

Mainframes – Services and Solutions 2025

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



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Introduction

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.

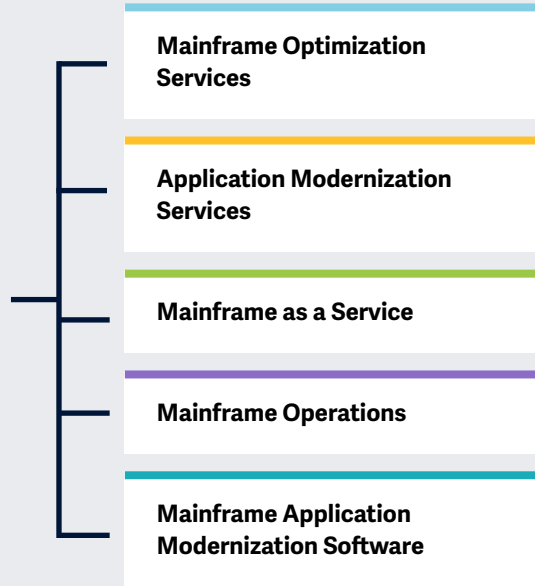
While GenAI can read legacy languages and document applications, clients expect it to create new code to eliminate obsolescence. GenAI does not automate rewriting code. However, it is changing the performance and functionality offered by application modernization tool vendors.

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.



Key focus areas for Mainframes – Services and Solutions 2025

Simplified Illustration Source: ISG 2024



Definition

The ISG Provider Lens™ Mainframes — Services and Solutions 2025 study offers the following to business and IT decision-makers:

- Transparency on the strengths and weaknesses of relevant providers.
- A differentiated positioning of providers by segments on their competitive strengths and portfolio attractiveness.
- Focus on different markets, including Brazil, Europe, U.S. and U.S. Public Sector.

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



Mainframe Optimization Services

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



Application Modernization Services

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



Mainframe as a Service

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)



Mainframe Operations

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



Mainframe Application Modernization Software

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)



Quadrants by Region

As a part of this ISG Provider Lens™ quadrant study, we are covering the following five quadrants on Mainframes — Services and Solutions 2025

Quadrant	Brazil	Europe	U.S.	U.S. Public Sector
Mainframe Optimization Services		✓	✓	✓
Application Modernization Services	✓	✓	✓	✓
Mainframe as a Service		✓	✓	✓
Mainframe Operations		✓	✓	✓
Mainframe Application Modernization Software		✓	✓	



The research phase falls in the period between September 2024 and October 2024, during which survey, evaluation, analysis and validation will take place. The results will be presented to the media in March 2025.

Milestones	Beginning	End
Survey Launch	September 25, 2024	
Survey Phase	September 25, 2024	October 25, 2024
Sneak Preview	February 2025	
Press Release & Publication	March 2025	

The collection of client testimonials via the Star of Excellence Program requires early client referrals (no official reference needed) as CX scores have a direct influence on the provider's position in the IPL quadrant and the awards.

Please refer to the [link](#) to view/download the ISG Provider Lens™ 2024 research agenda.

Access to Online Portal

You can view/download the questionnaire from [here](#) using the credentials you have already created or refer to instructions provided in the invitation email to generate a new password. We look forward to your participation!

Buyers Guide

ISG Software Research, formerly “Ventana Research,” offers market insights by evaluating technology providers and products through its Buyers Guides. The findings are drawn from the research-based analysis of product and customer experience categories, ranking and rating software providers and products to help facilitate informed decision-making and selection processes for technology.

In the course of the Mainframes - Services and Solutions IPL launch, we want to take advantage of the opportunity to draw your attention to related research and insights that ISG Research will publish in 2024. For more information, refer to the [Buyers Guide research schedule](#).

Research Production Disclaimer:

ISG collects data for the purposes of writing research and creating provider/vendor profiles. The profiles and supporting data are used by ISG advisors to make recommendations and inform their clients of the experience and qualifications of any applicable provider/vendor for outsourcing the work identified by clients. This data is collected as part of the ISG FutureSource™ process and the Candidate Provider Qualification (CPQ) process. ISG may choose to only utilize this collected data pertaining to certain countries or regions for the education and purposes of its advisors and not produce ISG Provider Lens™ reports. These decisions will be made based on the level and completeness of the information received directly from providers/vendors and the availability of experienced analysts for those countries or regions. Submitted information may also be used for individual research projects or for briefing notes that will be written by the lead analysts.



ISG Star of Excellence™ – Call for nominations

The Star of Excellence™ is an independent recognition of excellent service delivery based on the concept of “Voice of the Customer.”

The Star of Excellence™ is a program, designed by ISG, to collect client feedback about service providers’ success in demonstrating the highest standards of client service excellence and customer centricity.

The global survey is all about services that are associated with IPL studies. In consequence, all ISG Analysts will be continuously provided with information on the customer experience of all relevant service providers. This information comes on top of existing first-hand advisor feedback that IPL leverages in context of its practitioner-led consulting approach.

Providers are invited to [nominate](#) their clients to participate. Once the nomination has been submitted, ISG sends out a mail confirmation to both sides. It is self-evident that ISG anonymizes all customer data and does not share it with third parties.

It is our vision that the Star of Excellence™ will be recognized as the leading industry recognition for client service excellence and serve as the benchmark for measuring client sentiments.

To ensure your selected clients complete the feedback for your nominated engagement please use the Client nomination section on the Star of Excellence™ [website](#).

We have set up an email where you can direct any questions or provide comments. This email will be checked daily, please allow up to 24 hours for a reply.

Here is the email address:

ISG.star@isg-one.com



ISG Star of Excellence



The ISG Provider Lens Mainframes – Services and Solutions 2025 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.



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ISG Provider Lens Advisors Involvement Program

ISG Provider Lens offers market assessments incorporating practitioner insights, reflecting regional focus and independent research. ISG ensures advisor involvement in each study to cover the appropriate market details aligned to the respective service lines/technology trends, service provider presence and enterprise context.

In each region, ISG has expert thought leaders and respected advisors who know the provider portfolios and offerings as well as enterprise requirements and market trends. On average, three advisors participate as part of each study's quality and consistency review team (QCRT). The QCRT ensures each study reflects ISG advisors' experience in the field, which complements the primary and secondary research the analysts conduct. ISG advisors participate in each study as part of the QCRT group and contribute at different levels depending on their availability and expertise.

The Consultant Advisors:

- Help define and validate quadrants and questionnaires,
- Advise on service provider inclusion, participate in briefing calls,
- Give their perspectives on service provider ratings and review report drafts.

ISG Advisors to this study



John
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**Principal
Consultant**



Thorsten
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Bruce
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Steven
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**Principal
Consultant**



Invited Companies

If your company is listed on this page or you feel your company should be listed, please contact ISG to ensure we have the correct contact person(s) to actively participate in this research.

* Rated in previous iteration

Accenture*	Broadcom	CPT Global*	Fresche Solutions
Adaptigent*	BRQ*	DataBank	Fujitsu*
Altoros	CANCOM	DataKinetics	GFT*
Aspire Systems	Capgemini*	Datatek	Gigaspace
Astadia (Amdocs)*	CDW	Deloitte*	GlassHouse Systems
Atos*	CGI*	Delphix	Google*
Atruvia	CGI Group	DXC Technology*	HCLTech*
Avanade (Asysco)*	CherryRoad Technologies	Ensono*	Heirloom Computing*
AveriSource	CloudFrame*	Epam	Hexaware*
AWS*	Coforge	Euristiq	Hitachi Digital Services
BASE100*	Cognizant*	Eviden (Atos Group)*	Hostbridge
Beta Systems	Comarch	Evolveware*	HPE*
Birlasoft	Compass UOL*	FIS	IBA Group
BlueHill Data Services	Connectria	FNTS*	IBM*
BMC*	Converge Technology Solutions	FreeSoft*	IKAN*



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* Rated in previous iteration

Infinidat	LzLabs*	Nous Infosystems	Recovery Point Systems*
Infinite	MacKinney Systems	NTT DATA*	Remain Software
Informatica	Macro 4	Open Legacy	Rocket Software
Infosys*	MainLine Information Systems	OpenText*	Royal Cyber
INNOVA*	Maintec*	Optica	RSM Partners (BMC)
Ishir	Migrationware	Oracle	SCC
Jumar	Miratech group	Peraton	Sirius Computer Solutions
Keyhole Software	mLogica*	Persistent Systems	SLK Software*
Keyinfo	Mobilize.Net	PKS Software	Software AG
Kobee	Morphis Tech	Precisely	Sonata Software
Kyndryl*	MOST Technologies*	Profi AG	Sonda
LANSA	Move Solutions	PSR*	Sopra Steria
LRS	Mphasis*	QAT Global	Stefanini
LTIMindtree*	Natsoft	Qlik	SVA Software
Luminex	NCS	Raincode*	SysperTec



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* Rated in previous iteration

T-Systems	V8.Tech
TCC Software Solutions	Value-4IT
TCS*	Verang*
Tech Mahindra*	vfunction
TierPoint	Vicom Infinity
TIVIT*	ViON MFaaS
TmaxSoft*	Virtel (SysperTec Group)*
Tone Software	VirtualZ Computing
TSRI*	Virtusa
Unisys*	Wipro*
Updraft*	Yash Technologies
UST*	



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.



SEPTEMBER, 2024

REPORT: MAINFRAMES – SERVICES AND SOLUTIONS