STATE OF THE MAINFRAME IN 2025

In 2006, I had the privilege of working closely with my former colleague, Mike Moser, on BMC's first mainframe survey. At that time, the mainframe landscape was shrouded in uncertainty, with few analysts covering it in depth and many questioning its strategic longevity. Our goal with that initial survey was to establish data points that would help us understand the priorities and challenges faced by those working with the platform.

Fast forward 20 years, and the technological advances we've witnessed have been nothing short of remarkable. Our first mainframe survey was conducted before the Apple iPhone revolutionized mobile technology, and today, the surge in mobile apps has significantly contributed to the growth in transaction and data volumes on the mainframe. This year's survey reveals a more optimistic outlook, with more respondents anticipating growth than ever before.

Twenty years ago, the IBM® z9® introduced hardware cryptography, anticipating future security needs. Today's IBM z17® can perform over 450 billion artificial intelligence (AI) inference operations per day with just a one-millisecond response time, once again anticipating the market need, now for powerful AI processing.

The mainframe has evolved significantly over the past two decades. While longtime mainframers have retired and a new generation of stewards has taken their place, the platform has seen significant changes in tools and processes. Despite these changes, the mainframe continues to serve as the system of record for banks, insurance companies, governments, airlines, retailers, and more. It may look different and operate in new ways, but it remains a data processing powerhouse, just as it was when we conducted our first survey in 2006.

Results of the [2025 BMC Mainframe Survey](#), now in its 20th year, show that the platform's ability to adapt to—and innovate with—new technologies and processes doesn't appear to be going away any time soon. The future of the mainframe looks brighter than ever, with 97 percent of respondents seeing it as a long-term platform or a platform for new workloads, the highest percentage recorded in the history of the survey. Accordingly, 72 percent of survey respondents report a growth outlook for general purpose mainframe capacity within their organizations.

A generational shift in the workforce—and its methods

As workloads grow, a new generation of mainframe stewards continues to rise. A combined 66 percent of survey respondents identify as Gen Z or Millennial, an increase of 37 percent from 2018, the first year the generation question was asked. And not only do these groups now make up a majority of the mainframe's workforce, they champion its staying power, with 99 percent of GenZ and 98 percent of Millennial respondents viewing it as a long-term platform or platform for new workloads.

This change in workforce demographics is accompanied by innovative approaches to the way work is done on the platform, with continued implementation of modern software, processes, and tools. DevOps has become a standard practice on the platform while AIOps adoption continues to increase, rising 11 percent (to 72 percent) since 2023.

Speaking of AI, the use of generative AI (GenAI) with the platform is also on the rise. Sixty-five percent of respondents say their organization already uses GenAI with the mainframe, and 74 percent report that it is extremely or very important to their mainframe strategy in the next 12-24 months. Given this focus, it's not surprising that AIOps/operational analytics ranks in the top three respondent priorities for the second straight year.

Security remains a top priority

While AIOps, enhanced automation, and application modernization have moved up the list of top priorities over the past two years, compliance and security top the list for the sixth consecutive year.

Ransomware remains a threat, but implementation of controls against it—and confidence in their effectiveness—has grown. In 2024, 21 percent of respondents found their mainframe ransomware controls extremely effective, a number that has grown to 32 percent in 2025. In total, 85 percent of respondents report that their organization's controls are either very or extremely effective.

Organizations have also strengthened their defenses against internal threats, with increased utilization of privileged user monitoring, personally identifiable information (PII) data identification software, and privileged access management.

A strong present, with a bright future

Results of the 2025 BMC Mainframe Survey indicate that the state of the mainframe is strong. When BMC first launched the survey, many questioned the long-term viability of the platform. Now, 20 years later, the mainframe remains a platform of resilience and innovation, with growing workloads, modern processes and tools, and an enthusiastic workforce. As technologies like AI and cloud continue to mature and new technologies emerge, the mainframe is positioned to handle not only greater, but new workloads while continuing to deliver exceptional customer experiences.

To read our full report on the *2025 BMC Mainframe Survey*, download the e-book, "A modern platform, positioned for the age of AI." Learn more about key takeaways from the survey for the financial services industry in the blog post, "2025 Mainframe Survey Key Financial Services Takeaways."

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