

Mainframes — Services and Solutions

A research report comparing provider strengths,
challenges and competitive differentiators

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Enterprises need to focus on the reimagine approach to assess their mainframe modernization roadmap

In 2026, the modernization process prioritizes the reimagine approach to assess an enterprise's mainframe modernization roadmap, elevating business process changes before writing any code. The reimagine approach uses GenAI to extract and explain legacy business rules, enabling subject matter experts to validate and modify them, while automated tests run in parallel to preserve the required equivalence of a legacy and modernized application. This approach serves applications that will continue on the mainframe and those that will be rewritten to a cloud-native architecture.

This research found that service providers have developed a decision framework that routes deterministic rehost or refactor to domains where functional equivalence and regulatory continuity are critical. In these cases,

deterministic engines are used, with GenAI augmenting documentation, testing and overall productivity. When functional equivalence is not mandatory, the framework steers reimagine with agentic AI to areas where business process change is the primary goal and governance can absorb higher variance. Across both paths, the prevailing operating model is *governance first*, with human-in-the-loop checkpoints, auditable decision logs, staged rollouts with fallback and rollback plans, and quality gates across functionality and security. This approach ensures modernization improves strategic outcomes and operational survivability.

Migrating to a cloud is not the only path to modernization. Many mainframe clients are reshaping operations around automation, AI and DevOps to sustain velocity without compromising resilience. A growing share have adopted AIOps enhanced by GenAI for predictive monitoring, anomaly detection and self-healing workflows, pairing this approach with disciplined security practices such as IBM Resource Access Control Facility (RACF) hardening, encryption and multi-factor authentication. On the engineering side,

Enterprises should
use **GenAI** to
reimagine and
enhance **business**
and **applications**.



Executive Summary

teams are standardizing DevOps pipelines that span z/OS and distributed platforms, using CI/CD to automate build, test and deploy while exposing core functionality through APIs to support hybrid execution. Containerization and microservice decomposition are being used increasingly. AI agents are applied to documentation enhancement, test generation and dependency mapping with human-in-the-loop checkpoints to maintain control. Talent continuity programs and ecosystem partnerships with hyperscalers and tooling vendors round out the model, providing firms with operational resilience to modernize incrementally while keeping mission-critical workloads on the mainframe.

Enterprises should provisionally trust experienced system integrators and vendors, especially those emphasizing human oversight and deterministic verification, as this stance aligns with the market's proven, lower-risk practices. Leading modernization software vendors combine deterministic engines with GenAI to preserve functional equivalence, reduce hallucination risk and maintain compliance at cutover. This approach reflects

decades of accumulated lessons about hidden business rules and environmental context that AI-only rewrites can miss. Vendors recommend that clients avoid opaque black boxes in production using comprehensive verification to protect business continuity and regulatory obligations while still capturing GenAI's productivity gains in documentation, testing and API scaffolding.

Vendors should earn trust through evidence. Clients should require governance-first delivery with human-in-the-loop checkpoints, auditable decision logs and rollback plans; insist on parallel validation and automated regression tests that demonstrate functional equivalence; run controlled pilots in environments with measurable quality gates across functionality and security and review client references showing successful cutovers on regulated, high-volume workloads. When vendors and system integrators substantiate their claims with these artifacts and outcomes, clients can engage with confidence, balancing the speed of GenAI with the safety of deterministic verification.

The Mainframe Technology Consulting quadrant highlights providers that lead with structured assessments and modernization strategies, producing tailored roadmaps that balance cost efficiency, resilience and transformation goals. These firms evaluate legacy estates with MIPS optimization, portfolio rationalization and hybrid integration planning and increasingly embed automation, AI and ML analytics and GenAI to accelerate discovery, improve technical fidelity and reduce manual effort. Consulting offerings emphasize seamless connectivity between mainframe and modern ecosystems through decoupling, secure data access and the enablement of APIs and microservices. Security, compliance and governance are treated as first-class concerns, including RACF hardening and multi-year remediation guidance. Delivery models combine global scale with local proximity, supported by accelerators, frameworks and repeatable methodologies to ensure predictable outcomes across both near-term optimization and long-term transformation programs.

GenAI is reshaping mainframe consulting services by compressing discovery and planning cycles, improving technical fidelity and reducing manual effort in assessments and roadmap creation. For providers, it boosts productivity and differentiation, enabling richer portfolio rationalization, faster MIPS-optimization insights and more precise hybrid integration strategies with repeatable accelerators. For clients, it translates into quicker, higher-confidence decisions, better alignment of modernization plans to business priorities and early visibility into API exposure, decoupling options and security implications. It also strengthens governance by revealing dependencies and risks that inform compliance frameworks and lifecycle planning. GenAI's impact is not about replacing consulting judgment; it augments structured methodologies to deliver predictable outcomes more quickly and with greater traceability if programs retain human-in-the-loop checkpoints and security controls.

The Mainframe as a Service (MFaaS) quadrant shows providers combining hosting, hardware, OS, middleware and connectivity into



Executive Summary

subscription models that convert CapEx to predictable OpEx while delivering scalability and resilience. In 2026, the offerings emphasize AIOps integrated with GenAI for advanced orchestration and self-healing workflows, anomaly detection and self-healing workflows, reducing manual intervention and sustaining high availability. Security and compliance are foundational, with RACF hardening, encryption, multi-factor authentication, disciplined patching and upgrades, robust disaster recovery and adherence to industry regulations. Providers position MFaaS as an enabler of modernization by integrating APIs, DevOps toolchains and containerization to support incremental transformation without compromising core stability. Talent continuity and ecosystem partnerships are emphasized, with structured hiring and training programs and alliances with hyperscalers and technology vendors that expand capabilities and ensure long-term operating confidence.

GenAI is elevating MFaaS by enabling providers to orchestrate operations with fewer manual interventions, reduce mean time to detect and recover and uphold tighter SLAs at lower cost.

Runbooks are machine-executed, patching and upgrades are safer through simulation and policy checks, and capacity planning is more accurate, while strengthening resilience through self-healing workflows. For clients, the impact is greater availability and operational continuity, faster incident resolution, smoother, low-risk change management, and early insights into performance hotspots and security exposures as AI surfaces patterns across RACF, encryption, multi-factor authentication (MFA and 2FA) and disaster recovery controls. GenAI also accelerates the integration of APIs and DevOps toolchains, making incremental modernization more practical without destabilizing core workloads. The gains are maximized when programs retain human-in-the-loop governance, auditable decision logs and rollback safeguards to ensure automation remains compliant and trustworthy.

The Application Modernization Services quadrant comprises providers that deliver end-to-end programs spanning assessment, transformation and migration to cloud-native architectures, with an automation-first approach, supported by proprietary platforms

and accelerators to reduce manual effort and shorten timelines. These firms blend application engineering expertise, industry specialization, GenAI and third-party tooling to run robust workflows that combine deterministic automation for functional equivalence with agentic AI to enable innovation. A defining capability is the reimagine approach, where GenAI extracts and explains business rules so that experts can validate and modify them before a new code is produced. Automated testing runs in parallel across legacy and target applications to preserve required consistency. GenAI also accelerates API creation and integration, improving phased modernization and guiding workload placement, as providers decompose monoliths into microservices, expose functionality via APIs and integrate DevOps pipelines for CI/CD to sustain release velocity and quality.

Hyperscalers are actively promoting GenAI as the engine of the reimagine approach, bundling model access, developer copilots and integration services to help enterprises extract business rules, accelerate API creation and scaffold microservices before writing

new code. AWS is positioning Bedrock as a managed foundation model hub alongside CodeWhisperer, Kiro and CodeCatalyst to infuse rule discovery, documentation uplift and test generation into existing pipelines. Microsoft is aligning GitHub Copilot and Azure OpenAI service with enterprise-grade identity, telemetry and policy controls to bring AI-assisted requirements, coding and CI/CD into regulated environments. Google is integrating Gemini across Google Cloud with Vertex AI and Gemini Code Assist to power agentic workflows that parse legacy logic, propose refactoring targets and automate integration patterns. These offerings increasingly emphasize secure, auditable use of GenAI that includes model gating, private network paths, content filters and human-in-the-loop checkpoints. This approach enables teams to reimagine processes while maintaining determinism where needed. As providers stitch these capabilities into DevOps toolchains, clients gain practical paths for phased modernization: AI-generated documentation and tests, API scaffolding, dependency maps and targeted microservice decomposition, governed by



Executive Summary

enterprise policies and rollback safeguards. Service providers increasingly favor GenAI as it shifts modernization programs from narrow, tool-led code conversion to higher-value, business-led transformation that commands premium pricing and creates durable annuity streams. GenAI drives the reimagining of engagements, enabling providers to sell larger, outcome-based programs rather than commodity refactoring. It also mitigates talent scarcity in legacy skills by compressing discovery and engineering cycles, improving margin through productivity gains while preserving delivery velocity. Commercially, GenAI-first offerings open cross-sell pathways into AIOps, AI governance, data engineering and hybrid integration services, expanding wallet share and lengthening the lifecycle of client relationships beyond a one-time code migration.

Partnership economics reinforces their preference, as aligning GenAI solutions with hyperscalers and strategic ISVs unlocks co-sell motions, marketplace routes and marketing development funds, while driving cloud consumption that providers

can monetize through managed services. Tiers and specialization badges with AWS, Microsoft and Google increase deal flow and attach rates for MFaaS, observability, security and DevOps pipelines, and providers can package proprietary accelerators to differentiate and justify higher rates. The result is a revenue mix that blends upfront transformation fees with recurring operations, support and enhancement services, creating more predictable growth than deterministic, like-for-like projects alone.

Most leading firms do not abandon deterministic tools; they augment them with GenAI to balance functional equivalence with innovation. This hybrid posture satisfies regulated workloads that demand determinism while giving providers a commercially compelling story around business change, speed and ecosystem leverage.

Clients can benefit from using GenAI as it makes phased modernization more practical while preserving required equivalence through parallel validation. Productivity gains mitigate legacy skill shortages, shorten delivery timelines and improve alignment to business outcomes.

However, reimagining introduces greater variance because agentic AI can misinterpret hidden rules or environmental context, leading to logic gaps, defects and security exposures if not tightly governed. Autonomous changes may challenge control, reliability and compliance, and LLM-only rewrites risk hallucination and underperforming code. To mitigate risk, programs must adopt a governance-first operating model with human-in-the-loop checkpoints, policy-backed guardrails, auditable decision logs, staged rollouts and robust fallback/rollback plans, ensuring quality gates across functionality and security are met before expanding autonomy.

The Mainframe Application Modernization Software quadrant has a global focus, considering software vendors that support clients both remotely and on-premises. It captures a market maturing around repeatable tooling, measurable outcomes and sustained maintainability, with GenAI integration reshaping differentiation. Vendors adopt an automation-first posture, layering AI agents on top of deterministic modernization engines and explicitly distancing themselves from generic

LLM-based coding assistants. The prevailing model combines deterministic pipelines with GenAI orchestration to extract business rules and map dependencies and generate modern code with machine assistance, preserving functional equivalence while minimizing the risk of hallucination. Tooling emphasizes API enablement, containerization, serverless options, DevOps integration and rigorous cutover quality assurance, delivered through phased rollout, parallel validation and automated testing to ensure behavior and compliance. Many of these software engineers, who have more than 20 years of experience in application modernization and replatforming, recommend that clients require human oversight and deterministic verification rather than relying on an opaque black box in production, warning clients about the risk of LLM-only rewrites, such as hallucinated logic, missed environmental context and poor COBOL-in-Java performance, all of which can introduce security gaps.



Executive Summary

Mainframe application modernization now begins with the reimagine approach, using GenAI to support planning and innovation and merging deterministic approaches such as rehosting and refactoring with agentic reimagination within governance-first frameworks. Mainframe innovation's key technical priorities include API development, CI/CD pipelines, RACF hardening and operational improvements with AIOps, DevOps and optimization services.





Provider Positioning

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	Mainframe Technology Consulting	Mainframe as a Service	Application Modernization Services	Mainframe Application Modernization Software (Global)
Accenture	Product Challenger	Product Challenger	Leader	Not In
Altimetrik (SLK Software)	Not In	Not In	Contender	Not In
Amdocs	Not In	Not In	Product Challenger	Leader
Atos	Product Challenger	Rising Star ★	Product Challenger	Not In
Avanade	Not In	Not In	Product Challenger	Product Challenger
AveriSource	Not In	Not In	Product Challenger	Leader
AWS	Not In	Not In	Not In	Leader
BASE100	Not In	Not In	Not In	Product Challenger
BlueHill Data Services	Not In	Contender	Not In	Not In
Capgemini	Product Challenger	Leader	Leader	Not In





Provider Positioning

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	Mainframe Technology Consulting	Mainframe as a Service	Application Modernization Services	Mainframe Application Modernization Software (Global)
CloudFrame	Not In	Not In	Not In	Rising Star ★
Coforge	Product Challenger	Not In	Rising Star ★	Not In
Cognizant	Product Challenger	Leader	Leader	Not In
CPT Global	Leader	Not In	Contender	Not In
Deloitte	Contender	Not In	Product Challenger	Not In
DXC Technology	Leader	Leader	Leader	Not In
Ensono	Leader	Leader	Product Challenger	Not In
EvolveWare	Not In	Not In	Not In	Product Challenger
FNTS	Rising Star ★	Leader	Not In	Not In
FreeSoft	Not In	Not In	Not In	Contender





Provider Positioning

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	Mainframe Technology Consulting	Mainframe as a Service	Application Modernization Services	Mainframe Application Modernization Software (Global)
Fujitsu	Not In	Not In	Contender	Not In
GFT	Contender	Not In	Contender	Not In
Google	Not In	Not In	Not In	Leader
HCLTech	Leader	Rising Star ★	Leader	Not In
Heirloom Computing	Not In	Not In	Not In	Leader
Hexaware	Not In	Not In	Leader	Not In
IBA Group	Not In	Not In	Contender	Not In
IBM	Product Challenger	Not In	Product Challenger	Product Challenger
Infosys	Leader	Product Challenger	Leader	Not In
Karsun Solutions	Not In	Not In	Not In	Product Challenger



Provider Positioning

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	Mainframe Technology Consulting	Mainframe as a Service	Application Modernization Services	Mainframe Application Modernization Software (Global)
Kobee	Not In	Not In	Not In	Contender
Kyndryl	Leader	Leader	Leader	Not In
LRS	Not In	Not In	Not In	Contender
LTM	Leader	Product Challenger	Leader	Not In
Maintec	Not In	Contender	Not In	Not In
mLogica	Not In	Not In	Product Challenger	Leader
MOST Technologies	Not In	Not In	Contender	Not In
Mphasis	Contender	Product Challenger	Leader	Not In
NTT DATA	Product Challenger	Product Challenger	Product Challenger	Leader
PalmDigitalz	Not In	Not In	Not In	Product Challenger





Provider Positioning

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	Mainframe Technology Consulting	Mainframe as a Service	Application Modernization Services	Mainframe Application Modernization Software (Global)
PSR	Not In	Contender	Not In	Not In
Raincode	Not In	Not In	Not In	Contender
Recovery Point Systems	Not In	Market Challenger	Not In	Not In
Rocket Software	Not In	Not In	Not In	Leader
TCS	Leader	Leader	Leader	Not In
Tech Mahindra	Leader	Product Challenger	Leader	Not In
TmaxSoft	Not In	Not In	Not In	Leader
TSRI	Not In	Not In	Not In	Leader
Unisys	Product Challenger	Product Challenger	Contender	Not In
Updraft	Not In	Not In	Not In	Contender





Provider Positioning

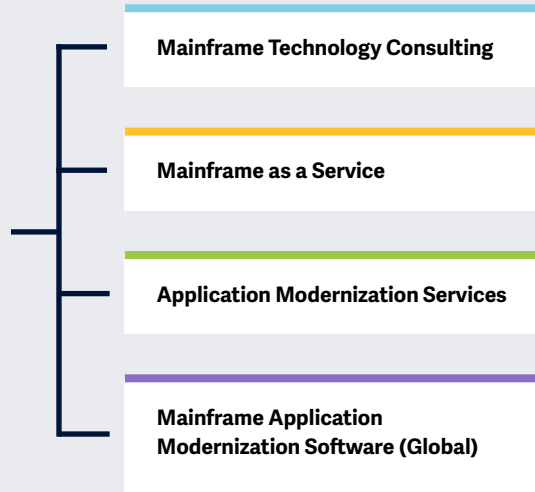
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	Mainframe Technology Consulting	Mainframe as a Service	Application Modernization Services	Mainframe Application Modernization Software (Global)
UST	Product Challenger	Contender	Contender	Not In
Verang	Not In	Not In	Contender	Not In
Vertali	Contender	Not In	Not In	Not In
Virtel	Not In	Not In	Not In	Contender
VirtualZ Computing	Contender	Not In	Not In	Contender
Wipro	Leader	Leader	Leader	Not In



Key focus areas for Mainframes – Services and Solutions 2026 study.

Simplified Illustration Source: ISG 2026



Definition

The mainframe market is undergoing a fundamental change as enterprises balance modernization with resilience. Cloud innovation is pushing organizations to reevaluate the way mainframes integrate with hybrid IT landscapes, with growing attention on seamless data access, software licensing optimization and use of middleware and third-party tools. Concurrently, cloud-native application development has become the new standard, driving enterprises to adopt microservices, APIs, containers, serverless computing and AI-driven engineering practices. These shifts are challenging established mainframe application management models and accelerating the demand for modernization strategies.

Generative AI (GenAI) has further transformed this environment. In the past year, it has redefined automation and application transformation approaches, impacting refactoring, replatforming, rehosting, rewriting and reengineering. Providers are increasingly embracing GenAI and AIOps to deliver self-healing systems, automated troubleshooting,

reduced technical debt and rapid responsiveness to business change. These are also reshaping development workbenches and software engineering.

This study assesses providers offering mainframe consulting, mainframe as a service (MFaaS) and system integration services for modernization and migration. It also evaluates global vendors of automation and transformation tools for modernization. Organized into four quadrants, the report examines the way providers and vendors leverage GenAI and AI analytics, and take cloud-native approaches to improve quality, ensure cost efficiency, focus on innovation and achieve desired business outcomes.



Scope of the Report

This ISG Provider Lens® quadrant report covers the following four quadrants for services/solutions: Mainframe Technology Consulting, Mainframe as a Service, Application Modernization Services and Mainframe Application Modernization Software (Global).

This ISG Provider Lens® study offers IT decision-makers:

- Transparency on the strengths and weaknesses of relevant providers
- A differentiated positioning of providers by segments on their competitive strengths and portfolio attractiveness
- Focus on the U.S. and global markets

Our study serves as the basis for important decision-making by covering providers' positioning, key relationships and go-to-market considerations. ISG advisors and enterprise clients also use information from these reports to evaluate their existing vendor relationships and potential engagements.

Provider Classifications

The provider position reflects the suitability of providers for a defined market segment (quadrant). Without further additions, the position always applies to all company sizes classes and industries. In case the service requirements from enterprise customers differ and the spectrum of providers operating in the local market is sufficiently wide, a further differentiation of the providers by performance is made according to the target group for products and services. In doing so, ISG either considers the industry requirements or the number of employees, as well as the corporate structures of customers and positions providers according to their focus area. As a result, ISG differentiates them, if necessary, into two client target groups that are defined as follows:

- **Midmarket:** Companies with 100 to 4,999 employees or revenues between \$20 million and \$999 million with central headquarters in the respective country, usually privately owned.

- **Large Accounts:** Multinational companies with more than 5,000 employees or revenue above \$1 billion, with activities worldwide and globally distributed decision-making structures.

The ISG Provider Lens® quadrants are created using an evaluation matrix containing four segments (Leader, Product & Market Challenger and Contender), and the providers are positioned accordingly. Each ISG Provider Lens® quadrant may include a service provider(s) which ISG believes has strong potential to move into the Leader quadrant. This type of provider can be classified as a Rising Star.

- **Number of providers in each quadrant:** ISG rates and positions the most relevant providers according to the scope of the report for each quadrant and limits the maximum of providers per quadrant to 25 (exceptions are possible).





Provider Classifications: Quadrant Key

Product Challengers offer a product and service portfolio that reflect excellent service and technology stacks. These providers and vendors deliver an unmatched broad and deep range of capabilities. They show evidence of investing to enhance their market presence and competitive strengths.

Contenders offer services and products meeting the evaluation criteria that qualifies them to be included in the IPL quadrant. These promising service providers or vendors show evidence of rapidly investing in products/ services and follow sensible market approach with a goal of becoming a Product or Market Challenger within 12 to 18 months.

Leaders have a comprehensive product and service offering, a strong market presence and established competitive position. The product portfolios and competitive strategies of Leaders are strongly positioned to win business in the markets covered by the study. The Leaders also represent innovative strength and competitive stability.

Market Challengers have a strong presence in the market and offer a significant edge over other vendors and providers based on competitive strength. Often, Market Challengers are the established and well-known vendors in the regions or vertical markets covered in the study.

★ **Rising Stars** have promising portfolios or the market experience to become a Leader, including the required roadmap and adequate focus on key market trends and customer requirements. Rising Stars also have excellent management and understanding of the local market in the studied region. These vendors and service providers give evidence of significant progress toward their goals in the last 12 months. ISG expects Rising Stars to reach the Leader quadrant within the next 12 to 24 months if they continue their delivery of above-average market impact and strength of innovation.

Not in means the service provider or vendor was not included in this quadrant. Among the possible reasons for this designation: ISG could not obtain enough information to position the company; the company does not provide the relevant service or solution as defined for each quadrant of a study; or the company did not meet the eligibility criteria for the study quadrant. Omission from the quadrant does not imply that the service provider or vendor does not offer or plan to offer this service or solution.





Mainframe Technology Consulting

Who Should Read This Section

This report is valuable for service providers offering **Mainframe Technology Consulting** in the **U.S.** to understand their market position and for enterprises looking to evaluate these providers. In this quadrant, ISG highlights the current market positioning of these providers based on the depth of their service offerings and market presence.

Chief information officers

Should read this report to assess the strengths and weaknesses of mainframe technology consulting providers in terms of their offerings, delivery capabilities, market presence and deployment of the latest technologies. Understanding the mainframe market advancements is critical for IT executives to shape effective, future-proof modernization strategies and ensure their organizations maintain competitive agility and resilience.

Directors of infrastructure and operations

Should read this report to evaluate enterprises' current and future IT infrastructure needs to manage and design IT strategies. A mainframe technology consulting engagement enables enterprises to create definitive objectives for sub-functions related to business units and define efficient procedures to determine mainframe budgets.

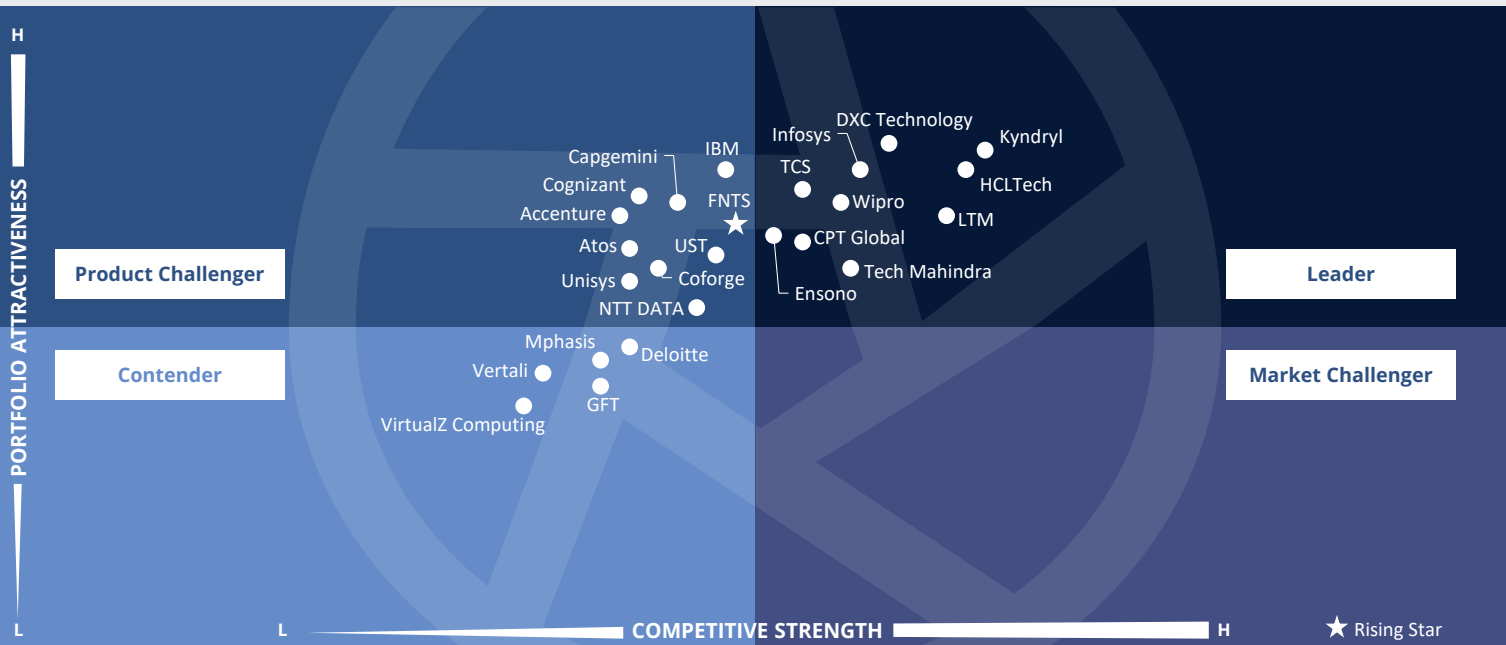
Sourcing, procurement and vendor management professionals

Should utilize this report to better understand the current landscape and partner ecosystem of mainframe technology consulting services in the U.S. A deep understanding of provider competencies, differentiation and market presence supports informed vendor selection and negotiation strategies, ensuring optimal partnerships that deliver both immediate value and sustainable long-term benefits.



Mainframes – Services and Solutions
Mainframe Technology Consulting

U.S. 2026



This quadrant assesses providers of **mainframe consulting** services, including **professional services**, software upgrades, **performance improvements**, **AIOps** and **DevOps** implementation, **data integration** and **hybrid cloud** design.

Pedro L. Bicudo Maschio



Definition

Providers in this quadrant are consulting firms that specialize in supporting enterprises in maintaining, updating and integrating mainframe systems with their broad IT landscape. The services are typically project-based and include upgrading operating systems, middleware and application languages for secure, efficient and resilient operations. The providers also advise on lifecycle management, workload optimization and MIPS reduction to avoid obsolescence and extend the value of legacy investments for clients. They are also increasingly deploying advanced technologies such as AI, ML and AIOps for automation, self-healing and intelligent monitoring, and fostering adaptive development environments through DevOps, code repositories, AI assistants and automated testing in mainframe practices. They further drive innovation by using GenAI to document legacy code, improve management and enable seamless integration with hybrid cloud and modern software delivery models.

Eligibility Criteria

1. Demonstrate **innovative client case studies** across IBM Z®, IBM iSeries/AS400, HP, Bull or Unisys mainframes
2. Hold **partner certifications** or authorizations to deploy new systems, middleware and upgrades
3. Showcase expertise in **updating application** languages and legacy codebases
4. Deploy **DevOps, AI and automation** within legacy programming environments to improve CI/CD practices
5. Deliver comprehensive portfolio, **workload and application assessments** as a part of client engagements
6. Provide clear **technology roadmaps**, covering innovation, testing and quality assurance tooling
7. **Enable hybrid cloud integration** by decoupling legacy codes and ensuring secure data access
8. Offer **advisory services** for future-state governance, compliance and lifecycle planning
9. Employ considerable **certified mainframe experts** with proven COBOL and mainframe system experience



Mainframe Technology Consulting

Observations

Providers in this quadrant emphasize structured assessments and modernization strategies. They focus on evaluating legacy environments, optimizing workloads and creating tailored roadmaps that balance cost efficiency, resilience and modernization goals. Typically, these assessments include MIPS optimization, portfolio rationalization and hybrid integration planning aligned with business priorities.

These providers integrate automation, AI and ML analytics, and GenAI into their consulting practices. They increasingly leverage GenAI to accelerate discovery and planning cycles, improve technical fidelity and reduce manual effort in modernization programs.

To address growing demand for mainframe data access, providers position their consulting services as enablers of seamless connectivity between mainframe systems and modern digital ecosystems, including strategies for decoupling legacy code, ensuring secure data access and providing APIs and microservices.

Security, compliance and governance remain consistent priorities. Providers offer advisory services for lifecycle planning, compliance frameworks and risk management. Mainframe security is a growing concern, driving offerings such as RACF hardening and multi-year security remediation guidance.

Delivery models combine global scale with local proximity, supported by accelerators, frameworks and repeatable methodologies for predictable outcomes. This combination of skilled resources, proven processes and advanced tooling positions firms to manage both short-term optimization and long-term transformation effectively.

From the 57 companies assessed for this study, 25 qualified for this quadrant, with 10 being Leaders and one Rising Star.

CPT Global

CPT Global offers mainframe consulting for optimization, in-place modernization, security, software rationalization and test coverage improvement, delivering measurable performance and cost benefits for large enterprises.

DXC TECHNOLOGY

DXC Technology provides practical mainframe consulting to optimize workloads without code changes and guides hybrid architecture designs leveraging automation, AI agents, AIOps, security, disaster recovery and DevOps.

ensono

Ensono offers vendor-neutral mainframe consulting that includes assessments, cost and performance optimization, application and data modernization, hybrid integration, DevOps and security, and is supported by automation, AI and a patented latency-risk assessment.

HCLTech

HCLTech provides consulting for mainframe and application modernization, using GenAI and automation-enabled delivery, cloud and API integration. It uses industry frameworks supported by repeatable accelerators and outcome-based engagement models.

Infosys

Infosys offers structured mainframe assessments and modernization strategies with implementation guidance that leverages automation and AI to document legacy systems, plan modernization paths, optimize MIPS and connect workloads to API-based architectures.

kyndryl

Kyndryl offers a comprehensive mainframe consulting portfolio covering strategy, assessments and targeted optimization through application modernization, supported by proprietary tools, such as Kyndryl Bridge, and mainframe hosting via zCloud and Cloud for i.



Mainframe Technology Consulting

LTM

LTM provides project-based mainframe consulting for in-place modernization, hybrid cloud integration, DevOps enablement, performance and cost optimization, and compliance advisory, supported by proprietary frameworks and automation.



TCS guides clients through mainframe modernization with comprehensive assessments and tailored strategies and roadmaps addressing technology, process and cost optimization across complex enterprise environments.



Tech Mahindra offers project-based consulting for performance optimization, hybrid cloud integration, AIOps-enabled operations, security and compliance and business continuity, delivered through a unified onshore/offshore model.



Wipro provides a structured mainframe consulting portfolio centered on its DEEP assessment framework, covering portfolio rationalization, performance and data modernization, and hybrid-cloud integration supported by AI-enabled automation.



FNTS (Rising Star) offers mainframe consulting services for hybrid-cloud integration, data access strategy, OS and ISV upgrades, DevOps enablement, software licensing rationalization with audit support and cyber-resiliency design.



Kyndryl



“Kyndryl’s comprehensive mainframe consulting service enables it to support discrete projects and multi-year transformations, addressing both infrastructure and applications across various hosting models.”

Pedro L. Bicudo Maschio

Overview

Kyndryl is headquartered in New York, U.S. It has more than 73,000 employees across over 60 countries. In FY25, the company generated \$15.1 billion in revenue, of which approximately \$3.9 billion was in the U.S., where it operates several mainframe data centers. Kyndryl’s consulting services cover mainframe strategy, assessments, optimization and application modernization in project-based engagements, supported by Kyndryl Bridge and hosted mainframe offerings such as zCloud for IBM Z and Cloud for i (C4i), with integrations that leverage AIOps and agentic AI.

Strengths

Comprehensive consulting portfolio: Kyndryl offers consulting services from strategy and assessments to targeted optimization of MIPS, storage, batch and software (licensing and middleware), alongside application-focused engagements that include code optimization, DevOps strategy and data modernization. Its readiness services for new releases, such as IBM z17, help clients understand modernization opportunities in AI, LLMs and hybrid cloud integration.

Agentic AI initiative: Kyndryl’s automated discovery includes documentation, change safety and operational automation. Kyndryl Bridge provides enterprise-wide observability and AIOps, offering data-driven insights that translate operational telemetry into actionable modernization and optimization

tasks. By prioritizing integration of the mainframe with the cloud rather than pursuing a simple *stay* or *move-off* path, it aligns workloads with business and regulatory constraints.

Access to talent and skills: A sustained hiring and training engine, university partnerships and internal guilds reinforce Kyndryl’s multi-skilled workforce across mainframe, cloud, security and AI. Its broad mainframe knowledge base allows it to address complex modernization programs and short, targeted interventions with the same rigor.

Caution

Many clients use Kyndryl’s on-premises services. However, its portfolio most benefits enterprises pursuing automation and connectivity for mainframes hosted in Kyndryl facilities, whether dedicated or consumption-based MFaaS.





Mainframe as a Service

Who Should Read This Section

This report is valuable for service providers offering **Mainframe as a Service** in **the U.S.** to understand their market position and for enterprises looking to evaluate these providers. In this quadrant, ISG highlights the current market positioning of these providers based on the depth of their service offerings and market presence.

Chief information officers

Should read this report to assess the strengths and weaknesses of mainframe as a service providers in terms of their offerings, delivery capabilities, market presence and deployment of the latest technologies. Understanding the mainframe market advancements is critical for IT executives to shape effective, future-proof modernization strategies and ensure their organizations maintain competitive agility and resilience.

Directors of infrastructure and operations

Should read this report to evaluate enterprises' current and future IT infrastructure needs to manage and design IT strategies. A mainframe as a service engagement enables enterprises to create definitive objectives for sub-functions related to business units and define efficient procedures to determine mainframe budgets.

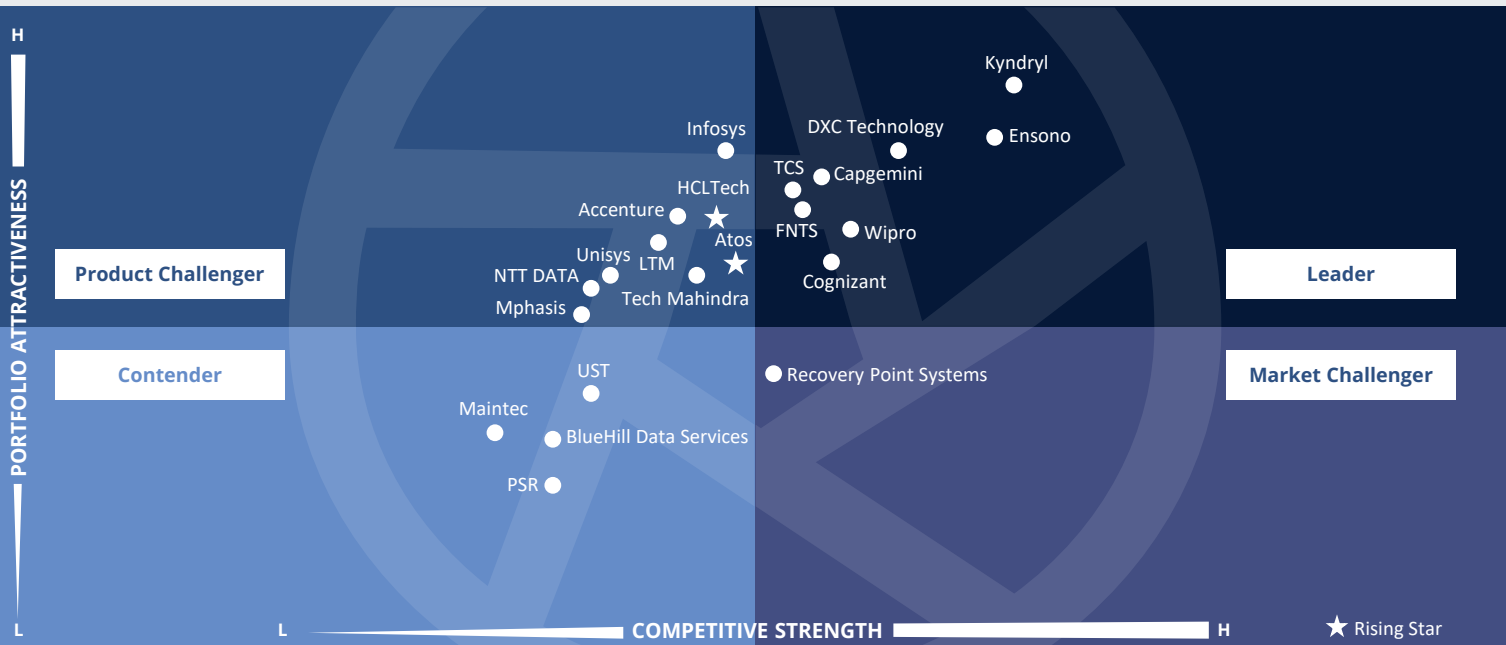
Sourcing, procurement and vendor management professionals

Should utilize this report to better understand the current landscape and partner ecosystem of mainframe as a service in the U.S. A deep understanding of provider competencies, differentiation and market presence supports informed vendor selection and negotiation strategies, ensuring optimal partnerships that deliver both immediate value and sustainable long-term benefits.



Mainframes – Services and Solutions
Mainframe as a Service

U.S. 2026



This quadrant assesses providers of **managed services**, infrastructure, facilities, hardware, software and hybrid cloud for **shared mainframe** infrastructure in both pay-per-use (MFaaS) and **conventional outsourcing** models.

Pedro L. Bicudo Maschio



Mainframe as a Service

Definition

This quadrant assesses providers delivering mainframe services through subscription-based models, including MFaaS, as well as traditional outsourcing approaches. In the MFaaS model, providers take complete responsibility for processing capacity, storage, infrastructure operations, security and ongoing maintenance, often embedding them in hybrid cloud environments. Other outsourcing models range from facility management to comprehensive services, covering system operations, middleware, monitoring, capacity planning, technical support, disaster recovery and staff augmentation. The capability to bundle these services determines the breadth and attractiveness of a provider's portfolio, with MFaaS offerings representing the pinnacle of integration, automation and scalability. By outsourcing mainframe operations, enterprises transfer the responsibility and risk to the provider, reducing CapEx and predictable operating costs and allowing agile responses to business and market demands.

Eligibility Criteria

1. Deliver **full mainframe environments**, including facilities, hardware, connectivity, OS, subsystems, licensing and tools
2. Provide **professional services** and expertise to ensure availability and meet performance metrics
3. Operate secure, **high-availability data centers** with proven disaster recovery capabilities
4. Offer **automation** for job scheduling, batch processing, performance optimization and routine system operations
5. Ensure **regular patching, upgrades and security** updates for operating systems, middleware and applications
6. Provide **low-latency and carrier-neutral connections** in public cloud environments
7. Demonstrate **financial capacity to expand** and maintain mainframe operations at scale
8. Maintain structured **hiring and training programs** to secure the availability of future mainframe skills
9. Enable **client access to dashboards** with utilization data, performance indicators, chargeback and reporting



Mainframe as a Service

Observations

Providers in this quadrant consistently emphasize MFaaS to convert CapEX into predictable OpEx while ensuring scalability and resilience. These offerings typically include hosting, hardware, operating systems, middleware and connectivity bundled into subscription-based services.

This year, ISG identified acceleration in AIOps adoption, with more providers highlighting advanced orchestration capabilities, predictive analytics and self-healing workflows to optimize performance and reduce manual intervention. Companies integrated GenAI and AIOps to enable proactive monitoring, anomaly detection and automated remediation, ensuring high availability and operational continuity for mission-critical workloads.

Security and compliance has emerged as a consistent priority across these companies. Many providers underscore RACF hardening, encryption and MFA as part of their managed service offerings. They also stress their ability to operate high-availability data centers with

robust disaster recovery frameworks, enforce regular patching and upgrades and maintain compliance with industry regulations.

Providers position MFaaS as a strategic enabler of modernization by integrating APIs, DevOps toolchains and containerization, enabling clients to pursue incremental transformation without disrupting core stability.

All providers converge on talent continuity and ecosystem partnerships. They invest in structured hiring and training programs to sustain mainframe skills and leverage alliances with hyperscalers and technology vendors to broaden service offerings.

From the 57 companies assessed for this study, 22 qualified for this quadrant, with 8 being Leaders and two Rising Stars.



Capgemini has advanced beyond traditional hosting models by combining automation-first principles with DevOps and API-driven integration, positioning its MFaaS offering as a modernization enabler for large-scale enterprise transformation.



Cognizant embeds GenAI-driven automation and predictive analytics into MFaaS delivery, aligning talent with advanced operating models to support autonomous operations and subscription-based services for U.S. enterprises seeking agility and cost predictability.



DXC Technology has the largest number of data centers in the U.S., offering multiple location options for reduced network latency and client proximity. It leverages global delivery centers and advanced automation to support scalable, efficient and standardized service delivery.



Ensono strengthens its MFaaS portfolio by delivering intelligent, hybrid-ready mainframe operations, integrating AI-driven predictive capabilities and workload portability to optimize performance and accelerate modernization without disrupting mission-critical processes.



FNTS reinforces its MFaaS strategy by embedding AI-led automation and compliance-driven models, enabling secure modernization and cost predictability. Its U.S.-centric approach reflects a deliberate focus on regulated industries while signaling readiness for broader scalability.



Kyndryl offers the largest global MFaaS and mainframe outsourcing footprint, delivering IBM Z and IBM i services through flexible models that optimize capacity, reduce capital expenditure and ensure operational resilience across industries in the U.S.



TCS focuses on an automation-first approach to MFaaS, leveraging AI-driven methodologies to identify optimization opportunities and streamline mainframe operations, complemented by a strong modernization framework for enterprise agility.



Mainframe as a Service



Wipro delivers managed mainframe services through its partner facilities, offering full-stack capabilities under a pay-per-use model. It leverages advanced automation to enhance efficiency, with a strong focus on the financial services industry.

Atos

Atos (Rising Star) provides MFaaS capabilities through fully managed IBM Z environments integrated with AI-driven automation and hyperscaler connectivity, supported by strategic partnerships and talent programs to strengthen operational aspects.

HCLTech

HCLTech (Rising Star) focuses on enhancing MFaaS into an automation-first, AI-enabled service model by embedding predictive orchestration, observability and compliance intelligence to support hybrid scalability for U.S. enterprise modernization programs.



Kyndryl



“Kyndryl leads MFaaS by combining flexible consumption models with AI-driven autonomy, enabling predictable economics, operational agility and modernization aligned with IBM Z advancements, setting a benchmark for scalable mainframe services.”

Pedro L. Bicudo Maschio

Overview

Kyndryl is headquartered in New York, U.S. It has more than 73,000 employees across over 60 countries. In FY25, the company generated \$15.1 billion in revenue. Kyndryl has over six million MIPS under management and 2.5 petabytes of storage capacity across 50 data centers globally. Its team of over 7,000 mainframe experts supports application and infrastructure operations and modernization for customers. The company provides seamless integration of all services across platforms, including mainframe operations, optimization and MFaaS.

Strengths

Flexible offering: Kyndryl offers MFaaS options across client-owned environments, dedicated hardware and shared platforms such as zCloud for IBM Z and C4i for IBM i, all under standardized service architectures. These options apply cloud economics with OpEx pricing, ARC/RRC scaling and hyperscaler integration for predictable costs and scalable capacity. This flexibility enables U.S. clients to manage mainframe workloads while maintaining resiliency and aligning mainframe costs with business demand.

Agentic AI-led delivery: Kyndryl’s agentic AI framework, integrated with Kyndryl Bridge, brings advanced automation and autonomy to MFaaS operations. It uses specialized agents for z/OS and subsystems to deliver proactive recommendations, automate

upgrades and optimize mainframe lifecycle management. This capability helps U.S. clients improve operational agility and achieve cost-efficient mainframe operations through predictive insights.

Strategic investments: Kyndryl continues to enhance MFaaS through investments in AI, hybrid IT, security, skills and observability aligned with IBM Z modernization. This focus includes upgrading environments to IBM z17 based on functionality requirements. These investments are reinforced through alliance-led cocreation, security enhancements such as quantum-ready capabilities and structured workforce upskilling.

Caution

Kyndryl’s customization-heavy MFaaS model and optional add-ons may reduce cost predictability. Enterprises should engage early with Kyndryl to review detailed cost structures and long-term OpEx projections to ensure transparency and avoid unexpected costs during scaling or modernization.





Application Modernization Services

Who Should Read This Section

This report is valuable for service providers offering **Application Modernization Services** in **the U.S.** to understand their market position and for enterprises looking to evaluate these providers. In this quadrant, ISG highlights the current market positioning of these providers based on the depth of their service offerings and market presence.

Chief information officers

Should read this report to assess the strengths and weaknesses of application modernization service providers in terms of their offerings, delivery capabilities, market presence and deployment of the latest technologies. Understanding the mainframe market advancements is critical for IT executives to shape effective, future-proof modernization strategies and ensure their organizations maintain competitive agility and resilience.

Directors of infrastructure and operations

Should read this report to evaluate enterprises' current and future IT infrastructure needs to manage and design IT strategies. A mainframe modernization engagement enables enterprises to create definitive objectives for sub-functions related to business units and define efficient procedures to determine mainframe budgets.

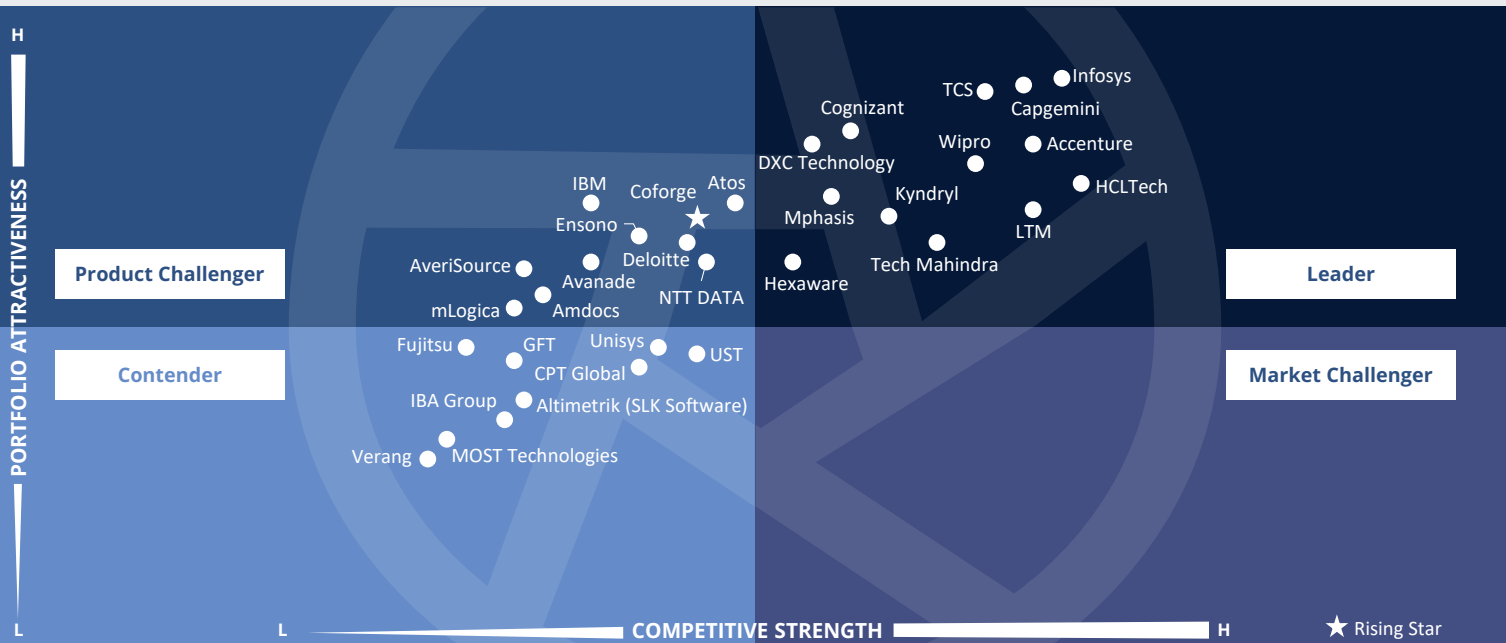
Sourcing, procurement and vendor management professionals

Should utilize this report to better understand the current landscape and partner ecosystem of application modernization services in the U.S. A deep understanding of provider competencies, differentiation and market presence supports informed vendor selection and negotiation strategies, ensuring optimal partnerships that deliver both immediate value and sustainable long-term benefits.



Mainframes – Services and Solutions
Application Modernization Services

U.S. 2026



This quadrant assesses **application modernization** service providers that transform applications and databases to **migrate mainframes to the cloud** in the U.S., offering replatforming, rehosting, reengineering and rewriting services.

Pedro L. Bicudo Maschio



Application Modernization Services

Definition

This quadrant assesses providers specializing in transforming legacy mainframe applications and migrating them to the cloud. The providers partner with hyperscalers and software vendors to automate refactoring, data conversion and database replacement, ensuring applications remain secure, efficient and scalable. Application modernization involves automation, reengineering tools, emulators and compilers, and uses GenAI to accelerate code transformation and reduce manual effort. Vendor-neutral providers with broad language expertise are best positioned to deliver success across diverse legacy environments. A comprehensive modernization program may include UI translation to replace green screens with intuitive, modern designs, improving overall UX. Modernization services break down monolithic applications into microservices, expose functionality through APIs and unify the application lifecycle with Agile practices, CI/CD, containerization, AI agents, and automated testing and quality assurance.

Eligibility Criteria

1. Ability to assess legacy applications to **provide application documentation**
2. **Deploy automation** for rewriting, reengineering, refactoring and rehosting applications (excludes providers that manually write new code)
3. Offer **application decoupling**, system architecture, data methods, API development and future-state application governance in services
4. Ability to offer phased transformation with **robust project management**, testing and quality assurance capabilities
5. **Foster agile development** and maintenance with CI/CD automation for enterprise clients
6. Demonstrate **expertise in modernizing legacy platforms** such as IBM Z®, IBM i HP, Cray, Fujitsu and Unisys mainframes
7. Offer support for **typical legacy applications** in COBOL, RPG, Easytrieve, PL/I, natural and other languages that traditionally run on mainframes



Application Modernization Services

Observations

Providers in this quadrant position their offerings as comprehensive programs that cover assessment, transformation and migration to cloud-native architectures. They use an automation-first approach reinforced by proprietary platforms and accelerators that reduce manual effort, improve accuracy and shorten delivery timelines.

Providers combine application engineering expertise, industry specialization, GenAI and third-party tooling to provide robust modernization workflows. These capabilities combine deterministic automation to ensure functional equivalence and agentic AI to facilitate innovation. Many companies now offer a reimagine approach that extends the conventional methods of rehosting, replatforming, refactoring, rewriting and reengineering.

The reimagine modernization approach uses GenAI to understand and explain business rules, enabling users to validate and modify them to reflect current business processes and eliminate technical debt where

appropriate. With GenAI, business experts modify requirements before writing new code. Automated testing of legacy and advanced applications ensures consistency, while GenAI identifies differences for human validation.

GenAI also accelerates API creation, reducing the complexity of integrating new applications with legacy mainframe systems, improving the performance of phased modernizations and enabling a consistent approach to identifying workloads that should remain on the mainframe.

Providers consistently highlight their ability to decompose monolithic applications into microservices, expose functionality via APIs and integrate DevOps pipelines for CI/CD automation.

From the 57 companies assessed for this study, 32 qualified for this quadrant, with 13 being Leaders and one Rising Star.

accenture

Accenture combines AI-driven reverse and forward engineering using proprietary tools, including AMT and Majalis for code transformation, and frameworks such as Mercury to develop composable, high-performance architectures.

Capgemini

Capgemini provides a structured mainframe modernization portfolio that includes services such as SlimFrame, EnableFrame and ExitFrame, supported by agentic AI tools such as CAP360, OrchestrateAI and BREAD to assess, optimize and migrate workloads to hybrid cloud architectures.

cognizant

Cognizant combines AI-driven code analysis and rewriting, rehosting and optimization services, providing flexible migration paths to cloud or in-place modernization. Its proprietary AI tools include FlowSource, Neuro AI, Ignition Data and Skygrade.

DXC TECHNOLOGY

DXC Technology modernizes mainframes through rehosting, refactoring, rewriting and in-place optimization, using conversion tools and AI-driven automation to create hybrid architectures supported by a global delivery network.

HCLTech

HCLTech delivers large-scale modernization with its AI platforms, including AI Force, ATLAS, NOVA and FENIX 2.0. Its toolset provides frameworks and accelerators that ensure quality and speed while balancing on-premises transformation with cloud migrations.

HEXAWARE

Hexaware provides end-to-end mainframe modernization with RapidX®, Amaze® and Tensai®. It proposes multiple migration paths with AI-assisted legacy understanding, AI agents orchestration, disciplined governance and a strong partner ecosystem.



Application Modernization Services



Infosys' AI-first modernization spans discovery, API enablement, DevOps and progressive transformation, supported by proprietary platforms such as iLEAD, Topaz, Cobalt and a vast partner ecosystem.

Kyndryl

Kyndryl delivers end-to-end mainframe modernization, from structured assessments and iterative implementation to hybrid cloud integration, enabled by its Kyndryl Bridge platform, Agentic AI Digital Trust, Kyndryl Consult and Kyndryl Vital practices.

LTM

LTM covers mainframe modernization, from assessment and reverse engineering to refactoring, database and API transformation, automated testing and cloud or container deployment, supported by proprietary automation.



Mphasis offers outcome-based deals and provides end-to-end mainframe modernization using AI-enabled platforms (NeoZeta and NeoCrux), accelerators (M-DART and CEAD) and a migration factory (Krypton) toward AWS, Azure and Google Cloud targets.



TCS specializes in modernizing mainframes through large-scale transformations, including AI-driven code refactoring, hybrid cloud integration and tailored strategies for migrating legacy workloads to modern, maintainable architectures.



Tech Mahindra offers a comprehensive mainframe modernization portfolio, supported by GenAI-driven accelerators, reverse-engineering automation, agentic AI orchestration, DevOps pipelines and hybrid cloud integration.



Wipro leverages agentic AI orchestration to automate and govern end-to-end modernization, including innovation, security-by-design, automated testing and controlled crossovers, to ensure quality and business continuity.

Coforge

Coforge (Rising Star) uses a global team of digital experts and proprietary tools such as Forge-X, CodeInsightAI and AMS Studio to deliver consulting and transformation services, using AI agents for discovery, reengineering and cloud replatforming.



Kyndryl



“Kyndryl combines its global scale and a structured modernization methodology with iterative delivery and hybrid cloud integration. It uses AI-driven insights, rigorous governance and strong alliances to modernize complex mainframe environments.”

Pedro L. Bicudo Maschio

Overview

Kyndryl is headquartered in New York, U.S. It has more than 73,000 employees across over 60 countries. In FY25, the company generated \$15.1 billion in revenue, of which the U.S. accounted for around \$3.9 billion of the total share. The company operates several mainframe data centers in the U.S. Kyndryl's application modernization offering spans assessment, strategy, planning and execution. This is enabled by its AI-driven Kyndryl Bridge platform and agentic AI and AIOps extensions, providing a holistic view of the mainframe environment to design and deploy robust hybrid cloud solutions.

Strengths

Global delivery coverage: Kyndryl supports hundreds of mainframe clients and offers multiple hosting models for clients operating in various countries. It uses a structured application disposition framework to align business goals with technical realities and executes modernization iteratively while maintaining support before, during and after change.

Agentic AI-enabled operating model: In 2025, Kyndryl introduced the Kyndryl Agentic AI Framework, a comprehensive agentic AI portfolio. It orchestrates specialized, self-learning agents that can reason and act in mission-critical environments, supported by the Kyndryl Agentic AI Digital Trust for centralized governance and a human-in-the-loop model. The company's portfolio

includes Kyndryl Consult, an agent-based modernization service that provides advisory support for reskilling and change management, and the Kyndryl Vital practice that co-designs CX and UX.

Robust partner ecosystem: Kyndryl uses leading automation tools to transform applications and collaborates with hyperscalers, including Google Cloud, AWS and Microsoft Azure. It is also involved in initiatives such as building 100 agents in 100 days with Google and leveraging AWS Transform for agentic-AI-enabled modernization. Kyndryl manages risk and maintains consistency across complex modernization programs.

Caution

Kyndryl can enhance its modernization practices through industry-specific AI agents and reference architectures. Responding to market demand for industry expertise could also improve its application services footprint.





Mainframe Application Modernization Software (Global)

Who Should Read This Section

This report is valuable for vendors offering **mainframe application modernization software globally** to understand their market position and for enterprises looking to evaluate these vendors. In this quadrant, ISG highlights the current market positioning of these vendors based on the depth of their service offerings and market presence.

Chief information officers

Should read this report to assess the strengths and weaknesses of mainframe application modernization software vendors in terms of their offerings, delivery capabilities, market presence and deployment of the latest technologies. Understanding the mainframe market advancements is critical for IT executives to shape effective, future-proof modernization strategies and ensure their organizations maintain competitive agility and resilience.

Directors of infrastructure and operations

Should read this report to evaluate their enterprises' current and future IT infrastructure needs, enabling them to manage and design effective IT strategies. A mainframe application modernization engagement enables enterprises to create definitive objectives for sub-functions related to business units and define efficient procedures to determine mainframe budgets.

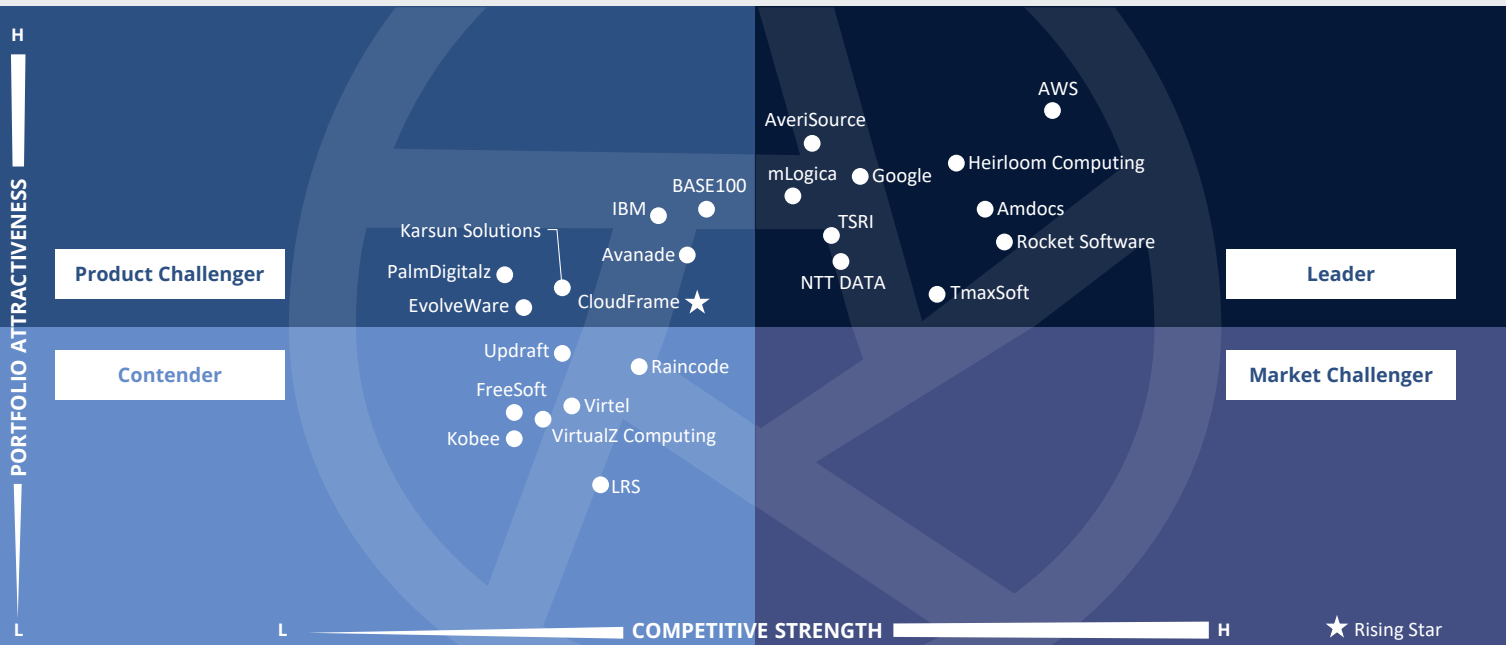
Sourcing, procurement and vendor management professionals

Should utilize this report to better understand the current landscape and partner ecosystem of mainframe application modernization software globally. A deeper understanding of provider competencies, differentiation and market presence supports informed vendor selection and negotiation strategies, ensuring optimal partnerships that deliver both immediate value and sustainable long-term benefits.



Mainframes – Services and Solutions
Mainframe Application Modernization Software

Global 2026



This quadrant assesses **modernization software** vendors that **support clients globally** in transforming and **migrating mainframe applications** to the cloud through automation for rehosting, replatforming, reengineering and rewriting applications.

Pedro L. Bicudo Maschio



Mainframe Application Modernization Software (Global)

Definition

This quadrant evaluates vendors of specialized tools designed to automate code refactoring, rewriting and reengineering, easing the migration of mainframe applications to the cloud or x86 platforms. The solutions assure consistency and repeatability through established frameworks and libraries, with predictable outputs from identical inputs — a critical distinction from the variability of an LLM-generated code. Vendors here leverage GenAI to validate results, generate documents, automate testing and enhance their software engineering toolsets. Modernization extends to logic flows, data architectures, test artifacts, APIs, microservices and serverless functions, helping enterprises accelerate transformation and reduce the risk of manual development. Recent market changes show how GenAI is reshaping competition dynamics and vendor offerings.

This quadrant excludes generic LLM or coding assistants; qualifiers must deliver fully functional, production-ready applications with enterprise-grade support.

Eligibility Criteria

1. Offer a license or deliver software as a service to foster **client autonomy**
2. Specialize in mainframe-**specific tools** (excluding generic reengineering and code analysis)
3. Demonstrate **expertise in modernization methods** such as reverse engineering, business logic mapping, business rules extraction, code review and inspection, documentation, emulators, compilers, frameworks and application development tools to accelerate application code refactoring and modernization to cloud-native architectures.
4. Have offerings that have been **in use** among clients for longer than one year (excludes startup and lab tools)
5. Maintain a robust **support organization** or service partner ecosystem for enterprise-grade support
6. Offer **assessment tools and compilers** (excluding generic code conversion tools, business process management [BPM] tools or wide-scope server/cloud optimization tools)
7. Offer **products** that deliver fully functional applications that equal or have better capacity and performance than the converted legacy mainframe application; this excludes standalone code generators



Mainframe Application Modernization Software (Global)

Observations

This quadrant reflects a market maturing around repeatable software, measurable outcomes and sustained maintainability, with GenAI integration reshaping the competitive landscape.

In this study research, ISG identified a renovated automation-first posture. A few vendors have a strong focus on LLMs alone. In contrast, the majority focus on adding AI agents to their deterministic modernization tools, explicitly differentiating themselves from generic LLM coding assistants. Vendors layer GenAI to uplift documentation, test generation and engineering productivity without compromising determinism.

The combination of deterministic engines with GenAI orchestration repeatedly demonstrates tooling that extracts business rules, maps dependencies and generates modern code with machine assistance. This approach guarantees functional equivalence and reduces hallucination risk, supporting the market demand for AI that augments rather than replaces proven modernization pipelines.

Vendors emphasize enabling API exposure, containerization, serverless functions, DevOps integration and quality assurance at cutover. These companies promote phased execution, parallel validation and automated testing to preserve behavior and compliance.

Relying solely on LLMs to rewrite mainframe code increases the risk of hallucination and poor COBOL-in-Java performance as models can overlook hidden business rules and environmental context, creating security gaps. Clients must ensure human oversight and prefer deterministic verification to avoid the risk of an underperforming and insecure black box running in production.

From the 57 companies assessed for this study, 24 qualified for this quadrant, with 10 being Leaders and one Rising Star.



Amdocs automates code refactoring, data migration and validation, test automation and DevOps-enabled delivery, supported by a structured modernization methodology and multicloud partnerships.



AveriSource combines deterministic analysis with AI to automate refactor, replatform and reimagine paths across diverse legacy stacks, supported by structured delivery phases and designed to address complex modernization requirements.



AWS provides a multi-pattern modernization portfolio centered around AWS Transform for mainframe, combining deterministic analysis and agentic AI with reverse or forward engineering, refactoring, reimagining and automated testing.



Google provides automated assessments, AI-enabled code transformation with GenAI, deterministic refactoring, data integration and Dual Run, demonstrating disciplined capabilities for large-scale application modernization.



Heirloom Computing delivers software and services that refactor mainframe applications to cloud-native Java using deterministic toolchains and agentic AI, supported by analysis, testing automation and partnerships for deployment across major clouds.



mLogica provides automated assessment to guide deterministic and GenAI-assisted refactoring of legacy code, data and middleware, enabling replatforming to cloud-native architectures with integrated testing and post-cut-off support.



NTT DATA offers a three-path portfolio, Mainframe in Place, Mainframe to Cloud and Mainframe Reimagined, powered by UniKix and GenAI, with certified hyperscaler integrations that enable code modernization and cloud-native transformation.



Mainframe Application Modernization Software (Global)

Rocket Software

Rocket Software offers low-risk replatforming of COBOL and PL/1, including tools for transaction processing, development, analysis and integration, with depth in automation, observability, compliance and hybrid orchestration.

TmaxSoft

TmaxSoft provides mainframe rehosting and refactoring with deterministic automation and AI-assisted conversion, broad language, dataset support and cloud marketplace delivery, providing scale to modernize complex legacy applications and data.

TSRI

TSRI offers a language-neutral automated modernization that integrates deterministic and GenAI methods for assessment, transformation and rich documentation. It delivers maintainable, cloud-ready code, along with training, multi-year support and a code warranty.

cloudframe

CloudFrame (Rising Star) provides discovery, intelligence, automated COBOL-to-Java transformation and workload relocation via a powerful, proprietary toolsets that include Atlas, CodeNavigator, Renovate, Relocate and Discover.





Appendix

The ISG Provider Lens® 2026 Mainframes – Services and Solutions study analyzes the relevant software vendors/service providers in the U.S., Global markets, based on a multi-phased research and analysis process, and positions these providers based on the ISG Research methodology.

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The research and analysis presented in this study will include data from the ISG Provider Lens® program, ongoing ISG Research programs, interviews with ISG advisors, briefings with service providers and analysis of publicly available market information from multiple sources. ISG recognizes the time lapse and possible market developments between research and publishing, in terms of mergers and acquisitions, and acknowledges that those changes will not reflect in the reports for this study.

All revenue references are in U.S. dollars (\$US) unless noted.

The study was divided into the following steps:

1. Definition of Mainframes – Services and Solutions market
2. Use of questionnaire-based surveys of service providers/ vendor across all trend topics
3. Interactive discussions with service providers/vendors on capabilities & use cases
4. Leverage ISG's internal databases & advisor knowledge & experience (wherever applicable)
5. Use of Star of Excellence CX-Data
6. Detailed analysis & evaluation of services & service documentation based on the facts & figures received from providers & other sources.
7. Use of the following key evaluation criteria:
 - * Strategy & vision
 - * Tech Innovation
 - * Brand awareness and presence in the market
 - * Sales and partner landscape
 - * Breadth and depth of portfolio of services offered
 - * CX and Recommendation



Lead Author



Pedro Luís Bicudo Maschio
Distinguished Lead Author

Distinguished analyst and author, Pedro Maschio brings extensive experience in the research of the SEMEA (Southern Europe Middle East and Africa) and the Americas service markets. With more than 30 years of experience in sourcing, he has developed vendor assessments plus contract restructuring, services scope and IT benchmarking programs for diverse vertical markets in the Americas and APAC.

Before joining ISG, Pedro was a partner of TGT Consult and managing vice president at Gartner Inc., responsible for the consulting business in APAC and Latin America.

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Manoj is a research analyst at ISG and supports ISG Provider Lens® studies on Private/Hybrid Cloud – Data Center Services, Mainframes and Public Cloud Data Center Solution and Services. He also supports the lead analysts of multiple regions in the research process. Prior to this role, he supported the ROI process in sales intelligence platform and was an individual contributor in handling research requirements for advanced technologies in different sectors. He has considerable expertise in predicting the automation impact by considering certain parameters

such as productivity, efficiency and time reduction. During his tenure, he has supported research authors and authored Enterprise Context and Global Summary reports with market trends and insights.



Author & Editor Biographies



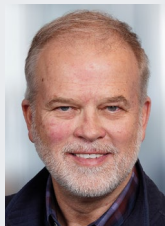
Study Sponsor

Heiko Henkes
Director & Principal Analyst, Global IPL Content Lead

Heiko Henkes serves as Director and Principal Analyst at ISG, overseeing the Global ISG Provider Lens® (IPL) Program for all IT Outsourcing (ITO) studies alongside his pivotal role in the global IPL division as a strategic program manager and thought leader for IPL lead analysts.

Henkes heads Star of Excellence, ISG's global customer experience initiative, steering program design and its integration with IPL and ISG's sourcing practice. His expertise lies in guiding companies through IT-based business model transformations, leveraging his deep understanding of continuous transformation,

IT competencies, sustainable business strategies and change management in a cloud-AI-driven business landscape. Henkes is known for his contributions as a keynote speaker on digital innovation, sharing insights on using technology for business growth and transformation.



IPL Product Owner

Jan Erik Aase
Partner and Global Head – ISG Provider Lens®

Mr. Aase brings extensive experience in the implementation and research of service integration and management of both IT and business processes. With over 35 years of experience, he is highly skilled at analyzing vendor governance trends and methodologies, identifying inefficiencies in current processes, and advising the industry. Jan Erik has experience on all four sides of the sourcing and vendor governance lifecycle - as a client, an industry analyst, a service provider and an advisor.

Now as a research director, principal analyst and global head of ISG Provider Lens®, he is very well positioned to assess and report on the state of the industry and make recommendations for both enterprises and service provider clients.



***ISG** Provider Lens®

The ISG Provider Lens® Quadrant research series is the only service provider evaluation of its kind to combine empirical, data-driven research and market analysis with the real-world experience and observations of ISG's global advisory team. Enterprises will find a wealth of detailed data and market analysis to help guide their selection of appropriate sourcing partners, while ISG advisors use the reports to validate their own market knowledge and make recommendations to ISG's enterprise clients. The research currently covers providers offering their services across multiple geographies globally.

For more information about ISG Provider Lens® research, please visit this [webpage](#).

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***ISG**

ISG (Nasdaq: III) is a global AI-centered technology research and advisory firm. A trusted partner to more than 900 clients, including 75 of the world's top 100 enterprises, ISG is a long-time leader in technology and business services sourcing that is now at the forefront of leveraging AI to help organizations achieve operational excellence and faster growth.

The firm, founded in 2006, is known for its proprietary market data, in-depth knowledge of provider ecosystems, and the expertise of its 1,600 professionals worldwide working together to help clients maximize the value of their technology investments.

For more information, visit isg-one.com.





MARCH, 2026



REPORT: MAINFRAMES — SERVICES AND SOLUTIONS