Resilient manufacturers study

2022 research report

WIPFLI

Manufacturers face a turning point, one at which their resiliency will determine how well they can manage change and disruption. The Wipfli resilient manufacturers study surveyed 194 U.S. manufacturers on their abilities to manage challenging business conditions and achieve success in four critical performance areas: innovation, growth, automation and resilience.

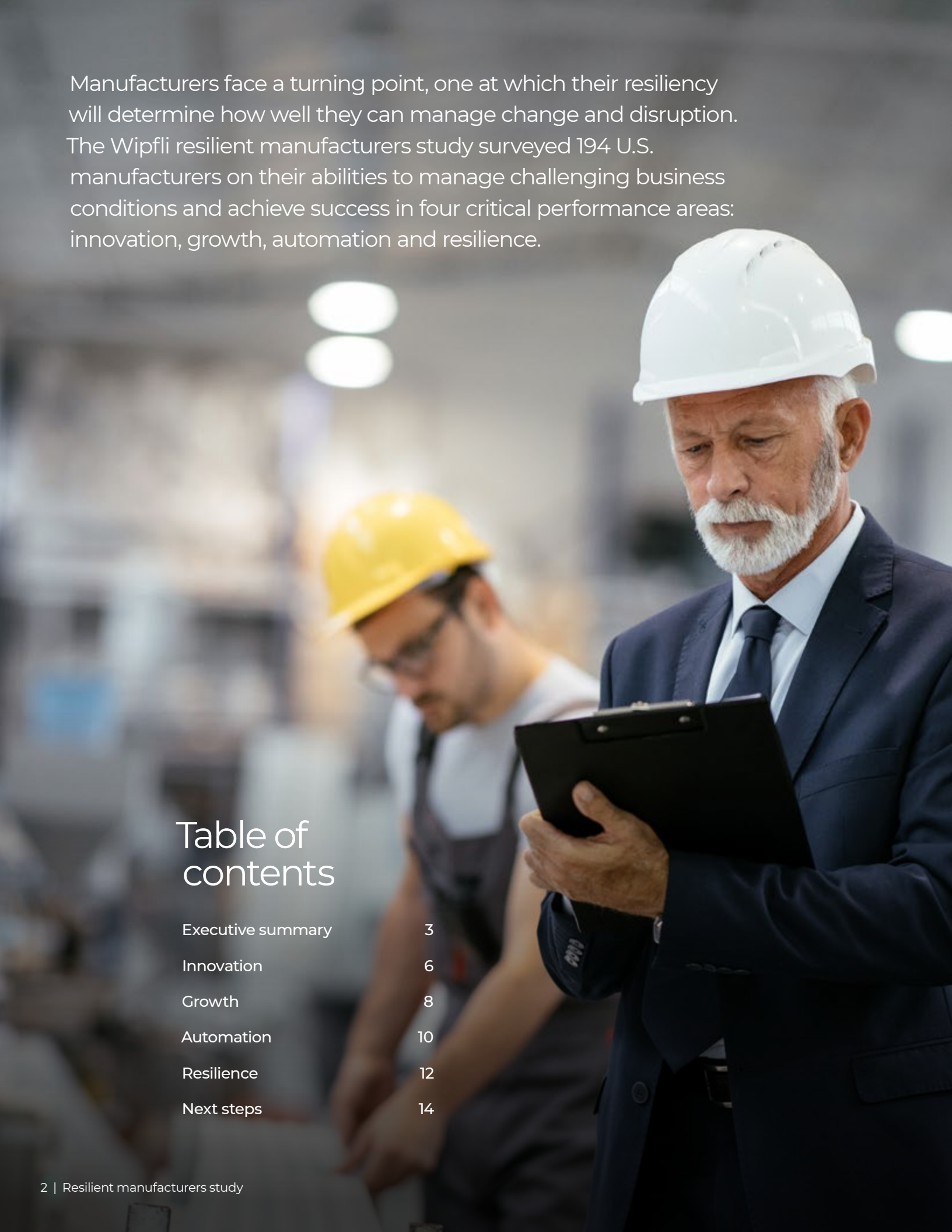


Table of contents

Executive summary

Manufacturing leaders have just lived through two years unlike any in their careers. The sheer scale of the COVID-19 pandemic's unforeseen impact created huge shifts and new norms — forcing every company to manage unprecedented challenges:

Supply chain: Delays, shortages and price increases have impacted every manufacturer, limiting their ability to efficiently manage production workflows. Leaders have been forced to look hard at their suppliers — and to plan for worst-case scenarios.

Labor: COVID-19 forced manufacturers to rapidly reconfigure facilities to accommodate social distancing, acquire scarce PPE, develop remote work policies on the fly and navigate new supply chain issues. Not surprisingly, these changes — along with pandemic frustration and malaise — drove many employees to leave their jobs. Now, the Great Resignation is here, and it's compounding the issue. Whereas in April 2020 there were almost five unemployed people for every job opening, in November 2021 there were 0.6.[1] With millions more job openings than employees to fill them, workers have more options, forcing manufacturers to manage skills shortages from the plant floor to the C-suite.

Demand: Manufacturers supplying industries devastated by the pandemic — e.g., restaurants, hospitality, entertainment and events — suffered precipitous demand and revenue declines. Yet other manufacturers — e.g., makers of PPE, paper products, hand sanitizer, construction and building materials, and home and household products — found themselves overwhelmed by orders, struggling to keep up as profits and capacity problems soared.

Among the key findings

72%
of respondents cannot launch new offerings in less than six months.

19%
of respondents don't have any strategy or goals around innovation or growth.

45%
of respondents experienced three or more data breaches in the past year.

66%
of respondents have increased profitability by more than 5% using Industry 4.0 technologies.

[1] "Number of unemployed persons per job opening, seasonally adjusted," U.S. Bureau of Labor Statistics.

Yet amid these crises — as well as the everyday complications of changing regulations, emerging competitors, cybersecurity, etc. — some manufacturers not only survived but thrived. How? By forging four new paths:

Innovation: Forward-thinking manufacturers leverage data to develop new business models that rapidly launch innovative products, services and processes.

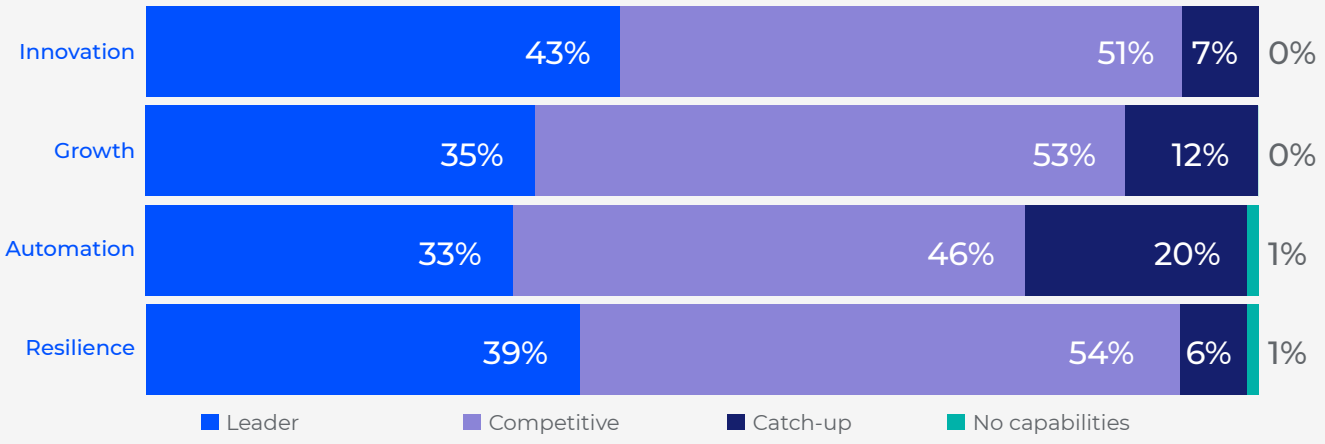
Growth: Growing manufacturers leverage strategies, goals and systems to ensure leaders, managers and frontline associates have the skills to increase customer satisfaction and optimize profitability.

Automation: Modern manufacturers embrace digitization and automation across the enterprise to improve productivity, develop talent and improve customer experience.

Resiliency: Healthy manufacturers adapt to challenges by building operations and supply chains able to monitor, mitigate and manage emerging risks.

Not surprisingly, few manufacturers excel in all these areas (Figure 1). While three-quarters of manufacturing executives consider their companies to be leaders in at least one performance dimension, only 7% are leaders in all four.

Figure 1. Company capabilities (% of manufacturers)



How can your business become a leader in all four? In this report, we'll share more results of our manufacturers survey, along with key analysis, so your business can identify obstacles and opportunities to tackle throughout the year to become a more resilient manufacturer.

While three-quarters of manufacturing executives consider their companies to be leaders in at least one performance dimension, only 7% are leaders in all four.

Innovation

Innovation processes — from ideation to product development to launch — determine the arc of a manufacturer's revenues and profits years in advance. While some manufacturers survive on core products, most are in constant search of their next breakthrough. Finding and marketing these winners requires a rigorous, well-defined innovation strategy.

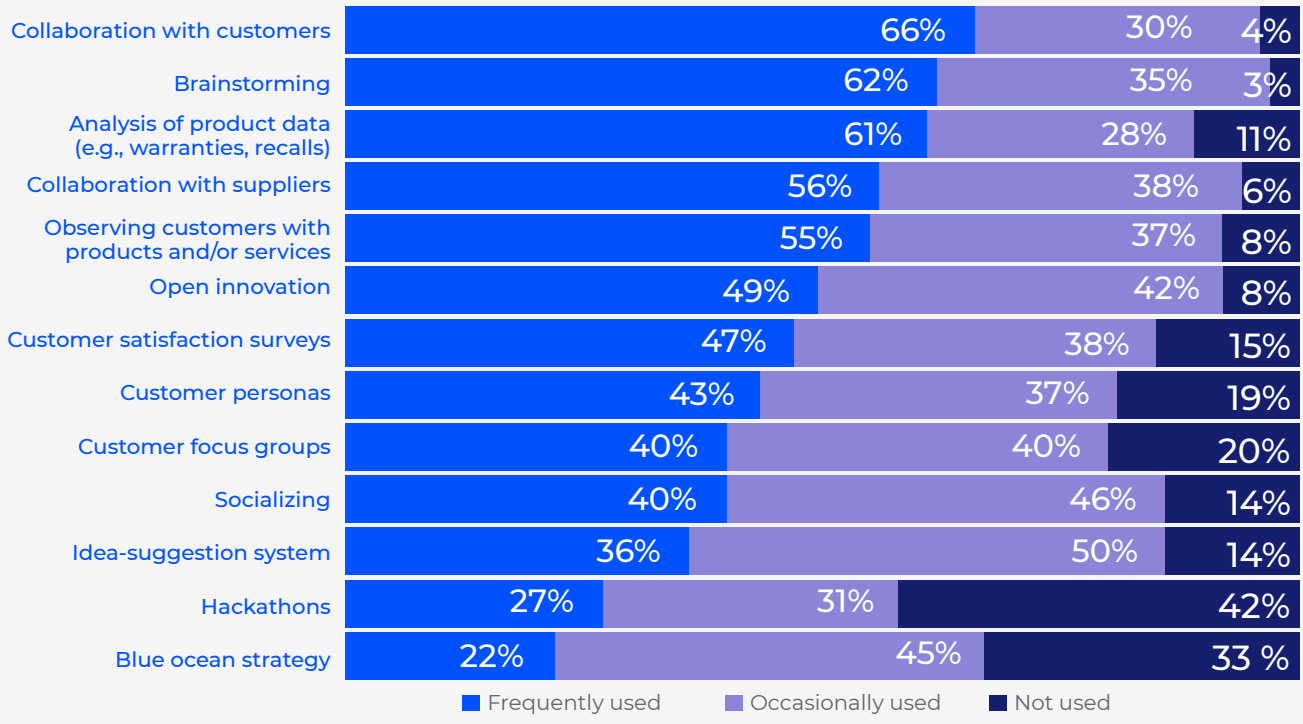
The Wipfli study finds that 81% of manufacturers have dedicated innovation strategies and goals or address them within other contexts. Yet a full 19% of manufacturers don't have any innovation strategy or goals.

This is a critical failure because innovation leaders are far more likely to have a dedicated innovation strategy versus other manufacturers.

A strategy, however, is only as good as its execution. Unfortunately, many ideation best practices — open innovation, customer satisfaction surveys, idea suggestion systems — are missing at a majority of manufacturers (Figure 2), as are lean R&D/product development processes (Figure 3).

> 19% of manufacturers don't have any innovation strategy or goals.

Figure 2. Use of ideation best practices (% of manufacturers)

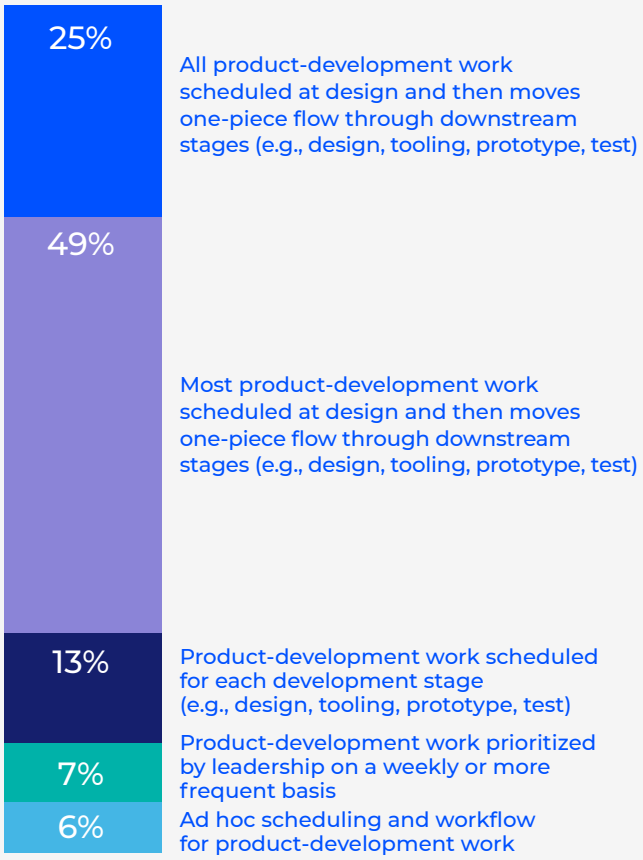


Not surprisingly, innovation leaders are far more likely to use these ideation practices and to have all or most product development work moving in one-piece flow.

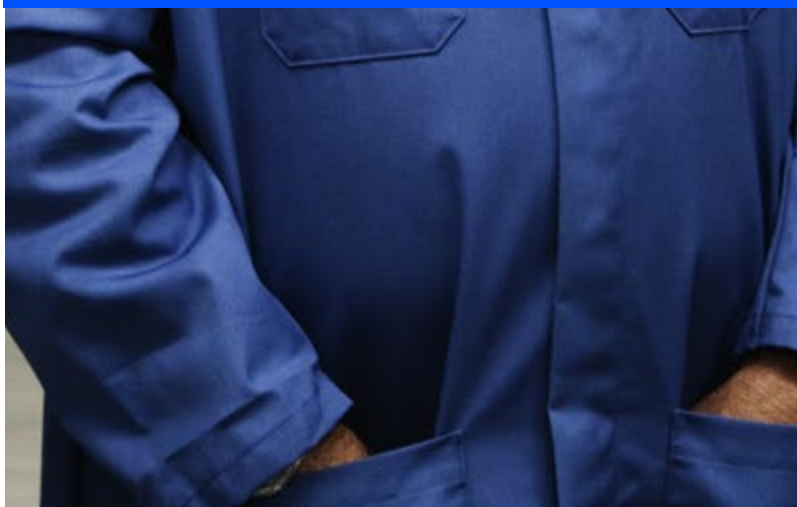
Better innovation strategies and practices allow manufacturers to efficiently and quickly launch new products, avoiding delays and ensuring a steady stream of new profits. Yet a third of companies require at least a year to get new products and services to customers; only 28% can launch new offerings in less than six months. That's one of the reasons just 13% of manufacturers generate more than 30% of annual sales from products and services released in the past 12 months.

Innovation tip: Rigorously quantify the returns — revenues, profits, patents, brand awareness, customer retention, etc. — that your company generates from innovation activities versus leaders in your industry.

Figure 3. Process to achieve innovation speed/efficiency (% of manufacturers)



Only 28% of manufacturers can launch new offerings in less than six months.



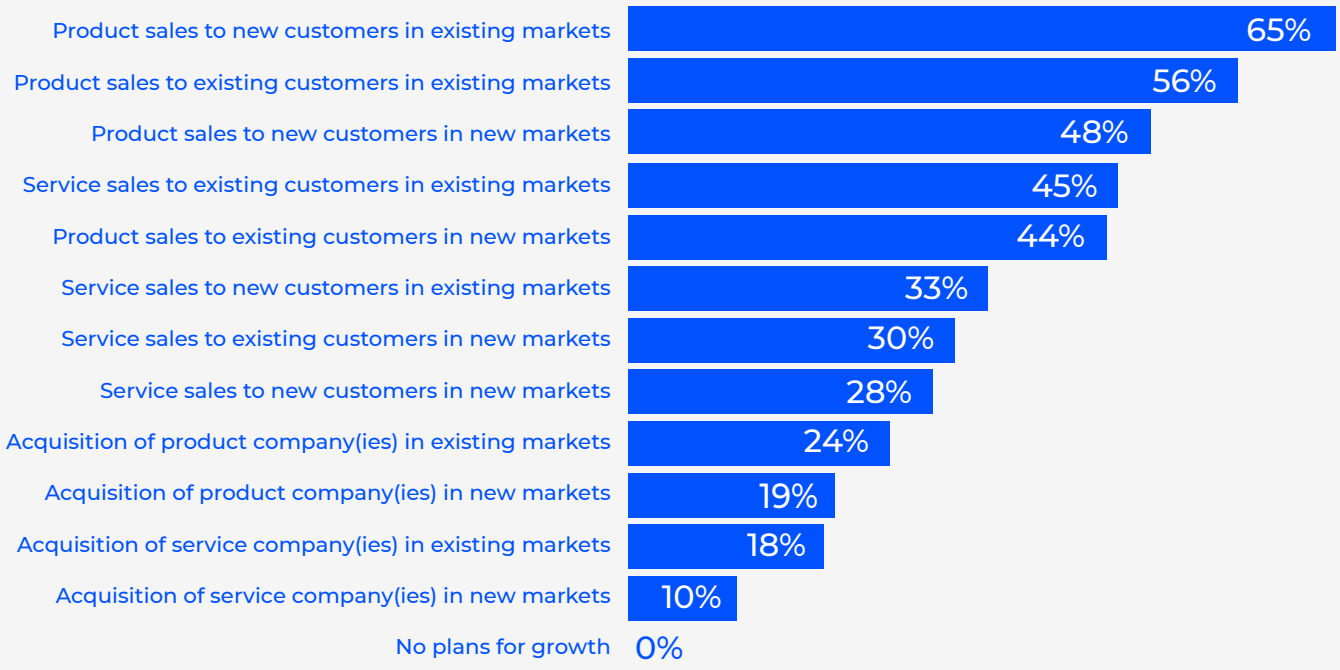
Growth

Manufacturers focused on growth need to update and expand internal capabilities — talent, technologies, process improvement methodologies — to increase revenues and margins. That's why 81% of manufacturers have dedicated growth strategies and goals or address them within other contexts. Yet 19% don't have a plan — putting them at a significant disadvantage, because growth leaders are more likely to have dedicated strategies versus other manufacturers.

A strong growth strategy identifies multiple paths toward growth. But a majority of manufacturers don't intend to pursue a range of growth opportunities over the next three to five years — including common offerings such as services for existing customers or product sales to existing customers in new markets (Figure 4).

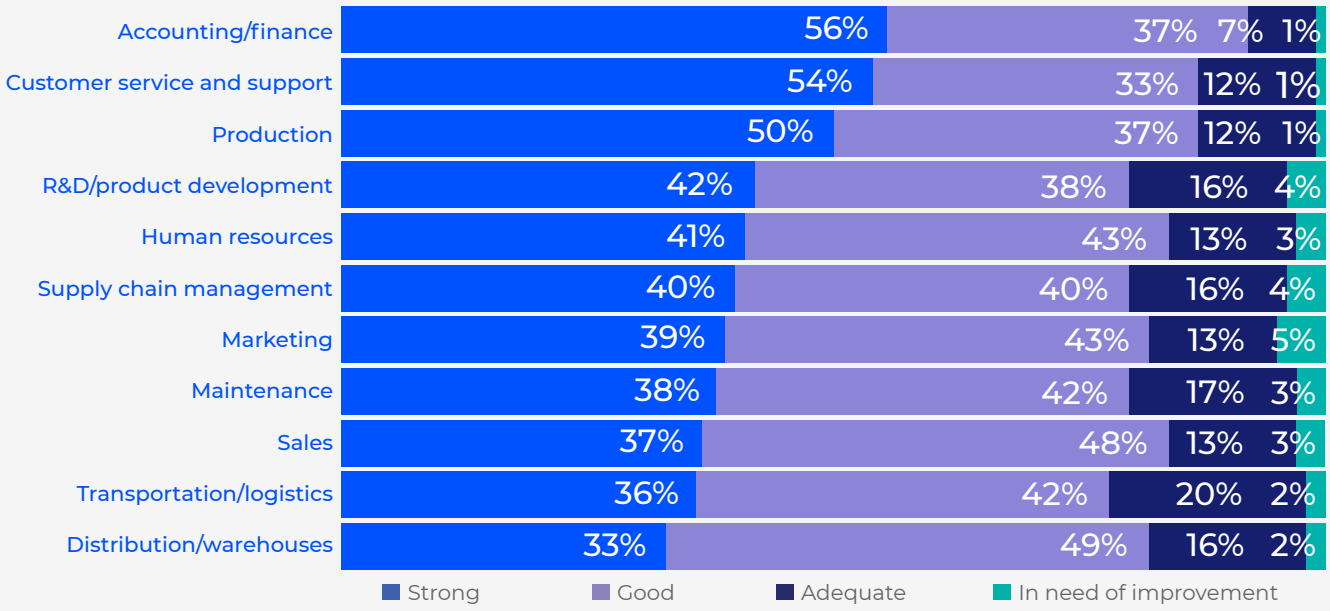
Sustainable growth also requires a steady pipeline of skilled leaders. A majority of manufacturers report "strong" or "good" leadership and management capabilities across their organizations, but nearly one in five say their leaders and managers are only "adequate" or are "in need of improvement" (Figure 5 on next page).

Figure 4. Plans to grow over the next three to five years (% of manufacturers)



Multiple responses possible

Figure 5. Leadership and management capabilities by function (% of manufacturers)



Growth leaders are far more likely to have strong leadership and management than other manufacturers.

Talent woes are increasing for all manufacturers as they watch skills walk out their doors:

Leadership and management: 25% of manufacturers report annual labor turnover of greater than 10%; only 46% report turnover of 5% or less.

Frontline associates: 37% report annual labor turnover of greater than 10%; just 26% report turnover of 5% or less.

Talent shortages — pandemic- or Great Resignation-related or self-inflicted — can devastate productivity. In some instances, manufacturers have been compelled to scale back operations or eliminated entire shifts. This is reflected by the 15% of companies reporting that production capacity is 60% or less of designed capacity; only 37% of manufacturers report capacity of 80% or higher.

Manufacturers also face external growth obstacles: Only 6% report that all of their suppliers could adequately respond — with on-time, high-quality deliveries — to a 20% or more increase in demand within three months.

Growth tip: Identify untapped sales opportunities (e.g., new customers in new markets, services for existing customers); quantify the resources, effort and ROI for each; and document and share plans to capture low-difficulty/high-gain opportunities via internal resources and/or partners (e.g., joint ventures, acquisitions).

37% of manufacturers report frontline annual labor turnover of greater than 10%.

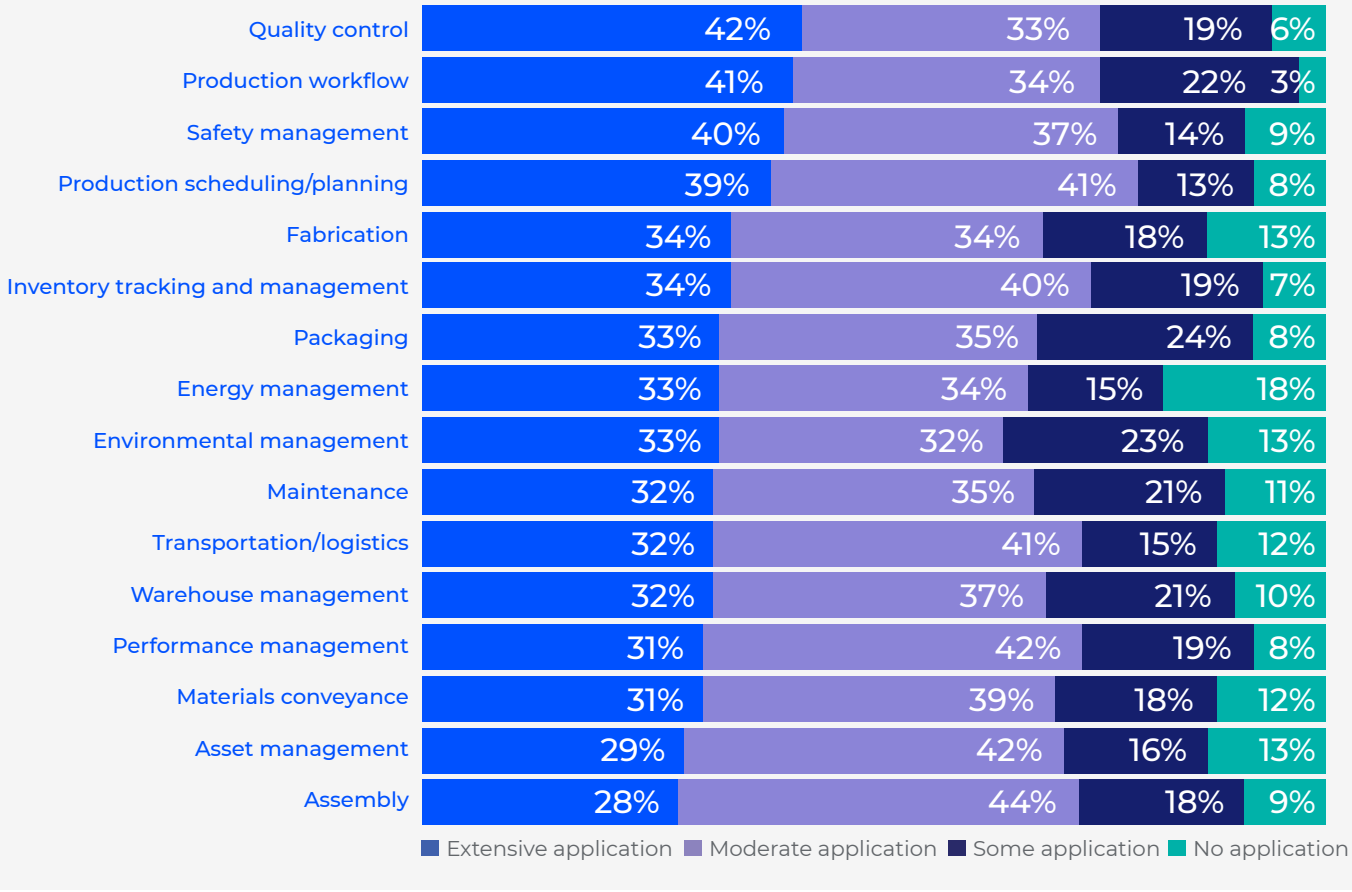
Automation

Manufacturing has rapidly become a world of digital haves and have-nots — and the window to catch up is closing. Why? Because automation and Industry 4.0 technologies are already delivering performance boosts — two-thirds of manufacturers report that Industry 4.0 technologies have increased productivity and profitability in the past year by more than 5%[2] — with more to come.

Some 75% of manufacturers have dedicated automation strategies and goals or address them within other contexts. But 25% don't have plans, putting their futures at risk — because automation leaders are far more likely to have dedicated strategies than other manufacturers.

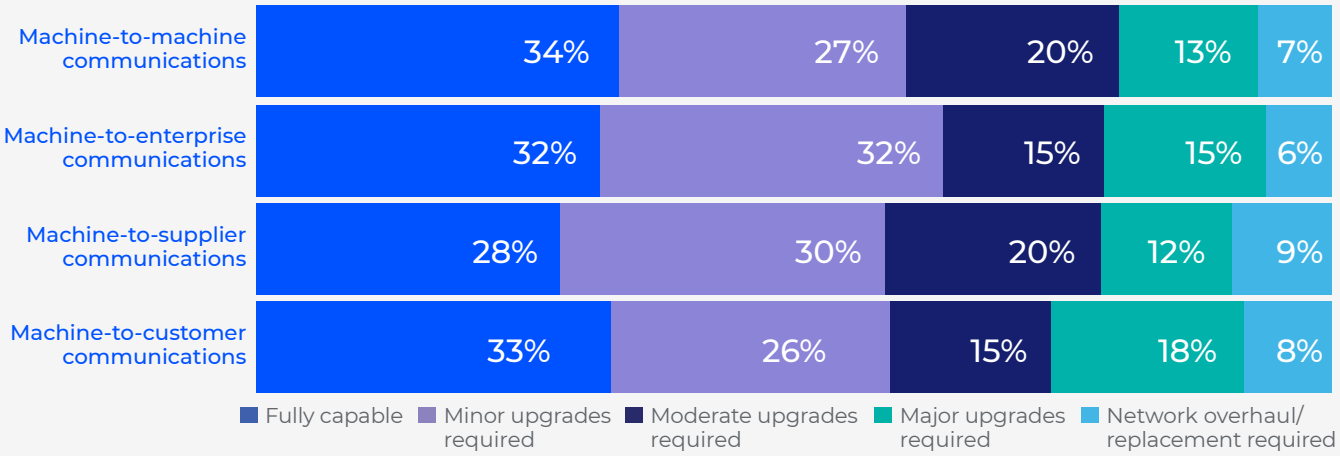
A majority of manufacturers have "extensive" or "moderate" application of automation and Industry 4.0 technologies across a range of manufacturing activities (Figure 6). Automation leaders are more likely to have extensive application for all the activities: e.g., 60% extensive application for production workflow versus 32% of other manufacturers.

Figure 6. Application of automation and Industry 4.0 technologies to the following activities (% of manufacturers)



[2] MPI 2021 Industry 4.0 Study, The MPI Group, 2021.

Figure 7. Current network infrastructure machine-data communication capabilities (% of manufacturers)



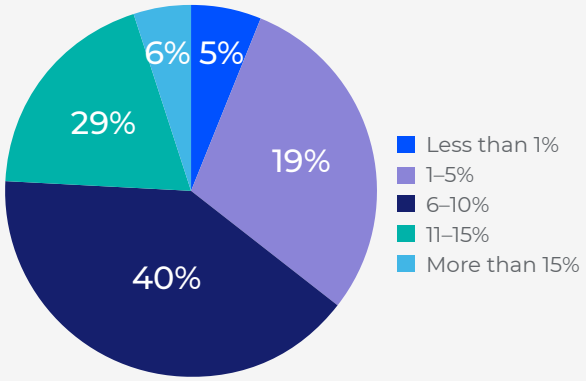
To optimize returns from automation and Industry 4.0, organizations need network infrastructures capable of passing manufacturing data to all who need it. Yet only a third of manufacturers have networks fully capable of moving data from machines to other machines, to the enterprise or to suppliers and customers. And one in five have networks that require major upgrades or complete overhauls (Figure 7). Automation leaders are far more likely to have capable network infrastructures, but many of them still need upgrades: e.g., 51% of leaders require network investments to enable machine-to-machine communications.

Many manufacturers also rely on aging capital equipment: 23% report that the average age of their equipment is more than 10 years old, and 43% report 6-10 years old. Automation leaders are less likely to have equipment more than 10 years old.

Spending on capital equipment varied widely in the past year (Figure 8). The vast majority of automation leaders (92%) spent more than 5% on capital equipment in the past year versus just 67% of other manufacturers.

Automation tip: Identify legacy equipment and systems that jeopardize production availability, prioritize automation investments based on detailed analysis of failure likelihood and cost, and establish a technology roadmap along with plans to fund capital equipment purchases.

Figure 8. Company spend on capital equipment — including automation and Industry 4.0 technologies — in past year (% of manufacturers)



23% of manufacturers report that the average age of their equipment is more than 10 years old.

Resiliency

Government actions to support businesses during the pandemic prevented worst-case scenarios for many organizations, but there still were 32,517 commercial bankruptcy filings in the U.S. in 2020 — and 22,339 more in 2021.[3] Could some have been prevented by practices and procedures that monitor and mitigate corporate risks?

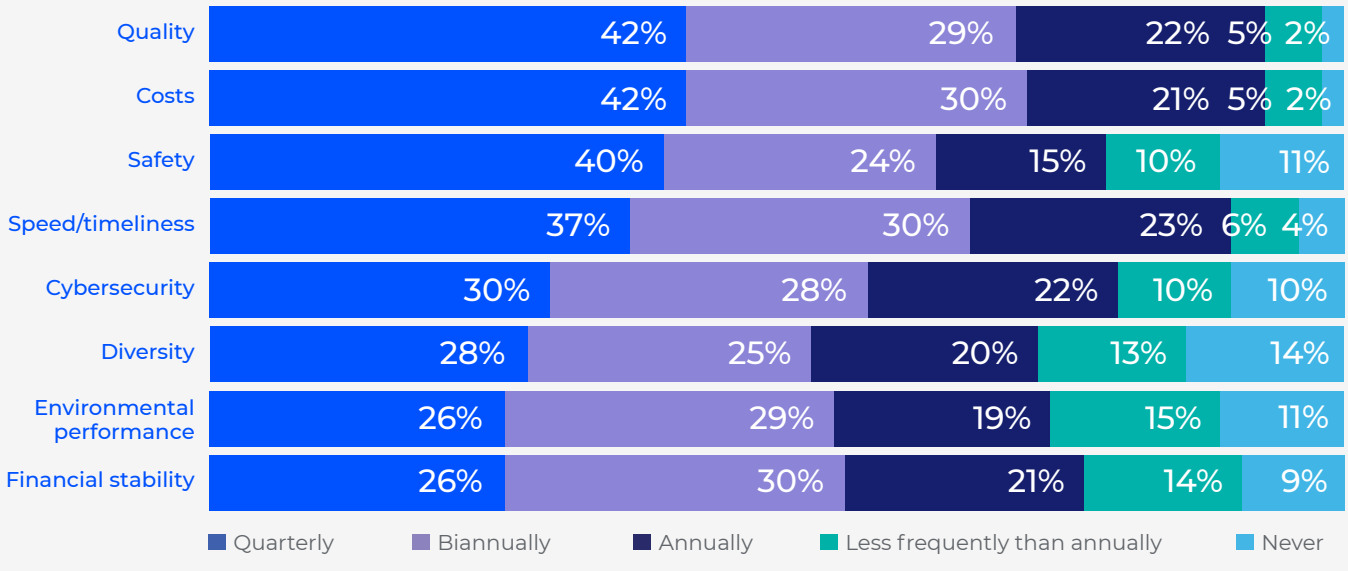
Only 31% of manufacturers have a dedicated resiliency strategy and goals deployed and aligned with other strategies and goals; another 46% address resiliency strategy and goals within other contexts. But 23% don't have a plan, despite the fact that resiliency leaders are more likely to have a dedicated strategy than other manufacturers.

A key task in managing risk is establishment of standardized work — making it clear when practices, conditions and outcomes are abnormal. Yet only 5% of manufacturers have standardized work and systems throughout their organizations, and a full 29% have standards for less than half of the processes in their organizations.

Resiliency also calls for frequent reviews of conditions that could impair operations:

Suppliers: A majority of manufacturers audit primary suppliers at least biannually for performances including quality, costs, diversity, environmental performance and financial stability (Figure 9). The pandemic highlighted the impact a few critical vendors can have on an entire supply chain, prompting some manufacturers to recruit backup vendors. Yet 60% of manufacturers still purchase a quarter or more of materials and components from a single supplier.

Figure 9. Frequency of audits of primary suppliers by criteria (% of manufacturers)



[3] "Total Bankruptcy Filings Drop 24 Percent in Calendar Year 2021, Commercial Chapter 11s Down 48 Percent," American Bankruptcy Institute, Jan. 7, 2022.

Inbound and outbound shipping: Real-time tracking of supplies and products to and from facilities can alert manufacturers to problems before they escalate to customer disasters. Most manufacturers have some real-time tracking capabilities, but few track goods as extensively as possible (Figure 10).

Cyber threats: Two-thirds of manufacturers report an unauthorized access of networks and data in the past year; 45% reported three or more breaches. Many cybersecurity best practices haven't yet been adopted by manufacturers (Figure 11).

23% of manufacturers don't have a resiliency strategy and goals.

Figure 10. Real-time tracking of supplies and products (% of manufacturers)

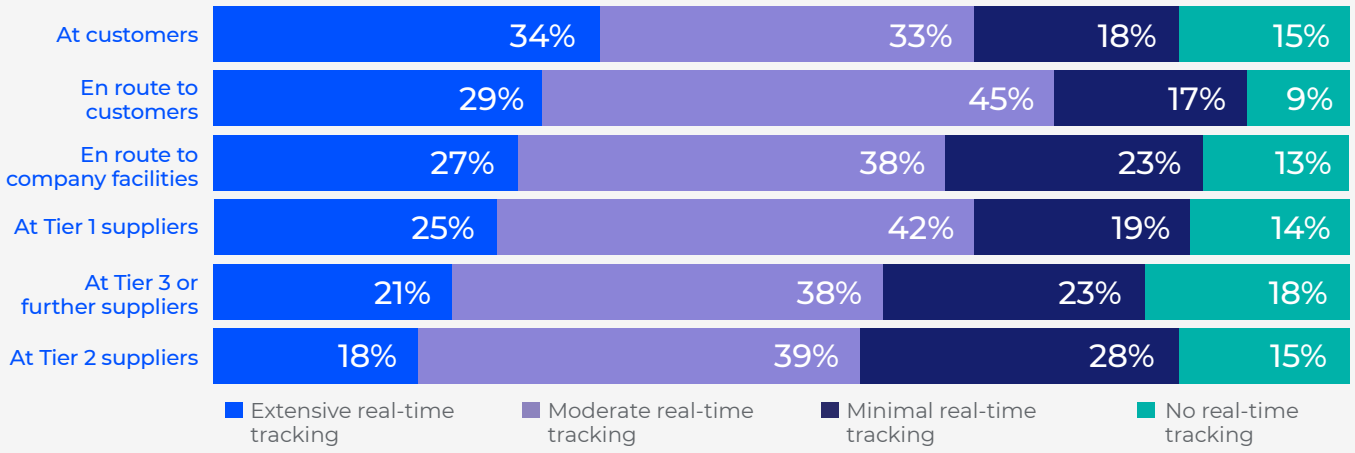
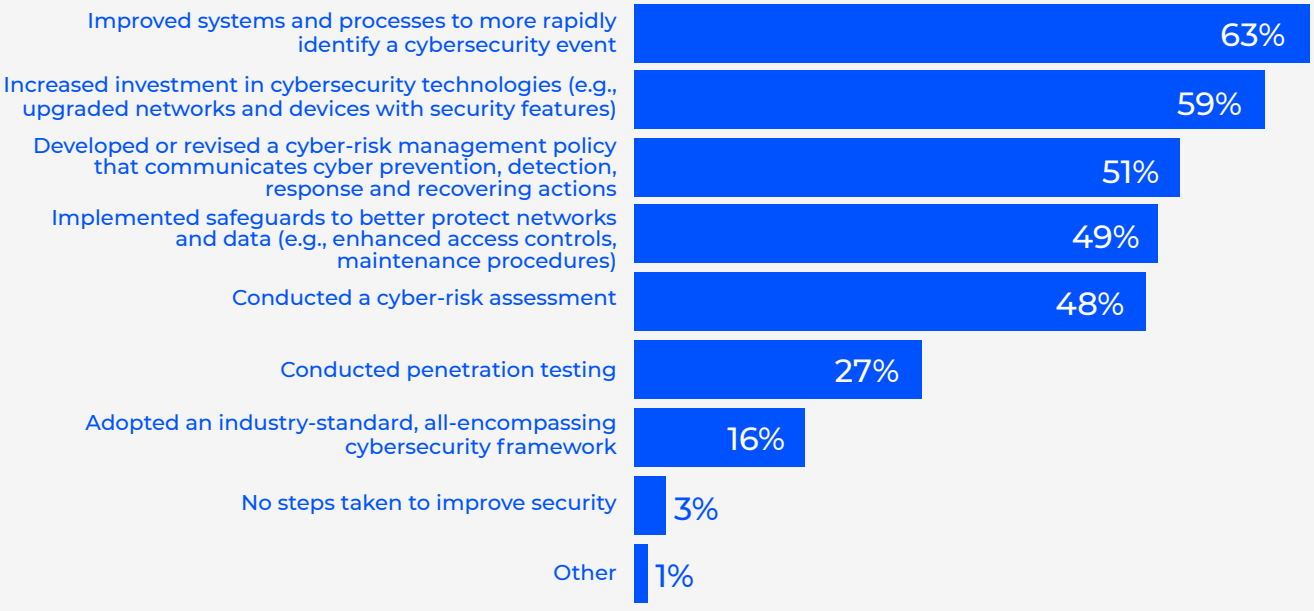


Figure 11. Actions taken in past year to ensure security of networks and data (% of manufacturers)



Multiple responses possible

Your next steps to becoming more resilient

Following the four paths to resiliency across critical functions — operations, R&D, finance, human resources, sales, procurement, etc. — is a complex undertaking. Manufacturing executives must regularly review leading indicators for each of these activities to respond to performance issues before they swamp the bottom line.

Fortunately, manufacturers don't need to go it alone.

Wipfli has helped numerous small and midsized manufacturers pinpoint leading indicators that track problems and progress alike, enabling all employees — from frontline associates and managers to senior leadership — to identify issues and collaboratively solve them for sustainable revenues and profits.

Is your company ready to become more resilient? To innovate, automate and grow? Discover how Wipfli can help you overcome your biggest challenges. **Learn more.**

For additional resources, visit our **manufacturing innovation hub.**


Perspective changes everything.
An ever-changing, increasingly digital world makes it a challenge for manufacturers to grow and thrive. But Wipfli knows how to help you innovate, self-disrupt and unlock the full potential of your business.
wipfli.com/MRD
WIPFLI
"Wipfli" is the brand name under which Wipfli LLP and Wipfli Advisory LLC and its respective subsidiary entities provide professional services. Wipfli LLP and Wipfli Advisory LLC (and its respective subsidiary entities) practice in an alternative practice structure in accordance with the AICPA Code of Professional Conduct and applicable law, regulations, and professional standards. Wipfli LLP is a licensed independent CPA firm that provides attest services to its clients, and Wipfli Advisory LLC provides tax and business consulting services to its clients. Wipfli Advisory LLC and its subsidiary entities are not licensed CPA firms.