



2020 Kansas Manufacturing Industry Needs Assessment Results Report

Presented By:



Trusted Advisors for Growth

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Kansas Manufacturing Solutions (KMS), part of the NIST Manufacturing Extension Partnership (MEP), exists to provide solutions to small and medium sized manufacturers in the state of Kansas to enable competitiveness, growth, and profitability.

MEP Centers, like KMS, provide critical services to manufacturers and have long been known for working elbow-to-elbow with companies anywhere from strategy in the board rooms to process, efficiency, and quality on the shop floor.

A trusted advisor to Kansas manufacturers, KMS’ suite of solutions include: Continuous Improvement, Sustainability, Quality and Compliance, Workforce Development, and Business Optimization. These solutions are crucial to enabling Kansas manufacturers to increase profits, grow sales, create and retain jobs, and strengthen their competitiveness in the local, domestic, and global marketplace.

As the only resource in Kansas solely dedicated to supporting small to medium sized manufacturing companies with programs and services, KMS is held accountable through published third-party quarterly surveys of KMS clients to ensure a performance scorecard of certified value for the manufacturing customers we serve. This provides reassurance to Kansas manufacturers that KMS has their best interests in mind and that a positive ROI is achievable.

Focused on this mission since its inception in 1991, KMS continues to evolve its business model based on the shifting needs of manufacturers and changes in the manufacturing support ecosystem.

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Kansas manufacturing industry manufacturers and supporters,

Kansas Manufacturing Solutions (KMS) is pleased to release the results of the 2020 Kansas Manufacturing Industry Questionnaire.

The industry survey was conducted to gain insight into the needs and challenges of manufacturers in Kansas, especially with the uncertainty manufacturers are facing relative to COVID-19.

The 2020 industry survey was conducted from June 24, 2020 to July 29, 2020. The survey results are at an 81% Confidence Level, with 5% Margin of Error. Because of the importance of manufacturing to the state of Kansas, and to ensure manufacturers' voices are heard, KMS will continue to conduct this survey annually.

Executive Summary

To better understand the underlying issues, risks, and opportunities that will define the current and future needs of manufacturing in the region, KMS undertook a detailed needs assessment of Kansas manufacturers.

Key findings include the following:

- To combat domestic and global competition, manufacturers are focusing on **producing better quality products**.
- **Health care costs** is the most significant expected growth inhibitor.
- Companies in Kansas, particularly small and medium-sized are struggling to find on-ramps into **Industry 4.0**.
- **Safety, cybersecurity, employee wellness programs, and social media marketing** are the most common initiatives.
- Despite expression of workforce availability issues, **there is little evidence** of widespread use of proven tools to ease those issues.

As a result of the analysis, KMS identified the below core items as the critical needs of Kansas manufacturers to remain competitive.

BUSINESS LEADERSHIP

NEED 1: Improved strategy & planning capabilities.

NEED 2: Assistance in creating and sustaining a competitive advantage through healthcare costs.

NEED 3: Alternative supply chain strategies to combat the rising cost and availability of raw materials.

GROWTH

NEED 1: Improvements in the production process to increase product quality.

NEED 2: Boost tactical activities that drive market penetration.

NEED 3: Encourage the use of next generation technology and productivity for continued growth.

PRODUCTIVITY

NEED 1: Improve adoption of proven initiatives to ease workforce constraints.

NEED 2: Provide hands on implementation assistance for small manufacturers.

TECHNOLOGY

NEED 1: Promote next generation technologies that can create sustained competitive advantages.

NEED 2: Deep technical support in advanced manufacturing engineering and automation.

WORKFORCE

NEED 1:

Support and grow manufacturing employee attraction programs.

NEED 2:

Improve and coordinate regional efforts to attract and retain workforce.

The State of Kansas Manufacturing

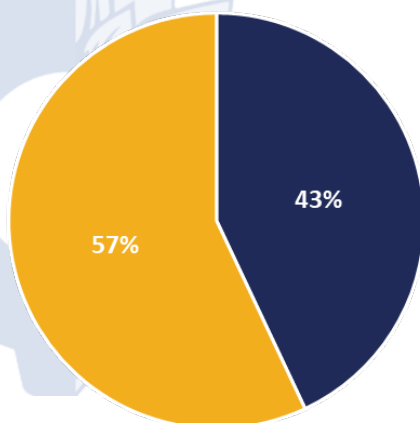
Manufacturing is a core driver of Kansas' economy. More than 2,538 manufacturers, employing 172,666 workers, contributed in excess of **\$27.6 BILLION** to Kansas' economy in 2018, making it the third largest sector in Kansas. For detailed economic data on manufacturing in Kansas, please see the "KMS 2020 Manufacturing in Kansas" report.

(www.wearekms.com/Report)

Manufacturers of different sizes, geographical locations, and manufacturing industry segments responded to an in-depth survey regarding their companies, limitations to growth, actions, and results. Additional input was provided during one-one interviews and group video meetings.

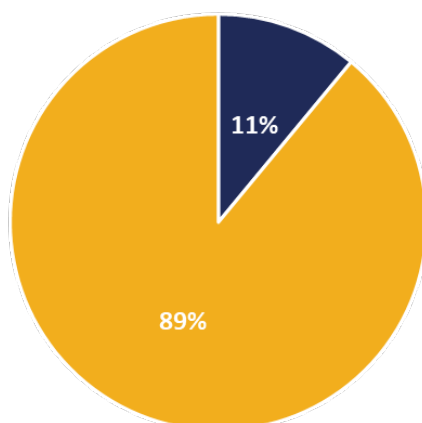
Manufacturing Participant Demographics

Geographical Location



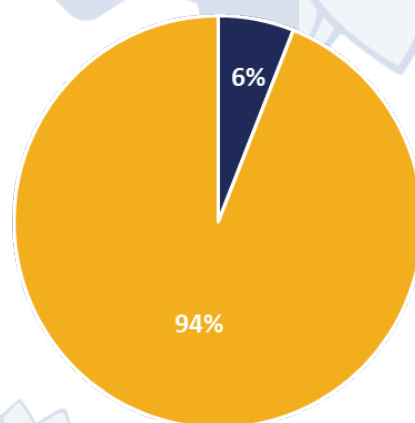
■ Urban ■ Rural

Company Ownership



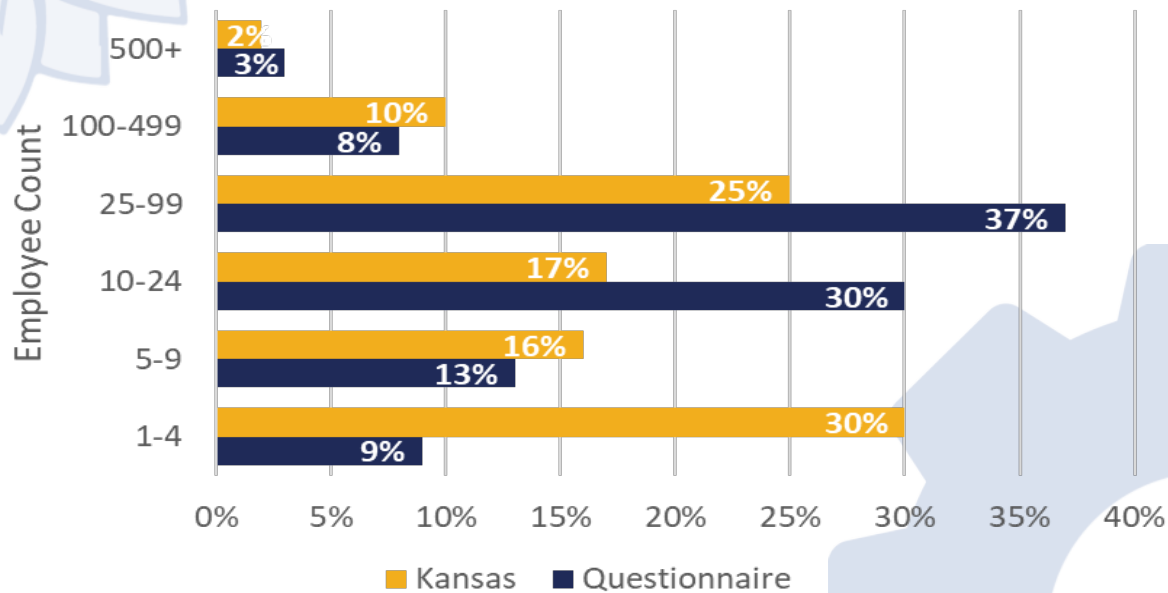
■ Public ■ Private

Business Longevity



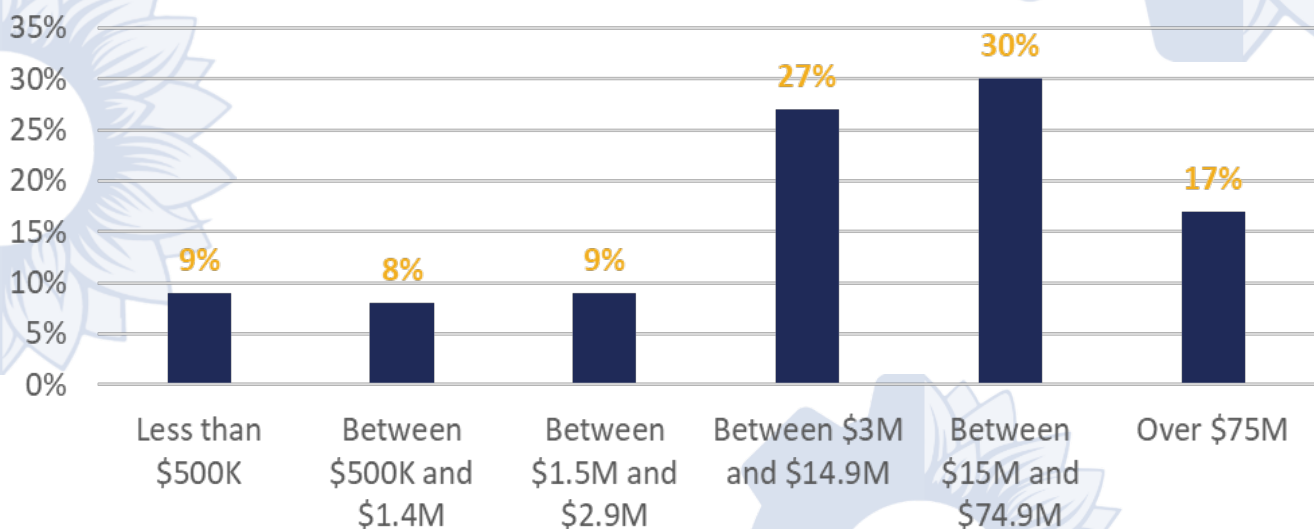
■ 5 Years or Less
■ More Than 5 Years

Company Size Distribution



The above graph displays the distribution of participant company sizes compared to company sizes of the entire Kansas manufacturing population. An objective in 2021 will be to increase the participant rate of manufacturers with 1-4 employees.

Annual Sales



43 counties are represented by manufacturing participants.

Top 5 participating counties are:

- Wyandotte
- Sedgwick
- Johnson
- Reno
- Harvey

17 manufacturing industries are represented.

Top 5 participating industries are:

- Plastics and Rubber Products Manufacturing
- Machinery Manufacturing
- Miscellaneous Manufacturing
- Fabricated Metal
- Food Manufacturing

Rural vs. Urban Performance

A key discussion topic when analyzing the needs of Kansas manufacturers is the variation in needs between rural and urban manufacturers. Rural-urban were defined by the criteria utilized by the USDA Rural Development in that rural is defined as a city or town with a population of less than 50,000 inhabitants. This analysis identified no significant variation among issues, initiative implementation, strategy, or profitability when controlling for level of urbanization. Although rural and urban regions of the state may face different long-term challenges and opportunities, there is no evidence to suggest that rural manufacturers in Kansas are facing a significantly different landscape than urban manufacturers.

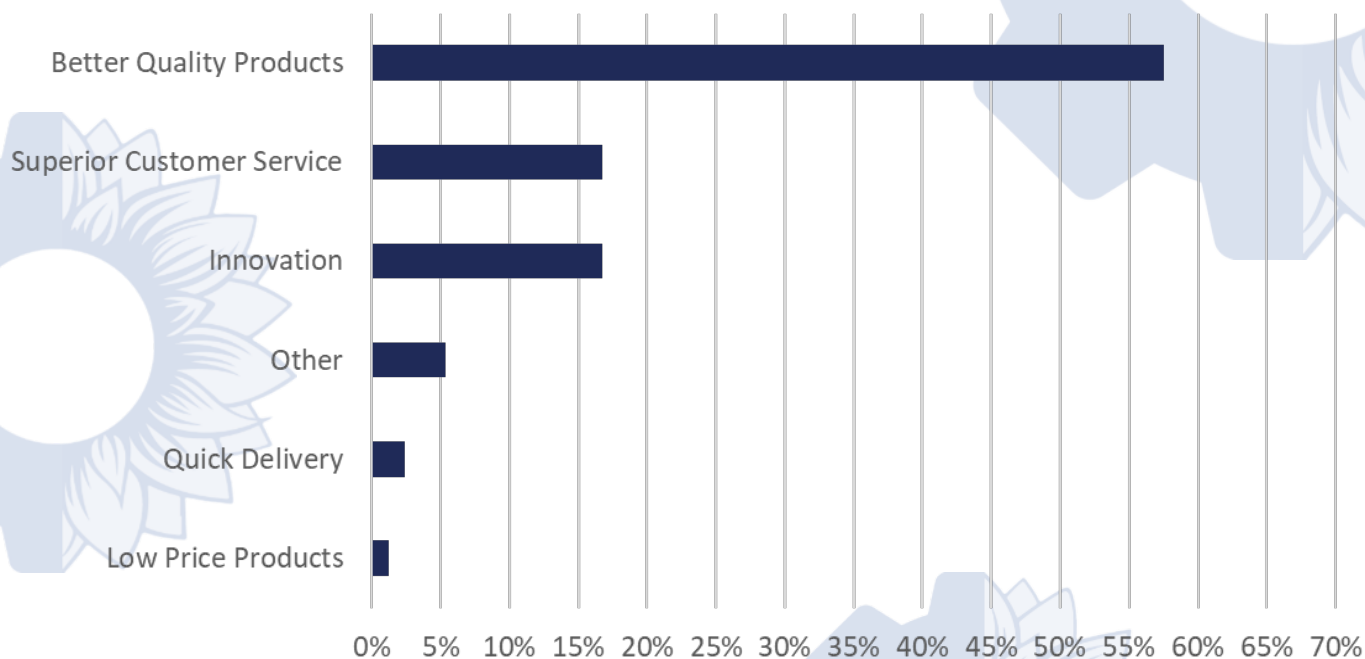
Strategy

Business Strategy

57% of manufacturers indicated their primary business strategy is producing **Better Quality Products**

The ability to deliver products with higher quality than the competition is the most common strategy among Kansas manufacturers, followed by superior customer service and innovation. Whereas product quality was a differentiator that effectively stood up to competition from low-cost countries in the 2000s, effective quality systems and tools have become globalized and commoditized. In effect, quality began to transition from an approach to capture margin to a universal, basic requirement for all manufacturers. As this transition continues, companies that do not find new ways to create customer value, will likely see profits decline.

Primary Business Strategy



Growth Strategy

58% of manufacturers said a top driver for increased profits in the next five years is **Increased market penetration with current products**

The questionnaire asked a variety of questions related to strategy, including identification of their top three planned actions to grow the business.

The three top drivers for increased profits in the next five years are:

Increased market penetration with current products	58.43%
Increased sales with new products	42.17%
Reduce production costs	35.54%

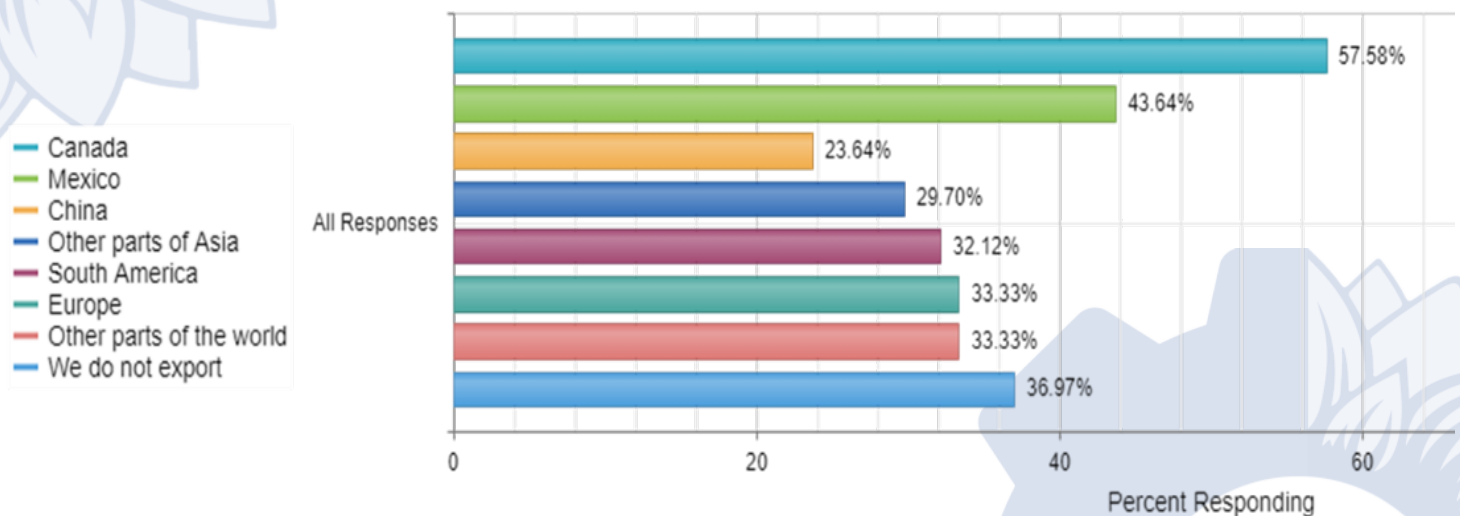
Export Strategy

Only 16% of all respondents plan on increasing profits through new international markets. However, 24% of mid-size (100-499 employees) manufacturers consider this a top business strategy.

63% of participating manufacturers indicated they export. They mostly export to:



Where do you export to?



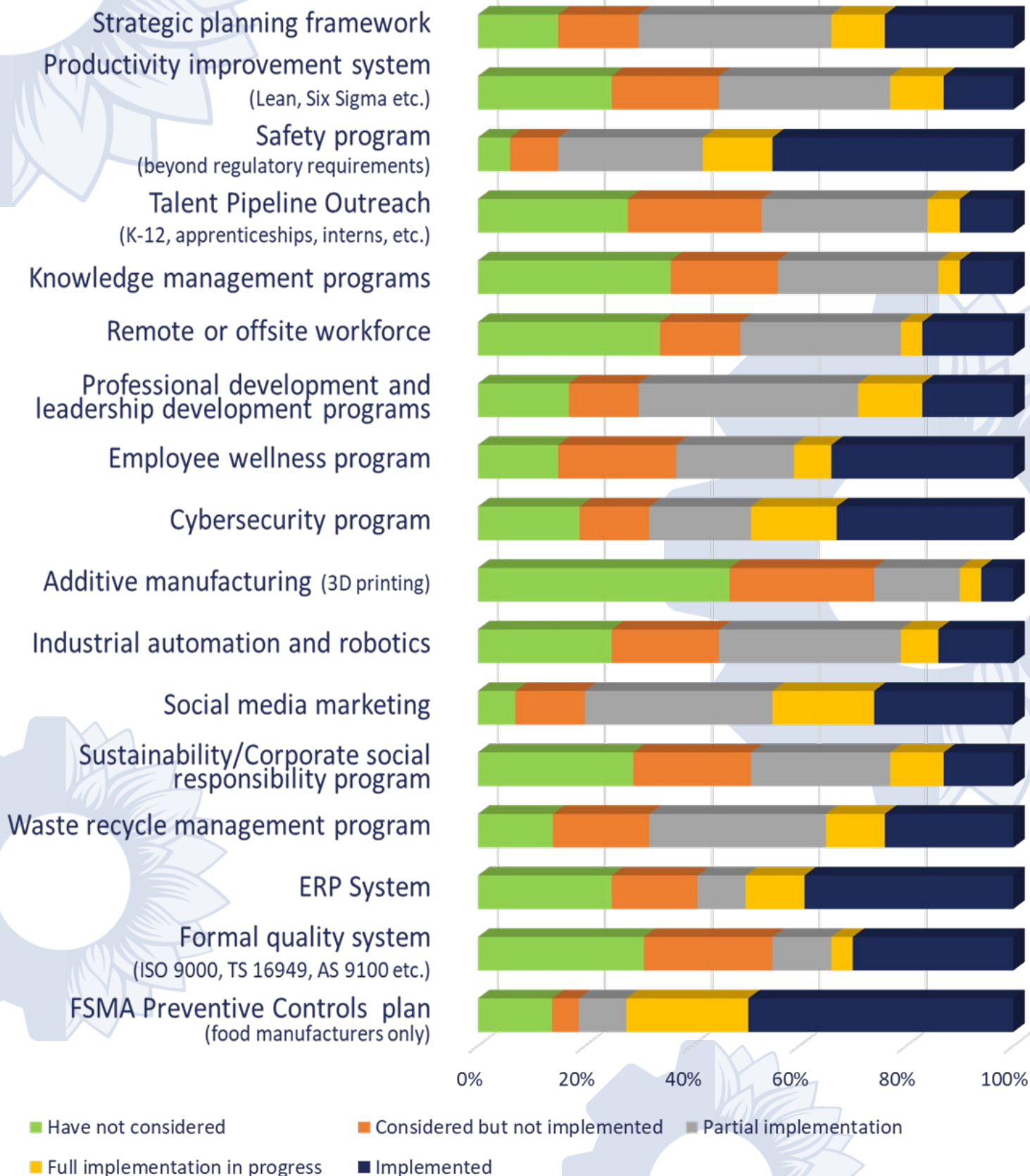
Exporting is more common with large (500+ employees) and mid-size manufacturers.

- 80% of large and 78% of mid-sized manufacturing participants export to at least one country.
- 96% of exporting manufacturers export to either Mexico and/or Canada.
- 54% of exporting manufacturers export to 4 or more countries.

Implementation Strategy

Manufacturers were asked about various strategic initiative actions and the degree to which they have been implemented in their organizations. For a list of 17 initiatives, the questionnaire asked the extent to which the company has implemented each item (5 = Fully implemented, 4 = Full Implementation in Progress, 3 = Partial Implementation, 2 = Considered but Not Implemented, 1 = Not Considered). The following graph shows the various implementation stages of tactical programs and initiatives.

To What Extent Have You Implemented the Following in Your Business



Implementation Strategy

To what extent have you implemented the following in your business?

Strategic Planning

34% of manufacturers have a strategic plan in place. 36% have started work on a plan. That is **excellent news** since transformation and value creation for a company rarely happen by accident.



However, that also means that 30% of companies have no strategic growth plan. 15% of those manufacturers indicated that planning is not being considered. Leaving value creation to chance is a significant missed opportunity.

ERP Systems

One method of understanding and controlling manufacturing processes and costs is through use of an ERP system. **57% of the manufacturer respondents have or are in process of implementing a solution.** 86% of manufacturers who generate under \$1.5M annually do not have an ERP system in place.



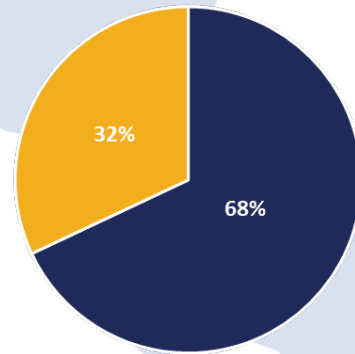
Industry 4.0

Adopting Industry 4.0 sits near the bottom of the priority list. For example, only 9% anticipate using Additive Printing in 2020-21. This underscores the challenges small-mid-sized companies face when considering the enormous complex world of Industry 4.0 and highlights the need for support to help with education and acceleration of adoption.



More traditional industries, such as manufacturing, have become a prime target for cyberattacks. No business is too small to be hacked. More than 70 % of reported breaches affected businesses with 100 employees or less.

Have Implemented Cybersecurity Measures



■ Have Cyber Plans ■ Don't Have Cyber Plans



A potential challenge is that cybersecurity and online hacking are not currently impacting 44% of participating manufacturers (page 17). While this is good news, the lack of cybersecurity and online hacking issues could provide a false sense of security and reduce a manufacturer's initiative to put cybersecurity protections in place. After a cyberattack occurs, it is too late to respond.



Implementing automation for your manufacturing processes is a significant investment of money for equipment and time for planning and programming. **43% of manufacturers have not started to implement an automation solution. 33% have partially implemented an automation solution.** With the expected future shortage of manufacturing workforce, automation is a strategy many manufacturers should start to explore. As the cost of robotics and other technologies continues to decrease, adoption of automation will continue to evolve. Deep technical support in advanced manufacturing engineering and automation is needed to help manufacturers take the next step.

Workforce

30% have focused on the workforce development opportunity. Professional and leadership development programs have been proven to increase employee retention. Additionally, these programs provide the company a better performing employee. Continual employee development is also necessary because as the adoption of automation and technology evolves, it will influence the types of skills needed for a career in manufacturing.



Workforce is a major challenge for manufacturing. 46% say a lack of workforce is a current concern (page 14) and 60% say it will be a concern over the next five years (page 16). **However, 51% of manufacturers are not actively conducting talent pipeline outreach activities,** which include apprenticeships, internships or working with their local schools to help develop the future manufacturers.

Waste Recycle Management Program



It is almost impossible for a manufacturer to avoid having scrap. Many manufacturers view scrap, excess raw material that was not needed during the manufacturing process, as an inevitable part of running their business. However, **68% of the manufacturers are implementing a waste recycling program** to reduce the resources and expense of managing waste, as well as recouping some of the cost of the raw materials. This is important, as 71% have a growing concern of the increase in cost of raw materials. (page 19)

Employee Safety



Employee safety is important, especially in this time of a pandemic. Employees are a company's most important and most expensive asset. The employee's safety means production can continue. **85% of the manufacturers have or are implementing a safety program beyond what regulatory requirements are expected.**

Current Issues

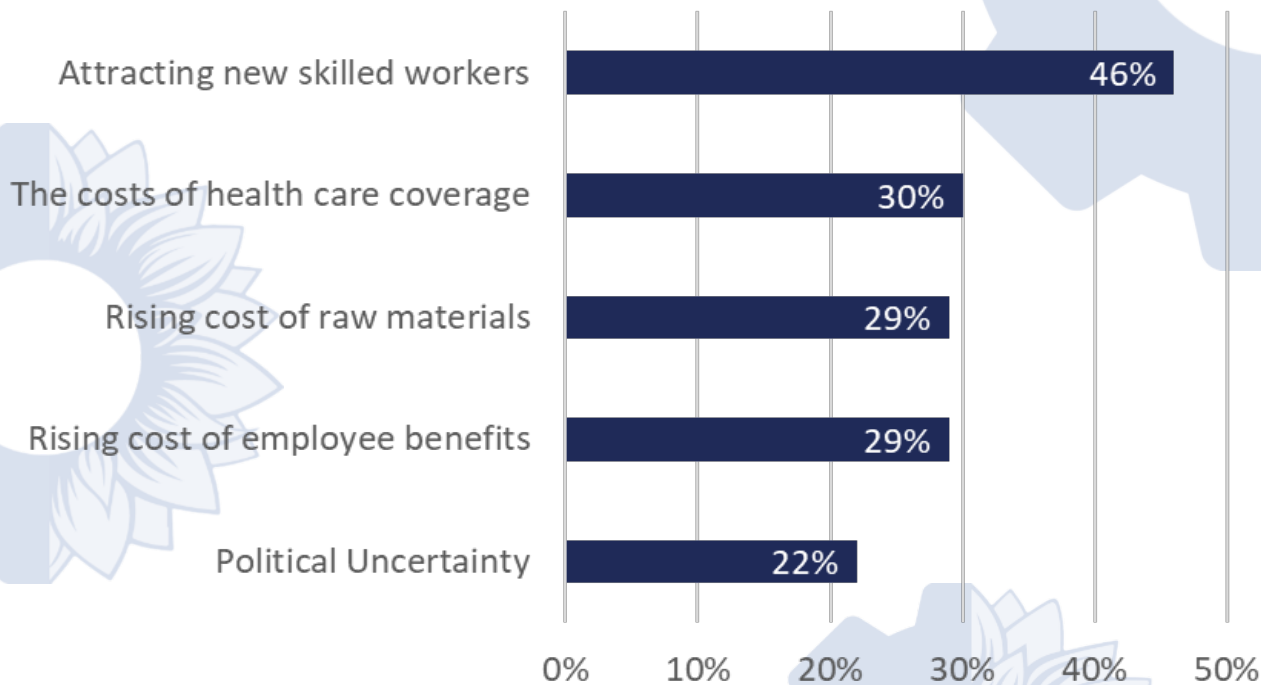
Impacting Business Growth Now

To best determine the needs of Kansas manufacturers, an understanding of what items business leaders perceive as the major impediments to growth is required. Respondents to the survey provided clear insights into what they are most concerned about.

The first question asked participants to rate 13 different factors that are currently impacting their business.

Attracting new skilled workers is the immediate top concern for 46% of manufacturers.

Negatively Impacting Growth Now



How This Business Issue is Affecting Our Company



The specific growth inhibitors were consistent across manufacturing subsectors. The below chart breaks down top issues by a variety of factors.

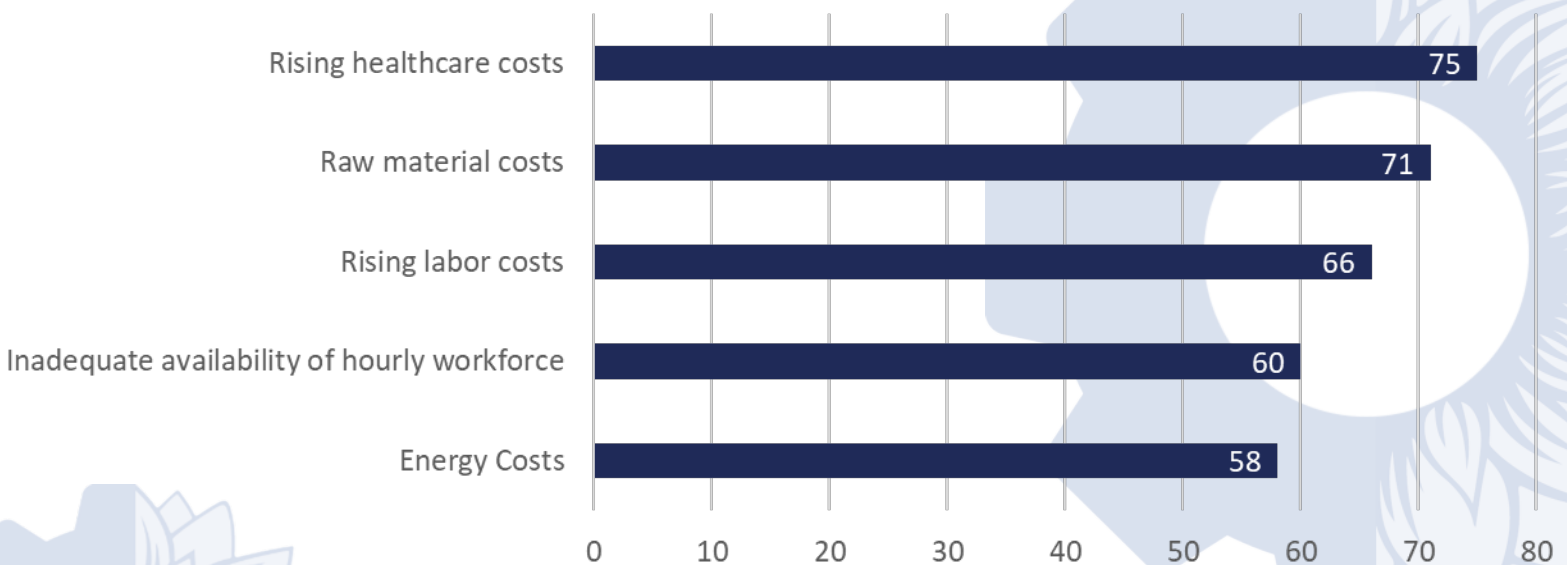
	Segment	Top 3 Issues	Bottom 3 Issues
GEOGRAPHICAL LOCATION	Urban	Attracting new skilled workers Rising cost of raw materials The costs of health care coverage	Drug abuse among current workforce Cybersecurity and online hacking Managing supply chain relationships
	Rural	Attracting new skilled workers The costs of health care coverage Rising cost of raw materials	Cybersecurity and online hacking Logistics of getting products to market Drug abuse among current workforce
MANUFACTURING INDUSTRY	Machinery Manufacturing	Attracting new skilled workers The costs of healthcare coverage Rising cost of raw materials	Logistics of getting products to market Managing supply chain relationships Drug abuse among workforce
	Miscellaneous Manufacturing	Attracting new skilled workers The costs of health care coverage Rising cost of raw materials	Drug abuse among current workforce Logistics of getting product to market Competition from foreign sources
	Fabricated Metal	Attracting new skilled workers The costs of health care coverage Rising cost of raw materials	Cybersecurity and online hacking Succession planning/future leadership Retirement of current skilled workers
	Food Manufacturing	Attracting new skilled workers Rising cost of raw materials Rising cost of employee salaries and benefits (not incl HC)	Drug abuse among workforce Competition from foreign sources Retirement of current skilled workers
	Plastics and Rubber Products Manufacturing	The cost of health care coverage Attracting new skilled workers Rising cost of raw materials	Retirement of current skilled workers Managing supply chain relationships Cybersecurity and online hacking
NUMBER OF EMPLOYEES	1 -4	The costs of healthcare coverage Rising cost of raw materials Attracting new skilled workers	Logistics of getting products to market Drug abuse among current workforce Competition from foreign sources
	5 - 9	The costs of healthcare coverage Attracting new skilled workers Rising cost of raw materials	Drug abuse among current workforce Retirements of current skilled workers Cybersecurity and online hacking
	10 - 24	Political uncertainty Attracting new skilled workers Rising cost of raw materials	Drug abuse among current workforce Retirement of current skilled workers Managing supply chain relationships
	25 - 99	Attracting new skilled workers The costs of healthcare coverage Rising costs of raw materials	Cybersecurity and online hacking Drug abuse among current workforce Managing supply chain relationships
	100 - 499	Attracting new skilled workers The cost of healthcare coverage Unfavorable government regulations (not incl tariffs)	Logistics of getting products to market Cybersecurity and online hacking Drug abuse among current workforce
	500+	Attracting new skilled workers Rising cost of raw materials The costs of healthcare coverage	Drug abuse among current workforce Cybersecurity and online hacking Managing supply chain relations

Business Concerns That Will Limit Growth

The second question asked participants to rate 19 different factors they believe may limit their growth over the next five years. Healthcare costs, raw materials costs, rising labor costs, and workforce availability stand out from the balance of issues.

The following issues will limit growth over the next 5 years

(% Agree or Strongly Agree)

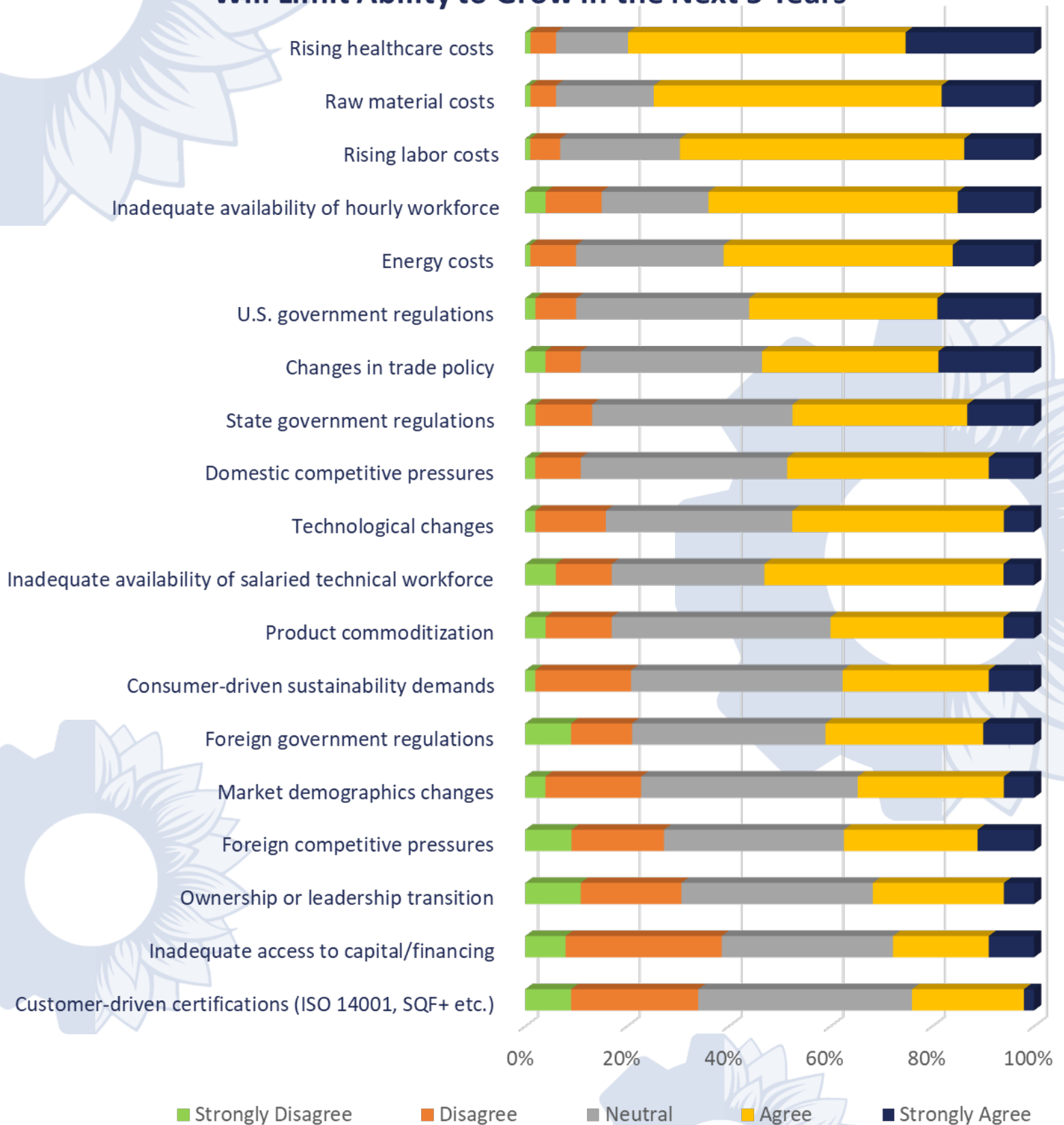


The rising cost of health care remains the most significant expected impediment to growth for Kansas manufacturers over the next five years. Healthcare expenses are expected to divert capital that could be used in more strategic investments.

Customer driven certifications and access to capital/financing were rated the lowest among respondents.

The following graph shows the various ranges of responses for the 19 different business concerns that will limit growth over the next five years.

Will Limit Ability to Grow in the Next 5 Years

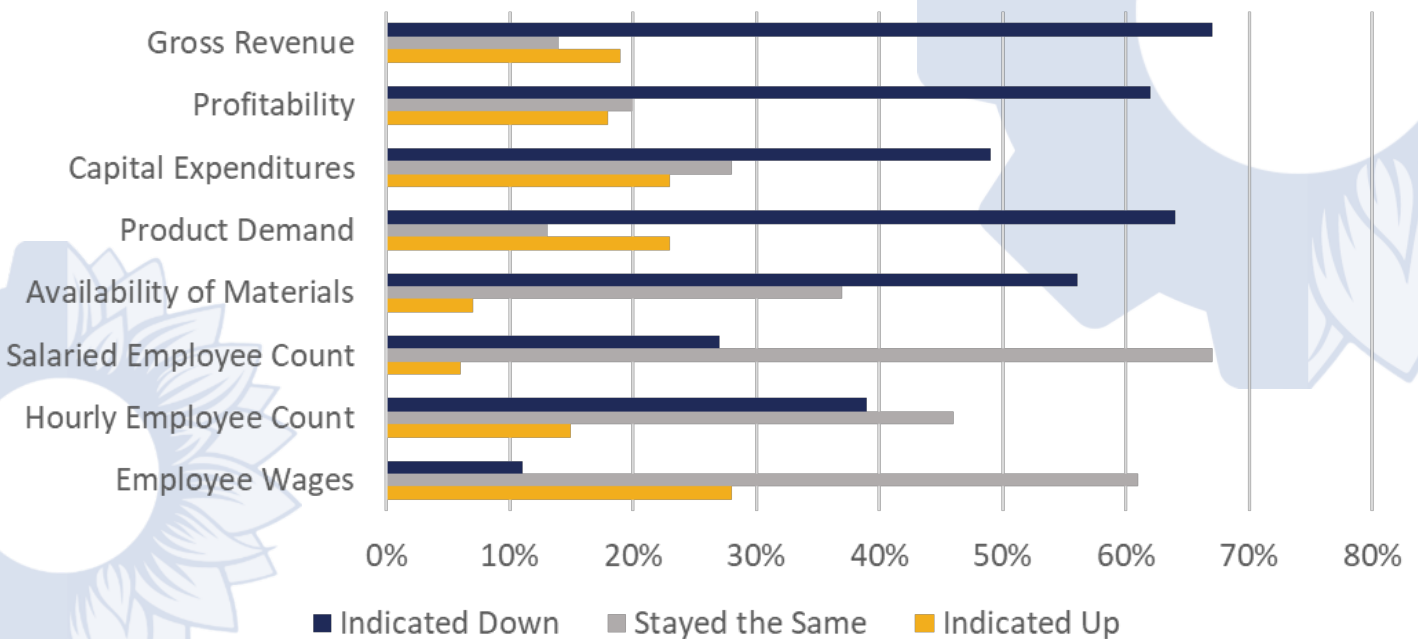


COVID-19

These are unprecedented times and the business dynamics for Kansas manufacturers and all business are in uncharted waters. There are manufacturers who have been negatively impacted by COVID-19 and others who have had difficulty keeping up with new demand.

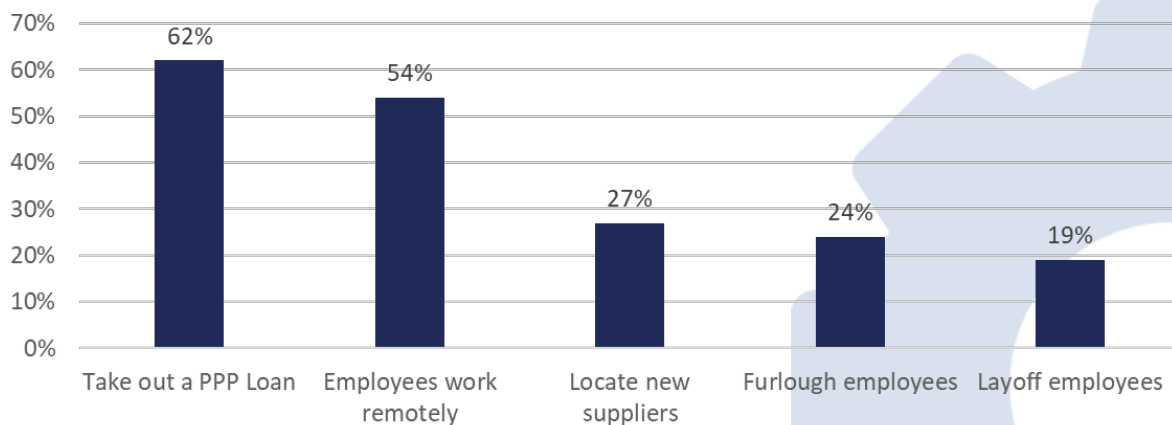
Manufacturers must shift from reactive to proactive, determine what will change only temporarily and what will change permanently, and learn to make good decisions without full information in rapidly changing economic conditions.

Business Impact From COVID-19



Manufacturers have had to make unusual and difficult decisions to keep their businesses viable during the pandemic. **62% of manufacturers took advantage of the Paycheck Protection Program (PPP) loan** that was made available as a part of the **Coronavirus Aid, Relief, and Economic Security (CARES) Act** .

In Response to COVID-19, Our Business Had to



47% of manufacturers have restricted investment in new equipment. A significant number of manufacturing projects may even be paused as companies struggle economically in the short term and seek to re-structure their operations in the long term. **33% have not restricted investment**, believing they have enough liquidity to continue manufacturing operations.

COVID-19 Has Caused Our Business to Restrict Investment in



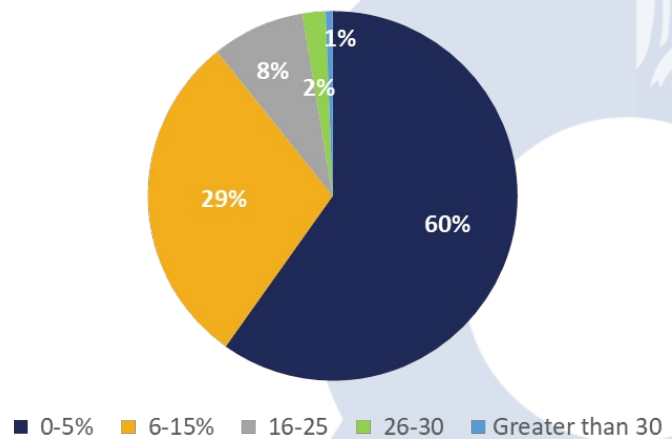
Workforce

The Workforce Need

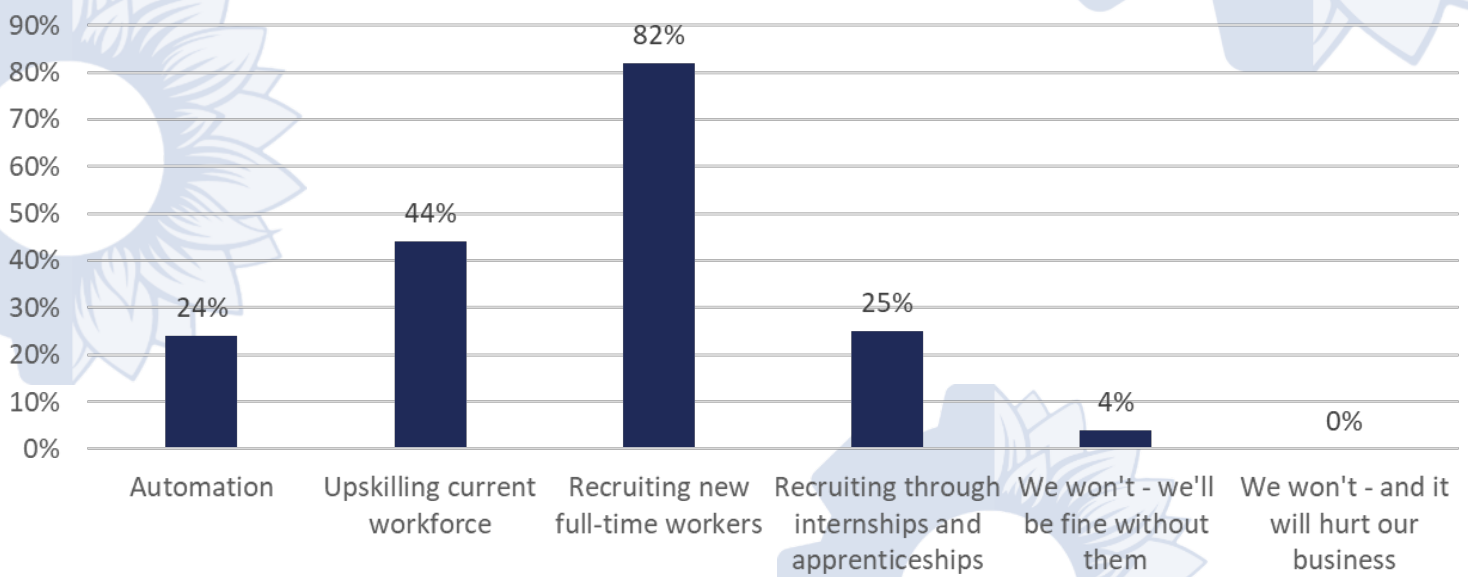
As indicated earlier in the report, manufacturers are deeply concerned about finding and hiring skilled talent. Companies' growth is being held back because they can not get the right people, with the right skills, in the right jobs. **There are approximately 4,521 open manufacturing jobs in Kansas.** (*Kansas DOL, 2020*)

In the next three years, **29% of manufacturers report that up to 15% of their workforce will retire.** 11% of manufacturers say it will be more than 15%. Add to that the current and growing skills gap and it's a potential crisis in the making we need to address.

How much of your workforce will be retiring over the next 3-years?



How Will You Replace Those Workers?



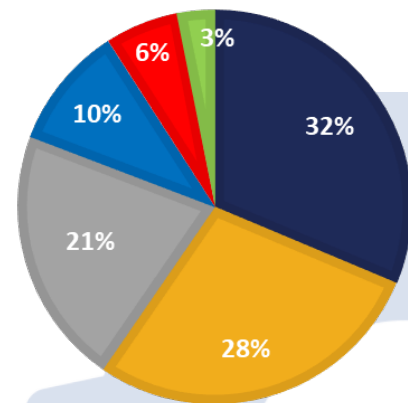
Finding Employees

Given the economic uncertainty that exists with the COVID-19 pandemic and as seen by restricted investment in employee hiring (page 22), the need for new employees will not be from business growth.

60% of manufacturers will be hiring less than 5 new employees because of business growth over the next 12 months.

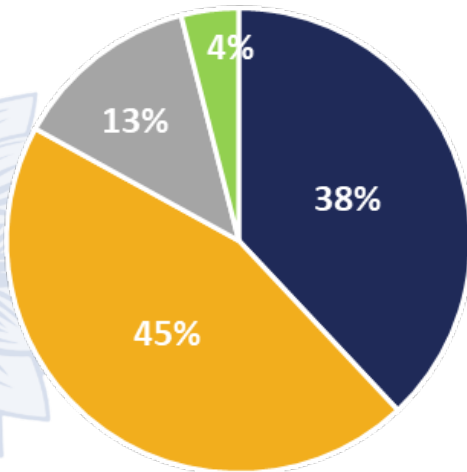
NUMBER OF NEW HIRES OVER NEXT 12 MONTHS

■ 1-2 ■ 3-5 ■ 6-10 ■ 11-20 ■ 21-50 ■ 51+



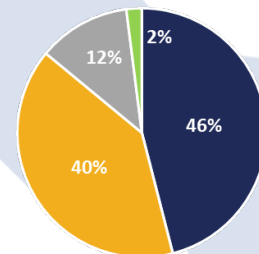
Manufacturers indicate that it is difficult to attract workers for open positions.

Difficulty Attracting Workers - All



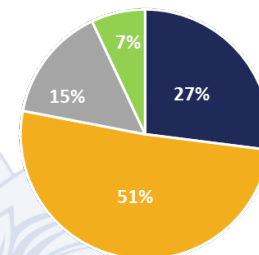
■ Somewhat Difficult ■ Very Difficult
■ Not Difficult ■ Not Difficult at All

Difficulty Attracting Workers - Rural



■ Very Difficult ■ Somewhat Difficult
■ Not Difficult ■ Not Difficult at All

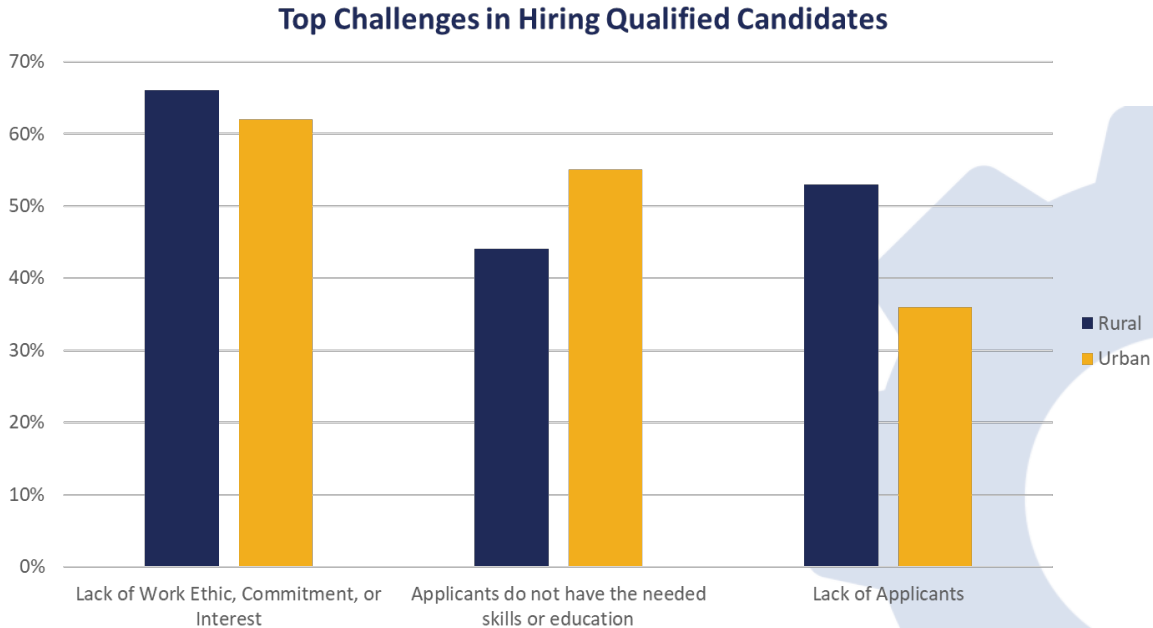
Difficulty Attracting Workers - Urban



■ Very Difficult ■ Somewhat Difficult
■ Not Difficult ■ Not Difficult at All

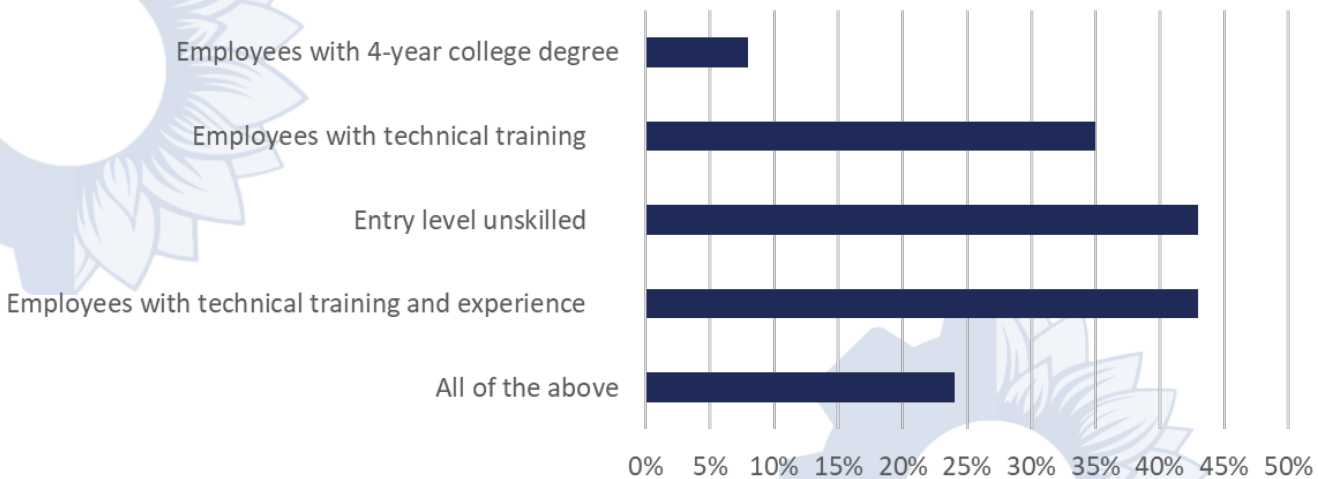
Finding the Right Employees

The below graph shows the three top challenges manufacturers face trying to hire qualified candidates. **64% said candidates they try to hire have a lack of work ethic, commitment, or interest.**



Locating the right employees is proving to be a hard job. In fact, **43% of manufacturers are resorting to hiring unskilled workers** and providing the necessary training internally to develop them for their roles.

Which types of employees are you actively searching for?

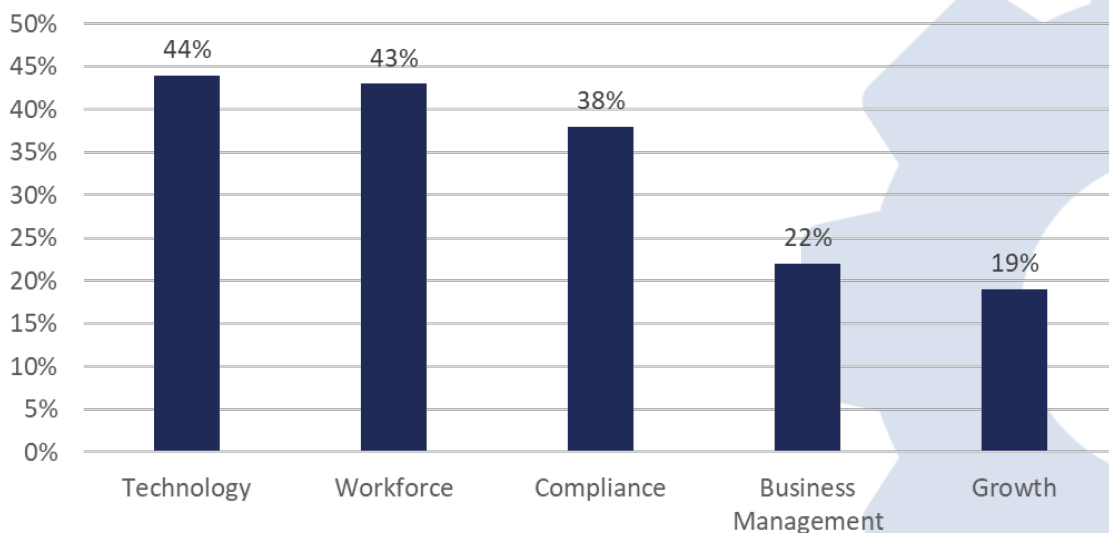


Resources

Manufacturers indicated they request support from economic development organizations (34%), chambers of commerce (34%), other manufacturers (31%), Kansas Department of Commerce (30%), and KMS (25%).

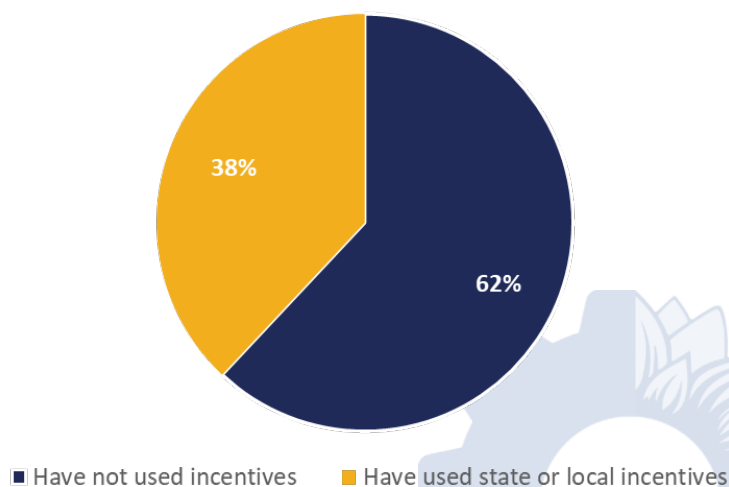
The top items they seek assistance with are technology and workforce.

Type of External Assistance Used



A smaller number of manufacturers have taken advantage of state or local incentives than not.

Incentive Usage



Kansas Manufacturing Solutions has numerous partnerships across Kansas and the United States to support Kansas manufacturing. These are examples of the types of organizations KMS partners with to help support the Kansas manufacturing ecosystem.

Strategic advocacy partners include

[Kansas Department of Commerce](#)

[National Institute of Science and Technology Manufacturing Extension Partnership](#) (NIST MEP). As the Kansas representative of the NIST MEP National Network, KMS has unique access to 50 peer organizations across the country who can provide resources, assets, supplier scouting opportunities, and more for Kansas manufacturers.

Sub-recipient partners leverage their resources and KMS resources to meet common goals of growing manufacturing in Kansas. These partners are:

[Kansas State University](#)

[Pittsburgh State University](#)

[Hutchinson Community College](#)

[Wyandotte Economic Development Council](#)

KMS works with manufacturing support organizations crucial to the development of the Kansas manufacturing industry and the communities with which they serve. Some of these partners include:

[Kansas Chamber of Commerce](#)

[Kansas City Manufacturing Network](#)

[Kansas City Chamber of Commerce](#)

[WSU Tech](#)

[Fairfax Industrial Association](#)

[Kansas City Kansas Community College](#)

[Kansas Economic Development Alliance](#)

[Kansas Manufacturing Council](#)

[Wichita Regional Chamber of Commerce](#)

[Peaslee Tech](#)

[Wichita Manufacturing Association](#)

[SEK, Inc](#)

[Workforce Partnership](#)

[Western Kansas Manufacturers Association](#)

KMS has developed an Alliance Partner program. This white glove program is made up of vetted business partners who provide solution support for manufacturers on behalf of KMS, providing KMS the ability to help with all your manufacturing business needs.

If you are interested in partnering with KMS, please contact us for more information at Drome@wearekms.com.

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