

2017 NATIONAL MANUFACTURING OUTLOOK AND INSIGHTS

Strategies to Overcome the Headwinds



leading **edge** alliance
innovation • quality • excellence

2017 MANUFACTURING OUTLOOK AND INSIGHTS

Strategies to Overcome the Headwinds

Contents

About the Industry	1
About the Survey	1
About the Respondents	2
2017 Economic Outlook	4
2017 Survey Outlook	6
2017 Key Strategies for Success	7
1. Top Priorities for Manufacturers	8
2. R&D Investment	9
3. Capital Expenditures	10
4. Increasing Costs	11
5. Mergers and Acquisitions	12
6. Hiring Trends	13
7. Data and Technology	14
Summary Observations	15
About LEA	16

About the Industry

Perhaps more than any other industry, manufacturing is in a continual state of transformation and has been for many years. Manufacturing businesses must manage frequently changing customer needs and a rapidly shifting competitor landscape, while remaining focused on profit margins and revenue growth. One thing that is not changing, however, is the importance of this industry to the U.S. economy.

According to the Bureau of Economic Analysis, the value of manufacturing in total annual GDP was \$2.17 trillion, or 11.9%, in the second quarter of 2016 (the most recently released report). This contribution represents more than the agriculture, construction, information, and mining industries combined. In fact, U.S. manufacturing alone would represent the ninth largest economy in the world according to the National Association of Manufacturers (NAM).

When considering the multiplier effect on the economy (the total increase as a result of spending), the impact is even greater. Traditional calculations by NAM state that for every \$1 spent in manufacturing another \$1.81 is added to the economy, which represents the highest multiplier of any industry sector. New research from the Manufacturers Alliance for Productivity and Innovation (MAPI), however, calculated the multiplier remarkably higher when accounting for the upstream supply chain and downstream sales chain. In September, 2016, MAPI found that for every \$1 spent on domestic manufacturing, another \$3.6 of value add is generated elsewhere.

The importance of manufacturing on U.S. employment, is equally significant. As of October, 2016, the Bureau of Labor Statistics reported that there were 12.3 million industry workers. This represents about 9% of the U.S. workforce. Combined with 17.1 million additional indirectly supported jobs, the manufacturing industry is connected to more than 20% of total U.S. employment according to the Economic Policy Institute.

***Manufacturing is mission critical
to a healthy U.S. economy.***

Whether measured by value added, economic multiplier, or employment, there is no question of the importance of this industry. Manufacturing is mission critical to a healthy U.S. economy. What is less clear is the future outlook of the industry and the actions necessary to get and stay ahead.

In an effort to better understand the outlook manufacturers have for 2017, the challenges they face, and the strategies they believe will be most effective, the public accounting firms of the Leading Edge Alliance conducted a survey of member firms' manufacturing clients and prospects. The following report describes that survey and the data gleaned from those respondents.

Sources: Bureau of Economic Analysis, NAM, MAPI, and the Economic Policy Institute

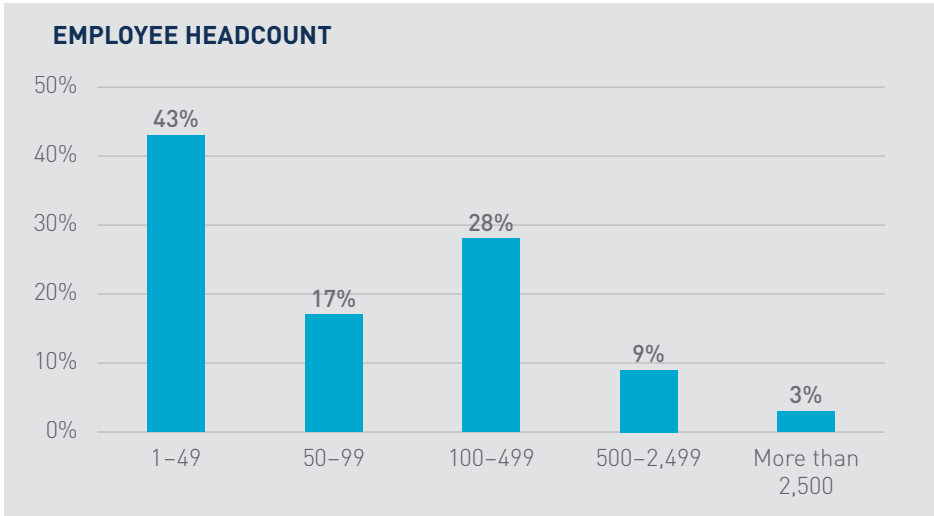
About the Survey

More than 250 manufacturing executives participated in the 2017 National Manufacturing Outlook and Insights survey during October, 2016. (It is important to recognize that the outlook and information shared by participants were collected prior to the national election in November, 2016.) Responses were collected via an anonymous electronic survey link sent to manufacturers from accounting firms, local industry, and business organizations. The survey was conducted using the Qualtrics LLC online research tool, which is utilized by more than 8,000 of the world's leading brands. All percentages included in this report were calculated based on total responses to each question separately and might not equal 100% due to rounding.

About the Respondents

Employee Headcount

Similar to the size of the average U.S. manufacturer, the majority of survey respondents were small. 43% had fewer than 50 employees, 60% had fewer than 100 employees, and 88% had fewer than 500 employees. Only 3% of respondents indicated that they had more than 2,500 employees. ▼

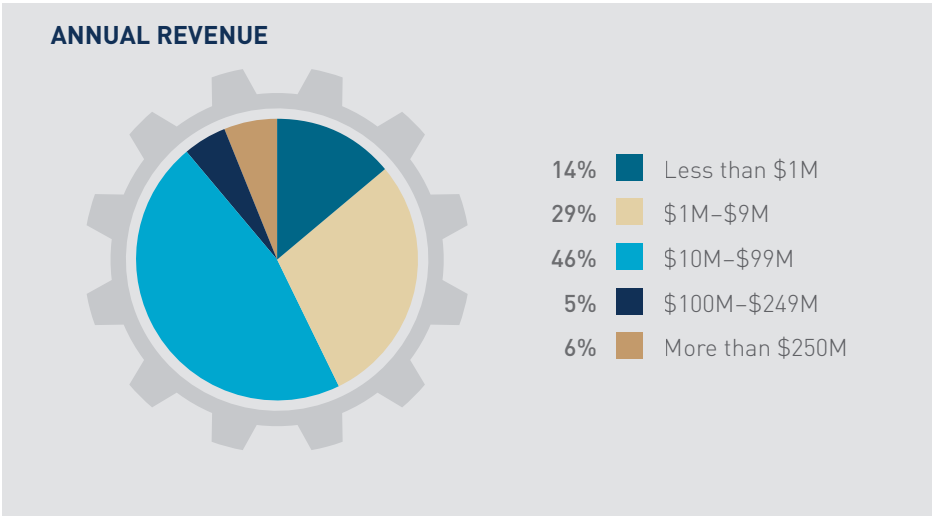


N=184

As of 2014, 94% of U.S. manufacturers had less than 100 employees, and only 1% had more than 500 employees. (U.S. Census Bureau and MAPI)

Annual Revenue

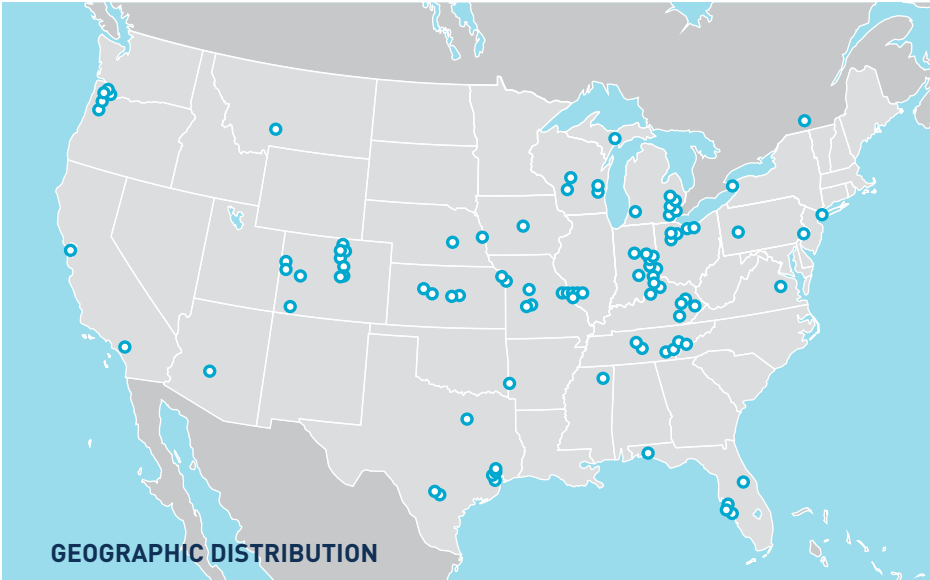
The greatest percentage of respondents, 46%, indicated that they had \$10 million to \$99 million in annual revenue. 5% had \$100 million to \$249 million in annual revenue, and 6% had more than \$250 million in annual revenue. 43% had less than \$10 million in annual revenue. ▼



N=202

Geographic Distribution

Survey respondents represent a true national geographic distribution. The greatest number of survey respondents were based in Midwestern, Southern and Great Lakes states, including Wisconsin, Michigan, Ohio, Indiana, Kentucky, Tennessee, Missouri, and Kansas. However, significant response was also gathered from western U.S. states, including Colorado, Oregon, and Washington, as well as southern states, including Texas and Florida. ▼

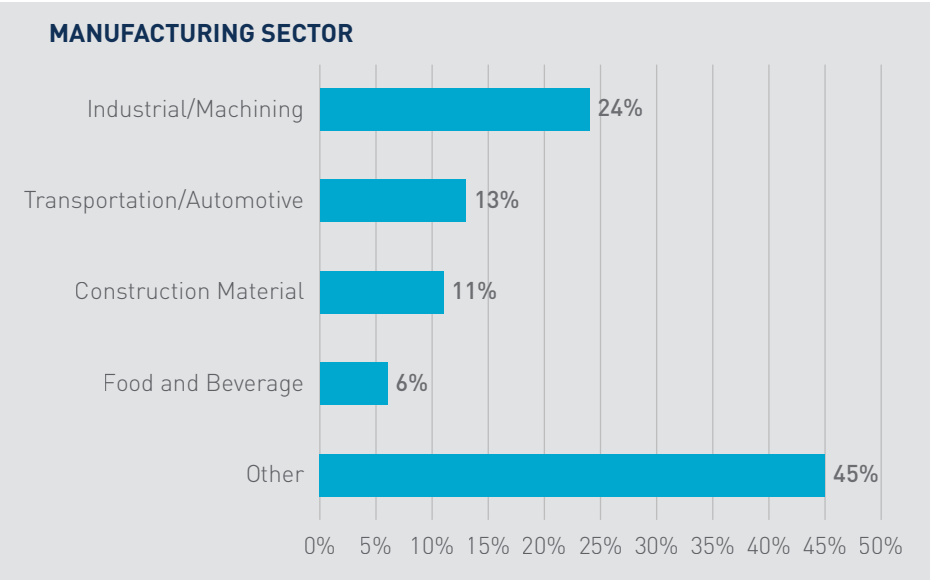


N=178

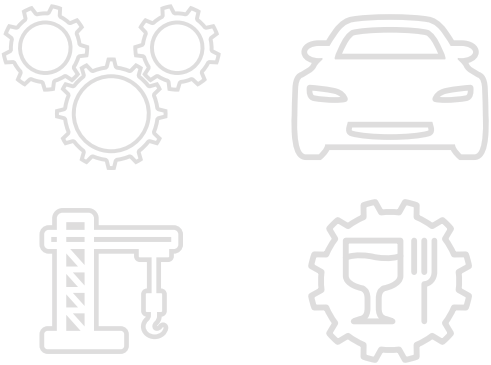
States with the greatest manufacturing employment as a percentage of total working age population include Wisconsin, Indiana, and Iowa. (U.S. Census Bureau)

Manufacturing Sector

Many types of manufacturers were included in this survey. The greatest representation included industrial/machining, transportation/automotive, construction material, and food and beverage manufacturers. Other survey respondents also included biotech/life science, aerospace/aviation, clothing and textile, and technical/scientific manufacturers. ▼



N=185



2017 Economic Outlook

By most accounts, the U.S. manufacturing industry outlook is healthy, but tenuous. Manufacturers operating in certain high-growth sub-industries will find more opportunities and less challenge for expansion, but those in lagging sub-industries will need to lead the pack in terms of efficiency, strategy, and nimbleness to grow. The industry headwinds are significant and range from internal issues, such as high inventory-to-sales ratios and the cost of technological innovation, to external factors, such as raw material prices, strength of the dollar, and global competition.

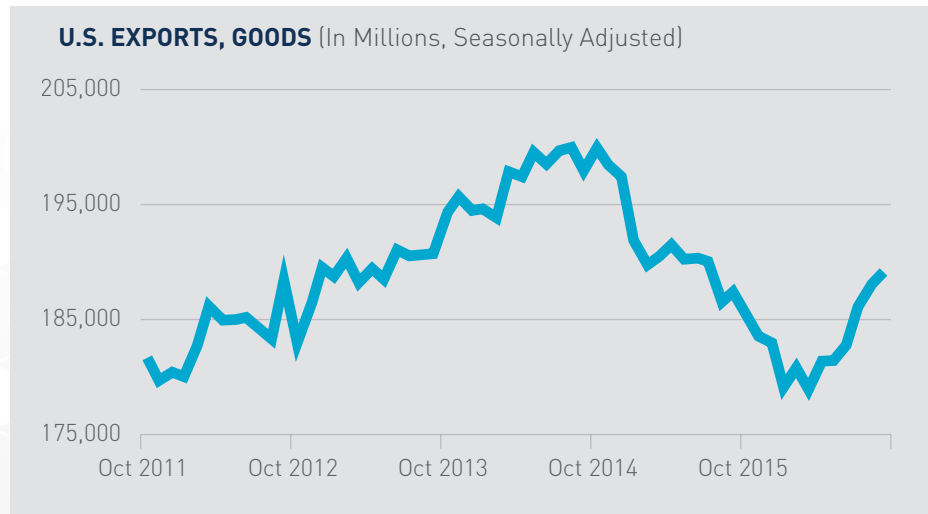
The third quarter of 2016, NAM Business Outlook dropped slightly from 61.7% to 61.0%, higher than the fourth quarter of 2015 and first quarter of 2016, but still significantly lower than the first half of 2015 when it was 88.5% and 76.3%. The Markit Manufacturing Purchasing Managers Index (PMI) in the U.S. has increased in recent months from 49.4 in August to 53.4 in October. This represents the highest reading in the past 12 months. In September, 2016, MAPI revised its manufacturing production growth down from 0.4% to 0.2% for 2016 and reduced its production growth forecast down from 2.0% to 1.6% for 2017.

While valuable to follow these kinds of statistics, what might be more important are the national and global trends impacting these industry measures and metrics. Two of the most important are U.S. exports and capital and consumer goods on new orders.

The industry headwinds are significant.

U.S. Exports

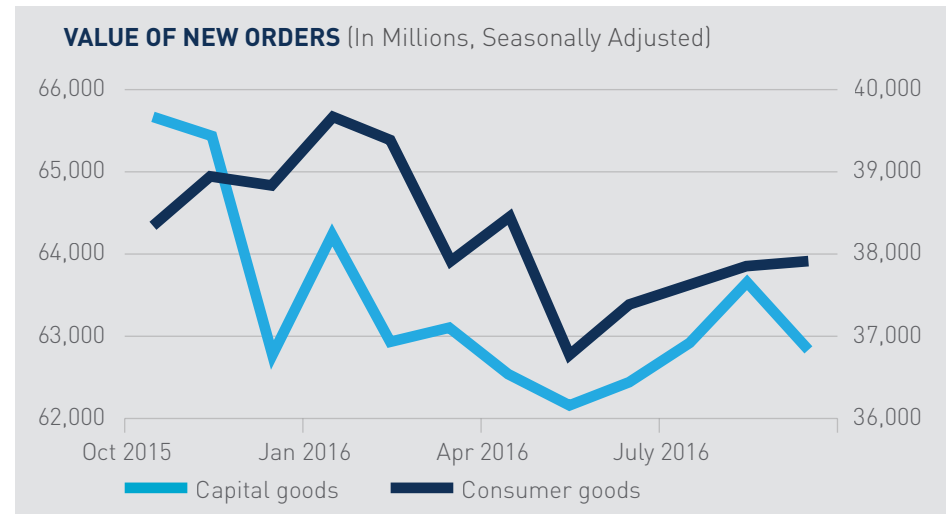
The export market for U.S. manufacturers has recovered significantly since spring 2016. The high value of the dollar and resulting foreign exchange rates have a major impact on global demand. Due to lag times in the purchase of some major products, even if the dollar's value drops, the impact may continue for a year or more. ▼



Sources: IHS Markit, MAPI, Bureau of Economic Analysis, Trading Economics, FRED® Federal Reserve Economic Data

New Manufacturing Orders

While consumer spending is near where it was one year ago, the weakness in non-defense capital spending by businesses is a significant issue for U.S. manufacturers. Many companies are spending money to gain efficiencies, but few are purchasing newly manufactured products (e.g., machines and tools, etc.) to grow productivity. ▼



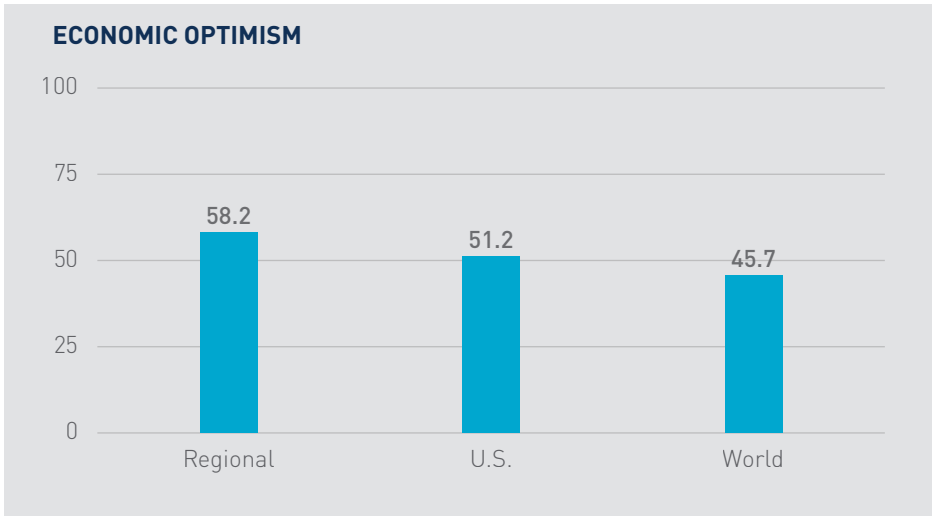
Weakness in non-defense capital spending by business is a significant issue.

2017 Survey Outlook

The survey asked respondents two questions to gauge their outlook for 2017, which captured both macroeconomic and microeconomic metrics. Asking manufacturers for their attitudes at both levels is critically important to universally understanding the industry and individual business opportunities in the new year. (These questions will be asked again in future surveys to track the expectations manufacturers have for the upcoming year.)

Optimism Rating

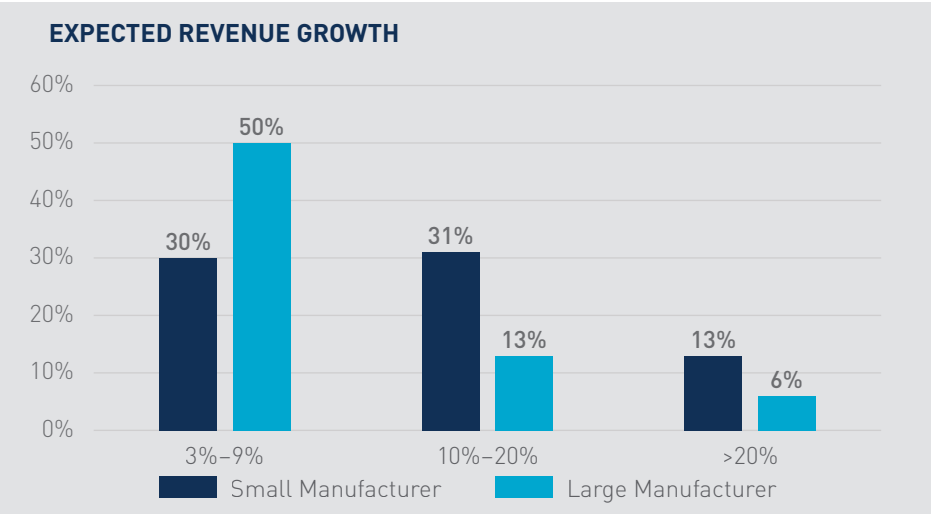
Survey respondents were asked to rate their optimism on a scale of 0 to 100, with 100 being the most optimistic for their regional economy, as well as for the U.S. and world economies. The average score was 58.2 for the regional economy, 51.2 for the national economy, and 45.7 for the world economy. Ranking the local economy higher and the world economy lower is a frequent trend in these types of surveys. ▼



N=177, 175, 169

Revenue Growth

When asked about expected revenue growth for 2017, respondents were split into two groups: “small manufacturers” (those with fewer than 100 employees) and “large manufacturers” (those with 100 employees or more). A similar percentage of both groups, 74% and 69%, respectively, expect revenue to grow. However, significantly more small manufacturers are expecting growth in the 10% to 20% and greater than 20% categories. ▼



N=179

Significantly more small manufacturers are expecting high growth.

2017 Key Strategies for Success

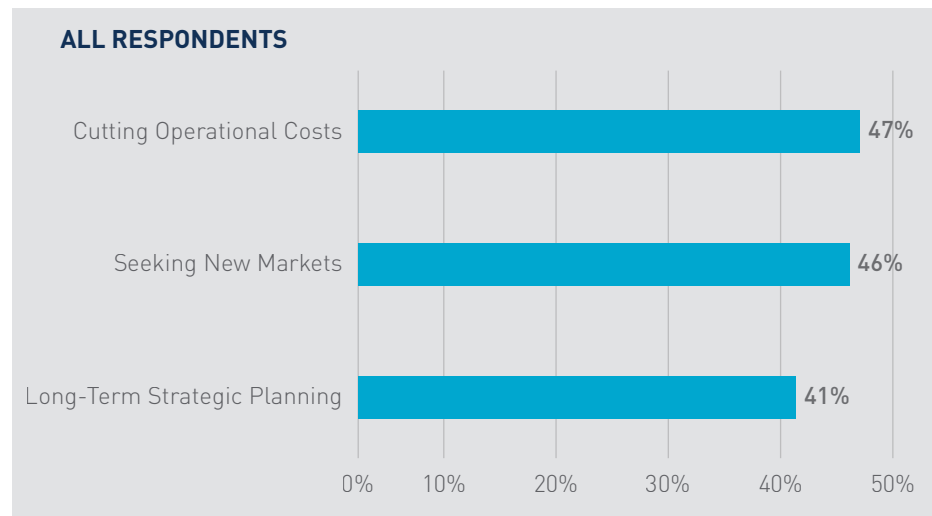
Beyond simply capturing the industry outlook for manufacturers in 2017, the LEA National Manufacturing Outlook and Insights survey also sought to identify key strategies of the best-run manufacturers. To gain this insight, seven strategic results are presented below: (1) top priorities, (2) R&D investment, (3) capital expenditures, (4) costs, (5) M&A, (6) talent, and (7) technology.

To highlight the difference between what most manufacturers and the highest growth manufacturers are planning and expecting, the answers of those who selected expected 2017 revenue growth in the 10%-20% and >20% category were segmented out and are presented in the following separate graphs. (These responses were also included in the “all respondents” graphs.)

- 
- 1 Top priorities
 - 2 R&D investment
 - 3 Capital expenditures
 - 4 Costs
 - 5 M&A
 - 6 Talent
 - 7 Technology

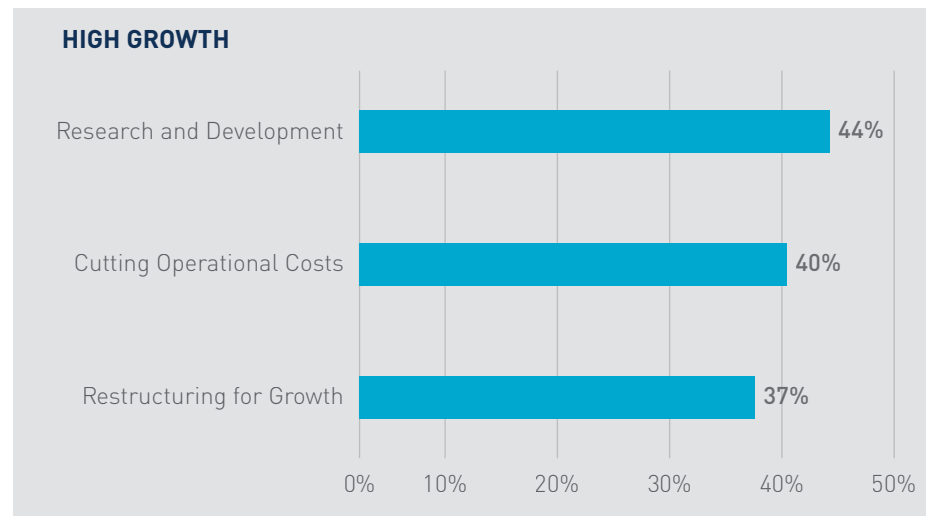
1. Top Priorities for Manufacturers

Among all respondents, 47% identified **cutting operational costs** as a top priority for 2017. Similarly, 46% selected **seeking new markets**, and 41% selected **long-term strategic planning**. ▼



N=180

Among high-growth respondents, 44% selected **Research and Development**, 40% selected **cutting operational costs**, and 37% selected **restructuring for growth**. ▼



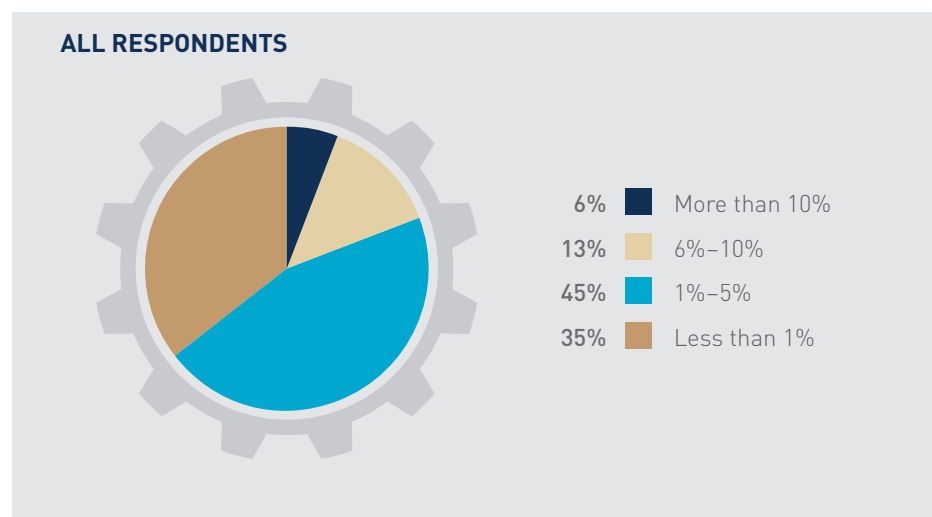
N=59

Strategy: It is not surprising that slower growing respondents are focused on cutting costs. However, as the saying goes, you can't shrink to greatness. In addition, after years of cutting costs following the great recession, few businesses find much more to cut. Higher growth respondents understand the importance of ongoing R&D and continuously optimizing their operational infrastructure to enable growth.

2. R&D Investment

According to NAM, “Manufacturers in the United States perform more than three-quarters of all private-sector research and development (R&D) in the nation, driving more innovation than any other sector.” This valuable manufacturing R&D work, not only improves the products companies create, but also results in critically important investments in people and processes, which lead to productivity gains and benefit other related industries.

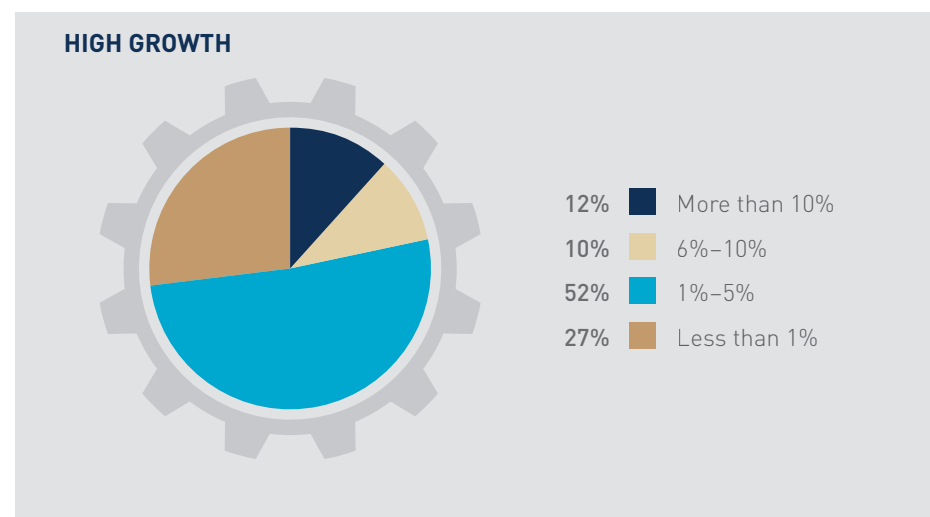
More than one-third of all respondents indicated that **less than 1%** of revenue would be reinvested in R&D in 2017. However, more encouraging was that nearly one-fifth of all respondents indicated **6%–10%** or **more than 10%** would be reinvested. ▼



N=177

When isolating the high-growth respondents, 12% plan to reinvest **more than 10%** into R&D, 10% plan to invest **6%–10%**, and more than half plan to reinvest **1% to 5%**. These higher percentages might reflect a combination of factors, including:

- Manufacturers in rapidly changing, high-tech sectors
- Manufacturers who are capturing more costs toward the R&D credit
- Manufacturers who waited for the R&D credit to become permanent
- Manufacturers using R&D to cut operating costs ▼



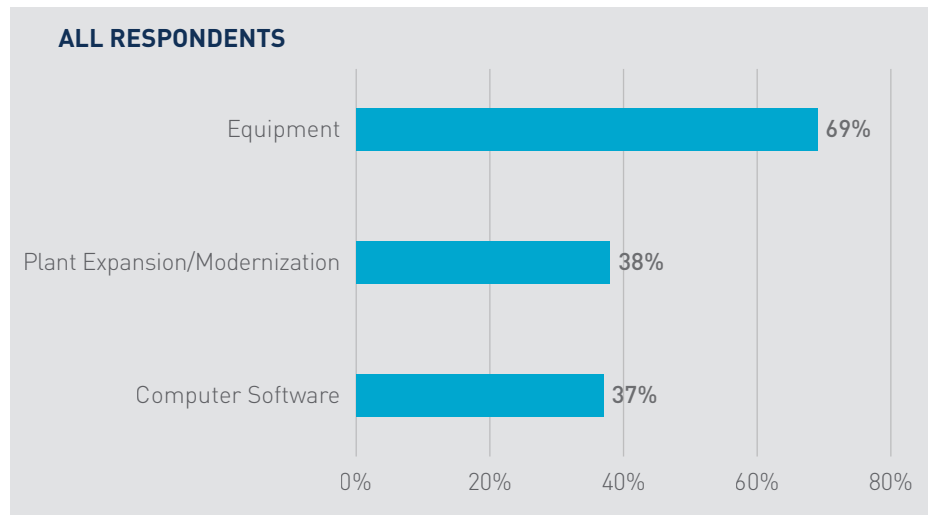
N=59

Strategy: Starting in 2016, the R&D tax credit can be used to offset payroll taxes up to \$250,000. This is an incredibly powerful new opportunity for rapidly growing and early stage manufacturing companies that may be pre-revenue but have significant labor expenses. There have also been recent changes to this credit that make it more useful to S corporation and partnership manufacturers.

3. Capital Expenditures

These costs are critical to the operations of most manufacturers who rely on upgrading assets and acquiring new efficient tools to remain competitive. These kinds of investments, however, are typically very expensive; therefore, they require careful and deliberate planning. Creating a purchasing timeline can help manufacturers prioritize and plot investments with their expectations around cash flow utilization, financing strategies, and the use of all available tax credits and deductions.

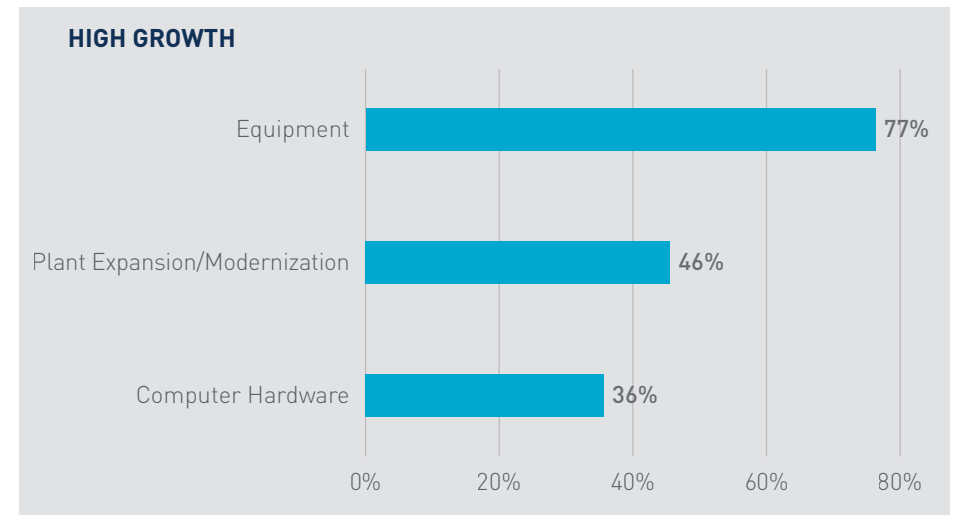
Among all respondents, just over two-thirds plan capital expenditures on **equipment** in 2017. Significantly fewer, 38% and 37%, respectively, identified **plant expansion/modernization** and **computer software** investments in 2017. ▼



N=165

Isolating high-growth manufacturers, a predictably even higher percentage, 77%, expect capital investment in **equipment** in 2017. Similarly, a higher percentage, 46%, expect to invest in **plant expansion/modernization**, likely as a result of the rapid growth. While all manufacturers were focused on **software**, the third highest area of capital expenditure investment for highest growth manufacturers was **computer hardware**.

When respondents were separated by size, small manufacturers, many of whom are more rapidly growing, plan to spend more on plant expansion/modernization, whereas larger manufacturers plan to spend on computer software as these systems grow in complexity and sophistication. ▼



N=56

Strategy: Manufacturers planning significant investment on equipment or facility expansion in 2017, should consider Section 179D, which provides energy efficiency deductions, and Section 179, which allows companies to expense up to \$500,000 on new, used, purchased, or financed equipment. Bonus depreciation, cost segregation studies, and any state or local credit or deduction programs should also be fully explored.

4. Increasing Costs

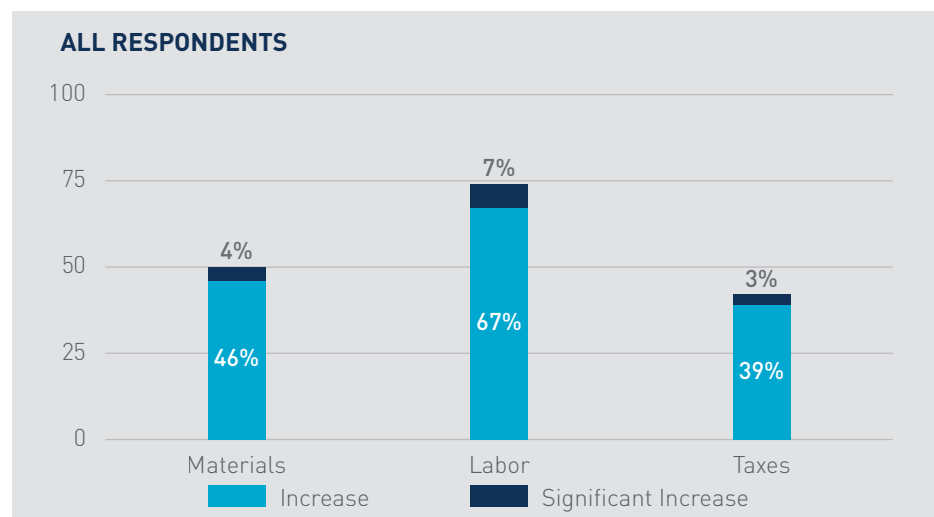
Manufacturing costs are typically split into three categories: materials, labor, and overhead (also known as G&A). Taxes are another important expense factor for manufacturers. While each of these segments will increase incrementally over time, it is valuable to understand which costs increasing at greater speeds in the near future.

Equally important is determining to which product lines, divisions, and customer costs should be attributed. Many manufacturers might lack the expertise, and, more importantly, the systems, to accurately assign expenses to each line of business.

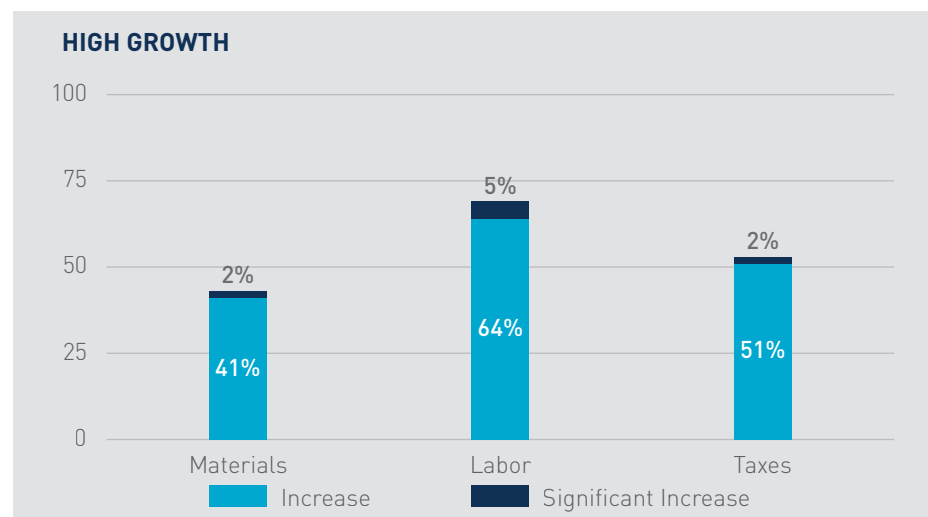
When it comes to expenses, 74% of all respondents expect **labor costs** to increase or increase significantly, followed by 50% of respondents who believe this will be the case with just **materials costs**, and then 42% who expect **tax costs** to increase or increase significantly. ▼

High-growth respondents project a slightly different picture. While **labor costs** is again the area with the greatest percent expecting growth (69%), this is followed by 53% expecting increases in **tax costs**.

When respondents were segmented by size on this question, smaller manufactures seem to have less issue with increasing raw material costs, but are challenged with escalating expenses from taxes. ▼



N=179, 179, 178



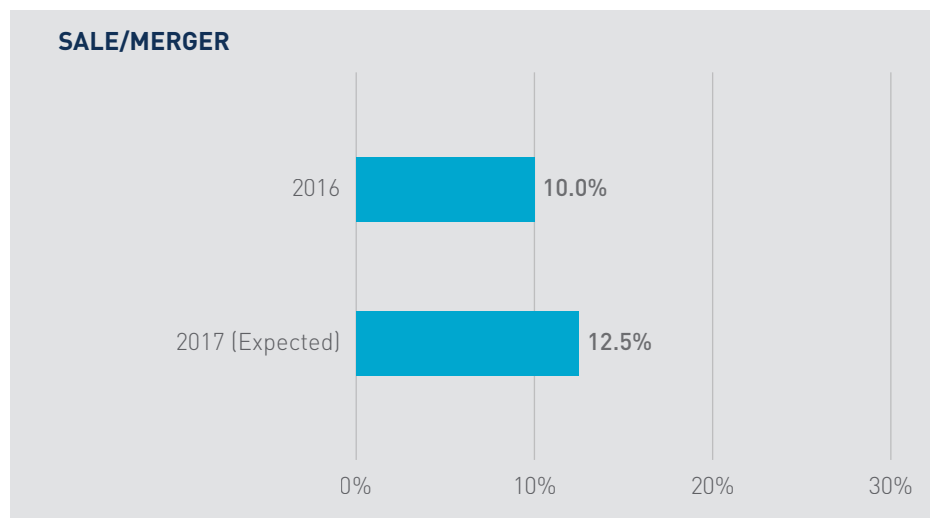
N=59, 59, 59

Strategy: In many sectors in recent years, manufacturing has changed from having very clear, specific product-attributable material and labor costs to a complex technology-based environment. Cost accounting and activity-based costing have moved reporting in the right direction to more accurately recognize specific product and service line profitability.

5. Mergers and Acquisitions

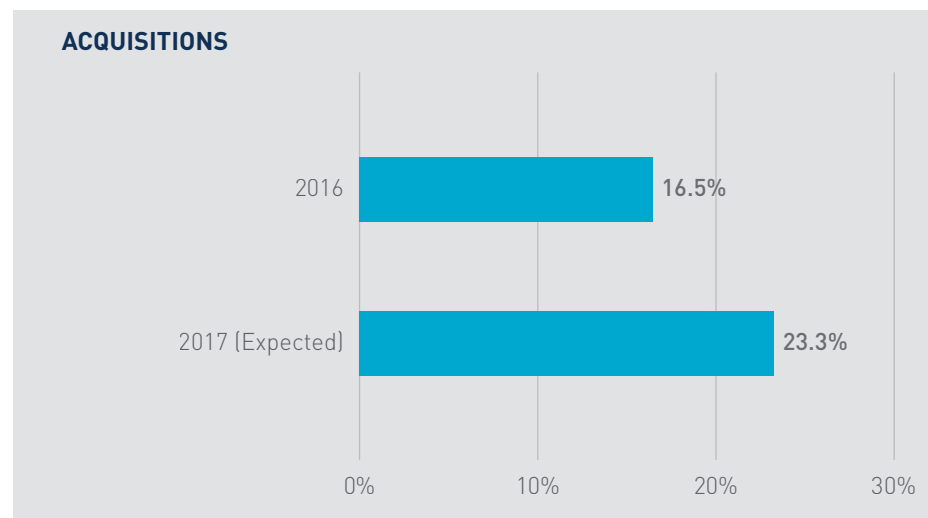
Many dealmakers expect healthy levels of M&A activity in the manufacturing industry to continue into 2017. Recent deals have been a result of various reasons for strategic and financial buyers. Strategic buyers have been filling technology gaps or consolidating their supply chains, and financial buyers looking for high-tech opportunities and undervalued manufacturers with strong financial foundation. In addition, the aging workforce in the manufacturing industry is likely leading to more owners considering sale opportunities.

One in ten respondents indicated they explored a sale or merger in 2016. That number increased to just over 12% indicating that they plan to explore sale or merger opportunities in 2017. ▼



N=176

Similarly, more respondents expect to explore acquisitions in 2017. Just over 16% indicated they explored acquisitions in 2016, whereas nearly a quarter of respondents are planning to investigate strategic acquisitions in 2017. (Response percentages for the high-growth segment were comparable for both questions.) ▼



N=57

Strategy: Manufacturers that are planning to sell their businesses should take a close look at operations, product line profitability, raw materials inventory, and customer concentration, and the sooner the better. These elements and the quality of financial statements and reporting can dramatically impact a potential sale price. Likewise, manufacturers looking for strategic acquisitions, should pay particular attention to the technology systems and processes at targets and consider the cultural implications for integration and success after the deal.

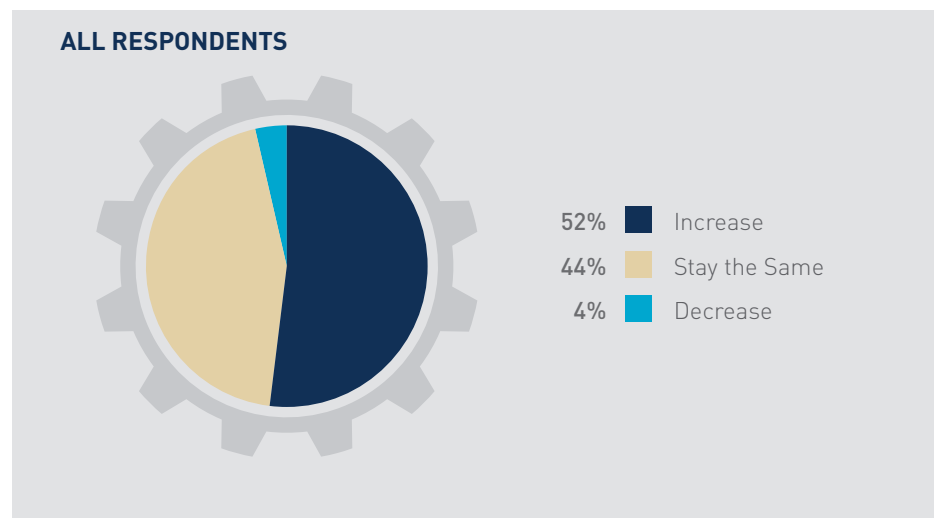
6. Hiring Trends

When asked about barriers to business growth in 2017, three of the top four responses were labor based. 47% of respondents selected **lack of qualified workers**, 38% selected **healthcare costs**, and 36% selected **pressure for increased wages**. (These talent-based challenges were also illustrated in the earlier question about anticipated operating cost increases in 2017.)

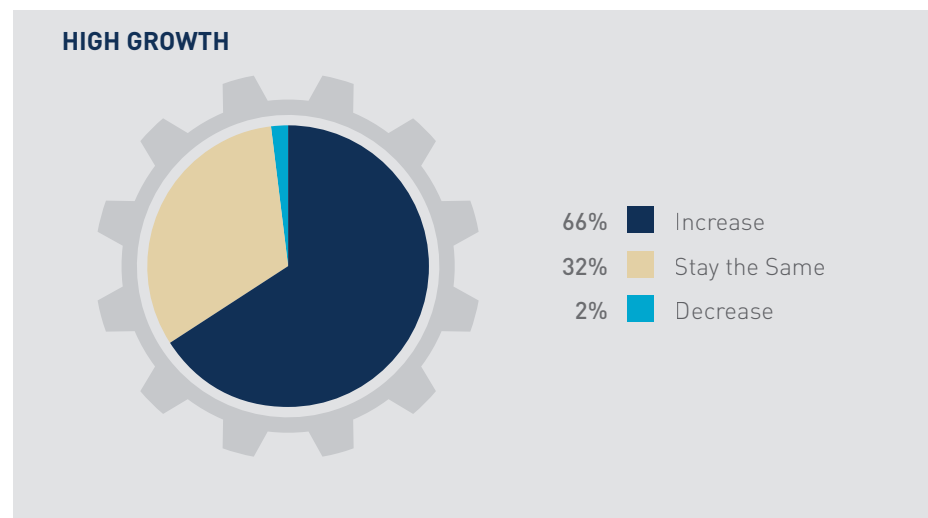
To understand how significant the competition for talent issue is, manufacturers were also asked about hiring plans for the new year.

Of all respondents, 52% indicated they expected to hire more, 44% indicated their hiring would remain the same, and only 3% indicated they expected hiring to decrease. ▼

When looking at high-growth respondents, demand for talent increases significantly. In this group, 66% expect to hire more, 32% expect to maintain current levels of hiring, and only 2% plan to decrease hiring. ▼



N=176



N=59

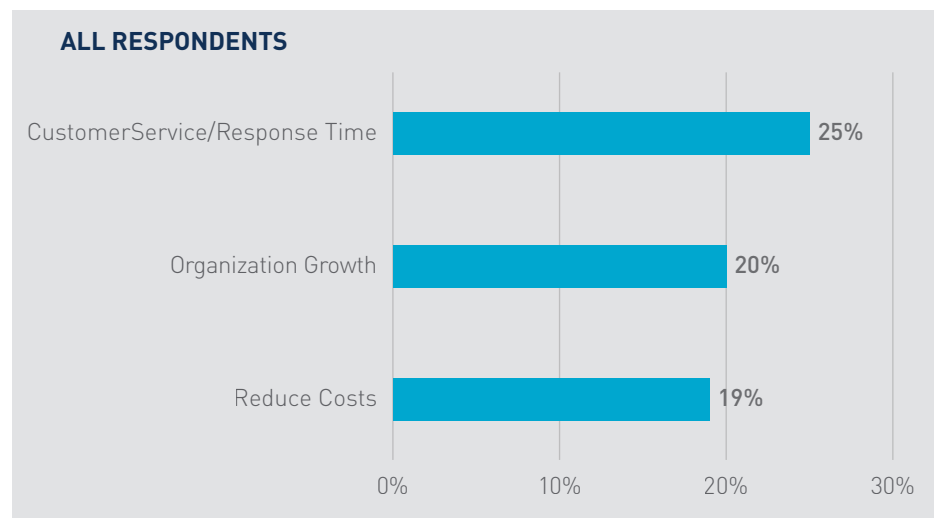
Strategy: The “make versus buy” decision does not only apply to products—it also applies to people (train talent or recruit it?). The best answer is probably a combination of making (apprenticeships) and buying (experienced hires) depending on timing and the technical skills required. The mix will be unique to the individual manufacturer and its circumstances.

7. Data and Technology

Technology issues are of critical importance to manufacturers in all sectors. Big data, business intelligence, cyber security, and the Internet of Things, are just some of the trends and challenges manufacturers should be thinking about.

The most successful manufacturers use technology as a strategic advantage, and those that don't are quickly left behind. To understand the impetus for technology planning and decisions, we asked respondents what top drivers impact their technology strategies.

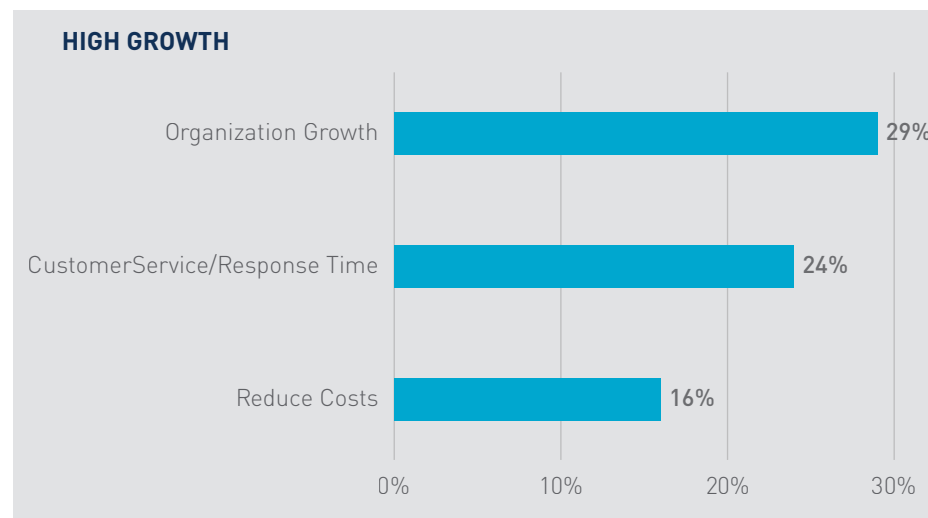
Customer service/response time was selected by one-quarter of all respondents. Another 20% chose **organization growth**, and almost 20% selected **reducing costs**. ▼



N=175

The same three top drivers were identified by the high-growth respondents. Nearly 30% selected **organization growth** (reflecting the important impacts to technology support when an organization grows), nearly a quarter selected **customer service/response time**, and 16% choose **reduce costs**.

Top business drivers impacting technology are improved customer service and response time, business growth expectations, and the desire to reduce costs. ▼



N=58

Strategy: When it comes to technology, quality data and the ability to analyze and interpret it change decision making and outcomes for the better. Five areas in which data accuracy is most important for manufacturers' ability to make strategic decisions include supply chain, operations, inventory, customer data, and financial recordkeeping and asset management.

Summary Observations

It is undebatable that a healthy manufacturing industry is mission critical to a thriving U.S. economy.

What is under debate is the nature of the sector's growth and how individual manufacturers can temper the challenges and exploit the opportunities before them. These matters include talent, technology, customer demands, and ongoing globalization. More than ever, small to middle market companies need help from their advisors and each other.

From colleagues, to service providers, to friends, let's start a dialogue about how we can collaboratively grow manufacturing businesses and our standing in the world economy.

The Manufacturing Special Interest Group of the LEA is comprised of member firms with a client industry focus on manufacturing. Through the combined efforts of these firms from across the country, we are pleased to present this report from the first annual national outlook survey. This effort represents the kinds of success that can be achieved by LEA member firms working together with a common goal and shared talent.

We welcome your thoughts and ideas about the survey and future survey enhancements, and invite your support for this project to become truly global, representing worldwide manufacturers. For more information and to provide feedback, please contact **Karen Kehl-Rose** at +1 630-513-9814 or karen.kehl-rose@leaglobal.com.



About LEA

Founded in 1999, LEA Global / The Leading Edge Alliance is the second-largest international association in the world, creating a high-quality alliance of 220 independently owned accounting and consulting firms focused on accounting, financial and business advisory services. LEA Global firms operate from 618 offices in more than 100 countries, giving clients of LEA Global firms access to the knowledge, skills and experience of 2,270 partners and 23,014 staff members.

LEA Global firms' combined annual revenue totals more than \$3 billion. Members stand out as leaders in their markets with firms ranking in the top tiers throughout all the regions of the world. In the U.S. more LEA Global firms are in the top 100 than any other association or network.



2nd LARGEST
WORLD
ASSOCIATION



618
OFFICES



100
COUNTRIES



220
INDEPENDENT
FIRMS



2,270
PARTNERS



23,014
STAFF
MEMBERS



leading **edge** alliance
innovation • quality • excellence