Enterprise Strategy Group by TechTarget

SHOWCASE

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# How AWS and Infosys Accelerate Application Modernization

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**Abstract:** Driven by the need to increase business agility, the vast majority of IT organizations are ramping up their efforts in the field of application modernization.[1] Enterprises that have already begun such projects have reported major benefits with direct impacts on enterprise agility. These are strategic initiatives, and their successful planning and implementation require the level of expertise and understanding provided by third-party service providers.

## Overview

Agility and the ability to innovate have become critical to business survival. A huge majority of IT organizations have recognized the fact that these qualities are supported by a process known as application modernization. 94% of respondents to a research survey from TechTarget's Enterprise Strategy Group (ESG) said that they are boosting their spending on such initiatives, and 43% are planning significant spending increases in this area.

Application modernization increases enterprise agility by accelerating the processes of developing, modifying, and deploying applications, therefore allowing innovations to be brought to market at an accelerated pace. The process also improves IT service levels across multiple areas that include performance, security, compliance, and availability. Enterprises that have modernized their applications have strongly confirmed these benefits.

However, application modernization is not a simple or small task. It is a strategic action that lays the foundation for continuing enterprise agility and competitiveness and requires planning with deep understanding of technical and operational IT issues. Faced with the need for such expertise while also suffering a skills gap, one third of enterprises surveyed by ESG have said they plan to engage third-party services as part of their application modernization projects.[2] ESG believes such services are essential to the long-term success of these and other organizations.

## The Need for Agility

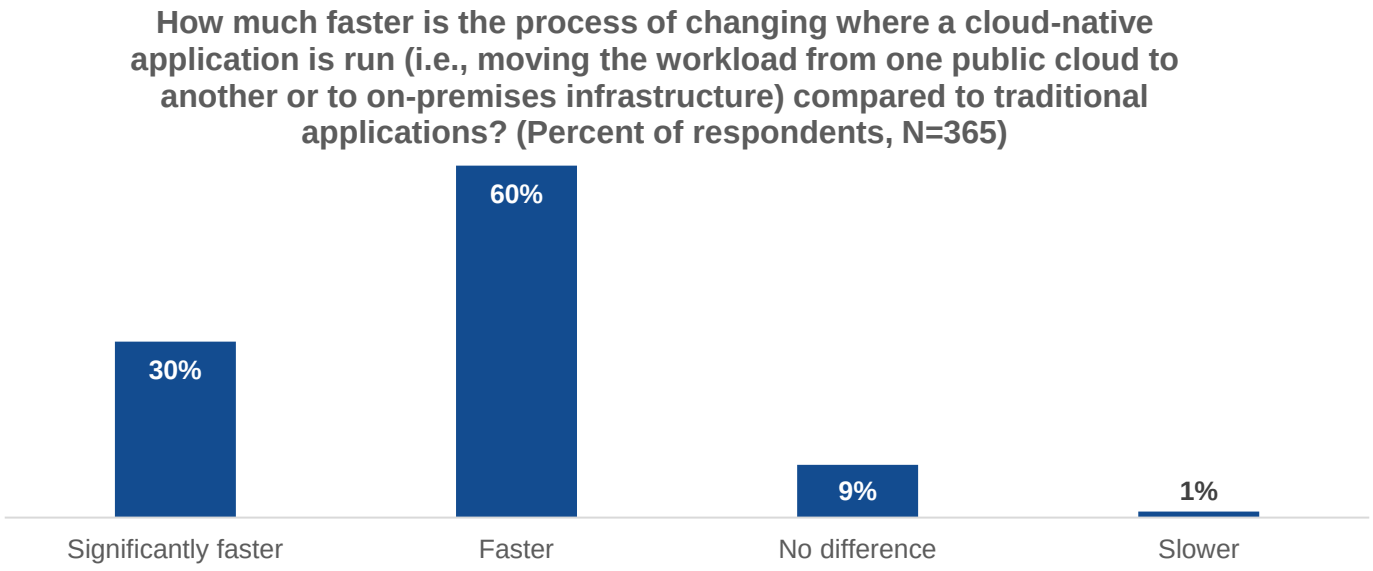
Businesses need to be agile and innovative now more than ever before. This is a direct consequence of the digitization of almost all aspects of business operations, which, by enabling unprecedented levels of agility, has made agility a critical business feature. Enterprises that use IT to continually innovate or refine their operations maintain competitiveness by constantly meeting customers' demands for better experiences with their goods or services.

The most agile of enterprises have already embarked on the process of modernizing their applications, or, to use an alternative term with the same meaning, have already embraced cloud-native applications. This has heavily increased the speed at which these organizations can deploy new or modified applications. In a recent research

[1] Source: Enterprise Strategy Group Research Report, *Cloud-native Applications*, May 2022. All Enterprise Strategy Group research references and charts in this showcase have been taken from this research report, unless otherwise noted.
[2] Source: Enterprise Strategy Group Research Report, *Application Infrastructure Modernization Trends Across Distributed Cloud Environments*, March 2022.

study completed by Enterprise Strategy Group (ESG), 90% of enterprises reported that cloud-native applications are faster to deploy, and 30% said they were significantly faster (see Figure 1).

**Figure 1.** Cloud-native Applications Are Proven to Be Faster to Deploy




*Source: Enterprise Strategy Group, a division of TechTarget, Inc.*

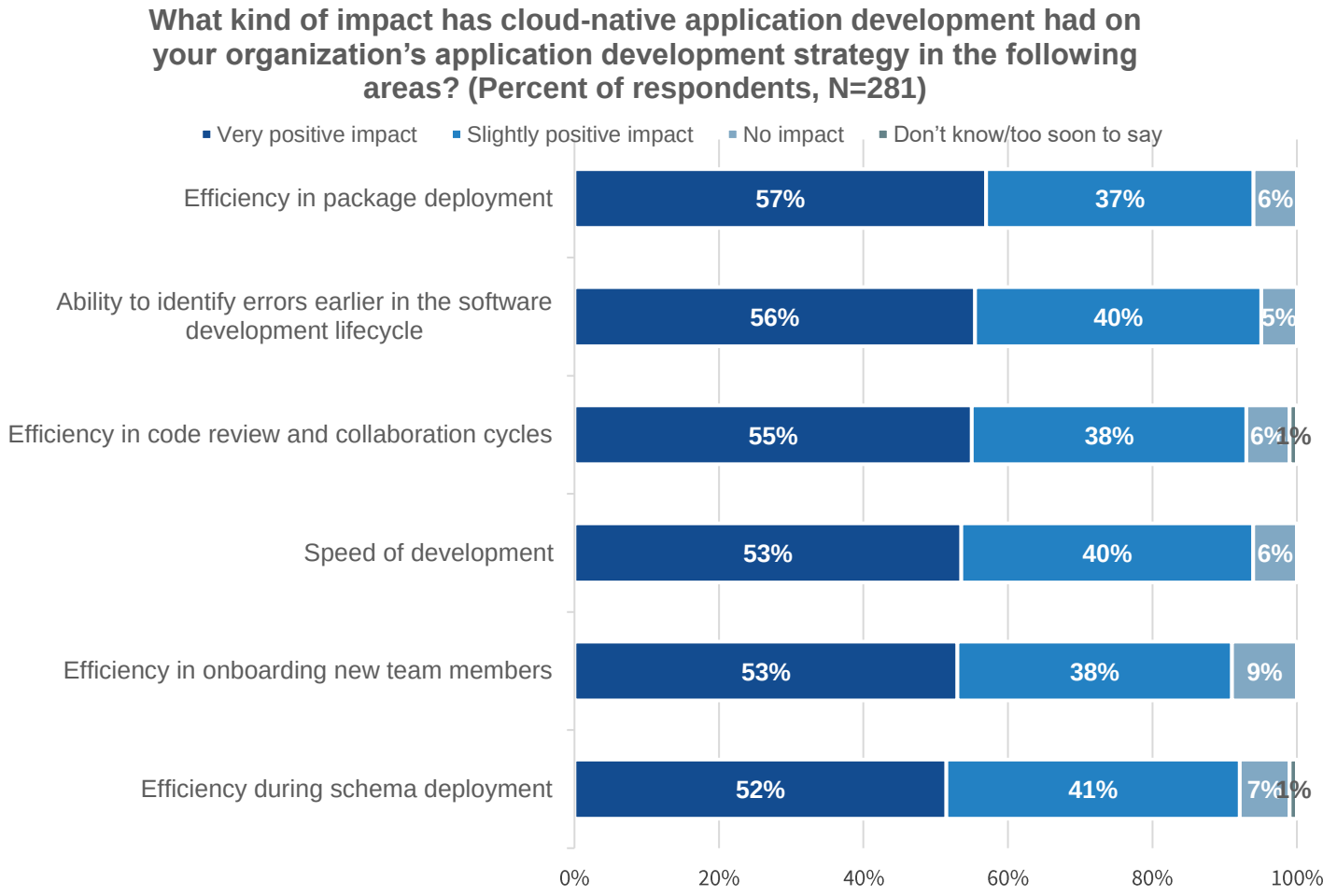
## Application Modernization Drives Agility

Application modernization is a broad term, but it is centered around two core activities—the adoption of microservices architectures and the automation of development and deployment (DevOps) processes. Microservices architectures make code development more flexible and efficient by replacing traditional monolithic code with applications that are assembled from independent and reusable elements or modules. This not only speeds innovation by streamlining the creation of new applications, but also enables faster modification of applications and the continual improvement of the customer experience.

Alongside those improvements, the time taken to deploy new or modified code is reduced by automating DevOps and creating continuous integration and continuous delivery (CI/CD) pipelines. This automation also boosts application reliability, security, compliance, and extensibility by enforcing best practices and eliminating the risk of human error.

IT organizations that have already embraced application modernization have confirmed its impact on the speed and quality of application development. In the same Enterprise Strategy Group (ESG) research study, an overwhelming majority of organizations reported that their application modernization strategy has had a positive impact in multiple ways, and over half stated that it had a very positive impact across each of several areas of improvement (see Figure 2).

**Figure 2.** Cloud-native App Development Provides Faster Time to Value



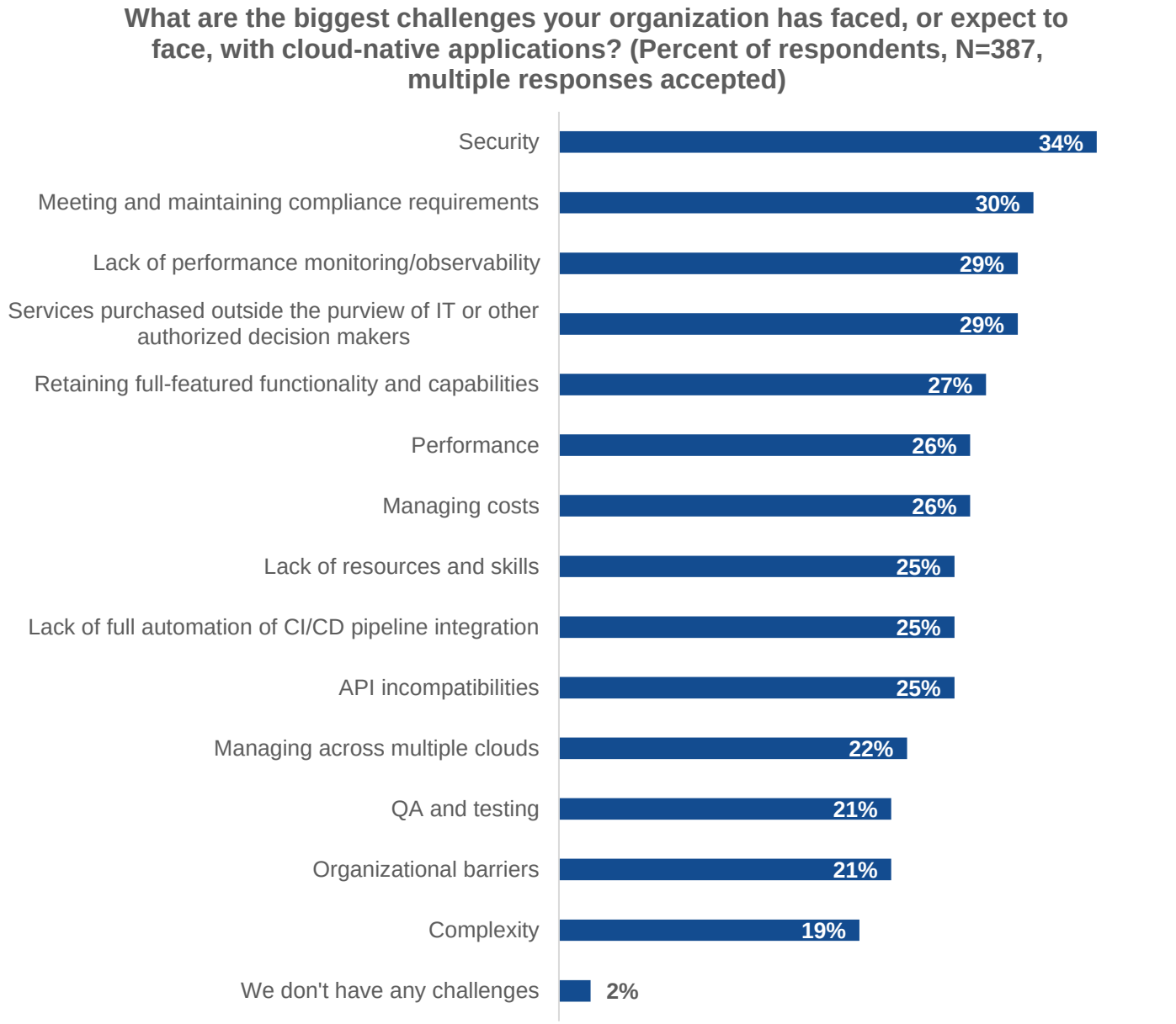

*Source: Enterprise Strategy Group, a division of TechTarget, Inc.*

In addition to those benefits, the use of microservices architectures strongly improves the portability of applications between on-premises and public cloud hosting venues, increasing the impact of hybrid cloud strategies on IT agility. Collectively, these are the reasons that, in the same Enterprise Strategy Group (ESG) study, 94% of enterprises said they plan to increase spending for cloud-native application development and 43% said the increases would be significant.

## Tackling App Modernization

Although many enterprises are already enjoying the benefits of application modernization, achieving it is not a straightforward or overnight task. Instead, it is a journey that is often best completed in stages—for example, by introducing changes to one application team at a time. The process requires both technical expertise and a comprehensive understanding of the way that DevOps processes will be transformed and will interact with each other. Skills gaps and a lack of experience in this area increase the difficulties. Enterprise Strategy Group (ESG) has found that IT organizations embarking on application modernization have faced a wide range of organizational, operational, and technical challenges (see Figure 3). The depth and breadth of these challenges is underlined by the fact that only 2% of the survey respondents said their organizations encountered no challenges.

**Figure 3.** Biggest Cloud-native Application Challenges Organizations Face or Expect to Face

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Decisions made during modernization projects can have long-term consequences for organizations, while also requiring deep technical knowledge. One example is the choice of method for implementing microservices, which can be achieved via containerization or by using the serverless functions offered in public clouds, such as AWS Lambda—or by a mix of both methods. Containerization itself involves a choice between a range of container orchestration mechanisms or public cloud services such as Amazon's Elastic Container Service (Amazon ECS) and Elastic Kubernetes Service (EKS). Each of these mechanisms delivers different benefits in different environments. Elsewhere, some modernization projects have been slowed by problems that could have been avoided with sufficient knowledge of issues such as the need to modify disaster recovery and backup to work with containerized applications.

## Why Use Amazon Web Services (AWS) Services and Infosys

Infosys is a global leader in next-generation digital services and consulting that enables clients in more than 56 countries to navigate their digital transformation. As an AWS Premier Partner and an AWS Managed Service Provider Partner, Infosys has achieved AWS Migration, AWS DevOps, and AWS Mainframe Modernization Consulting Competencies, among others. Leveraging Infosys Cobalt, a set of services, solutions, and platforms for enterprises to accelerate their cloud journey, including 35,000 cloud assets and over 300 industry cloud solution blueprints, Infosys brings together the AWS capabilities needed to drive customers' business and IT priorities.

The Infosys Live Enterprise Application Development Platform, a part of Infosys Cobalt, simplifies and accelerates the modernization and development journey on AWS. It covers patterns like cloud-native development, application migration and modernization to the cloud, database modernization, legacy modernization, and application maintenance and supports all lifecycle stages, including architecture, development, testing, site reliability engineering, and deployment.

The platform abstracts underlying technology complexity, unlocks information from legacy systems, simplifies decision-making, and reduces dependency on niche skills. Deep insights into technical debt enable high code quality, and integration with ALM tools helps improve sprint velocity, release predictability, and product quality. The platform's guided workflows and AI-enabled tools save up to 40 percent effort and enable up to 25 percent faster time to value.

Learn more about Infosys and AWS offerings here.

## Conclusion

As well as making its own contribution to enterprise agility, the widespread and growing use of public cloud infrastructure services is continuing to shape the evolution of almost all aspects of enterprise IT. One example of this influence on application modernization has been the rapid adoption of containerization as a means of realizing microservices architectures. Although containerization strongly benefits code development processes, an equally important virtue for many enterprises has been its positive impact on application portability across on-premises and cloud venues. Continuing along this path, containerization is now being augmented by the serverless functions offered within public infrastructure clouds.

This is why application modernization is not a tactical or operational task but is a central plank of enterprise IT strategy. A thorough understanding of DevOps processes, technologies, and future developments is vital to creating a successful plan for application modernization and eliminating the risk of making uninformed decisions that will have long-term negative impacts.

While skills gaps continue to make this level of understanding scarce, Enterprise Strategy Group (ESG) believes that it will be essential for many organizations to engage the assistance of third parties with proven expertise in providing application modernization services. Covering technical and tactical issues, as well as long-term strategies, such services benefit from the experience of the service providers and the lessons they have learned while assisting multiple clients to lay foundations for continued competitiveness and agility.

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TechTarget's Enterprise Strategy Group provides focused and actionable market intelligence, demand-side research, analyst advisory services, GTM strategy guidance, solution validations, and custom content supporting enterprise technology buying and selling.

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