Persistent

From Legacy Drag to AI Advantage

How modern enterprises can use AI to accelerate transformation and build the foundation to scale AI with confidence

The real question for enterprise leaders is not whether AI matters, but whether their business is structurally ready to convert AI enthusiasm into scaled economic value. Nearly nine in ten organizations report regular AI use, yet nearly two-thirds have not begun scaling AI across the enterprise, and only 39% report EBIT impact at the enterprise level.

The pattern is evident, AI adoption is widespread, but enterprise value creation remains uneven because the underlying operating model, application estate, data architecture, and governance are not ready. AI is not failing because of models.

It is failing because of the foundation beneath them. The uncomfortable truth is that AI does not compensate for technical debt, fragmented data, legacy architectures, and disconnected workflows.

The AI Readiness Gap Nobody Is Talking About

Across industries, executives are discovering the same challenge. Their organizations have invested in copilots, agents, predictive analytics, and generative AI. Yet critical enterprise data remains siloed. Core systems were designed decades ago. Business processes depend on manual interventions. Security, governance, and integration architecture were built for a different era.

As McKinsey notes, as much as 70% of the software used by Fortune 500 companies was developed more than 20 years ago. These legacy environments are increasingly becoming the single biggest barrier to scaling AI.

The result is predictable:

AI can generate insights but cannot execute decisions.

AI can detect issues but cannot automate resolution.

AI can create content but cannot access trusted enterprise knowledge.

AI can improve individual productivity but struggles to transform business performance.

The problem is not AI adoption. The problem is enterprise readiness.

Every Industry Faces the Same Reality

Telecom: AI Needs a Modern Network

For telecom operators, AI is unlocking transformative value, but success depends on a modern, cloud-ready, software-defined, and secure network foundation. With operators accelerating investments in cloud and AI while facing rising security risks, modernization has become a business imperative — not an IT priority. Future AI opportunity will be captured by telcos that modernize with discipline, turning network resilience into a platform for AI-led growth. The key lesson is that AI can optimize a network, but only a modern network can fully exploit AI.

Media: Content Monetization Requires Data Intelligence

In media and entertainment, AI is reshaping value chain, but sustained value depends on modernizing the core systems that power content, advertising, and audience engagement. As revenue growth accelerates and AI becomes embedded across the value chain, legacy platforms risk becoming the biggest barrier to innovation and agility. The winners will be those who connect AI to a modern digital backbone — turning content, customer data, and ad operations into a scalable growth engine. The key lesson is that the winners will not be those with the most AI tools but the ones with a modern foundation of connected data ecosystems.

Manufacturing: AI Without Integration Is Just Another Pilot

Manufacturers have spent years experimenting with Industry 4.0 initiatives. The companies creating measurable value are not necessarily deploying more AI — they are modernizing operational technology, data platforms and engineering ecosystems. Smart manufacturing leaders are already achieving improvements in productivity, production output and capacity through integrated digital operations. The key lesson is that AI succeeds when connected to a modern digital thread foundation, from engineering to factory floor to service operations.

What Needs to Be Done Differently

The biggest mistake enterprises make is treating AI as a layer and modernization as a backlog. That sequencing is flawed. The organizations that will win are those that modernize with AI in mind, not modernize first and "add AI later." They redesign architecture, data, workflows, security and operating models specifically to support intelligent, composable, continuously improving business processes.

1	**Start with business value, not technology.**	Focus on the outcomes that matter most — growth, margin, resilience, speed, and experience. Prioritize the domains where modernization removes AI bottlenecks and unlocks measurable business impact. This value-first approach is what separates scaled AI leaders from organizations stuck in perpetual pilots.
2	**Modernize the data foundation before scaling AI.**	AI outcomes depend on trusted, accessible and well-governed data, not just better models. Build an AI-ready data fabric with governed domains, reusable integrations, and strong ownership to overcome the biggest barriers to enterprise-scale AI.
3	**Simplify and harmonize the application estate.**	AI scales fast on modular, API-enabled and event-driven platforms — not legacy monoliths. Focus modernization on increasing reuse, accelerating change and creating secure pathways for AI to interact with core business processes.
4	**Redesign workflows, not just tools.**	AI delivers value when organizations rethink decisions, handoffs, and human-machine interactions — not simply add copilots to existing processes. The biggest gains come from reengineering end-to-end workflows, operating models, and ways of working.
5	**Institutionalize governance from the start.**	AI readiness depends as much on trust as technology. Embed security, privacy, compliance, resilience, and model governance into the modernization blueprint to enable AI adoption at scale with confidence.

Organizations that combine these capabilities create a compounding advantage, every modernization investment improves AI effectiveness, and every AI investment accelerates modernization.

Modernization Through the Lens of Persistent

For years, enterprises viewed modernization as a technology imperative, a way to reduce costs, retire technical debt, and improve operational efficiency. That mindset is now obsolete. The organizations pulling ahead in the AI era are not asking, “How do we modernize our applications?” They are asking a far more strategic question, “What must change to make AI a scalable business capability?”

The New Modernization Playbook

The traditional transformation journey was linear, Modernize → Stabilize → Innovate

The AI-era playbook is fundamentally different, Modernize for AI → Scale AI → Reinvent the Business

Modernization is no longer about building a better technology estate. It is about creating an enterprise that can continuously learn, adapt, automate and innovate where AI becomes embedded into products, operations, decisions and customer experiences.

The Modernization Flywheel

Many organizations still treat modernization and AI as separate initiatives. They modernize first and hope to realize AI value later. We believe that old school thoughts are not relevant anymore. In today’s context, AI is helping accelerate modernization, while modernization is creating the foundation to scale AI. To put that to perspective, AI can analyze legacy code, automate testing, accelerate migration, improve documentation and reduce transformation effort. At the same time, modern architectures, trusted data and cloud-native platforms provide the foundation AI needs to operate on a scale.

The result is a powerful flywheel

Use AI to Modernize Faster → Modernize to Scale AI Better. Organizations that combine both create a compounding advantage over others.

Two Sides of the Same Transformation

AI for Engineering

The first opportunity is using AI to accelerate engineering itself

Large enterprises remain constrained by decades of technical debt, complex application portfolios and aging infrastructure. AI can dramatically simplify software engineering, infrastructure modernization, testing, migration, operations and product development.

Our continued focus and investments on AI and platform led software lifecycle platform (SASVA™) is key to compressing modernization cycles to build AI ready foundations for enterprise.

Engineering for AI

But the bigger challenge is often the second one.

Many enterprises successfully launch AI pilots yet fail to scale them because their foundations were never designed for AI. Data is fragmented. Applications are disconnected. Infrastructure is outdated. Governance is weak. Engineering for AI is the modernization of applications, data, infrastructure, security and workflows to support AI at enterprise scale. Our solutions assets and accelerators for enterprise data readiness (iAURA) ensures that organizations have the right data foundation from Day 1 of their AI transformation journey.

Our 3C Framework (Core, Context and Co-ordination) is designed for Purpose Built Enterprise AI solutions that addresses the widening value gap across AI pilots and production grade solutions. It helps enterprise with a systemic approach to engineer AI solutions grounds up at scale by ensuring the right foundations are in place across enterprise readiness, awareness and operational aspects.

Core is the enterprise backbone and foundation for **AI readiness.**	Context is the engine for enterprise intelligence that makes **AI enterprise aware.**	Coordination is the human-machine orchestrated experience that makes **AI operational.**

As a trusted partner in their enterprise modernization journey, we have been working with customers to help them embrace AI to modernize today (AI for Engineering) in ways that enable AI for tomorrow (Engineering for AI).

About the Customer	Transformation Highlights
Customer is a global leader in network equipment and software	Reimagined customer's fragmented IoT operations into a centralized lifecycle platform, modernizing their legacy core, unifying onboarding, monitoring, billing, analytics and security into a single unified architecture. On top of this modernized core, AI-led observability and AIOps enabled anomaly detection across telemetry and billing pipelines, together with AI-infused SRE driving faster turnaround, rapid onboarding and overall TCO optimization.
Customer is a leading provider of media and ad analytics	Modernized its legacy platform into a cloud-native, real-time data ecosystem, integrating diverse data sources (TV, routers, census). AI-powered analytics enabled real-time anomaly detection, cross-platform measurement and intelligent insights, significantly improving data accuracy and advertiser decision-making while enabling AI-driven audience intelligence.
Customer is a global leader in energy technology	Unified OT/IT security data systems into an integrated cybersecurity platform, transforming fragmented logs and alerts into a single ecosystem. A GenAI powered Security Copilot enabled natural language interaction and AI-driven threat analysis, leading to faster incident detection, reduced MTTD/MTTR and improved analyst productivity.
Customer is a leading global supplier of advanced materials and process solutions	Built a unified and connected enterprise data platform across R&D, manufacturing and operations. AI extended this with agentic intelligence, BOM extraction and GraphRAG based traceability, accelerating engineering productivity, decision speed, and lifecycle insights.
Customer is a leading engineering and construction company	Modernized legacy planning systems into a cloud-based, unified platform powered by microservices and data pipelines. Agentic AI introduced risk analysis and automated schedule insights, enabling 40% faster decision-making and improved accuracy in project delivery timelines, reducing cost overruns.

The Winning Formula

AI for Engineering accelerates modernization. Engineering for AI enables transformation. Together they create an AI-ready enterprise. The future belongs to enterprises that use AI to modernize today and modernize in ways that enable AI for tomorrow's opportunities.

Explore AI-Led Industrial Innovation.

Learn More

About Persistent

Persistent Systems (BSE: 533179 and NSE: PERSISTENT) is a global services and solutions company delivering AI-led, platform-driven Digital Engineering and Enterprise Modernization to businesses across industries. With over 27,500 employees located in 21 countries, the Company is committed to innovation and client success. Persistent offers a comprehensive suite of services, including software engineering, product development, data and analytics, CX transformation, cloud computing and intelligent automation. The Company is part of the MSCI India Index and is included in key indices of the National Stock Exchange of India, including the Nifty Midcap 50, Nifty IT and Nifty MidCap Liquid 15, as well as several on the BSE such as the S&P BSE 100 and S&P BSE SENSEX Next 50. Persistent is also a constituent of the Dow Jones Best-in-Class World Index. The Company has achieved carbon neutrality, reinforcing its commitment to sustainability and responsible business practices. Persistent has also been named one of America's Greatest Workplaces for Inclusion & Diversity 2025 by Newsweek and Plant A Insights Group. As a participant of the United Nations Global Compact, the Company is committed to aligning strategies and operations with universal principles on human rights, labor, environment and anti-corruption, as well as take actions that advance societal goals. With 468% growth in brand value since 2020, Persistent is the fastest-growing IT services brand in 'Brand Finance India 100' 2025 Report.

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