

AI-driven modernization with Kyndryl and AWS

Modernize with greater speed, confidence and business impact

kyndryl | aws

Contents

PAGE

03 Market reality

04 The modernization challenge

05 Accelerate with Kyndryl and AWS

06 Modernization made practical

07 Build trust into modernization

08 Proof in action

09 What comes next



AI ambition is colliding with enterprise reality

Every enterprise shares the same ambition: deliver real-time customer experiences, grow business faster and put AI to work across the business. Each of these goals depends on systems that were built for a different era. Legacy estates, fragmented data, integration complexity and technical debt are constraining the value of what's possible.

The challenge is no longer simply adopting AI—it is creating a technology foundation that can support new business models, modern customer expectations, and intelligent operations at scale.



Nearly

90%

of large enterprises report enterprise debt limiting growth, inflating costs or constraining AI value creation.[1]



33%

of enterprise data is considered AI-ready, while 53% is rated low quality.[2]



67%

of organizations cite legacy infrastructure as a barrier to realizing AI value.[3]



52%

of CIOs face pressure to reduce costs, and 57% face pressure to improve productivity.[4]



The modernization challenge

Why traditional modernization falls short

Most organizations know modernization is necessary. The challenge is deciding where to start, what to prioritize and where modernization will create the greatest business value.

Enterprise environments are complex, with critical business knowledge often embedded across applications, data and decades of processes. While assessments provide insights and migration tools help move workloads, they don't always answer the question of what should happen next.

Successful modernization requires more than understanding the current environment—it's also important to identify opportunities, prioritize investments and turn insight into action with confidence.

Where the friction shows up

Technical debt

Development teams spend about **42%** of their time dealing with existing technology debt.[1]

Data foundation

Data quality issues contributed to **42%** of AI and analytics initiatives being delayed, underperforming or failing.[2]

Integration

42% of leaders identify integration with existing systems as a major transformation obstacle.[3]

Cost + priority

94% of CIOs expect major changes to plans and priorities within the next 24 months.[4]



A joint AI modernization factory with Kyndryl and AWS

Kyndryl and AWS work together as a coordinated modernization factory. Kyndryl brings orchestration, enterprise context and the path into execution. Through the Kyndryl Agentic AI Framework (KAF), Kyndryl prioritizes what matters most for modernization, validates findings with experts and carries the work through delivery into operations. AWS Transform brings modernization intelligence and acceleration.

Together, Kyndryl and AWS turn modernization insight into business-prioritized action, accelerating transformation while managing risk.

Kyndryl Agentic AI Framework

Adds specialized technology intelligence and business context, prioritizes what matters and routes findings to experts for validation.

Joint modernization factory with Kyndryl and AWS Transform

Provides one coordinated approach across complex mainframe estates— from discovery through production readiness. Kyndryl carries validated requirements into forward engineering, production readiness and operations.

AWS Transform

Accelerates discovery of the estate, maps dependencies, extracts business rules and generates delivery-ready assets.

The result: broad estate coverage, rapid movement from assessment to execution, and a repeatable path from modernization insight to production readiness.



4 Modernization made practical

Turn estate insight into the right modernization action

Our coordinated modernization approach helps organizations move from understanding their complex IT estate to a prioritized, executable modernization path—without treating every workload the same.

A workload-appropriate approach keeps options open: modernize on the mainframe, integrate with AWS and the wider hybrid estate, or selectively move when the business case supports it—the right application, on the right platform, at the right pace.

Understand

Build a decision-ready view of the selected estate, including business functions, dependencies and operating context.

Prioritize

Choose what to modernize based on business value, complexity, risk and readiness—not a technology-first migration mandate.

Modernize + validate

Create delivery-ready requirements and modern assets, then validate that the target solution meets the intended business and technical outcomes.

Operate + reuse

Prepare the modernized service for production, then carry proven knowledge and patterns into subsequent modernization waves.



5 Build trust into modernization

AI speed needs enterprise-grade confidence

For mission-critical systems, speed only matters when the outcome is explainable, verifiable and ready to operate.

→ **Broad estate coverage**
Extend beyond standard COBOL patterns with specialized agents and intelligence for complex, heterogeneous mainframe environments.

→ **Expert validation and traceability**
Experts review extracted business rules and requirements at defined checkpoints before anything moves to build.

→ **Operational readiness**
Connect modernization to runbooks, support assets, observability, governance and hybrid coexistence so transformation is supportable from day one.

→ **Operational readiness**
Connect modernization to runbooks, support assets, observability, governance and hybrid coexistence so transformation is supportable from day one.



Proof in action

AI-driven modernization is measured in outcomes: lower cost, simpler operations and dramatically faster execution.

Alpitour World | Modernize without disrupting the business



25-30%

cost reduction[5]



80%

simplification of business-as-usual toolin.[5]

Kyndryl, AWS and Astadia redeveloped Alpitour's mainframe environment as a cloud-native solution on AWS—helping simplify the technology estate and improve cost efficiency with zero disruption.

Leading mobility solutions provider | Compress months of modernization work into days



6-8 weeks → 6 hours

Analysis[5]



1-2 months → 3 days

Planning and design[5]



3-4 months → 6 days

Code and testing[5]

We combined AI agents with human expertise to accelerate analysis, design, code transformation and testing. The business outcome was even broader: a more unified fleet platform, asset-level profitability insight and less dependence on maintaining legacy code.

The proof point is not AI for AI's sake—it is modernization velocity translated into measurable business value.

7 What comes next

Start with the one opportunity that matters

It can be tempting to tackle everything at once, turning modernization into a portfolio-wide planning exercise that takes months before anything reaches production. Instead, target incremental success by starting with a focused business function or service, validate the approach end-to-end, and then carry the blueprint forward.

The next move does not need to be estate-wide. Select a meaningful service, prove the business and technical case, ship it, and use the resulting blueprint to inform the next wave.

Assess

Understand the selected service and its dependencies, business rules and value case.

Prove

Forward-engineer a contained opportunity, validate business intent and demonstrate the joint approach.

Ship + reuse

Move to production, capture the blueprint and reuse proven knowledge, agents and patterns across the estate.

Ready to turn legacy complexity into AI-ready momentum?

See Kyndryl and AWS in action →



© Copyright Kyndryl, Inc. 2026

Kyndryl is a trademark or registered trademark of Kyndryl, Inc.in the United States and/or other countries. Other product and service names may be trademarks of Kyndryl, Inc. or other companies.

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. Kyndryl products and services are warranted according to the terms and conditions of the agreements under which they are provided. 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 has no obligation to develop or release any of the functionality or products described in this statement. Any information about Kyndryl's possible future offerings is subject to change by Kyndryl at any time without notice and does not represent a commitment, promise or obligation for Kyndryl to deliver or make available any offering.

[1] The $18 trillion opportunity: Four enterprise debts will make or break your AI future, HFS, June 2026

[2] HFS Horizons: Data Modernization and AI, HFS, April 2026

[3] The State of Organizations 2026: Three tectonic forces that are reshaping organizations, McKinsey, February 2026

[4] Strategic Pivots Will Define the CIO's Agenda in 2026, Gartner, November 2025

[5] Based on Kyndryl customer data, actual results may vary by environment and scope