



2023 KPMG US Technology Survey Report

Business growth with technology

Industrial manufacturing
sector insights

Looking to technology to grow their businesses

Industrial manufacturers are eager to better understand their customers, convert prospects to buyers, and boost the lifetime value of their customers. And they are counting on technology to help them achieve those goals. Like their counterparts in other sectors, they say the digital technologies that will be most important to realizing their ambitions over the next three years are artificial intelligence/machine learning, robotics/automation, and virtual reality/augmented reality (VR/AR).

These findings from the 2023 KPMG US Technology Survey¹ suggest that industrial manufacturers know where they want to go and how they want to get there. But the survey also shows that shortcomings in deploying those technologies are holding some back. The good news? Declining costs for data storage and processing power over the past few years, combined with the widespread availability of increasingly flexible cloud computing platforms, offer a path forward for those seeking to keep their digital transformation agendas on track.

¹ In May and June 2023, KPMG surveyed 400 US-based, executive-level technology leaders across eight industry sectors to find out how their organizations are looking forward to the next stage of the digital transformation journey, where they expect emerging technologies to drive new value, and how they will move forward with pace and confidence. This report highlights the most significant differences in the survey findings for the technology, media, and telecommunications sector relative to all sectors represented in the survey.



Leading organizations are migrating toward a smart industrials strategy.

It's all about the customer

The 2023 survey, which canvassed 400 technology executives across eight distinct business sectors, reveals that those working for industrial manufacturers are more likely than others to cite the need to convert prospects into customers as a main driver of digital transformation at their organization, by a 60 percent to 53 percent margin. Another 44 percent identify “customer feedback” as a top-three driver. (See Figure 1)

Industrial manufacturing also is the only sector where executives cite transparency around environmental, societal and governance (ESG) issues as the customer/user expectation most influencing strategic priorities within their digital transformation projects. Sixty-three percent point to that issue, versus 45 percent of all executives.

These findings align with what KPMG professionals are seeing on the ground. Leading industrial manufacturers are migrating toward a smart industrials strategy in which they shift away from a product-centric focus to one centered on customers, creating new revenue streams that flow in from digitally enabled aftermarket and field services. Examples of companies pursuing this new approach include Johnson Controls International and Schneider Electric. Johnson Controls makes fire, HVAC, and security equipment for buildings, for example, but is now a provider of energy management services, too, including a new “cooling as a service” offering that lets commercial customers pay for air conditioning systems on a pay-per-use model.² And Schneider, while still a global specialist in energy management and automation products, also has created new sources of revenue from as-a-service offerings. Its “energy as a service” solution, for example, lets its customers pay for things like asset and energy use management services on a pay-as-you-go basis without incurring upfront capital costs.³

² Johnson Controls, “Johnson Controls Introduces Cooling as a Service (CaaS) Improving Accessibility and Affordability of Advanced Building Technologies,” September 4, 2023.

³ Schneider Electric, “Schneider Electric Ranked #1 Energy-as-a-Service Provider,” March 13, 2019.

Figure 1

Need to convert prospects is a big driver of digital transformation



What are the main triggers of digital transformation at your business?

TRIGGER	IM COMPANIES
Converting prospects into customers	60%
Regulatory obligations or security concerns	54%
Upsell and cross-sell optimization to boost spend volumes	48%
Fast-tracking employee productivity	48%
Third-party/partner ecosystem	46%
Customer feedback	44%

Source: KPMG US Technology Survey, KPMG LLP (US), 2023

44% of IM executives indicate “customer feedback” as a top-three driver of digital transformation at their organization.

Challenges to progress: Data management, technical debt

While industrial manufacturing executives have strong opinions about where their organizations need to go, they are not uniformly convinced they have the technology chops to meet one of their most important goals.

While an impressive 81 percent are confident their organization's technology will allow their organization to meet its goals for turning risk into opportunity, such as by developing new business models, only 62 percent are confident their existing technology will allow their organization to meet its objectives around growing the business and building the organization. (See Figure 2)

Industrial manufacturing executives also are slightly less likely than others to say their organization is proactive in progressing against its strategy on four key technology fronts: artificial intelligence and automation (6 percent, versus 10 percent of companies across all sectors), cybersecurity (6 percent versus 16 percent), data and analytics (12 percent versus 14 percent), and emerging technology (4 percent versus 10 percent).



Figure 2

Existing technology may not be sufficient to grow the business

How confident are you that your organization will be able to achieve the following business and organizational ambitions using your existing technology? (Percentages answering "fairly confident" or "very confident".)

Technology	ALL COMPANIES	IM COMPANIES	DIFFERENCE
Growing the business/building the organization	71%	62%	-9 pts
Advancing ESG priorities/commitments	72%	73%	+1 pt
Building trust with third parties, including customers, citizens, or suppliers	73%	73%	+1 pt
Enhancing employee satisfaction and wellbeing	72%	75%	+2 pts
Improving efficiencies and cutting costs	75%	77%	+1 pt
Upholding resilience (e.g., despite supply chain disruption)	76%	73%	-2 pts

Source: KPMG US Technology Survey, KPMG LLP (US), 2023

At KPMG, we see multiple explanations for these shortcomings. Many industrial manufacturers are shouldering high levels of technology debt, including outdated legacy information systems that can't easily share data. In fact, 17 percent of industrial manufacturers—versus only 8 percent of all organizations represented in the survey—have no dedicated processes in place to ensure that employees can get the data they need to do their jobs. What's more, just over half (56 percent) have a fully integrated, influential, or cohesive approach to dealing with data silos, versus 66 percent of all organizations. The lack of data connectivity resulting from these limitations makes it harder for industrial manufacturers to take advantage of comprehensive and advanced analytics algorithms to gain customer-specific insights.

“Many manufacturers have big cracks in their data foundations,” says Claudia Saran, national sector leader, Industrial Manufacturing, KPMG in the US. “If you're going to be truly leading edge in using AI to generate insights from data, you need data that's been cleaned and standardized and is easily accessible. You need to be able to trust that (1) the data you're using is current and correct, (2) measures and metrics derived from that

data are consistently defined across your organization, and (3) data is protected by robust cybersecurity practices and controls.”

Industrial manufacturing executives point to several other challenges to their digital transformation agendas, including a lack of executive buy-in and funding. Thirty-nine percent say that although their organization has a strategic vision for using AI and automation, an absence of executive buy-in and/or investment approval are limiting progress in that area. That compares with just 28 percent of executives across all sectors. They also are more likely to say a lack of executive buy-in and funding is hindering their adoption of emerging technologies (40 percent versus 32 percent).

When it comes to investing in emerging technologies, many industrial manufacturers also are hobbled by their existing commitments to technology vendors and by a general wariness of how dependable those new technologies may be. For example, 69 percent of executives in this sector say their company's progress with automation has been delayed by concerns about how AI makes decisions. And 31 percent strongly agree that long-term contracts with existing vendors are limiting their organization's ability to invest in new technologies.

“Many manufacturers have big cracks in their data foundations.”

– Claudia Saran,
Partner, National Sector Leader, Industrial Manufacturing,
KPMG in the US

Finding a way forward

Making the transition to a smart industrial strategy demands a deep understanding of end customers, which can be challenging for manufacturers who customarily have sold through distributors or dealers and may not even have a fully formed marketing department.

It can require not only sophisticated data analytics capabilities but also a shift away from the industrial engineering mindset that's long guided their strategy.

“A traditional industrial engineering mindset is great for driving process efficiencies, but not so great for knowing what's really important to your end customers,” says Martin Kaestner, principal, Advisory, KPMG in the US. “Manufacturers need to adopt a customer-centric mindset and rethink how they plan to grow their businesses.”

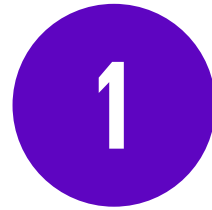
To be sure, most industrial manufacturing executives are eager to see their organizations make better and more productive use of technology. Many see it helpful to move more of their IT systems to the cloud, which offers greater flexibility in scaling capacity up or down and allows for quicker deployment of new applications and services. Sixty-three percent, versus 53 percent of all executives surveyed, say one of their primary ambitions for the use of cloud platforms right now is to support the operation of emerging technologies.

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Key next steps

KPMG has identified five actions industrial manufacturers can begin taking right now to accelerate their digital transformation agenda and keep it on track:



Conduct a portfolio review and prioritize objectives.

“Look at your portfolio and determine which businesses you need to keep and which you don’t before you start thinking about which technologies you need and how you’re going to get the most out of them,” says Saran. “Otherwise, you’re just playing whack-a mole.” Saran advises pulling the company’s chief information officer and chief data officer into these discussions and, if he or she is not close to the business, making sure division-level IT and data leaders are at the table, too.



Make data management a priority.

Data is the key to unlocking value in a digital enterprise—the foundational element on which insights and strategy are built. “We’re seeing a big increase in demand for data management projects from clients who recognize they need to clean up their data and figure out how to govern and protect it so that they can use it for analytics,” Saran observes. “Specifically, they’re asking for help with master data management, which is the process, aided by technology, of ensuring the consistency and accuracy of all your organization’s data.”



Update your enterprise risk management strategy to reflect new risks that have emerged with changing business models and technologies.

As manufacturers move closer to their customers and establish digital connections with them, and as they look to take advantage of generative AI, they open themselves to new cybersecurity and operational risks. “Identify those new risks that have emerged within the last few years and that are just around the corner and take action now to ensure they’re accounted for and addressed,” Saran says.

Key next steps

Continued



Take advantage of inexpensive data storage and processing power to get around tech debt.

Data storage and processing power have become relatively inexpensive, and with that has come the development of new tools that allow companies to more easily integrate data, check data quality, and bring together data from different sources. Accordingly, while aggregating data from multiple legacy IT systems can still be a big undertaking, it's not as daunting as it once was. "You can bring everything together into a data warehouse in the cloud, even if it means keeping your legacy information systems for now," Kaestner says. "As long as you have the right master data management controls in place you can run analytics on top of that data warehouse. And then you can take advantage of the great visualization tools available today to better understand the insights that analysis is yielding about your business and your customers. For many companies, it can be a workable way around the constraints presented by their tech debt."



Don't let perfect get in the way of getting started.

"A lot of clients look at where they need their data and data management capabilities to be to take advantage of new technologies like generative AI, and conclude they need to be perfect before they can even start," Kaestner says. "But if you wait for that to happen, you'll keep falling further and further behind. Even if you don't have perfect data, you probably have some good data. You can make that data more widely available now and draw some insights from it—and that is better than nothing."

How KPMG can help

KPMG has IT professionals with the skills, resources and alliances needed to help you design and implement a successful digital transformation agenda—and to apply emerging technologies like generative AI to better serving your customers. Our wide-ranging technical expertise and deep experience working with the industrial manufacturing sector allow us to help

guide your organization through strategy, use case development, vendor selection, and pilot implementation. Meanwhile, our pre-configured Modern Data Platform, along with Ignite, our AI platform, allow us to help clients accelerate their path to new technology, automation and insights.

That's speed to modern technology.

[Click here](#) to learn how KPMG can help your organization reap the full promise of a tech-enabled transformation.

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