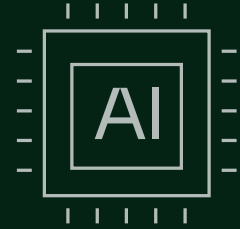


Mainframe modernization for insurance innovation

Insurance



Business challenge and opportunity

For insurance organizations, the mainframe remains a trusted foundation for core operations, valued for its security, reliability, performance and ability to support regulatory and compliance requirements. In fact, 73% of insurance organizations say the mainframe is very or extremely important to their strategy and operations¹, and 59% increased mainframe use in the last 12 months.¹

Now, insurers are looking to extend that foundation to support faster innovation, tighter integration with cloud and new AI-enabled use cases, from claims automation and fraud detection to customer insights. The opportunity is significant: over the next three years, insurance organizations project \$35 million in estimated revenue¹ from AI/gen AI initiatives and \$23 million in savings¹ from those initiatives.

Integration complexity, workforce challenges and the need for strong governance can slow AI integration progress. Agentic AI can help insurers modernize with greater speed, clarity and control, while preserving the mission-critical strengths of the mainframe.

Technical challenges

Modernizing mainframe environments for AI-enabled insurance operations requires a clear understanding of complex applications, data and dependencies. Common technical challenges include:

- **Limited application visibility** caused by decades of custom code and incomplete documentation can make it difficult to understand how core insurance processes operate across the environment.
- **Complex dependencies between applications, databases and shared services** can create challenges when determining which workloads can be modernized, integrated with cloud services or enhanced with AI capabilities.
- **Large volumes of business logic embedded in legacy code** require detailed analysis to identify opportunities for refactoring, optimization and modernization without impacting mission-critical operations.
- **Stringent regulatory, security and compliance requirements** require modernization teams to maintain clear governance, data protection controls and auditability throughout AI-assisted transformation initiatives.
- **The criticality of core systems** supporting underwriting, policy administration and claims operations demands a careful approach that minimizes disruption while accelerating modernization efforts.
- **Establishing trusted data foundations**, operational guardrails and sufficient application understanding is important before AI agents can effectively support modernization activities.

Our solution

Using the [Kyndryl Agentic AI Framework](#), Kyndryl helps insurance leaders:

- **Identify hidden mainframe assets and map applications rapidly**, using AI agents to uncover non-functional aspects and create an end-to-end view of business logic.
- **Establish an agent-first approach to IT modernization** that accelerates outcomes while improving quality and reducing risk.
- **Reveal hidden dependencies** between mainframe workloads and use this information to reduce the risk of disruption during modernization.
- **Plan and orchestrate** migrations or redesign applications for cloud-native environments, while eliminating obsolete code and assets.
- **Use [Agentic Modernization services-as-software](#)** to transform iteratively using proven [agentic workflows](#) industrialized through [Kyndryl Bridge](#), for faster execution and more predictable outcomes.
- **Maintain security** at the core of the transformation by embedding governance into every layer of the project, including the AI agents.
- **Embed policy-as-code capabilities** that automatically create AI guardrails from business rules, compliance requirements and operational [policies](#).
- **Replace labor-intensive transformation projects** with a scalable and resilient IT modernization capability that is less reliant on specialized mainframe talent.



Benefits you could achieve

Transform rapidly and confidently to meet the challenges of tomorrow. Mainframe modernization with Agentic AI has the potential to give insurance companies:

- **Rapid results:** AI agents complete mainframe assessment and code refactoring at speed and scale, cutting time-to-value for large-scale transformation.
- Holistic understanding:** With complete documentation created by AI agents, cross-functional teams can readily identify opportunities for innovation.
- Future-ready operations:** With modernization complete and Agentic AI workflows already embedded in the organization, insurers can rapidly explore new AI-driven use cases to support efficiency and productivity.

One Kyndryl insurance customer² already using the Kyndryl Agentic AI Framework has achieved:

3x decrease in experts required for mainframe assessment

2x faster mainframe assessment

15 month expected transformation versus traditional 3+ years

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** brings together the right governance and security controls and human oversight to enable 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 support 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 a carefully selected **alliance ecosystem**—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 [Kyndryl 2025 State of Mainframe Modernization Research Report, Insurance focus, Kyndryl](#)

² This document is current as of the initial date of publication and may be changed by Kyndryl at any time without notice. Not all offerings are available in every country in which Kyndryl operates. The performance data and client examples cited are presented for illustrative purposes only. Actual performance results may vary depending on specific configurations and operating conditions. Kyndryl products and services are warranted according to the terms and conditions of the agreements under which they are provided.