

Future-ready applications

Transform application ecosystems with AI to achieve breakthrough performance and lasting value



kyndryl.

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Executive summary

As enterprises navigate a fast-changing business and technology landscape, their applications must be agile enough to outpace disruptions and accelerate innovation.

The emergence of AI has amplified the weaknesses of the underlying application ecosystem, making holistic modernization an urgent priority. Applications must become intuitive, deeply personalized, self-optimizing, context-aware, agent-augmented, and designed around human experience.

Ensuring adaptability, scalability, and resilience for future-ready applications will be challenging. Having an experienced partner to guide your decisions around design, development, and deployment can make all the difference.

At Kyndryl, we bring a hybrid architecture strategy that integrates old and new technologies and cuts time-to-value with agentic AI, proven frameworks, and accelerators. We can transform your application ecosystem, helping you become an AI-native organization and unlock the full value of AI faster while mitigating business risks.

Modernization matters, but it's not easy to achieve

The future of applications is increasingly AI-driven, but realizing value from AI is far from straightforward. As organizations adopt agentic and generative AI, they face growing complexity across applications, data, and infrastructure. Without strong governance, AI can introduce bias, compromise privacy, and erode trust. At the same time, AI-powered agents expand the attack surface, while threat actors use AI to scale and automate attacks faster than traditional security controls can respond.

Application modernization is critical, but many initiatives stall or fail when treated as isolated technology upgrades rather than strategic transformations. Legacy and monolithic systems, hybrid infrastructures, tool sprawl, and accumulated technical debt make seamless integration difficult and slow innovation. Incomplete or inconsistent data undermines AI outcomes, while fragmented workflows limit efficiency and scale.

Modernization initiatives may also fail if organizations don't consider people, processes and experiences. In addition, deep integration is required to enable agentic AI operations at machine scale and to manage the fast-growing web of applications, APIs and data pipelines.

Leaders responsible for application transformation face a common set of challenges:

- **Integration and complexity** across hybrid environments, APIs, and data sources
- **Balancing performance, resilience, and cost** as AI-driven workloads scale
- **Security and compliance** to ensure applications and data are secure and compliant

→ **Cultural shifts and change management** to accelerate and optimize transformation outcomes

→ **Talent and skills gaps** and the need for continuous upskilling

→ **Keeping pace with rapid technological change** without increasing risk

The question is no longer whether to modernize applications for AI or not, but how to overcome these challenges and move transformation forward with confidence.



Four elements of application transformation

To be future-ready, organizations must take a deliberate path to application modernization, integrating AI in alignment with strategy and culture. This approach rests on four interconnected elements, each addressing an important facet of the transformation journey. Together, they help ensure a sustainable, competitive path forward.

01

AI-infused applications

Integrate AI into applications to capitalize on the opportunity while balancing risks and costs. This means moving beyond experimentation and isolated use cases to reimagine processes and ways of working with AI, maximizing impact and business value.

02

Continuous modernization

Adopt a continuous modernization approach with modular, composable architectures that remediate technical debt and add incremental value over time. Here, the focus lies in aligning with your business goals and developing fit-for-purpose solutions without disrupting business continuity.

03

Organizational change

Invest in change management, cross-functional collaboration, and skills development to help ensure optimal transformation outcomes and to set your workforce up to harness future-ready applications effectively.

04

Ecosystem collaboration

Collaborate and co-create with an ecosystem of hyperscalers and technology and service partners. These strategic partnerships provide access to specialized expertise, help design industry-leading solutions, drive innovation and reduce the burden on internal resources.

Future ready in one, two, three

At Kyndryl, we help customers address these transformational elements to shape intelligent, secure application foundations enabled by agentic workflows. With decades of experience in business-critical technology systems, we bring a hybrid architecture strategy to integrate old and new technologies, proven frameworks and accelerators to pragmatically plan and implement the transformation.

To chart the most efficient course to future-ready applications, our approach centers on three core transformation pillars.

01. Transform applications with AI

We help you reimagine enterprise applications and jump-start your transformation with AI. We modernize existing applications and build new ones that integrate **agentic AI** and Gen AI, unifying data across systems and embedding **responsible AI guardrails**.

- Accelerate time-to-market for new capabilities
- Automate complex business processes to unlock new efficiencies
- Elevate experiences with personalization and intuitive interactions
- Support business users with real-time data analysis and decision-making

02. Future-ready application architecture

To deliver maximum impact, future-ready applications require a scalable, AI-native architecture. We help you build it, using **Kyndryl Vital** and proven frameworks, accelerators, change strategies, and an enterprise architecture mindset. With our continuous modernization approach, you gain modular, scalable applications that match both IT and business needs, integrate AI, and operate seamlessly in cloud-native environments.

- Align technology roadmaps with business goals to support the desired future state
- Enable agility through composability to adapt to changing business needs
- Integrate new and legacy technologies effectively while prioritizing user experience
- Design agile operating models with AI and cloud-native capabilities

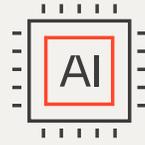
03. Mitigate business risks

Every transformation naturally brings new responsibilities and risks to manage. We tackle them head-on, addressing technical debt, security gaps, and adoption challenges. We apply governance by design with enhanced change management, and robust security to shape resilient foundations for your future business.

- Stay ahead of modernization and AI risks such as technical debt, cost, security, and governance
- Promote user adoption by leveraging organizational change management, workforce transformation and reskilling
- Secure hybrid IT systems and enhance developer experiences
- Maximize application performance with intelligent observability and control

Kyndryl modernization levers

Kyndryl offers intelligent and secure transformation for future-ready applications with its comprehensive services.

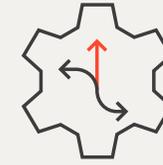


AI for Applications

We enable secure, adaptive applications that power personalized and intuitive digital experiences. We harness agentic AI, Gen AI, and data solutions, frameworks, and accelerators to build robust application foundations, helping:

- Accelerate time-to-market for new capabilities
- Automate complex business processes to unlock new efficiencies
- Empower experiences through real-time data analysis and decision-making

[Read about the City of Stockton's experience](#)



Application Development

We deliver secure, intelligent applications that boost efficiency. From design and development to testing and deployment, our end-to-end approach ensures rapid delivery and seamless user experiences. We combine future-ready architecture with human expertise, AI agents, DevSecOps approaches and low-code/no-code platforms to streamline your application lifecycle.

[Read how we built an app for a leading EdTech company](#)



Application Modernization

We bring extensive experience in mixed application landscapes, including SAP ERP, custom, and mainframe applications to modernize application portfolios. By integrating AI, aligning transformation strategies with your business goals and deploying architecture blueprints, we enable future-ready, secure, scalable applications, ready for AI and cloud with business agility. Our robust methodology, combined with agentic AI workflows, enables adaptive operating models while mitigating risks related to technical debt, user adoption, cost, and security.

[Read how Dow is modernizing applications using AI](#)



Application Security

We deliver end-to-end protection for your business applications and workflows, following security-by-design and zero-trust approaches. We focus on proactive threat detection, precise access control, regulatory compliance, responsible AI, and rapid cyber incident recovery.

[Read about Arab National Bank's resilient digital banking](#)



Cloud-native Services

We offer consulting, implementation, and managed services across hybrid and multi-cloud environments. Our cloud-native services are built on proven architectural principles and operating models that reduce complexity in cloud adoption. We leverage infrastructure-as-code (IaC) and DevOps practices to enable scalable, efficient, and modern cloud-native capabilities.

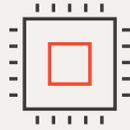
[Read about the Arizona Motor Vehicle Division](#)



Organizational Change Management

We help manage seamless transitions with proven organizational change management (OCM). By embedding OCM into the fabric of transformation, enterprises can mitigate resistance, reduce change fatigue, and foster a culture of adaptability, helping teams take full advantage of new technologies.

[Read about Dilip Buildcon's experience](#)



Platform Engineering

Our platform engineering services build on agile DevOps and FinOps practices, and on low-code/no-code approaches, using a custom internal developer platform with self-service features to streamline software development lifecycles. Our approach aims to help multiple development teams—application, infrastructure, security and operations—reduce complexity and work together more seamlessly.

[Read about our work with UK Power Network](#)



Kyndryl Bridge

We underpin all these services with intelligent application observability, performance monitoring, and optimization. These capabilities are enabled by **Kyndryl Bridge**: our proprietary integration, AI, and automation platform.

[Read about our work with Kantar](#)

Proof points

Kyndryl helps customers of all sizes and across all sectors to build future-ready applications through proven approaches. We modernize, develop and integrate application ecosystems, aligning culture and strategy to ensure optimal business outcomes.



Virginia Department of Motor Vehicles

- Modernized critical applications by transitioning them from a mainframe system to a modern and flexible cloud infrastructure on Microsoft Azure
- Drives continual innovation and better services for residents and DMV partners with an agile cloud environment
- Supports more efficient and secure processing of driver and vehicle transactions
- Enhances security to comply with federal and state standards and protect sensitive customer data

ATCO

- Designed and built a mobile and desktop app for crane inspections
- Reduces the risk of manual error with guided checklists for crane inspections and automated load calculations
- 20% more efficient daily inspections reduce expensive work delays
- 100% data availability and backup
- Digitization overall increased safety and efficiency at the job sites

National Australia Bank

- Modernized and migrated 23 applications to Microsoft Azure
- Decommissioned 200+ physical servers and consolidated 50% of VMs
- Enhanced resiliency of critical business applications while reducing operational costs

Why work with us?

01.

Accelerated time-to-value and reduced operational costs to unlock growth potential and reduce business risks

02.

Alignment to business strategy with an architecture mindset

03.

Empowered users with organizational change management for sustained success

Kyndryl has been recognized as a leading provider of application modernization and AI-enabled application development by major analyst groups.

A Leader,

IDC MarketScape: Worldwide Hybrid IT Infrastructure Consulting and Integration Services 2025 Vendor Assessment

A Major Contender,

Everest Group Application Development for AI Applications Services PEAK Matrix® Assessment 2025³

A Leader,

ISG Provider Lens: Mainframes — Services and Solutions, Mainframe Application Modernization, US, 2025¹

A Major Contender,

Everest Group Application Management Services PEAK Matrix® Assessment 2025

A Major Contender,

Everest Group Application Transformation Services for AI-enablement PEAK Matrix® Assessment 2025²

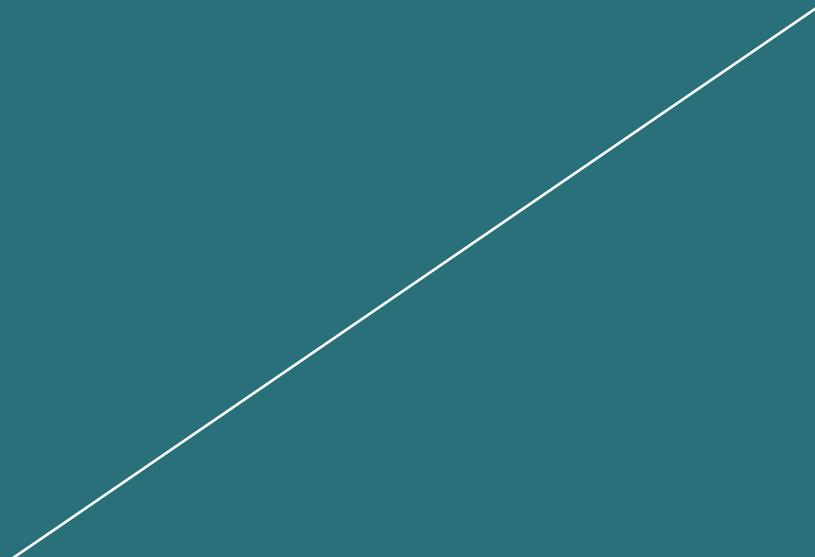


Let's jointly define your modernization strategy

Learn more about [future-ready applications](#).

Discover Kyndryl's [Agentic AI Framework](#).





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Sources:

1. [ISG Provider Lens: Mainframes — Services and Solutions, Mainframe Application Modernization, US, 2025](#)
 2. [Everest Group Application Transformation Services for AI-enablement PEAK Matrix® Assessment 2025](#)
 3. [Everest Group Application Management Services PEAK Matrix® Assessment 2025](#)
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