Our Thoughts On...
the 2017 Schneider Downs

MANUFACTURERS' ECONOMIC SURVEY

SCHNEIDER DOWNS
Big Thinking. Personal Focus.

INTRODUCTION

Edward R. Friel

The results are in for the 2017 Schneider Downs Manufacturers' Survey, and oh what an interesting year it was! The stock market has reached all-time highs, tax law changes are on everyone's mind, and I don't believe anyone could have anticipated what our political landscape would look like one year into President Trump's term.

Everyone knew things were going to be different, including manufacturers, who in last year's survey anticipated that the new administration would be a great help to the industry. That has certainly been the case. By our survey results, manufacturing made dramatic upward strides in 2017, with 72% of respondents indicating they're doing better now than a year ago.

The 2017 survey asked for everyone's input on how tax law changes would impact the manufacturing industry (71% believe they will positively affect their company and the industry as a whole), and feedback was solicited regarding proposed changes to the North American Free Trade Agreement (NAFTA) (62% indicated that they would not benefit from a renegotiated NAFTA).

We also sought and received valuable input on such matters as fraud prevention; the challenges of workforce recruiting and development; the effects of recent advances in technology; and how today's ever-growing cybersecurity issues are handled. Overall, survey responses increased 5% over the prior year and we appreciate everyone taking time to participate. As we are always looking for ways to improve the survey, please forward any questions and feedback you have to Schneider Downs.

Thank you for your participation and best wishes for a healthy and prosperous 2018!

Survey Result

INDUSTRY ON AN UPWARD STRIDE

72% believe the manufacturing industry is in a **better** position today than it was a year ago.

2018 CAPITAL BUDGET

- 47% Increase
- 10% Decrease
- 43% Remain the same

2018 FORECASTED REVENUES COMPARED TO 2017 RESULTS

- 35% Significantly above (> 5%)
- 44% Slightly above
- 16% Consistent
- 5% Slightly below

Survey Result

IMPACTFUL LEGISLATION

OPTIMISTIC THEY WILL ENACT

- 70% Comprehensive tax reform
- 65% Regulatory relief
- 23% Infrastructure reform

IMPACT OF TAX REFORM

Positive 70%

Negative 5%

25% No impact

Enacted
TAX REFORM

Evan C. Ogrodnik

Shortly before we went to press with this year's survey results, the Tax Cuts and Jobs Act (the "Act") was signed by President Trump on December 22, 2017, marking the most significant tax legislation since the Tax Reform Act of 1986. The President had lobbied hard on the campaign trail for tax reform and, close to a year after taking office, it finally took form. Our survey respondents were optimistic that tax reform would be enacted (70%) with an equivalent percentage of the mindset that tax reform would positively impact their company.

One of the most significant provisions in the legislation is the reduction of the corporate tax rate (to 21%) effective January 1, 2018. The decreased charge is expected to reduce the competitive disadvantage faced by U.S. manufacturers relative to their global peers, which is, in turn, anticipated to lead to enhanced job creation and added investment in modern plants and equipment.

Along those lines, the Act provides for 100% bonus depreciation of eligible property, effective September 28, 2017 through 2022, with phase-out thereafter. The Section 179 first-year expensing is retained and increased to $1.0 million. Additionally, this expensing is permitted for qualified real property and qualified improvement property. The immediate tax benefit realized from capital investments should spur manufacturers to continue to invest in modern equipment.

Highly leveraged manufacturers, however, may feel the impact of a new limitation on business interest expense deductions, since the Act places a cap on the amount of interest that can be deducted annually, generally 30% of tax EBITDA over the next four tax years. Disallowed amounts will carry forward indefinitely. This provision is an attempt to bring some consistency between companies that borrow to finance capital equipment purchases with those that capitalize with equity.

Manufacturers will lose the Domestic Production Activity Deduction (DPAD) for tax years after 2017. The DPAD was an incentive to manufacture domestically, and deductions could run as much as 9% of taxable income.

Owners of manufacturers that are structured as pass-through entities will also see benefits from the Act. While the number of tax brackets was not changed (maintained at seven), the top marginal rate was reduced to 37% (from 39.6%). Additionally, there will be a statutory 20% deduction for qualified business income, which is all income from an eligible trade or business other than interest and dividend income, capital gains and other investments. This 20% haircut on the marginal rate effectively brings the tax rate down to approximately 30%.

Continued on next page.

Enacted
TAX REFORM *(continued)*

Evan C. Ogrodnik

Other provisions within the Act are aimed to simplify recordkeeping for small businesses – those with less than $25M in average gross receipts – including the exemption from UNICAP requirements, an expansion of the types of businesses eligible for the cash basis method of accounting, and additional exclusions on entities required to account for inventories.

U.S. companies with international activities will now be subject to tax under a new territorial tax system (versus the historic worldwide tax system). As such, a U.S. C corporation that owns 10% or more of the shares of a foreign corporation may distribute the earnings of such foreign corporations without additional U.S. tax (i.e., obtain a 100% dividends received deduction). In order to transition to this new system, the Act imposes tax on the one-time, deemed repatriation on a 10%-or-greater "U.S. shareholder's" proportionate share of the accumulated earnings and profits ("E&P") of a specified foreign corporation. For these purposes, a U.S. shareholder includes a C corporation, flow-through entity, trust and individual. That portion of E&P in cash and noncash assets is taxed at 15.5% and 8%, respectively.

The Act also provides certain incentives and anti-abuse provisions that will impact U.S. manufacturers, including an incentive to domestically produce goods and services for customers outside the U.S. Specifically, it provides a C corporation with a deduction equal to 37.5% of its Foreign Derived Intangible Income (FDII), reduced to 21.875% starting in 2026. FDII is defined as a domestic corporation's foreign-derived intangible income derived in connection with property sold by the taxpayer to a person who is not a U.S. person, and that such property is for foreign use or disposition outside the U.S. Therefore, a deduction of 37.5% applied to a domestic corporation's FDII would reduce the effective tax rate on this portion of a U.S. corporation's taxable income (from 21%) to 13.125%. While the FDII is specific to U.S. C corporations, the Act retains the Interest Charge Domestic International Sales Corporation (IC-DISC), which will continue to benefit companies with significant export activity, despite an initial repeal proposed by the Senate in early December.

Continued on next page.

Enacted
TAX REFORM *(continued)*

Evan C. Ogrodnik

While FDII is the "carrot" for U.S. companies doing business abroad, the Act also introduces a "stick" with the addition of new Section 951A, which requires a U.S. shareholder of a controlled foreign corporation ("CFC") to include in income currently, the Global Intangible Low Taxed Income (GILTI) of the CFC. GILTI is defined as the excess of the U.S. shareholder's CFC's aggregate net "tested income" over the "net deemed tangible income return." "Tested income" is the gross income of the corporation with certain exceptions. "Net deemed tangible income return" is defined as 10% of the excess of the shareholder's basis in tangible property (QBAI or qualified business asset investment) used to produce tested income over the amount of interest expense allocated to net tested income.

Once the tentative GILTI amount is determined, a deduction equal to 50% of this amount is allowed (this deduction is reduced to 37.5% starting in 2026). After applying this deduction, a domestic corporation would effectively be subject to U.S. tax on GILTI at a rate of 10.5% (50% of the U.S. corporate tax rate of 21%). A U.S. corporate shareholder is then entitled to a foreign tax credit equal to 80% of the taxes paid or accrued with respect to the tested income of each CFC. Therefore, as long as the aggregate foreign tax on tested income is at least 13.125% (13.125% * 80% = 10.5%), no residual U.S. tax will be due as the result of this new provision.

While it is way too early to determine if the Act achieved any true "simplification" of the tax code for business entities, the changes are many and the impact may be realized differently by taxpayers of all shapes and sizes. With certainty, tax rates are declining – at least statutorily – and many tax breaks will be limited, if not eliminated entirely.

CLICK HERE TO LEARN MORE

Survey Result

INTERNATIONAL CUSTOMERS

INTERNATIONAL CUSTOMER BASE

66% Yes

34% No

LOCATIONS

Canada - 96%
Mexico & Latin America - 89%
Europe - 85%
Asia-Pacific - 69%
South America - 60%
Southeast Asia - 49%
Australia & New Zealand - 47%
Middle East - 42%
Russia - 36%
Africa & South Africa - 27%

OPERATION TYPES

Sales Agents/Independent Representatives - 65%
Manufacturing Facilities - 47%
Shipping & Distribution Facilities - 36%
Administrative Offices - 36%
Outsourced Operations - 18%

International **LANDSCAPE**

Dennis R. Mowrey

The health of the U.S. manufacturing sector has long been of great concern to Congress. The decline in manufacturing employment since the start of the 21st century has stimulated particular congressional interest, leading members to introduce hundreds of bills over many sessions intended to support domestic manufacturing activity in various ways. The worry is that the United States is, by various measures, falling behind other countries in manufacturing, and that this relative decline can be changed or reversed by government policy. Some of the pertinent findings are as follows:

- The United States' share of global manufacturing activity declined from 28% in 2002 to 16.5% in 2011. Since then, the U.S. share has risen to 18.6%, its largest share since 2009. These facts are based on the value of each country's manufacturing in U.S. dollars. Part of the decline in the U.S. share was due to a 23% decline in the value of the dollar between 2002 and 2011, and part of the rise since 2011 is attributable to a stronger dollar.

- China displaced the United States as the largest manufacturing country in 2010. Part of China's rise by this measure has been due to the appreciation of its currency against the U.S. dollar. The reported size of China's manufacturing sector decreased slightly in 2015 and 2016 and is continuing to shrink in 2017 due to currency adjustments.

- Manufacturing output, measured in each country's local currency adjusted for inflation, has been growing more slowly in the United States than in China, South Korea, Germany and Mexico, but more rapidly than in most European countries and Canada.

Continued on next page.

International **LANDSCAPE** *(continued)*

Dennis R. Mowrey

- Employment in the manufacturing industry has fallen in most major countries over the past quarter century. In the United States, manufacturing employment since 1990 has declined in line with the changes in Western Europe and Japan, although the timing of the decline has differed from country to country.

With the current change in the U.S. corporate tax rate being lowered moving forward, expectations are that the U.S. will become a much larger player in the international manufacturing market place. Companies that tend to operate globally will be able to access foreign cash tax more efficiently.

The world continues to change at an alarming rate. The United States is in a constant battle for global manufacturing activity and no longer dominates the world market. Recent changes to the U.S. tax code, however, are likely to ultimately affect the United States manufacturing sector.

Survey Result
NAFTA

NORTH AMERICAN FREE TRADE AGREEMENT

68% of the respondents are impacted by NAFTA

62% of the respondents believe their company would **not** benefit from having NAFTA renegotiated

Renegotiating **NAFTA**

Brian W. Matthews

Originally enacted in 1994, the North American Free Trade Agreement (NAFTA) created an extensive free trade zone between the United States, Canada and Mexico. During the previous 10 years, the U.S. and Canada had already phased out a wide range of trade restrictions under the Canada–United States Free Trade Agreement (FTA), which led to an increase in cross-border commerce. The goal of NAFTA was to more completely eliminate trade and investment barriers between the three neighboring countries, but except for the North American Agreement on Environmental Cooperation and the North American Agreement on Labor Cooperation, which are supplemental agreements to NAFTA, the original agreement has not been revised since 1994 despite significant changes in the business landscape. Now the three nations are looking to modernize the pact, with some of those updates expected to affect the manufacturing industry.

Areas of impact would likely include those related to business practices that weren't around in the 1990s, like digital trade and e-commerce, two concepts that have increased exponentially in the two decades since the agreement was put in place. And while NAFTA does provide for intellectual property rights protection, those terms were negotiated prior to the widespread use of the internet in global commerce and may not provide all the necessary protections within Mexico and Canada.

Elsewhere, many manufacturers are encouraging the elimination of restrictions on duty drawback, citing that in the original agreement the intent was to prevent foreign companies from relocating into a territory of an FTA partner in order to benefit from duty drawback when exporting processed goods for sale in the U.S.

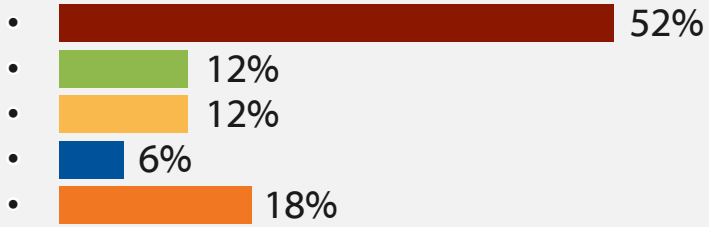
Duty drawbacks allow exporters to receive a refund of customs duties, taxes and other fees imposed on imports when those imports are used in the production of goods that are later exported, or where the imported good is substituted for the same or similar domestically produced good that is later exported.

Having been negotiated over 24 years ago, the U.S., Mexico and Canada are seeking to bring NAFTA up to speed with current business developments and requirements. As the three countries continue negotiations into 2018, we'll have to see what changes are ultimately made and what impact that will bear on the manufacturing industry.

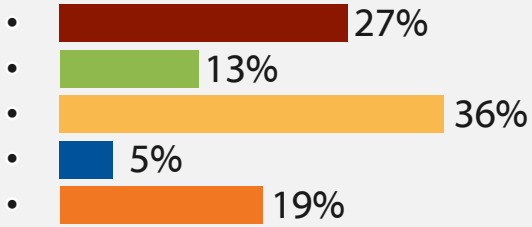
Survey Result

CURRENT CHANGES BEING MADE

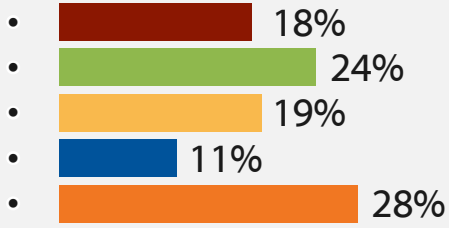
Fraud prevention/detection



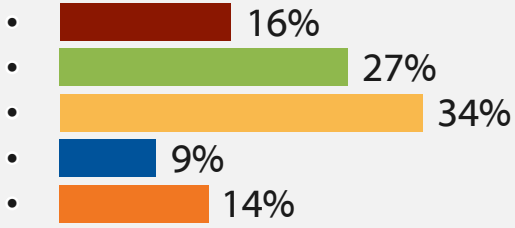
Supply chain



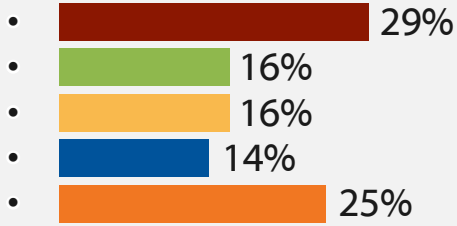
Cyberthreats and data breaches



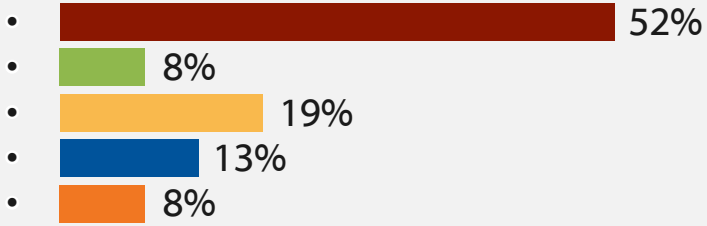
Talent acquisition strategies



Research and development



Acquisition/divestitures



- No need to change
- Recognize need to change
- Developing strategy to change
- Concrete plans to implement change
- Change program underway or completed

Revenue
RECOGNITION

Mark A. Sarver

In the manufacturing industry, companies are constantly faced with challenges, some of which may require them to adapt or evolve. In our survey, cyberthreats and talent acquisition strategies were identified as areas in which companies recognized the need to change. However, another area that may not have yet been addressed by your company are the changes resulting from the soon-to-be-effective revenue recognition standard.

Although revenue recognition over the entire life of a contract will not change, the new accounting standard could alter the timing of revenue recognition for your company based upon the underlying language in the contract. If the appropriate steps to prepare for the changes are not taken, companies could leave themselves more susceptible to financial reporting errors.

In May 2014, the Financial Accounting Standards Board issued Accounting Standards Update (ASU) 2014-09, Revenue from Contracts with Customers, with the goal to ultimately remove inconsistencies and weaknesses in revenue recognition requirements by moving from a rules-based recognition approach to a principles-based approach. Under the new ASU, revenue would be recognized at a point in time (or over time) as the following five steps to the revenue recognition model are satisfied:

1. Identify contracts with the customer
2. Determine the performance obligations to the contract
3. Determine the transaction price
4. Allocate the transaction price to the performance obligations
5. Recognize revenue as a performance obligation is satisfied

These steps revolve around the idea of a performance obligation, which is a promise in a contract with a customer to transfer a good or service to that customer. While it may appear that identifying a performance obligation, allocating a price to it and seeing it satisfied may be straightforward in the manufacturing industry, there are multiple changes that, if not prepared, could lead to accounting errors.

Continued on next page.

Revenue
RECOGNITION *(continued)*

Mark A. Sarver

One significant area in which this ASU will impact manufacturers is warranties. Many companies offer warranties in connection with the sale of a product. Some provide assurance that the product will function as intended because it's in line with agreed upon specifications, while others offer service of some sort in addition to the standard warranty. In an instance in which a warranty is purchased or negotiated separately, it is considered a separate performance obligation, and a portion of the transaction price should be allocated accordingly and recognized as the warranty is satisfied.

Another area that heavily impacts manufacturers are incentives like volume rebates. A rebate liability will be required going forward when at the start of the contract management believes that certain volumes and rebates will be met and earned. As rebate periods continue, circumstances may arise that would require management to revisit the assessment and impact future revenue to be recognized.

Right of return is also an area that impacts the industry. Under the new ASU, in such instances revenue and cost of sales would be recognized to the extent the company expects to be entitled (products not expected to be returned), and the difference would be a refund liability and an asset for the sale value and cost value for products expected to be returned. These assessments should be revisited frequently and adjustments made as necessary.

The new revenue recognition principles rely heavily on estimation, judgment and reassessment throughout the life of a contract. Manufacturing companies need to prepare for the impact of the new standard and how internal controls and oversight can be improved to protect against any potential error that could be borne of these recognition changes. This ASU is effective for annual periods beginning after December 15, 2017 for public entities and periods beginning after December 15, 2018 for nonpublic entities.

Survey Result

INFORMATION SECURITY

BUDGET

- 45% Increased
- 1% Decreased
- 54% Remained the same

ACTIONS TAKEN

- Hired new key personnel to manage the risk - 20%
- Conducted a high-level security assessment - 38%
- Performed a vulnerability assessment - 56%
- Held security awareness training - 45%
- None of the above - 15%
- Other - 10%
  - Moved to the Cloud
  - Upgraded hardware and software
  - Implemented new IT policies
  - Hired third-party support

Stepping Up: **CYBERSECURITY**

Daniel J. Desko

Respondents to our annual manufacturing survey showed that they have stepped up their approach to information security by increasing their cybersecurity spend. Approximately 45% of respondents indicated that they have increased dollars allotted to information security matters, while only 2% noted a decrease, with the remainder keeping the status quo.

Manufacturers are wise to put an increased focus and budget on cybersecurity, since they have long been targets of external threat actors, even before the days of the internet. Whatever good a manufacturer produces, there is always someone out there looking for ways to make it faster, better and cheaper. In many cases, they do so unethically, whether through reverse engineering, hiring employees of a competitor or using other methods to steal trade secrets. These examples are not new, and have been long-standing risks in the manufacturing business landscape. The methods by which these risks transpire have evolved over time, and are now enabled by technology.

The Verizon Data Breach Incident Report, which studied 620 confirmed incidents reported by manufacturers in 2016 (124 with confirmed data disclosure), notes that the presumed motives of 94% of these breaches were fueled by espionage in order to steal trade secrets. Please note, this data only studied reported incidents; the true number of incidents is likely far greater.

While this all seems like something out a spy novel, I can assure you that it is real and is happening in our own backyards. Not long ago, a grand jury in the Western District of Pennsylvania indicted five Chinese military hackers for computer hacking, economic espionage and other offenses directed at six American victims in the U.S. nuclear power, metals and solar products industries.

One may read the details of this case and have a fatalistic attitude towards cybersecurity, and that is totally understandable. After all, how can any one company stand up to the attacks of motivated state-sponsored hacking agencies? While there is no silver bullet solution, we can tell you that there are a number of realistic best practices that can be implemented to help drastically reduce the chance of being breached. Performing some of these best practices will make you less attractive to hackers and they may focus on easier targets. In other words, you don't have to outrun the bear, you just need to be faster than the person next to you.

Continued on next page.

Stepping Up:
CYBERSECURITY *(continued)*

Daniel J. Desko

Here are three high-impact recommendations worth focusing on today:

- **Beware of the Phish** - The vast majority of attacks begin with phishing, a form of social engineering designed to fool employees into giving up their password or installing malware. We recommend implementing anti-phishing software on your email gateway to further scan and scrutinize inbound emails. In addition to the tools, end-user awareness training is also necessary.
- **Monitor the Border** - Pay attention to the data leaving your network. We often find that organizations are so focused on the traffic coming into their network that they often ignore the outbound traffic. It is wise to take a more holistic approach and monitor both. By studying the outbound data and setting up data loss prevention rules, you will be in a much better position to detect sensitive data leaving your network in an unauthorized manner.
- **The Earth is not Flat** - Beware of a flat network. In other words, not every computer on the network has a need to talk to every other computer on the network. If the computer of an administrative assistant gets compromised by malware, the attacker shouldn't be able to see your server with all your trade secrets stored on it. Segment and isolate your most prized data as much as possible.

While these recommendations may seem trivial, it is not uncommon to see businesses that lack the basics in cybersecurity defense measures. Hackers constantly change their methods of stealing data; be sure your business continually evaluates and challenges its cybersecurity framework.

Survey Result

TOUGHEST CHALLENGES

TOP 4

- Lack of Skilled Workers
- Customer Demand
- Identifying New Markets and Products
- Technology/Automation

Survey Result

WORKFORCE WILL

IN 2018

48% Increase

6% Decrease

46% Remain the same

Survey Result

SKILLED WORKER SHORTAGE

ACTIONS TAKEN

- 66% Wage increases
- 51% Apprenticeships/in-house training
- 43% Community outreach/ academic partnerships
- 43% Social media engagement (i.e. recruiting, marketing)
- 22% Tuition reimbursement
- 10% Additional employee benefits

Closing the Gap
FINDING & RETAINING TALENT FOR TOMORROW'S WORKFORCE

John A. Kohler

An ongoing concern of manufacturers and other organizations is how to find and retain good talent. It is particularly challenging in an ever-changing industry where technological advancements have begun to alter what skillsets organizations are requiring from their employees. Our survey respondents have indicated that the lack of skilled labor is the toughest challenge they're currently facing (53%) and, over the next five years, the development of the labor force is near the top of their list of concerns (45%).

Within the next 10 years, manufacturers across the country will be tasked with replacing millions of jobs due to the number of retiring "baby boomers," as well as creating additional jobs thanks to an increased demand for products and services. A recent report published by the Allegheny Conference on Community Development stated that the Pittsburgh region will require 34,000 new workers annually over the next 10 years. The skilled workforce so heavily sought will need to be equipped not only with production and mechanical skills, but also with computer science or other technical application skillsets. Local colleges and universities are partnering with elementary and secondary schools to create an awareness of career opportunities with skilled trades, demystifying stereotypes of advanced manufacturing and changing the perception that manufacturing jobs in the 21st century are not the dirty, labor-intensive jobs of the past. In fact, it's anything but. Modern manufacturers utilize technology, additive manufacturing (3-D printing) and robotics within their processes, often employing one or more individuals fully dedicated to research and development efforts.

Continued on next page.

Closing the Gap
FINDING & RETAINING TALENT FOR TOMORROW'S WORKFORCE *(continued)*

John A. Kohler

Elementary and secondary schools across the country have begun to emphasize STEAM (Science, Technology, Engineering, Arts and Mathematics) classes within their curricula. Programs are being designed to cultivate creative and critical thinking, experimental learning and problem-solving skills. Post-secondary schools are also creating curriculum designed specifically to prepare individuals for the advanced manufacturing workforce by offering programs and degrees in manufacturing engineering.

We are naïve to believe that our education system alone will produce the workforce our skilled trades will require. The greatest influence on our youth comes from family members and the messaging we deliver to our children. For many years, much of middle- to upper-class America has held the belief that a four-year college degree was the only path to a good-paying, secure career. In reality, many students with an undergraduate degree are now saddled with debt and struggle to find the positions they desire. Until we change our mindset, finding qualified workers will remain a challenge.

Journeymen (and women), on the other hand, are starting with salaries above the average state household income, and it is not uncommon for an experienced tradesman to earn into the six figures. These individuals are educated with post-secondary degrees similar to college or university, and they have good-paying jobs, with healthcare, retirement benefits, and ongoing training and education.

Approximately half of our respondents stated that they intend to increase their workforce over the next year. Given the known, and well-publicized lack of skilled talent in the workforce, where will those resources come from? One way our respondents are bridging the skills gap is through the creation and implementation of apprenticeship programs or internships (51%) that help employers connect to the workforce and foster the training and development of the next generation. While there is a financial cost to the organization, it is an investment in human capital.

Because of the need for skilled labor, many companies have focused on finding and consuming local talent rather than developing talent. Such a scenario works against the employer base by 1) limiting the expansion of the pool of resources, and 2) increasing compensation for the existing pool, making labor more expensive. Interestingly, approximately 66% of our respondents indicated that they are addressing the skilled worker shortage through increased wages.

There may be no single answer in finding the solution to the skilled worker shortage, and a combination of strategies may be necessary to help fill the void. It is apparent that our respondents recognize the challenges ahead and are taking steps to address the impact to their businesses.

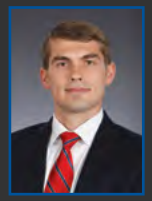
Survey Result

MOST IMPACT ON THE INDUSTRY

TOP 4

- Technology advancement
- Development of labor force/recruitment
- Government regulations and compliance
- International sales and globalization

Advanced Manufacturing Technology
NOT FAR FROM HOME



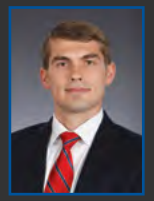
Brian C. Reitz

Over the past several years, a consistent theme among responses to our annual manufacturing survey has been the belief that technology advancement and robotics will have the most significant impact on the United States' manufacturing industry. In our 2017 survey, nearly 70% of respondents shared this sentiment. While it is clear that from a global perspective technology advancement has and will continue to impact nearly all industries, the fact that our survey respondents are largely centralized in the Western Pennsylvania region reinforces this conviction locally.

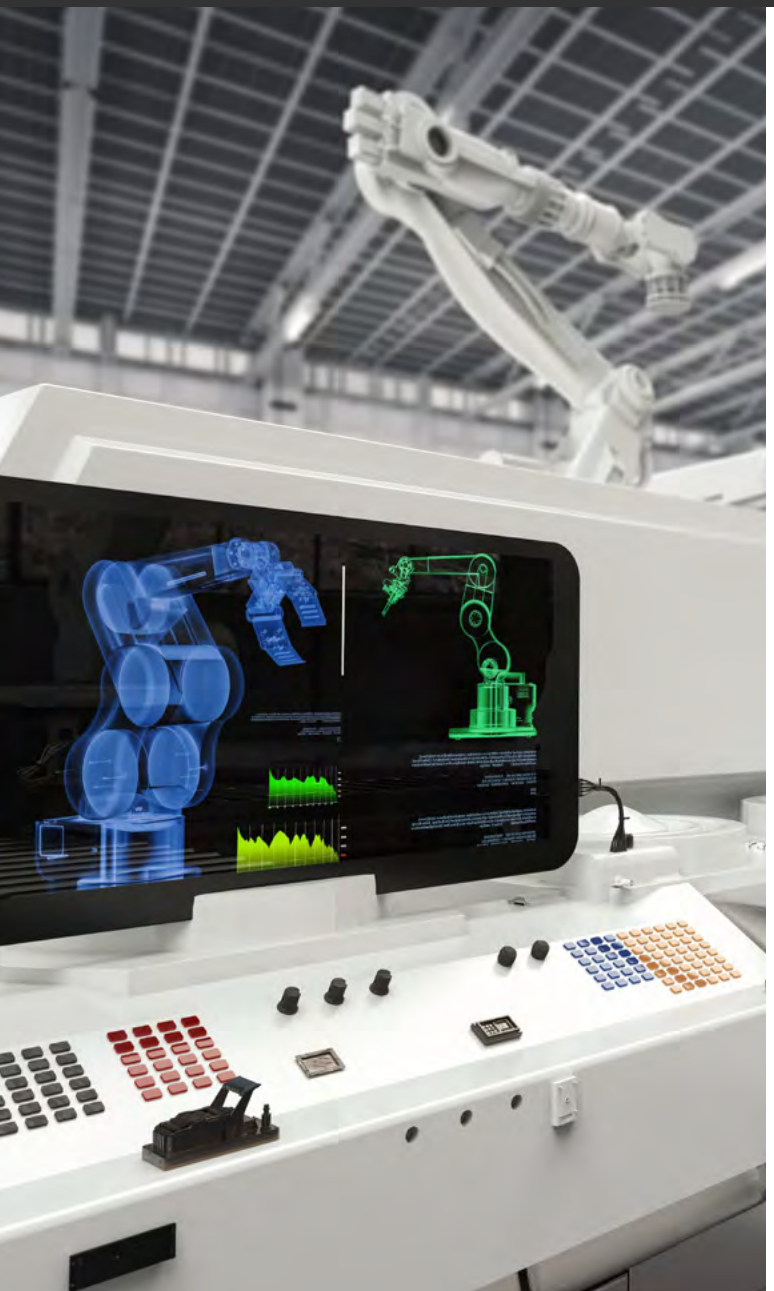
At the forefront of the development of autonomous vehicles, Pittsburgh has solidified its position as a critical hub for the advancement of robotics and technology. Taking advantage of the talent coming out of one of the top robotics programs in the country at Carnegie Mellon University (CMU), dozens of robotics companies have made their home in Pittsburgh. While self-driving cars attract the attention of the world and billions of dollars in investment capital, many other smaller local companies are striving to develop robotic solutions to ultimately continue to change and advance the way companies do business. Just last year, a local company that spun out of CMU released a fully autonomous robot that can locate and pick items from warehouse shelves.

Continued on next page.

Advanced Manufacturing Technology
NOT FAR FROM HOME *(continued)*



Brian C. Reitz



These developments and continued growth in the Pittsburgh robotics space show no signs of slowing, with the Advanced Robotics for Manufacturing Institute (ARM Institute), a standalone nonprofit organization founded at CMU, winning an $80 million grant from the Department of Defense in 2017 and receiving commitments of over $170 million from other partners. The ARM Institute is a Pittsburgh-based collaboration of over 220 companies, academic, government and nonprofit organizations working together to "catalyze innovation and expertise in robotics to accelerate growth of U.S.-based manufacturing." With significant financial backing, the ARM Institute will continue to play a critical role in the creation and development of emerging technologies, including artificial intelligence, 3-D printing and autonomy for use in the United States manufacturing industry.

The ARM Institute, in connection with CMU's Manufacturing Futures Initiative (MFI), works to bring the best technologically advanced tools to American companies in order to allow them to compete with low-cost overseas manufacturing. Further, these organizations are working to make these technological tools and advancements affordable for even small businesses to help continue to build the base of successful U.S. manufacturers.

Having the ARM Institute, CMU's MFI and many other private advanced technology companies headquartered in Western Pennsylvania, there is no doubt our region will continue to be on the forefront of technological advancement in manufacturing. With technology changing the way local manufacturers do business every day, it's exciting to know that many of these technologies are being developed right in our backyard.

About the
SURVEY RESPONDERS

Karen M. Lang

SECTORS

- Metals
- Industrial
- Consumer Goods
- Chemicals
- Plastics
- Wholesale Distribution
- Mixed Materials
- Assembly
- Food Services
- Medical Devices
- Print Finishing
- Home and Building

EMPLOYEES

- Fewer than 50 - 22%
- 51-150 - 29%
- 151-250 - 11%
- 251-500 - 9%
- More than 500 - 29%

ANNUAL REVENUES

- Under $10 million - 17%
- $10 to $25 million - 25%
- $26 to $50 million - 12%
- $51 to $100 million - 14%
- $101 to $250 million - 14%
- $251 to $500 million - 2%
- Over $500 million - 16%

What does the U.S. manufacturing industry need to do to remain competitive?

Enact tax reform

Develop skilled workforce

Automate

Increase output

Invest in technology

Innovate

About the Schneider Downs
MANUFACTURING INDUSTRY GROUP

Schneider Downs provides accounting, tax and business advisory services to the manufacturing industry in Western Pennsylvania, Central Ohio and around the world. Our team of business advisors works with a range of manufacturers from high-tech startups to publicly traded industrial manufacturers.

Our Manufacturing Industry Group helps our clients streamline operations, improve internal controls, save taxes and grow profitability. Our dedicated team of professionals has the experience and knowledge to create solutions specific to your manufacturing organization, solutions that will help you achieve your business goals.

Stay current with changes as they happen and subscribe to our weekly Our Thoughts On and Manufacturing Matters newsletters. Sign up on our website: **http://www.schneiderdowns.com/subscribe**.

For more information about our services to the manufacturing industry, visit our website or contact one of our Manufacturing Industry Group Team Members:

Evan C. Ogrodnik – eogrodnik@schneiderdowns.com
Edward R. Friel – efriel@schneiderdowns.com
Mark E. Cobetto – mcobetto@schneiderdowns.com

CLICK HERE TO LEARN MORE

Pittsburgh:
p 412.261.3644
f 412.261.4876

Columbus:
p 614.621.4060
f 614.621.4062

schneiderdowns.com

LinkedIn

PrimeGlobal
An Association of Independent Accounting Firms