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The Blueprint for AI Leadership in **Life Sciences and Healthcare**

It's personal, not just technical



A global research report | 2026

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Who’s really winning the AI race?

In life sciences and healthcare, the organizations beginning to pull ahead with AI are not necessarily those launching the most pilots or adopting the newest models. They are the ones embedding AI into regulated, data-intensive and operationally complex environments where the industry’s most important work happens, including:

- Accelerating drug discovery, clinical development and regulatory submissions in biopharma
- Enabling AI-driven diagnostics, real-world evidence and device performance intelligence in medtech
- Transforming claims adjudication, utilization management and member engagement for payers
- Redesigning care coordination, clinical documentation and population health management for providers

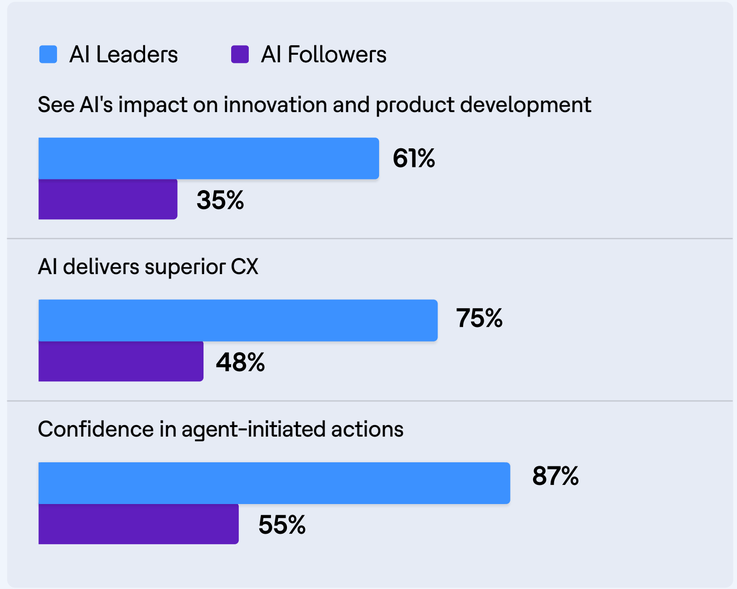
Across the sector, GenAI is moving beyond experimentation and becoming increasingly integrated into enterprise workflows, operational systems and knowledge environments. As adoption matures, organizations are seeing measurable gains in efficiency, responsiveness and access to insight. The bigger question is whether these gains can translate into durable enterprise advantage.

The divide is no longer defined by access to technology alone. Increasingly, it reflects differences in organizational readiness, leadership alignment and the ability to operationalize AI at scale. In a sector where innovation must coexist with patient safety, regulatory oversight and trust, the organizations pulling ahead are not simply deploying more AI but are redesigning how work is executed, decisions are made and intelligence flows across the enterprise.

Key trends shaping the divide include:

01 More than half (51%) of organizations continue to measure AI ROI primarily through efficiency gains or cost savings, while only 37% identify innovation and product development as AI’s biggest impact area.

02 Organizations pulling ahead are increasingly embedding AI directly into enterprise workflows rather than layering it onto existing systems.



Many organizations still approach AI primarily through the lens of automation and productivity. While operational improvements remain important, they represent only part of AI’s long-term value. The organizations generating stronger outcomes are using AI not simply to optimize existing processes, but to redesign how work is executed, decisions are made and intelligence flows across clinical, operational, research and enterprise environments.

AI Leaders, who represent 18% of the sample, are maximizing ROI not simply by using AI to reduce costs, but by applying it to drive growth, innovation and improved customer experience.

AI Followers, by contrast, represent 60% of the sample. While they are realizing returns from AI investments across business functions, they significantly trail Leaders in the higher-value use cases that are reshaping operating models and competitive advantage.



AI Leaders are nearly twice as likely to identify innovation and product development as AI's biggest area of impact (61%) compared with AI Followers (35%), reinforcing the growing divide between organizations using AI to optimize existing processes and those using it to drive broader business transformation.

In highly regulated sectors such as life sciences and healthcare, this shift carries additional complexity. AI transformation must evolve alongside patient safety obligations, regulatory oversight, data privacy expectations and growing demands for governance, trust and accountability. As AI adoption deepens, competitive advantage is increasingly shaped by structural readiness rather than technology access alone.

At the same time, several persistent barriers continue to constrain enterprise-wide adoption. Legacy infrastructure, fragmented data environments, complex integration and technical debt remain major obstacles across the industry.

- In biopharma, fragmentation spans pre-clinical, clinical, regulatory and commercial data estates ,where the majority of research teams still rely on spreadsheets for core data management.
- In MedTech, it surfaces as siloed device telemetry, disconnected post-market surveillance data and limited access to the real-world clinical datasets required for AI model validation.
- At payers, claims adjudication systems built before modern integration standards sit alongside AI point solutions operating with proprietary APIs. At providers, EHR platforms with limited interoperability constrain the ability to build unified views of patient, operational and financial data across the enterprise.

Organizational fragmentation further compounds these challenges where AI initiatives lack clear ownership, governance alignment or enterprise-wide coordination. Those generating stronger outcomes increasingly share several defining characteristics:

01

Modernized data foundations and stronger governance models

02

Leadership alignment that connects AI initiatives to broader business priorities

03

Organizational cultures that encourage workforce adaptability and continuous learning

04

Enterprise architectures capable of scaling AI across connected workflows and decision-making environments

As Agentic AI adoption accelerates, the distinction between Leaders and Followers will become more pronounced. Traditional measures of AI success focused on usage, productivity gains or isolated process improvements are becoming insufficient. The more meaningful question is whether AI helps LSH organizations operate differently, through more connected workflows, faster decision-making, stronger governance and more resilient patient, member, research and operational experiences.

In life sciences and healthcare, the organizations most likely to pull ahead will be those that combine AI innovation with operational trust, regulatory discipline and enterprise-wide modernization. As the industry moves beyond pilots and isolated use cases, competitive advantage will depend less on how much AI organizations deploy and more on how effectively they redesign the enterprise around it.

Leading from the front

Defining value before scaling AI

While most organizations are exploring AI adoption, one of the clearest points of divergence lies in how they define and pursue value. AI Leaders anchor initiatives around clear business and operational outcomes, using these priorities to guide investment, governance and execution. Nearly two-thirds (64%) of AI Leaders prioritize AI adoption around measurable organizational value, compared to just 25% of AI Followers.

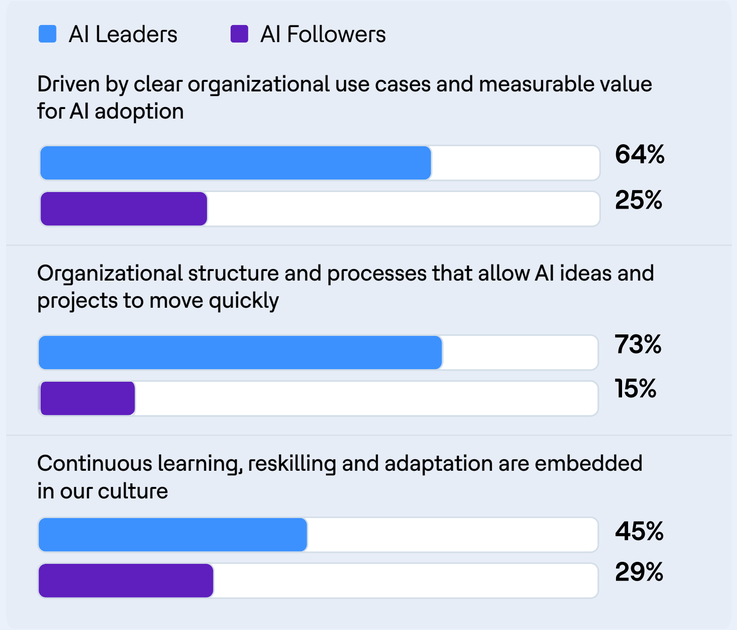
In life sciences and healthcare, this distinction is especially important as AI increasingly intersects with clinical, operational, research and commercial environments. Organizations generating stronger outcomes are linking AI adoption to patient and member engagement, workflow efficiency, research acceleration, care coordination and enterprise responsiveness rather than treating AI as a technology initiative. This clarity of purpose is helping organizations scale AI more effectively and sustain momentum beyond isolated pilots.

Key characteristics separating AI Leaders from Followers include:

- Clearly defined business outcomes tied to AI investments
- Stronger cross-functional alignment between technology and business teams
- Governance models designed to support enterprise-wide scale rather than isolated experimentation

Leadership alignment as a scaling advantage

Leadership behavior is emerging as one of the strongest differentiators between AI Leaders and Followers. Organizations where senior leadership actively champions AI adoption tend to move faster, scale more confidently and create stronger alignment between AI initiatives and broader enterprise priorities. This leadership influence increasingly extends beyond technology functions alone. More than four-fifths (82%) of AI Leaders actively encourage experimentation with AI tools and new ways of working, compared to just 23% of AI Followers. AI Leaders are also significantly more likely to foster a continuous culture of learning and adaptation, with 45% saying leadership has successfully established such a culture compared to only 29% of AI Followers. Together, these patterns reinforce how leadership alignment is shaping not only AI adoption, but also broader organizational adaptability and workforce readiness.



For life sciences and healthcare organizations, visible executive sponsorship plays an especially important role in reducing organizational friction, accelerating decision-making and aligning operational, clinical, research, commercial and governance stakeholders early in the transformation process. In biopharma, this means aligning R&D, regulatory and commercial leadership around shared AI investment priorities where innovation timelines and regulatory accountability advance together.

In MedTech, it requires engineering, clinical affairs and regulatory teams to align from the earliest stages of AI-enabled product development, where FDA clearance strategy shapes technical and commercial viability. At payers, operations, medical management and technology leaders must align around AI-assisted utilization management decisions with regulatory and member experience implications. At providers, executive sponsorship is essential to close the gap between IT-led AI strategy and clinician adoption at the bedside. Rather than treating AI as a standalone innovation agenda, leading organizations are embedding it within broader enterprise transformation strategies.

Bridging the readiness gap

Despite growing confidence in AI's transformative potential, structural readiness remains uneven. Legacy applications, fragmented workflows and tightly coupled systems continue to constrain enterprise-wide adoption, particularly where operational continuity, compliance and data integrity are critical.

The challenge becomes more pronounced as organizations move toward autonomous AI. Only 16% say they are fully prepared for autonomous AI agents performing tasks independently, while just 17% express high confidence in agent-initiated actions. By contrast, confidence among AI Leaders reaches 87%, reflecting stronger governance, operational oversight and enterprise readiness.

Organizations making the strongest progress are also investing in the cultural conditions needed for Responsible AI adoption. Rather than positioning AI as a replacement for human expertise, they are framing it as a co-pilot that augments decision-making, improves collaboration and strengthens operational resilience.

The human edge

Confidence alone is not readiness

Organizations increasingly recognize that AI transformation is ultimately a workforce transformation. In life sciences and healthcare, where operational continuity, clinical judgment, scientific expertise and regulatory accountability remain critical, employees' ability to work effectively alongside AI systems is becoming a defining factor in long-term success.

Yet confidence does not always translate into preparedness. While workforce enablement is widely acknowledged as important, relatively few organizations have embedded AI learning, role redesign and continuous adaptation into enterprise-wide operating models. Nearly 73% of AI Leaders have organization-wide retraining and upskilling strategies in place, compared to just 23% of AI Followers.

AI Leaders also demonstrate significantly higher preparedness to manage continuous organizational change driven by AI, with 64% saying they are equipped to navigate ongoing transformation compared to only 13% of AI Followers. This widening gap highlights how workforce readiness increasingly depends not only on training initiatives, but also on organizational adaptability and long-term change management capabilities.

Key workforce challenges include:

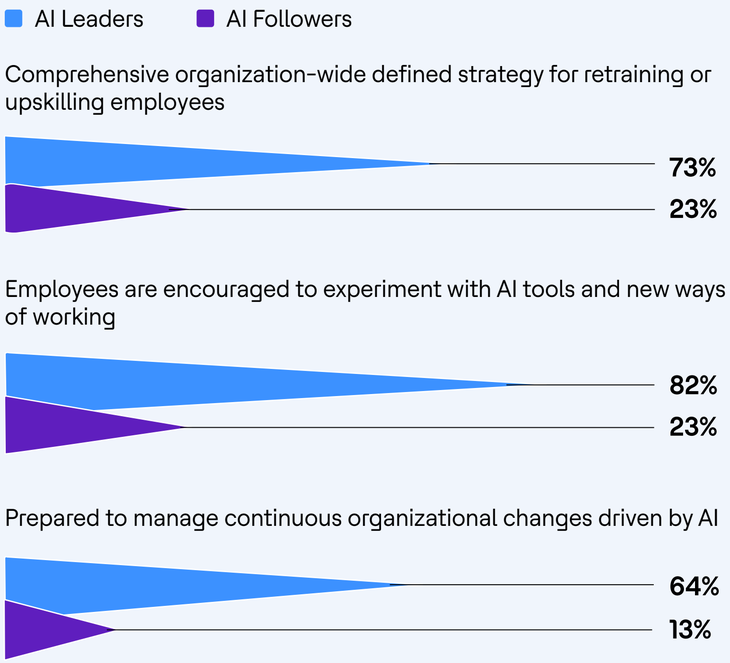
01
Limited integration between AI learning programs and day-to-day workflows

02
Inconsistent approaches to role redesign and workforce planning

03
Gaps in governance training and AI oversight capabilities

04
Misalignment between performance systems and AI-enabled ways of working

This increasingly separates organizations treating workforce transformation as a strategic capability from those approaching AI training as a periodic learning initiative.



Redesigning work around AI

AI Leaders are approaching workforce transformation differently. Rather than layering AI onto existing processes, they are redesigning workflows, responsibilities and decision-making structures around AI-augmented operating models. In the industry, this shift is becoming particularly visible across documentation, research acceleration, care coordination and operational decision-making. In biopharma, this means scientists, clinical operations professionals and regulatory affairs teams working alongside AI to accelerate research workflows, protocol design and submission preparation, where role redesign is as important as the technology.

In MedTech, the shift is visible in how engineers, clinical specialists and field service teams are adapting to AI-enhanced diagnostics, device performance monitoring and evidence generation.

At payers,claims adjusters, utilization management staff and care management nurses are increasingly working alongside AI decision tools–requiring clear frameworks for human oversight, escalation and accountability.

At providers, clinicians, care coordinators and revenue cycle teams are at the frontier of this transition, where workforce confidence in AI tools directly determines whether adoption moves beyond documentation into clinical decision-making.

Organizations making the strongest progress tend to share several characteristics:

- Learning embedded directly into operational workflows
- Greater experimentation and cross-functional collaboration
- Roles redesigned around human oversight and orchestration
- Incentives aligned with AI-enabled ways of working

This reflects a broader shift in how organizations define AI literacy. The challenge is no longer limited to technical training or tool adoption. Increasingly, organizations must define how each role evolves within an AI-enabled environment and build workforce strategies around that future state. Where organizations fail to redesign work intentionally, AI initiatives often remain fragmented, leaving employees uncertain about how AI changes responsibilities, decision-making and long-term career pathways.

Moving beyond the resistance narrative

Many organizations continue to frame workforce challenges primarily through the lens of employee resistance. Yet the larger barrier is often the absence of structured capability development, operational clarity and organizational support systems.

Employees are generally more willing to engage with AI when they understand how it improves workflows, complements expertise and supports better outcomes. In highly specialized environments such as healthcare and life sciences, trust becomes particularly important because clinicians, scientists, operations teams and business users need clarity on where AI supports judgment and where human accountability remains essential.

Organizations that build workforce confidence most effectively:

01 Position AI as a co-pilot rather than a replacement for human expertise

02 Establish clear frameworks for oversight and escalation

03 Improve communication between technical, operational and business teams

04 Increase transparency into how AI systems generate outputs

As AI adoption expands into more autonomous environments, workforce confidence will increasingly determine whether organizations can scale beyond low-risk or assistive use cases.

Preparing for the autonomous era

The rise of more autonomous AI systems is reshaping how organizations think about workforce capability, accountability and operational control. Governance, contextual judgment and operational oversight will become increasingly important as employees work alongside systems capable of acting more independently across workflows and operational processes.

Organizations preparing most effectively for autonomous AI environments are increasingly focused on:

01
Governance and human oversight frameworks

02
Building workforce confidence around agent-initiated actions

03
Embedding accountability into AI-driven decision-making

04
Redesigning operational processes around human-AI collaboration

Confidence in these environments remains sharply divided. In highly regulated industries such as life sciences and healthcare, maintaining human accountability alongside autonomous systems will become a critical source of organizational resilience. The organizations most likely to sustain long-term advantage will be those that treat workforce transformation as inseparable from AI transformation itself.



Fix your data reality

From AI ambition to data reality

Enterprise AI ambitions are increasingly colliding with a more fundamental reality: fragmented and underprepared data environments. Once AI initiatives expand beyond pilots and isolated use cases, gaps in data quality, accessibility and governance become significantly harder to ignore. AI systems are only as effective as the environments supporting them, yet many organizations continue to operate within fragmented ecosystems shaped by siloed ownership models, disconnected infrastructure and inconsistent governance practices.

In life sciences and healthcare, this challenge becomes even more complex because clinical, operational, research, regulatory and commercial environments are often fragmented and governed by strict privacy, safety and compliance requirements.In biopharma, this fragmentation spans the drug development lifecycle, as disconnected data estates across pre-clinical, clinical, regulatory and commercial functions are compounded by the persistent reliance on spreadsheets and non-integrated research platforms.

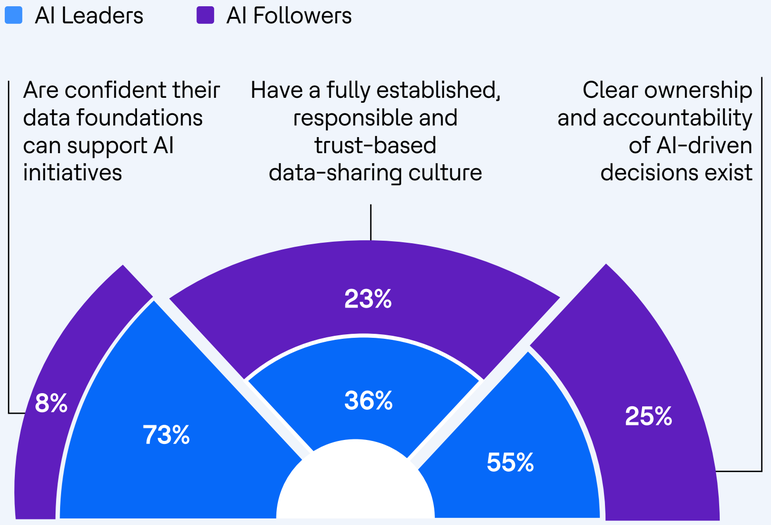
In MedTech, the barriers are heightened by regulatory constraints: privacy laws significantly limit access to real-world clinical datasets required to train, validate and monitor AI-enabled devices, while post-market surveillance data remains largely isolated.

At payers, decades-old claims systems and proprietary AI point solutions create fragmented workflows and inconsistent data definitions across the organization.

At providers, EHR platforms with limited native interoperability continue to constrain the ability to unify clinical, operational and member data at the enterprise level.

While organizations increasingly recognize AI's strategic importance, many remain underprepared to support it with the interoperability, consistency, lineage and governance required to scale effectively. This growing divide is becoming increasingly visible between AI Leaders and Followers. While 73% of AI Leaders express confidence in their data foundations, only 8% of AI Followers report the same level of readiness.

As AI adoption matures, organizations are discovering that AI often acts less as a solution to operational inefficiencies and more as a magnifier of them. Fragmented data environments, inconsistent definitions and poor visibility across systems become increasingly exposed as AI expands across workflows and decision-making processes. Increasingly, the organizations generating stronger outcomes are not necessarily those with access to better tools, but those that have invested earlier and more systematically in data modernization, governance and enterprise-wide accessibility.





What distinguishes AI Leaders

AI Leaders are differentiating themselves through a more disciplined and strategic approach to data management. Rather than treating data as a byproduct of operations or a departmental asset, they increasingly manage it as a foundational enterprise capability with clear ownership, governance standards and lifecycle accountability. More than half of AI Leaders (55%) have established clear ownership and accountability for AI-driven decisions, compared to only 25% of AI Followers.

This maturity extends beyond infrastructure alone. Leading organizations are investing in capabilities that improve visibility into how data is created, accessed and used across the enterprise, strengthening consistency, explainability and operational trust. Equally important is the cultural dimension of data readiness. Organizations making the strongest progress tend to foster environments where data can move more effectively across teams, functions and operational domains.

This distinction is particularly visible in enterprise-wide data-sharing practices. More mature organizations are significantly more likely to establish trust-based data-sharing cultures, with 36% of AI Leaders reporting fully established practices compared to 23% of AI Followers. In highly regulated industries, this trust becomes especially important because governance is closely tied to operational resilience, regulatory accountability and confidence in AI-driven outcomes.

As organizations attempt to scale AI across increasingly complex workflows, the ability to connect trusted data across clinical, operational, research, regulatory and customer-facing environments is becoming essential to generating sustained enterprise-wide value.

Governance as an enabler of scaling AI

As AI adoption accelerates, governance is becoming increasingly central to long-term success. Yet governance is no longer simply about compliance or risk mitigation. Increasingly, it is becoming an enabling capability that allows organizations to scale AI responsibly, transparently and with greater operational confidence.

Organizations leading in AI maturity are embedding governance directly into their data and AI strategies through stronger oversight models, clearer accountability structures and continuous monitoring capabilities. In sectors such as life sciences and healthcare, where trust, explainability, patient safety and regulatory confidence remain critical, governance also plays an important role in sustaining confidence among regulators, employees and end users.

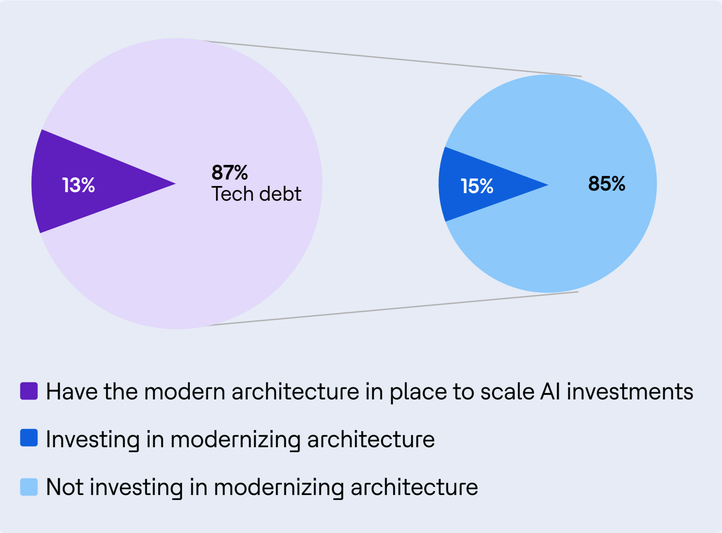
At the same time, many organizations continue to treat data readiness as a one-time modernization initiative rather than an ongoing organizational capability. In reality, long-term AI readiness requires continuous refinement across infrastructure, governance and culture simultaneously. Organizations that succeed with AI at scale will increasingly be those that treat data not simply as a prerequisite for AI, but as the foundation on which enterprise intelligence continuously evolves.



Modernize to scale

Organizations are moving beyond experimentation and isolated deployments and architecture is emerging as one of the defining constraints on enterprise-scale AI adoption. Strong data foundations remain essential, but they are no longer sufficient on their own.

This architectural gap is becoming increasingly difficult to ignore. Leading organizations believe they currently have the foundations required to scale AI effectively across the enterprise. The remaining organizations continue to struggle with technical debt, fragmented infrastructure and legacy environments that were never designed to support modern AI workloads.



In life sciences and healthcare, these constraints are particularly visible across clinical systems, operational platforms, research environments and enterprise applications that were not built to support the speed, scale and orchestration requirements of modern AI. In biopharma, legacy R&D, regulatory and manufacturing platforms constrain data movement and integration across the development lifecycle, slowing the pipeline from molecule to market. In MedTech, the modernization challenge now extends to ongoing real-world performance monitoring: the FDA expects AI-enabled devices to be tracked and validated through the full product lifecycle, not just at clearance.

At payers, claims adjudication systems built decades before cloud native architecture require careful, non-disruptive modernization, where the risk of operational disruption compounds the complexity of transformation. At providers, deeply entrenched EHR and revenue cycle systems must be modernized around rather than replaced outright, requiring progressive interoperability investment alongside clinical continuity.

Several structural capabilities increasingly distinguish organizations making stronger progress:

- Composable and interoperable architectures that allow systems, applications and workflows to connect more seamlessly across the enterprise
- Integrated operational and data environments that reduce fragmentation and enable intelligence to move fluidly across functions
- Modernization initiatives aligned directly to business outcomes such as resilience, responsiveness and AI-driven decision-making
- Governance, security and compliance capabilities embedded directly into enterprise architecture

The challenge is compounded by the fact that many legacy systems remain deeply embedded within critical operations. Organizations must modernize while simultaneously maintaining operational continuity, regulatory compliance and system reliability. This creates a difficult balancing act between sustaining current operations and building the flexibility required for long-term AI transformation.

Organizations making the strongest progress are approaching modernization as an enterprise-wide transformation initiative rather than a standalone technology upgrade. Instead of rebuilding entire technology estates, they are prioritizing the modernization of critical constraints, improving interoperability between systems and creating more flexible architectural foundations that allow AI capabilities to scale progressively across the enterprise. This approach reduces transformation risk while enabling organizations to improve connectivity, accelerate data movement and support increasingly complex AI workloads.

As AI systems become more deeply embedded across enterprise environments, the relationship between architecture and organizational agility becomes increasingly important. Fragmented environments slow integration and limit interoperability, while modernized architecture creates the flexibility required to scale AI more confidently and adapt more effectively to changing operational demands.

Ultimately, the next phase of AI transformation will depend less on access to models and more on the ability to modernize systems, workflows and governance structures in parallel. Organizations that can combine architectural modernization with trusted data, workforce adaptability and leadership alignment will be significantly better positioned to translate AI investment into sustained enterprise-wide value.

Conclusion

AI adoption is no longer the primary differentiator in enterprise transformation. Increasingly, the organizations pulling ahead are those capable of embedding AI into the core of how the enterprise operates, makes decisions and adapts to change. In life sciences and healthcare, this requires far more than isolated innovation initiatives or incremental automation gains.

Across leadership, workforce readiness, data modernization and enterprise architecture, AI Leaders are demonstrating that sustained value comes from structural preparedness and enterprise-wide alignment. These organizations are connecting AI initiatives to measurable business outcomes, strengthening governance frameworks and redesigning workflows around more connected, intelligence-driven operating models.

As Agentic AI and autonomous systems become more deeply embedded across enterprise environments, the ability to balance innovation with trust, accountability and operational resilience will become increasingly important. Organizations that can modernize systems, enable human-AI collaboration and operationalize AI responsibly at scale will be best positioned to convert AI investment into long-term competitive advantage.

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