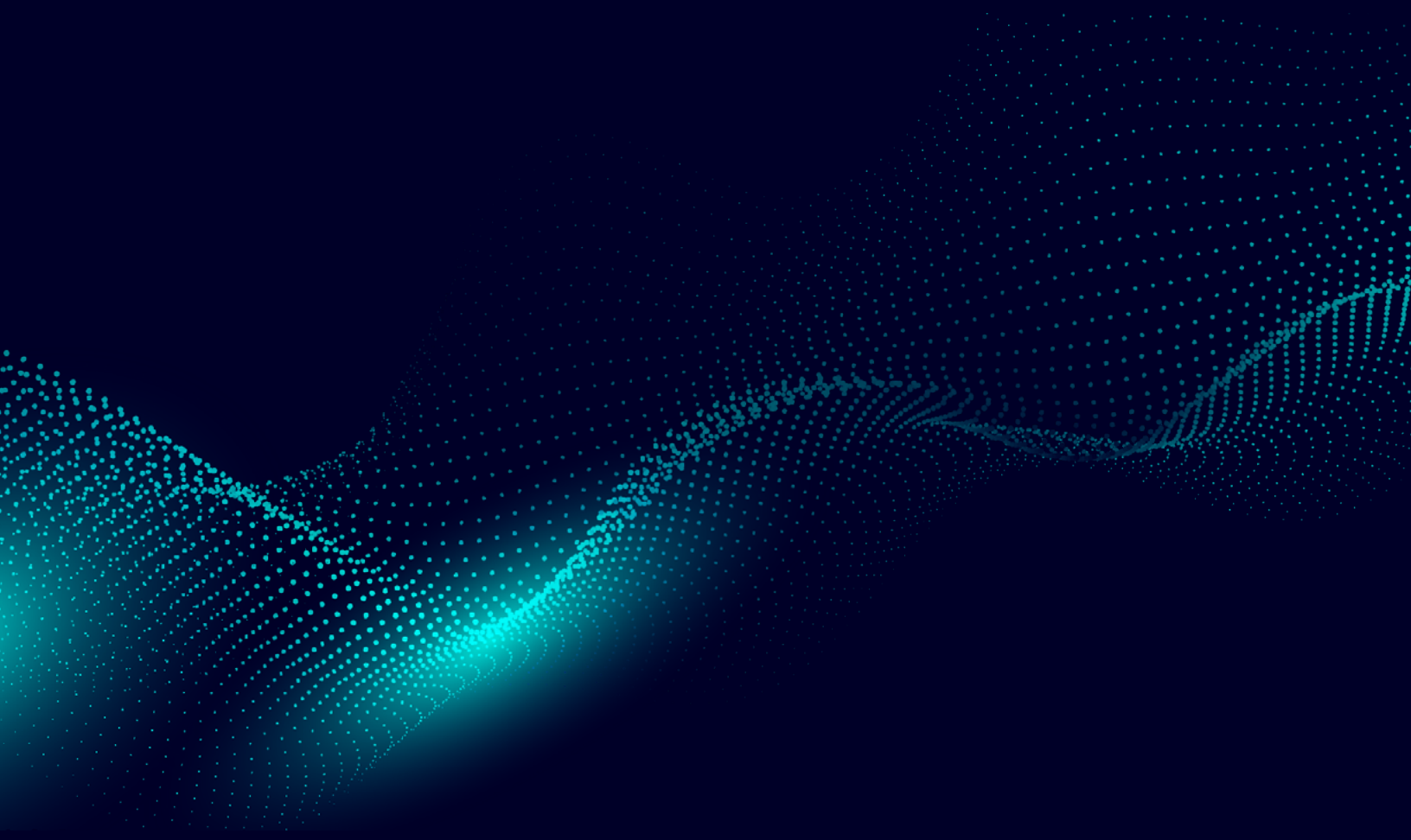


The 2026 Digital Transformation Report

How Data, AI, and Digital Twins are Reshaping Asset Performance and Operations

SIEMENS

Introduction

In the pursuit of continuous operational excellence, organizations have historically turned to new technologies to streamline processes, connect siloed information, and equip their teams with the tools needed to execute high-quality workflows and support operational resilience and sustainability.

This digital transformation has consistently redefined how assets are managed, maintained, and optimized across their entire lifecycle. As asset lifecycle management (ALM) has evolved from break/fix strategies to data-informed, analytics-driven approaches, culminating in predictive maintenance, the latest challenge for facilities teams is understanding how to use their growing volume of available data and insights to effectively increase operational efficiency.

To navigate this shift, facilities leaders are increasingly focused on the role of clean, reliable data in enabling both emerging and established technologies, including artificial intelligence (AI) and digital twins, to meet evolving operational and strategic demands.

Yet many organizations are grappling with a persistent paradox: a deep-seated trust in data for forecasting and risk assessment that often coexists with ongoing challenges in data quality and integration. In other words, they believe in the value of their data, but aren't always confident that it's reliable and up to date.

This gap between ambition and execution is unfolding alongside the growing use of tools like digital twins — dynamic, real-time representations of physical assets that enhance visibility, decision-making, and the increasing utilization of AI, which is unlocking new levels of insight and acting as a catalyst for intelligent asset management.

But the effectiveness of these solutions depends directly on the quality and accessibility of the data they rely on.

This **2026 Digital Transformation Report** explores these critical interplays and technologies and provides a clear picture of how organizations are navigating the digital imperative in asset management today. It also highlights where meaningful progress has been made, and where challenges in data quality and integration continue to limit the full realization of successful operational change.

Through independent, third-party research, we've uncovered key insights into how strategic investments in data governance, digital twin implementation, and AI integration are helping drive operational efficiencies, build resilience, and support sustainability within daily workflows.

More than just an overview, this report provides strategic insights to help you better understand where your organization stands and what steps can be taken to strengthen your approach.

As you engage with these insights, consider your own operational environment. Are you struggling with fragmented data, or are you effectively leveraging it to anticipate challenges? Are your digital twin initiatives providing true predictive power, or are they merely virtual representations? Is AI a strategic partner in your asset management, or an aspiration?

How you respond to these questions will influence not only how your operations perform today, but how confidently you can meet the challenges taking shape in the years ahead.

What is the digital transformation gap?

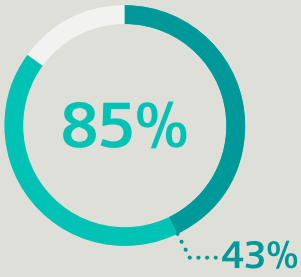
High trust meets persistent friction

Data is the anchor of modern asset management but turning it into consistent value remains a challenge.

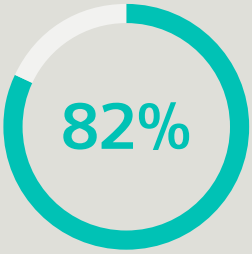
In our survey, a clear paradox emerged: organizations trust their data, yet struggle to fully operationalize it. A majority of respondents rely on data to inform key decisions, with 80% trusting it for forecasting and planning, while 83% use it to identify trends and assess risk. This widespread confidence reinforces data's role as a cornerstone of planning, performance monitoring, and long-term strategy.

Correspondingly, asset management systems are central to how organizations process and utilize this critical data. Most teams (83%) actively leverage these systems to schedule preventive maintenance, identify trends and risks, and flag assets at risk of failure. This reliance extends to decision-making, with 85% of organizations consulting asset management system dashboards and reports at least monthly, and nearly half (43%) doing so daily or weekly. Highlighting the reliability of these digital tools, 82% of asset managers largely trust their CMMS data more than their own experience, knowledge, and intuition.

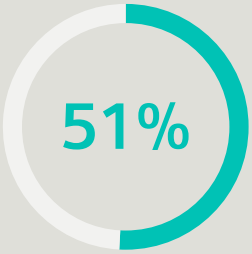
However, that high level of trust is tempered by persistent barriers, revealing a disconnect between the value of data and the realities of effectively managing it at scale; more than half of respondents (51%) cite data overload and integration challenges, while 50% point to human error as a driver of poor data quality.



85% of organizations using a CMMS consult dashboards and reports at least monthly, 43% doing so daily or weekly.



82% of asset managers largely trust their CMMS data more than their own experience, knowledge, and intuition, indicating a significant reliance on system-generated insights.



51% of respondents cite data overload and integration challenges, revealing a disconnect between the value of the data and effectively managing it at scale.

What organizations now expect from their data

To overcome the gap between data confidence and data usability, organizations are prioritizing the fundamentals that make data trustworthy and actionable: accuracy, effective reporting capabilities, cost-effectiveness, comprehensive visualization, and ease of use.

Looking ahead, the priorities are even more stark. With 88% of organizations highlighting data integration, 83% emphasizing compliance compatibility, and 71% focused on enabling AI-driven insights, the overarching goal is to cultivate more connected, transparent data environments that support operational efficiency.

Strategic Takeaway

Effectively addressing the gap between data confidence and data usability requires a dual approach: mitigating human error through improved processes and leveraging advanced asset management tools to reduce integration bottlenecks. This comprehensive strategy can ensure data accuracy from its source and streamline its flow across systems.

By enhancing data visibility and transparency, organizations can unlock the full strategic and operational value of their asset data, transforming raw information into actionable insights that drive smarter decisions. They are then poised to move from mere trust to tangible, measurable outcomes, ultimately optimizing performance and resource allocation.

Digital Twins: From virtual models to real-world impact

Moving from emerging concept to operational advantage

Digital twins have long been viewed as a forward-looking concept, but they are quickly becoming a practical tool for advancing asset management. As digital transformation accelerates, their ability to create dynamic, virtual representations of physical assets is making them more relevant than ever. By connecting real-time data with operational models, digital twins allow facilities teams to simulate asset performance, anticipate failures, and make more informed decisions across the asset lifecycle.

Because the majority of an asset's cost is incurred during its operational life, the ability to monitor, simulate, and optimize performance in real time is becoming increasingly critical — making digital twins a key enabler of cost control and efficiency.

In our survey, we found that their use is gaining traction: 35% of organizations reported that digital twin initiatives are either implemented or in progress. That momentum is expected to accelerate with 45% of respondents planning to implement digital twins within the next five years, while 57% expect them to become a standard part of asset management practices.

The advantages of digital twin adoption are evident among those who have implemented or plan to implement them. A majority (60%) consider easier asset performance visualization and tracking a primary benefit of digital twins, while 56% see improved strategic planning and 52% anticipate improved return on investment (ROI). Additionally, 34% believe digital twins will lead to reduced downtime. Overall, nearly half of organizations (49%) are highly familiar with digital twins, indicating an increased understanding of their potential.

This growing interest in digital twins is also reflected in the evaluation of asset management tools. When considering new digital tools, 49% of organizations prioritize the ability to support digital twin technology, highlighting its increasing importance in their strategic planning and tool selection processes.

Yet, successful implementation depends on a critical prerequisite: consistent, reliable data. This challenge is already evident in adoption efforts, where 44% of organizations report data consistency across systems as a barrier, and 20% cite difficulty integrating disparate data sources. Without a strong data backbone, digital twins risk becoming static models rather than powerful, decision-supporting tools.

35% of respondents have implemented, or are in the process of implementing, digital twins — yet nearly half (45%) plan digital twin adoption within the next five years.

Manufacturing is leading the charge

Digital twin adoption is not uniform across industries. Manufacturing continues to lead in this area, driven by its long-standing investment in automation, connected systems, and performance monitoring.

However, for other sectors more opportunities to leverage digital twins are emerging. In healthcare, for example, the technology can support more proactive facility management, optimize equipment performance, and improve reliability in critical environments. Similarly, in education, it offers the potential to better manage campus infrastructure, simulate long-term capital needs, and improve resource allocation.

As these industries continue to digitize operations, the gap in digital twin adoption is likely to narrow, though implementation is unlikely to be as extensive as in manufacturing.

Strategic Takeaway

Realizing the full potential of digital twins begins with getting the data foundation right. Organizations that prioritize data consistency, integration, and visibility will be better positioned to move beyond static models and unlock the predictive, operational value digital twins promise. Without a resilient and reliable data infrastructure, digital twins remain conceptual, unable to deliver real-time insights and optimized decision-making.

Investing in clean, interconnected data pipelines and ensuring data governance are critical first steps. This proactive approach transforms digital twins from impressive visualizations into dynamic, actionable tools that truly enhance performance and drive innovation across the enterprise.

AI: From automation to smarter asset decisions

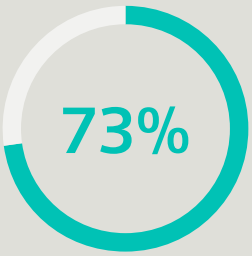
High confidence translates to greater application

AI's meteoric rise as the defining technology of the current digital transformation era is constrained by its frequent inability to deliver on its promise. With up to 95% of AI projects failing to deliver measurable ROI, most AI initiatives stall long before they scale.

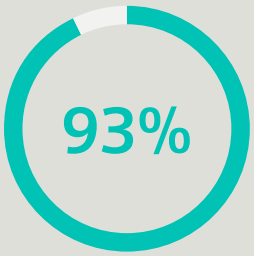
Yet AI is emerging as a core component of asset management, reshaping how organizations make decisions and manage performance. Our survey shows that AI has moved beyond experimentation, with 73% of organizations reporting active use in asset management, applying it across predictive maintenance, capital planning, and performance optimization.

Among those using AI, confidence is exceptionally high: 96% of respondents say it improves forecasting and planning accuracy, while 92% believe AI-driven automation will shape the next era of digital transformation.

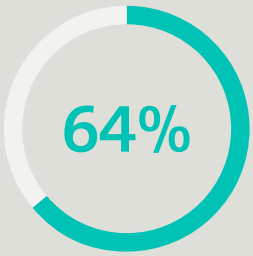
This enthusiasm for leveraging AI to enhance visibility across the asset lifecycle — enabling more proactive, data-driven workflows — is reflected in targeted, high-value applications. A strong majority (93%) use AI for predictive maintenance, enabling earlier detection of failures and reducing downtime, while 64% apply it to predictive capital planning, improving long-term investment decisions, and 53% of respondents say they use AI to optimize asset performance in real time.



73% of organizations report actively using AI in asset management.



93% use AI for predictive maintenance, enabling earlier detection of failures.



64% use AI in predictive capital planning, improving long-term investment decisions.

53% report that they use AI to optimize asset performance in real time.

The gap between belief and readiness

Despite strong adoption and confidence among operations leaders, hurdles remain, particularly among those who have yet to adopt AI. 59% of non-users cite high implementation costs, while 45% point to a lack of internal expertise. Concerns around cybersecurity, privacy, and liability are also cited by roughly 40–45% of organizations, indicating that hesitation is shaped as much by perceived risks, such as cost, security, and liability, as by gaps in technical capability.

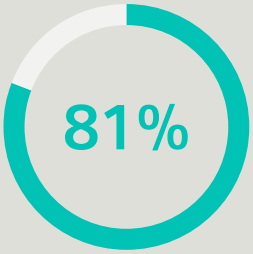
These findings reflect a broader uncertainty, seen across digital transformation efforts, about whether existing data is reliable, integrated, and usable enough to support effective AI integration. In many cases, data is still fragmented across systems or inconsistently managed, creating a perception gap between what organizations believe AI can achieve versus what it can actually deliver. As a result, AI initiatives are often built on poor quality data that hinders accurate forecasting and optimization, limiting teams' ability to move beyond one-off use cases to scalable operational transformation.

The larger industry reality is that, while AI's potential is widely recognized, delivering measurable ROI remains a challenge. High expectations, combined with barriers to adoption and uneven data readiness, create conditions where AI initiatives can underperform. In many cases, organizations are advancing AI strategies without fully addressing the foundational data requirements that enable success.

Strategic Takeaway

AI alone doesn't create value. Good data does.

Organizations that prioritize data accuracy, integration, and governance will be best positioned to translate AI adoption into meaningful outcomes. As 71% of organizations emphasize the importance of AI-driven insights, the focus must shift from simply implementing AI to ensuring it is supported by reliable, high-quality data. Organizations that align data strategy with AI investment will move beyond experimentation to unlock more predictive, efficient, and intelligent asset management.



81% of asset managers believe better data quality would significantly accelerate AI implementation, emphasizing the critical link between data readiness and AI success.

Final Thoughts

The findings in this report underscore that the current era of digital transformation in asset management is no longer defined by the adoption of individual technologies, but by how effectively they are applied within day-to-day operations. Data, digital twins, and AI are not independent tools; they are interdependent pillars of a connected strategy that, when properly aligned, can translate investment into consistent, scalable operational performance.

While organizations have made measurable progress in adopting advanced technologies and embedding them into daily workflows, a critical challenge persists: the quality, integration, and usability of data. As the report highlights, data overload and integration limitations are primary bottlenecks to effective decision-making with asset data. This creates a significant disconnect, hindering the true impact of digital investments and full realization of transformation goals.

Consider this: is your organization truly leveraging the power of its asset data? The ability to graduate from reactive fixes to predictive, optimized operations depends on strengthening the foundational data that fuels AI and digital twin initiatives. However, though the majority of asset managers believe better data quality would accelerate AI implementation, that trust is tempered by poor data that has slowed or prevented AI adoption. Bridging this gap requires teams to prioritize data quality, consistency, and accessibility across systems. Without this, even the most sophisticated tools will struggle to deliver consistent, scalable results.

Looking ahead, organizations that zero in on enhancing how asset data is captured, standardized, and connected with maintenance operations will immediately see a reduction in inefficiencies, boost reliability, and enable more predictive, optimized operations. When asset maintenance data is accurate, connected, and current, digital twins and AI can truly support more proactive strategies, better long-term capital planning, and more effective resource utilization across assets and teams.

For more information and insights on asset lifecycle management, and how modern and complete ALM systems can help you maximize the value of your assets and infrastructure, visit **assetmanagement.siemens.com** to learn more.

Three Key Takeaways

1

Data quality is the cornerstone of digital transformation

The effectiveness of advanced technologies like AI and digital twins hinges entirely on the quality of the data they consume. Our findings consistently show that issues like human error and a lack of standardized processes are significant contributors to poor data quality.

Organizations must prioritize robust data governance and integration strategies to ensure asset information is accurate, consistent, and accessible. This groundwork is essential to prevent negative impacts on organizational performance and ROI, ensuring that technology investments yield their full potential.

2

Integrate technology for holistic operational performance

Organizations must cultivate an interconnected ecosystem where data from maintenance operations seamlessly flows into digital twins and AI models. The report reveals that a lack of integrated data often delays projects and presents a significant challenge for digital twin implementation.

A holistic approach ensures that insights derived from advanced tools are grounded in real-world operational realities, driving continuous improvement and strategic decision-making across the entire asset lifecycle.

3

Shift from reactive to predictive with confidence

By strengthening data quality and strategically integrating technologies, organizations can confidently transition from reactive maintenance to truly predictive strategies. This report underscores that reliable data is considered the most valuable operational asset, highlighting its critical role in enabling this transformation.

The benefits are clear: reduced unplanned downtime, extended asset lifespans, optimized resource allocation, improved capital planning, and greater operational resilience for the future.

Respondent Demographics

The data in this report was collected through a third-party, anonymous survey with a total of 400 respondents. Participants were required to pass a knowledge-based screening, work in the U.S., and be decision-makers in their organization's asset management software selection process. They represented the education, manufacturing, government, or healthcare sectors (acute and senior living). Below is a breakdown of respondent demographics:

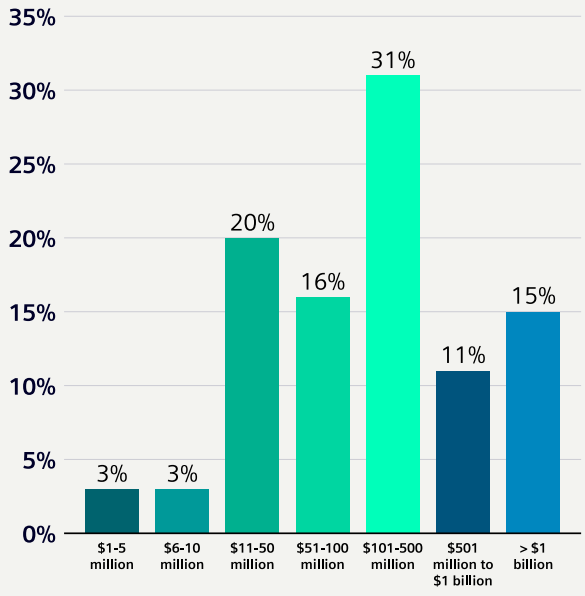
Industry

34%	Education
33%	Healthcare/Medical
33%	Manufacturing

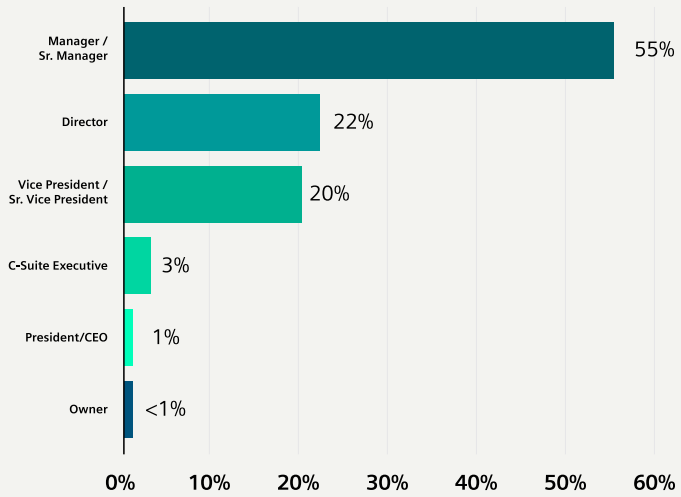
Size of Organization

15%	0 to 249
15%	250 to 499
25%	500 to 999
31%	1,000 to 4,999
14%	5,000 to 19,999
1%	20,000 or more

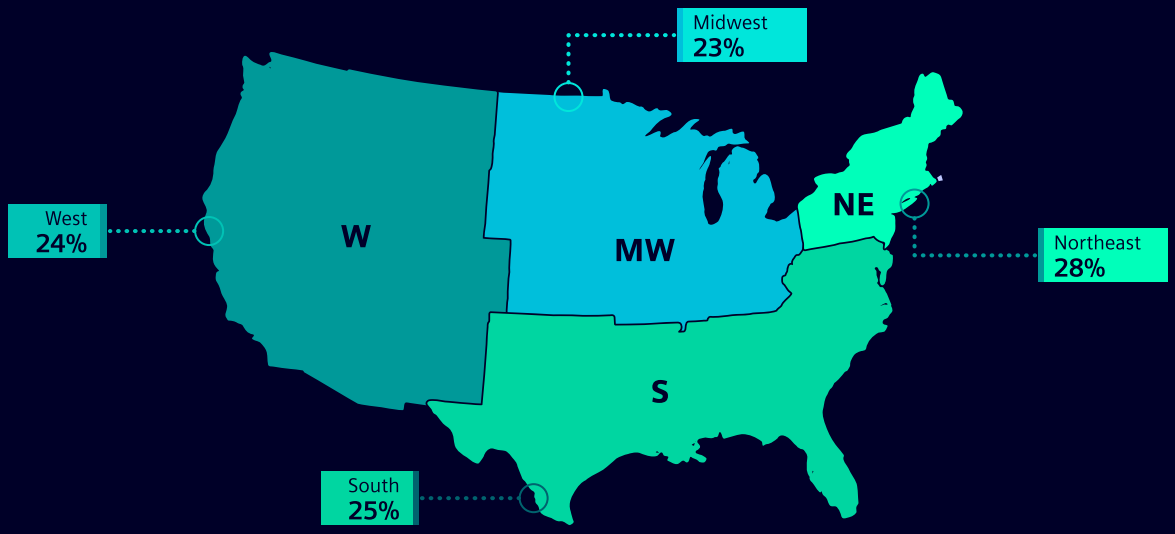
Annual Revenue



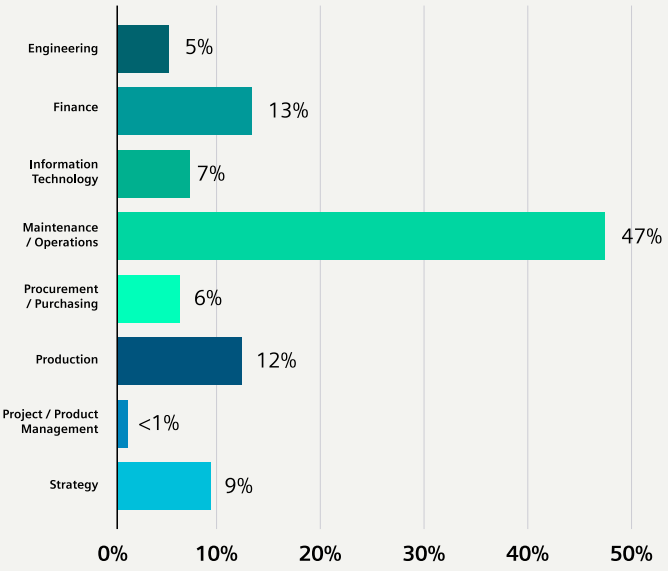
Job Role



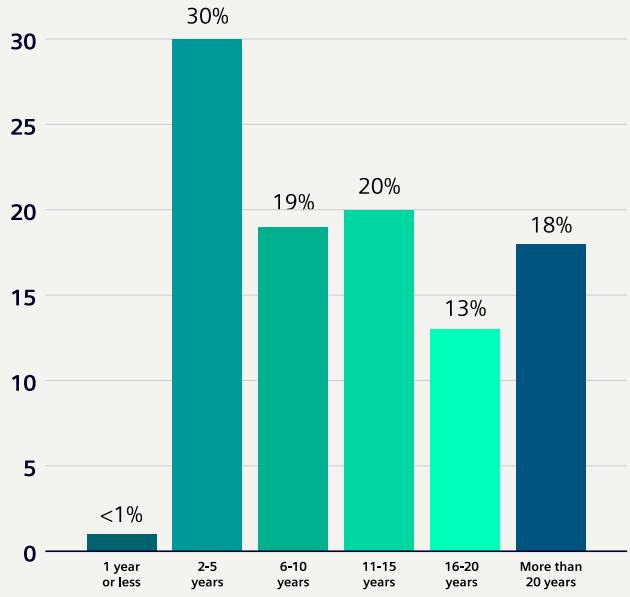
Respondents by region



Department



Years of Experience in Industry



Respondents by Sub-Industry

Education Sector

7%	Primary / Elementary
30%	Secondary / High school
63%	Higher education / University

Healthcare Work Setting

50%	Acute care
50%	Senior living facilities

Siemens Asset Management Software enables organizations with connected insights and processes to manage the entire lifecycle of their assets, facilities and infrastructure.

As a global leader in intelligent asset management, our intuitive cloudbased AI-empowered platform is expertly designed to improve capital planning through smarter, data-driven decision making, equip technicians to predict, prioritize and manage preventative maintenance activities, and support organizations to achieve operational resiliency, compliance and efficiency goals.

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