

EBOOK

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CLOUD

IMPACT

STUDY

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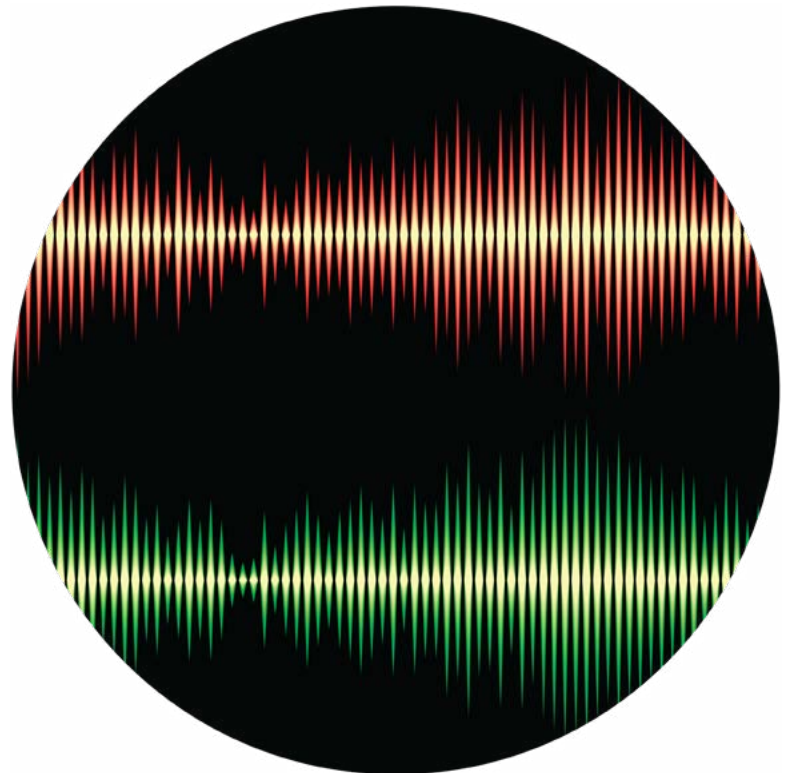
HYBRID: WHY AND HOW

APPLYING LESSONS FROM DIGITAL TRANSFORMATION

INTRODUCTION

'Hybrid: Why and How' is the first part of Aptum's 2022 Cloud Impact Study. Aptum polled 400 senior IT professionals to understand the effects of accelerated digital transformation on organizations' workloads, what issues they are experiencing, and where they most value input from a Managed Service Provider (MSP). The result was clear: most respondents, spanning many sectors in the US, UK, and Canada, need help to optimize their cloud deployments.

The first annual **Cloud Impact Study in 2021** revealed organizations are facing a series of unanticipated challenges across cost optimization, security, and modernization. Despite this, businesses reaped many of the benefits that cloud technology offers, especially considering the global pandemic that struck in 2020. Now, 12 months after the first study, with COVID-19 still impacting the business landscape, Aptum's second annual study evaluates the ongoing impact digital transformation has had on cloud adoption and other infrastructure deployments.





“When the pandemic hit, many organizations reacted hastily to moving applications to the cloud and neglected some workload considerations that have since become apparent. So, while organizations see benefits from the cloud, they could have been more successful in their endeavors when the shift first took place. As a result, many react by moving applications out of cloud infrastructure instead of taking a proactive approach where the desired end-state is constantly kept top of mind”.

– Chris David, Senior Cloud Product Leader
Aptum

EXECUTIVE SUMMARY

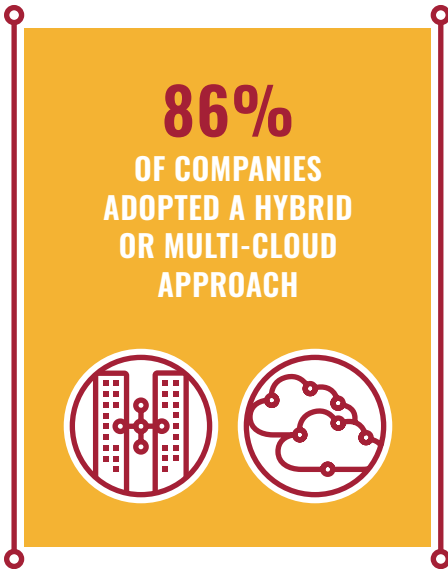
Organizations are increasingly spending more on cloud computing, with public cloud services being a key focus for many companies. Over the next year, Gartner **predicts** a 21.7% increase in public cloud spending, up from \$396bn in 2021 to \$482bn in 2022.

Public cloud, in particular, has grown at such a rapid rate because its benefits, such as affordable security, scalability, flexibility, business agility and access to third-party expertise, appeal to CIOs seeking to move workloads to the cloud. As COVID-19 hit and now appears to be a long-term consideration, these qualities have become even more desirable.

As cloud computing continues to grow, it significantly affects overarching digital transformation strategies. Microsoft CEO Satya Nadella said the company has seen two years of digital transformation take place in a matter of two months as its customers started adopting cloud solutions. McKinsey recently undertook a study that shows an even higher rate of acceleration: five years’ worth of digital transformation occurred in the first quarter of the pandemic in 2020.

For many businesses, these changes were reactionary and dictated by existential circumstances instead of being part of a pre-determined strategy to increase applications hosted in cloud infrastructure. As a result, the rush to cloud has revealed some shortcomings that have resulted in a cloud boomerang effect for some.





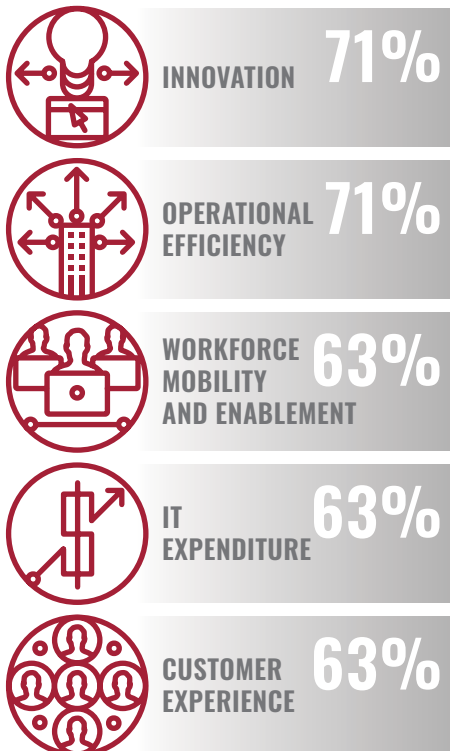
HYBRID CLOUD APPROACHES DOMINATE

As cloud computing continues to mature, companies have cast a clear vote for hybrid and multi-cloud deployments. A full 86% of companies had adopted or planned to adopt a hybrid or multi-cloud approach. Hybrid cloud mixes a traditional infrastructure environment with at least one cloud provider, while multi-cloud includes at least two cloud providers in the mix. The study shows these approaches to be equally popular.

Hybrid architectures naturally emerge as organizations change their infrastructure mix and shift more workloads to the cloud. Beyond this natural progression, hybrid models accommodate the individual requirements of each application. A greater level of technical control – such as hardware and software components that protect a system against cybersecurity attacks – means businesses can meet a range of compliance requirements, access more security options, and achieve greater architectural flexibility.

The popularity of cloud within the hybrid model is reflected in the study results. Cloud was the most popular hosting option across all 12 application categories examined in the study, compared to just two of nine categories in last year’s Cloud Impact Study. On average, 60% of companies hosted applications across these categories in the cloud.

Respondents also cited the rate of cloud transformation in their organization has had a **POSITIVE IMPACT** on the following areas:



CLOUD ENABLES TODAY’S BUSINESS NEEDS

The benefits of cloud computing shine through in some notable areas. This approach to enterprise IT has delivered expected efficiencies for nearly all (90%) of respondents. It has become a crucial tool for data management in 91% of companies and has bolstered business continuity for 94%.

The remote working experience is a good example of the increased need for resilience and a focus on business continuity. The move to working from home meant staying online and connected was essential for continuity. SaaS (Software-as-a-Service) collaboration tools like Microsoft Teams paved the way, but poor infrastructure resilience meant that some organizations endured elongated periods of downtime. With hybrid and remote working arrangements looking like they are here to stay, organizations require higher service level agreements (SLAs) across their infrastructure to guarantee uptime for all their applications. Fortunately, the built-in resilience and high service levels found in the data centers operated by public cloud providers means that excellent SLAs are now within reach of most businesses.

The transformative effect of cloud has empowered companies to engineer change. It has increased innovation for 71% of organizations and helped 93% become more agile. The pandemic’s influence on cloud adoption was also reflected in the study responses, with over half (63%) of companies reporting that it positively affected workforce mobility.



54%

The biggest driver cited by respondents for continuing to operate in a cloud environment was that it is a part of their **LONG-TERM IT STRATEGY.**



This exceeded the next biggest driver - **INCREASED PRODUCTIVITY** - by far

REPATRIATION PLANS FOR SOME

These numbers show overwhelming support for cloud computing, but a closer look reveals a more nuanced story. While 60% of respondents on average hosted their applications in the cloud, 23% plan to move some back to a data center in the future.

Repatriation plans were evident across all application categories. This included data backup (26%), along with ERP (25%), line of business (LOB) applications (25%), websites (25%), and CRM (24%).

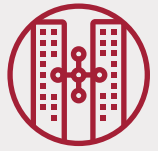
This movement of workloads will prompt an uptick in the use of on-premises and data center infrastructure in the next two years. In 2020, almost six in 10 respondents planned to decrease their reliance on their own infrastructure. But, over the course of the next two years, 47% of respondents are planning to increase their use of traditional infrastructure resources for enterprise IT, with 54% of them choosing to continue including cloud computing in the mix because it forms part of their long-term strategy.

EXPLAINING THE REAL CLOUD BOOMERANG EFFECT

So, why are some companies shifting applications away from cloud infrastructure? There are several factors driving them back to the data center despite the positive outcomes they have seen from cloud.

INTEGRATION CONSIDERATIONS

Among the most prevalent hurdles is integrating cloud and legacy applications. In fact, 44% of respondents worried about doing it properly. Tying cloud solutions together with traditional systems is often a daunting and complicated task. Getting it wrong creates potential performance and reliability issues, which was a concern for 39% of respondents. Not having the in-house skills to manage the integration of cloud and legacy applications is one of the main causes of this. In fact, seven in 10 respondents said they wanted to accelerate their cloud adoption but lacked the internal expertise to do it.



“Contrary to widely held belief, the cloud boomerang effect isn’t simply about moving workloads from cloud platforms back to traditional infrastructure. More accurately, the boomerang is the movement of applications between development and operations teams.”

– Chris David, Senior Cloud Product Leader
Aptum

DEV VS OPS

The primary focus of development teams is the creation of new versions of applications, meaning limited time can be spent on administrative duties. Due to this, the onus often shifts back to the operations teams to manage administration. Unfortunately operations teams often lack the necessary skills or resources. If they lack skills, tools, cloud governance policies, or best practices to enforce operational standards in the cloud, these workloads will often come back to legacy platforms.

Development and operations teams typically have different priorities that affect the placement of workloads. Development teams are usually under significant pressure to deliver new applications and product features into production in a brief period. Developing applications in the cloud is usually their preference as the tools they need are readily available and there is usually very little, or no process involved in obtaining sign off to spin up an operational cost as opposed to capital expenditure. When the features of an application are finished they move on to their next project, and often do not take the time to outline how it should be operated and managed.

When an application moves back into the remit of operations, they have an unfamiliar and unfinished application that sometimes is not architected to a common standard that allows for scalability and optimized performance. Operations frequently are not familiar with running and managing workloads in cloud environments, so they revert to traditional infrastructure where they understand the power, governance, and controls.

SECURITY CONSIDERATIONS

Security and data privacy were factors for 44% of respondents in the move back to on-premises/ data center infrastructures. Handling cybersecurity in purely public cloud environments is difficult enough for some organizations, who must understand the shared responsibility model and adjust their security infrastructure to the cloud environment. That includes learning how to use cloud-native security tools that replace previous solutions.

Splitting operations across a hybrid environment and potentially across multiple cloud vendors further complicates the cybersecurity challenge, reducing visibility into cloud infrastructure and data management. End-to-end control of this infrastructure becomes more problematic and much more complex.



The sheer number of solutions and operating concepts is often overwhelming in the cloud industry.

80%

of organizations report that this complexity and choice makes it difficult to decide on the most effective cloud strategy.

CLEAR CLOUD STRATEGY IS KEY, YET FEW HAD ONE

All of these considerations are manageable if companies undertake cloud transformation projects with a clear strategy. Yet only 20% of respondents reported an intentional, holistic strategy before beginning their cloud journey.

While most companies by no means walked into cloud projects without some planning, their approaches were still fragmented. Some had small teams with mixed skills to tackle the cloud. Others allowed different business units to steer their projects, resulting in multi-cloud implementations with no overall guidance to tie their efforts or technical solutions together.

The cloud industry is such a vibrant, innovative space that the sheer number of solutions and operating concepts is often overwhelming. Eighty percent (80%) of organizations report that this complexity and choice makes it difficult to decide on the most effective cloud strategy.

The lack of an overarching strategy is a major cause of the integration struggles faced by cloud customers. Companies that do not understand the integration requirements will often migrate applications and data to inappropriate environments.

Misplaced applications are often unable to exchange data effectively with other applications and cloud services. This limits their potential to deliver full value in a hybrid or multi-cloud environment. In many cases, this results in driving up cloud costs through increased data traffic across expensive cloud service boundaries, while making the organization less agile. This is a key factor in companies' decisions to step back from the cloud.





“Partnering with an MSP gives companies the technical and strategic help they need to manage complex hybrid and multi-cloud environments. A third-party with an established record of accomplishment in hybrid and multi-cloud deployments can help organizations analyze their application portfolios and make informed decisions about where to host each workload.

A partner can help companies decide whether to retain an application on their own premises, retire it altogether, rehost it in a lift-and-shift configuration, or invest in refactoring it entirely for the cloud.”

– Chris David, Senior Cloud Product Leader
Aptum

DESIGNING AN EFFECTIVE CLOUD STRATEGY

Aptum’s 2022 Cloud Impact Study shows that organizations understand the benefits cloud and digital transformation offer, but sometimes struggle to integrate their legacy applications and infrastructure to achieve their goals. Many have rushed to implement cloud solutions without proper planning to support workforces that were forced to work remotely as a result of the COVID-19 pandemic.

The result of this fragmented approach to cloud transformation has left companies with a strategy gap. Over a third of respondents (35%) said they wanted to improve their cloud strategies this year, with another 21% acknowledging the need to create an appropriate strategy.

Organizations can minimize any difficulties in moving to the cloud with careful planning, and looking at their entire IT operation from end-to-end before making the leap. For many, a hybrid infrastructure with some workloads running in a data center and other workloads running in the cloud will be ideal. For instance, a database application with large volumes of reads and writes might run more cost effectively in a data center, while a software testing/development framework might be better suited to the cloud.

Organizations should understand how their applications, data and users interact with each other, and which infrastructure best suits each scenario. This modelling should focus on supporting the business outcomes these IT resources support, while acknowledging potential risks.

A HOLISTIC CLOUD STRATEGY IS CRITICAL TO SUCCESS

This kind of analysis requires a deep understanding of application and business dependencies. It calls for a level of technical skill that many companies lack. Seven in 10 respondents said that they wanted to accelerate their cloud adoption but lacked the internal expertise to do it.

Companies may be at a crossroads in their cloud transformation, but that does not mean they need to abandon their cloud investments and pull all their applications back to the data center. Sourcing expert advice from a trusted partner can help them plan their next move while fully unlocking the benefits that cloud computing promises.

TO LEARN MORE ABOUT HOW OUR SERVICES CAN HELP YOUR ORGANIZATION, PLEASE VISIT:

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