ISG Provider Lens™

Mainframes – Services and Solutions

Mainframe Operations

A research report comparing providers and software vendors strengths, challenges and competitive differentiators

QUADRANT REPORT | **FEBRUARY 2023** | **U.S.**

Table of Contents 🏠

Report Author: Pedro L Bicudo Maschio

Compliance, agility and cost are driving the market

The mainframe market findings for 2023 are in line with client priorities identified in 2022 when ISG interviewed a group of ISG client executives in the U.S. to understand how the macroeconomic climate impacts their spending plans on technology services. The clients represented multiple industries, including insurance, retail, manufacturing and energy. Most clients are reprioritizing their technology budgets to focus on investments that produce results in the short term. At the same time, almost all organizations recognize the importance of technology modernization.

Trends in mainframe modernization are similar across all countries in the Americas because IBM and Unisys, the major suppliers of mainframe technology, support clients seamlessly across the region. In 2022, mainframe clients increased outsourcing and accelerated their mainframe modernization plans. Outsourcing enables clients to assess their spending and find opportunities to optimize operations, replace middleware tools and add automation. When opting for a mainframe-as-a-service (MFaaS) deal, additional savings are from opting for a shared environment and gains of scale that reduce licensing costs.

Modernization can provide additional benefits, and either starts with outsourcing or is set into motion after that. Modernizing applications running on mainframes improves application performance and reduces MIPS requirements, further reducing costs. New data solutions, such as the ones provided by Model9 and Precisely, can facilitate mainframe data access, enabling clients to move data from expensive mainframe storage to low-cost cloud storage, but without the need to replace or modify mainframe applications.

A few enterprises modernize COBOL to insert APIs and DevOps, with percentage utilization under 15 percent – the same trend observed in previous years. The new trend in mainframe

ESG is impacting **mainframe** modernization demand.

modernization is data integration, with bi-directional integration or ETL to use analytics in the cloud. Data analytics continue to drive demand for mainframe modernizations.

Data analytics continue to drive demand for mainframe modernization. Mainframe migrations to the cloud have accelerated. Hyperscalers continue to invest in marketing and in developing partners' capabilities. AWS and Google are more active in promoting partner capabilities and in incentivizing clients to take modernization initiatives, in comparison with Azure that is not as intense in marketing, but equally relevant as a cloud destination.

Besides data access and cost savings, migrations to the cloud enable enterprises to standardize their application portfolio development workbench. Converted applications use the same DevOps and continuous integration tools, improving the agility and quality of the applications.

ESG is impacting mainframe modernization demand. Mainframe hardware can be energy efficient, but its surrounding technology is not. Also, updating client-owned data centers to comply with changing regulations can have cost implications. By migrating applications to the cloud, enterprises benefit from locations that use clean energy and are certified carbon neutral. Most cloud data centers do not meet this requirement, but all hyperscalers have committed to meeting their ESG targets before 2030. Concerns and regulations around environmental control vary by country; it is more important in the U.S., with a minor impact in Brazil.

The governance aspect of ESG is also pushing modernization. To comply with regulations around data availability, location and sovereignty, auditors may have doubts about the ability of legacy applications to meet privacy, data loss prevention, location and access control requirements. The old answer that mainframes are secure is not adequate for certification; the doubt surrounds the application. Most enterprises do not have the documentation or test cases to prove compliance. In some particular cases, data originating in one country should not be accessed, stored or processed in another. Replicating the mainframe in many locations to comply with regulations would be extremely expensive, but refactoring the applications to run in the cloud can be fast and involve low risk, besides producing the documentation and tests to prove compliance.

The cloud has proven to provide better scalability and performance than mainframes, with the additional benefit that it enables easy replication in different cloud regions, thus ensuring higher availability and business resilience.

Mainframe migration to the cloud involves cost reductions, technology modernization, controlled data access and compliance with increasing ESG regulations. Service providers have accumulated many success cases to predict the time required for modernization, ensure transparency on cost and risk factors, and have the required controls for incremental modernizations.

The providers of mainframe migrations to cloud are experiencing growth beyond their expectations. Any obstacles in expansion arise from the need for training and educating more practitioners to operate the application refactoring tools. Tools are innovative and use high-end technology and sophisticated software engineering methodologies.

The market is characterized by three modernization strategies:

- **Replatforming** adjusts an application code to run on emulators in the cloud or uses compilers to build executable code that runs natively on cloud virtual machines. This approach simplifies the process and can be scaled fast. However, legacy application source codes remain untouched and are not modernized.

- **Rewriting** uses compilers and translators to convert legacy languages to new ones, usually Java, C# or .Net. This approach retains application logic and behavior. Most tools generate readable and maintainable code, allowing clients to maintain applications in the new language. A few solutions do not generate a readable code and all subsequent changes are made in the legacy source code. Rewriting is popular among vendors.

Executive Summary

- **Reengineering** uses automated assessment tools that extract business rules and design the application flow, which is useful for documentation. It creates code requirements that AI-assisted tools interpret to write a new code. The full process is automated but manual intervention is needed to correct the interpretations used to write the new code.

All methods require data extraction from the mainframe databases and for files to be loaded into new databases and cloud storage. Testing automation is fundamental for success and risk control. Vendors run tests multiple times to achieve success. Tests need to include application, performance and database conversion.

Many vendors and service providers compare the cost of mainframe infrastructure with cloud infrastructure. It is noted that mainframe system, database and storage licensing comprise most of the savings from any modernization initiative.

These factors, among other drivers, impact the modernization software market.

Vendors are passionate about their solutions and often tend to overlook their limitations. Clients should always prioritize consulting, project management and risk management to bring projects that do not deliver the desired outcomes to a stop. No single tool can address all legacy languages and modernization options, requiring clients to select a toolset that involves several vendors.

A cloud infrastructure offers high performance and scale to run sophisticated modernization tools, where vendors use cloud capacity to further improve their tools. A major innovation this year is Google Dual Run, a solution developed in partnership with Micro Focus that enables clients to compare a mainframe application in production with the same application running on Google Cloud. It is not a simple setup, but has proven to be valuable to highlight application performance, integration and accuracy before removing the application from the mainframe.

AWS announced its mainframe migration service in 2022. It aims to leverage the AWS Marketplace to deliver Everything as a Service, including modernization tools and consulting services. The company is assessing and certifying partners to ensure usability, capacity and the quality of outcomes and service levels.

The focused activities of the hyperscalers in the mainframe modernization market portends that it will continue to accelerate, with mainframes gradually moving to the cloud. It is too early to say that all mainframes will migrate. At the current pace of migration it would take years, perhaps more than a decade, to migrate all mainframes. However, small modifications in IBM licensing terms and hardware prices could change the game entirely.

> Data analytics continue to drive demand for mainframe modernization.

Provider Positioning

	Mainframe Modernization Services	Mainframe Application Modernization and Transformation Services, U.S.	Mainframe Application Modernization and Transformation Services, Brazil	Mainframe as a Service (MFaaS)	Mainframe Operations	Mainframe Application Modernization Software
Accenture	Not In	Leader	Leader	Not In	Not In	Not In
Adaptigent	Not In	Not In	Not In	Not In	Not In	Contender
Advanced	Not In	Product Challenger	Not In	Not In	Not In	Leader
Astadia	Not In	Not In	Not In	Not In	Not In	Leader
Avanade (Asysco)	Not In	Product Challenger	Not In	Not In	Not In	Leader
Atos	Product Challenger	Leader	Contender	Product Challenger	Product Challenger	Not In
AveriSource	Not In	Not In	Not In	Not In	Not In	Product Challenger
AWS	Not In	Not In	Not In	Not In	Not In	Leader
BMC	Contender	Not In	Not In	Not In	Not In	Not In
BRQ	Not In	Not In	Contender	Not In	Not In	Not In

Provider Positioning

	Mainframe Modernization Services	Mainframe Application Modernization and Transformation Services, U.S.	Mainframe Application Modernization and Transformation Services, Brazil	Mainframe as a Service (MFaaS)	Mainframe Operations	Mainframe Application Modernization Software
Capgemini	Leader	Leader	Product Challenger	Product Challenger	Leader	Not In
CloudFrame	Not In	Not In	Not In	Not In	Not In	Contender
Cognizant	Market Challenger	Product Challenger	Not In	Leader	Product Challenger	Not In
Compass	Not In	Not In	Contender	Not In	Not In	Not In
CPT Global	Product Challenger	Product Challenger	Not In	Not In	Not In	Not In
Deloitte	Not In	Product Challenger	Contender	Not In	Not In	Not In
DXC Technology	Rising Star ★	Leader	Product Challenger	Leader	Leader	Not In
Ensono	Leader	Product Challenger	Not In	Leader	Leader	Not In
FNTS	Not In	Not In	Not In	Rising Star ★	Contender	Not In
FreeSoft	Not In	Not In	Not In	Not In	Not In	Product Challenger

Provider Positioning

	Mainframe Modernization Services	Mainframe Application Modernization and Transformation Services, U.S.	Mainframe Application Modernization and Transformation Services, Brazil	Mainframe as a Service (MFaaS)	Mainframe Operations	Mainframe Application Modernization Software
Fujitsu	Not In	Product Challenger	Not In	Not In	Not In	Not In
GFT	Contender	Product Challenger	Leader	Not In	Not In	Not In
Google	Not In	Not In	Not In	Not In	Not In	Leader
HCLTech	Leader	Leader	Not In	Product Challenger	Product Challenger	Contender
Heirloom	Not In	Not In	Not In	Not In	Not In	Leader
Hexaware	Not In	Rising Star ★	Not In	Not In	Not In	Not In
HPE	Not In	Product Challenger	Product Challenger	Not In	Not In	Contender
IBM	Not In	Not In	Not In	Not In	Not In	Contender
IKAN	Not In	Not In	Not In	Not In	Not In	Contender
Infosys	Leader	Leader	Product Challenger	Product Challenger	Leader	Not In

Provider Positioning

	Mainframe Modernization Services	Mainframe Application Modernization and Transformation Services, U.S.	Mainframe Application Modernization and Transformation Services, Brazil	Mainframe as a Service (MFaaS)	Mainframe Operations	Mainframe Application Modernization Software
INNOVA	Not In	Contender	Not In	Not In	Not In	Not In
Kyndryl	Leader	Contender	Product Challenger	Leader	Leader	Not In
LRS	Not In	Not In	Not In	Not In	Not In	Contender
LTIMindtree	Product Challenger	Leader	Not In	Product Challenger	Product Challenger	Not In
LzLabs	Not In	Not In	Not In	Not In	Not In	Product Challenger
Maintec	Not In	Not In	Not In	Contender	Contender	Not In
Micro Focus	Not In	Not In	Not In	Not In	Not In	Leader
mLogica	Not In	Not In	Not In	Not In	Not In	Rising Star ★
Model9	Not In	Not In	Not In	Not In	Not In	Contender
MOST	Not In	Contender	Not In	Not In	Not In	Contender

Provider Positioning

Page 5 of 6

	Mainframe Modernization Services	Mainframe Application Modernization and Transformation Services, U.S.	Mainframe Application Modernization and Transformation Services, Brazil	Mainframe as a Service (MFaaS)	Mainframe Operations	Mainframe Application Modernization Software
Mphasis	Product Challenger	Leader	Not In	Not In	Contender	Not In
Natsoft	Not In	Not In	Not In	Not In	Not In	Product Challenger
NTT DATA	Not In	Contender	Contender	Not In	Not In	Contender
PSR	Not In	Not In	Not In	Contender	Contender	Not In
Raincode	Not In	Not In	Not In	Not In	Not In	Contender
Sonda	Not In	Not In	Contender	Not In	Not In	Not In
TCS	Leader	Leader	Product Challenger	Not In	Leader	Product Challenger
Tech Mahindra	Product Challenger	Product Challenger	Product Challenger	Not In	Not In	Not In
TmaxSoft	Not In	Not In	Not In	Not In	Not In	Leader
TSRI	Not In	Not In	Not In	Not In	Not In	Leader

Provider Positioning

	Mainframe Modernization Services	Mainframe Application Modernization and Transformation Services, U.S.	Mainframe Application Modernization and Transformation Services, Brazil	Mainframe as a Service (MFaaS)	Mainframe Operations	Mainframe Application Modernization Software
TIVIT	Not In	Not In	Contender	Not In	Not In	Not In
T-Systems	Not In	Not In	Contender	Not In	Not In	Not In
Unisys	Product Challenger	Not In	Not In	Not In	Product Challenger	Not In
UST	Contender	Product Challenger	Not In	Not In	Contender	Not In
Verang	Not In	Contender	Not In	Not In	Not In	Contender
Wipro	Leader	Leader	Product Challenger	Product Challenger	Leader	Not In

This study focuses on what ISG perceives as most critical in 2023 for **Mainframes Services and Solutions**.

Simplified Illustration Source: ISG 2023

Mainframe Modernization Services

Mainframe Application Modernization and Transformation Services, U.S.

Mainframe Application Modernization and Transformation Services, Brazil

Mainframe as a Service (MFaaS)

Mainframe Operations

Mainframe Application Modernization Software

Definition

Digital business transformation has been pushing companies to become more agile in adapting to market changes. The cloud provides the core agility elements, including cloud-native AI, machine learning, serverless computing, database as a service, data services, full automation and many SaaS options to improve business performance.

The more advanced enterprises are prioritizing mainframe modernization. Mainframe systems are complex and slow to change, thus pushing back against agility. These enterprises have two options. They can migrate their legacy applications to the cloud or adapt the old applications with APIs, microservices and DevOps.

Mainframe systems combine high-performance hardware, software tools, and large, individually programmed applications that are complex to replace. Thus, modernization is not a trivial task.

The market offers automation tools to transform legacy applications, without loss in functionality, into new ones in the cloud.

Such solutions enable the standardization of application languages and databases, including open-source tools.

However, many enterprises are not ready for a full exit from mainframes. They may prefer outsourcing or pay-as-you-go (PAYG) models to enable mainframe-as-a-service – thus running their legacy applications on cloud-like mainframe data centers.

This study assesses service providers that modernize mainframe applications or convert applications to run in the cloud, and those that offer mainframe outsourcing and MFaaS. Software vendors of automation tools for refactoring, rehosting, replatforming, rewriting and reengineering applications are also evaluated.

Scope of the Report

In this ISG Provider Lens™ quadrant study, ISG includes the following five quadrants: Mainframe Modernization Services; Mainframe Application Modernization and Transformation Services; Mainframe as a Service (MFaaS); Mainframe Operations; and Mainframe Application Modernization Software. The trends identified and other findings largely apply across the region. However, ISG did add a national quadrant analysis on Mainframe Application Modernization and Transformation Services for Brazil because of specific market conditions there.

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

- Transparency on the strengths and weaknesses of relevant providers and software vendors
- A differentiated positioning of providers by segments
- Focus on regional markets

ISG studies serve as the basis for important decision-making in terms of 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 IT providers and software vendors for a defined market segment (quadrant). Without further additions, the position always applies to all company sizes classes and industries. In case the IT service requirements from enterprise customers differ and the spectrum of IT providers operating in the local market is sufficiently wide, a further differentiation of the IT 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 IT 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 5,000 or more employees or revenue above US$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 Challenger, 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.

★ **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.

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.

Mainframe Operations

Who Should Read This Section

This report is relevant for enterprises in the U.S. for evaluating providers of mainframe operations related to mainframe applications.

In this quadrant report, ISG assesses traditional outsourcing providers with extensive experience in offering mainframe services.

U.S.-based enterprises are increasingly focusing on mainframe operations for core business processes and are simultaneously facing the cost pressure of modernizing mainframes.

These enterprises are relying on mainframe operations management solutions that will help to integrate a mainframe into an organization's overall service management strategy, thus aligning business priorities across IT infrastructures for increased efficiencies. In recent times, mainframe operation services can result in reduced operating costs and decreased risk of downtime for core business applications.

Enterprises wish to engage with a service provider that offers operations services that can lead to incremental modernization of business applications in the current IT infrastructure. Providers need to offer enterprises with the flexibility to modernize the applications in their business processes and provide the required technical staff to support the transformation journey.

Service providers in this space are focused on engaging in all types of mainframes deals – from initial legacy system augmentation to full outsourcing and modernization.

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

CTOs should read this report to understand the mainframe modernization capabilities of providers to ensure suitable technology integration into products, services and business administration.
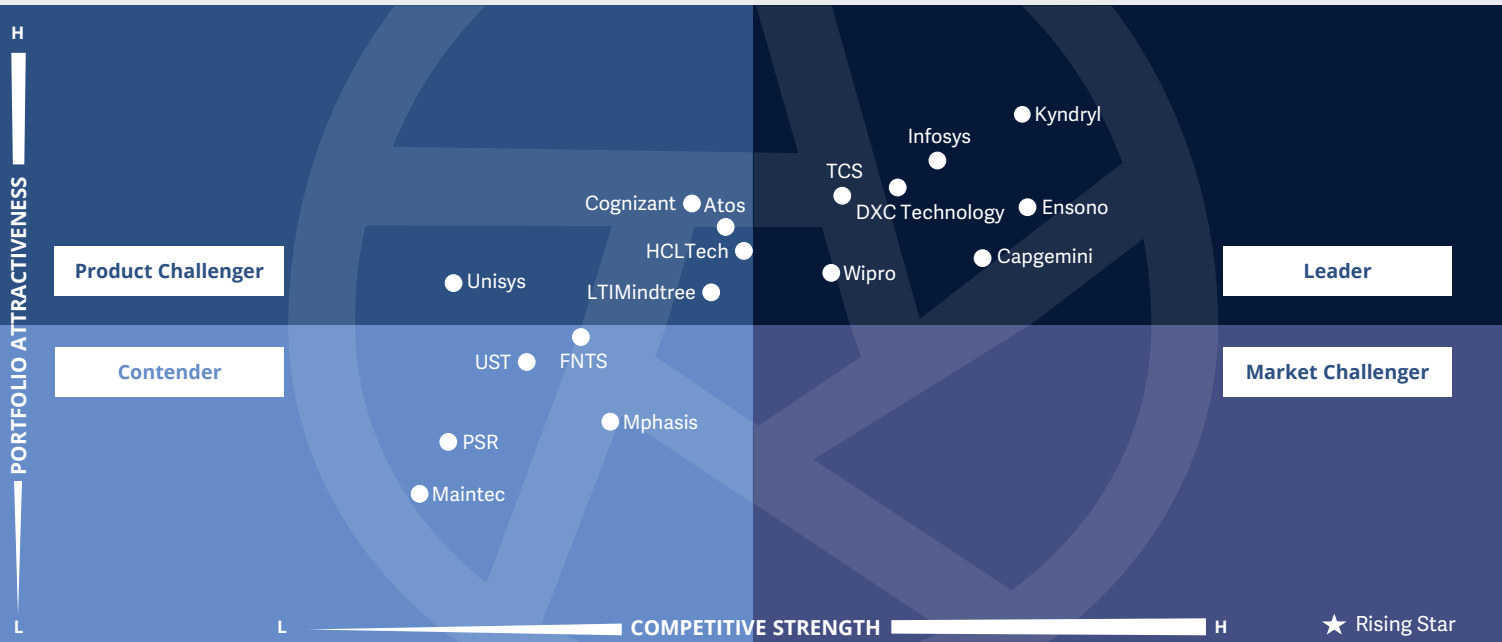
Procurement and sourcing specialists should read this report to understand their outsourcing deals and develop a better understanding of the consulting and transformation landscape for mainframes.

ISG Provider Lens™

Mainframes – Services and Solutions
Mainframe Operations

U.S. 2023

PORTFOLIO ATTRACTIVENESS

H

Product Challenger

Leader

Contender

Market Challenger

Cognizant ● Atos

HCLTech ●

● Unisys

LTIMindtree ●

UST ● FNTS

● Mphasis

● PSR

● Maintec

TCS ●

Infosys ●

● Kyndryl

DXC Technology

● Ensono

● Wipro

● Capgemini

L

L

COMPETITIVE STRENGTH

H

★ Rising Star

This quadrant assesses the **service providers** and outsourcers that **operate clients' mainframes** on-premises, in colocations or at the providers' facilities.

Pedro L Bicudo Maschio

Mainframe Operations

Definition

This quadrant assesses traditional outsourcing providers with extensive experience in mainframe services. Typical participants employ experienced practitioners to cover legacy mainframe technologies and the most recent mainframe releases. They typically have skilled teams to keep clients' mainframes running.

Services can be delivered on any hosting facility (clients' data centers, provider-owned and colocation facilities). These services, which have long been in existence, include job scheduling, performance optimization, CICS, batch, backup, restore, system upgrades, security patches and other typical mainframe operations.

Multiple options exist for hardware and software ownership, upgrades and modernization responsibilities. A typical deal structure includes clear service levels and a responsibility matrix that can be simplified as follows:

- The client owns data center, hardware and software. The provider delivers services on site.

- The client owns data center, hardware and software. The provider delivers services remotely, nearshore or offshore.

- The client owns the software. The provider owns data center and hardware.

- The client owns the data center. The provider owns hardware and software.

- Full outsourcing: The provider owns data center, hardware and software.

The owned data center can be in colocation facilities. Services delivered on-site typically include staff augmentation. All the above service scope models are considered in this quadrant.

Eligibility Criteria

1. The provider should demonstrate a strong mainframe **operation capacity** through case studies.

2. The provider should have a **hiring and training program** to ensure skills availability in the future.

3. The provider offers **management and monitoring** of CPUs, memory, databases, operating systems and tools.

4. It offers **professional services** to install and replace hardware, software and tools.

5. Professional services must include patching services for operating systems, middleware and applications, system upgrades, data center security, network configuration and system integration.

6. The provider enables clients' access to **management dashboards**, including utilization reports, performance indicators, chargeback and other **reporting functionality**.

7. Services must comply with IT service management **(ITSM)** best practices and include incident management, problem management and release management.

8. Outsourced platforms can include IBM Z, AS/400 and iSeries, HP, Cray, Fujitsu and Unisys mainframes.

Observations

The Mainframe Operations quadrant includes traditional mainframe outsourcing. Most of the providers in this quadrant have longstanding outsourcing clients of more than 20 years. The market continues to grow, albeit the growth is single digit, and all providers experience high client retention.

Most of these clients are going through mainframe modernization and workload migrations to the cloud. However, some large mainframe shops continue to add more MIPS to their current installations, offsetting the MIPS reductions due to migration to the cloud. This allows providers of mainframe operations to achieve stability or growth in their installed base.

The market imposes new demands on clients running mainframes on-premises. Skill shortages, licensing costs, upgrade costs, compliance and carbon reduction goals push enterprises to close their data centers and outsource their mainframe operations.

From the 56 companies assessed for this study, 16 have qualified for this quadrant with seven being Leaders.

Capgemini

Capgemini offers full-service scope, including application services and mainframe operations. It integrates services in a feature-rich ITSM platform to provide end-to-end client support. The company focuses on large deals that comprise managed services delivered on-site or remotely from large delivery centers in India.

DXC TECHNOLOGY

DXC Technology operates 16 data centers in the U.S., providing clients with an array of choices in location and connectivity. It uses a global service platform that enables remote access to mainframes and 24/7 support. The company has rich experience in outsourcing and mainframe technologies.

Ensono

Ensono operates 10 data centers in the U.S. and has robust capacity of more than 750,000 MIPS. It partners with IBM to provide clients with leading technology innovation. The company has been growing steadily, attracting clients from on-premises and the competition. It can support large accounts, but most of its clientele is in the midmarket.

Infosys

Infosys manages five data centers in the U.S, with significant activity in large accounts in the financial services market. It has one of the largest mainframe resource pools globally, enabling highly efficient offshore operations and 24/7 support.

Kyndryl

Kyndryl excels in installed capacity and operates many data centers globally, including five in the U.S. Its global presence enables it to provide unhindered services to large multinational enterprises. The company covers many industry verticals and supports large accounts and the midmarket.

TCS — TATA CONSULTANCY SERVICES

TCS offers a comprehensive mainframe portfolio, ranging from operations to application modernization. It uses automation and offshoring to deliver efficient operations. The company does not promote operations in its data centers; instead it engages in outsourcing deals on-premises or through colocation partners.

wipro

Wipro operates clients' data centers, using its robust automation platform. It provides on-site, onshore, nearshore and offshore services for 24/7 support. It does not have data centers in the U.S. but can help clients colocate their mainframes in partner facilities.

DXC Technology

Leader

"DXC Technology offers full outsourcing services for high performance and efficient mainframe operations."

Pedro L Bicudo Maschio

Overview

DXC Technology is headquartered in Virginia, U.S., and operates in 70 countries with more than 130,000 employees. In FY22, the company generated $16.3 billion in revenue. It offers management and support using its proprietary standard tools and processes for IBM mainframe workloads, running the z/OS, z/VM, z/VSE, zTPF or zLinux operating systems on zSeries Business Class or Enterprise Class servers, and connected to its standard storage technology. The company has 16 data centers in the U.S.

Strengths

Client retention: DXC Technology is a long-time incumbent of large deals involving top-line enterprises. It has achieved high customer satisfaction, which enables high client retention. The company's understanding of mainframe infrastructure and legacy applications makes it a top choice for mainframe outsourcing.

Scale of operations: With 16 data centers in the U.S., DXC Technology offers a wide range of choices in mainframe location, connectivity and disaster recovery. It manages more than 160 IBM z/Series mainframe platforms, accounting for a capacity of more than 911,000 MIPS globally. It has more than 200 technology partners, including IBM, Micro Focus and Red Hat.

Many deal models: DXC Technology's service options include onshore, nearshore and offshore experts, with remote operation centers distributed globally to offer 24/7 support. Deal models vary from client-owned assets to full DXC Technology ownership (MFaaS), including predictable, volume-based pricing.

Caution

DXC Technology occasionally can offer staff argumentation for existing clients. However, its portfolio centers on full outsourcing, leveraging standard tools and shared infrastructure.

Appendix

ISG Provider Lens™

The ISG Provider Lens™ 2023 Mainframes – Services and Solutions analyzes the relevant software vendors/service providers in the Americas, based on a multi-phased research and analysis process, and positions these providers based on the ISG Research methodology.

Lead Author:
Pedro L Bicudo Maschio

Editor:
Ipshita Sengupta

Research Analyst:
Manoj M.

Data Analyst:
Tishya Selvaraj

Consultant Advisors:
Thorsten Hoeltken, John Schick, Steven Garrant and Bruce Guptill

Project Manager:
Shona Merin Jacob

Information Services Group Inc. is solely responsible for the content of this report. Unless otherwise cited, all content, including illustrations, research, conclusions, assertions and positions contained in this report were developed by, and are the sole property of Information Services Group Inc.

The research and analysis presented in this report includes research from the ISG Provider Lens program, ongoing ISG Research programs, interviews with ISG advisors, briefings with services providers and analysis of publicly available market information from multiple sources. The data collected for this report represents information that ISG believes to be current as of December 2022, for providers who actively participated as well as for providers who did not. ISG recognizes that many mergers and acquisitions have taken place since that time, but those changes are not reflected in this report.

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 & Editor Biographies

Lead Author

Pedro L Bicudo Maschio
Lead Author

Distinguished analyst and author, Pedro Maschio brings extensive experience in the research of the SEMEA (Southern Europe Middle East and Africa) and Latin America 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.

Lead Author

Manoj M
Research Analyst

Manoj is a research analyst at ISG and supports ISG Provider Lens™ studies on Mainframes Services & Solutions, Cloud Native Services & Solutions 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 the 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.

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.

ISG Research™

ISG Research™ provides subscription research, advisory consulting and executive event services focused on market trends and disruptive technologies driving change in business computing. ISG Research delivers guidance that helps businesses accelerate growth and create more value.

ISG offers research specifically about providers to state and local governments (including counties, cities) as well as higher education institutions. Visit: Public Sector.

For more information about ISG Research subscriptions, please email contact@isg-one.com, call +1.203.454.3900, or visit research.isg-one.com.

ISG

ISG (Information Services Group) (Nasdaq: III) is a leading global technology research and advisory firm. A trusted business partner to more than 800 clients, including more than 75 of the world's top 100 enterprises, ISG is committed to helping corporations, public sector organizations, and service and technology providers achieve operational excellence and faster growth. The firm specializes in digital transformation services, including automation, cloud and data analytics; sourcing advisory; managed governance and risk services; network carrier services; strategy and operations design; change management; market intelligence and technology research and analysis.

Founded in 2006, and based in Stamford, Conn., ISG employs more than 1,300 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™