EXECUTIVE REPORT

Organization Strategic Needs Around Modernization Efforts on IBM® i and IBM Z® Systems

A survey of 75 business decision-makers on their legacy modernization prioritization strategies

September 2021
Introduction

A recent survey of IT professionals was initiated to understand how organizations manage their foundational IT infrastructure and uncover intelligence surrounding their specific modernization needs.

Modernization reduces disruption, improves agility
Business is always in a state of flux, but the last two years have made the changes brought by more typical disruptors like recessions, geopolitical events, and security threats, seem like the calm before the storm. Since March 2020, the three most popular words in the business lexicon have been disruption, transformation, and modernization. Organizations have cycled through unimaginable change as they shifted gears quickly at the onset of the pandemic, sending entire workforces’ home, transforming business models, accelerating migration to cloud, and adapting legacy applications and operations accordingly. And those efforts are ongoing.

Rocket Software commissioned Energize Marketing to conduct a detailed survey on modernizing legacy systems for IBM i/Z users. With 75 respondents, the survey gauged their specific modernization needs and challenges. Those who took the survey reflected a high degree of specialty in their field with most at the director level or higher.
Demographics
IBM® i/Z Utilization and Modernization Plan

Which most closely matches your current job title?

- VP/Director and eq. (51%)
- Manager and eq. (22%)
- C-level and eq. (5%)

What platform(s) is/are your organization currently using?

- IBM i & IBM Z (34%)
- IBM Z (32%)
- IBM i (32%)
- IBM i & IBM Z (34%)

What is your organizations annual revenue including all locations?

- $1 billion to $10b (51%)
- More than $10b (27%)
- $10 million to $100m (10%)
- $500m to $999m (6%)
- $100m to $499m (5%)

Which best describes your functional area?

- IT / IS (88%)
- OPS (12%)

What applications are currently being run on your organization’s IBM i or IBM Z systems?

- Financial/Investment-related transactions (23%)
- Business Intelligence & Analytics (22%)
- Accounting & Financials (20%)
- Sales & Marketing Portals (CRM) (16%)
- Travel & related transactions (11%)
- Product Lifecycle Management (PLM) (7%)
- Enterprise Resource Planning (ERP) (1%)

How many people are employed by your organization including all locations?

- More than 10,000 (44%)
- 1,001 to 5,000 (29%)
- 5,001 to 10,000 (16%)
- 501 to 1,000 (12%)

How would you describe your organization’s industry?

- Financial Services (18%)
- Manufacturing & Goods (18%)
- Retail & Wholesale (16%)
- Healthcare, Medical, Pharma (13%)
- Technology (10%)
- Education (8%)
- Energy, Telecom, Utilities (6%)
- Business Services (5%)
- Travel, Entertainment, Transportation (5%)
Key Findings

In analyzing the survey results, three key findings stood out.

**Top Challenges:**
The top challenges faced by organizations in maintaining and managing their IBM i/Z systems varied, depending on the respondent. But, two themes emerged around data and application access and discovery and system and tool management.

The challenge of how to access and understand data and applications running on IBM i and IBM Z systems is nothing new. In an age where siloed systems are going extinct, IT is continually looking for ways to better understand how to leverage the critical data and applications on these systems. This is especially prevalent in an post-COVID era when all basic assumptions of how business and industry operates are thrown out the window, forcing companies to re-evaluate how they do business.

Which, leads into the second challenge of how to manage core systems that skew to on-premise deployment, with a workforce that is suddenly – and possibly permanently – remote. Security becomes a tremendous challenge. With sensitive data and applications being accessed over potentially unsecure connections, how does IT ensure they stay compliant with regulations and more importantly protect their customers’ information? Availability is also an issue. Can workers still access the applications they need to do their job, regardless of where they are? With increasingly global workforces that sometimes include regions where residential Internet access is unreliable, IT teams have had to get creative quickly.

**Application workflow visibility is a struggle**
The majority of respondents don’t believe they have enough visibility into how their company engages with their legacy applications and few (about 7%) have confidence their level of visibility is sufficient to build a modernization with the highest business impact. Historically, businesses would shadow workers to better understand workflows. While it wouldn’t deliver end-to-end visibility (shadowing only delivers insight into what’s happening at the screen level), it would provide enough visibility to build a decent project plan that delivers business value.

In today’s world of shorter timelines and smaller budgets, shadowing workers for 4 months is not an option. And, without tools to replace that pre-project work, most companies build a modernization plan with a best-guess approach, sometimes leaving potential bottom line results on the table.

**Organizations approach modernizing applications in totality**
When thinking about modernization, organizations tend to look at applications in totality. Instead of approaching modernization projects by the modernization work itself and updating all user interfaces first, for example, organizations look at the whole of an application and/or department and build their plans to include updating the user interface, creating APIs to connect the application to the rest of the business, and automating repetitive or tedious parts of the workflow.

This suggests there are some efficiency gains in approaching modernization this way, especially when one considers the pre-modernization work that needs to happen. For developers to know how to build an API, for analysts to know what parts of a workflow to automate or what screens to modernize, there is some level of education and knowledge sharing with the users of the application. Since users typically work in more than one application it stands to reason that projects are focused in phases based on either department/use case, application, or both.
Survey Results

CHALLENGES

What are the top challenges involved in maintaining and managing your IBM i/Z systems?

Respondents struggle with access to data stored on IBM i/Z systems—15 percent of leaders surveyed say this. That’s an issue that must be resolved, though, if companies are to become data-driven organizations of the future. Another 15 percent also face challenges balancing the management of on-prem systems with remote workforce, which, if unresolved, is only likely to grow as organizations compete for workers and offer more flexible work options that are key not only to employee satisfaction but to workers being able to do their jobs.

- Access to data stored on our IBM i/Z systems: 15%
- Balancing management of on-prem systems with remote workforce: 15%
- Configuring and customizing the tools: 13.5%
- Application discovery: 12.5%
- Data discovery: 12.5%
- High administrative overhead costs: 8%
- Employees think replatforming is more worthwhile: 6%
- Knowledge gaps: 6%
- Incompatibility with open-source software: 3%
- Security concerns: 2.5%
- Leveraging API capabilities for on-prem business applications: 2.25%
- User interfaces are old and less intuitive: 1.75%
- Minimizing risks from outages (i.e. Disaster Recovery): 1%
Survey Results

MODERNIZATION VISIBILITY AND PRIORITIZATION

When is your organization planning to do the following?

Respondents are well on their way to modernized applications. While the modernization journey is continuous, a bulk of the work already completed seems to be focused on optimizing workflows through automation.

- **Streamline processes and workflows on the IBM i/Z**: 47% have already done this, 26% within 1-2 years, 13% within 3-5 years, and 14% after 5 years or longer.

- **Improve the UI/UX of IBM i/Z applications**: 14% have already done this, 35% within 1-2 years, 29% within 3-5 years, and 22% after 5 years or longer.

- **Integrate or merge the IBM i/Z data with another IT system or Business Intelligence function**: 16% have already done this, 17% within 1-2 years, 31% within 3-5 years, and 36% after 5 years or longer.
When thinking about modernization efforts for IBM i/Z, how do you prioritize the work?

At first glance, these data appear to be in opposition to the findings that respondents are further along with automation than other modernization efforts. In fact, automation often is both a "low hanging fruit" modernization effort that can easily improve bottom line results and one that can be discovered over time as processes change or are uncovered.

For example, call centers succeed (or fail) based on particular metrics like their response time to incoming calls. If call center representatives spend 25% of their time toggling between 12 green screens to answer a simple customer question, it is easy to see a direct line between automating that back and forth between applications and improving call center. Perhaps while projects focus on applications or use cases in totality, the micro-project tends to start with the larger automation efforts that are easy to pick out.

We are looking at applications in totality, modernizing the UI while also building in automation and connecting it to the rest of the business 22%

We are prioritizing areas like the call center, where the work can directly impact customers 21%

We are prioritizing efforts based on the department or use case that is experiencing the most challenges relative overhead costs 18%

We are focusing on building out modern UIs first, then we’ll look at automation and integration 17%

We don’t really have a structure in place – the plan is ad hoc 13%

We are not modernizing 6.5%

We are looking to connect the IBM i/Z data and applications to the rest of the business first 2.5%
Survey Results

MODERNIZATION VISIBILITY AND PRIORITIZATION

Do you have comprehensive visibility into how your business engages with IBM i/Z applications?

Over 60% of respondents admitted that they don’t have complete visibility into how their organization engages IBM i and IBM Z applications. And, nearly a quarter don’t believe they have very much visibility at all.

While initially shocking, a deeper look and one quickly understands why. Most IBM i and Z applications were originally built decades ago. Often the original developers are long gone, sometimes taking with them knowledge of how the application was built because documentation was never created. In an era when time and money are always a scarce resource, organizations cannot spend 4 months shadowing workers to improve their understanding of how the business uses the data and applications on core systems. Visibility inevitably becomes a pervasive challenge across every IBM i/Z organization.

- We mostly understand how the business uses IBM i/Z applications, but there are areas we can’t see, especially when it comes to exception workflows (47%)
- We don’t have a lot of visibility into how the business is using the IBM i/Z applications (23%)
- Yes, we fully understand how the business uses and engages with IBM i/Z applications, including all manual workflows, macros, as well as through APIs (19.5%)
- I don't know (10.5%)
Survey Results

MODERNIZATION VISIBILITY AND PRIORITIZATION

Do you think your visibility into how the business engages with IBM i/Z applications is sufficient to build a modernization project plan that provides the most value to the business?

Not surprisingly in complex environments based on legacy systems, most respondents, 70 percent, don’t have the visibility they need into their applications running on IBM i/Z yet agree gaining visibility is critical to building a modernization roadmap.

Only around 7% of respondents have confidence their level of visibility is where they need it to be to drive bottom line business value quickly. One wonders how this lack of confidence impacts not only modernization project success rates but also the percentage of modernizations projects that receive buy-in from business stakeholders. Are there potential modernization projects that could have driven real value to the business but never received approval because the business case did have enough strength behind it? Or perhaps – the more likely scenario: a myriad modernization plans were built around obvious “low hanging fruit” improvements that were easier to prove ROI, but potentially left on the table higher returns.

We somewhat understand how the business uses IBM i/Z applications and focused on what we do know to create and prioritize the plan

We don’t have a lot of visibility into how the business is using the IBM i/Z applications, so we focused our plan on alleviating problem areas for the users that have been complaining

I don’t have much visibility and am anxious about building out a project plan

I do not need to build out a plan

Yes, we are confident we have the insight we need to build a plan that drives bottom line value for the business quickly

I don’t know
Conclusion:

THE ONLY CONSTANT IS CHANGE

No one is doing business the way they did two years ago. As competition increased and work was upended, there has been increasing pressure across industries to change how one does business in order to quickly adapt to unexpected market dynamics; meet customer expectations; and drive innovation. Resiliency at its core is the impetus behind the growing trend to modernize IBM i/Z applications as opposed to moving off platform. But, to build a plan that drives high business value quickly, visibility into how a business engages core applications and data is crucial. Whether just beginning their modernization journey or well on their way, organizations need a tool that helps shine a light end-to-end across IBM i/Z application workflows.

Talk to an expert today and elevate your modernization journey with Rocket.

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