

Navigating Last-Mile IT Modernization Challenges with IBM Consulting and AWS



Companies that are far along the IT modernization journey are experiencing more positive business benefits. Yet many remain stuck, lacking the requisite IT skills, security, cloud migration prowess, and/or strategic planning expertise to capture the full value of the hybrid IT landscape.

As digital services and strategies become the hallmark of modern business, the need to modernize IT in a way that aligns technology investments to core business strategies and objectives is clear. By optimizing the application mix towards measurable business outcomes, organizations lower maintenance and operations costs. At the same time, they are better situated to deliver streamlined experiences, launch new services, comply with regulations, and respond agilely to changing business needs—a potent mix for competitive advantage.

According to a Foundry survey in collaboration with IBM and Amazon Web Services (AWS), organizations are making strong progress on the modernization front: Nearly all those surveyed (93%) said their modernization strategies were aligned with core business goals, and 86% confirmed they correlate with attaining stated modernization objectives. The success marker was even higher (98%) among companies with more advanced IT modernization strategies, and which were farther along in execution.

Only 3 in 10 IT organizations categorized their progress at the advanced stage of IT modernization. However, those pursuing more sophisticated strategies were generally closer to meeting their

goals on nearly every target, including compute, applications, data management, networking, and automation projects.

The research reveals that:

- Even companies furthest along the modernization journey still require expert assistance to complete transformation due to the lack of expertise in everything from cloud architecture to automation.
- While technology challenges remain, the real hurdle is orchestrating change management at scale—another area where organizations could benefit from third-party expertise.

The push for application modernization

Companies are looking to IT modernization to drive a variety of business outcomes. Among the highest-ranked, near-term priorities are optimizing IT resources (33%), modernizing applications (33%), and meeting corporate sustainability goals (26%). Although other motivators include increasing operational agility, operating hybrid clouds at scale, reducing time to value, and simplifying IT, they aren't as crucial.

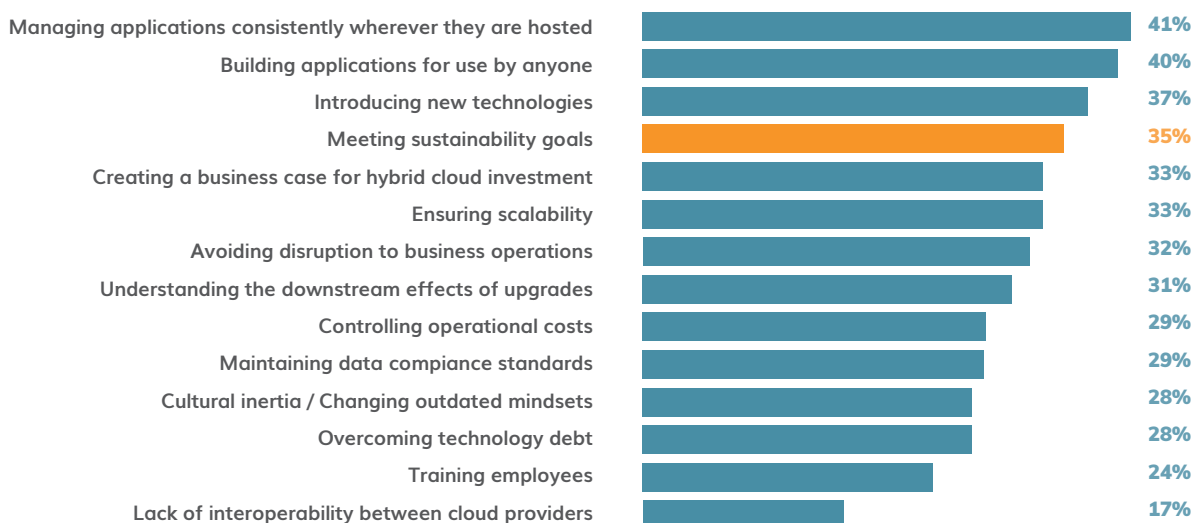
"The goal of transformation is not just to become more modern, but to change the way you adapt to the new norms of running businesses in a digital world," Praveena Varadarajan, modernization offering leader and strategist for IBM's Hybrid Cloud Migration Group, notes. *"The aim should be to make digital solutions more business-centric."*

As part of the business strategy mix, companies are elevating environmental, social, and governance (ESG) and sustainability goals. Here too, IT modernization serves as a key enabler. (See sidebar, page 4)

Last-mile hurdles undermine modernization

While much work has been done, very few companies have reached the end goal of IT modernization. The Foundry survey found 67% of respondents characterized their progress as in the middle of the journey. They are hampered by a variety of factors, including lack of expertise in critical areas from app modernization to automation, along with limited experience driving organizational change management at scale. (See Figure 1, below).

Figure 1. Biggest Challenges to IT Modernization



Even the one-third of companies in the later stages of IT modernization still grapple with challenges, including:

- 33% - refactoring applications and use of microservices
- 30% - automation
- 29% - security

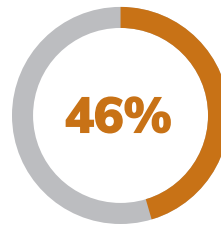
In general, companies encounter a broad array of hurdles as they navigate later-stage IT modernization, including:

- 41% - managing applications regardless of where they are hosted
- 40% - building applications that can be used by anyone
- 37% - introducing new technologies

Those organizations that have accomplished less substantial modernization work admit to having a weaker set of IT skills and limited capacity, especially as it relates to executing on cloud migration, as well as understanding the implications for compliance and global regulations.

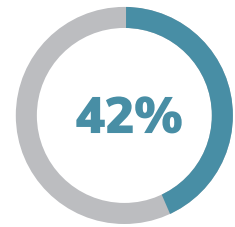
The Foundry survey found that as companies modernize, they need overall technology expertise and experience at every stage of the journey. Companies midway through the process require the most assistance managing applications regardless of where they are hosted (46%). Those in the later stages of modernization need a hand building applications that can be used by everyone (42%). Companies furthest along need help overcoming technology debt, training employees, or understanding the downstream effects of upgrades.

**Need assistance
managing applications**



**Companies midway
through modernization**

**Need assistance
building applications**



**Companies in late stages
of modernization**

Companies with advanced modernization strategies are also most invested in data centers. Yet even they need help refactoring applications for their on-premises data center environments, along with lifting and shifting applications and developing cloud-native systems. At the same time, firms deploying hyperscalers and cloud-native applications need app transformation support, including assistance refactoring apps (20%).

Many organizations still need cloud migration and deployment expertise as they execute IT modernization. And on the devops front—an area critical to advancing agile business and IT modernization—most respondents reported significant gaps.

The IBM Consulting and AWS partnership helps fill the gaps

The IBM Consulting and AWS partnership can help organizations accelerate and optimize IT modernization regardless of where they are in the journey. Both companies have strong industry reputations, deliver access to robust ecosystems of technology partners, and are backed by a litany of customer implementation success stories that span decades—all critical attributes for companies when evaluating transformation partners.

"We see clients across industries adopting AWS Cloud as their cloud for migration and cloud-native services," Pranit Kumar, VP and Senior Partner, IBM Consulting - AWS Strategic Partnership, says. "This is to accelerate 'Speed of Innovation' as a KPI measure to help reduce the time it takes for them to turn ideas into customer value. They embed into their customer journey and execute at the last mile with a start-up mind set."



IBM Consulting and AWS offer an array of IT modernization services, including:

- **Application Modernization Services:** IBM Consulting and AWS work with clients to establish a detailed understanding of operations, applications, data, and integration points—while identifying bottlenecks and pain points. The next step in the process is to design a target operational model and rationalize the IT landscape that delivers optimal business value.

For instance, the IBM Consulting Cloud Accelerator (ICCA) for AWS Cloud journey has been key to mapping out the best path to cloud modernization. ICCA helps with accelerated planning and low-touch execution through built-in expert rules, automation tooling, playbooks, and starter code. The platform designs different migration and modernization programs beforehand, laying out potential paths prior to making an investment. The journey framework delivers an optimized path from planning to execution, enabling different mission-critical applications to migrate to AWS Cloud in real-time with consistency and confidence.

- **Red Hat OpenShift Service on AWS (ROSA):** Clients with operations, applications, and data across hybrid clouds beyond AWS can turn to ROSA. It is a proven way to build and modernize applications on-premises or in the cloud, reduce cost, improve developer productivity, and reduce the operational risk of maintaining legacy applications. ROSA offers the most comprehensive foundation to enable the automation of customer operations, increase resiliency and scalability, modernize applications, and create innovative new applications. Hybrid cloud with ROSA accelerates migration and time to market.

- **Mainframe Application Modernization Services:** As mainframes carry mission-critical workloads, they are an element in many firms' IT modernization efforts. IBM and AWS are accelerating that transformation by delivering a single integrated operating model, common agile practices, and interoperability of applications between the AWS Cloud and on-premises IBM mainframes. The hybrid strategy built around IBM zSystems and AWS is designed to significantly reduce talent gaps, support rapid innovation via the DevOps approach, and make it easier and more cost-effective to access applications and data.

- **SAP Transformation:** As the predominant systems integrator provider in SAP migration to AWS, IBM simplifies the migration of SAP S/4HANA to AWS without disrupting critical business processes. Thanks to highly automated data conversion processes, organizations can accelerate the deployment window while also improving application response times for business users. Access to proven workflows and SAP S/4HANA best practices ensures a smooth migration journey. IBM has developed a framework that integrates IT and business processes into a unified view on the AWS cloud, enabling real-time monitoring. This integration helps with predictive, proactive, low-touch, and high-quality SAP digital operations.

- **Sustainability Services:** Experts work with organizations to determine the best modernization opportunities while creating a roadmap and target application architecture that will deliver sustainability benefits throughout the entire life cycle. Enterprises are guided through the process of selecting the most opportune business outcomes, creating an implementation roadmap, designing a target architecture, identifying and measuring sustainability targets and outcomes, and aligning employee skillsets and business operating models to meet the new [requirements](#).

For example, IBM developed a green IT framework that includes AWS Custom Lens for sustainability using best practices and tools like IBM Carbon Accounting and Reduction Engine (CARE) and AWS Customer Carbon Footprint Tool (CCFT) to help customers build and operate sustainable IT platforms.

- **Security Services:** IBM Consulting and AWS together create a robust cloud security capability portfolio to ensure a safe cloud migration journey, including end-to-end security services and tools from cloud security posture assessment, DevSecOps, threat management for proactive detection and protection, and advanced managed security services. IBM accelerates AWS migration through #SecurityFirst methodology to embed security at the start of the cloud journey to optimize the maturity, quality, scale, and velocity needed to properly protect cloud assets.

The Bottom Line

With no quick fixes or one-size-fits-all solutions, companies can face a rocky road navigating the twists and turns of IT modernization. Aligning with the right partners with industry and domain expertise can create a smoother transition path, accelerating the journey, mitigating potential business risks, and maximizing the value of the hybrid IT estate.

Sustainable IT Modernization

Sustainability has become a central factor as companies devise strategies and roadmaps for modernizing the IT estate as part of an overall digital transformation. Among the key takeaways from the IBM Consulting/AWS/Foundry survey:

Sustainability is important.

- Meeting corporate ESG goals is among the top three IT modernization outcomes.
- IT operations (56%) and modernization (54%) are part of the ESG vision for most organizations.

Practices are underway, but there is more work to be done.

- Roughly three-quarters (73%) of respondents have green IT strategies in place and nearly two-thirds (64%) seek out vendors specializing in green technology areas.
- Optimized resource provisioning is the most practiced green IT strategy (51%); carbon accounting is less practiced (39%).

Challenges can impede outcomes.

- Despite their interest and commitment, more than one-third (35%) of respondents find it challenging to meet ESG goals, regardless of IT modernization strategy or status.
- Almost two-thirds (63%) say partnering with green data centers is crucial.



For more on the IBM Consulting and AWS partnership, visit ibm.com/consulting/aws