How AWS Cloud Adoption Framework & DevOps Services Transforms Business

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*aspire* SYSTEMS

attention. always.

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Chapter 1

Introduction

Leveraging the AWS Cloud Adoption Framework (AWS CAF) has become standard practice to transform businesses across various industries digitally. The AWS CAF helps identify particular capabilities in the enterprise to empower cloud transformations successfully, even as they enhance your cloud readiness. According to the Cloud Value Benchmarking report - *"Adopting AWS leads to a 37% reduction in time-to-market for new features and applications, a 342% increase in code deployment frequency, and a 38% reduction in the time to deploy new code."* It also goes to show that *"Driven by economies of scale, larger applications see greater cost reductions, averaging 42.4% lower cost per user for applications with more than 1,000 users."*

Essentially, AWS CAF focuses on the following perspectives:

- **People perspective** - Serves as a bridge between business and technology, where enterprises become a place for continuous growth, where change is normal, and the focus is on company culture, structure, and workforce. The stakeholders would include the C-Suite, Cloud director, and enterprise-wide leadership team.

- **Business perspective** - Ensures that Cloud investments help digital transformation with clear business outcomes. The stakeholders include CEOs, CTOs, CFOs, COOs, and CIOs.

- **Platform perspective** - Offers an efficient hybrid cloud platform that is scalable and helps modernize workloads involving technology leaders, engineers, architects, and CTOs.

- **Governance perspective** - Mitigates transformation-related risks, and maximizes organizational benefits. Common stakeholders are the CIOs, CTOs, CFOs, CDOs, and CROs.

- **Security perspective** - Ensures data integrity and secure access to cloud workloads. The decision-makers include CISOs, CCOs, security engineers and architects, and internal audit teams.

- **Operations perspective** - Ensures that cloud services delivery meets business needs, where operations and infrastructure leaders, IT service managers, and site reliability engineers are the stakeholders.
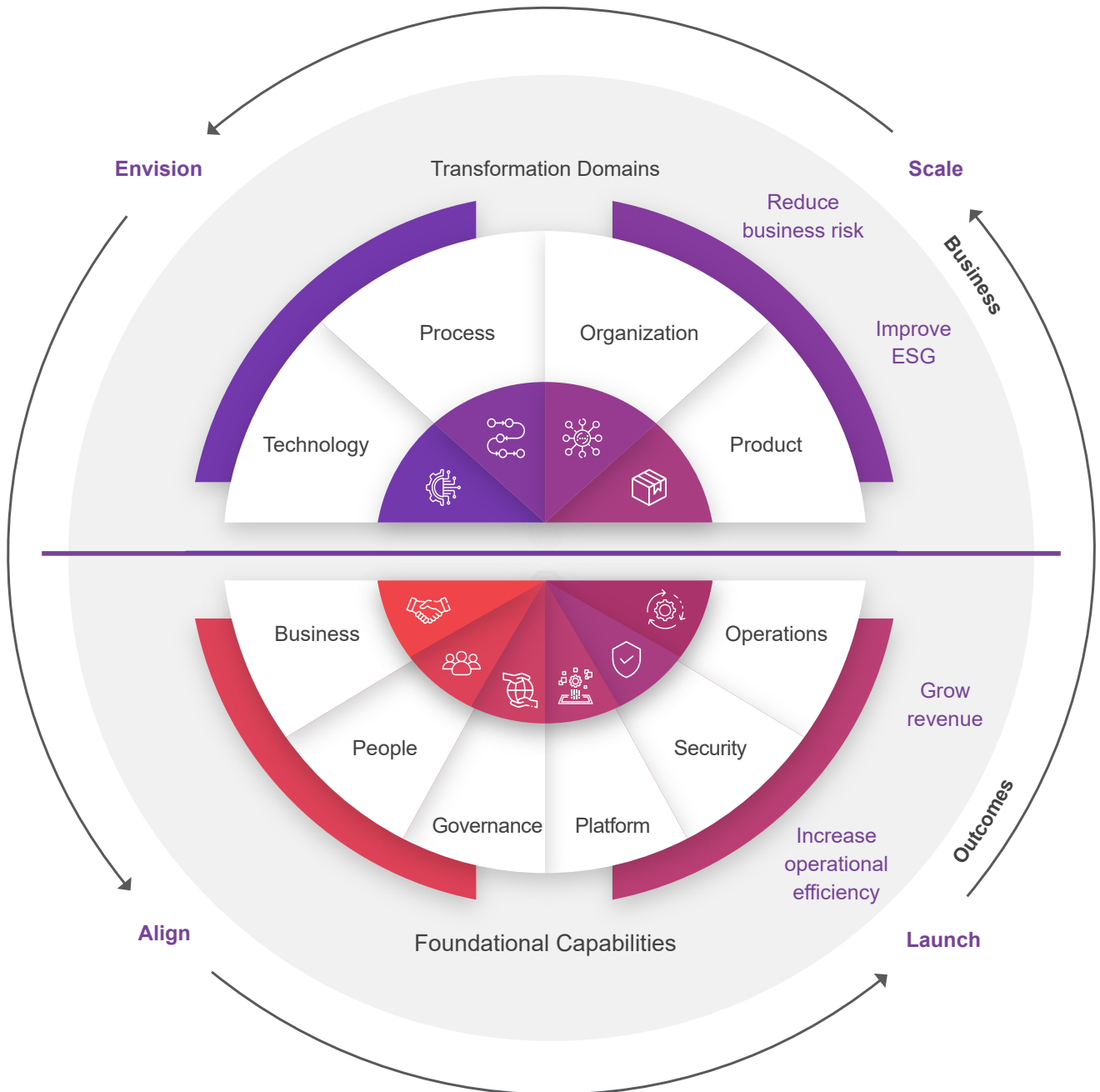
Each of the above has a unique set of capabilities that are within a particular stakeholder's domain. The best approach is to evaluate and improve cloud readiness, identify and prioritize transformation opportunities, and create a transformation roadmap.
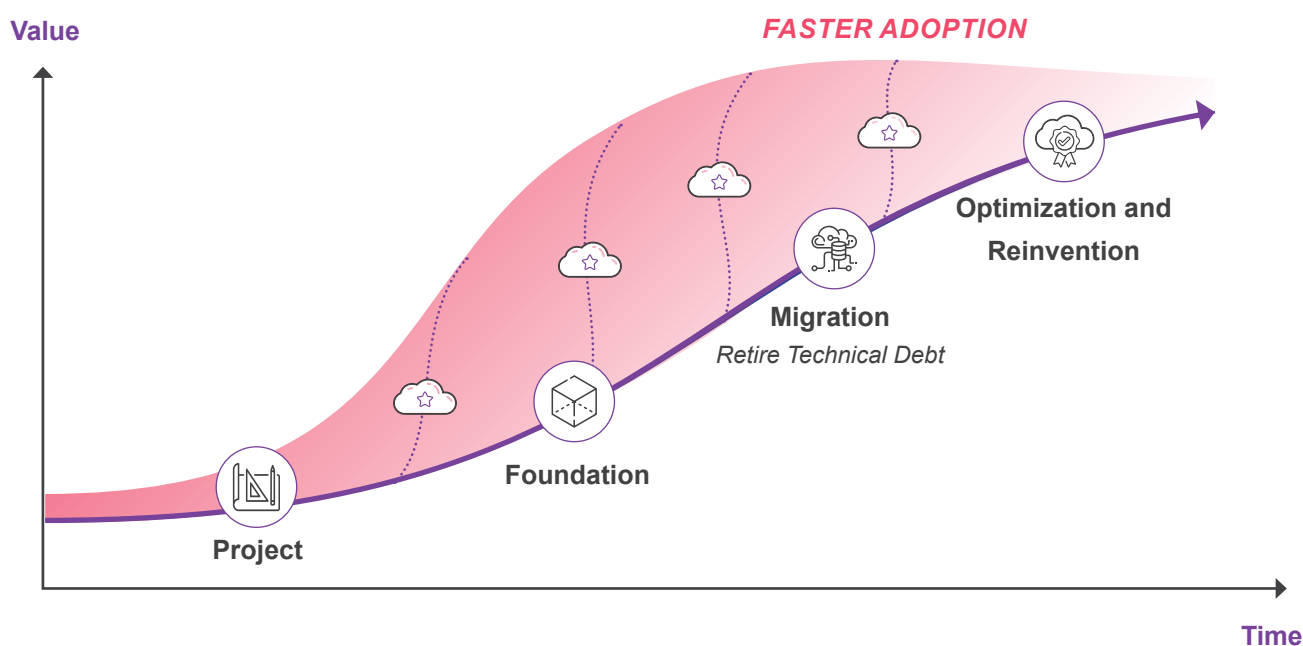
Chapter 2

How can AWS CAF help your enterprise?

AWS CAF helps the digital transformation process by reducing risk and improving performance and reliability. It also generates deep insights to ensure greater enterprise-wide transparency, sustainability, and operational efficiency to meet the evolving customer expectations, thereby directly impacting the bottom line.

ACCELERATING CLOUD ADOPTION AND REALIZING VALUE

Value

FASTER ADOPTION

Optimization and Reinvention

Migration

Retire Technical Debt

Foundation

Project

Time

When you identify transformation opportunities that are aligned with business and strategic goals, you also envision measurable business outcomes during the transformation journey. The inevitable cross-functional dependencies and capability gaps are defined to design strategic initiatives toward cloud readiness and to facilitate change management aligned with the business.

AWS's set of flexible services also helps build and deliver products faster to market with DevOps best practices. They streamline provisioning infrastructure, deploying applications, automating software releases, and managing infrastructure and application performance.

Chapter 3

Why DevOps?

DevOps combines tools, technology, and best practices to empower an enterprise in its product and service delivery at high velocity. DevOps-based processes ensure high speed in product development and application delivery, in turn serving customers better. Moreover, DevOps can remove barriers to collaboration between the development and operations teams. In today's complex user environment, this can be crucial. A recent market study revealed that 88% of organizations require an access request to go through two or more employees to be approved and granted!

As DevOps is designed to propel innovation and accelerate the drive for continuous improvement.
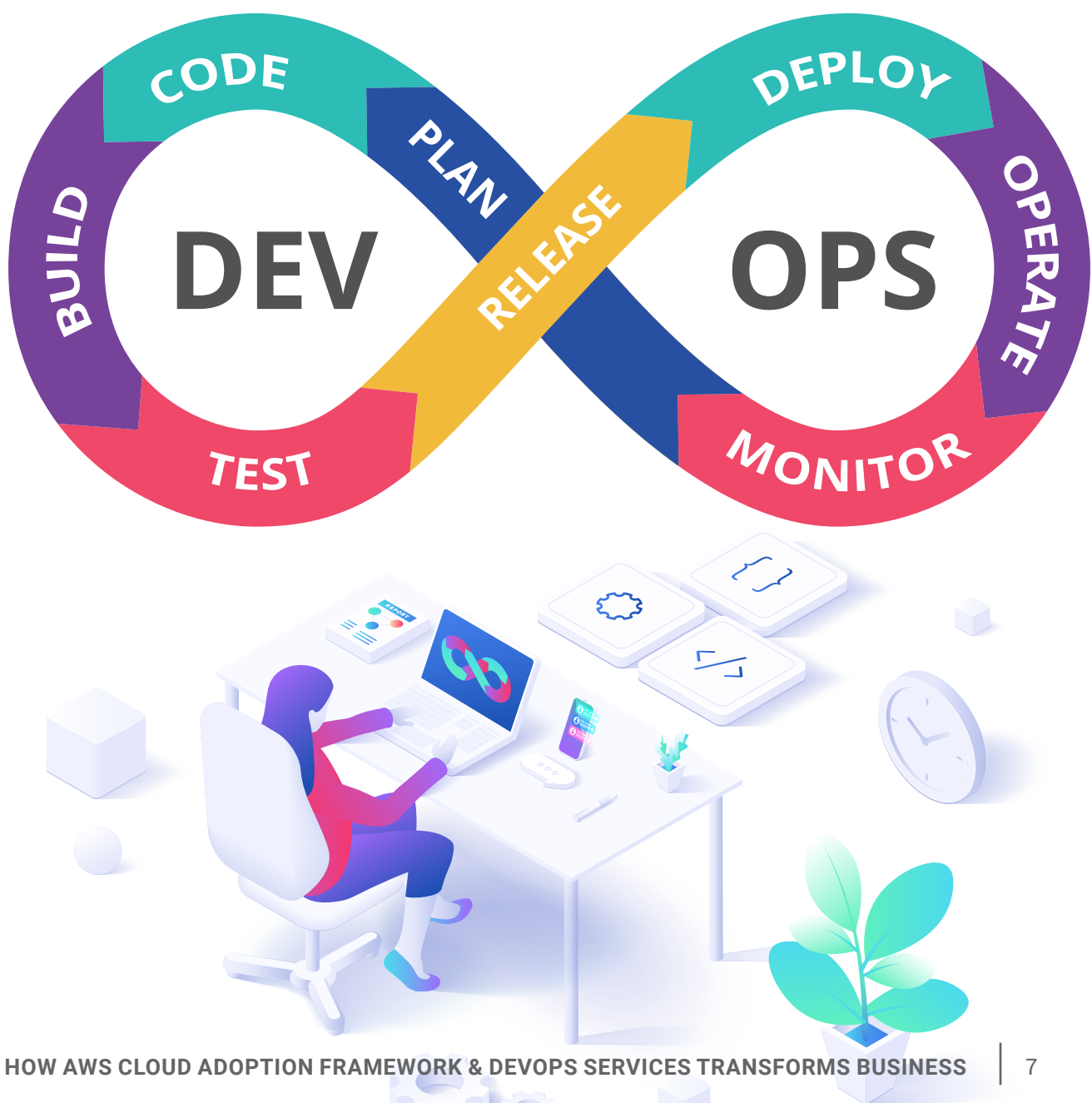
Chapter 4

Benefits of using AWS for DevOps
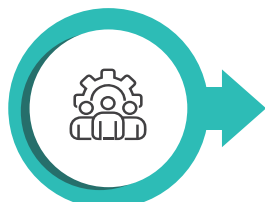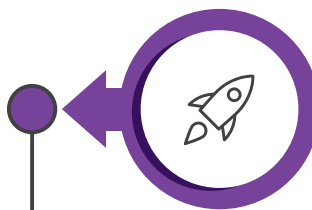
BUILT FOR SPEED

AWS's flexible services do not require software installation or setup. The service is ready-to-use with just an AWS account.
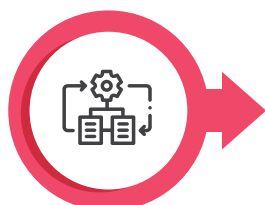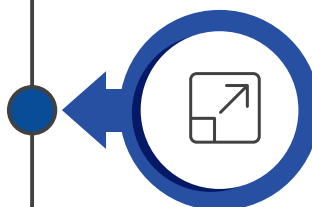
MANAGED SERVICES

You can leverage AWS resources without additional infrastructure and still focus on core product development and delivery with your AWS account.

SCALABILITY

Scalability is one of the primary requirements in digital transformation. With AWS and DevOps accelerating business growth, you need platforms and solutions to scale from one instance to thousands in the shortest time possible. AWS services simplify provisioning, scaling, and configuration and help enterprises make the most of the computing resources.

AUTOMATION

Automation is essential for faster and more efficient builds. AWS services help automate routine and repetitive manual tasks, including test workflows, deployments, and container and configuration management.

SECURITY

AWS' I&AM helps you set policies and permissions, giving you granular-level control over who can access your resources, thereby providing high security.
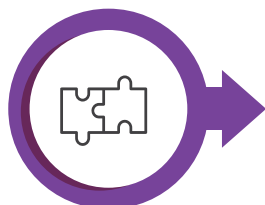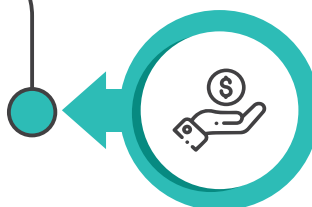
INTEGRATION

AWS' services support integration partners to extend its services, be it open-source tools or third-party partners.

PAY-AS-YOU-GO

You can buy only the services as and when you need them as there are no upfront costs, long-term contracts, or termination penalties with AWS.

Chapter 5

AWS Tools for DevOps

These AWS developer tools help store and version the source code and build, test, and deploy applications automatically to AWS or on-premises. You can also ensure continuous integration or delivery workflow using AWS CodeBuild, CodeDeploy with the tools, or individually. For instance:

- The AWS CodePipeline enables enhanced software release workflows. For instance, you can ensure continuous integration (CI) and continuous delivery (CD) service for quick updates and new features at pace with every code change.

- AWS CodeBuild is a build service that compiles the source code, runs the tests, and gets software ready to deploy. You don't need to provision or scale up your build servers, as you can use CodeBuild to scale up or down continuously and process various builds concurrently.

- AWS CodeDeploy automates the code deployment to any instance, in AWS or on-premise servers. Releasing new features or updates rapidly is made possible with AWS CodeDeploy with zero downtime during the deployment.

- AWS CodeStar has a unified interface to manage all software development activities from one place; It enables setting up a continuous delivery toolchain within minutes, helping you release the codes faster.

- DevOps automation helps ensure backup compliance using AWS Backup Audit Manager. It covers defining and enforcing backup policies and protecting them through encryption, from manual deletion, and preventing changes from a centralized console. It is an AWS service that has built-in compliance controls that can also be customized further on data protection policies.

Chapter 6

Conclusion

Essentially, the AWS CAF 3.0 is here to help organizations build and execute a holistic plan for their digital transformation. The six foundational perspectives offer 47 discrete capabilities identifying four domains, including technology, process, organization, and product involved in the transformation.

DevOps AWS tools help you configure and deploy your resources optimally, making for a more flexible and scalable set of applications in your enterprise. They are cost-effective solutions to leverage AWS CAF best practices to accelerate your journey through innovative digital transformation.

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