

2026 | MANUFACTURING INDUSTRY

The State of the Manufacturing Industry 2026

AI Adoption Surges to 72% in Manufacturing,
but Only 10% of Manufacturers Have Scaled
Across Networks, New Global Study Finds



PARSEC[™]

Executive Summary

Manufacturing organizations are entering a new phase defined not by incremental digital transformation, but by structural complexity. The combined pressures of reshoring, supply chain volatility, workforce shortages, cost pressure, and accelerating technological change are reshaping operational priorities.

In this environment, operational excellence has shifted from a competitive differentiator to a prerequisite for survival.

In February 2026, we surveyed 1,200 manufacturing leaders worldwide to better understand how organizations are navigating technology adoption, AI integration, labor challenges, reshoring initiatives, and supply chain disruption.

The SOMI 2026 survey highlights a clear pattern:

- Manufacturers are investing aggressively in digital technologies, AI, and automation—but scaling these capabilities across operations remains limited.
- While adoption is widespread, execution maturity varies significantly. Most organizations remain in early or intermediate stages of digital transformation, with fragmented systems, inconsistent data strategies, and workforce constraints limiting progress.

Executive Summary

Three themes emerge from the data:

1. COMPLEXITY IS INCREASING ACROSS GLOBAL MANUFACTURING NETWORKS.
2. AI AMBITION IS ACCELERATING, BUT ENTERPRISE-SCALE ADOPTION REMAINS LIMITED.
3. EXECUTION SYSTEMS AND OPERATIONAL VISIBILITY ARE BECOMING FOUNDATIONAL TO RESILIENCE.

The data signals a structural shift. Manufacturers are investing aggressively in AI, automation, and reshoring—yet scaled execution, governance maturity, and workforce capability are not advancing at the same pace.

The next phase of manufacturing innovation will not be defined by technology adoption alone, but by the ability to operationalize and scale these capabilities across production environments.

In 2026, competitive advantage will be determined not by who adopts technology first, but by who integrates, governs, and operationalizes it most effectively.

Methodology & Interpretation Notes

This report is based on a February 2026 survey of 1,200 manufacturing leaders across global markets. Respondents represent a mix of executive, operational, and technical roles across diverse manufacturing sectors. Comparative references to 2024 data reflect results from prior State of the Manufacturing Industry surveys.

IMPORTANT INTERPRETATION NOTE

Many survey questions allowed respondents to select multiple answers. As a result, percentages throughout this report represent selection frequency, not mutually exclusive adoption or system penetration.

IMPLICATION FOR DATA INTERPRETATION

Certain results—particularly comparisons between systems such as ERP, MES, and QMS—should not be interpreted as indicators of overall market penetration. Instead, they reflect which systems respondents rely on for specific operational functions.

This distinction is critical to avoid misinterpretation of the data and to ensure findings are understood in the appropriate operational context.



SECTION 02

Digital Technology Landscape

Most Common Digital Solutions

Interpretation

In practice, ERP systems are nearly ubiquitous across manufacturing organizations, but are typically used for:

- Planning
- Financial management
- Record-keeping

Whereas MES and QMS are more directly used for:

- Execution
- Tracking
- Operational control

Insight

Manufacturers often have ERP systems in place, but day-to-day operations are executed through MES, spreadsheets, or manual processes.

Implication

This reinforces a key industry dynamic: The execution layer (MES/MOM) remains underdeveloped relative to enterprise systems, despite its central role in coordinating production, quality, and data flow.



Execution Systems at the Center of Modernization

Finding

Manufacturing is no longer experimenting with digital tools—it is increasingly dependent on them.

Most manufacturers (69%) report operating with a hybrid mix of legacy and modern equipment, highlighting the operational reality of integration across generations of infrastructure. Most organizations are still in transition rather than operating with fully modernized technology stacks.

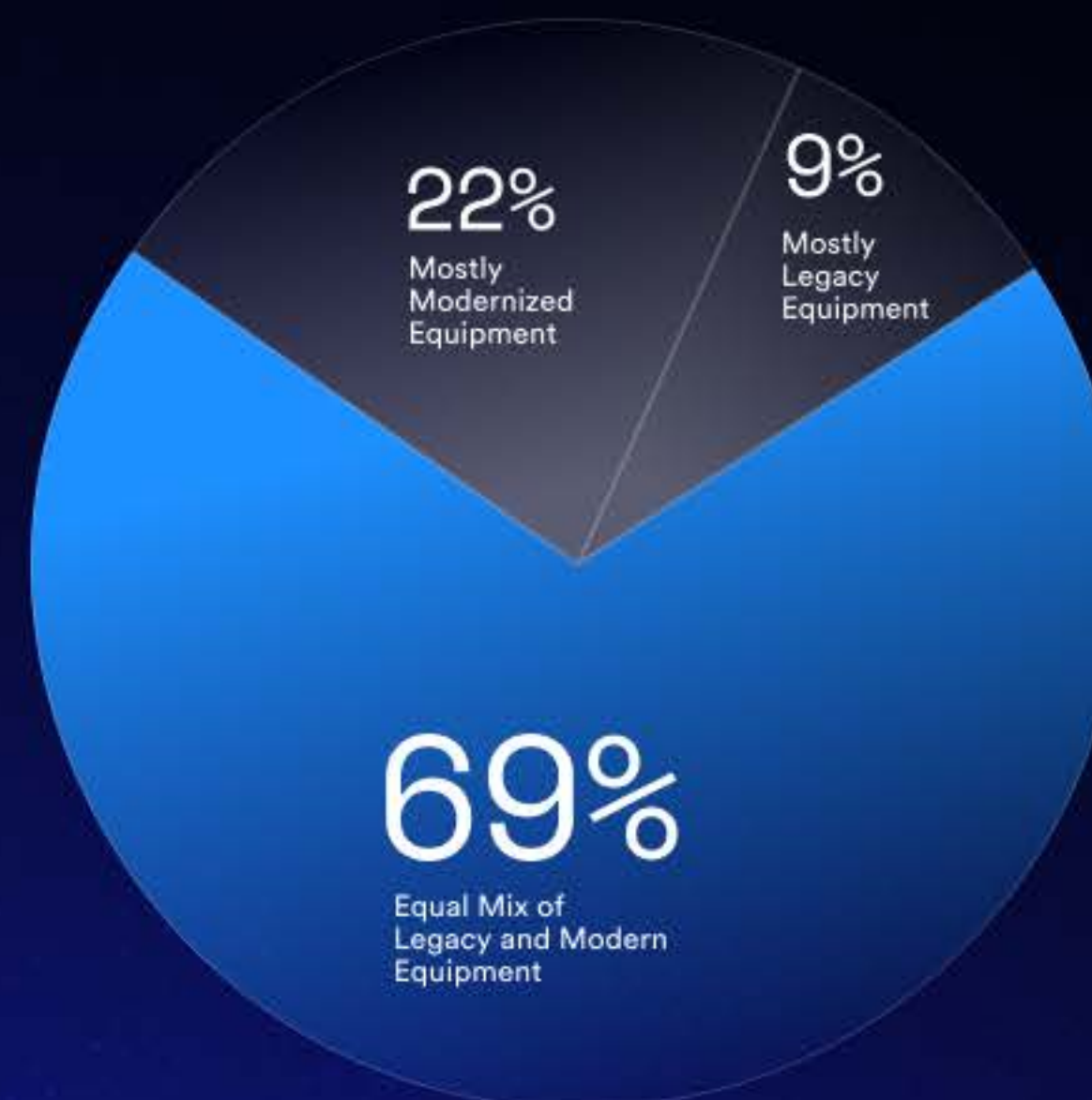
Interpretation

Manufacturers are not operating in clean, fully modernized environments. Instead, they are managing layered technology ecosystems that combine legacy systems, modern platforms, and, in many cases, manual processes.

This creates integration complexity and limits the ability to standardize operations across sites.

How would you characterize the state of legacy equipment across your plant network?

Among IT Leaders; Sample Size = 400



Insight

The challenge is no longer access to technology—it is the ability to integrate and operationalize technology across heterogeneous environments.

Data Strategy Progress

Finding

Only 37% of manufacturers currently have a unified, data-driven strategy in place. However, 60% are either implementing or planning such strategies —up from 40% in 2024.

Interpretation

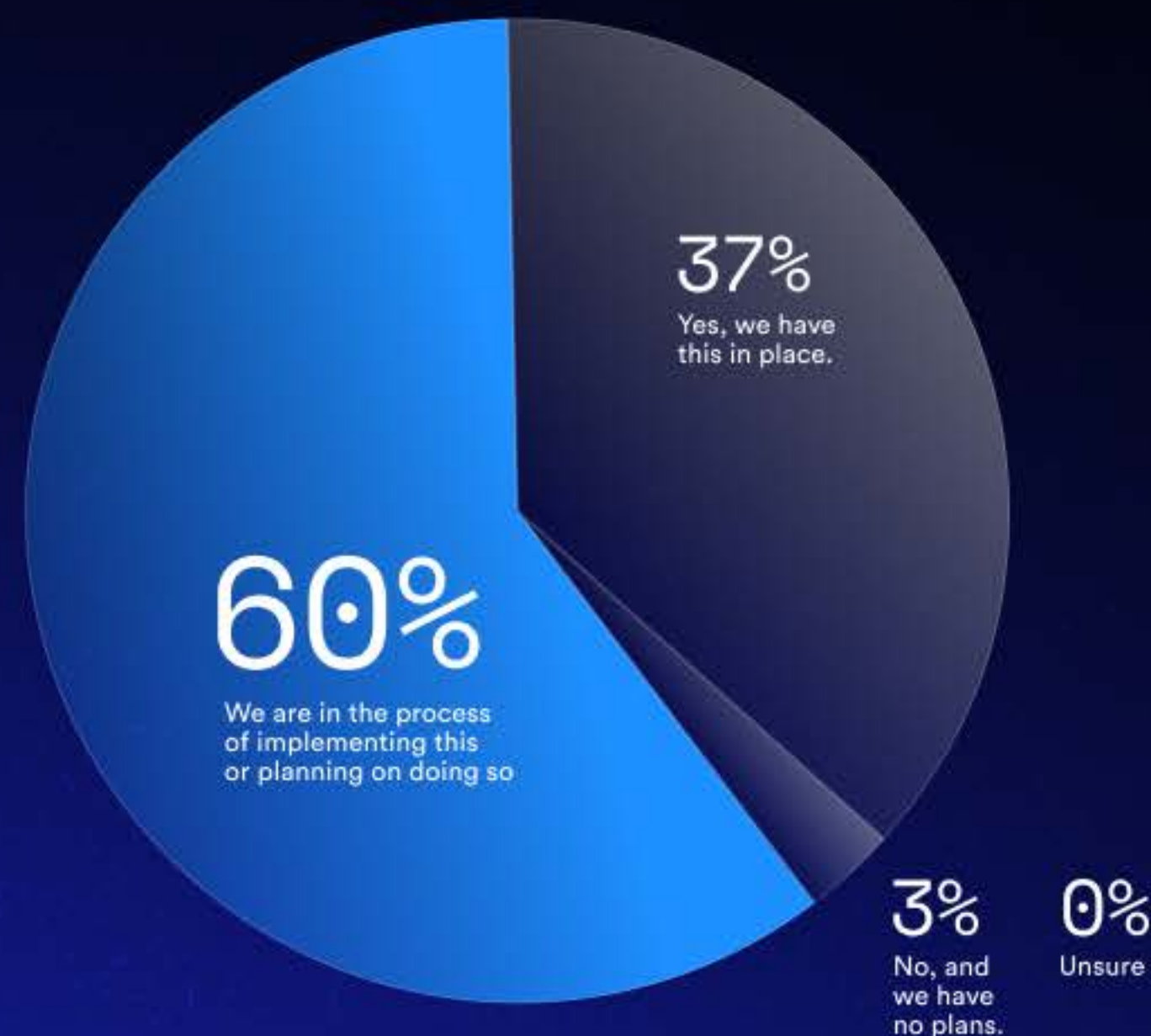
Data strategy adoption is accelerating, but most organizations remain in early stages of maturity and are still building foundational architecture.

Insight

Data strategy maturity is lagging behind technology investment, creating a structural constraint on scalability, analytics, and AI enablement.

Does your company have a data driven digital strategy in place? Meaning, your company collects and stores data in an accessible, unified format so decisions can be made based on this data to improve future business performance.

Among IT Leaders; Sample Size = 400



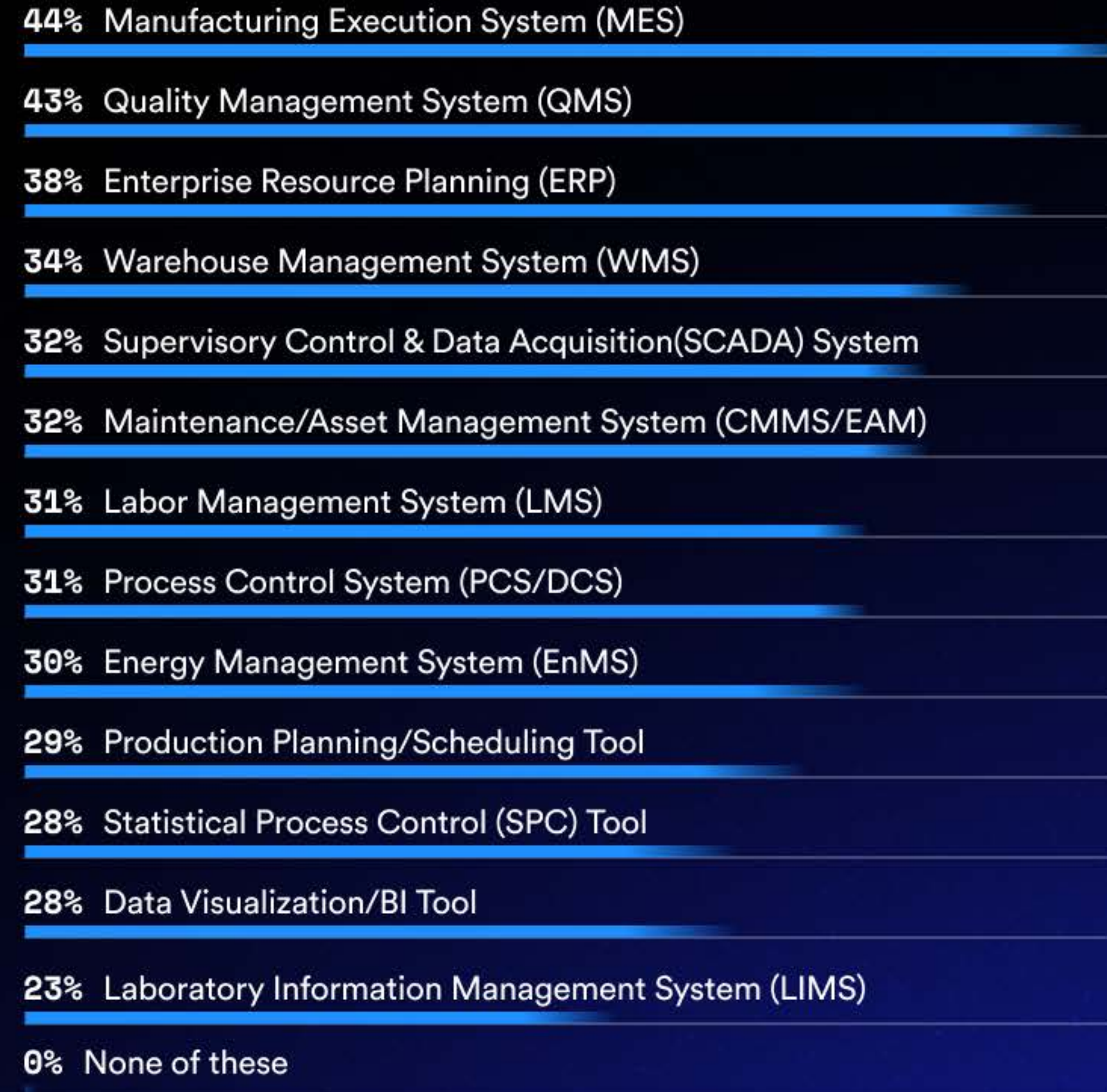
Most Common Digital Solutions

Finding



At face value, MES and QMS appear to be the most commonly used systems, while ERP appears lower than expected. These results should not be interpreted as a reflection of ERP penetration. Given the structure of the survey question, responses reflect how systems are used operationally—not whether they exist within the organization.

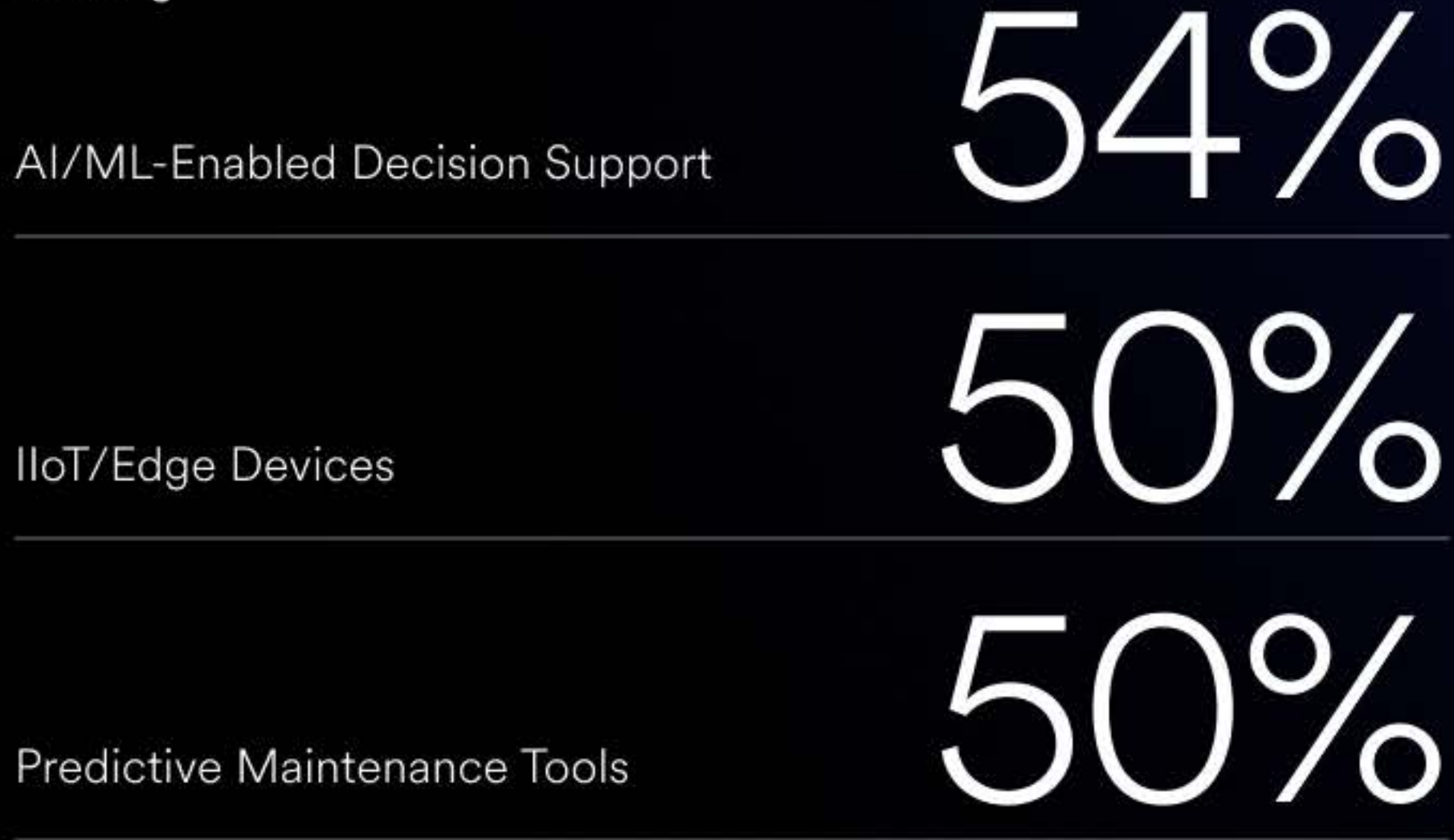
Which systems are used to manage manufacturing operations? Please select all that apply.



Sample Size = 1200

Top Tools and Capabilities

Finding



Interpretation

Manufacturers are investing heavily in advanced tools that enhance visibility, monitoring, and predictive capabilities.

Which of these, if any, is your company currently using?
Please select all that apply.



Among OT Leaders and IT Leaders. Sample Size = 800

Insight

The effectiveness of these technologies depends on structured, accessible operational data—which many organizations are still in the process of building.

Top Drivers of Technology Adoption

Finding



Interpretation

Technology adoption is being driven by compliance, data demands, and quality improvement—not experimentation or novelty.

What are the top drivers for adopting new technologies in your manufacturing processes? (Top Three Ranked Responses)



Sample Size = 1200

Insight

Modernization efforts are widespread, but architectural maturity varies significantly across organizations, limiting the ability to fully realize the value of these investments.

SECTION 03

Artificial Intelligence

Ambition is high. Scale is limited. Governance risk is rising.

Finding

AI adoption has accelerated significantly:

- 72% of surveyed manufacturers have adopted AI (up from 53% in 2024)
- 22% have implementations underway
- Only 10% have adopted AI/ML and automation at scale across their networks

To what extent has your organization adopted AI technologies.



Close to a third (30%) have fully adopted AI across departments, while another 43% have adopted it in some departments but have yet to fully carry out their plan.
Sample Size = 1200

Which best characterizes the overall digital maturity of your manufacturing operations?



Just 10% of IT Leaders indicate their manufacturing operations have AI/ML and automation implemented at scale across the network while another quarter (25%) have integrated systems with real-time decision support and analytics and 35% at least have core systems like MES, QMS, and CMMS in place at most sites.

Among IT Leaders; Sample Size = 400

Ambition is high. Scale is limited. Governance risk is rising.

Interpretation

AI adoption is accelerating rapidly, but deployment remains fragmented and localized. Most organizations are implementing AI at the pilot or departmental level rather than scaling across production environments.

Insight

AI adoption \neq AI maturity. The gap between experimentation and operationalization is the defining challenge in manufacturing AI today.

Key Issue

The transition from pilot to production introduces integration, governance, and standardization challenges that most organizations are not yet equipped to manage.



Top AI Use Cases

Finding

Top use cases include:



In which of the following manufacturing business functions have you seen or do you anticipate seeing AI have the most impact? Please select all that apply.



Manufacturing Professionals have most commonly seen, or anticipate seeing, AI impact their quality control (50%), IT operations (46%), supply chain management (45%), and process automation (45%) functions.

Sample Size = 1200

Top AI Use Cases

Interpretation

These use cases share common characteristics:

- Measurable outcomes
- Structured data environments
- Clear and immediate ROI

Insight

AI adoption begins where value is clear and data is accessible—not necessarily where transformation is most needed.

What's Missing

AI adoption remains limited in:

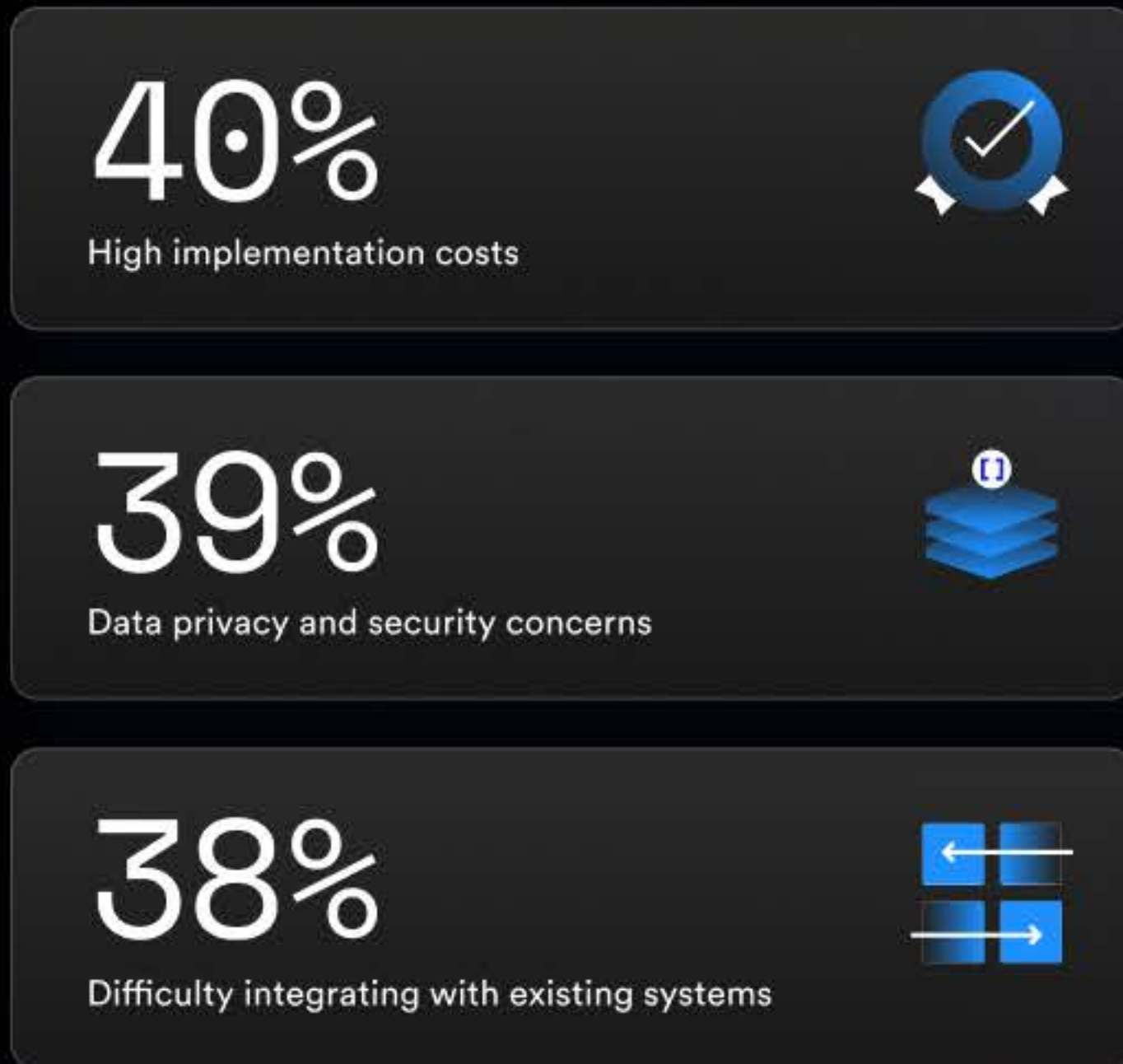
- Core production workflows
- Real-time operational control
- Cross-functional orchestration

This highlights the gap between localized optimization and enterprise-wide transformation.

Barriers to Wider Adoption

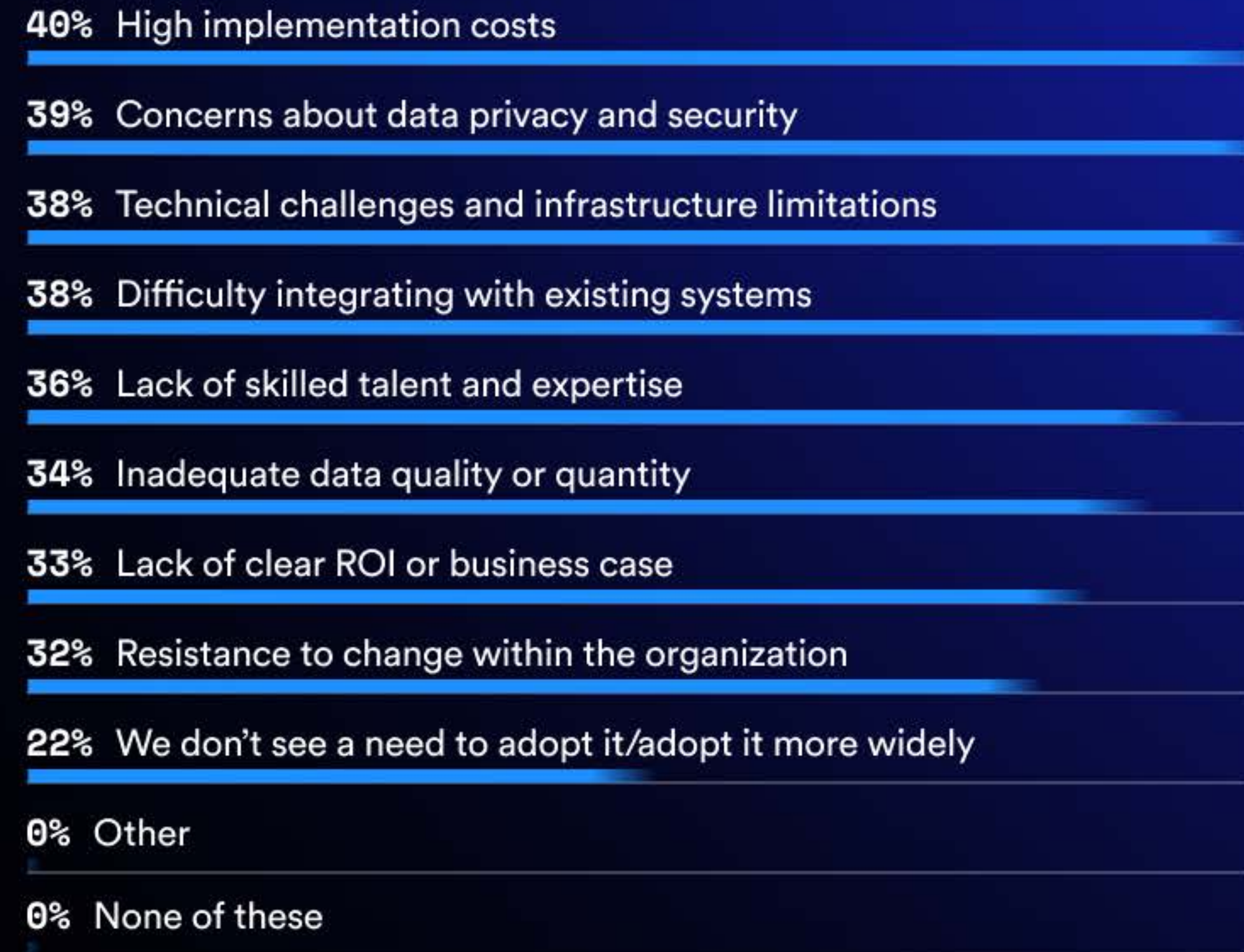
Finding

Top barriers include:



Compared to 2024, where infrastructure limitations were the primary constraint, concerns have shifted toward governance, cost, and integration complexity.

Which of the following barriers are preventing or would prevent your organization from wider adoption of AI? Please select all that apply.



Sample Size = 842

Barriers to Wider Adoption Animate

Interpretation

These barriers are not independent challenges—they are interconnected symptoms of deeper architectural issues.

Insight

The primary constraint to AI adoption is not the technology itself—it is the operational foundation, including fragmented systems and inconsistent data architecture.

Key Point

Integration becomes the dominant challenge when moving from:

- Pilot → Production
- Department → Enterprise



Risk Perception

Finding

Leaders identify two primary AI risks:

Being too hesitant and falling behind competitors

60%

Investing too aggressively and risking failure

40%

When asked about cybersecurity threats:

- 49% cited internal threats (phishing, sabotage)
- 45% cited AI adoption
- 45% cited lack of AI governance policies

What are the three biggest cybersecurity risks for your company right now? Please select you top three.

49% Threats from within the company (e.g., phishing, sabotage)

45% Lack of AI governance policies

45% Increased AI adoption

44% On-site vulnerabilities (e.g., servers, locations)

41% Outdated systems or platforms

39% Attacks on partners (e.g., supply chain)

39% Ransomware attacks

0% Other

Among IT Leaders; Sample Size = 400

Interpretation

AI is viewed simultaneously as a strategic opportunity and a source of risk, particularly in the absence of clear governance structures.

Insight

As AI adoption increases, governance maturity becomes as important as technical capability.

SECTION 04

Generative AI ("GenAI")

Ubiquitous Experimentation, Structured Scale Still Emerging

Finding

Generative AI adoption is widespread:

- All manufacturers surveyed have either adopted GenAI or are in the planning/discovery phase
- 65% have begun adoption across some or all departments (up from 48% in 2024)

Interpretation

GenAI is entering organizations through low-risk, non-operational workflows. Common use cases include:

- Documentation
- Knowledge retrieval
- Analysis support

To what extent has your organization adopted GenAI technologies?

We've adopted AI across some departments, but haven't completed our plan

41%

We are just beginning adoption and have pilot projects underway

27%

We've fully adopted AI and have extensive implementation across departments

24%

We haven't adopted GenAI technologies, but are exploring potential use cases

7%

We have no plans to adopt GenAI at this time

0%

Sample Size = 1200

Ubiquitous Experimentation, Structured Scale Still Emerging Animate

Insight

Generative AI is the fastest adoption vector, but not yet the most operationally impactful.

Emerging Pattern

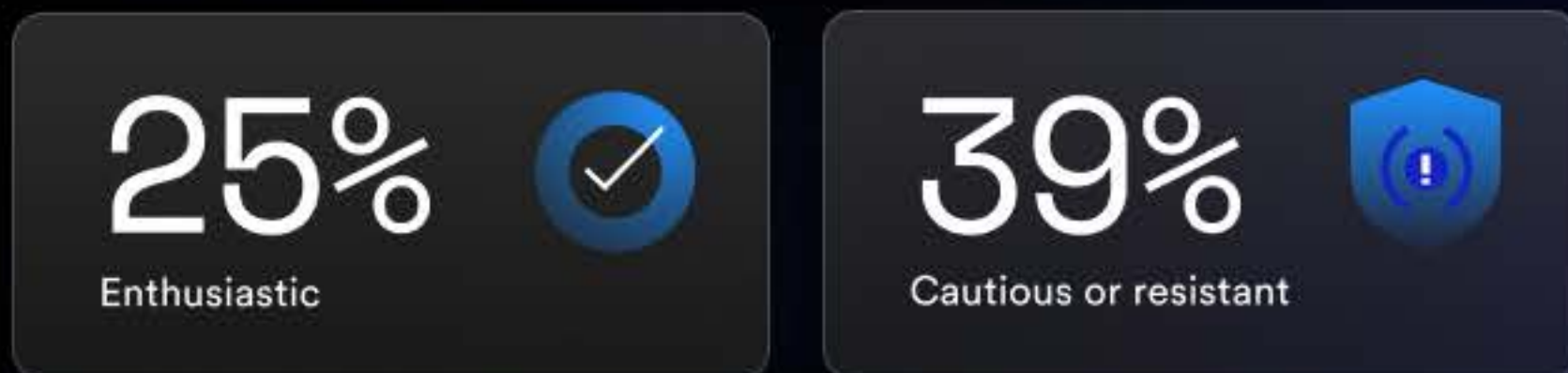
- High executive interest
- Mixed workforce perception
- Unclear long-term operational role



Sentiment Toward AI

Finding

Senior leaders:



Other employees:



Interpretation

Contrary to common assumptions, workforce resistance is not the primary constraint to AI adoption.

Insight

The limiting factors are governance clarity and strategic direction—not cultural acceptance.

Which best captures the attitude your company's senior leaders tend to have toward emerging AI technologies?

36% Interested but hesitant to being an early adopter

34% Cautious but open to adopting once proven

25% Enthusiastic and eager to adopt early

05% Resistant to adopting until the tech is well-proven

Among IT Leaders and Executive Stakeholders; Sample Size = 800

How receptive are employees at your company to adopting emerging AI technologies?

53% Generally receptive

22% Generally resistant

19% Highly receptive

06% Highly resistant

Sample Size = 1200

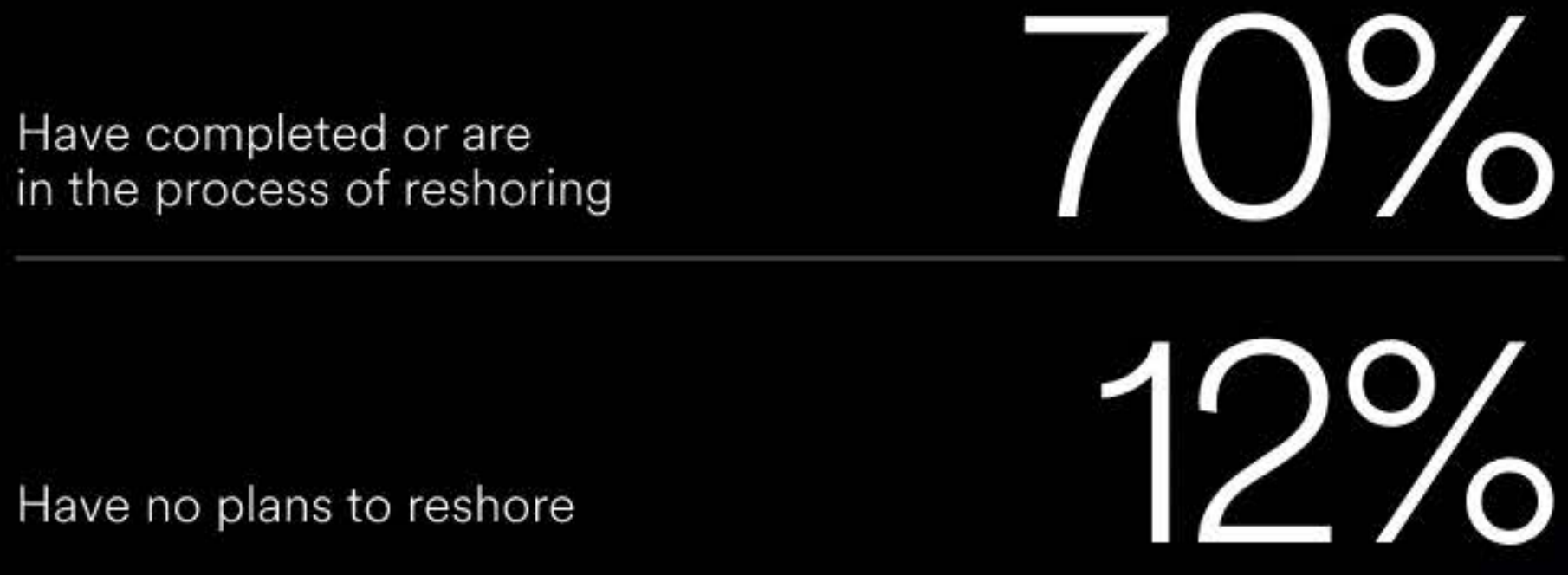
SECTION 05

Reshoring and Tariffs

Operational Complexity at Scale

Finding

Reshoring activity has accelerated dramatically:



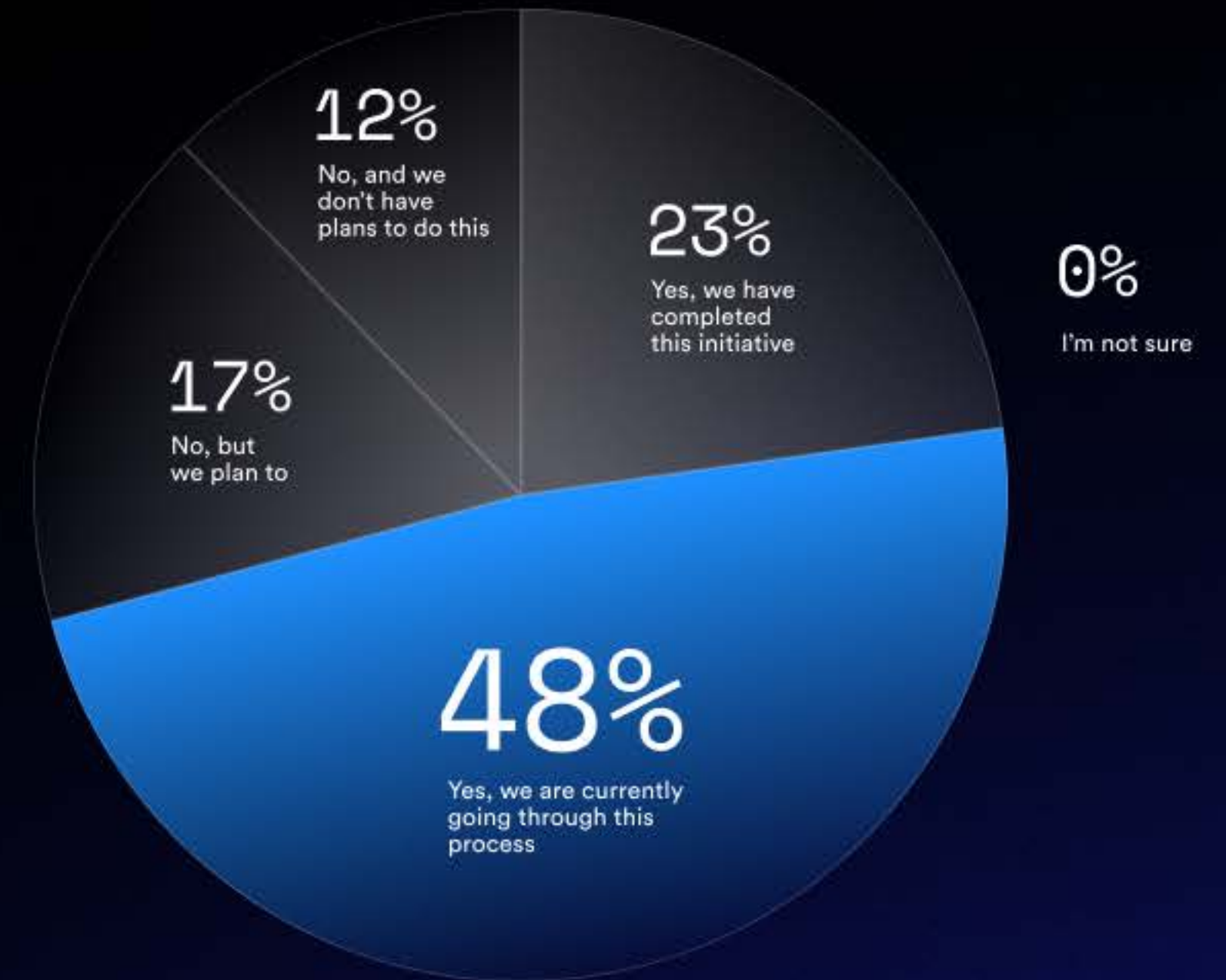
This represents a significant shift from 2024, when just 33% had completed or were undergoing reshoring initiatives, and 38% had no plans to reshore.

Interpretation

Reshoring is no longer a forward-looking strategy—it is actively being executed across the industry. However, as production footprints expand domestically, organizations are introducing new layers of operational complexity across multi-site networks.

Is your organization undergoing reshoring or nearshoring?

Sample Size = 1200



Insight

Reshoring is not simply geographic relocation. It is an execution challenge that requires coordination, standardization, and visibility across distributed operations.

Top Reshoring Challenges

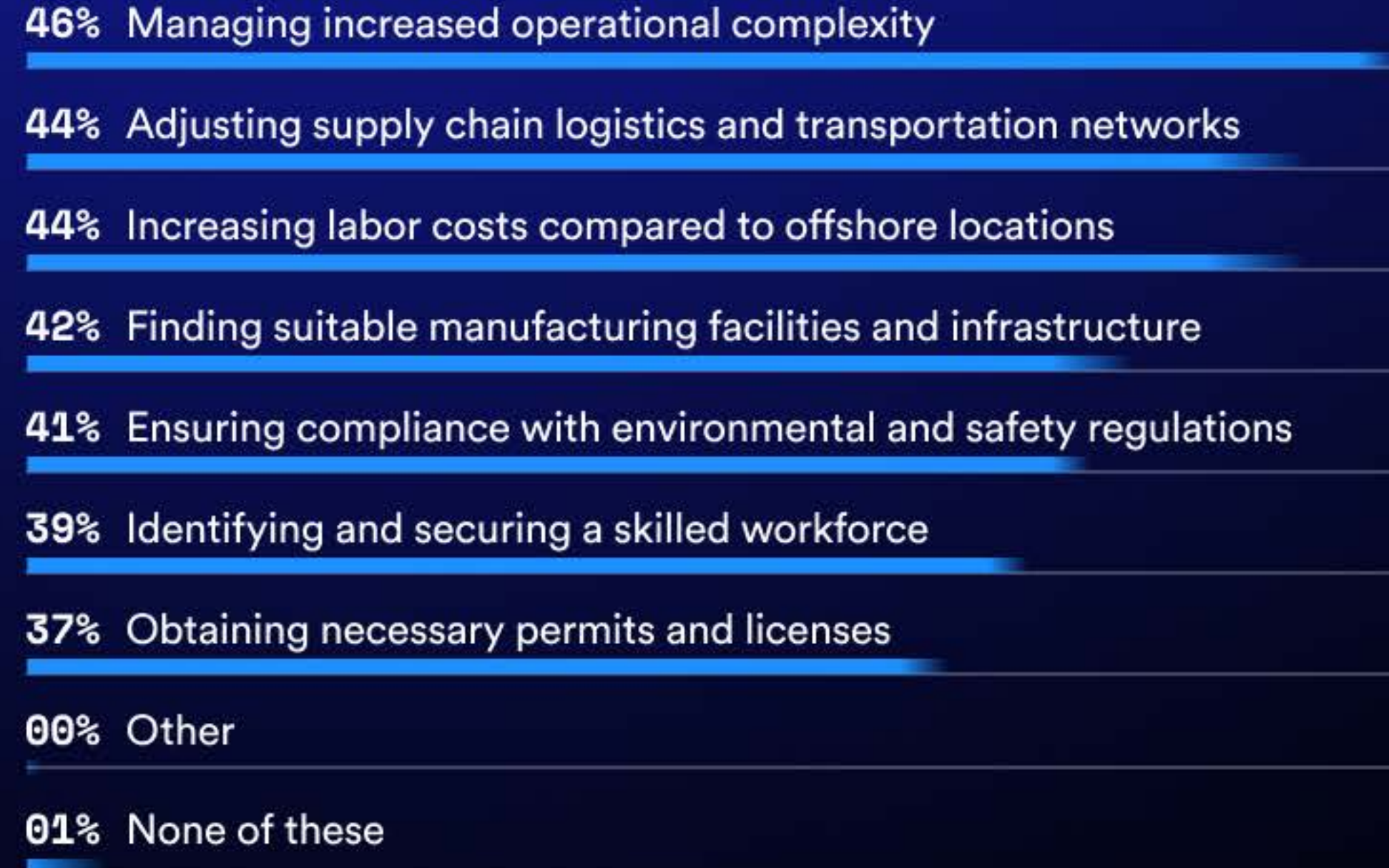
Finding



Interpretation

These challenges are interconnected and reflect the operational burden introduced by reshoring. Expanding or reconfiguring production networks increases coordination requirements across systems, sites, and teams.

What are the primary challenges, if any, your organization anticipates or has experienced when implementing nearshoring or reshoring initiatives? Please select all that apply.



Among OT Leaders and Executive Stakeholders whose company is undergoing nearshoring / reshoring. Sample Size = 555

Insight

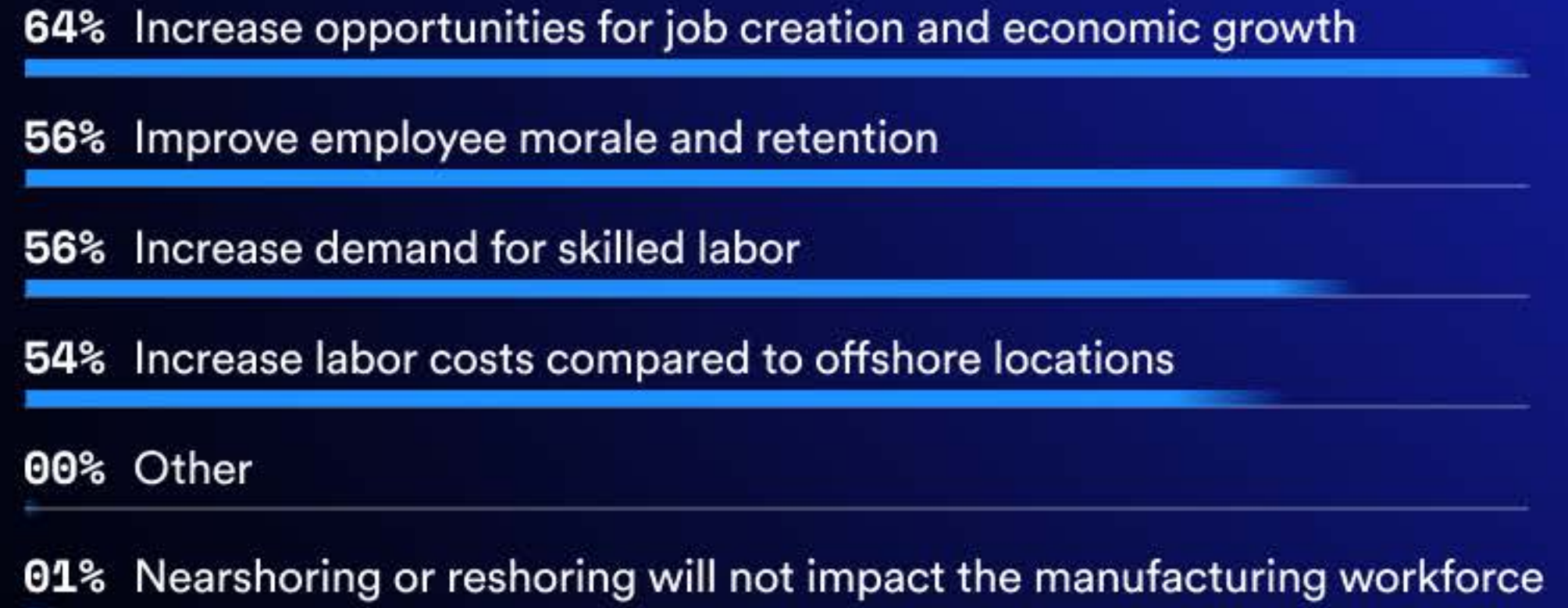
The primary challenge of reshoring is not location — it is managing complexity at scale.

Workforce Impacts

Finding



How, if at all, will nearshoring or reshoring impact the manufacturing workforce? Please select all that apply.



Among OT Leaders and Executive Stakeholders. Sample Size = 800

Interpretation

While reshoring strengthens domestic manufacturing presence, it simultaneously increases demand for skilled labor in an already constrained talent market.

Insight

Reshoring amplifies existing workforce challenges, particularly in technical and operational roles required to support modern production environments.

Tariff Impacts

Finding



Additionally, 70% of manufacturers focused more on cost-cutting than supply chain resiliency during the past 12 months.

How have your company's supply chains shifted over the past 12 months due to tariffs and broader economic shifts?



Among Executive Stakeholders; Sample Size = 400

How strongly do you agree or disagree with the following statement? Cutting costs were a higher priority than supply-chain resiliency at my company over the last 12 months.



Among OT Leaders and Executive Stakeholders; Sample Size = 800

Tariff Impacts

Interpretation

Cost discipline remains the dominant factor shaping sourcing and operational decisions, even as reshoring initiatives accelerate.

Insight

Manufacturers are balancing competing priorities: increasing control and resilience while managing cost pressure.

Key Trades Off

Benefit	Cost
Supply chain resilience	Higher labor costs
Geopolitical control	Talent shortages
Reduced lead times	Increased operational complexity

Strategic Insight

Reshoring is accelerating faster than standardization. As a result, execution discipline across distributed networks is becoming a critical requirement for success.

SECTION 06

Labor

Workforce Capability as a Gating Factor

Finding

Manufacturers continue to face persistent workforce challenges:

- Talent shortages
- Skills gaps
- Difficulty recruiting

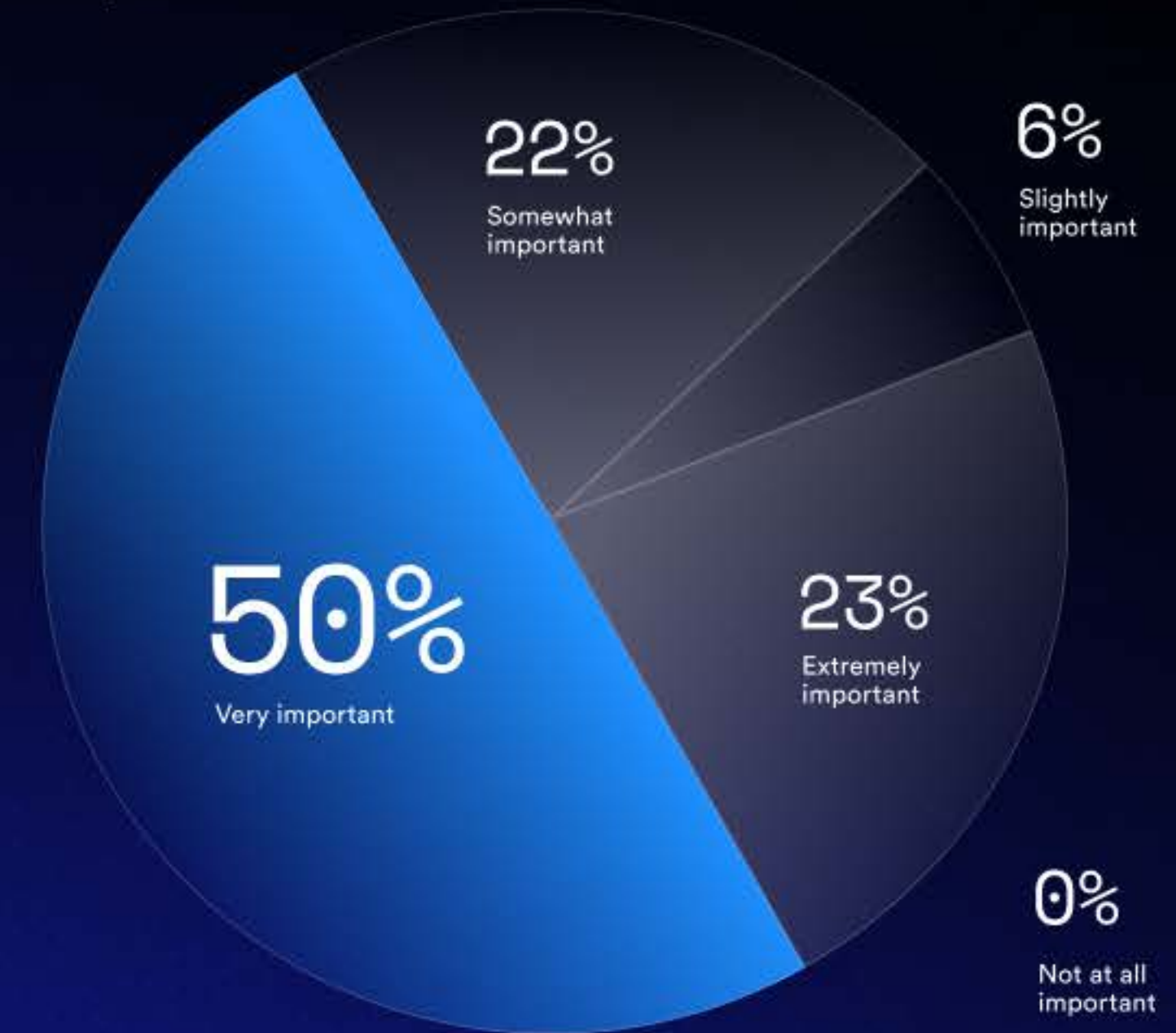
72% of surveyed respondents say upskilling their workforce will be very or extremely important over the next three years.

Interpretation

As technology adoption accelerates, workforce capability is not keeping pace. Organizations are increasingly constrained not by access to tools, but by the availability of skilled labor required to implement, manage, and scale them.

How important will upskilling your current workforce be to your company's long-term viability over the next three years?

Sample Size = 1200



Insight

Technology adoption is now constrained by people, not tools. Workforce capability is emerging as the primary bottleneck in digital transformation and technology ROI.

Top Recruitment Strategies

Finding

Top recruitment strategies include:



What initiatives is your company using to help identify and recruit the next generation of leaders? Please select all that apply.



Sample Size = 1200

Interpretation

Manufacturers are pursuing a mix of internal development and external hiring to address talent gaps, reflecting both immediate needs and long-term capability building.

Insight

There is no single solution to the workforce challenge—organizations must simultaneously build, attract, and retain talent.

Most Difficult Roles to Fill

Finding



What type of manufacturing roles, if any, are the most challenging to fill at your company right now? Please select all that apply.



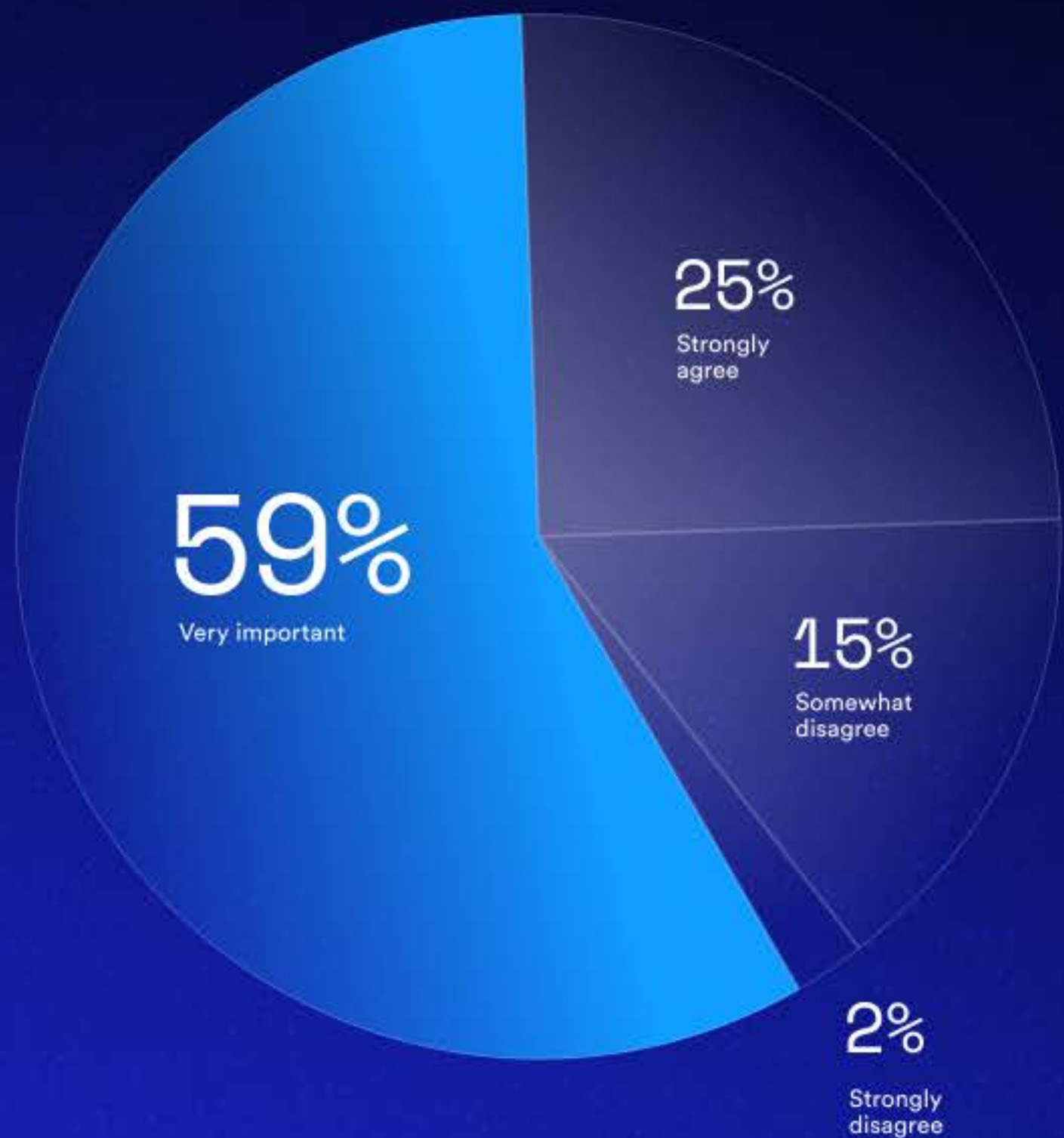
Among OT Leaders and IT Leaders; Sample Size = 800

Additionally, 84% believe manufacturing’s perception as a low-skill, labor-intensive field makes recruiting technical talent more difficult.

Most Difficult Roles to Fill

How strongly do you agree or disagree with the following statement?
Recruiting top tech talent is more difficult in my industry than in others because manufacturing is often incorrectly perceived as labor-intense / low-skill industry.

Sample Size = 1200



Interpretation

The most difficult roles to fill are those required to support digital transformation—particularly technical and operational leadership positions.

Insight

Perception and capability gaps are reinforcing each other, making it harder to attract the talent required to modernize operations.

Workforce Readiness and AI

Finding

Manufacturers are split on the impact of AI on jobs:

- 53% believe AI could replace at least half of certain departments
- 47% do not

Meanwhile, 45% cite internal skill gaps as a major challenge when integrating new systems.

How strongly do you agree or disagree with the following statement? I think AI could replace at least half of my department within the next three years.



Interpretation

Organizations are navigating uncertainty around the role of AI in the workforce, while simultaneously lacking the skills required to implement and scale new technologies.

What are the biggest challenges to your organization faces when integrating new manufacturing systems? Select up to three.



Among OT Leaders and IT Leaders; Sample Size = 800

Insight

AI introduces both opportunity and disruption—but without workforce readiness, its impact will remain limited.

Key Tension

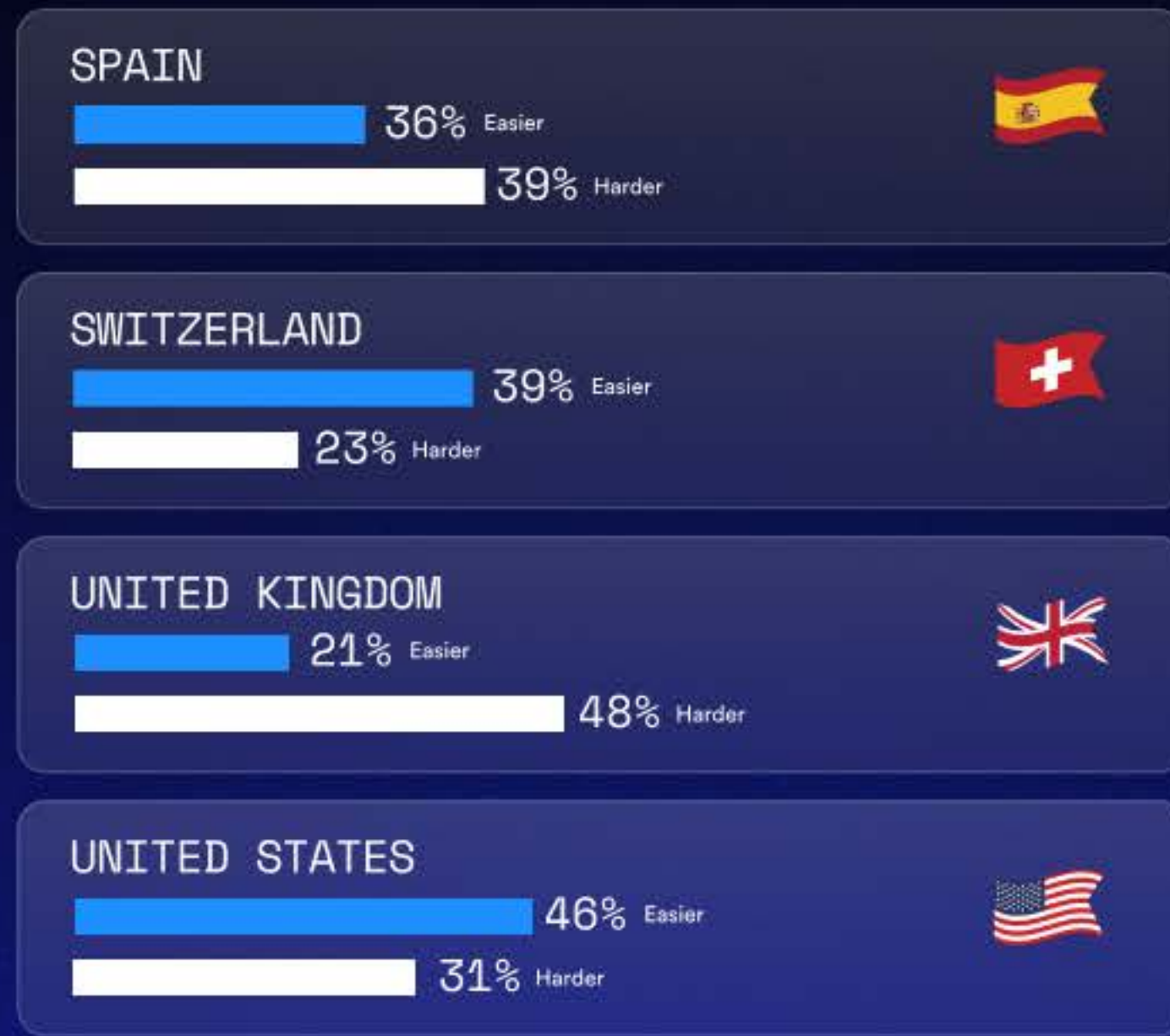
AI is viewed as:

- An opportunity by leadership
- A potential threat by segments of the workforce

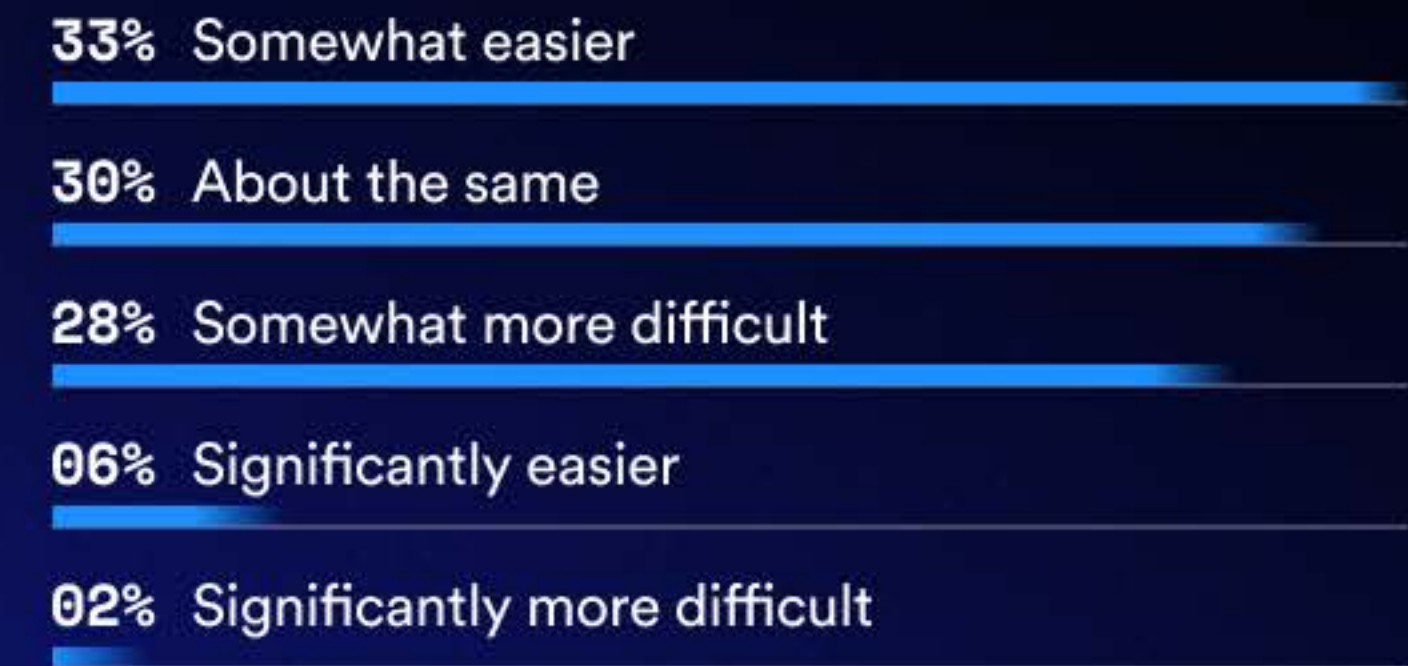
Global Talent Variability

Finding

Manufacturers report mixed hiring conditions globally when compared to one year ago:



Compared to a year ago, how easy or difficult is to find and retain workers with top technology skills?



Among OT Leaders and IT Leaders; Sample Size = 800

Interpretation

Labor market conditions vary significantly by region, reflecting differences in economic conditions, workforce availability, and industrial dynamics.

Insight

Workforce challenges are global but uneven—requiring region-specific talent strategies rather than a one-size-fits-all approach.

SECTION 07

Supply Chain



Resilience Improving, Visibility Gaps Remain

Finding

Supply chain resilience has improved compared to prior years:



Interpretation

Manufacturers have made measurable progress in stabilizing supply chains following recent global disruptions. However, these improvements are primarily the result of reactive measures rather than structural transformation.

How would you describe the state of your supply chain over the past year?



Among OT Leaders and Executive Stakeholders; Sample Size = 800

How prepared is your organization to address current supply chain issues?



Among OT Leaders and Executive Stakeholders; Sample Size = 800

Insight

Supply chains are more stable—but not yet more transparent.

Top Mitigation Strategies

Finding

Manufacturers are responding to supply chain challenges through:



Interpretation

These strategies reflect a combination of tactical adjustments and incremental modernization efforts aimed at improving resilience.

What strategies did your company implement to mitigate supply chain disruptions? Please select all that apply.



Among OT Leaders and Executive Stakeholders whose company faced supply chain challenges in the last year; Sample Size = 794

Insight

Many mitigation strategies improve short-term stability, but do not fully address underlying visibility and coordination challenges.

Top Ongoing Challenges

Finding

Despite improvements, key challenges persist:



Which of the following, if any, were supply chain challenges your company faced in the last year? Please select all that apply.



Among OT Leaders and Executive Stakeholders; Sample Size = 800

Top Ongoing Challenges

Interpretation

Operational complexity remains high, and visibility into supply chain activity is still limited across many organizations.

Insight

Visibility gaps continue to constrain decision-making, coordination, and responsiveness across supply networks.

Core Issue

The underlying constraint is a lack of:

- End-to-end visibility
- Real-time data access
- Coordinated systems across suppliers, production, and distribution

Strategic Insight

Confidence in supply chain resilience has improved, but without structural improvements in visibility and system integration, that resilience may not hold under future disruption.

SECTION 08

Why MES Matters Now

Execution Discipline in an Era of Volatility

Across reshoring, AI adoption, supply chain disruption, and labor shortages, one consistent theme emerges: operational complexity is increasing.

Manufacturers are investing in AI, predictive tools, and IIoT capabilities. But scale remains limited, and integration challenges persist. Structured execution systems are increasingly necessary to standardize processes, enforce quality, and ensure governed data flows across facilities.

As production networks expand and external pressures intensify, the execution layer becomes mission-critical. It connects strategy to the shop floor, ensures traceability, supports compliance, and provides the structured data foundation required for advanced analytics and AI.

At the same time, as digital adoption increases, so does system complexity and exposure to risk. Internal threats, AI-related risks, and governance gaps are emerging as critical concerns, reinforcing the need for disciplined, controlled operational environments.

In an environment where cost pressure, cybersecurity risk, and operational complexity intersect, execution systems are no longer optional infrastructure. They are foundational to resilience.

As volatility intensifies, execution-layer systems are evolving from operational support tools into enterprise control infrastructure. Their role now extends beyond coordination—they anchor governance, enforce process discipline, and enable scalable intelligence.

Strategic Insight: The AI Adoption Gap

Observation

- AI is widely adopted across manufacturing organizations.
- However, enterprise-scale deployment remains limited.

Root Causes

- Fragmented systems
- Inconsistent and ungoverned data
- Integration complexity
- Workforce capability constraints

Insight

The industry is not struggling to adopt AI —it is struggling to operationalize it.

Implication

AI will not deliver transformational value without a strong execution foundation, including integrated systems, governed data, and workforce readiness.



SECTION 09

The Bottom Line

Implications for Manufacturing Leaders

Strategic Insight

Manufacturing is entering a phase where execution maturity—not technology adoption—determines competitive advantage.

Priorities for Leaders

01.

Strengthen the Execution Layer

Focus on MES/MOM and operational systems that connect strategy to execution.

02.

Build a Data Foundation

Standardize, contextualize, and govern data across operations.

03.

Prioritize Integration

Connect systems across ERP, MES, automation, and analytics environments.

04.

Invest in Workforce Capability

Upskilling is essential to enable adoption and scale.

05.

Scale, Don't Just Pilot

Shift from experimentation to repeatable, enterprise-wide deployment.

Implications for Manufacturing Leaders

Conclusion

Manufacturers are not operating in a stable environment. They are navigating structural volatility defined by geopolitical shifts, reshoring acceleration, cost pressure, labor constraints, and rapid AI adoption.

Adoption rates for advanced technologies are high, but scaled execution remains limited. Integration complexity, governance concerns, and workforce skill gaps continue to constrain impact.

Resilience sentiment has improved compared to 2024, yet visibility gaps and operational complexity remain top challenges.

The data indicates that manufacturing is entering a phase where system integration, governance, and workforce enablement will determine competitive positioning. Adoption alone is no longer a sufficient signal of maturity.

Organizations that align AI ambition with disciplined execution architecture and operational visibility will be better positioned to manage cost volatility, geopolitical shifts, and workforce constraints.



Final Takeaway

Manufacturing is entering a new phase of digital transformation. The key differentiator will not be who adopts technology first—but who successfully integrates, governs, and operationalizes it across operations. In 2026, resilience and competitive advantage will be defined not by the number of technologies deployed, but by the discipline with which they are executed.



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