CIO FROM IDG

SPONSORED CONTENT

Mainframe and Digital Transformation: Are You Driving Better Business Outcomes?

Insights on Measuring Performance for Optimal ROI

PRESENTED BY

ca technologies A Broadcom Company

IDG COMMUNICATIONS, INC.

Mainframe and Digital Transformation: Are You Driving Better Business Outcomes?

Insights on Measuring Performance for Optimal ROI

MOBILE DEVICES, cloud computing, the Internet of Things (IoT), and other technologies that have emerged over the past two decades are fueling the Digital Revolution. Nonetheless, a mainstay of an earlier era in computing—the mainframe—is playing an increasingly important role in enterprise IT operations during the digital era.

That's because mainframes efficiently process high-volume transactions such as credit card purchases, run mobile application backends, and offer the high availability and capacity that increasingly sophisticated data analytics and machine-learning algorithms rely on—all in a cost-effective manner. In a recent IDG QuickPulse survey of enterprises running mainframes, respondents reported an average of nearly 6,000 MIPS (millions of instructions per second) installed on their mainframes (Figure 1). For larger enterprises, MIPS installations of 20,000 or far more are typical. A bank in South America reportedly has more than 1.5 million MIPS in its mainframe environment.

Digital transformation is driving an exponential increase in data and transaction requests, which in turn drives a need for more (and more efficient) resources to support enterprise operations and meet market expectations. This makes mainframes essential to improving business performance and maintaining continuity.

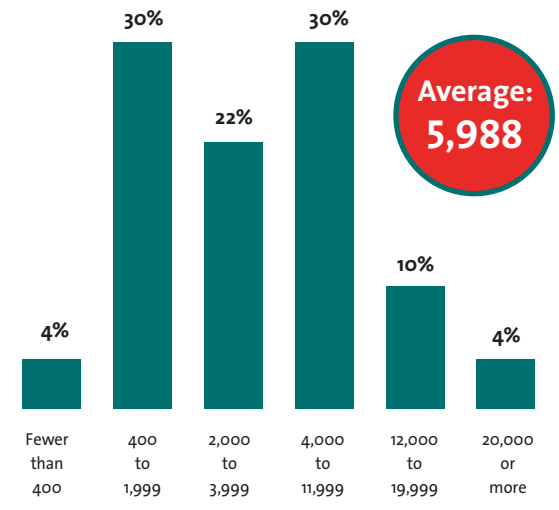
It also puts growing pressure on IT to reduce mainframe costs and improve ROI—all while enabling digital transformation. Therefore, IT leaders must be able to assess their mainframe capabilities to achieve the optimized operational efficiencies required by the economic realities every company faces without exposing the enterprise to additional risk.

The IDG QuickPulse survey was designed to determine 1) how companies measure the capabilities and business impact of their mainframe environments, and 2) the steps they are taking to drive business outcomes from their mainframes. The survey also asked respondents to assess the perceived value to enterprise IT of an automated solution that can both scan the mainframe environment (to quickly reveal hidden costs and operational deficiencies) and deliver actionable recommendations.

QuickPulse survey respondents listed more than a half-dozen key performance indicators (KPIs) for assessing mainframe capabilities (Figure 2). They most often cited "security risk" (26%) and "cost efficiency" (22%) as the top KPI, with larger companies increasingly likely to value cost efficiency as a leading performance metric for mainframes.

Respondents also stressed the importance of the human element in a mainframe environment.

Figure 1. Number of MIPS installed



Source: IDG Research *Assessing Mainframe Capabilities Survey*, September 2018

The availability of IT staff with the required mainframe knowledge and skills was ranked the top KPI by 18% of IT decision-makers surveyed.

Among the other key takeaways from the survey:

- Fifty-six percent of IT leaders are planning to extend their mainframe capacities.
- They say they have ways to measure mainframe impact, but only a little more than a third can turn data into insights, and only about a quarter are confident they can act on the results.
- With greater insight into mainframe performance, organizations can control or reduce costs, increase efficiency, and free up resources for high-value activities related to digital transformation.

Assessment challenges

The good news from the IDG QuickPulse survey is that a vast majority of respondents (82%) say they have ways to measure the business impact of their mainframe environments. The bad news is that many of these respondents say they are struggling to leverage those insights into action.

Only 37% of enterprises with at least one way to measure the business impact of their mainframes are "very good" at translating mainframe data into meaningful insights, the survey shows, while only 27% of respondents said their organizations are "very good" at turning the results into actions or for developing best practices. On the flip side, more than four in 10 (42%) rated their shops as "poor" or "very poor" at using data to improve mainframe ROI.

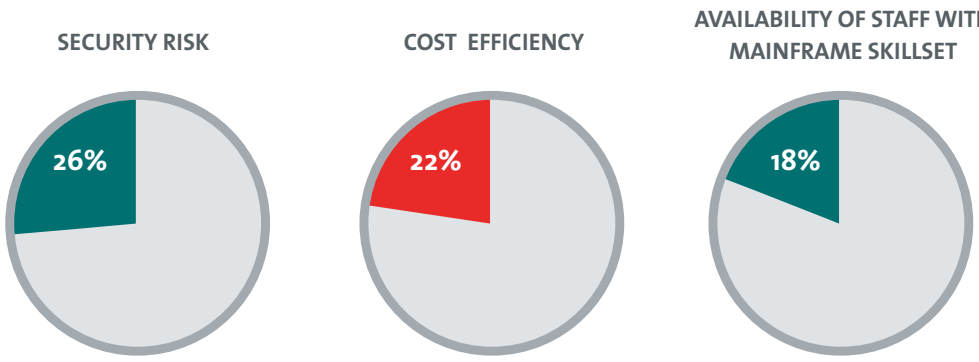
This inability to turn data into actionable insight will become even more costly as enterprises increase their reliance on mainframe resources to support their mobile, security, and analytics capabilities. To that point, more than half (56%) of IDG QuickPulse survey respondents said they plan to extend and optimize mainframe capacity, while 26% said they are extending workloads running on their mainframes.

All of this will add to the huge amounts of data that IT staff—already stretched thin in most shops—analyzes manually. "They're being asked to reduce costs and take on additional workloads related to new applications, while also being asked to keep the lights on and do everything else they're expected to do a daily basis," says Chris "Spence" Spencer, product manager at Broadcom Inc. (See sidebar, page 6.)

Then there's the growing skills gap: As older mainframe-savvy IT employees retire, they take with them decades of difficult-to-replace and highly valuable institutional knowledge. In turn, they are replaced by younger workers who may have ability but lack the experience and expertise needed to optimize and run more efficient mainframe operations. Further, even if they did have the right skills, the pressure of "keeping the lights on" to deliver against service-level agreements (SLAs) can leave little time for in-depth assessment or scenario modeling.

"The challenge for IT pros in mainframe environments," Spencer explains, "is to figure out how to keep operations running smoothly and efficiently, and how to carve out additional time so they can take a step back and understand, 1) how lean the organiza-

Figure 2. Top Key Performance Indicators (KPIs) for assessing mainframe capabilities



Source: IDG Research *Assessing Mainframe Capabilities Survey*, September 2018

tion is, and 2) how lean the environment is in which the mainframe is running. And are there any opportunities to tweak and make adjustments so they can move toward that operational efficiency goal?"

Driving better business outcomes

To meet this need for improved mainframe performance and ROI, enterprises typically are using multiple approaches (Figure 3). Nearly half (44%) of respondents said they are modernizing their mainframes to reduce the need for specialized skills. Among organizations that are extending workloads running on the mainframe, 46% are implementing automatic remediation and/or cutting CPU utilization.

More than one-third (34%) of survey respondents said they are performing capacity analysis to understand which workloads can be optimized to improve mainframe operations, reduce costs, and boost business performance.

IDG QuickPulse survey respondents make it clear that they welcome solutions to the ongoing challenge of turning mainframe data into actionable insights. An overwhelming majority of respondents (78%) highly rate the value of an automated tool that can 1) scan a mainframe environment to quickly reveal hidden costs and operational deficiencies, and 2) deliver reports and actionable recommendations to optimize existing resources.

Companies with plans to extend workloads on their mainframes are even more likely to rate highly the value of an automated cost and process assessment tool such as CA Mainframe Resource Intelligence. More than half of respondents (54%) from companies with plans to extend workloads on their mainframes rated such a tool as "extremely valuable."

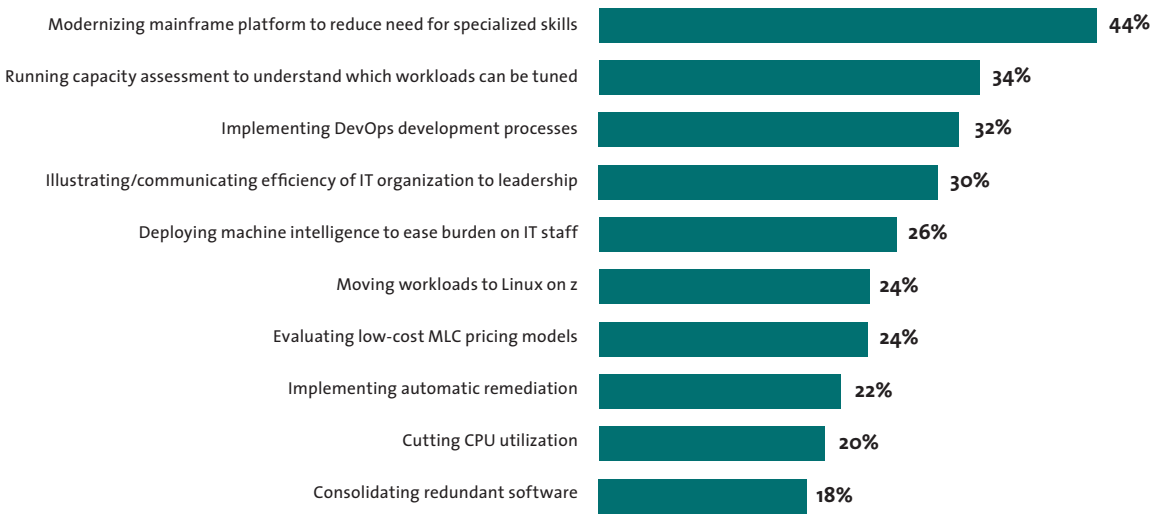
More specifically, respondents cited more than a half-dozen potential benefits to this kind of mainframe analysis tool, including the abilities to:

- Enable sound business decisions
- Free up resources
- Maintain costs easily
- Increase efficiency and reduce costs
- Cut time and IT workload
- Identify areas for cost savings
- Provide insight into ability to scale/assistance with product roadmap
- Help boost production while cutting production costs

Many of the potential benefits listed above are related to cost control and/or reduction, factors that directly affect cost efficiency—which IDG QuickPulse survey respondents indicate is among the most important KPIs used to assess their mainframe environments.

IT decision-makers have plenty of ideas regarding how they would spend the money they'd save if

Figure 3. Actions taken to drive business outcomes from the mainframe environment



Source: IDG Reasearch *Assessing Mainframe Capabilities Survey*, September 2018

they were able to reduce mainframe costs (Figure 4). Nearly half (46%) of QuickPulse survey respondents said they would invest in IT staffing and/or training, while an identical percentage said they would invest in IT services/outsourcing. Roughly one in three respondents said they would invest in digital transformation initiatives (34%) or DevOps (32%).

CA Mainframe Resource Intelligence

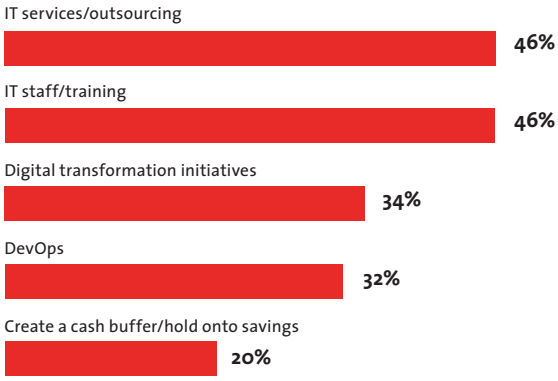
Most mainframe solutions offer only resource-intensive proof of concepts or product pilots. CA Mainframe Resource Intelligence provides customers with a rapid, automated way to test-drive potential benefits of new mainframe solutions or capabilities. At the same time, it provides an understanding of and visibility into mainframe environments that in the past were difficult and/or too cost-prohibitive to obtain. This easy-to-use solution provides rapid, accurate analysis of mainframe environments as well as actionable recommendations that deliver tangible value to the business.

CA's tool automates the scanning and collection of disparate mainframe data, thereby reducing the need for in-house resources and freeing IT staff to focus on high-priority tasks and more immediate needs. Furthermore, it assesses and visualizes potential savings and optimization scenarios based on CA and industry best practices. Reports and actionable recommendations are delivered in minutes or hours, rather than days or weeks, allowing IT leaders and operations personnel to respond quickly to both problems and opportunities.

Customers across multiple industries are deploying CA Mainframe Resource Intelligence for a variety of use cases. A large bioinformatics company, for example, needed a way to maximize operational efficiencies while reducing costs. It relied on CA's tool for capacity optimization and capacity metrics reports.

"Their goal was to figure out how to maximize mainframe ROI by fine-tuning how they're leveraging capacity," CA's Spencer says. "Capacity optimization can result in significant savings, often multi-millions of dollars, while capacity metrics is meant to keep an eye on the adjustments you've made. As your environment changes, you can either continue to tweak those configuration settings, or do another complete optimization assessment."

Figure 4. Likely Areas of Investment with the Ability to Reduce Mainframe Costs



Source: IDG Research *Assessing Mainframe Capabilities Survey*, September 2018

Other customer use cases echo these successful applications:

- Dollar Bank, a full-service regional bank serving customers in Pennsylvania, Ohio, and Virginia, uses the tool's Base Assessments feature to accelerate integration of acquired mainframe environments with the company's existing mainframe. This avoids the time and expense of sending experts to acquisition mainframe operations sites to conduct assessments. It also offers capacity optimization to identify opportunities to realize immediate benefits during the integration process.
- A worldwide financial services company uses CA Mainframe Resource Intelligence to streamline data-gathering and analysis for annual audits, freeing up the operations team to pursue higher-value activities. It also delivers information to decision-makers much faster (in seconds or minutes, rather than days or weeks) and at a lower cost.

By using CA Mainframe Resource Intelligence, organizations can gain greater insight into their mainframe performance, leading to increased efficiency, lower costs, and the freed-up resources to pursue higher-value activities related to digital transformation.

Learn more about CA Mainframe Resource Intelligence.

Q&A | **CHRISTOPHER SPENCER**, PRODUCT MANAGER, BROADCOM INC.

Assessing Your Mainframe Performance

Christopher Spencer, product manager for Mainframe Division at Broadcom Inc., consults with enterprise customers on how to assess and improve the efficiency of their mainframe environments. Here, he shares his perspectives on the importance of mainframe operational efficiency and offers advice for assessing mainframe environments.

What are the main challenges and obstacles to assessing mainframe operational efficiency?

Every time we speak with mainframe operations teams, common themes pop up. They're being asked to take on additional workloads related to new applications while also reducing costs, in addition to fulfilling their day-to-day responsibilities. So the challenge is to keep operations running smoothly and efficiently while also carving out time to take a step back and do an assessment. How lean is the organization? How lean is the environment running the mainframe? Are there any opportunities to tweak and make adjustments to move toward an operational efficiency goal?

If your mainframe environment is running as lean as possible, you need a way to go back to leadership and say, "Hey, we're at maximum operational efficiency. If you want us to cut the budget, it's going to impact our ability to meet our SLAs for all the apps that rely on the mainframe."

Why is mainframe efficiency so important today?

As the IT landscape is evolving, we're seeing increased demands on the mainframe coming from cloud apps on the distributed side. As the workloads are increasing on the distributed side, reliance on the mainframe also is increasing. A good example is a customer who was talking to us about a mobile app that was reliant upon a database backend running on a mainframe. As that mobile app started getting more popular, the amount of traffic and requests back to that database were exponentially increasing. That's just one example of the interconnectivity between the two sides. It's not that you can't separate them out, it's that they have to work together. So as the IT environment evolves and changes, that relationship becomes even more important.

CHRISTOPHER SPENCER

What advice would you offer enterprises for assessing their mainframe environments?

A couple of things are really important: 1) You have to know what's going on in your mainframe environment; and 2) you have to know what you have in your mainframe environment.

Understanding your mainframe environment — understanding what assets you have deployed from a hardware and software perspective — is critically important, especially if you're trying to get your arms around everything from security and risk management to just understanding what opportunities might exist for capacity optimization. One of the things we're seeing is a larger reliance and interest in artificial intelligence (AI) and machine learning (ML). By turning loose ML algorithms and elements of AI, you can gain a higher level of understanding of what's going on in your mainframe environment.

EXPERT OPINION | **PHIL MANGIS**, VP OF INFORMATION TECHNOLOGY, DOLLAR BANK

Taking Mainframes to the Next Level

FOR THE PAST 20 YEARS, he's been hearing that the mainframe will disappear from the enterprise—but Phil Mangis, vice president of information technology for Dollar Bank, has news for the doomsayers.

"It's not going away," says Mangis, who vows to take the venerable mainframe "to the next generation and the next level."

Participating in a panel discussion at CA's Mainframe Virtual Summit, Mangis offered some perspectives on and insights into the benefits of assessing your mainframe environment, the obstacles that make it harder for organizations to optimize their mainframe environments, and the challenges that a tool such as CA Mainframe Resource Intelligence addresses for enterprises striving for digital transformation.

Although mainframes aren't going away, many of the IT pros who spent their careers working with "big iron" are, Mangis explains.

"We've had attrition over the past few years," he says. "Most of our applications were developed in 1985, and most of those people aren't in the workforce now. They've taken advantage of retirement opportunities."

In their place are newer IT workers who lack the background or interest in mainframes. "The younger generation has not embraced the mainframe," Mangis says. "I think the colleges and universities have not given them the opportunity; I mean, how many people take COBOL classes anymore? The majority of my programs are on COBOL applications."

Lack of staff mainframe skills can lead to serious problems for a company in the financial sector, where 24/7 consumer access to service and information is critical. "When you go on your phone, you want to see your balance, you want to pay your bills," Mangis says. "Especially the younger generation. They won't tolerate [outages]. If we can't keep up, they're moving their money to another place."

The bar for performance in the digital age is getting higher every day. Organizations need to be agile, responsive, and reliable, which makes the performance and efficiency of their mainframe environments even more important. Assessment tools such as CA Mainframe Resource Intelligence, Mangis says, are critical for helping enterprises get the most out of their mainframes.

"We need to start understanding from a mainframe perspective all the different areas and assessments we can engage in to make the interaction between all these applications much more seamless," he says. "From a technical perspective, there's a lot of parts and pieces that need to come together. And it's a challenge to keep up with that."

PHIL MANGIS
VP OF INFORMATION TECHNOLOGY, DOLLAR BANK

"We need to start understanding from a mainframe perspective all the different areas and assessments we can engage in to make the interaction between applications much more seamless."