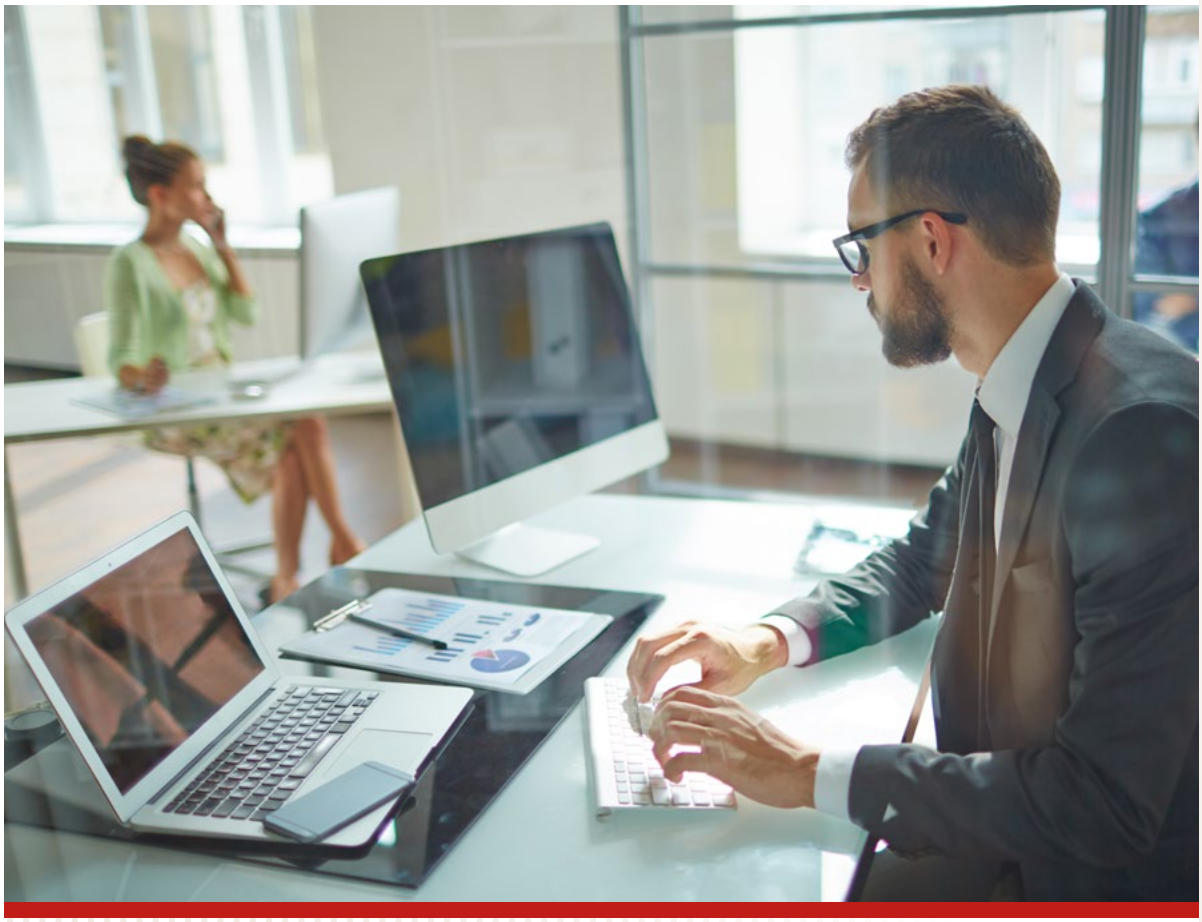
SPONSORED CONTENT | WHITE PAPER

# Cloud Migration and the ROI Problem: **How Enterprises Can Modernize Infrastructure, Reduce Cloud Waste and Become Cloud-Powered**



SPONSORED BY

CIO

pwc

Microsoft

The cloud has become ubiquitous in enterprise IT. More than three-quarters (78%) of all US executives surveyed by PwC say that have adapted it in all or most of their business. 36% report that all their operations are in the cloud[1].

**36%**

**report that all their operations are in the cloud.**

But even though the cloud is pervasive throughout the enterprise, return on investment (ROI) remains elusive. Almost one-third (30%) say their cloud spend is wasted, which makes achieving cost savings – the most important metric for assessing cloud success for of business leaders – extremely challenging[2]. Just one in 10 business leaders believe their organizations have unlocked the true business value of cloud[3].

But the challenges of migrating to the cloud and unlocking ROI are not insurmountable. With the most effective approach, organizations can successfully migrate and realize the overall value of their investment.

## Starting the cloud ROI journey

Though their ROI journeys may differ due to goals and requirements, all organizations should start at the same place: establishing a firm foundation for security and compliance by embracing automated governance for the cloud and becoming elastic. In doing so, organizations can avoid the common "false start" for cloud migration, where the initial effort fails due to a lack of end-to-end modernization. To make cloud migrations work, organizations should think beyond them.

"For instance, when you migrate apps into the cloud, do so consistently and make sure that they are coded so they can take advantage of cloud security services, automation, and platform-native elasticity," said Matt Joe, Principal, and Consumer Markets & Climate Transition Leader at PwC US. "That way, you can monitor and apply security profiles correctly to provide consistent protection across your overall application portfolio. If there's a problem, you only have to fix it once. Our Azure foundation and governance framework can help

automate enforcement of policies to control and enforce security controls, reducing risk."

But migrating on-premises systems to the cloud can be far easier said than done. Modern enterprise IT ecosystems are often highly interconnected and complex. Keeping the lights on requires constant attention, leaving little time for innovation. The fear of causing a disaster because of code changes often paralyzes development groups. This fear is not unwarranted – plenty of severe IT outages have involved administrations mistakenly deleting part of a routing table or pushing an untested patch into a product. Simply put, limited visibility into the IT ecosystem makes introducing cloud-native capabilities feel unsafe – it's hard enough to predict what ordinary changes to the environment will do, never mind cloud-native ones.

It is possible to disentangle this complex IT web through automation and analytics to understand how the various parts interact. "Terrain Insights, a PwC product, can leverage the inherent automation, analytics and visualization capabilities of Azure to provide real-time transparency into how assets are interrelated," Joe said.

Once this visibility has been achieved, IT can help identify issues early. This reduces the business impact of disruption from cloud migration and introduces greater efficiencies through automation to accelerate digital transformation and achieve ROI.

## Cloud ROI

Cloud ROI is elusive because so many cloud migrations often experience a false start – where the migration gets underway but is then derailed and has to begin anew. It's important to understand why past cloud investments have failed to deliver ROI.

Workloads moved to the cloud are often migrated in a "lift and shift" manner that doesn't optimize them for their new environment. Lift and shift treats the cloud as a traditional, third-party data center, which means IT gains none of the computing, storage, and cost-savings benefits that cloud elasticity brings. Consequently, IT frequently manages the cloud in the same way it ran on-premises workloads. Governance overhead rapidly grows, security becomes just as complex, and changes to the cloud require a slow,

multistep approval process. Applications are always scaled and always on, without any elasticity.

This approach might lead to modest cost savings. But retaining workloads and processes designed for on-premises environments is more likely to lead to cost increases. Meanwhile, organizations risk losing out on the cloud's biggest benefits: agility, scalability, and consistent, strong security. Unless they are cloud-powered, and not just operating in the cloud, these advantages cannot be realized.

> **"The definition of success is to** leverage the unique environment **that is the cloud."**
>
> - Matt Joe, Principal, and Consumer Markets & Climate Transition Leader

"This definition of success is to leverage the unique environment that is the cloud," Joe said. "While a lot of organizations may be in the cloud, they're not cloud-powered because they didn't modernize their apps. IT should go beyond migration. They should also modernize their development skills and software development life cycle."

Joe likens it to driving a hybrid car with regenerative breaks that recharge the battery each time they're used. As opposed to a traditional car, where users want to minimize riding the breaks because it reduces their life. "There are practices that should change to optimize the cloud, such as confirming test and dev environments are spun down when they're not being used. Behaviors should change to recharge the battery and achieve value," he says.

## Empowering developers and enabling transparency

To avoid this situation, empower developers to innovate by taking advantage of cloud-native solutions that have been designed to work within a cloud environment and make the most of its unique capabilities. Additionally, the organization should adopt FinOps, a methodology that brings development, IT and the business into alignment to help control costs and achieve maximum value. Finally, AI can further grow ROI by increasing automation and identifying additional areas for optimization.

"Our Build Studio can help integrate infrastructure-as-code automation, which frees developers to focus on

innovation," Joe said. "It's a solution that can make it simple and fast to accomplish much of the routine work that eats up so much time, so these skilled professionals can focus on solving hard problems and creating value."

IT and development teams can exploit the scalability of the cloud by adopting containers and taking advantage of the cloud's auto-scaling capabilities to gain agility and optimize spend. Cloud-native FinOps solutions can enable IT to scale and create without worrying about transparency, reliability, security, privacy or compliance – because the solutions confirm the requirements are met.

IT and development teams should also drive continuous integration (CI)/ continuous delivery (CD) by natively integrating these processes with solutions like Azure DevOps and GitHub Actions. Doing so makes apps resilient, intelligent and scalable.

Embracing and empowering DevOps with a FinOps context can enable app developers to access Azure services without having to obtain additional permissions and approvals. FinOps confirms that costs are transparent and controlled, while also providing developers with the freedom and flexibility to securely build and launch code at a fast pace.

By taking these steps, organizations can generate significant cost savings over an on-premises environment. A cloud-powered organization can rapidly scale in response to changing conditions, deploy new apps at a pace that matches constantly evolving market demands, and unleash innovation to help drive revenue opportunities.

## Cloud success: Enhancing business continuity

When you have millions of customers, hundreds of thousands of employees, and complex supply chains, system outages can cause cascading problems and seriously disrupt operations. The board of directors for one Fortune 500 retailer made achieving enhanced resiliency through accelerated cloud migration a major initiative. It was a challenging project because their infrastructure was extremely complex, with more than 2,000 critical applications spread across two on-premises data centers.

PwC implemented Azure-based technologies that provided new visibility into its distributed application infrastructure. This enabled PwC to establish a disaster recovery plan with automated governance as part of the larger Azure implementation.

As a result, Azure became a third scalable data center to support emergency operations and protect business continuity. Critical workloads were rearchitected so the retailer could adopt more resilient, cloud-native services, and Azure policies hardened security across systems.

"Becoming cloud-powered means modernizing your apps, policies, and procedures, which is a lot to ask, but the benefits are so well-worth it when you go beyond the migration," Joe said. "Everyone understands the advantages of cloud-powered email became pretty compelling. Why spend email servers for your users when you could spend them on, developing a new product."

The benefits of working with PwC mean apps don't simply get lifted into the cloud. Instead they're modernized so they can leverage the cloud's elasticity. Not only that, PwC works to upskill the dev team and modernizing processes for DevOps development and automation - ensuring lasting benefits beyond migration.

PwC can meet clients where they are to help them recover from cloud migration false starts – and go beyond the migration to finally achieve the cloud ROI that has so far eluded them. If you'd like to learn how PwC can help your organization become cloud-powered, visit PwC.com/us/azure to see if you qualify for a 3-week complimentary workshop.

[1] PWC. PwC's 2023 Cloud Business Survey. 2023. https://www.pwc.com/us/en/tech-effect/cloud/cloud-business-survey.html. Retrieved 25 June 2023

[2] ibid

[3] ibid



CIO pwc Microsoft