Business Value Highlights

300%+
five-year ROI

10 months
to breakeven

An average of almost
$200 million
in additional revenue per year

27%
lower mainframe licensing costs

52%
more efficient mainframe management

47%
lower overall cost of operations over five years than distributed environments

EXECUTIVE SUMMARY

After several years of relentless hardware and software innovation, the mainframe is at an inflection point. It's quickly moving from being a supporting platform of transaction revenue to becoming a source of revenue growth and innovation. Organizations are evolving toward what IDC calls the "connected mainframe." This evolution to the platform is also enabling the mainframe to play a central role in organizations' digital transformation (DX) journey. Key steps in achieving the connected mainframe require that organizations modernize and integrate the platform with their internal and external environments. IDC finds that these modernization and integration initiatives lead to new business innovations, which in turn are driving revenue growth.

Early adopters of a connected mainframe strategy have achieved more than 300% return on investment (ROI). Over 50% of the benefit value came from business productivity gains, realized from higher transaction volumes, new services, and/or business expansion.

IDC's findings are based on extensive interviews with executives at nine organizations that have historically run significant mainframe operations. The goal of this study was to understand how and to what extent these organizations are leveraging the platform to support their DX initiatives and share those best practices so that other IT leaders can make informed business decisions as they evaluate their mainframe strategies.

The research also examined how organizational and cultural stances toward the mainframe platform impacted the speed at which organizations made progress on their DX efforts. In summary, organizations that delivered greater business value:

1. **Took a business-first approach vs. technology first.** They were committed to finding the fit-for-purpose platform to fulfill business objectives and then optimized resources accordingly.

2. **Looked to extend the mainframe versus migrate off the platform or start afresh.** Participants noted that reusing mainframe assets to deliver new services was easier and more cost effective.

3. **Accept that culturally, the mainframe is an integral part of a connected ecosystem.** The ability to integrate the mainframe within the datacenter was seen as a mantle of IT agility.

4. **See innovation on the mainframe as feasible and beneficial.** Study participants who embraced even a few capabilities such as Java, internal APIs, or Linux, showed that they could deliver innovation at a pace comparable to the rest of the IT organization.

The biggest reason cited for slow adoption of the connected mainframe was organizational inertia and outdated perceptions about the platform. IDC notes that businesses that do not take advantage of its broad range of capabilities during their transformation give up value and, potentially, competitive advantage.

Value Generation from the Connected Mainframe

A healthcare provider noted:

"Our membership in one line of business has gone from about 250,000 members to about 800,000 members because of the technological enhancements we've done to modernize on the mainframe."

Situation Overview

The Connected Mainframe

Connected mainframe adopters are engaged in two broad sets of initiatives that drive business innovation: modernization and integration.

Modernizing on the mainframe means leveraging the latest technologies on the platform. While the majority of leading organizations have embraced Java, thus enabling the use of web services to communicate with other parts of the infrastructure, a much smaller percentage of organizations have taken advantage of Linux on Z or Mainframe as a Service offerings.

Integration with the mainframe means treating IT holistically and tearing down silos by connecting the mainframe with the rest of the datacenter infrastructure and IT to open the platform up to the outside world. IDC finds that the late and early majority participants are embracing the use of internal and external APIs, thus enabling integration of mobile applications with the mainframe's various services. Furthermore, the most exciting aspects are the early successes with DevOps and agile development on the mainframe, pointing to faster and more frequent application releases.

Figure 1 shows the full scope and varying degrees of adoption of a variety of technologies and practices within the connected mainframe strategy.

FIGURE 1

Connected Mainframe Adoption Among Study Participants

- ● **Modernization Initiatives**
- ● **Integration Initiatives**

Innovators Early Adopters Early Majority Late Majority Laggards
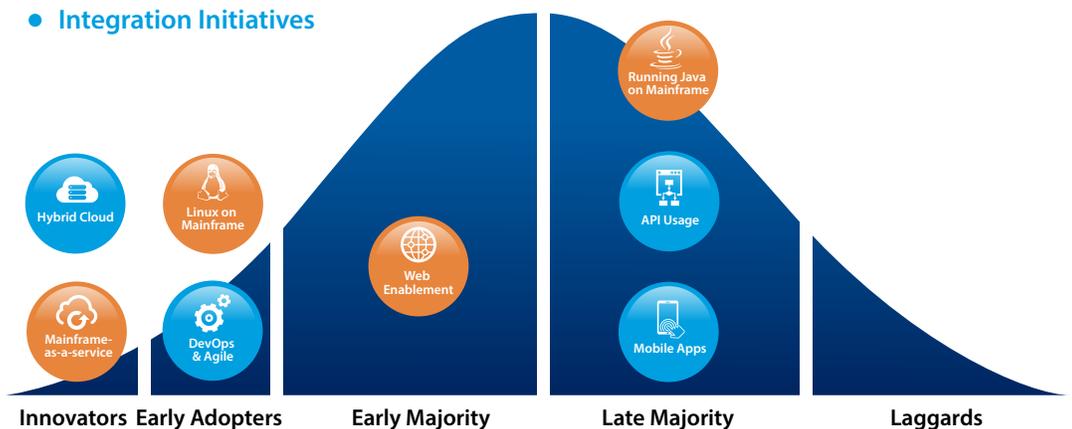
Note: The adoption categories are adapted from Everett M. Rogers' Diffusion of Innovation.
Source: IDC, 2016

Business Value Summary

Study participants reported that their modernization and integration efforts had significant positive impacts on business results and operational efficiencies. While specific use cases differed by participant, they drew a common link between increased mainframe agility to improved business results. Meanwhile, most organizations are realizing value via reduced costs and more efficient operations. IDC's analysis puts the annual business value for study participants of these connected mainframe initiatives at an average of $181,900 per application ($56 million per organization) per year over five years. This value is accrued in the following key areas:

» **Business productivity benefits.** By providing more effective delivery of applications and a more cost-effective platform for expanding business operations, the mainframe provides organizations with additional revenue of $646,500 per application per year ($198.5 million per organization over five years). At a15% operating margin, this translates into an average of $97,000 per application per year or $30 million in additional profit over five years.

» **IT staff productivity benefits.** Requiring less IT staff time for daily support activities and enabling application developers to be more effective translates into productivity benefits worth an average of $58,900 per application per year ($18 million per organization over five years).

» **IT infrastructure cost reductions.** IDC also found that organizations can achieve cost savings at an average of $26,000 per application per year ($8 million per organization over five years) by leveraging the mainframe to reduce licensing and power costs.

Please note that the complete appendix and data of the study can be found here.

Modernization Over Migration

When accounting for hardware, maintenance, licensing, power, facilities, IT management time, impact from IT downtime, and staff time for migration, this study found that organizations that modernize versus migrate off their mainframes realize an average of 47% lower five-year cost of operations. The potential capital savings of such a migration itself were more than offset by the cost of operations associated with maintaining a substantial distributed environment. Key challenges respondents noted:

» **Significant hardware investment:** "To do the mainframe applications on distributed servers, we'd need another 5,000 servers in addition to what we have now."

» **IT staff requirements:** "We would probably need two times as many staff for managing a distributed environment… it creates a lot more breakage because there's a lot more moving parts."

Finally, the costs and risks associated with re-platforming applications are not insignificant. One IT leader noted, "The majority of potential big migrations we've looked at end up with the transition costs being very high without a great business case or an ROI."

Conclusion and IDC's Recommendations

IDC finds that organizations can and do successfully drive DX with their mainframe and, as a result, achieve a compelling ROI. Organizations looking to pursue a connected mainframe strategy need to carefully consider the technical, business, risk, and cultural aspects together. Next steps include:

» Launch one or more of the modernization and integration initiatives outlined in this paper.

» Begin fostering active knowledge sharing across the IT organization beyond the mainframe team.

» Focus teams on the business outcome versus specific technologies or initiatives.

No one platform in today's datacenter represents the "secret sauce" for DX. The task for IT organizations is to maximize the business impact of the entire infrastructure. IDC believes that the time to pursue a connected mainframe strategy is now. Businesses that do so can potentially earn a strong return on investment and competitive advantage.

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