

IDC MarketScape: Worldwide Mainframe Modernization Infrastructure Solutions 2025–2026 Vendor Assessment

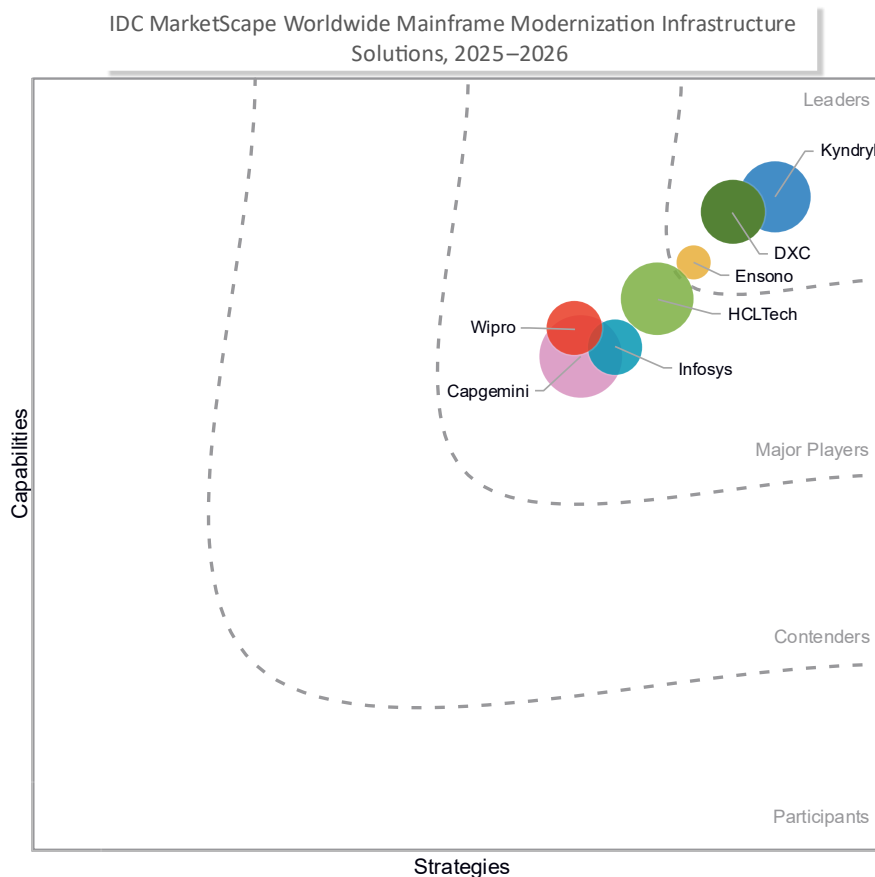
Mary Johnston Turner

THIS EXCERPT FEATURES DXC AS A LEADER

IDC MARKETSCAPE FIGURE

FIGURE 1

IDC MarketScape: Worldwide Mainframe Modernization Infrastructure Solutions Vendor Assessment



Source: IDC, 2025

Please see the Appendix for detailed methodology, market definition, and scoring criteria.

ABOUT THIS EXCERPT

The content for this excerpt was taken directly from IDC MarketScape: Worldwide Mainframe Modernization Infrastructure Solutions 2025-2026 Vendor Assessment (Doc # US52975425).

IDC OPINION

Mainframes have been part of enterprise infrastructure computing environments for 60 years and continue to play an important role for many organizations, particularly those that have very large-scale transaction processing requirements. IDC's recently published *State of the Modern Mainframe* (IDC multiclient study, 2025) indicates that after a number of years of decline, mainframe usage has stabilized, with signs of some customers increasing MIPS usage to support mission-critical workloads.

IDC's June 2025 survey of 510 mainframe users found that 88% expect to rely on mainframes for at least some current workloads for five years or more. AI was identified as a top strategic workload driving new plans for mainframe system refreshes and application and security enhancements in the coming years. The survey found that 82% of mainframe users also plan to significantly improve mainframe data integration for AI support over the next two years.

As the mainframe market has matured, it has largely consolidated around the IBM Z ecosystem. IBM dominates the mainframe hardware market globally, with 89% of survey participants indicating they rely on IBM Z and 65% noting they use Z/OS. IDC expects the IBM z17, launched in April 2025, will be a catalyst for a new mainframe infrastructure refresh cycle as it delivers an AI-optimized tech stack built around the IBM Telum II processor and the IBM Spyre Accelerator on PCIe card — which supply accelerated I/O and are designed to support high-performance AI inference processing for transaction data. These accelerators are designed to support combined encoder and decoder models and multimodal workloads linking predictive AI, generative AI LLMs, and agentic AI. The IBM z17 also features AI-enhanced improvements to mainframe management and power efficiency, including AI assistants on the platform to help complete tasks faster.

As enterprise customers consider their mainframe infrastructure modernization options and timelines, they often struggle with staffing and skill gaps, particularly in areas related to security, mainframe AI expertise, and mainframe programming and

automation. Space and environmental constraints cause some to look at colocation or mainframe-as-a-service alternatives to on-premises datacenter deployments.

For organizations that want to update their mainframe infrastructure and include mainframe workflows and data in broader AI initiatives, third-party service providers, such as those profiled in this IDC MarketScape, are available to supplement staff, provide state-of-the-art automation and operational best practices, and assist customers in designing and implementing mainframe AI use cases and modern infrastructure deployments.

IDC MARKETSCAPE VENDOR INCLUSION CRITERIA

This IDC MarketScape evaluates mainframe modernization infrastructure solution providers that help enterprises optimize, sustain, and extend IBM Z mainframe systems, including enterprise datacenters, colocation facilities, managed services/outsourced sites, and/or mainframe-as-a-service (MFaaS) environments. The emphasis is on infrastructure solutions with application and data-related capabilities viewed as enablers of infrastructure modernization.

To be considered, mainframe modernization infrastructure solution providers must offer a comprehensive services portfolio supporting all of the following mainframe modernization infrastructure solution capabilities for Z:

- Mainframe infrastructure hardware, OS, and software refresh and update assessment, planning, and implementation, including managed services and/or mainframe-as-a-service solutions
- Mainframe application modernization, including automated code analysis, documentation, conversion, and testing to support mainframe infrastructure upgrades and ongoing use of existing mainframe applications — both custom and packaged
- Mainframe data management, integration, and orchestration to provide distributed systems and AI models with access to mainframe data and to enable onboard mainframe AI processors and accelerators to integrate with the organization's broader AI environment
- Mainframe runtime operations automation, orchestration, monitoring, and optimization, including workload automation/job scheduling optimization and MIPS utilization and cost optimization, including ISV software rationalization

Solutions meeting the aforementioned criteria must have been in general availability in multiple geographies since January 1, 2025.

Solutions and service providers primarily focused on migration of existing mainframe workloads to non-mainframe environments such as public cloud IaaS or in-house distributed computing platforms are excluded. Independent software vendors are excluded as the focus of this study is on services providers.

ADVICE FOR TECHNOLOGY BUYERS

The investments IBM is making to enable a full multimodal AI-ready tech stack for Z are significant in that they help position mainframes as "equal citizens" in the enterprise AI ecosystem. To take full advantage of these capabilities, many enterprises will need to work with services partners that have proactively invested in modern mainframe expertise including best practices and state-of-the-art tools to help assess, design, implement, and operate AI-ready mainframe infrastructure refreshes, application updates, and integration strategies. When evaluating technology service providers to assist with mainframe modernization infrastructure solutions, customers should consider the following:

- **The current availability of internal resources in terms of staff, skills, and knowledge.** Identify the gaps and prioritize partners that can pick up the slack quickly and efficiently.
- **Positioning mainframe modernization infrastructure investments as part of the organization's broader AI strategy and tech debt remediation program.** Mainframe infrastructure refreshes can take a year or more to plan and implement, and many organizations wait several years in between major updates. Ensure that today's investments will be designed to scale and evolve appropriately over time.
- **Determine how the organization can best engage with service providers.** In some cases, a full dedicated three- to five-year managed service contract including staff augmentation and remote support may make the most sense. Some customers may want a third-party to host dedicated mainframe platforms. Others may find that a shared MFaaS solution can provide cost-effective flexibility. In yet other cases, specific project engagements to help jump-start or supplement internal capabilities may be appropriate.

Once the preferred engagement model is identified, service provider evaluations should consider:

- The scope and maturity of capabilities related to assessing, planning, and refreshing customer-owned mainframe systems and management tools, mainframe applications, and mainframe data management and storage

- Service provider investments related to crafting proprietary methods and building value-add tools, including the provider's use of AI and automation to maximize infrastructure performance, efficiency, and security
- Scope and maturity of provider partnerships across the mainframe ecosystem, including participation in IBM early access programs, major mainframe open source programs, and major mainframe ISV and public cloud partnerships
- The provider's level of investment in building mainframe innovation labs and offering mainframe-specific AI-enablement services to help customers accelerate their own mainframe AI agendas and identify compelling use cases
- The provider's skills and head count mix, internal program to build and retain skills, ongoing training and retention programs, and onboarding processes in cases where in-house staff might be re-badged as provider employees

Conversations with potential providers should balance immediate considerations related to cost, performance, and security with road maps for expansion, tech debt avoidance, AI enablement, and optimizing operations long term.

VENDOR SUMMARY PROFILES

This section briefly explains IDC's key observations resulting in a vendor's position in the IDC MarketScape. While every vendor is evaluated against each of the criteria outlined in the Appendix, the description here provides a summary of each vendor's strengths and challenges.

DXC

DXC is positioned as a Leader in this 2025 IDC MarketScape for mainframe modernization infrastructure solutions vendor assessment.

DXC is a worldwide IT professional and managed service provider created in 2017 via the merger of HPE's Enterprise Services Division (formerly EDS) and Computer Sciences Corporation (CSC). The company's mainframe capabilities are built on 60 years of mainframe experience. The total company has approximately 120,000 employees with about 5,500 dedicated to mainframe services.

In December 2024, DXC signed a new five-year preferred MIPS-based pricing hardware agreement with IBM that includes flexibility for DXC to be able to redeploy MIPS as needed on a worldwide basis. The company supports more than 100 long-term managed mainframe operations and mainframe-as-a-service customers as well as many project-based engagements annually.

Major DCX mainframe modernization infrastructure solutions include:

- **Managed mainframe operations:** DXC manages customer-owned mainframe infrastructure, data, and applications located in customer datacenters or colocation sites, including ongoing planning and implementation activities.
- **Mainframe as a service:** DXC provides as-a-service subscriptions, including ongoing technology refreshes, for bundled mainframe hardware, software licenses, datacenter facilities support, and disaster recovery. Options for shared or dedicated mainframe resources are available.
- **DXC Z360 assessment, planning, and implementation services:** DXC provides project-based assistance with mainframe system hardware and software expansion, refresh, and updates over time, including evaluations of which workloads will benefit from remaining on mainframes versus migration to other platforms and assisting with change management as needed.
- **Mainframe performance and cost optimization project services:** DXC provides services to help reduce peak MIPS utilization levels, optimize software licensing costs, and improve security and workload performance.
- **DevOps and app optimization project services:** DXC provides services to improve legacy code performance and enable mainframe-based workload microservices and APIs to support integrations with distributed and cloud systems, including automated code conversion, testing, and deployment.
- **Mainframe data management project services:** DXC provides services including assessment, planning, and implementation related to mainframe data governance, quality, archiving, retention, backup, recovery, security and compliance activities, and automation.

DXC's mainframe as a service and mainframe hosting datacenter locations are distributed across the Americas, Europe, and Asia, including locations designed to support the latest IBM z17 system using both liquid and air cooling. DXC serves customers across a number of verticals and offers industry-specific mainframe software solutions for banking, insurance, and transportation.

The company prioritizes internal investments that improve mainframe staffing productivity and operational efficiency. The company has developed a number of mainframe-specific assessment and planning tools, including capabilities specific to z/OS to LinuxONE conversions. DXC's Software Factory enables DXC to manage over 600 unique LPAR configurations that can be quickly applied to customer deployments to efficiently validate software compatibility.

DXC is developing internal AI-based tools such as AIROE, a proprietary internal agentic AI operations tool, to access and analyze information about mainframe data usage, storage, and connectivity and to automate data normalization and inclusion of mainframe data in customer AI data lakes. The company leverages a wide range of

ecosystem ISV software, including offerings from IBM, Broadcom, Rocket, Splunk, and BMC as well as technologies from the open source community.

DXC has been working to take advantage of AI-ready mainframe LLMs and code assist tools to simplify legacy COBOL code documentation, refactoring, and modernization using modern IDEs, code repositories, and CI/CD pipelines. The company is preparing to help customers take advantage of mainframe-based AI inferencing on Telum II processors to improve fraud detection and user authorization in real time. It is also developing reference GenAI use cases to help mainframe customers get started with GenAI inferencing and mainframe-hosted LLMs as IBM makes the Spyre AI accelerator for Z17 available in late 2025.

Strengths

DXC's mainframe modernization infrastructure capabilities focus on helping customers reduce business risk, streamline MIPS utilization spending, and cut mainframe software licensing costs by optimizing mainframe infrastructure workloads, data management, and security. The company has strong partnerships with IBM and major mainframe infrastructure ISVs.

DXC offers customers an outcomes-focused pricing model to share the benefits of cost savings and proactively invests in development of internal automation, analytics, and AI tools to help scale service delivery and managed mainframe operations, including MFaaS. The company is proactively developing use cases and methodologies to assist customers in taking advantage of emerging mainframe-based AI capabilities.

Challenges

DXC's overall mainframe datacenter footprint and head count is somewhat smaller than some other mainframe modernization infrastructure solution providers. The company's overall revenue has declined slightly in recent years as it has worked to modernize its business model and focus its investments more strategically.

APPENDIX

Reading an IDC MarketScape Graph

For the purposes of this analysis, IDC divided potential key measures for success into two primary categories: capabilities and strategies.

Positioning on the y-axis reflects the vendor's current capabilities and menu of services and how well aligned the vendor is to customer needs. The capabilities category focuses on the capabilities of the company and product today, here and now. Under

this category, IDC analysts will look at how well a vendor is building/delivering capabilities that enable it to execute its chosen strategy in the market.

Positioning on the x-axis, or strategies axis, indicates how well the vendor's future strategy aligns with what customers will require in three to five years. The strategies category focuses on high-level decisions and underlying assumptions about offerings, customer segments, and business and go-to-market plans for the next three to five years.

The size of the individual vendor markers in the IDC MarketScape is based on the estimated number of employees specifically dedicated to supporting the organization's mainframe services around the world.

IDC MarketScape Methodology

IDC MarketScape criteria selection, weightings, and vendor scores represent well-researched IDC judgment about the market and specific vendors. IDC analysts tailor the range of standard characteristics by which vendors are measured through structured discussions, surveys, and interviews with market leaders, participants, and end users. Market weightings are based on user interviews, buyer surveys, and the input of IDC experts in each market. IDC analysts base individual vendor scores, and ultimately vendor positions on the IDC MarketScape, on detailed surveys and interviews with the vendors, publicly available information, and end-user experiences in an effort to provide an accurate and consistent assessment of each vendor's characteristics, behavior, and capability.

Market Definition

For the purposes of this IDC MarketScape, mainframe modernization infrastructure solution providers help enterprises optimize, sustain, and extend mainframe systems by providing a range of assessment, strategy, planning, design, and implementation services to deploy, update, integrate, and operate mainframe systems in enterprise datacenters, colocation sites, managed services/outsource sites, and/or mainframe-as-a-service environments. Given that IBM Z represents the vast majority of the mainframe systems market, this IDC MarketScape is limited to providers that support Z.

For the purposes of this IDC MarketScape, mainframe service providers that focus primarily on application modernization, code conversion, and programs related to refactoring and migration of workloads and data off mainframes and onto public cloud or distributed systems are not included in this assessment. It also excludes specialized providers focused on non-IBM mainframe infrastructure services.

Related Research

- State of the Modern Mainframe 2025
- *Global Banks Have Multidimensional Mainframe Modernization Strategies That Will Increasingly Leverage AI to Achieve a Range of Objectives* (IDC #US53615425, June 2025)
- *What Are the Top Priorities Driving Mainframe Modernization?* (IDC #US53570925, June 2025)
- *How Will AI Impact Mainframe Investments and Usage in the Next Two Years?* (IDC #US53552425, June 2025)
- *IBM's z17 Launch Brings Multimodel AI Capabilities to the Mainframe* (IDC #lcUS53303925, April 2025)
- *Tech Buyer Perspectives on the State of the Mainframe 2025* (IDC #US53248925, March 2025)

Synopsis

This IDC study evaluates seven worldwide mainframe modernization infrastructure service providers that focus on assisting enterprises in sustaining, updating, and extending their IBM Z mainframe resources. While it offers details on each vendor's capabilities, it is not meant to be a buyer's guide. Instead, this evaluation is intended to help IT buyers narrow down candidates that fit their specific needs as they prepare to take advantage of new mainframe AI capabilities and look to improve and sustain overall mainframe infrastructure performance, cost, and operations to support mission-critical business workloads.

"While many service providers stand ready to help enterprise customers migrate off mainframes, the set of vendors proactively investing in capabilities to facilitate ongoing mainframe infrastructure modernization is more limited," explains Mary Johnston Turner, research vice president, IDC's Digital Infrastructure Strategies. "This IDC MarketScape is designed to provide organizations with long-term, strategic commitments to mainframe infrastructure to find service provider partners that best match their organizational needs — whether they are seeking project-based support or long-term managed services or mainframe-as-a-service solutions."

ABOUT IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications, and consumer technology markets. With more than 1,300 analysts worldwide, IDC offers global, regional, and local expertise on technology, IT benchmarking and sourcing, and industry opportunities and trends in over 110 countries. IDC's analysis and insight helps IT professionals, business executives, and the investment community to make fact-based technology decisions and to achieve their key business objectives. Founded in 1964, IDC is a wholly owned subsidiary of International Data Group (IDG, Inc.).

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