The Manufacturing Institute–BKD
Small and Medium-Sized Manufacturers Survey
February 2021: The 'New Normal' and Post-Pandemic Workforce Challenges

This is the first in a series of special surveys of small and medium-sized manufacturers (i.e., those with fewer than 500 employees) that are being conducted by The Manufacturing Institute's Center for Manufacturing Research and BKD, a national CPA and advisory firm.[1] The topic will vary with each report, and for this initial survey, manufacturing leaders were asked to describe the "new normal" for their operations in the aftermath of severe disruptions due to the COVID-19 pandemic—to the extent that they have coalesced around what that might look like for their businesses.

Highlights:

- **Workforce challenges:** Despite a dramatically altered labor market, manufacturers consistently suggest that they have trouble attracting and retaining sufficient workers. More than 77% of small and medium-sized firms expect to continue struggling to identify talent in 2021 and beyond.

- **Keys to growth:** Three-quarters of respondents said that a stronger domestic economy was key to driving growth for their companies, followed by increased efficiencies (59.2%), new product development (53.6%), investments in new technologies (43.9%) and worker training, upskilling and professional development (42.9%).

- **Technology:** More than 77% were making technological investments at their businesses to achieve cost efficiencies in the production process, with 73.4% doing so to improve their operational performance.

- **Safety:** More than 83% had enhanced workplace safety measures and requirements, with nearly two-thirds noting a need for increased worker flexibility.

- **Remote work:** Nearly 64% had reevaluated what work could be done remotely where possible, and 55.8% noted that their business was working to reengineer the production process with social distancing in mind.

- **Supply chain:** Roughly 47% of SMMs were reevaluating their supply chain. Moreover, one in five respondents cited the need to accelerate automation in their operations, with roughly the same percentage stating that the pandemic provided the opportunity to offer new products or services to their customers.

[1] The MI and BKD administered this survey from Nov. 19 to Dec. 3, 2020, with at least 426 responses to each of the questions. All responses were anonymous, but some individuals identified themselves for attribution and for further follow-up on their examples.

- **New normal:** Respondents offered free response comments, featured below, on what the "new normal" looks like for them—assuming they know what that means just yet.

How Are SMMs Coping with Workforce Challenges Post-Pandemic?

There is an interesting paradox in the economy right now: even though unemployment has spiked as a result of the pandemic, manufacturers report significant difficulty in hiring the right talent—the same pressing problem that manufacturers faced pre-pandemic.

Employment has changed dramatically since the pandemic began. In February 2020, the unemployment rate registered 3.5%, a 50-year low, with a tight labor market, and there were 12.85 million employees in the manufacturing sector, not far from the highest level in 11 years. With the onset of the COVID-19 pandemic and severe shocks to the economy, the unemployment rate jumped to 14.8% in April 2020 before pulling back to 6.3% in January 2021. Manufacturing employment fell by 1.36 million workers between February and April 2020 but has since regained about 55% of those jobs.

Roughly 18 million Americans are receiving some form of unemployment insurance, and unemployment rates are nearly double what they were a year ago. And yet, more than 77% of firms responding to the MI–BKD SMM Survey expect to continue struggling to identify talent in 2021 and beyond. This is the paradox in the labor market, and one that flies in the face of conventional wisdom given the number of unemployed Americans. And as the manufacturing economy continues to improve, the workforce challenge is likely to grow. While manufacturing production plummeted 20% between February and April 2020, output was down by just 2.6% by December and a handful of major subsectors were near their pre-pandemic levels of production.[2]

In this survey, respondents were asked which skill clusters would be the most difficult to fill in 2021 and beyond (Figure 1). Perhaps not surprisingly, manufacturing and production roles topped the list, cited by 76.8% of those completing the survey. Other areas included maintenance, repair and installation (42.3%), engineering (39.4%), industry knowledge (37.6%), "soft skills" (30.8%) and sales (19.7%).

The challenge of finding sufficient talent means that many manufacturers have needed to turn away work.[3] In lieu of missed opportunities, business leaders were asked about how they have tried to address the skills shortages at their firms (Figure 2). Obviously, one way of accomplishing what needs to get done with jobs remaining unfilled is to have current employees take on more work (63.0%), but that is something that will likely only work in the

[2] Most manufacturing sectors still have a way to go to reach that threshold. National Association of Manufacturers Chief Economist forecasts that manufacturing output will be back to pre-recessionary levels by the second half of 2021.

[3] In the March 2020 edition of the NAM Manufacturers' Outlook Survey, 25.8% of respondents said they had to turn away work and lose revenue opportunities due to the inability to attract and retain workers.

short term. Other options cited include creating or expanding internal training programs (47.5%), utilizing temporary staffing services (41.9%), collaborating with educational institutions on skills certification programs (39.1%) and encouraging possible retirees to stay longer in their roles (32.8%).

Respondents were also asked about their growth strategies. Nearly 43% mentioned worker training, upskilling and professional development as a primary driver of growth for their businesses (Figure 3)—an important recognition of the importance of human capital to the process. Respondents also noted worker flexibility and improvements in employee culture (27.8%). Other top responses included having a stronger domestic economy and sales for their products (75.2%), increasing efficiencies in the production process (59.2%), new product development (53.6%), investments in new technologies (43.9%), increasing international sales (31.8%) and reevaluating the supply chain for the goods and services that are being produced (18.8%).

When asked about motivations for investing in new technologies, more than 77% said that they were making these investments to achieve cost efficiencies in the production process, with 73.4% doing so to improve their operational performance (Figure 4). Other top choices for spending more on technology include a desire to stay competitive with others in the industry (56.9%), to help facilitate better operational excellence (50.8%), to develop new products or services (42.4%) and to improve service with customers, including connected products and services (39.4%).

What Is the "New Normal" in the Manufacturing Sector?

Manufacturing production fell more than 20% between February and April 2020, as firms grappled with tremendous challenges related to the COVID-19 pandemic and the resulting global recession. Beyond the business and workforce difficulties that were both pervasive and severe, many firms were also concerned with cash flow and their finances, particularly SMMs. Few firms can survive with little to no income, and the enormity of the crisis tested many manufacturers as they figured out how to survive and remain operational on the fly.

Passage of the Coronavirus Aid, Relief and Economic Security (CARES) Act in spring 2020 was designed to provide the necessary "bridge" to help businesses cope and keep workers employed until activity could resume, and policymakers continue to discuss extensions for many of the provisions in this important legislation.

SMMs were asked about business impacts from the COVID-19 pandemic (Figure 5), and worker safety and flexibility were top concerns. More than 83% had enhanced workplace safety measures and requirements, with nearly two-thirds noting a need for increased worker flexibility. The priority was keeping the labor force healthy, but with child care options limited and school often operating virtually, companies also recognized the logistical hurdles that many employees were facing in their personal lives. With that in mind, 63.9% had reevaluated what

work could be done remotely where possible, and 55.8% noted that their business was working to reengineer the production process with social distancing in mind.

In addition, 46.8% of SMMs reported that they were reevaluating their supply chain. Many companies were looking for alternative and/or duplicative sources as a preventative measure against future production disruptions. Moreover, one in five respondents cited the need to accelerate automation in their operations, with roughly the same rate stating that the pandemic provided the opportunity to offer new products or services to their customers.

With that data as context, respondents were asked to describe what the "new normal" looks like for them in their own words. The following are samples of actual responses, organized in 10 groups and along with the corresponding manufacturing sector (edited only for clarity):

- **Workplace safety and increased protocols are the norm.**

  - "24/7 dealing with effects of COVID-19, daily employee symptom screening, temperature checks, waiting for test results, contact tracing, COVID fatigue, masks requirements, etc. Folks are mentally exhausted from dealing with COVID." *(Other, "Vinyl and aluminum window and door manufacturer")*
  - "Constantly encouraging employees to maintain safe social distancing and reduction in time away from work." *(Transportation equipment)*
  - "Enhanced safety protocols." *(Other, "Advanced manufacturing, precision machining")*
  - "Given the implementation of CDC protocols for dealing with the pandemic in the workplace, we are busy making retail display packaging for food products but very conscious of social distancing and disinfecting areas." *(Paper and paper products)*
  - "More personnel working remotely, safety protocols consistent with [recommendations from the Illinois Department of Public Health]." *(Fabricated metal products)*
  - "Reconfigured manufacturing environment and less travel." *(Fabricated metal products)*
  - "Staggered shift starting times for manufacturing, reduced capacity in our cafeteria, no more plant-wide meetings, no more company gatherings." *(Other, "Packaging")*
  - "Staggered work hours and masks." *(Fabricated metal products)*
  - "We continue to look at ways to minimize risk of our employees while still being able to reach our clientele." *(Nonmetallic mineral products)*

- **Work will continue to be virtual where possible, with increased worker flexibility in scheduling.**

- "Balancing production, remote workforce options long term." *(Electrical equipment and appliances)*
- "Continue to social distance and have remote meetings. Limit company travel." *(Fabricated metal products)*
- "Creative methods to communicate internally and externally." *(Machinery)*
- "Emphasis on servicing existing customers and ensuring we live up to and fulfill our commitments to customers and prospects." *(Machinery)*
- "Less rigid time and attendance." *(Fabricated metal products)*
- "Less travel. Fewer trade shows. More remote workers." *(Machinery)*
- "Much more remote working. Jobs that we thought could not be done remotely are being done well remotely." *(Machinery)*
- "More virtual selling." *(Paper and paper products)*
- "We have adopted remote working as the new norm for our business; 60–75% of workforce will no longer be in a traditional office on a daily basis." *(Other, "Medical devices")*
- "We will look mostly the same with some office personnel working remotely more often." *(Fabricated metal products)*

- **Manufacturers expect to continue to struggle finding talent.**

  - "Fewer available workers." *(Primary metals)*
  - "More jobs with 80% work from home. Hiring people with better analytical skills." *(Fabricated metal products)*
  - "I can't define the new normal. The only known is that employees will be harder to find and retain. We have to get past paying people to stay home." *(Other, "Defense production")*
  - "People keep working at home, add staff as needed without expanding facilities. Biggest challenge is integrating new staff to culture and training without them being in the office." *(Machinery)*
  - "Sales recovering but difficult time with labor. Some people afraid to work and others using the system, unemployment benefits. This has reduced labor pool in our area." *(Fabricated metal products)*

- **Firms will accelerate their investments in new technologies and in cost control.**

  - "Being a smaller and more agile company." *(Other, "Aerospace manufacturing")*
  - "Better supply chain risk management and maximum flexibility for workforce and distribution partners." *(Machinery)*
  - "Hopefully the same as pre-COVID, only with a more digital flavor." *(Other, "Manufactured equipment leasing and finance")*
  - "More use of technology, the internet and improved processes." *(Electrical equipment and appliances)*

- "Staying as lean as possible and finding efficiencies and technology to carry us through the slow growth ahead." *(Fabricated metal products)*

- **Many manufacturers are also reporting sharply higher costs, at least for the near term.**

  - "Higher costs for everything. Inability to pass on rising costs to customers to stay competitive. Deciding if it's worth it to stay in business on no margin." *(Other, "Semiconductor/electronic industry")*
  - "Increased sales and increased lead times for raw materials will cause delays in fulfilling orders." *(Electrical equipment and appliances)*
  - "More pharma products, outsourcing locally to help support production ramp-ups, increased internal costs and focusing even more on quality." *(Machinery)*
  - "Rising costs with no ability to raise product prices." *(Machinery)*

- **A few taking the survey said that new products or services will be part of the "new normal" for their operations.**

  - "Change some of our product offerings to supply new demand." *(Fabricated metal products)*
  - "We have to pivot to new markets (government contracting). We have to find a new banking partner." *(Fabricated metal products)*

- **Despite challenges for many, some manufacturers report very strong growth in recent months.**

  - "Consistently working 2 full shifts, 10 hours a day, 5 days a week due to increase in sales to existing customers and the addition of new customers." *(Fabricated metal products)*
  - "Fortune 500 companies pushing out [more work for us]!" *(Fabricated metal products)*
  - "Our company is an essential business. Our sales have increased slightly this year, and we have more employees than in 2019." *(Transportation equipment)*

- **The "new normal" looks like the old normal for some manufacturers.**

  - "I think there may be long-term improvement." *(Fabricated metal products)*
  - "I hate the words 'new normal'; nothing normal about this. I'd like to see an increased focus on U.S. manufacturing." *(Fabricated metal products)*
  - "Looks like the 'old' normal. True supply and demand." *(Wood products)*
  - "My definition of 'normal' is 'constant change.' There is virtually nothing in 2021 that looks anything like 1999. I hate the term 'new normal.' What is normal today will be changed tomorrow, if not sooner." *(Fabricated metal products)*
  - "Return to pre-COVID conditions." *(Other, "Window manufacturing")*

- "We are currently back at our budgeted goals." *(Other, "Farm machinery and equipment")*
- "We are looking to get back to the old normal." *(Fabricated metal products)*

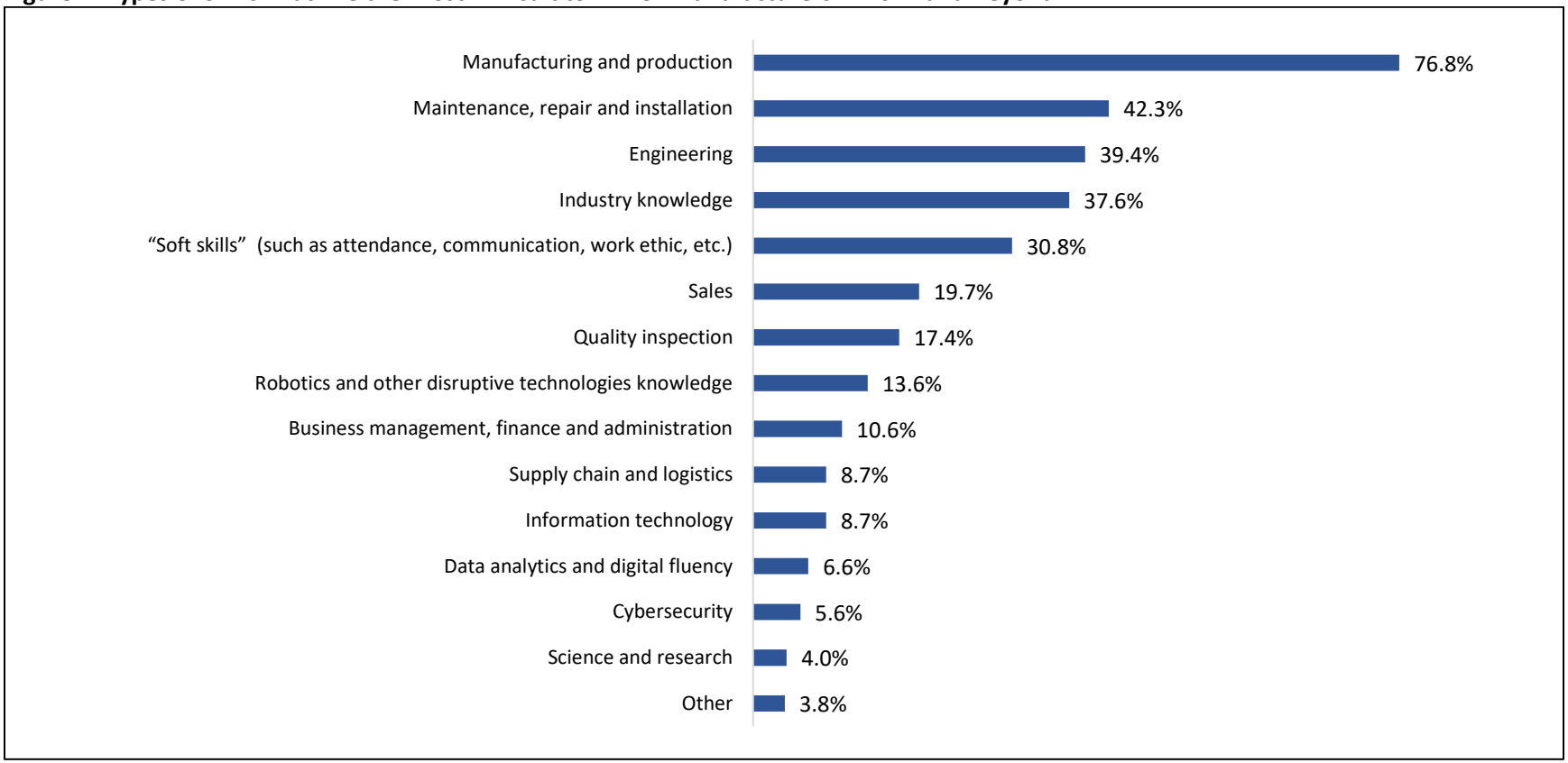
- **However, manufacturing activity will remain below pre-pandemic levels for a while for some businesses.**

  - "Hard fight for every sales dollar." *(Fabricated metal products)*
  - "It looks like [it does] when we are in a recession." *(Plastics and rubber products)*
  - "Probably about 30% lower in revenue, the company will have to do more with fewer people." *(Fabricated metal products)*
  - "Slower construction until pandemic is over." *(Electrical equipment and appliances)*
  - "Slower growth with better budget management." *(Electrical equipment and appliances)*
  - "We are doing okay, but outlook is a bit unknown and assumed to be negative for a while." *(Fabricated metal products)*
  - "We really haven't changed much. Early in the pandemic, we had some work from home changes, but it's limited what you can do in a manufacturing environment. We have been pushing through business as usual albeit at a lower level than normal." *(Other, "Manufacturer of laboratory research equipment")*

- **Several respondents said it was too soon to know what the "new normal" might look like.**

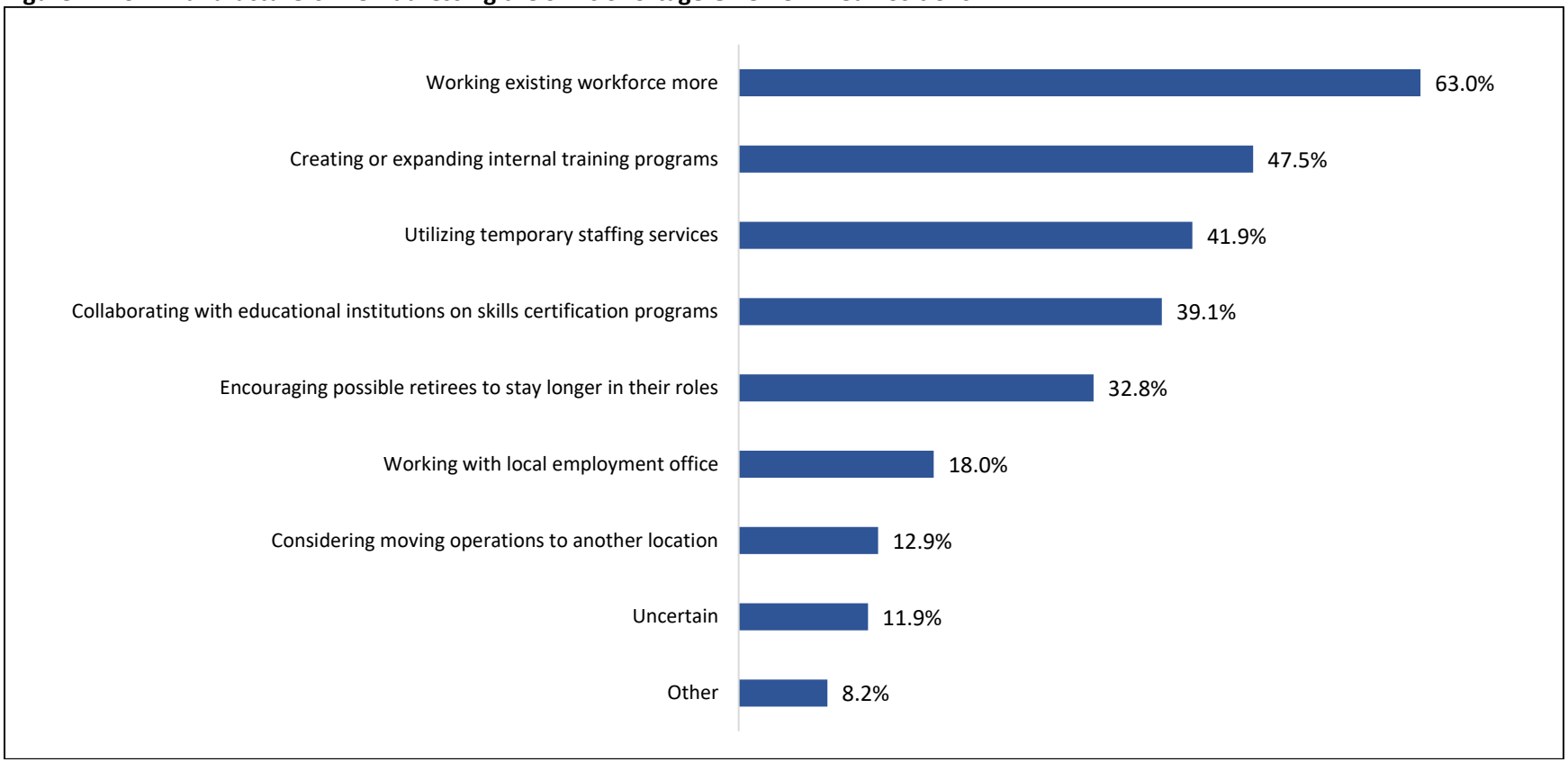
  - "No idea." *(Fabricated metal products)*
  - "The question is too broad to answer. If it was more specific related to a certain area (sales, production, etc.), that would allow for a specific response to a new normal." *(Fabricated metal products)*
  - "Unknown." *(Fabricated metal products)*
  - "We do not know what the 'new normal' is, so our current challenge is to be productive in uncertainty." *(Other, "Industrial pumps")*
  - "Who knows?" *(Fabricated metal products)*

Figure 1: Types of Skills That Are the Most Difficult to Fill for Manufacturers in 2021 and Beyond



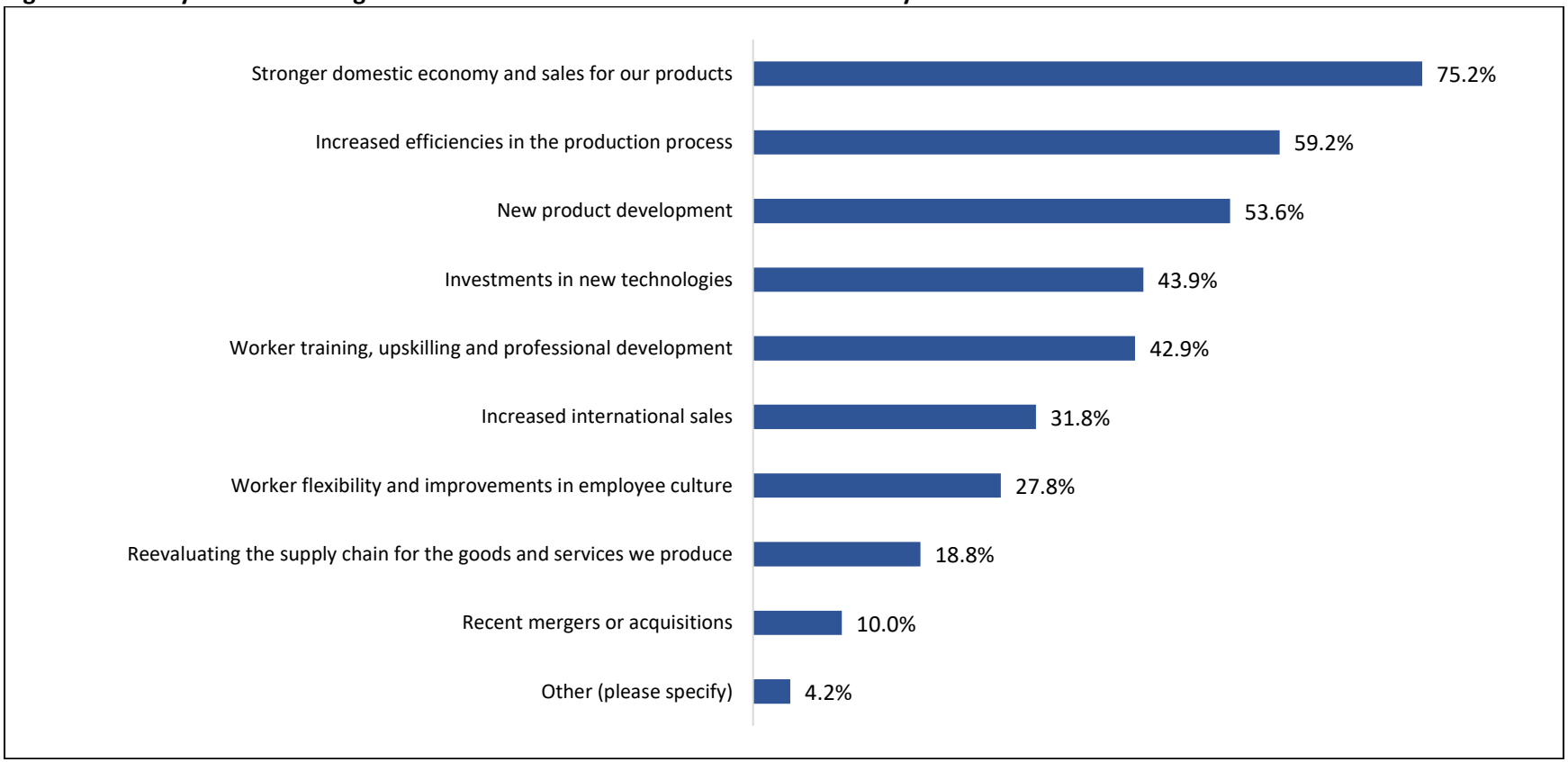
Note: Respondents were able to check more than one response; therefore, responses exceed 100%.

Figure 2: How Manufacturers Are Addressing the Skills Shortage Given Unfilled Positions



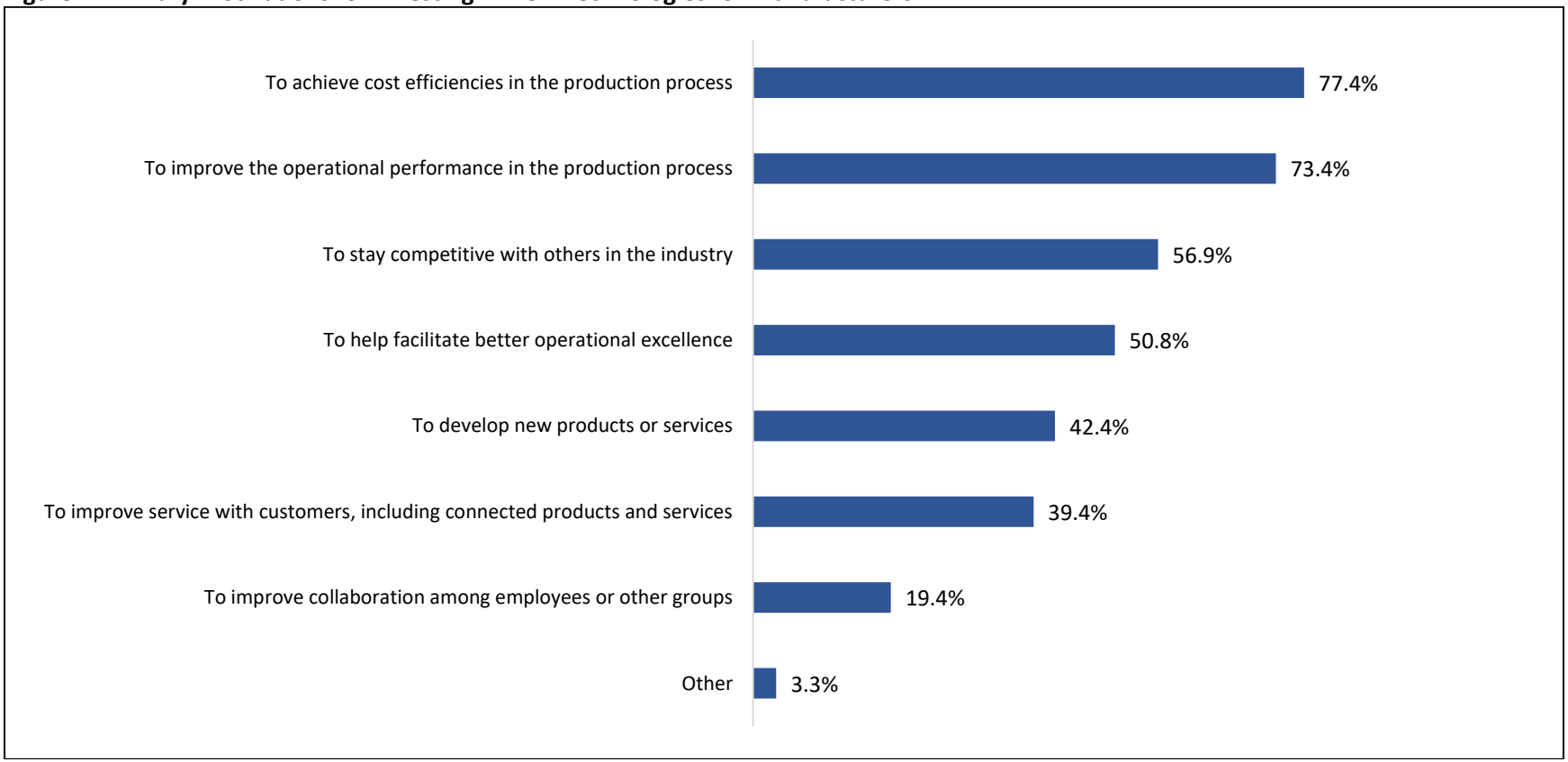
Note: Respondents were able to check more than one response; therefore, responses exceed 100%.

Figure 3: Primary Growth Strategies for Manufacturers' Businesses in 2021 and Beyond



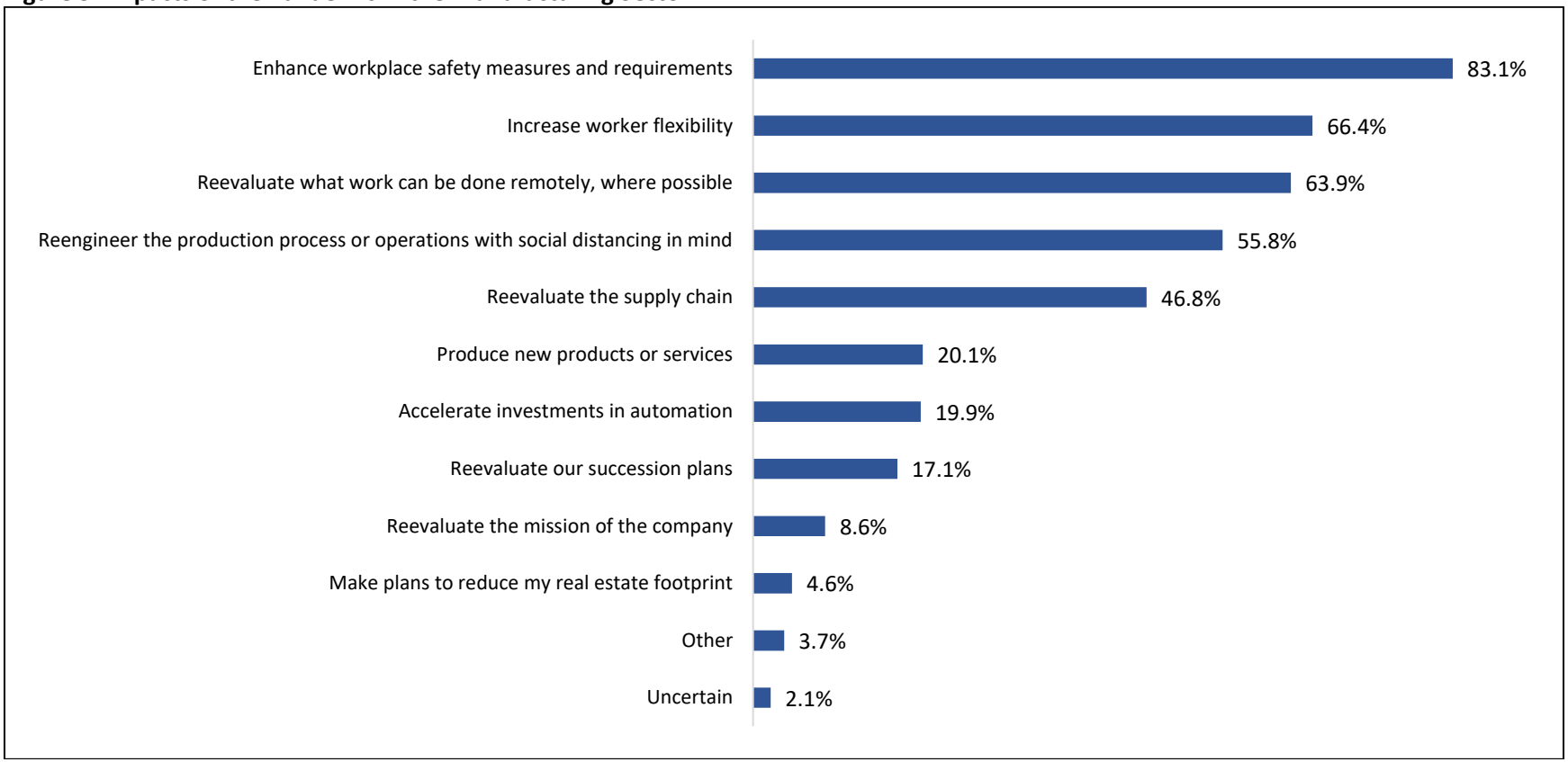
Note: Respondents were able to check more than one response; therefore, responses exceed 100%.

Figure 4: Primary Motivations for Investing in New Technologies for Manufacturers



Note: Respondents were able to check more than one response; therefore, responses exceed 100%.

Figure 5: Impacts of the Pandemic in the Manufacturing Sector



Note: Respondents were able to check more than one response; therefore, responses exceed 100%.

Survey Responses

1. Has your company been forced to do any of the following since the pandemic began? (Select all that apply.)
    a. Reevaluate the mission of the company – 8.6%
    b. Produce new products or services – 20.1%
    c. Reevaluate the supply chain – 46.8%
    d. Reengineer the production process or operations with social distancing in mind – 55.8%
    e. Accelerate investments in automation – 19.9%
    f. Enhance workplace safety measures and requirements – 83.1%
    g. Reevaluate what work can be done remotely, where possible – 63.9%
    h. Increase worker flexibility – 66.4%
    i. Make plans to reduce my real estate footprint – 4.6%
    j. Reevaluate our succession plans – 17.1%
    k. Other – 2.1%
    l. Uncertain – 3.7%

2. What are the primary drivers of your company's growth strategies in 2021 and beyond? (Select all that apply.)
    a. Stronger domestic economy and sales for our products – 75.2%
    b. Increased international sales – 31.8%
    c. Reevaluating the supply chain for the goods and services we produce – 18.8%
    d. Increased efficiencies in the production process – 59.2%
    e. Investments in new technologies – 43.9%
    f. New product development – 53.6%
    g. Recent mergers or acquisitions – 10.0%
    h. Worker flexibility and improvements in employee culture – 27.8%
    i. Worker training, upskilling and professional development – 42.9%
    j. Other – 4.2%

3. What are the primary motivations for investing in new technologies for your company? (Select all that apply.)
    a. To achieve cost efficiencies in the production process – 77.4%
    b. To improve the operational performance in the production process – 73.4%
    c. To develop new products or services - 42.4%
    d. To improve collaboration among employees or other groups – 19.4%
    e. To improve service with customers, including connected products and services – 39.4%
    f. To help facilitate better operational excellence – 50.8%
    g. To stay competitive with others in the industry – 56.9%
    h. Other – 3.3%

4. The labor market landscape has obviously changed dramatically since the pandemic began, but manufacturers have cited the inability of finding talent as their top concern in recent years. Do you anticipate ongoing difficulties in attracting and retaining workers for your company in 2021 and beyond?
    a. Yes – 77.3%
    b. No – 13.5%
    c. Uncertain – 9.3%

5. What are the types of skills that you see as the most difficult to fill for your company in 2021 and beyond? (Select all that apply.)
    a. Business management, finance and administration – 10.6%
    b. Cybersecurity – 5.6%
    c. Data analytics and digital fluency – 6.6%
    d. Engineering – 39.4%
    e. Industry knowledge – 37.6%
    f. Information technology – 8.7%
    g. Maintenance, repair and installation – 42.3%
    h. Manufacturing and production – 76.8%
    i. Quality inspection – 17.4%
    j. Robotics and other disruptive technologies knowledge – 13.6%
    k. Sales – 19.7%
    l. Science and research – 4.0%
    m. Soft skills – 30.8%
    n. Supply chain and logistics – 8.7%
    o. Other – 3.8%

6. If you are unable to find the talent that you need, with open job postings that remain unfilled, how would you address the skills shortage? (Check all that apply.)
    a. Working existing workforce more – 63.0%
    b. Creating or expanding internal training programs – 47.5%
    c. Encouraging possible retirees to stay longer in their roles – 32.8%
    d. Collaborating with educational institutions on skills certification programs – 39.1%
    e. Utilizing temporary staffing services – 41.9%
    f. Working with local employment office – 18.0%
    g. Considering moving operations to another location – 12.9%
    h. Other – 8.2%
    i. Uncertain – 11.9%

6. As the global economy tries to bounce back from a severe recession and the COVID-19 outbreak, what does the “new normal” look like for your company? (Open response)

7. What is your company’s primary industrial classification?
    a. Chemicals – 6.3%
    b. Computer and electronic products – 3.5%
    c. Electrical equipment and appliances – 6.1%
    d. Fabricated metal products – 30.4%
    e. Food manufacturing – 0.9%
    f. Furniture and related products – 0.7%
    g. Machinery – 12.6%
    h. Nonmetallic mineral products – 2.6%
    i. Paper and paper products – 2.2%
    j. Petroleum and coal products – none
    k. Plastics and rubber products – 7.2%
    l. Primary metals – 3.5%
    m. Transportation equipment – 3.0%

n. Wood products – 1.3%
o. Other – 19.5%

8. Please estimate the total number of “full-time equivalent” employees (including contract workers) your organization currently employs in the United States.
    a. 50 or Fewer – 31.4%
    b. 51–100 – 24.7%
    c. 101–250 – 25.1%
    d. 251–500 – 18.8%