6 Reasons Enterprises Need Their Mainframe to Create a Digital Advantage

The BMC Compuware Challenge: Modernize Your Mainframe to Protect Your Business
Compuware joins BMC to empower the next generation of developers to mainstream the mainframe. With unparalleled mainframe operations management and agile application development and delivery, BMC Compuware provides a mainframe-inclusive DevOps toolchain that increases volume and velocity.

Bring apps that run on the mainframe to market faster with increased quality throughout the process of analyzing, building, testing, deploying, monitoring, and tuning apps and services. Our combined offering accelerates each client’s evolution to an Autonomous Digital Enterprise.
Introduction

In a world where volatility is the new norm, with profound implications across virtually all industries, winning organizations reliably and repeatedly adapt to changing conditions while staying true to their core values. But where enterprises often go wrong is having a myopic focus on investing in new technology without question, assuming SaaS and cloud platforms alone will make them faster, better, and stronger.

Instead, enterprises should leverage existing systems by adopting and applying modern business and software development practices and tools to those systems. For many enterprises, the primary system in question is today’s modern mainframe. Here, we’ll outline six critical aspects of the mainframe’s importance, why neglecting the platform will only diminish your company’s ability to compete, and how you can take the platform to the next level to help your enterprise thrive and deliver on modern customer expectations in a digital age.
The Mainframe is an Indispensable Strategic Platform for the Digital Economy

If you doubt the mainframe's importance to your enterprise, consider that 88% of CIOs believe the mainframe will be a key business asset over the next decade, and 59% of executives in 2019 recognized the mainframe as a platform for growth, compared to 51% in 2018, according to BMC's annual State of the Mainframe Survey.

Nearly every business-critical operation in your enterprise is reliant on the mainframe in some way, and most of the front-end innovations you're driving to create a unique customer experience are, too. In fact, Forrester found 72% of mainframe-powered organizations say their customer-facing applications are completely or very reliant on mainframe processing, and 64% of mainframe-powered organizations planned to run more than half their mission-critical workloads on the platform by 2019.

Challenge Question
Do you know how reliant your digital innovations are on your mainframe applications and data?
Large enterprises that have built their foundation on the mainframe cannot simply get off the platform, nor is it technically feasible, economically practical, efficient, or competitive to do so. History speaks for itself, as many companies have already considered or attempted to migrate off the mainframe.

+ TSB Bank’s failed attempt to migrate off the mainframe had disastrous financial results. Roughly 80,000 customers switched from TSB to another bank in 2018. The bank cited migration costs, including customer compensation, additional resources, fraud, and foregone income totaling approximately $432.6 million.

+ Hershey spent $112 million in software alone to replace its mainframe and was unable to deliver a needed product. As a result, order fulfillment time doubled, Hershey’s stock price dropped 8%, and its earnings dropped 18%.

+ The FAA was years behind schedule and massively over budget in its attempted migration off the mainframe. A new computer system the organization put in place of the mainframe caused the cancellation of more than 200 flights, completely upending the customer experience.

The risks and costs of migrating off the platform are much too high and sap the energy and funds you could be investing in modernizing on the mainframe instead. Only 42% of migration projects fall under their original budget, and 82% take longer than expected, according to a Gartner survey using the insurance industry as an example.
Conversely, other large enterprises have realized the power of the platform and taken the opposite route: Invest heavily in modernizing on the mainframe.

Not only is failure the name of the game when it comes to migrating off the mainframe, you also lose additional enterprise value in the form of reliability, availability, and perhaps most importantly, security.

“We could have tried to re-engineer everything onto distributed platforms, but the cost and effort involved would never pay off. The mainframe is the heavy-lifting engine of choice for financial services. It is an exceptionally fast, performant, and concise platform for transaction processing. To retain this value, it was evident that mainframe modernization was needed to bring the team into the fold of mainstream IT and integrate it with our DevOps workflows.”

– Engineering lead for debit card systems at a large UK bank
Reason #3

You Can’t Beat the Mainframe’s Security

It’s surprising how few people understand the importance of the mainframe in their enterprise, yet this platform happens to be your company’s most securable computing platform, leading the industry in system security. In fact, 70% of CIOs are surprised by how much additional work and money is required to ensure new platforms and applications match mainframe security.

The mainframe is uniquely designed to help protect systems, data, transactions, and applications from accidental or malicious modification. The only real security challenge mainframes face is insider threats. But defending against these is a matter of best practice, not built-in hardware capability.

With 71% of all Fortune 500 companies using a mainframe, and the platform holding 80% of enterprise data, there’s clearly no better system for keeping your business and customer IP secure and, therefore, IP that is able to be leveraged more securely for customer-facing innovations.

Challenge Question

Do you know what you would be giving up in security if you got off the mainframe?
Your Working Mainframe Code is Gold

The code and data that your mainframe processes are the lifeblood of your organization, the irreplaceable IP that has helped your enterprise become what it is and remain competitive.

There are 220 billion lines of mainframe application code in use today, with five billion lines added annually. This equates to multiple decades of business rules and process logic investments—of irreplaceable value—that still work. Working code is gold that should be mined and minted for competitive value that many of your competitors will never have access to.

The elegant simplicity of tried and true mainframe COBOL and PL/I systems of record must be championed as an opportunity to gain a digital advantage by augmenting the mainframe’s unmatched virtues of transactional reliability, performance, security, and cost efficiency with transformational advancements in software development quality, velocity, and efficiency.

Thanks to modern software and processes, it’s much easier to understand and maintain these applications than it used to be.

Challenge Question

Do you know how much time and money you have invested in your mainframe code (which you’ll lose if you migrate to another platform)?
Regardless of what modern infrastructure you invest in, your company will always only be as fast as its slowest digital asset in the art of experimentation and change. Many point to the mainframe as the culprit, and while it may be the case that mainframe software development and delivery seems slower than other platforms, it’s due to enterprises neglecting this critical system.

It’s not the mainframe itself that is slow; far from it, the modern IBM z15 mainframe can execute up to one trillion secure web transactions per day and is capable of running 2.4 million containers on a single system. Rather, what’s creating a drag on your enterprise velocity are the culture, processes, and tools surrounding the mainframe.

Your enterprise needs its mainframe, but it also needs the platform to be running at the same levels of quality, velocity, and efficiency as other systems. To get there, you must apply the same Agile and DevOps philosophies used on other platforms and in other areas of the business in order for the mainframe to become a more agile platform for mission-critical data and applications.

**Challenge Question**

Have you compared the costs of modernizing on platform versus the astronomical costs, not to mention risks, of migrating your workloads?
The best part is, this is no longer just a forward-thinking ideal, it’s a reality that enterprises around the world are already existing in. Not only are they increasing their mainframe application development quality, velocity, and efficiency by adopting Agile and DevOps practices, they’re also making it possible for developers of any experience to interact with the mainframe with modern tools.

“Modernizing the platform—through secure extensibility into market-leading software development tools, automation of software development processes, and providing the associated tools to confidently restructure and improve the overall maintainability of inherently complex programs—would strategically support opening up the mainframe to less-experienced application developers familiar with CI/CD development practices.”

– Jolene Olivier, Head of CI/CD strategy at Standard Bank

“We’re innovating faster on the mainframe than we are in our digital channels, which is just incredible.”

– Engineering lead for debit card systems at a large UK bank
The mainframe is an ideal platform to leverage with the cloud. In no way does it replace the cloud, rather, you can still use the cloud for what it is meant for—basic business applications such as a sales CRM, payroll, etc.—and continue leveraging and innovating on your mainframe for mission-critical activities. These two systems can and should collaborate with each other in a two-platform, one-speed IT strategy, and can easily consume your x86 workloads to reduce that footprint and save you money.

Adopting a two-platform, one-speed IT strategy with the mainframe and cloud is extremely beneficial. Both platforms provide their respective strengths, and both platforms can run at the same speed and uncompromised quality required from Agile and DevOps processes.

The time to begin a strategy of connecting your mainframe is now. A leading analyst firm found companies that have invested in a connected mainframe strategy are achieving massive ROI in a short amount of time, whereas companies that spent time considering or attempting migrations off the mainframe paid higher costs and regretted their decisions.
Neglect Your Mainframe, Jeopardize Your Business

Continuously improving the quality, velocity, and efficiency of mainframe software development and delivery—with the goals of reducing backlog demands, resolving technical debt, enhancing future flow, and ultimately delivering digital products and services that delight customers—is an absolute CIO imperative. The mainframe is your organization’s most unique differentiator: nothing else can deliver the reliability, availability, security, and transactional efficiency for massive amounts of business-critical IP that has been layered for competitive advantage over the span of decades.

The days of pondering how your mainframe might potentially fit into your enterprise’s digital transformation are over; the time to take action to modernize on platform is now. Double down, reinvest, and reap the benefits.

Self-Learning Recommendations

10 Steps to True Mainframe Agility, 2nd Edition
eBook

The Unicorn Project: A Novel about Developers, Digital Disruption, and Thriving in the Age of Data
by Gene Kim

The Phoenix Project
by Gene Kim, George Spafford, and Kevin Behr

Project to Product: How to Survive and Thrive in the Age of Digital Disruption with the Flow Framework
by Mik Kersten

Accelerate: The Science of Lean Software and DevOps: Building and Scaling High Performing Technology Organizations
by Gene Kim, Jez Humble, and Nicole Forsgren
About BMC
From core to cloud to edge, BMC delivers the software and services that enable over 10,000 global customers, including 84% of the Forbes Global 100, to thrive in their ongoing evolution to an Autonomous Digital Enterprise.

BMC—Run and Reinvent

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