

Integration
Mobilization
Unification

From Legacy to Leading Edge



Mainframe Modernization: A Strategic Imperative for the Digital Age



White Paper



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Executive Summary

Organizations face growing pressure to innovate, remain agile, and sustain a competitive advantage, leading to a critical reassessment of long-standing IT infrastructures, particularly mainframes. These robust systems, which continue to underpin many enterprises, are viewed as essential by **71% of organizations**, according to IBM. However, their inherent complexity and inflexibility present obstacles that underscore the need for modernization.

This white paper examines the challenges posed by mainframe systems, the key factors driving modernization efforts, and strategic approaches to aligning mainframe capabilities with today's evolving business demands

The Mainframe Dilemma

Mainframes have been instrumental in enterprise computing for decades, but their age and structure present unique challenges in today's tech landscape. Many mainframe systems rely on legacy programming languages and older architectures that can be cumbersome to maintain. As a 2021 Deloitte survey highlights, **56% of organizations** face a shortage of mainframe skills due to an aging workforce. Furthermore, **83% of IBM mainframe users** are either actively pursuing or planning modernization strategies, per research from Macro4, underscoring the urgency of this transformation.

The risk for enterprises is clear: relying on legacy systems to drive future success is a risky proposition. Mainframe modernization offers a pathway to reinvigorate these vital systems, ensuring they can support evolving business needs effectively.



Modernization for Agility and Profitability

The need for agility is central to the modernization movement. In a digital-first economy, businesses must swiftly respond to market shifts, introduce new features, and scale operations. Various studies reinforce agility as a key driver behind modernization:

- **59% of companies cite increased agility as a primary motivator (Accenture).**
- **32% of organizations report a lack of agility as a challenge linked to legacy mainframes (Modern Systems).**
- **40% of respondents identify agility as a significant benefit of mainframe modernization (Kyndryl).**

Besides agility, modernization can yield considerable financial benefits. Kyndryl's survey shows that organizations engaging in modernization projects enjoy a **9-11% increase in profitability**, with average annual savings of **\$25 million**. These results illustrate how modernization investments can bolster both operational flexibility and financial performance, enabling organizations to reduce the cost of doing business while positioning themselves for future growth.



Three Core Approaches to Mainframe Modernization

While mainframe modernization is complex, organizations have several strategies to choose from. Each approach offers a unique way to tackle the limitations of legacy systems, allowing businesses to meet their objectives without abandoning their mainframe investments.

1. Partial Rehosting

Rehosting is a popular approach that involves moving applications from costly legacy systems to more cost-effective platforms without altering their core functionality. This strategy provides immediate cost savings and scalability without the need for complex redevelopment. In fact, a Kyndryl survey reveals that **95% of respondents** have either rehosted or plan to rehost certain applications as part of their modernization efforts.

Partial Rehosting with NeoSuite

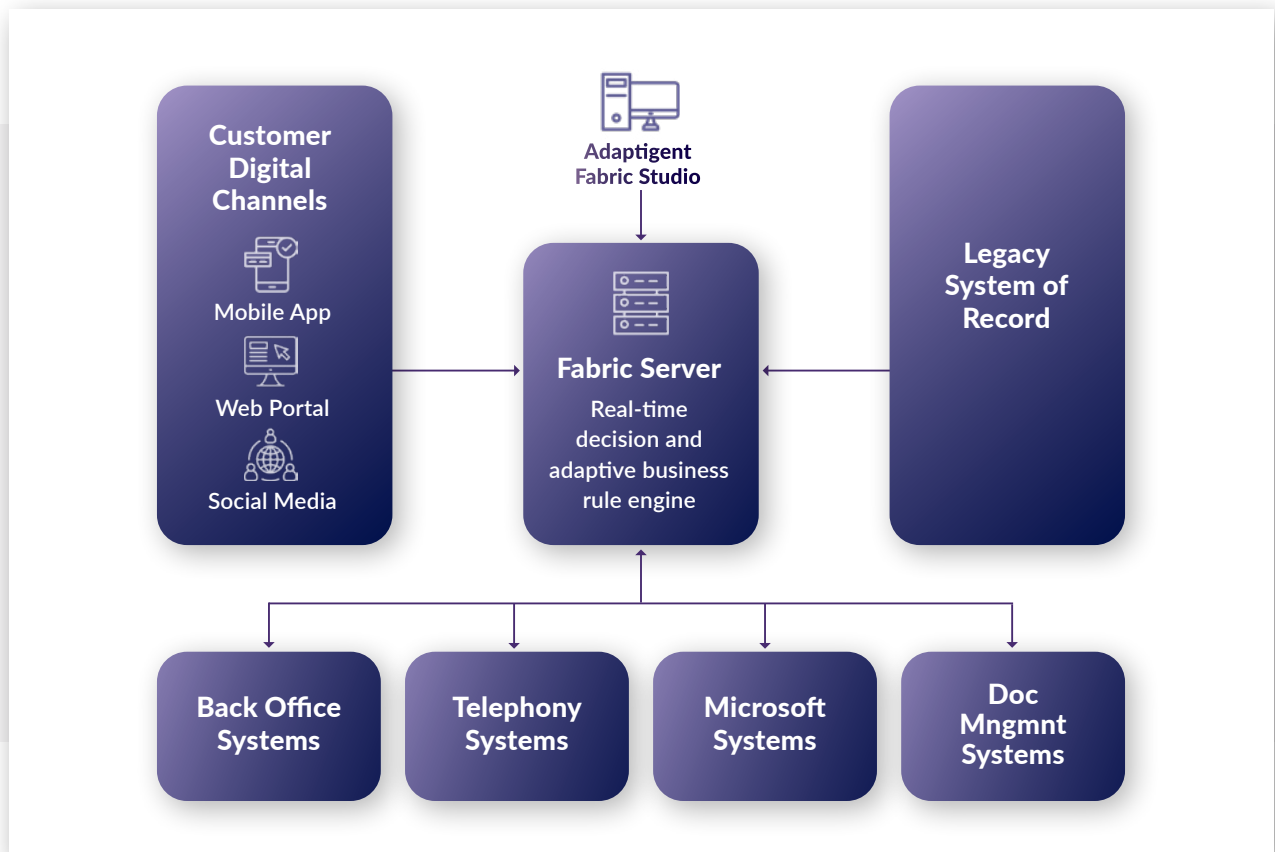
NeoSuite offers a low-risk path to process non-critical legacy applications and data on alternate platforms. By transferring select applications off the mainframe, organizations can free up resources, ensuring that critical processes have the computing power they need to optimize outcomes.

2. Integration

Integration is a modernization technique that enables mainframe applications to connect seamlessly with contemporary technologies through APIs. By integrating mainframes with other platforms, businesses achieve better scalability and avoid the risks associated with extensive code rewrites. This approach allows organizations to leverage the stability of their mainframes while benefiting from the versatility of newer technologies.

Integrating with Adaptive Integration Fabric

This no-code integration platform connects legacy systems with modern applications, facilitating rapid, bi-directional communication through REST or SOAP APIs. Adaptive Integration Fabric enables seamless orchestration of business logic across platforms, **reducing development time by up to 80%** and eliminating the need for code modifications.



Integrating with Enterprise Data Integration

Adaptigent's Enterprise Data Integration solution provides high-performance, SQL-based access to legacy data structures, making it easier to build agile, cross-platform applications. Supporting millions of transactions daily, it allows organizations to integrate mainframe and non-mainframe data sources, meeting the demands of data-intensive environments



3. Incremental Improvement

For organizations seeking a gradual approach, incremental improvement focuses on enhancing mainframe processes and usability. By making modest adjustments to improve user experiences and increase operational efficiency, businesses can create meaningful improvements without fully overhauling their systems. This approach can be particularly beneficial for user onboarding and system design, delivering value while minimizing disruption.

Incremental Improvements with ASSIST/TS

ASSIST/TS improves productivity in 3270 applications by offering built-in help and direct DB2 data access within CICS. This enhancement empowers users with easy-to-access information and resources, improving workflows without the need to modify existing code.

Incremental Improvements with BMS/TS

Designed for CICS environments, BMS/TS enables the modernization of screen designs and user interfaces without extensive backend changes. Advanced map creation and testing capabilities allow for enhanced user experiences, maintaining system stability while modernizing the user-facing elements.

Adaptigent's solutions offer flexibility and control in modernization efforts, allowing organizations to update their legacy systems on their terms—whether through rehosting, seamless integration, or targeted improvements—maximizing the utility of their infrastructure while integrating with contemporary technology.





Business Challenges and Our Differentiators

Businesses often encounter several obstacles that complicate modernization efforts. These challenges include achieving seamless connectivity across disparate systems, overcoming complex redevelopment requirements, and finding flexible solutions that support both legacy and cloud environments. Here's how Adaptigent addresses these issues to stand out as a unique provider:

1. Challenge: Limited Mainframe Integration with Cloud and SaaS Applications

Many integration platforms excel in cloud-first scenarios but fall short in deeply integrating with mainframe and legacy environments. This limitation can result in extended development times and requires complex re-coding when connecting legacy systems.

Adaptigent's Solution

Adaptive Integration Fabric is specifically designed to handle these complexities, offering a no-code, bi-directional integration platform that enables efficient connections between mainframes and modern applications. Fabric simplifies the process with rapid deployment and legacy extensions, reducing development time without extensive system rewrites.



2. Challenge: Extensive Customization and Code Changes for Legacy System Enhancements

In many mainframe environments, enhancing legacy systems can often involve significant modifications and deployment efforts, especially when introducing features like CICS screen modernization and more user-friendly interfaces.

Adaptigent's Solution

Adaptigent's tools like ASSIST/TS and BMS/TS minimize the need for code changes while offering tailored enhancements such as 3270 help screens and modernized CICS interface designs. These solutions enable incremental upgrades that maintain stability, making Adaptigent's approach ideal for enterprises that need streamlined deployment without extensive redevelopment.

3. Challenge: Basic API Wrapping Without Advanced Data Access

Many integration tools focus on simple API generation, which limits functionality and creates performance bottlenecks for data-intensive applications. These limitations make it challenging to meet the needs of high-transaction environments and often require deep knowledge of legacy systems to fully leverage data.

Adaptigent's Solution

Adaptigent's Enterprise Data Integration goes beyond basic API creation, offering SQL-based data access across platforms. This capability supports high-performance, bi-directional communication, and real-time data interactions, which can be orchestrated without specialized system knowledge. Adaptigent's Fabric solution also allows for seamless business logic orchestration, providing flexibility and robust data handling for demanding enterprise applications.



4. Challenge: Cross-Platform Rehosting Can Be Costly

Many integration tools focus on simple API generation, which limits functionality and creates performance bottlenecks for data-intensive applications. These limitations make it challenging to meet the needs of high-transaction environments and often require deep knowledge of legacy systems to fully leverage data.

Adaptigent's Solution

Adaptigent's NeoSuite provides a tailored approach for organizations moving to Windows environments. With features that support .NET and Windows-native functionalities, including seamless JCL batch process management through NeoBatch., NeoSuite offers a cost-effective pathway to leveraging alternate platforms. By focusing on Windows-native integration, Adaptigent allows organizations to retain critical processes while achieving greater cost efficiency and flexibility.

Adaptigent's solutions address the major technical and operational challenges associated with legacy modernization. By providing incremental, cost-effective approaches to rehosting, integration, and enhancement, Adaptigent enables organizations to modernize legacy systems with minimal disruption. This flexibility in deployment and ongoing adaptability sets Adaptigent apart, offering a tailored modernization pathway that extends the value of existing infrastructure without requiring extensive redevelopment or retraining.



Modernization as a Business Imperative

Modernization is no longer optional. The demands of digital connectivity and customer expectations are only growing, making modernization a vital step for companies aiming to remain relevant. For example, Forrester highlights that every time a new customer-facing feature is released—such as a mobile banking update—mainframe usage typically increases. This demonstrates the ongoing importance of mainframes in delivering digital services and the need for systems that can handle the resulting demand.

Organizations must embrace modernization not only to compete but also to ensure business continuity and resilience. With options like rehosting, integrating, and incremental improvements, businesses have a range of solutions to choose from, each offering a path to rejuvenate mainframe systems.

Adaptigent provides solutions that support all three approaches, empowering companies to modernize their environment. Instead, Adaptigent's offerings enhance performance and functionality, allowing businesses to choose the modernization strategy that best fits their unique needs.

Transforming Legacy Systems into Strategic Assets

Modernization is a strategic imperative for businesses looking to thrive in an era of rapid change. By selecting the right approach—whether rehosting, integrating, or improving processes—Adaptigent can transform their legacy systems into assets that drive innovation, efficiency, and resilience.

Adaptigent is here to guide enterprises through this transformation, offering a suite of solutions that streamline modernization efforts and unlock new value. Start the conversation with Adaptigent to determine the best approach to modernization for your organization. Embrace the future while building on the strengths





Adaptigent is a software technology company offering solutions to help businesses harness the power of APIs for innovation and growth. A global distributor of the Fujitsu NetCOBOL compiler, Adaptigent seamlessly integrates core systems. More than 2,500 organizations globally trust Adaptigent solutions. Visit www.adaptigent.com.

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