenue because employers can't find people with the right skills. Yet a TD Bank report says whatever skills shortages exist are isolated and likely no greater than a decade ago. Similarly, the Boston Consulting Group says the US skills shortage will be far less of a problem than many people believe in the short term, and it's unlikely to prevent a resurgence in US manufacturing in the next few years.

Despite what the TD Bank suggests, Handling Specialty is challenged by skills. As it works towards making its equipment more intelligent, it's in need of people with electronics and programming skills, plus hydraulics people, fluid technicians, and industrial electricians, among others.

"We struggled because of our geography and the challenges in the steel industry. [Nearby] Hamilton has been rich with guys who were packaged out. So I have a lot of good skills that are 50 years plus," said Beach, who nonetheless is aware that may be a short-term solution, leaving the long term open to question.

But the company is being proactive. It's starting "apprentice nurturing programs" to bring in young talent. "I have a business grad from London I'm going to bring up through sales. Just trying to look five to 10 years out."

However, the engineering and customizing orientation of the business also creates some unique skill requirements, something Beach describes as hybrids who can weld, fix a cavitating pump and program a processor.

"We struggle to find those, so we're talking about the cross-training, sharing jobs and touching each other's specialty in order to create a family of hybrids."

Training is also key, particularly for process improvements, such as handling the precise documentation required when supplying to the nuclear industry: a real eye-opener for Beach. "We spent over $45,000 getting an accreditation for the nuclear industry. I think the skills that we need to actually perform this contract were not there. So, we're playing catch-up. We're paying for that. But that's all part of the learning experience."

Astl noted a similar experience needing people who could do several things. Lind Equipment used to look for the person with the right mix of skills, but based on that alone, hires often didn't work out. "The more we focus on getting the right person and training them … the more success we have."

Radu highlighted the need for three key ingredients. At Nelson Industrial, each employee has a recipe for success,

"If you can get everything lined up and drive to a common goal, whether it's innovating a process or product, that's something that I tell my staff, 'Never think you've done enough.'"

— Don Simpson

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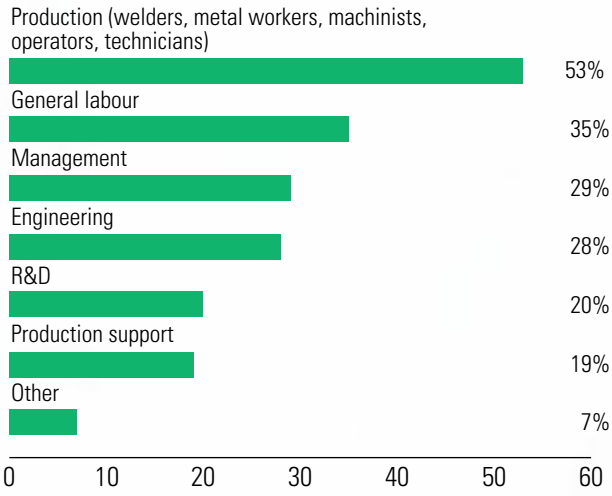
Shortages in Specific Skills Areas

Total Responses 450

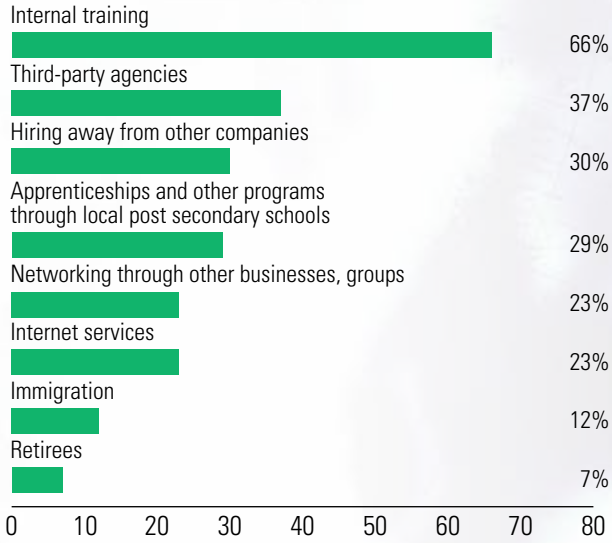
Most shortages in specific skills areas were production, general labour and management.



How Skilled Jobs Are Being Filled

Total Responses 450

Companies are filling skilled jobs through internal training, third-party agencies and hiring away from other companies.



which involves versatility, ability and mobility.

"We started to align the wage structure around these attributes. And that completely changed the methodology of considering who the top performers are," he said.

"It made them valuable in multiple areas of the plant, because they were more flexible in adjusting their working time with the necessities of the business. We implemented installations and servicing in our offering, so now we need people to volunteer to go on the road with the product and provide service there. People willing to display or to utilize their abilities and capabilities in this manner are more valuable to the business and we need to recognize that."

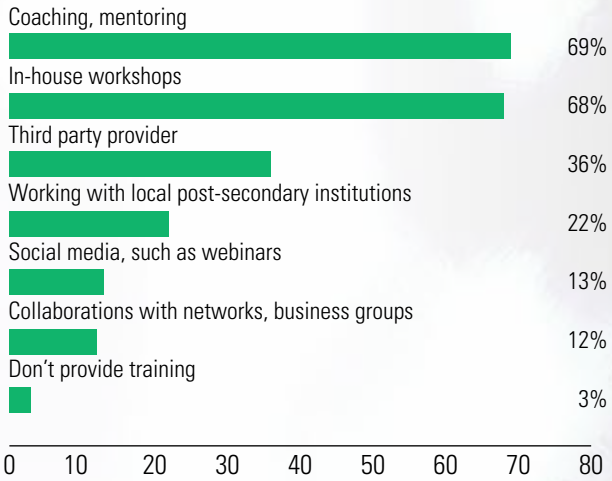
The analysts and pundits continue to advise companies to address productivity issues, innovate and look beyond Canada's borders. In fact, a recent PwC report says Canadian companies are at risk of losing out on growth opportunities if they don't look to the US and other foreign markets in 2014.

Companies that responded to the Outlook survey indicate that they are investing in the tools that address productivity issues, they are thinking ahead about how to fill skills needs, and they are poised to capitalize on improving economic conditions, but there is still work to do on their world view where new markets and opportunities beckon.

Methods of Delivering Skills Training

Total Responses 450

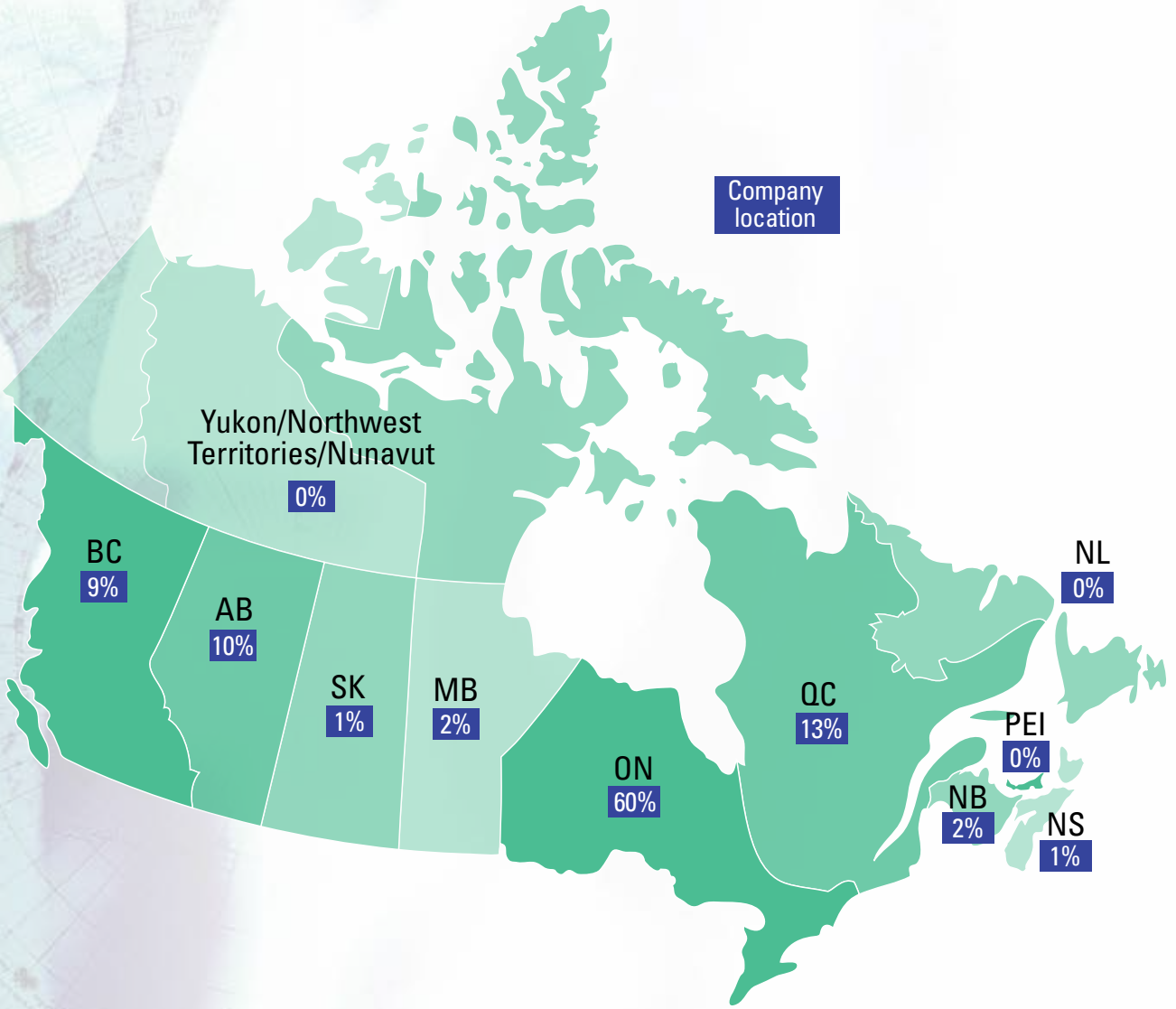
The top two methods of delivering skills training are coaching and mentoring, and inhouse workshops.



Location of Company and Canadian Headquarters

Total Responses 450

Most (87%) companies are small and medium enterprises (SMEs), 83% are privately owned, and 66% of those firms are family owned. Just 26% identified themselves as subsidiaries of a multinational company. Annual revenues for the entire group will average $86.8 million this year and they're forecasting revenues of $91.3 million next year.



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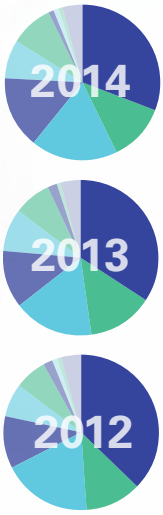
Revenue Forecasts

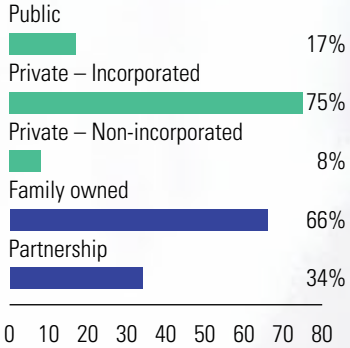
Total responses 450



	2014	2013	2012
<$5M	31%	35%	38%
$5M-$9M	12%	14%	12%
$10M-$24M	18%	17%	19%
$25M-$49M	15%	12%	11%
$50M-$99M	8%	9%	7%
$100M-$249M	9%	8%	7%
$250M-$499M	1%	2%	2%
$500M-$749M	1%	n/a	1%
$750M-$999M	1%	1%	1%
$1BM+	4%	4%	4%

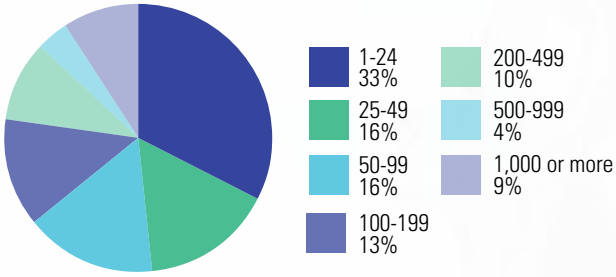
Type of Company Ownership

Total Responses 450



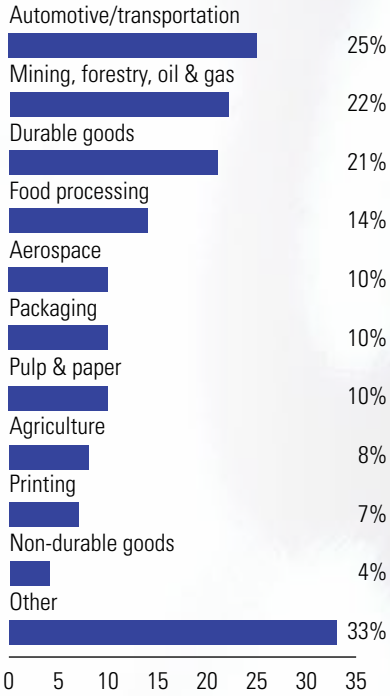
Number of Employees

Total Responses 450



Industry Sector

Total Responses 450



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Instinct says: growth requires passion.

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