LEA global

Brown Plus
ACCOUNTANTS + ADVISORS

/// Manufacturing Outlook Survey and Insights

FOUNDATIONS FOR SUCCESS

2022-2023

/// Contents

/// Anticipating a Greater Focus on Plant and Labor in 2023

Thank you for your interest in the 2022-2023 Manufacturing Outlook Survey and Insights report. If you participated in this survey, thank you for sharing your experience with us.

Based on the results of this report, we anticipate that manufacturers are taking a close look at the foundations of their operations, their talent and their financial outlook. Investing now in key capital improvements such as plant and equipment and ERP systems will help them prepare for an uncertain economy. Although they are more optimistic about their region than the national or global economy, respondents to this survey are concerned about overcoming supply chain disruptions, fluctuating fuel and energy pricing and – most importantly – staffing shortages.

Opinions and planning will evolve as we monitor the economy. We look forward to discussing how you are currently experiencing these pressures (or opportunities) in your business. Making the best use of your capital in a way that supports a favorable financial and growth outcome is our goal, too.

Please reach out to us at any time to discuss the information in this report.

Sincerely,

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/// Executive Summary

The theme of the 2022-2023 Manufacturing Outlook Survey and Insights report is Foundations for Success. We chose this theme because survey respondents communicated a strong focus on plant and capital investments that will support more automated and productive companies in the future. This survey also marks the beginning of new resources and services that members can enjoy through LEA Global.

Some key survey highlights in this report include:

More local and regional strategic partnerships – Manufacturers are placing more trust in their regional economies and are looking for supplier relationships closer to home. National economic prospects are perceived with less optimism, while attitudes about the international economy are trending toward pessimism for 2023.

More automation to augment smaller labor pools – Although investment in plant and equipment and automation has been the talk of this industry for many years, the pandemic and accelerated labor shortage means that real dollars are moving toward plant modernization. Top investments for 2023 include new manufacturing equipment, ERP systems and robotics.

Exploration of machine learning and analytics tools – Manufacturers acknowledged an uptick in R&D investment this year, which aligns with their top operational spending priorities for information technology tools, new product or service development and business technology and/or intelligence data.

Less cybersecurity response than expected – Although the manufacturing sector was the most targeted industry for ransomware and vulnerability attacks in 2021, companies in this survey did not plan to invest a significant amount in shoring up their cybersecurity in the coming 12 months. This could be because the companies have already invested in this aspect of their business, or they may perceive cybersecurity as less urgent than other investments in the short term. However, cybersecurity and data protection were among the top business drivers manufacturers cited for using technology.

Less concern over ESG as an emerging requirement – This sample of manufacturers, particularly in the middle market U.S. machining/industrial (17%), transportation/automotive (12%) and construction (11%), sectors, indicated limited concern about environmental, social, governance (ESG) factors as serious barriers to growth, at least for the coming 12 months. However, it is an emerging requirement as larger customers must perform ESG due diligence along the value chain.

About 40% of surveyed manufacturers forecast 10-20% revenue growth over the next 12 months (through second quarter 2023) and another 29% of respondents predict more modest revenue growth of 3-9%. The third largest group of respondents (19%) expect revenue to remain unchanged through second quarter 2023. With confidence in their current rate of growth and revenue, manufacturing leaders are focusing on staffing, supply chains and modernization to be ready for short-term volatility.

> **Large companies with $99 million or more in revenue were more likely to anticipate revenue growth of 10% or more in the coming year compared to smaller manufacturers.**

For long-term growth, manufacturing leaders are restructuring their sourcing strategies while investing in new product and process research. Overall, they indicate that now is the time to focus on foundational improvements that will mitigate uncertainty and build their future success.

In the full report, we further explore levels of optimism, barriers and opportunities for growth, top operational priorities and investments, and the general outlook for 2023 in manufacturing.

The manufacturing sector is one of 15 major industries represented in LEA Global. Survey data was gathered from an aggregated sample of middle-market and large, global manufacturers in a variety of industries, primarily in machining/industrial, transportation/ automotive and construction.

For more information about this resource and others, visit leaglobal.com

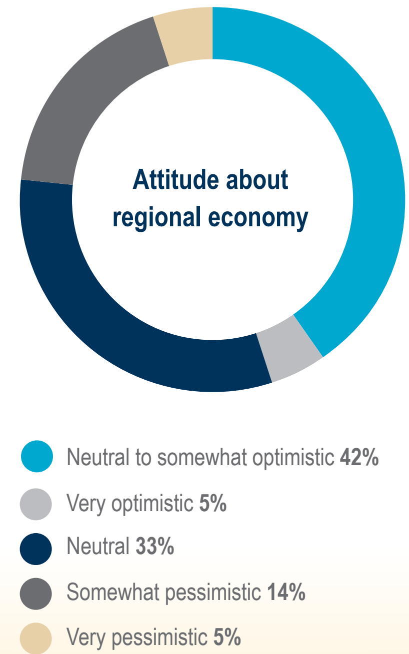
/// Levels of Optimism

Manufacturers surveyed have the most confidence in their regional economies, but the number of "neutral" responses indicate that many are taking a wait-and-see attitude about the North American economy as a whole. Sentiments about the world economy show a more pessimistic attitude.

Just over 42% of respondents chose "somewhat optimistic" to describe their attitude about their regional economy. Another 5% chose "very optimistic." About 33% are staying neutral on the question while 19% were somewhat pessimistic (14%) to very pessimistic (5%).

About 49% of manufacturers surveyed gave a neutral (26%) to somewhat optimistic (23%) response about the U.S. economy, while another 39% stated that they were somewhat pessimistic (23%) to very pessimistic (16%) About 67% of respondents are somewhat pessimistic to very pessimistic about the world economy. About 60% of respondents gave a neutral response about the Canadian economy, with another 23% leaning toward somewhat pessimistic.

Declining GDP, as seen in 2022, is typically a sign of recession, however, companies still appear eager to attract talent to recover from pandemic-related talent turnover and shortages. Unemployment claims, another historic recessionary indicator, remained flat through the summer. Consumer spending remained strong at the time of this publication. These mixed signals in the U.S. economy seem to have kept overall optimism in manufacturing fairly flat for the coming 12 months, even though revenue expectations are trending positive.



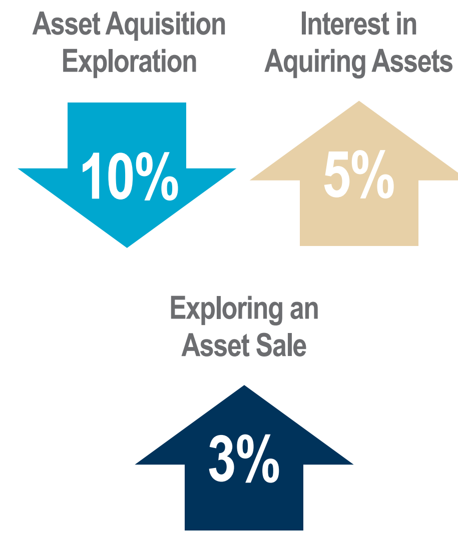
/// M&A Landscape

As a sign of manufacturing health, survey respondents acknowledged an uptick of interest in asset acquisition exploration in 2022 compared to acquisition exploration in 2021. Interest in mergers is down about 10% compared to 2021, while interest in acquiring assets is up about 5%. Companies exploring an asset sale are up about 3% from 2021.

Some respondents may have completed a merger in 2021. Deal activity, particularly in the industrial sector, rose through the second half of that year and was expected to remain steady through 2022, according to PWc.

Asset acquisition is a strategy for increasing revenue, but also for increasing the available labor pool. Companies seeking acquisitions may view this as a primary growth and talent strategy. However, available private equity financing now as well as concerns over higher taxation in the future for both buyers and sellers could also influence hotter acquisition exploration in 2022 and 2023.

Companies exploring asset sales are likely in need of business valuation guidance to understand the factors that will increase business value while managing future capital gains for owners or shareholders. Conversely, companies looking to acquire assets should understand exactly what they are acquiring as well as the tax implications.



SUPPLY CHAIN SOLUTIONS: How are manufacturers managing their supply chains?

Since the pandemic, manufacturing leaders are keenly aware of the need to maintain agile supply chains and distribution channels while responding quickly to changing economic or geopolitical conditions. Although the war in Ukraine was not high on their list of top threats, they recognize the global nature of sourcing and logistics. A disruption to those systems will impact productivity, the customer experience and revenue.

Some operational spending is also budgeted toward additional warehousing in order to sustain adequate materials and supplies. In fact, 51% of respondents said they are managing inventory and supply chain concerns through advance buys and inventory stockpiling, at least for materials that are difficult to source.

However, close to 32% of responding companies are hoping to shorten lead times through local suppliers. Anecdotally, leaders cited investment in ERP systems to drive timely purchasing as well as building relationships with new sources in the U.S. and abroad.

These approaches to supply chain management did not seem to differ widely by size of company.

/// Forecasted Growth

About 40% of surveyed manufacturers are forecasting 10-20% revenue growth over the next 12 months (through second quarter 2023). About 29% of respondents predict more modest revenue growth of 3-9%.

The third largest group of respondents (19%) expect revenue to remain unchanged through second quarter 2023.

These expectations seem to track with current spending patterns in the U.S. as well as an uptick in new manufacturing orders and capacity midyear. Optimism is tempered by workforce shortages and supply chain instability abroad, which can impact efficiency and profit margins.

Top factors influencing growth

Organic growth

Increasing market share

New products and services

Joint ventures/strategic alliances

According to survey respondents, revenue growth projections are based primarily on increasing the company's existing market share as well as organic growth in those markets. To a modest extent, the launch of new products or services and joint ventures or strategic alliances are expected to spur revenue growth. A few manufacturing leaders also speculated that revenue growth will be a natural result of strategic price increases for their products and services.

Respondents did not view M&A as a major factor for bottom line revenue growth, nor do they expect much growth within existing or new foreign markets through the middle of 2023.

/// Barriers to Growth

INTERNAL	EXTERNAL
1. Labor shortages	1. Inflation
2. Supply chain disruption	2. Talent
3. Wage increases	3. Oil/energy prices
4. Rising logistics/transportation costs	4. Decline in market demand

Like all industries, the U.S. manufacturing sector is fighting for its share of available talent in a limited labor pool. Whether due to early retirements, voluntary turnover or COVID-19 testing and quarantine policies, manufacturers are operating with smaller crews and trying to compete for workers through higher wage and benefit offerings. They are also indicating inflationary pricing pressures on the cost of raw materials, shipping, transportation and energy. All of these factors impact a company's ability to grow.

Besides offering higher wages, flexible schedules and more attractive benefits to potential new employees, manufacturers are also looking toward new capital and operational investments. They expect that these investments will improve efficiency and counteract the current environment of smaller labor pools, longer lead times and fuel and energy costs. At the time of this publication, fuel and energy costs had decreased by 5-7%, but this was prior to European sanctions going into effect against Russian fuel purchases.

Overall, manufacturers did not consider any of the following to be major barriers to growth compared to other factors:

Lack of ESG strategy

Cybersecurity risk management

Obsolete technology

/// Issues to Watch

Concerns about cybersecurity and ESG appear to be more dependent on customer requirements and expectations than on a proactive strategy, which is concerning from a long-term strategic viewpoint.

These issues will be ones to watch as technology, regulation and customer expectations increase in sophistication.

ESG - The Securities and Exchange Commission is already requiring ESG disclosures that may be material to investors, but it is the proposed climate-related disclosures that could impact suppliers to SEC registered companies. Proposed rules are currently in the comment stage as of this publication. In summary, proposed disclosures regarding greenhouse gas emissions (GHG) would include reporting on activities in the registrant's "value chain," potentially meaning GHG data from public or privately held companies that serve them. Therefore, middle market manufacturers that serve these companies could have a stake in how these proposed rules shake out related to ESG data collection and reporting.

The EU Corporate Sustainability Due Diligence Directive does not apply to small and medium-sized enterprises; however, they may be subject to ESG data collection for their customers if they are contractors or subcontractors of large companies active in the EU.

Cybersecurity - A 2022 report by IBM, *the X-Force Threat Intelligence Index,* noted for the first time that manufacturing was the most targeted industry for cyber attacks. They noted a 33% increase in attacks caused by vulnerability exploitation of unpatched software, a point of entry for ransomware to fracture global supply chains. The Association of Equipment Manufacturers also noted that phishing and ransomware have ramped up 239% since 2019. Such attacks shut down computer systems and can hold a company captive until they pay a large sum of money. As companies automate, they can actually become more vulnerable to network hacks. Encryption updates, cyber insurance and staff training should be part of every company's cybersecurity strategy, according to these reports.

Technology - Computer-Integrated Manufacturing (CIM) can enhance productivity and workflow while decreasing design costs and lead time, however it can be a costly process to undertake in the middle market. It appears, however, that manufacturers are undertaking this process proactively in 2023 as part of their top capital investments. Although cybersecurity and data protection were not listed as a major capital investment in the coming year, manufacturing leaders in the survey did cite these needs as a top business driver for investing in technology.

/// Top Business Priorities

1. Attracting and hiring skilled workers

2. Product pricing changes

3. Long-term strategic planning

4. Cutting operational costs

5. Shipping and distribution improvements

6. Responding quickly to changing economic or geopolitical conditions

With current labor shortages, headcount budgets are expected to increase in 2023, with 67% of manufacturing leaders expressing their plans to hire more workers. However, 32% of survey respondents expect headcount budgets to remain the same and 2% expect them to decrease.

With about one third of respondents maintaining headcount budgets, we asked about other top priorities. The second most important priority is to adjust pricing on products and services. Long-term strategic planning is a close third priority followed by methods to cut operational costs. Investing in newer manufacturing equipment and modernizing facilities appear to be part of that cost-cutting strategy.

Since the pandemic, manufacturing leaders are also keenly aware of the need to maintain agile supply chains and distribution channels while responding quickly to changing economic or geopolitical conditions. Although the war in Ukraine was not high on their list of top threats, they recognize the global nature of sourcing and logistics. A disruption to those systems will impact productivity, the customer experience and revenue.

Secondary priorities for manufacturers included company and management restructuring as well as short-term strategic planning. This assumes a need for agile leaders and systems right now to support long-term growth strategies.

/// Top Investments

Looking to investments in the next 12 months, survey respondents indicated a focus on greater speed and efficiency in plant operations.

Top 5 Capital Investments in 2023

1. Manufacturing equipment
2. Plant expansion/modernization
3. Computer hardware
4. Computer software/ERP systems
5. Robotics/Office equipment

To a lesser extent, manufacturers are exploring digital sales and marketing tools (for lead generation) as well as internal data analytics and AI tools. It appears that plants need to upgrade and modernize before they can leverage analytics and machine learning.

They also need people. Companies are doubling down on recruit-and-train strategies. They are also prioritizing external sales and marketing and new product and service development. Business intelligence will give them insights about trends in the industry and consumer preferences, which will inform these development strategies.

Top 5 Operational Spending Priorities in 2023

1. Recruitment/training
2. Information technology/new product or service development
3. Business technology/intelligence
4. Marketing/sales promotion
5. Sourcing/procurement

Some operational spending is also budgeted toward additional warehousing in order to sustain adequate materials and supplies. In fact, as indicated earlier in this report, over half of survey respondents (51%) said they are managing inventory and supply chain concerns through advance buys and inventory stockpiling, at least for materials that are difficult to source. But they are also investing in alternate sources and adding new vendor relationships domestically and abroad. Close to 32% of responding companies are hoping to shorten lead times through local suppliers.

/// Overall 2023 Outlook

With more confidence in their regional economy than the national or global economy, manufacturers will emphasize regional partnerships and internal strategies to grow in 2023.

Owing to supply chain disruptions, increasing port and shipping costs and taxation, manufacturers are rethinking their offshoring/outsourcing strategies and seeking additional local suppliers to maintain more enterprise control and to shorten lead times. These factors level the playing field for local/regional suppliers who can offer competitive differentiation through customer service, speed and pricing.

Supply chain disruptions

Increasing port/shipping costs

Trade tariffs/taxation

The current inflationary climate and uncertain future taxation are propelling manufacturers to strategically modernize plants and equipment.

Consumer demand for durable goods and technology remained high through third quarter 2022, supporting domestic manufacturing growth forecasts in the double digits. But rumbles of recession and increased financing costs have manufacturing leaders reinvesting their cash now in equipment, hardware and software. Leaders expect a similar or slight increase in taxation for 2022, and those expectations should remain unaffected by implementation of the Inflation Reduction Act of 2022. Increased corporate taxation in the Act is primarily focused on 2023 onward.

It appears that leaders want to be ready for the next wave of volatility by strengthening operations during this window of higher growth.

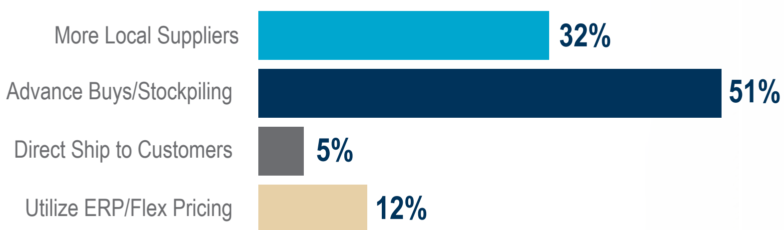
To reduce inventory costs and manage supply chain concerns, manufacturers will rely more on warehousing, local suppliers and advance buys.

Demand for warehouse space is high in major metropolitan areas, with U.S. industrial warehouse vacancy rates falling below 5% in the second quarter of 2022, the seventh quarter in a row that demand outpaced supply. Manufacturers will compete with retailers as well as commercial/office lessees for space. Rent growth is expected to remain elevated through the middle of 2023. Although speculative new warehouse construction is performing well, it is only happening in areas with available land.

Alternative sourcing strategies are popular right now, but it will be important for manufacturers to understand the risks and benefits of including independent suppliers in sourcing, whether it be local distributors, brokers or secondary source markets.

By working with their current suppliers on advance buying strategies in combination with alternative sourcing — along with strong negotiation on pricing — manufacturers can mitigate risk and develop a stronger sourcing foundation for the future.

Top Inventory/Supply Chain Initiatives (12 month outlook)



Manufacturers will invest more than historic averages into product and process R&D.

Historically, manufacturers have spent about 1% of net total revenues on R&D, but that percentage has been rising since mid-2020. In our survey, we found that 46% of respondents re-invested 1-5% of "corporate sales" in new product/process R&D while 21% are re-investing between 6% and 10% (or more) in R&D. That leaves 26% investing less than 1% in R&D (with 7% N/A).

Some of this movement could be happening in combination with 3D printing investments. More manufacturers are experimenting with their own component development, as applicable, using polymers and select metals. Most of the demand will be in industrial, electronic and consumer goods, however aerospace and automotive industries are close behind.

Process R&D can encompass areas such as machine learning and digital design to support faster product testing capabilities at the plant before production.

Expansion of the R&D tax credit as part of the Inflation Reduction Act of 2022 could also support these activities among small and start-up manufacturers.

Active recruitment and training will win the staffing game as manufacturers vie for available employees amidst historically low unemployment rates.

Predictions for rising unemployment rates are mixed, within a range of 3-5% by the end of 2023. But slower economic growth could slow hiring, too. Finding available workers will require a combination of strong recruitment programs, incentives and in-house training. Leveraging technical school and high school program connections could aid in this effort, with manufacturers recruiting students directly into manufacturing training tracks.

Although staffing remains a top priority among manufacturers, they also continue to seek target acquisitions and automation solutions to help add capacity and efficiency to their operations.

To augment staffing capacity, manufacturers will leverage technology in the next 12 months primarily to reduce costs, improve customer service and aid productivity.

Technology is also an integrated piece of growth strategy, according to survey respondents. Streamlining multiple business systems and improving customer/supplier relationships were listed among key drivers for technology strategies.

Top Business Drivers for Using Technology

Reduce Costs

Improve Customer Service

Integrate With Growth Strategy

Cybersecurity and Data Protection

Connecting Multiple Business Systems

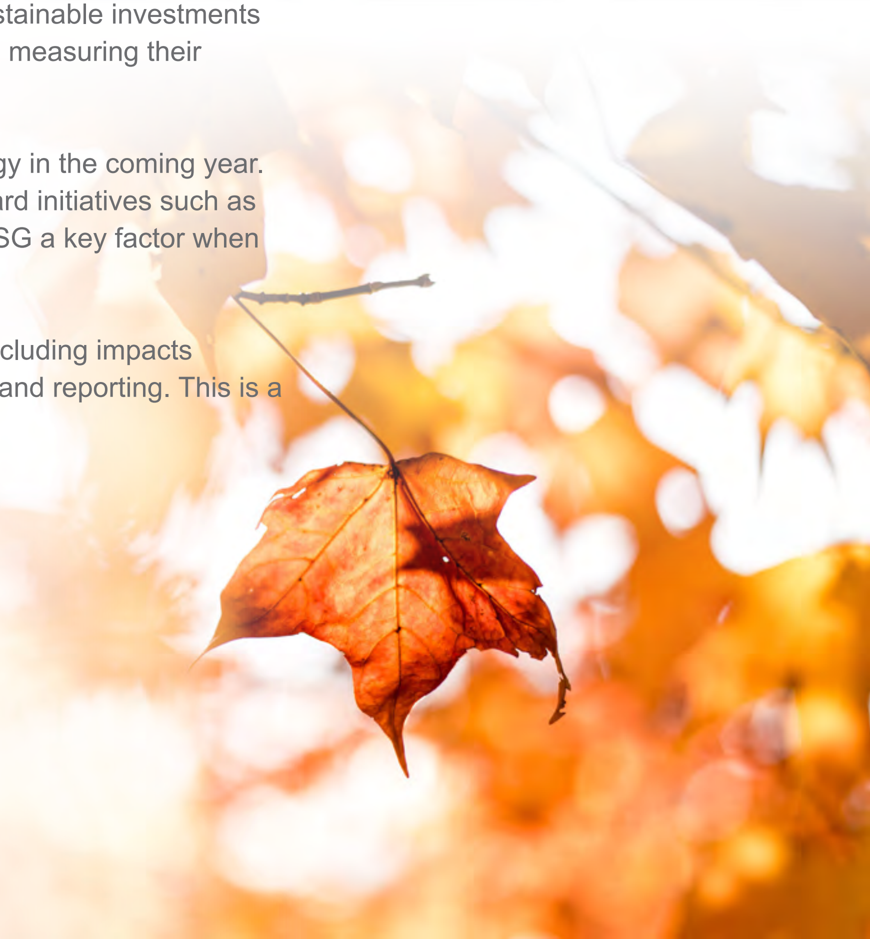
ESG is not on the radar of most middle market manufacturers, but it will be.

Unless their customers are currently pushing for it, manufacturers are not investing time or money in Environmental, Social, Governance (ESG) strategies…yet. More than 70% of respondents indicated that ESG did not apply to them. However, reporting requirements for SEC-registered companies in the U.S. and large companies in the European Union are expected to trickle down to enterprise businesses within the next four or five years. It will be important for middle market companies that contract with large clients affected by ESG to understand their role in ESG greenhouse gas emissions (GHG) reporting and the EU due diligence reporting frameworks.

For manufacturing leaders who said that ESG did apply, they cited partnerships and sustainable investments as their primary reason for measuring a strategy (14%). The remaining respondents are measuring their environmental initiatives.

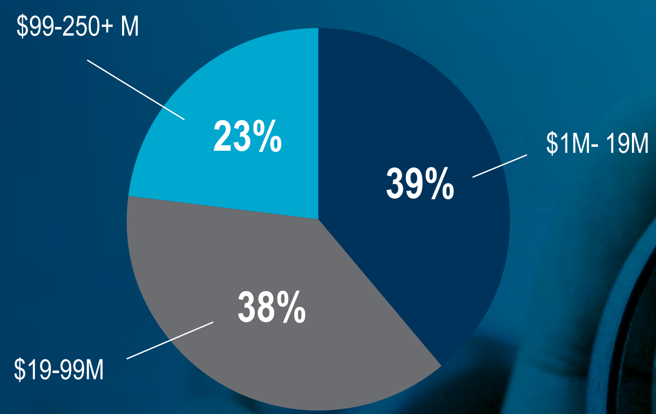
As indicated, most manufacturers in this survey will not embark on a formal ESG strategy in the coming year. However, requirements by customers, suppliers or future labor will create the push toward initiatives such as reducing greenhouse gas emissions or attracting a younger workforce that considers ESG a key factor when choosing a job.

As larger companies are required to report ESG impacts in their financial statements, including impacts throughout their value chain, more manufacturers will be looped into this measurement and reporting. This is a leading indicator that may see movement in future surveys.



/// About the Survey

The 2022-2023 Manufacturing Outlook Survey by LEA Global represents an aggregated sample of executives and operations leaders in manufacturing companies. Companies are primarily U.S. based with their largest international markets in Canada and Mexico. Headcounts average 250 or fewer employees.



Respondents included manufacturers in a variety of industries, with the largest samples in machining/industrial (17%), transportation/automotive (12%) and construction (11%).

Sponsoring firms receive a complimentary copy of this survey report to co-brand and share with their team, clients and strategic partners.

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Survey results reflect an aggregate of total responses, analyzed and prepared by a third-party consulting agency, Ingenuity Marketing Group, LLC, St. Paul, MN. This report is not, nor is it intended to be scientific in any way, including in its number of respondents, selection of respondents or response rate. Accordingly, this pulse survey is based on opinion only and does not necessarily indicate economic or industry-wide perceptions or trends. This pulse survey was conducted through Q3 2022 and may not reflect current economic or financial conditions for North American manufacturing.

About LEA Global

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