ISG Provider Lens™

Mainframes – Services and Solutions

A guide to extend mainframe capabilities and modernize applications to integrate cloud services

Customized report courtesy of:

DXC TECHNOLOGY

QUADRANT REPORT | MARCH 2025 | EUROPE

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Europe's mainframe landscape sees cautious investment, hybrid strategies and rising AI use

Across Europe, mainframes are crucial for sectors such as banking, government and manufacturing. Multiple studies estimate that European institutions process billions of transactions daily on mainframes. In the last 18 months, cost pressures, skill shortages and stricter regulations have sparked demand for services and software that optimize, modernize and secure legacy systems.

Hybrid strategies persist, balancing mainframe stability with cloud agility. In a recent mainframe client study by Kyndryl, most enterprises stated they now adopt a hybrid approach: 96 percent are migrating some portion of their workloads off the mainframe (on average 36 percent) while relying on them for mission-critical tasks. Meanwhile, 89 percent consider mainframes Extremely or Very Important, blending cloud scalability and mainframe reliability.

As enterprises integrate mainframes more closely with cloud and distributed platforms, these hybrid environments will demand new tools and processes — particularly to harness data across platforms for AI and analytics.

Europe's slow or near-stagnant economic growth has made enterprises more cautious, favoring smaller, high-impact modernization projects that demonstrate clear ROI. At the same time, the ongoing need for competitiveness, compliance and AI-driven innovation propels continued investment in upgrading mainframes. As a result, modernization efforts in the region have shifted from large-scale overhauls to incremental, service-based approaches.

Generative AI (GenAI) has swiftly moved from being a PoC to an increasingly viable solution for mainframe modernization in Europe, assisting with code refactoring, documentation and skill transfer. While limitations in accuracy, regulatory complexity and resource requirements remain significant, continued advancements in domain-specific models and compliance frameworks promise to close existing gaps.

Twenty-eight percent of mainframe clients say they **lack the in-house skills** to modernize effectively.

Skills shortage — a key issue in the European mainframe market

Mainframe clients in Europe have been struggling with the low availability of mainframe knowledge for years, and the issue persists. Eurostat data on workforce demographics shows that up to 30 percent of Europe's IT professionals could retire or exit the workforce by 2030. Many of these professionals hold mainframe-specific skills such as COBOL, PL/I, IMS and CICS, making the retirement wave especially problematic for companies that still depend on these platforms.

Higher education institutions in the region are increasingly emphasizing cloud-native and web-based development, leaving mainframe-focused curricula less common. Surveys from various industry groups (including the European CIO Association) indicate that less than 10 percent of recent IT graduates in Europe have exposure to mainframe environments, and fewer than 5 percent report proficiency in COBOL or assembler languages often used in legacy systems.

The fragmentation of the European continent into more than 30 countries with varied languages, partly different labor laws and diverse business cultures forces companies to seek talent on a limited local scale. Moreover, mainframe specialists require dedicated local language skills because teams in France, Germany, Spain or Italy may use local languages for system documentation or documentation of local regulations.

The result is a shallow talent pool for mainframe positions, even as the need for modernization expertise grows. Some of the largest companies in Europe face serious challenges in recruiting new talent with the security, compliance and mainframe-coded language skill sets needed to manage critical systems in an era of complex regulatory requirements. Therefore, leading regional banks and telecoms have set up internal *mainframe academies*, offering boot camps and labs to cross-train existing staff from other IT disciplines.

GenAI is driving change, with regulations hindering rapid (and more insecure) development

Over the past 18 months, the use of GenAI in mainframe environments has progressed from niche pilot tests to structured deployments. Early prototypes struggled with limited context and specialized legacy languages, yet the technology demonstrated enough potential to attract broader interest. Initial trials focused on tasks such as automated documentation and code translation, revealing that AI-driven systems can reduce the overhead of manual analysis. Despite some accuracy challenges, these PoCs spurred further experimentation, highlighting how AI models could automate aspects of modernization projects and address enduring skill shortages in mainframe development.

Today, GenAI tools are being used to uncover hidden logic in COBOL and assembler code, refactor or annotate legacy applications and expedite documentation efforts.

In Europe, where banking, insurance and public administration often rely heavily on mainframes, these use cases have begun advancing from pilot stages to production. Providers report faster discovery of dependencies, assistance in bridging knowledge gaps for younger developers and greater confidence in modernization timelines. However, the technology still requires domain-specific tuning and human oversight; most organizations rely on subject matter experts to validate AI output and ensure it aligns with business requirements and compliance standards.

There are several limitations. Mainframe codebases are typically vast, customized and deeply embedded in critical workflows, rendering them less straightforward than modern systems. GenAI also risks generating hallucinations or convincing yet incorrect recommendations, making verification essential. Strict European data protection laws add complexity, as organizations must handle code and correlated data carefully to avoid breaching GDPR or sector-specific regulations.

In addition, AI-driven tools can be resource-intensive, whether they are run on-premises or via cloud services, and many companies remain cautious about how and where to train or deploy large models containing sensitive organizational logic.

GenAI in mainframe contexts is poised to expand across the development lifecycle. Expected improvements include the development of more precise domain-focused models to handle COBOL variants and legacy data structures, integrated compliance features that log and audit AI use, and deeper ties to DevOps pipelines for automated testing. Many providers are working on capabilities supporting hybrid cloud architectures, where modern and legacy systems interconnect seamlessly. Enhanced low-code integrations may also emerge, allowing non-experts to leverage mainframe data while relying on AI-driven code insights for complex backend processes.

The discussion about the limitations that Europe's regulatory environment puts on AI development and how regulations can be adapted to fuel development without loosening its protection mechanisms is in full swing. Its result will play a unique role in shaping GenAI adoption for mainframe code analysis. Today, strict data protection rules and local sovereignty requirements necessitate either robust on-premises solutions or carefully managed partnerships with AI providers. Large banks and government agencies have already pushed for specialized security and auditing features, influencing global providers to accommodate European privacy mandates. These constraints sometimes slow adoption but ultimately contribute to more reliable, well-documented implementations, setting a precedent for international deployments that must prioritize security, compliance and data ethics.

The necessity for innovation is stronger than pure cost control

Europe's mixed economic outlook, with several leading economies experiencing near-stagnation or minimal growth, has created a dual effect on mainframe modernization. On the one hand, tighter budgets and cost-conscious strategies have prompted some enterprises to proceed more cautiously with large-scale investments. Decision-makers often look to defer or phase out capital-intensive modernization projects, focusing instead on smaller, quicker improvements with clear ROI. This approach has led many companies to scrutinize every outlay more closely, seeking ways to justify projects through measurable gains in efficiency and resilience.

On the other hand, the drive to remain competitive — especially against global competitors and in the face of new digital mandates — continues to power modernization initiatives. Even in a slow-growth environment, organizations cannot afford to stagnate core infrastructure to maintain or improve market share. Compliance requirements, security threats and the surge in AI-driven innovations provide additional impetus as outdated or inflexible systems become bottlenecks to agile service delivery. In regulated sectors such as banking, insurance and government, modernization is often viewed as essential to meeting evolving standards and customer expectations, rather than a discretionary expense.

As a result, the trend toward modernization has not halted; it has merely shifted. Many enterprises now pursue **incremental modernization** — updating specific workloads, integrating targeted AI solutions and employing hybrid models that blend mainframe stability with cloud flexibility. Outsourced operations services, mainframe-as-a-service models and phased modernization approaches also help reconcile cost constraints with the push for innovation. Consequently, despite economic headwinds, the need to stay competitive and comply with rigorous regulations ensures that mainframe modernization remains a priority in Europe's business landscape.

Mainframe Optimization Services

European enterprises rely on mainframe optimization to curb costs, adapt to inflation and improve resource utilization. In light of economic uncertainty, many European enterprises are focusing on cost efficiency, leading to a noticeable uptick in demand for specialized teams that can tune mainframe environments (e.g., CPU utilization, workload management and capacity planning).

Over the last 18 months, AI-powered diagnostics have highlighted performance bottlenecks, driving down CPU overhead. Heightened regulatory pressures (e.g., GDPR and NIS2) now shape optimization priorities and have pushed optimization services to include data protection and audit-readiness assessments. By combining capacity planning with cost oversight, these services extend mainframe life, streamline processes and unify monitoring across hybrid environments.

Mainframe Application Modernization Services

A **hybrid** approach to modernization remains prevalent across Europe. Rather than complete migration off the mainframe, many enterprises favor strategies that retain mission-critical workloads on mainframe infrastructure while integrating cloud services for front-end or analytics functions. As COBOL experts retire, service providers have become increasingly **consultative,** offering **training** and **code analysis** to address skills shortages. GenAI is also being applied for automated code refactoring and documentation. In the past 18 months, AI-driven analysis has eased skill gaps by automating COBOL translation and revealing dependencies.

In BFSI, as well as national or regional government agencies, application modernization services are in particularly high demand to meet **compliance** and **digital transformation** mandates, with a drive to **accelerate modernization** initiatives. This shift has spurred providers to adopt **Agile** and **DevOps** practices that shorten project cycles and reduce risks.

Mainframe Operation Services

As internal mainframe teams shrink, many European enterprises increasingly turn to outsourced/managed services to maintain mission-critical systems. This approach frees them from routine tasks such as monitoring, patching and incident response while letting staff focus on innovation.

Beyond basic uptime and performance SLAs, buyers now expect advanced security controls (such as encryption, real-time threat detection and compliance reporting), forcing operation service providers to expand their offerings. Therefore, recent demand centers around end-to-end observability — one console or dashboard that can track mainframe performance along with distributed and cloud services.

More operators are introducing AIOps to meet these demands, reduce manual intervention and speed up incident resolution. Although adoption is still in the early stages for many, the trend is gaining ground in large-scale environments looking to streamline support. ISG expects some significant development in this area in the next 18 months.

Mainframe as a Service (MFaaS)

While the MFaaS model has gained more visibility in the last 18 months, adoption in Europe remains measured, and the number of providers offering MFaaS at scale remains low. MFaaS is pitched as a way to convert mainframe overhead into a more OpEx-centric model. However, understanding TCO can still be tricky, leading some organizations to pilot MFaaS solutions before fully committing.

Organizations in highly regulated industries often cite data sovereignty concerns and specific compliance obligations that require either on-premises hosting or stringent contractual agreements that only a few providers can meet.

MFaaS can help scale up or down without large capital outlays for companies with seasonal or variable workloads. This advantage resonates with midsize and small enterprise clients that need mainframe capabilities but lack the budget or the talent to manage everything internally. The move to MFaaS also creates a good opportunity to bring the mainframe environment up to date with the latest patches and upgrades, which might have been delayed due to the rising lack of in-house skills. Early adopters often pair MFaaS for certain test or development environments with on-premises mainframes for production. This strategy aligns with a broader hybrid IT philosophy.

Mainframe Application Modernization Software

Over the past 18 months, the availability of AI-enhanced code analysis and conversion tools has increased. These tools aim to accelerate modernization projects by generating reports on code dependencies, business logic and

application flows. Some solutions enable low-code or no-code development on mainframe assets, letting non-mainframe specialists create or integrate new services without delving into COBOL or assembler.

As more European enterprises adopt modern CI/CD practices, the demand for software that easily plugs into enterprise DevOps toolchains has surged, allowing consistent build, test and release cycles across both cloud and mainframe components. Many modernization software suites offer built-in security checks, encryption libraries and compliance audit features to align with European data protection and privacy regulations. As many providers of mainframe application modernization software are headquartered outside the EU and might have limited local workforce capacities, they rely heavily on their partnerships with multinational service providers to create a localized offering and ensure the availability of regulatory skills and processes.

Europe has a highly regulated environment, from GDPR to regional and industry-specific directives (e.g., banking, healthcare and pharma). In practice, this means that mainframe modernization and operation skills must include not only technical expertise in mainframes but also a strong grasp of data privacy and cybersecurity best practices to ensure companies comply with European regulations.

Provider Positioning

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	Mainframe Optimization Services	Application Modernization Services	Mainframe as a Service	Mainframe Operations	Mainframe Application Modernization Software
Accenture	Product Challenger	Leader	Not In	Product Challenger	Not In
Astadia (Amdocs)	Not In	Not In	Not In	Not In	Product Challenger
Atos	Leader	Leader	Leader	Leader	Not In
Avanade	Not In	Product Challenger	Not In	Not In	Leader
AveriSource	Not In	Not In	Not In	Not In	Product Challenger
AWS	Not In	Not In	Not In	Not In	Leader
BASE100	Not In	Not In	Not In	Not In	Product Challenger
BMC	Contender	Not In	Not In	Contender	Product Challenger
Capgemini	Leader	Leader	Product Challenger	Leader	Not In
CGI	Not In	Contender	Not In	Not In	Not In

Provider Positioning

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	Mainframe Optimization Services	Application Modernization Services	Mainframe as a Service	Mainframe Operations	Mainframe Application Modernization Software
CloudFrame	Not In	Not In	Not In	Not In	Contender
Cognizant	Product Challenger	Leader	Product Challenger	Leader	Not In
CPT Global	Product Challenger	Contender	Not In	Contender	Not In
Deloitte	Not In	Product Challenger	Not In	Not In	Not In
DXC Technology	Leader	Leader	Leader	Leader	Not In
Ensono	Product Challenger	Product Challenger	Product Challenger	Product Challenger	Not In
FreeSoft	Not In	Not In	Not In	Not In	Product Challenger
Fujitsu	Not In	Product Challenger	Not In	Not In	Not In
GFT	Contender	Product Challenger	Not In	Contender	Not In
Google	Not In	Not In	Not In	Not In	Leader

Provider Positioning

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	Mainframe Optimization Services	Application Modernization Services	Mainframe as a Service	Mainframe Operations	Mainframe Application Modernization Software
HCLTech	Leader	Leader	Leader	Product Challenger	Not In
Heirloom Computing	Not In	Not In	Not In	Not In	Leader
Hexaware	Not In	Product Challenger	Not In	Not In	Not In
IBM	Not In	Product Challenger	Not In	Not In	Product Challenger
IKAN	Not In	Not In	Not In	Not In	Contender
Infosys	Leader	Leader	Not In	Leader	Not In
Kyndryl	Leader	Rising Star ★	Leader	Leader	Not In
LTIMindtree	Product Challenger	Leader	Product Challenger	Product Challenger	Not In
LzLabs	Not In	Not In	Not In	Not In	Product Challenger
mLogica	Not In	Not In	Not In	Not In	Product Challenger

Provider Positioning

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	Mainframe Optimization Services	Application Modernization Services	Mainframe as a Service	Mainframe Operations	Mainframe Application Modernization Software
MOST Technologies	Not In	Not In	Not In	Not In	Contender
Mphasis	Product Challenger	Product Challenger	Not In	Not In	Not In
NTT DATA	Not In	Contender	Not In	Not In	Rising Star ★
OpenText	Contender	Not In	Not In	Not In	Not In
Raincode	Not In	Not In	Not In	Not In	Contender
Rocket Software	Not In	Not In	Not In	Not In	Leader
Software AG	Contender	Not In	Not In	Not In	Not In
TCS	Leader	Leader	Leader	Leader	Product Challenger
Tech Mahindra	Product Challenger	Product Challenger	Contender	Not In	Not In
TmaxSoft	Not In	Not In	Not In	Not In	Leader

Provider Positioning

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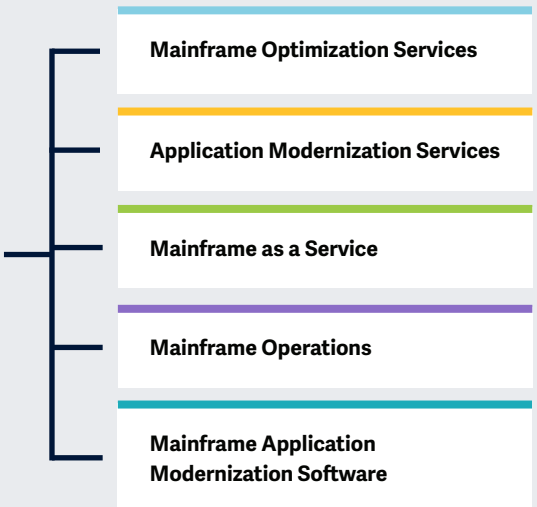
	Mainframe Optimization Services	Application Modernization Services	Mainframe as a Service	Mainframe Operations	Mainframe Application Modernization Software
TSRI	Not In	Not In	Not In	Not In	Leader
T-Systems	Product Challenger	Contender	Contender	Product Challenger	Not In
Unisys	Product Challenger	Not In	Contender	Product Challenger	Not In
UST	Product Challenger	Product Challenger	Not In	Product Challenger	Not In
Virtel (Syspertec Group)	Not In	Not In	Not In	Not In	Contender
Wipro	Leader	Leader	Product Challenger	Product Challenger	Not In

Key focus areas for Mainframes – Services and Solutions 2025.



Simplified Illustration Source: ISG 2025

Definition

This study assesses service providers and vendors offering mainframe optimization, outsourcing and mainframe as a service (MFaaS). It also evaluates system integrators and automation tool vendors for refactoring, rehosting, replatforming, rewriting and reengineering applications to migrate to the cloud.

Generative AI (GenAI) solutions requiring access to mainframe data have accelerated modernization demand in the last two years. Clients seek mainframe modernization to reduce technical debt, enable AI technologies, improve business analytics and enhance compliance. New business resilience and carbon neutrality requirements are also pushing companies to rethink their data center strategies.

Market consolidation and cloud innovation, including GenAI, continue to change the competitive landscape. Mainframe software licensing, particularly third-party software and middleware, drives mainframe budgets.

Mainframe modernization aims to optimize resources and license costs while reducing or eliminating technical debt.

While GenAI can read legacy languages and document applications, clients expect it to create new code to eliminate obsolescence. GenAI does not automate rewriting code. However, it is changing the performance and functionality offered by application modernization tool vendors.

Mainframe outsourcing and MFaaS are common choices to reduce IT spending, increase automation, optimize performance and improve hybrid cloud integration. This study helps track how outsourcing is evolving in response to modernization, GenAI and new enterprise requirements.

Scope of the Report

This ISG Provider Lens™ quadrant report covers the following five quadrants for services/solutions: Mainframe Optimization Services, Application Modernization Services, Mainframe as a Service, Mainframe Operations and Mainframe Application Modernization Software.

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

- Transparency on the strengths and weaknesses of relevant providers/software vendors
- A differentiated positioning of providers by segments (quadrants)
- Focus on the regional market

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.

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.

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 a follow sensible market approach with a goal of becoming a Product or Market Challenger within 12 to 18 months.

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 Optimization Services

Who Should Read This Section

This report is valuable for providers offering mainframe optimization services in Europe 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 and examines how each addresses key regional challenges.

CIOs

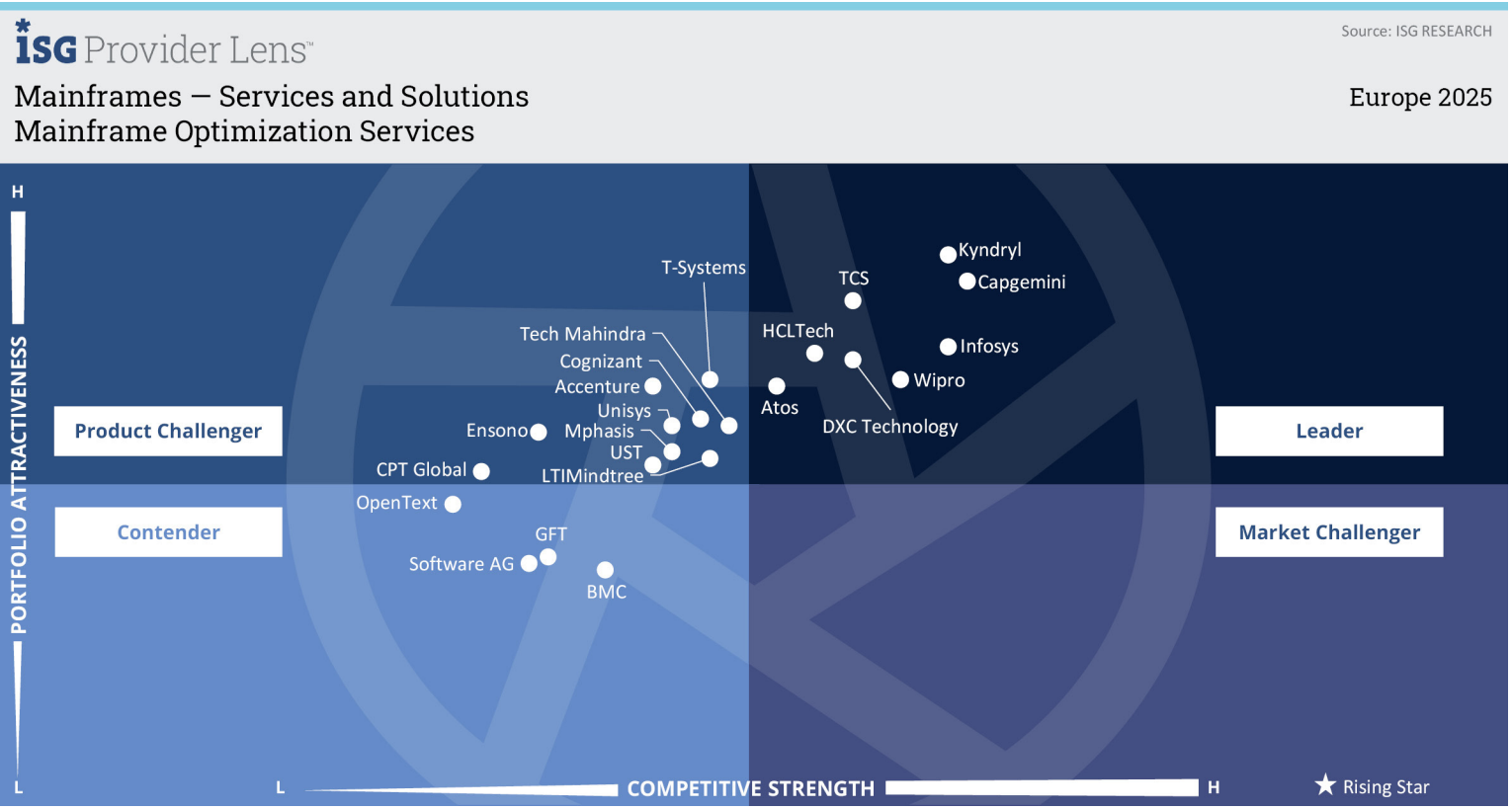
Should read this report to understand the strengths and weaknesses of providers, including the way they harness latest technologies to deliver reliable offerings.

CTOs

Should read this report to understand the mainframe optimization service capabilities of providers to achieve improved technology integration into products, services and business administration.

Technology leaders

Should read this report to understand providers competing in the mainframe market in terms of offerings, innovations, talent and portfolios.



This quadrant assesses service providers that offer mainframe optimization services to **modernize and optimize** mainframe environments to **control costs**, optimize performance and manageability, and **prepare enterprises for faster innovation**.

Oliver Nickels

Definition

Providers in this quadrant offer mainframe optimization, modernizing its technology and applications while maintaining programming languages, such as COBOL. Innovation may include GenAI to document legacy code, automate version control and repositories such as GitHub, improve DevOps integration and automate code and security testing to optimize agile delivery.

Clients aim to optimize their mainframe operations to control costs and avoid obsolescence. A consistent modernization and optimization program will help them upgrade mainframes in the future. During optimization, clients expect providers to help replace middleware with new tools and improve configurations to enhance performance and reduce MIPS consumption.

Providers assess clients' application portfolios and deliver modernization plans, advising on which applications should remain on the mainframe platform and which should be transformed or migrated to other platforms to optimize cost and performance.

Eligibility Criteria

1. Present modernization **case studies** around IBM Z®, IBM AS/400, IBM iSeries, HP, Bull or Unisys mainframe applications
2. Include **DevOps tools integration** in case studies
3. Enable legacy programming languages to build and deploy mainframe applications in line with modern **continuous integration** practices (e.g., COBOL CI/CD pipeline implementation)
4. Provide **portfolio and application assessments** as part of services
5. Plan for phased modernization with robust testing and **quality assurance**
6. **Decouple applications,** develop APIs and integrate with applications outside the mainframe environment
7. Offer guidance for future-state application **governance**
8. Demonstrate adequate **COBOL expertise** and proficiency in other mainframe programming languages among employees

Observations

Enterprises in Europe are increasingly optimizing their mainframes to reduce costs, adapt to inflation and manage resources amid economic uncertainty. The demand for specialized teams to fine-tune CPU usage and workload management is growing while AI-driven diagnostics uncover performance bottlenecks. Regulatory requirements (such as GDPR and NIS2) now shape optimization priorities and emphasize data protection and audit readiness. By merging capacity planning with cost oversight, these services prolong system life, streamline processes and unify hybrid monitoring.

Technological advancements and strategic alliances define the market in Europe. Major providers emphasize end-to-end modernization, cloud integration and partnerships with tech specialists, ensuring broad, scalable solutions.

Leading firms differentiate themselves through AI-driven modernization, proprietary transition frameworks and specialized tools that automate complex processes, resulting in better efficiency, reduced costs and alignment with future technologies.

Atos has expanded in Europe by combining a strong localized presence in European countries with dedicated services for risk-aware optimization, minimizing compliance risks and system disruptions. New to the quadrant, Accenture broadens its regional footprint with global mainframe proficiency and a focus on security, collaborative frameworks and organizational capabilities, positioning it as a 2025 Product Challenger.

From the 46 companies assessed for this study, 22 qualified for this quadrant, with eight being Leaders.

Atos

Atos leverages HPC expertise and managed services for risk-aware mainframe optimization, emphasizing compliance and minimal disruption across critical systems.

Capgemini

Capgemini uses a consulting-led approach and agile methods to align mainframe optimization with business goals, delivering secure transformations across complex global environments.

DXC TECHNOLOGY

DXC Technology leverages extensive legacy expertise with AI-driven solutions to offer flexible migration strategies that integrate risk-aware processes and global delivery capabilities.

HCLTech

HCLTech integrates robust engineering with AI-powered modernizations, focusing on code analysis, automation and agile frameworks to optimize mainframe operations and reduce costs.

Infosys combines industry-focused consulting with AI-accelerated modernization to streamline mainframe systems, leveraging broad partnerships and deep domain expertise for scalable outcomes.

Kyndryl builds on IBM's mainframe roots to deliver resilient and reliable transformations with consultative cloud, security and networking perspectives fortified by GenAI integration.

TCS emphasizes industrialized frameworks, repeatable processes and domain-specific accelerators to modernize mainframes, leveraging GenAI to handle complex migration and optimization tasks.

Wipro's AI-driven automation and agile approach support incremental modernizations, featuring proprietary GenAI refactoring and testing tools backed by global delivery and domain-specific expertise.

Leader

"DXC Technology blends decades of expertise with AI-driven solutions to enable flexible partial migrations and scalable mainframe optimization worldwide."

Oliver Nickels

DXC Technology

Overview

DXC Technology is headquartered in Virginia, U.S. It has more than 127,200 employees across over 130 offices in 65 countries. In FY24, the company generated $13.7 billion in revenue, with Global Infrastructure Services as its largest segment. DXC offers mainframe optimization services that improve operations, security and processing efficiency while delivering high availability and stability. In Europe, DXC has completed over 200 mainframe migrations and maintains partnerships with major cloud providers to support mainframe modernization efforts.

Strengths

Heritage in legacy management: DXC, formed by the 2016 CSC and HPE services merger, draws on its extensive experience in optimizing mainframe workloads. By combining proven migration frameworks with global delivery, it reduces risk and modernizes infrastructure while gradually transforming applications, aligning with large enterprises' digital goals.

AI-driven innovation: DXC launched AI Impact, merging consulting, engineering and secure enterprise services to advance AI. Collaborations with Dell Technologies further boost Enterprise Intelligence Services, leveraging AI, ML and analytics to transform enterprise data. These moves highlight DXC's focus on integrated AI for modernization.

Flexibility and cost control: DXC offers partial application migration strategies that combine platform modernization with MFaaS to keep core systems running while reducing costs. A focused go-to-market model targets customers not using modern DevOps or GenAI, those seeking cost efficiency and smaller clients looking for leveraged infrastructure.

Global mainframe expertise: Operating 700,000 MIPS in 52 data centers, DXC's 5,600 experts excel in COBOL and DB2. Its broad modernization portfolio bridges managed mainframe services and transformative modernization, delivering high performance, enhanced competitiveness and improved UX.

Caution

DXC can expand nearshore capabilities and tailor solutions for smaller European enterprises to reduce costs and complexity. It could also expand its industry expertise to accelerate modernization timelines and reinforce client confidence.

Application Modernization Services

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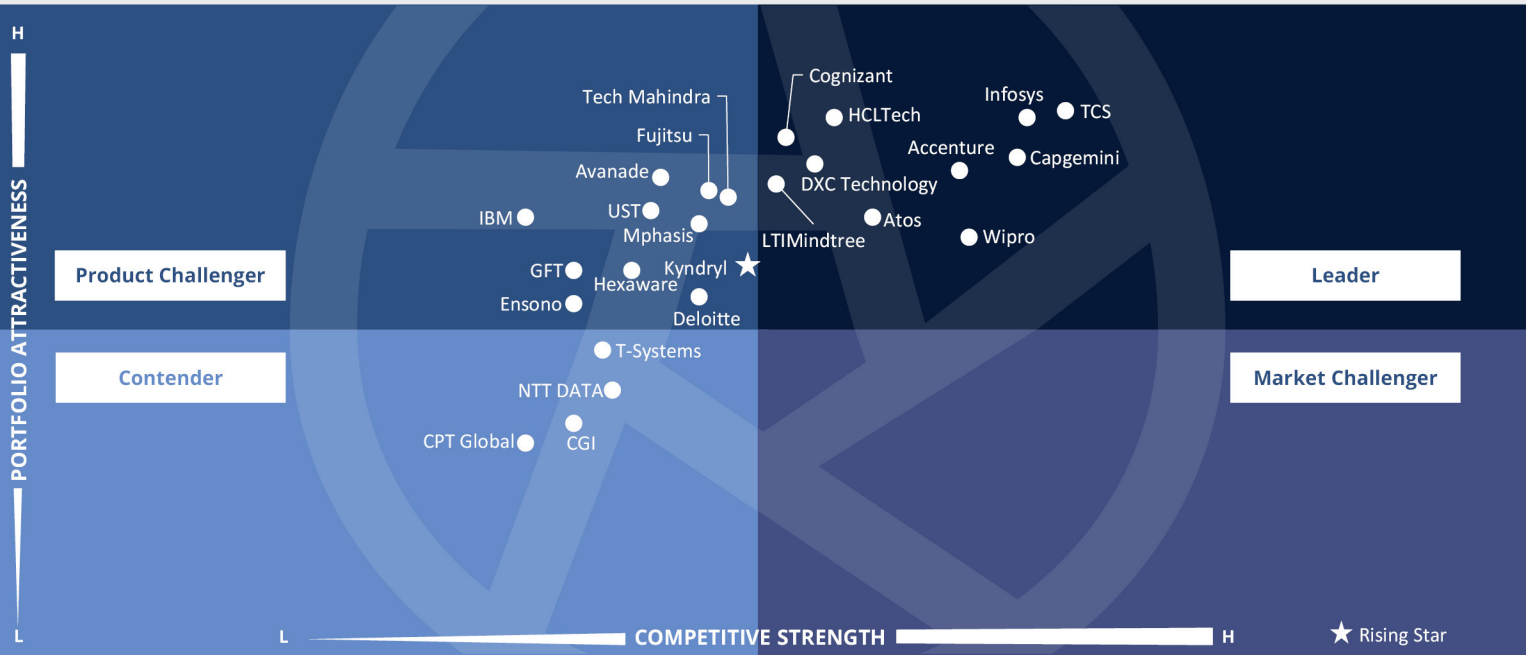
ISG Provider Lens™

Source: ISG RESEARCH

Mainframes — Services and Solutions
Application Modernization Services

Europe 2025



This quadrant assesses service providers that use advanced **mainframe application modernization** methodologies and partner with tool vendors to **automate the assessment and rewriting** of legacy programming language applications.

Oliver Nickels

Definition

This quadrant evaluates application service providers that use advanced modernization methodologies to assess and rewrite legacy programming language applications. These providers partner with tool vendors to automate code writing, data conversion, database and cloud migration.

Typical legacy applications use COBOL, RPG, Easytrieve, PL/1, natural and other languages that traditionally run on mainframes. The capacity to cover many legacy languages contributes to the service provider rating. Thus, providers that use more vendor tools and GenAI may have better appraisals.

Providers may also use emulators and compilers to replatform rather than rewrite (without converting the source code), which does not impact their rating.

A provider's neutral approach to selecting vendor tools can improve its position. A complete transformation should include UI translation services that can eliminate green screens while introducing a modern UI for a better UX.

Eligibility Criteria

1. Reverse engineer legacy applications to provide application logic **documentation**
2. Use **automation for rewriting, reengineering, refactoring and rehosting** applications (excluding providers that manually write new code)
3. Include application **assessment, decoupling,** system **architecture, API development** and future-state application governance in services
4. Offer phased transformation with **robust project management,** testing and **quality assurance**
5. Enable the enterprise client to operate **agile development and maintenance** with CI/CD automation
6. Support legacy platforms, including IBM Z, AS/400, HP, Cray, Fujitsu and Unisys mainframes

Observations

A hybrid approach to mainframe modernization prevails across Europe, blending mission-critical workloads on mainframes with cloud services for analytics and front-end functions. As COBOL experts retire, consultative support and GenAI solutions help bridge skill gaps by automating code refactoring and documentation. BFSI and government agencies drive high demand for such solutions due to compliance mandates and digital transformation, spurring agile and DevOps adoption to streamline project cycles.

The market is transforming rapidly, with leading providers emphasizing cloud integration, AI-driven capabilities and partnerships with hyperscalers to ensure scalability and security. Some providers differentiate themselves through proprietary tools, frameworks and flexible pricing aligned with client needs.

Kyndryl has emerged as a Rising Star, combining IBM heritage with AI-powered platforms such as Kyndryl Bridge to deliver resilient, scalable solutions. Meanwhile, LTIMindtree has achieved the Leader status by offering in-house accelerators, a robust partner ecosystem and comprehensive modernization services that align with Europe's evolving IT landscape.

From the 46 companies assessed for this study, 25 qualified for this quadrant, with 10 being Leaders and one a Rising Star.

accenture

Accenture integrates business-focused consulting with proprietary tools and strategic cloud partnerships to deliver tailored mainframe modernization that aligns with broader digital transformation goals while managing organizational change effectively.

Atos

Atos specializes in phased, compliance-focused modernization, leveraging high-performance computing (HPC) expertise and the Atos Group migration & modernization framework. framework to deliver secure and efficient transformations tailored to complex and regulated industries.

Capgemini

Capgemini uses its CAP360 suite and hybrid strategies to drive incremental modernization with AI-driven automation. It focuses on cost savings, agility and industry-specific transformation outcomes.

cognizant

Cognizant blends domain expertise with AI-powered platforms to accelerate modernization. It focuses on incremental value, leveraging automation and strong cloud partnerships for cost-effective and strategic outcomes.

DXC Technology delivers full-scale modernization using GenAI tools and Modernization Studio. Its strong hyperscaler alliances support tailored offerings for seamless migration, optimization and hybrid integration.

HCLTech combines its engineering-driven approach with advanced automation tools and AI frameworks, offering hybrid and incremental mainframe modernization solutions that prioritize business alignment and scalability.

Infosys uses its AI-first approach with proprietary platforms such as iLEAD and Topaz, driving modernization with zero disruption, robust cloud integration, and scalable, value-driven frameworks.

LTIMindtree employs its M3 framework and automation-driven accelerators to deliver modular modernization. The company's services balance agility with risk reduction for regulated sectors such as manufacturing, energy and BFSI.

TCS provides industrialized mainframe modernization with its MasterCraft platform, combining AI-driven automation, domain expertise and hybrid cloud strategies for comprehensive, scalable transformation.

Wipro's modular ModerniZ platform and BoundaryLess Enterprise strategy focus on continuous modernization, blending AI, DevOps and cloud expertise to deliver agile, incremental transformation.

Rising Star **Kyndryl** integrates mainframe and hybrid IT modernization with AI-powered tools such as Kyndryl Bridge, combining decades of IBM expertise with new flexibility to deliver resilient, scalable solutions for critical workloads.

Leader

"DXC Technology excels in large-scale transformations, combining GenAI-driven tools, a global delivery model and strategic hyperscaler partnerships to modernize legacy systems with precision and speed."

Oliver Nickels

DXC Technology

Overview

DXC Technology is headquartered in Virginia, U.S. It has more than 127,200 employees across over 130 offices in 65 countries. In FY24, the company generated $13.7 billion in revenue, with Global Infrastructure Services as its largest segment. DXC provides mainframe application modernization services, emphasizing the transformation of legacy applications to improve agility and reduce costs. The company has a strong presence across multiple countries and offers tailored modernization solutions to meet region-specific requirements in Europe.

Strengths

Comprehensive end-to-end modernization: DXC stands out for its full-service mainframe application modernization approach, covering every stage from advisory to cloud deployment. Using proprietary frameworks and tools such as the Modernization Studio platform and Quick Transformation Engine, it provides tailored solutions for rehosting, replatforming or rearchitecting applications. DXC's robust methodologies ensure seamless transformations, having migrated over 65,000 workloads in more than 200 successful projects.

AI-powered innovation and automation: DXC leverages its Recursive AI Method and GenAI tools to accelerate modernization, enabling intelligent code analysis, pattern recognition and automated test generation. These tools reduce manual effort, streamline processes and facilitate precise outcomes.

Strategic partnerships and specialized expertise: With strong alliances with AWS, Microsoft and Google, DXC integrates the latest hyperscaler innovations into its modernization strategies. It also specializes in niche areas, such as z/TPF OS for airlines and exclusive Hogan modernization road maps for insurance. Flexible pricing models and a highly skilled workforce allow DXC to offer tailored solutions that balance cost efficiency with risk mitigation.

Caution

DXC offers application modernization services exclusively for IBM Z. The company has the potential to expand its offering to include the vast AS/400 installation in Europe.

Mainframe as a Service

Who Should Read This Section

This report is valuable for providers offering MFaaS in Europe 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.

CIOs

Should read this report to understand the strengths and weaknesses of providers, including the way they harness the latest technologies to deliver reliable offerings.

CTOs

Should read this report to understand the capabilities of providers offering MFaaS to achieve improved technology integration into products, services and business administration.

Procurement and sourcing specialists

Should read this report to understand their outsourcing needs and establish a suitable landscape for mainframe consulting and transformation services.

This quadrant assesses provider capabilities in offering **shared mainframe services**, including facilities, **hardware, operating system** and subsystems, connectivity, hardware and operating system **maintenance services**, software licensing and **optimization** tools.

Oliver Nickels

Definition

This quadrant assesses infrastructure service providers that offer shared IBM mainframes under a pay-per-use contract model. The provider ensures continuous infrastructure upgrades and capacity expansion to support clients' growth and avoid infrastructure obsolescence.

Typically, MFaaS is offered on the provider's data center facilities. However, colocation partners are also considered if they provide a cloud-like experience, and clients should not have to check or audit the underlying infrastructure. Providers typically offer application migration services to onboard clients, and the default scope includes providing high availability and disaster recovery.

To provide a cloud-like experience, providers offer clients a self-service portal with service catalogs and GenAI assistants, covering approval workflows, security, compliance and automated service provisioning, enabling clients to increase and decrease their utilization.

Eligibility Criteria

1. Include facilities, hardware, connectivity, mainframe network management, operating system and subsystems, licensing and tools in the MFaaS scope. **Provide all hardware and operating system maintenance services required to keep mainframes running** and meet the expected performance metrics established upfront.
2. Offer **secure data centers** with high performance and availability
3. Include job scheduling automation, performance optimization, customer information control system (CICS), batch processing, backup, restore, system upgrades, security patches and other typical **mainframe operations** in services
4. Demonstrate proven MFaaS infrastructure **disaster recovery** effectiveness
5. Provide **low-latency connections** (e.g., Direct Connect) to clients' locations and the public cloud, with a preference for carrier-neutral data centers
6. Demonstrate **financial capacity** to invest in and expand mainframe operations
7. Implement a **hiring and training program** to ensure future skills availability
8. Support platforms, including IBM Z and IBM Power Systems (AS/400 and iSeries)

Observations

Many European enterprises increasingly outsource mainframe operations, offloading routine tasks, such as monitoring, patching and incident response, to specialized providers so internal teams can focus on innovation. Beyond basic uptime and performance SLAs, buyers expect advanced security controls (such as encryption, real-time threat detection and compliance reporting) and seek unified observability across mainframe, distributed and cloud environments. Therefore, operators are expanding their offerings and deploying AIOps, albeit in early stages, to reduce manual intervention and accelerate issue resolution.

Meanwhile, Europe's MFaaS market remains selective and cost-driven, with leaders prioritizing security, scalability and cloud integration for flexible, efficient solutions. Some excel through proprietary tools, consumption-based pricing and specialized legacy support. As the market evolves, providers must anticipate technological shifts and leverage innovation, adaptability and robust operational frameworks.

HCLTech has emerged as a Leader, leveraging proprietary solutions, global expansion and bundled pricing to enhance modernization and automation.

From the 46 companies assessed for this study, 13 qualified for this quadrant, with five being Leaders.

Atos

Atos delivers secure and flexible MFaaS solutions with a focus on hybrid environments, sustainability and risk management. Its robust infrastructure supports modernization efforts, data compliance and scalable mainframe operations tailored to client needs.

DXC TECHNOLOGY

DXC Technology provides adaptable MFaaS solutions on dedicated or shared infrastructure, with global delivery and hybrid cloud integration. Its offers cost efficiency, security and modernization through scalable mainframe services for diverse workloads.

HCLTech

HCLTech provides competitive MFaaS services with bundled pricing, proprietary tools and global expansion plans. Its robust solutions address modernization, automation and talent shortages while enhancing operational efficiency and reducing infrastructure costs.

kyndryl

Kyndryl's zCloud-based MFaaS delivers secure, scalable mainframe solutions with flexible pricing and cloud integration. The company's advanced automation and AI-powered analytics capabilities optimize hybrid operations while ensuring mission-critical reliability and resiliency.

TCS TATA CONSULTANCY SERVICES

TCS offers comprehensive MFaaS through its Enterprise Cloud Platform, which integrates mainframes with cloud systems. Its automation tools, 7R Framework and tailored modernization strategies accelerate transformation while minimizing costs and risks.

Leader

"With a vendor-agnostic approach and global delivery capabilities, DXC Technology provides scalable MFaaS solutions that integrate hybrid cloud systems, optimize costs and support seamless modernization."

Oliver Nickels

DXC Technology

Overview

DXC Technology is headquartered in Virginia, U.S. It has more than 127,200 employees across over 130 offices in 65 countries. In FY24, the company generated $13.7 billion in revenue, with Global Infrastructure Services as its largest segment. DXC provides MFaaS offerings, managing more than 160 IBM z/Series mainframe platforms globally with a capacity exceeding 911,000 MIPS. DXC operates 16 data centers in Europe, offering a wide range of choices in mainframe location, connectivity and disaster recovery options for clients across multiple countries.

Strengths

Flexible and scalable mainframe services: DXC offers a versatile MFaaS model that adapts to client needs, from dedicated infrastructure to shared environments. Supporting over 1 million MIPS globally, its vendor-agnostic approach ensures seamless management of diverse IBM mainframe workloads and optimizes costs and utilization.

Global delivery with compliance focus: Leveraging a robust global delivery model, DXC ensures compliance with data sovereignty requirements while maximizing cost efficiency through support from low-cost countries. Its dual emphasis on resiliency and regulatory adherence makes it a trusted partner for enterprises with complex enterprise environments.

Comprehensive modernization and innovation: DXC drives modernization through in-place optimization, cloud migrations and innovative solutions such as containerization, APIs and hybrid DevOps enablement. Advanced technologies, including OpenShift and Rancher, make DXC a forward-looking leader in transforming legacy infrastructures.

Strategic partnerships and industry expertise: DXC has a robust pipeline and strong alliances with AWS, Azure, Google Cloud, IBM and others. It combines deep mainframe expertise with coinnovation to enhance customer offerings. Its focus on DevOps integration, cybersecurity and workload optimization ensures future-ready solutions tailored to client needs.

Caution

DXC has the opportunity to further differentiate its MFaaS offerings through targeted innovations, such as expanded AI capabilities or a focus on a wider range of industries. This will help the company align better with market dynamics and seize growth opportunities.

Mainframe Operations

Who Should Read This Section

This report is valuable for providers offering services for mainframe operations in Europe 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.

CIOs

Should read this report to understand the strengths and weaknesses of providers, including the way they harness the latest technologies to deliver reliable offerings.

CTOs

Should read this report to understand the mainframe operations capabilities of providers to achieve improved technology integration into products, services and business administration.

Sourcing and procurement specialists

Should read this report to understand outsourcing needs and establish a suitable landscape for mainframe consulting and transformation services.

This quadrant assesses service providers that offer operations services for mainframes on or off clients' premises, including **performance optimization**, backup, restore, **system upgrades** and **security patches**.

Oliver Nickels

Definition

This quadrant assesses traditional outsourcing providers with extensive mainframe service experience. Providers usually employ experienced practitioners to operate legacy mainframe technologies and recent mainframe releases.

Providers can deliver services to any hosting facility, such as clients' data centers, colocation and provider-owned facilities. Managed services include job scheduling, performance optimization, CICS, batch processing, backup, restore, system upgrades, security patches and other typical mainframe operations. The capacity to deploy GenAI services for user support, AIOps and cloud integration is expected but not required for inclusion.

Multiple options exist for hardware and software ownership, upgrades and modernization responsibilities. A typical deal structure includes clear service levels and a responsibility matrix.

Services can be delivered remotely and onsite, which include staff augmentation.

Eligibility Criteria

1. Demonstrate strong mainframe **operation capacity**
2. Implement a **hiring and training program** to ensure future skills availability
3. **Monitor operations**, including CPU, memory, database and operating system
4. Offer **professional services** to install and replace hardware, software and tools
5. Include **patching** operating systems, middleware and applications, **system upgrades**, data center **security** and network configuration in professional services
6. Enable clients' access to **management dashboards**, including utilization reports, performance indicators, chargeback and other **reporting functionality**
7. Comply with **ITSM best practices**
8. Support outsourced platforms, including IBM Z, AS/400 and iSeries, HP, Cray, Fujitsu and Unisys mainframes

Observations

Though MFaaS has gained visibility over the past 18 months, its adoption in Europe remains measured due to data sovereignty constraints, compliance concerns and unclear TCO. Organizations often pilot MFaaS for test or development workloads, maintaining on-premises systems for production to align with a hybrid IT model. Midsize and small enterprises find MFaaS appealing for its scalability, OpEx-centric pricing and the chance to update delayed patches, all while bypassing talent shortages. However, only a small group of specialized providers can accommodate strict regulations and offer the expertise required for mission-critical environments.

Within Europe's mainframe operation services market, a few providers stand out because they integrate advanced cloud, AI and security measures to ensure high reliability and flexible, client-focused solutions. Some differentiate themselves via proprietary platforms, pricing models or extensive compliance knowledge in highly regulated sectors.

DXC Technology, a newly recognized Leader, underscores this trend toward flexible modernization, using advanced automation and a shared infrastructure approach to deliver cost-effective hosting and modernization services. This combination of innovation, regulatory alignment and scalability characterizes Europe's evolving MFaaS and mainframe operations landscape.

From the 46 companies assessed for this study, 18 qualified for this quadrant, with seven being Leaders.

Atos delivers comprehensive mainframe operations services with a focus on automation, cost efficiency and hybrid IT integration. Decades of experience and sustainable practices further contribute to the company's success.

Capgemini provides adaptive mainframe solutions, integrating DevOps, disaster recovery and modernization to optimize operational performance and facilitate seamless service continuity.

Cognizant offers AI-powered mainframe operations services, combining tailored automation and scalable services. It also leverages strategic partnerships to enhance enterprise operational agility and streamline costs.

DXC Technology delivers a range of flexible mainframe services, from hosting to modernization, using advanced automation and cost-effective shared infrastructure to optimize efficiency.

Infosys draws on AI-driven platforms, strong partner ecosystems and comprehensive modernization frameworks to deliver scalable and resilient mainframe operations globally.

Kyndryl provides end-to-end mainframe solutions, combining AI-driven automation, cloud integration and extensive expertise to deliver scalable, resilient and future-ready operations.

TCS offers end-to-end mainframe services, leveraging proprietary tools, intelligent automation and cloud integration to accelerate modernization and ensure operational efficiency.

Leader

"DXC Technology's vendor-agnostic approach, robust automation and cost-effective pricing models deliver scalable, efficient mainframe operations that address modernization and operational excellence."

Oliver Nickels

DXC Technology

Overview

DXC Technology is headquartered in Virginia, U.S. It has more than 127,200 employees across over 130 offices in 65 countries. In FY24, the company generated $13.7 billion in revenue, with Global Infrastructure Services as its largest segment. DXC provides comprehensive mainframe operations services, managing a large number of IBM z/Series mainframe platforms globally. In Europe, the company operates multiple data centers, offering clients a wide range of choices in mainframe location, connectivity and disaster recovery.

Strengths

Comprehensive mainframe services: DXC is one of the largest independent providers of mainframe services, offering a broad portfolio that spans from monitoring and remote infrastructure management to full-service operations, including hosting, storage and disaster recovery. Its flexible delivery model supports both dedicated and leveraged infrastructures, catering to diverse client needs while ensuring high service reliability and operational efficiency.

Predictable pricing: A strong focus on cost management distinguishes DXC in the mainframe operations service space. It offers predictable, volume-based pricing models that further facilitate a transition from CapEx to OpEx, providing clients better financial control and risk mitigation.

Pathways to modernization: DXC excels in providing clear modernization pathways, integrating traditional mainframe environments with hybrid cloud solutions. Its innovative features, including MIPS elasticity, zConnect and Data Virtualization Manager, help clients modernize seamlessly while leveraging their existing mainframe investments.

Innovation and IPs: DXC demonstrates strategic foresight by investing in next-generation capabilities and automation. It enhances mainframe operations' scalability and resilience with tools for workload optimization, containerization and real-time AI processing.

Caution

DXC could further align its mainframe operations services to Europe's hybrid IT strategies by integrating localized cloud options and enhancing its capabilities for real-time operational analytics.

DXC currently lacks managed clients' data centers in Europe. Expanding into this market is advised to reinvigorate growth.

Mainframe Application Modernization Software

Who Should Read This Section

This report is valuable for vendors offering mainframe application modernization software in Europe 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 software offerings and market presence.

CIOs

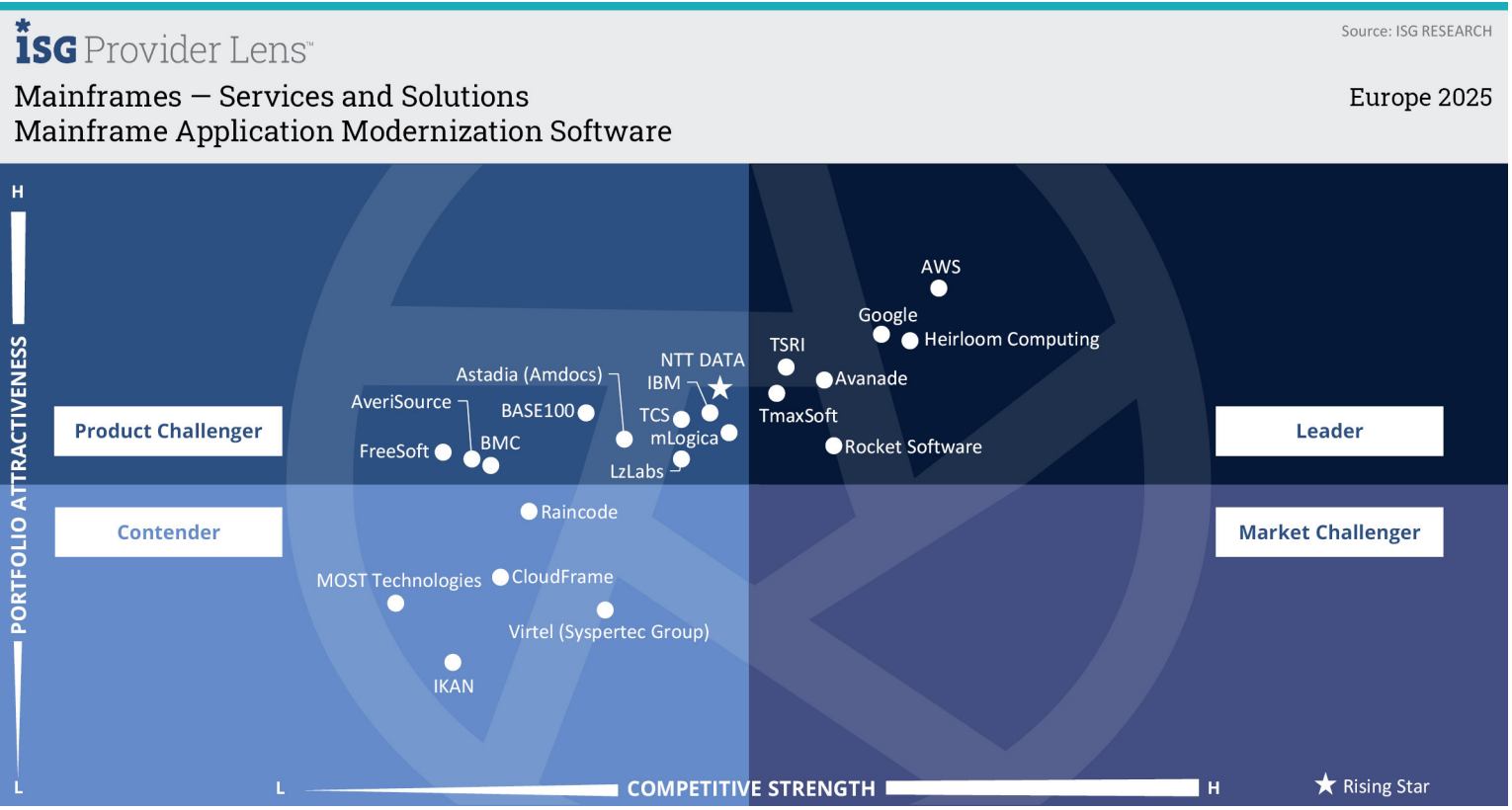
Should read this report to understand the strengths and weaknesses of vendors, including the way they harness the latest technologies to deliver reliable offerings.

CTOs

Should read this report to understand the capabilities of application modernization software vendors to achieve improved technology integration into products, services and business administration.

Application services and portfolio managers

Should read this report to compare vendors in the application modernization software market in terms of their offerings, innovations and portfolios.



This quadrant assesses software providers that **perform legacy application assessments** and **application transformations** to modernize mainframe applications and **move them to x86 servers or public cloud** platforms.

Oliver Nickels

Definition

This quadrant assesses software vendors that enable legacy application assessments and transformations, such as replatforming, rehosting, refactoring, rewriting or reengineering. These vendors supply the modernization toolset and partner with global system integrators (GSIs) that deliver modernization services.

Mainframe modernization software outcomes include compiled code to run in the cloud, refactored code to run on emulators on the cloud or new source code from reengineering, using automation tools and GenAI to reduce or eliminate human errors. The intermediary products include documentation, logic flows, data architectures, automation tools, test artifacts, testing tools, serverless functions, APIs and microservices that can accelerate the mainframe modernization program.

Professional services and consulting expertise can improve the vendor rating but are not requisites if offered through certified partners.

Eligibility Criteria

1. License or **deliver software** as a service to enable client autonomy
2. Specialize in **mainframe specialization** and offer 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. Ensure the product has been available and in use by **clients** for longer than one year (excludes startup and lab tools)
5. Maintain a robust support organization or **service partner ecosystem** to ensure enterprise-grade support
6. Include **assessment tools** and compilers (excluding generic code conversion tools, business process management (BPM) tools or wide-scope server/cloud optimization tools)

Observations

Over the last 18 months, AI-enhanced code analysis and conversion tools have accelerated mainframe modernization by mapping dependencies, business logic and application flows. Some solutions provide low-code/no-code interfaces, enabling teams without mainframe expertise to develop or integrate new services. As European enterprises adopt modern CI/CD practices, the demand for software that integrates seamlessly with DevOps toolchains has grown, supporting consistent build, test and release cycles across clouds and on-premises mainframes.

Many solutions include robust security, encryption and compliance features to meet Europe's strict data protection regulations. As several leading software vendors are based outside the EU, they partner with global service providers that help them localize offerings and meet regional regulatory requirements.

Cloud integration, security and operational efficiency are priorities, with a premium on innovative, customer-centric approaches aligned with broader digital transformations. Leading vendors offer end-to-end solutions that migrate complex legacy systems, using proprietary data transformation tools and strategic partnerships to ensure scalable, flexible transitions.

Rocket Software, recognized as a Leader, significantly expanded its revenue and European footprint after acquiring OpenText's Application Modernization and Connectivity business. TSRI also stands out for its AI-driven semantic transformation, minimal business disruption and comprehensive refactoring. Meanwhile, NTT DATA has gained traction as a Rising Star, blending IntelliMod code analysis and UniKix for cloud-ready rehosting.

This evolving market landscape underscores the mounting demand for solutions that solve technical modernization challenges and help achieve broader strategic goals.

From the 46 companies assessed for this study, 22 qualified for this quadrant, with seven being Leaders and one a Rising Star.

Avanade

Avanade specializes in custom modernization solutions, integrating AI technologies with automated migration tools for scalable, enterprise-level transformations.

AWS provides modernization paths, including replatforming and refactoring, a robust partner ecosystem and scalable cloud environments with strong security features.

Google Cloud supports mainframe modernization with tools such as MAT and Dual Run, offering AI-powered code rewriting, real-time testing and scalable cloud-based solutions.

Heirloom Computing focuses on client-driven modernization with dual replatforming and refactoring capabilities, using Eclipse-based tools for seamless transitions.

Rocket Software

Rocket Software enables replatforming without code changes, offers hybrid solutions and uses tools such as Visual COBOL for efficient modernization while retaining legacy system functionality.

TmaxSoft's OpenFrame provides data transformation, scalability and hybrid deployment options, offering adaptable solutions for mainframe migrations to the cloud.

TSRI automates legacy system transformation with *JANUS* Studio®, supporting multiple languages and comprehensive refactoring, database migration and documentation.

NTT DATA (Rising Star) offers flexible modernization paths using IntelliMod for code analysis and migration, complemented by UniKix for seamless cloud readiness and rehosting.

Appendix

Methodology & Team

The ISG Provider Lens 2025 – Mainframes — Services and Solutions research study analyzes the relevant software vendors/service providers in the Global market, 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

Author

Oliver Nickels

Principal Analyst and Executive Advisor

Oliver Nickels has in-depth technical and business knowledge and more than 25 years of experience as management consultant, IT analyst, marketing manager, and start-up entrepreneur to contribute to ISG customer projects. His focus areas are organizational change and modernization through digital and AI-based technologies, AI-driven ADM, and the digital customer journey. Specific strengths include his ability to take the customer's perspective and to plan, implement and effectively integrate digital business processes and digital customer dialogues.

Enterprise Context and Overview Analyst

Manoj M

Senior Research Analyst

Manoj is a Senior 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.

Study Sponsor

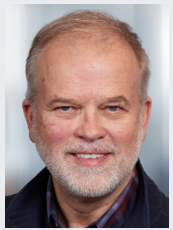
Heiko Henkes

Managing Director

Heiko Henkes serves as a Managing Director 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. 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 partner 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.

ISG Research™

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ISG

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Founded in 2006, and based in Stamford, Conn., ISG employs 1,600 digital-ready professionals operating in more than 20 countries—a global team known for its innovative thinking, market influence, deep industry and technology expertise, and world-class research and analytical capabilities based on the industry's most comprehensive marketplace data.

For more information, visit isg-one.com.

ISG Provider Lens™

MARCH, 2025

REPORT: MAINFRAMES — SERVICES AND SOLUTIONS