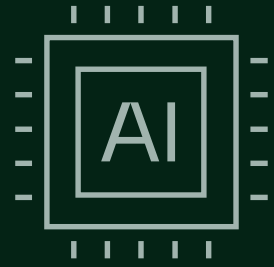


Healthcare systems modernization with Agentic AI



Healthcare

Business challenge and opportunity

Healthcare's enduring mission to provide higher-quality services to more patients at lower cost is under assault by a new, modern-day operating challenges:

- Decreases in funding
- Difficulties finding and retaining qualified staff
- The evolving healthcare needs of aging populations
- Unwieldy, hard-to-support IT systems and healthcare applications

Advanced technology can help address these challenges—and, the pressure to apply it now is mounting. Case in point: by 2030, the shortage of healthcare workers worldwide is expected to reach 11 million,¹ driving urgency for automation and smarter workflows.

As a result, leading healthcare organizations have leaned into digitalization to streamline workflows and enable clinical teams to provide effective care with limited resources. However, progress at pace is often stalled by the volume and diversity of digital systems, such as Electronic Health Records (EHR), inherited through corporate mergers and acquisitions.

Consolidating these diverse systems is complex, risky, costly and time-consuming — so organizations often continue to run them side by side. This makes IT management and support harder, increases technical debt, and drains resources from critical modernization initiatives.

By integrating Agentic AI workflows alongside human-led workflows, healthcare leaders can modernize operations and improve the way technology supports clinical staff, helping them focus less on systems and more on patient care.

Technical challenges

Before adopting AI agents, healthcare organizations must ensure their systems are prepared for effective deployment. Common challenges include:

- Diverse and poorly integrated application landscapes with unclear data governance models and security policies can require time-consuming manual processes, impacting employee productivity and the delivery of services.
- Government regulations requiring strict guardrails around AI use to help protect patient data safety.
- Potential for loss of data and unplanned downtime during transformation projects can affect the level of medical care.
- Lack of AI skills in the workforce creates skepticism and organizational pushback against adopting AI agents.
- Lack of documentation of existing systems, workflows and business processes can slow the training of AI agents and knowledge transfer.



Our solution

Kyndryl helps healthcare leaders overcome challenges and drive progress quickly by applying our deep domain expertise and the Kyndryl Agentic AI Framework to:

- **Assess AI readiness** and design an actionable roadmap to deployment that builds stakeholder trust with human-in-the-loop workflows.
- **Train and deploy secure-by-design AI agents** to automate common IT helpdesk tasks, improving support while freeing up staff to focus on more complex issues like EHR integration.
- **Support business continuity** by deploying AI Site Reliability Engineers to query application status and recommend the best course of action to human engineers in the event of system downtime.
- **Create application knowledge bases** using voice agents to record interviews of human stakeholders and ingest the content into existing documentation capturing knowledge to provide training for new hires.
- **Support regulatory compliance** through policy-as-code guardrails using the organization's predefined policies and rules, traceable agent actions, and automated policy adjustment based on evolving regulations.
- **Identify future modernization opportunities** by using AI agents to analyze applications, determine functional and non-functional requirements, and create user scenarios backed by costed business cases.



Benefits you could achieve

Provide exceptional medical care and improve focus on innovation while reducing operational overhead. Kyndryl experts and the Kyndryl Agentic AI Framework can help to enable:

- **Significantly faster transition to AI-augmented IT support operations** through ingestion of documentation and voice interviews with human experts.
- **Lean, efficient IT operations** through the use of AI agents to manage day-to-day monitoring and support operations. This releases human staff to focus on service improvements and bigger-picture integration and modernization.
- **In-depth pattern analysis** of incoming support tickets, enabling the identification and resolution of common issues, helping maintain 24/7 availability of critical systems for patient care.
- **Business process transformation** using policy-as-code and dynamic orchestration of agents to accelerate complex, multi-stage processes such as staff onboarding, increasing productivity and freeing up staff to focus on patient care.

Why Kyndryl?

With decades of mission-critical operations experience, we bring deep expertise in designing, building, and managing AI across complex IT estates.

The **Kyndryl Agentic AI Framework** enables businesses to move beyond isolated pilots to integrated, intelligent systems. It combines secure, scalable agent orchestration with real-time observability and governance, powered by **Kyndryl Bridge**.

Through **Kyndryl Consult**, we align AI strategy with business outcomes. **Kyndryl Vital** provides proven user-centered design and rapid prototyping. And our trusted **delivery experts** ensure frictionless integration and help with reskilling and upskilling to build the foundation for success at scale.

We apply a forward engineering approach — using insights from existing systems to design and deploy future-ready AI agents and architectures that are adaptive, resilient, and scalable. Our method is grounded in open ecosystems, data sovereignty, and transparent decision-making.

And with one of the broadest **alliance ecosystems** in the industry—across cloud, data, and AI—we bring the right partners and technologies together to design fit for purpose solutions and orchestrate AI at scale without disrupting the business.

With Kyndryl, AI becomes a core capability—not just a tool—driving productivity, innovation, and growth.



Accelerate your journey to AI-native

Our AI Benchmark Assessment provides a maturity snapshot and personalized roadmap for accelerating the value of AI in your organization.

[Take the assessment](#) →

What's your enterprise vision for AI?
Let's co-create it together.

[Talk to an expert](#) →

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^{1,2,3} [State of Mainframe Modernization Survey Report, Kyndryl, 2025](#)