SEPTEMBER 2018 REPORT

METALWORKING TODAY

AN INSIDE LOOK AT THE INDUSTRY
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PURPOSE, SCOPE AND METHODOLOGY

For this year’s Metalworking Industry Report, Grainger conducted an online survey exclusively to our customer list in June 2018. We hoped that with this approach, the results of this year’s survey would accurately reflect all facets of the industry, from small maintenance and repair shops to much larger facilities operating sophisticated CNC machining and manufacturing equipment. We wanted to capture our customers’ impressions regarding current business conditions, key challenges they’re facing, and changes that are impacting small, medium and larger companies in the industry.

What emerges are some common themes. Our customers describe the steps their businesses must take to remain competitive in today’s increasingly high-tech, globalized industry. With a tight labor market, robust national economy, and fluctuating raw material costs all converging to create new challenges for the industry this year, Grainger metalworking customers are developing innovative ways to overcome these issues while also exploring new opportunities.

In its July 2018 Report on Business, Institute for Supply Management states that economic activity in the manufacturing sector (including fabricated metal manufacturing) expanded in July, and the overall economy grew for the 111th consecutive month.

All signs point to a healthy second half of 2018 for manufacturers.
METALWORKING TODAY: ABOUT THE SURVEY RESPONDENTS

AGE

<table>
<thead>
<tr>
<th>Age</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>18 - 34</td>
<td>8%</td>
</tr>
<tr>
<td>35 - 54</td>
<td>36%</td>
</tr>
<tr>
<td>55+</td>
<td>47%</td>
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That such a small percentage of our respondents are between the ages of 18 and 34 seems to directly illustrate the skills gap problem. Fewer younger people are entering this field.

This year’s respondents work on both the production and maintenance side of the metalworking industry, with the majority involved in heavy manufacturing, e.g., fabricated metals, machinery and equipment, and automotive, as well as light manufacturing, and contracting. They represent facilities of all sizes and employ anywhere from fewer than 50 to over 500 workers.

ROLE

- Purchasing Agent: 27%
- Supervisor: 24%
- Department or Group Manager: 19%
- Administrative: 16%
- Engineer: 16%
- Executive Owner or Partner: 15%
- Laborer: 11%
- Machinist: 10%
- R&D: 7%
- Quality: 7%
- Sales: 6%

INFLUENCER OR PRIMARY DECISION MAKER

- Make or place orders to purchase products: 69%
- Specify or recommend which products/brands to order: 54%
- Specify or recommend which supplier to use: 52%
- Use the products: 48%
- Evaluate bids received from suppliers: 46%
- Cutting tool and related supply acquisition: 44%
- Metalworking equipment acquisition: 43%
- Negotiate contracts and/or prices with suppliers: 33%
- Process change or adoption: 30%
- Hiring & recruiting: 26%
METALWORKING TODAY: ABOUT THE SURVEY RESPONDENTS

SURVEY RESPONDENTS BY REGION

PRIMARY METALWORKING FUNCTION*

- Production Metalworking
- Maintenance Metalworking
The economy is booming and we have had record growth but can’t find good employees.

Finding and Keeping Skilled Workers
As the current labor force moves closer to retirement, there’s serious concern about finding people with appropriate skills. Fewer people are entering the industrial workforce, so finding qualified and competent labor continues to be a challenge. Additionally, the costs of labor are going up, whether it be for insurance coverage or to cover wages, so respondents are looking for more innovative ways of addressing this. The good news here is that the industry is booming, and work pipelines are ample and continue to grow.

Finding and Keeping Qualified Labor 59%
Struggling with Employee Competency Levels 45%

Availability of Raw Materials
Those in the metalworking industry expect the availability and rising cost of metals and steel to have an impact on their operations, as many of those products are manufactured overseas. While there has been an increased focus on government regulations and tariffs of late, the respondents were split on the overall effect any policy changes would have on their respective businesses. At the time of this survey, it is too early to predict an outcome for the industry, but it is a noteworthy trend to watch.
Process Improvements and Managing Costs

Because of these and other challenges in today’s market, our customers are trying to do a better job of managing costs. To address this, they report adding programs around automation and optimization. Investment in new technologies and creative investing in new equipment will play a much stronger role in the future.

Respondents Rank the Following Costs As Significant

- Raw Materials: 45%
- Cost of Labor: 45%
- Customer Procurement: 48%
- Pricing Pressures: 44%
- Cost of New Technology: 44%

“At your company, what is the most impactful change you have seen?”

- “The cost of new equipment.”
- “Improved efficiencies with new technology.”
- “Laser cutting technology.”
- “Automation.”
- “Current metal prices, although I don’t believe they are permanent.”
- “Investment in new equipment.”
- “The amount of work compared to three years ago has greatly increased.”
- “The cost of raw materials.”
Too many kids are told to go to college when high paying craft jobs are going unfilled!

Metalworking is turning to creative employee recruiting and retention strategies in 2018. Over the next three years, there will be significant workforce shifts as more laborers retire.

Strategies To Offset Labor-Related Issues

58%
Employee Development Programs focused on creating employee recruitment, development, and training programs—all of which they expect to become even more important in the future.

38%
Manager/Supervisor Training

28%
Employee Bonuses or Profit Sharing

28%
Adding Staff
Of those using these strategies, all feel that the steps will have a moderate positive impact on their operations over the next three years. Other strategies include:

- **Staff Reduction**: 17%
- **Apprenticeship Programs**: 21%
- **College/Technical School Partnerships**: 21%

Combined, these approaches are helping metalworking organizations fill open positions, while also ensuring their current labor forces stay in place.
Advanced technology will continue to play a large role in the Industry 4.0 movement, which finds more and more manufacturers using connected, automated systems to run their operations.

Keeping Pace with Changing Technologies

48% Say This Is Somewhat Challenging

44% Say It Presents a Significant Challenge to Budgets

What do you see planned for the next 3 years to help the metalworking business?

“Continuous improvements in the processes that are used in the components we make to make us more competitive.”

“We are buying new machines, finding new markets to survive.”

“Upgrading machinery.”

“Pay will increase for the good workers, to be able to keep them. Some costs have come down due to process improvements.”

“Good planning, keeping competent employees, keeping up with trends and cost management.”

“Getting new equipment to stay ahead”
**The Impact of Automation**

Respondents to the survey aren’t yet sure how automation will affect the way metalworking operations do business. For now, the most popular automation in metalworking plants includes:

<table>
<thead>
<tr>
<th>Automation Type</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>High-Speed Machining (HSM)</td>
<td>17%</td>
</tr>
<tr>
<td>Unattended Operations</td>
<td>18%</td>
</tr>
<tr>
<td>Quick-Change Tooling/Fixturing</td>
<td>17%</td>
</tr>
<tr>
<td>Flexible Manufacturing Systems</td>
<td>12%</td>
</tr>
<tr>
<td>CNC Tool Presetting</td>
<td>12%</td>
</tr>
<tr>
<td>CAD/CAM File Revision Control/Management Tools</td>
<td>21%</td>
</tr>
<tr>
<td>Tool Inventory Systems</td>
<td>14%</td>
</tr>
<tr>
<td>Tool Path Verification Software</td>
<td>10%</td>
</tr>
<tr>
<td>Digital Tooling</td>
<td>8%</td>
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</table>
Continuous improvements in the processes that are used in the components we make [will] make us more competitive.

Productivity improvements are a top priority right now as a way to help manage costs. Some of the strategies respondents are using include implementing lean concepts into more areas of the business.

32% of respondents are using shop floor reorganization as a business optimization tool, while 31% are leveraging general IT and data management upgrades to optimize their operations.

Over the next three years, survey respondents say their top initiatives will include rebuilding some existing equipment to meet changing customer requirements; adding new processing equipment; diversifying their product lines; and using stronger, more focused recruiting efforts.
Strategies in Metalworking to Optimize Operations

- **28%**
  Lean Manufacturing Processes

- **23%**
  Ongoing Improvement Processes Like Six Sigma

- **27%**
  Production Monitoring and Planning Systems

- **18%**
  Supplier/Vendor Optimization Analysis

As the metalworking industry continues to work through some of the current industry challenges, our respondents say they have plans to leverage more advanced technology (sensors, Internet of Things, Artificial Intelligence) in order to maintain competitive advantage.

Each new year brings a new set of challenges and opportunities for all manufacturing sectors, and metalworking will surely withstand—and prevail over—the challenges put forth while also benefitting from emerging opportunities.
**SUMMARY**

Business is booming at North American manufacturing plants, where a robust construction market and healthy economy is keeping work pipelines full and bottom lines healthy. Having endured the recession years and economic downturn, today’s metalworkers have a heavy workload, and good prospects for the future over the next few years.

Continued, sustained growth brings challenges, and the survey responses in this year’s Metalworking Industry Report certainly reflect those challenges. Still there's reason to be optimistic as the industry is finding innovative ways to adapt, such as establishing new ways to partner with other businesses and educators to recruit and retain skilled workers, and leveraging new technologies to enable companies to work smarter, better and faster.
ABSTRACT GRAINGER

Grainger is a broad line, business-to-business distributor of maintenance, repair and operating (MRO) supplies, metalworking and other related products and services. More than 3 million businesses and institutions worldwide rely on Grainger for products in categories such as safety, material handling and metalworking, along with services like inventory management and technical support. Grainger carries 1.7 million products, including more than 350,000 metalworking products—from top-notch tooling and fluids to precision measurement and finishing—that are available online, over the phone and at local branches.

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