Manufacturing

For many industries, the pandemic accelerated progress with producing results from digitization strategies. This was not the case in manufacturing, where only 15% of executives say they are producing results. However, digitization remains a top priority as consumer pressures increase.

Read on for more insights into manufacturing executives' top trends and priorities, along with recommendations for key actions they can take now to accelerate their digital journeys.

CGI

Accelerating digitization to reinvent for the future

It's been a daunting year for manufacturers, yet they continue to move ahead toward a digital future.

Despite slow progress in producing results from their digitization strategies, manufacturers felt increasing customer pressure due to the pandemic's impacts on their business models. Optimizing operations to save costs remains top of mind; however, a heightened focus on becoming digital to satisfy customer expectations and collaborate across traditional silos for growth will accelerate their digitization journey.

More executives recognize the benefits of prioritizing IT modernization, cloud enablement and IT/OT security. They also view environmental sustainability as core to creating future value.

Each year, we meet with client executives from around the world to get their views on the trends affecting their organizations and industries. Through the CGI Voice of Our Clients, we analyze these findings to provide actionable insights by industry to benchmark best practices, including the attributes of digital leaders. This report summarizes the trends and priorities from our 2021 CGI Voice of Our Clients discussions with 171 manufacturing executives, along with recommendations for manufacturers to accelerate their digital journeys.

About the insights

In 2021, we met with 1,695 business and IT executives. This summary shares sample insights from 171 manufacturing client executives.

Interview demographics

32% Business leaders	**68%** IT leaders
54% C-level	**46%** Ops-level

Over the past 6 years through the CGI Voice of Our Clients program, we've held 7,470 client discussions, collecting 1 million data points across the industries and geographies we serve. Our anonymized benchmarking data reflects insights from 5,500 client organizations located in countries representing 68% of the world's IT spend across all economic sectors.

Top trends and priorities

Manufacturing top trends and priorities are unchanged from 2020. Becoming digital, optimizing operations and digitizing processes remain the key focus areas. However, customer experience rises in importance ranking, as does the need to protect the plant and the shop floor.

Top trends

1 Becoming digital organizations

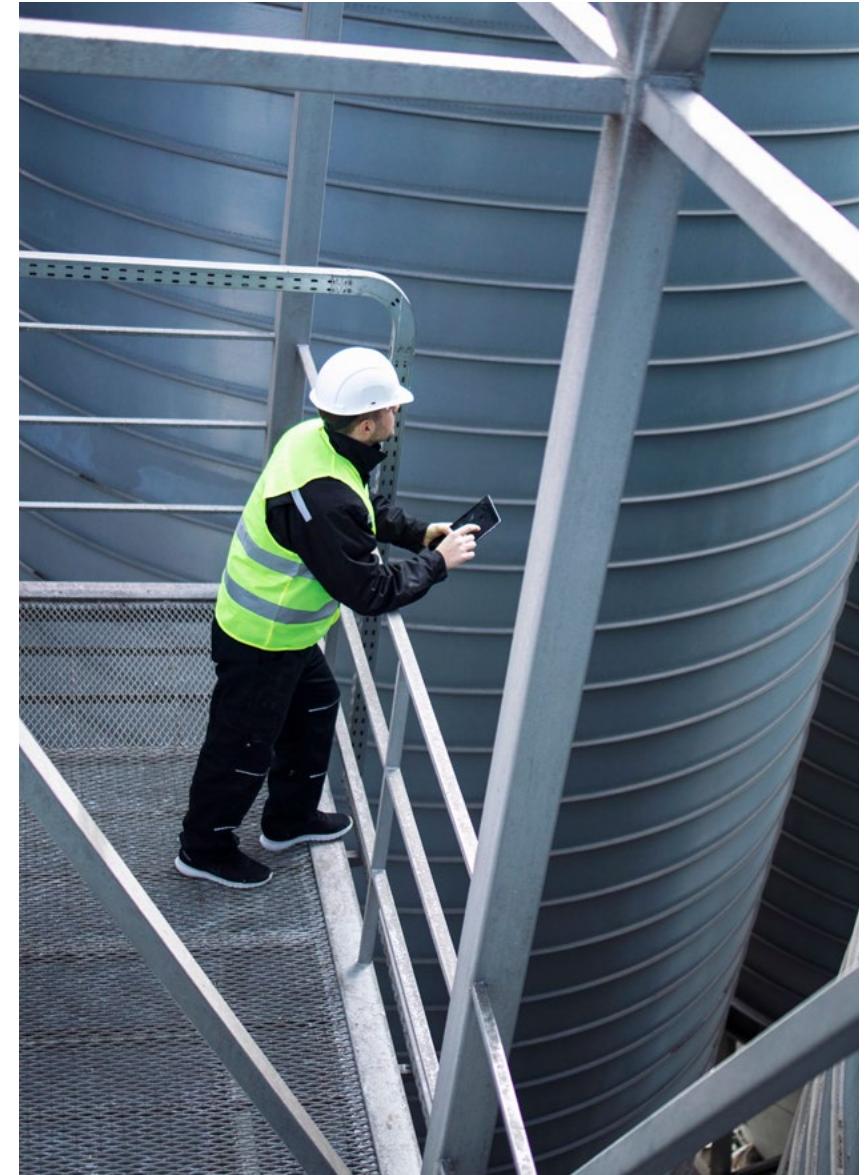2 Digitization for data integration

3 Protecting through cybersecurity

Top business priorities

1 Optimizing operations

2 Improving the customer experience
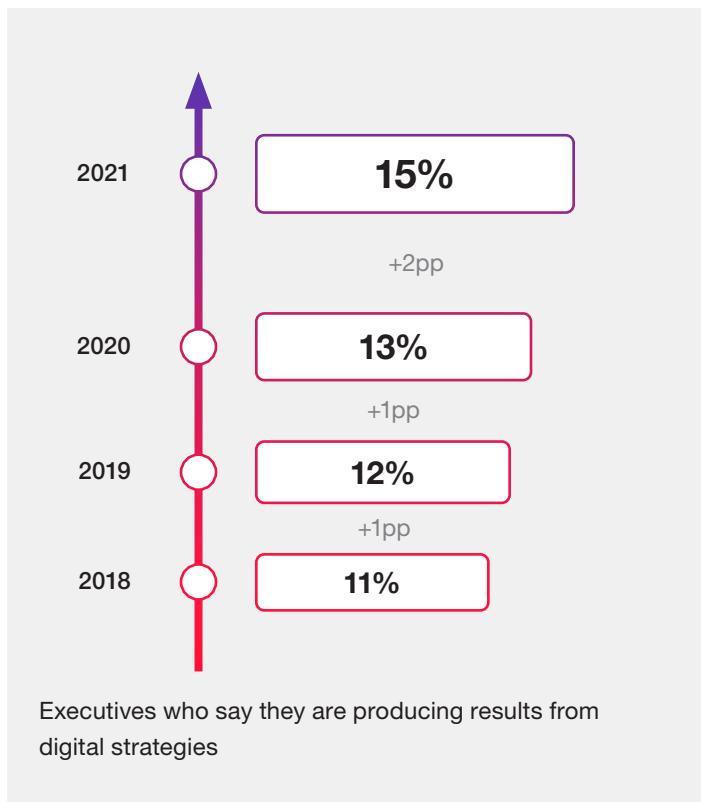
3 Collaborating across traditional silos

Top IT priorities

1 Digitizing processes and integrating systems

2 Driving IT modernization of applications

3 Protecting through cybersecurity

Top insights for manufacturing

Becoming digital to meet customer expectations remains the top trend, and executives report growing consumer pressure on their digital strategies. Cybersecurity rises as a focus and sustainability is core to value creation. Budget constraints and internal processes emerge as new top challenges.

2021	**15%**
	+2pp
2020	**13%**
	+1pp
2019	**12%**
	+1pp
2018	**11%**

Executives who say they are producing results from digital strategies

1 **Progress is slow in achieving digitization results.**

Only 15% of executives say they are producing results from their digital strategies, up from 13% last year and 11% in 2018. The manufacturing industry ranks lowest among industries in this category, along with the government sector (15%).

2 **Consumer pressure on digital strategies is rising.**

54% of executives say external pressures from consumers impacted their approach to digitization to a high degree, rising significantly from 40% in 2020, after more than a year of pandemic impacts. Conversely, the pressure felt from new non-traditional competitors fell to 27% from 37% last year.

3 **Budget constraints and internal processes emerge as top challenges.**

For the first time, executives say budget constraints and internal processes are having the most significant impact on achieving their business priorities, increasing considerably since the pandemic began. Challenges with cultural change, lack of collaboration across silos and restraints from legacy systems continue to hinder their progress.

(4) Existing IT supply chains are complex and not agile enough.

39% of executives say the complexity of their IT supply chain poses a challenge to implementing their IT priorities. Furthermore, only 19% rate the agility of their organizations' IT supply chain as very high. This is among the lowest rates compared to all other industries.

(5) Manufacturers foresee greater reliance on fully managed services.

27% of executives say they plan to rely on fully managed IT application services in three years, compared to 13% now.

(6) Manufacturers care about sustainability.

71% of executives view environmental sustainability as highly core to their organization's ability to continue creating value for customers in the future, compared to 51% across all industries. This focus resonates more strongly with European executives (73%) compared to their North American (58%) counterparts, and with natural resources executives (87%) compared to commercial and industrial sector executives (67%).

(7) Data and predictive analytics remain the top innovation investment.

As in 2020, executives rank data and predictive analytics as their top area of innovation investment this year. Business executives rank data and predictive analytics higher than their IT counterparts do.
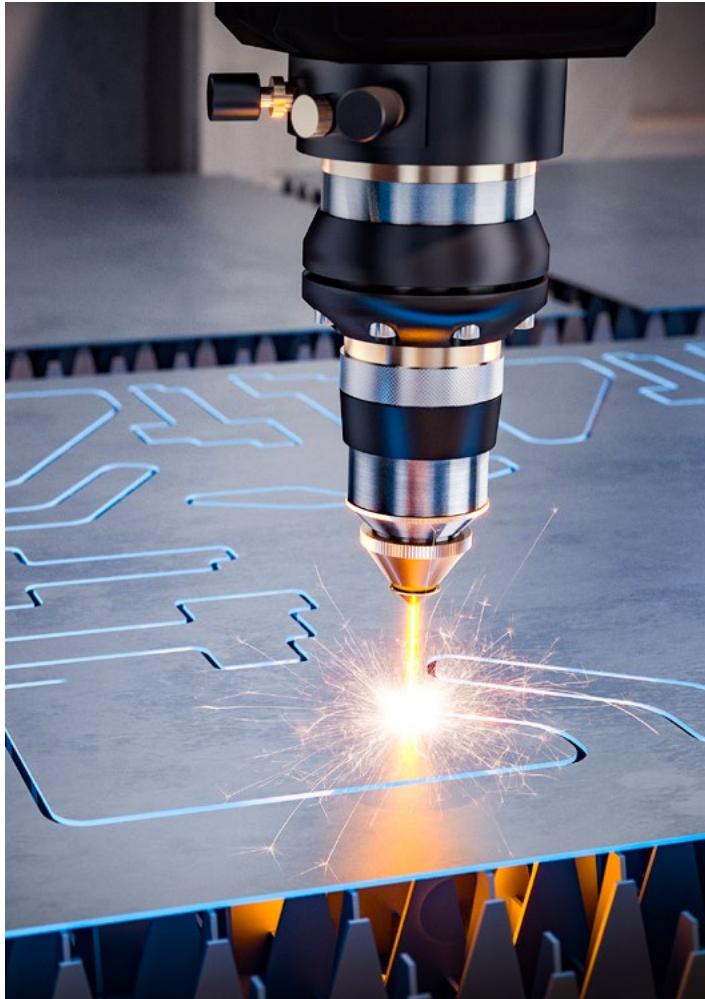
8 Cybersecurity is a top focus, while employee training and awareness are key to success.

IT/OT security is a top IT spending trend for 90% of manufacturing executives this year. In addition, 79% believe employee training and awareness are core cybersecurity elements, followed by programs to test organizational response capabilities.

9 The use of AI and automation intensifies.

74% of executives say the use of advanced artificial intelligence technologies is the top spend trend impacting IT budgets this year. In terms of progress, robotic process automation implementations, in particular, rose to 36% from 29% in 2020.

10 More application modernization and cloud migration are in the cards.

62% of executives say they plan to modernize at least 21% of their organization's applications portfolio in the next 2 years, while 59% plan to migrate at least 21% of their applications to the cloud.

11 Digital manufacturing and integration across internal and external networks are top digitization initiatives.

With digitization a priority, top initiatives include digitally executed manufacturing (e.g. smart manufacturing) and integration across internal and external networks to enable digital continuity end-to-end.

Digital leaders in manufacturing

Manufacturing executives cite slow progress with producing results from digitization strategies, with 15% achieving such results in 2021. In examining the insights from this 15% who are digital leaders, some common attributes emerge. The table compares responses to questions from the digital leaders to those from executives whose organizations are still building or launching digital strategies.

Common attributes of digital leaders	Executives producing results from digital strategies	Executives building or launching digital strategies
Are better at introducing applicable innovation	**38%**	24%
Modernize more of their applications	**35%**	28%
Migrate more solutions to the cloud	**27%**	18%
Use managed services and partners more	**84%**	74%

Digital leaders say they feel a greater impact* from external pressures, particularly from consumers (+14%) on their digitization approach.

Digital leaders identify lack of talent as the top constraint to their organization's ability to achieve its business priorities. Significantly, this constraint does not feature in the top 5 priorities for manufacturing executives overall.

* 8–10 on scale of 1–10, where 10 is high

5 recommendations for achieving your top priorities

1 **Continue to push toward digitization** to enable more autonomous and connected services with better quality and faster time to market. Traditionally, manufacturers have been slower to leverage digital channels compared to other industries like retail banking. However, post-pandemic, digital investment should remain a top priority to improve agility and resilience, especially as pressure from customers continues to increase.

2 **Invest in data insights** to gain the greatest return on investments and benefits to the end-to-end value chain. Every digital transformation requires a data transformation as well. However, just having data will not be enough; having access to quality data is the key differentiator. Achieving this requires a clear strategy to manage how and where data is stored, what kind of data is shared, how it is owned, and how it is contextualized. We recommend manufacturers take a holistic data governance approach that includes using the right tools and processes to validate, verify and process data. It also must include building successful data sharing ecosystems to unearth untapped potential for new business models and revenue streams.

Case in point: A leading global developer and supplier of technologies, automation and services to the manufacturing industry struggled with fragmented data sources and business reports, and multiple reporting tools. In addition, a new global ERP implementation was underway that required a scalable reporting solution with frequent refresh intervals. Our experts designed and built a global business reporting and analytics platform to meet the client's needs. The secure and scalable cloud-based data warehousing platform combines data from various source systems. Metrics, previously reported every quarter, are now calculated multiple times a day. Moreover, the business analytics platform has set the foundation to build data science capabilities to advance the client's journey to becoming a data-driven organization.

(3) **Make sustainability core to operations** by using the momentum of ongoing digitization efforts to integrate sustainability. The first step is to define a true, purposeful sustainability strategy and integrate its aspects into a technology architecture. This will enable manufacturers to leverage automation and improve the transparency and traceability of net-zero and sustainability actions to increase trust with stakeholders, customers and potential investors.

(+) Read more: Going green in manufacturing: Recommendations to get started on your sustainability journey

(4) **Nurture a culture of cybersecurity** to effectively address the growing risk of cyber threats. Implementing and operationalizing more digital strategies, including Industry 4.0, connects more machines, systems and people. It leads also to greater collaboration beyond the boundaries of the organization. However, such digital interconnectedness amplifies the need for better IT/OT security to protect the plant, including the shop floor. Manufacturers need to take a holistic approach that addresses people, processes, technology and machines to defend against growing cyber risks. Success depends in considerable measure on better awareness of cyber threats among employees and internal training programs to stay up-to-date.

Case in point: Jacobs Douwe Egberts (JDE), the world's largest coffee and tea company, required an overview of the potential cybersecurity risks across its factories worldwide to mitigate possible threats and vulnerabilities. This included all operational technology (OT) computing systems used to manage the entire industrial operation. Our experts conducted a comprehensive OT security assessment of every individual factory that provided clear insights into the potential security risks. Based on the identified risks, we advised mitigations, developed awareness videos for employees, and helped define OT/ICS cybersecurity priorities moving forward. We were also tasked with implementing the relevant mitigation measures. A complete overview of vulnerabilities has enabled JDE to improve its cybersecurity posture and mitigate risks across all factories.

(5) **Accelerate modernization** of legacy application portfolios, and map out a clear enterprise cloud strategy. As the last year demonstrated, the pandemic changed customer demands. It also showed that it doesn't take a global event to disrupt global supply chains; much smaller events can also hurt. Prioritizing modernization and cloud strategies supports manufacturers' priority to collaborate better across entire value chains with the required elasticity and flexibility to react quickly to market changes.

Case in point: A large Canadian vehicle manufacturer and longstanding client turned to us to help support the S/4HANA transformation of their complete supply chain ecosystem. The project included functional design as well as development and technical integration across more than 200 interfaces to connect S/4 to the client's ecosystem for a full greenfield integration. As a result, our client can benefit from a seamless integration of the new ERP system across their entire digital ecosystem and the built-in intelligent technologies that the system offers.

About CGI

Insights you can act on

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world.

We are insights-driven and outcomes-based to help accelerate returns on your investments. Across 21 industry sectors in 400 locations worldwide, our 80,000 professionals provide comprehensive, scalable and sustainable IT and business consulting services that are informed globally and delivered locally.

For a complete set of the CGI Voice of Our Clients industry insights, and to consult with one of our experts, please visit cgi.com/voice-of-our-clients or contact us at info@cgi.com.