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# AWS VERTICAL EXPERT

## AWS CLOUD ADOPTION FRAMEWORK (CAF)

# Digital Cloud Transformation

Digital Cloud Transformation are processes and methodologies that involves leveraging emerging technologies to facilitate organizational change, enabling businesses to adjust to evolving market conditions, satisfy customers, and expedite business results.

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# Digital Cloud Transformation

Digital Cloud Transformation helps you leverage cloud to transform your business digitally, AWS offers the cloud adoption framework that contains sets of foundational organizational capabilities.

A capability is described as the organizational ability to use processes effectively to allocate resources such as people, technology, and other assets towards achieving a specific goal or outcome.

In the context of AWS CAF (AWS Cloud Adoption Framework), these capabilities serve as guidelines or best practices to enhance the organization's readiness to utilize cloud services for digital transformation.

These foundational capabilities are like essential skills or tools that the organization possesses to make the transformation successful.

# Transformation Domain

The transformation domains represent a value chain where technological transformation enables process transformation which enables organizational transformation that enables product transformation. Key business outcomes include reduced business risk, improved environmental, social and governance (ESG) performance, as well as increased revenue and operational efficiency.
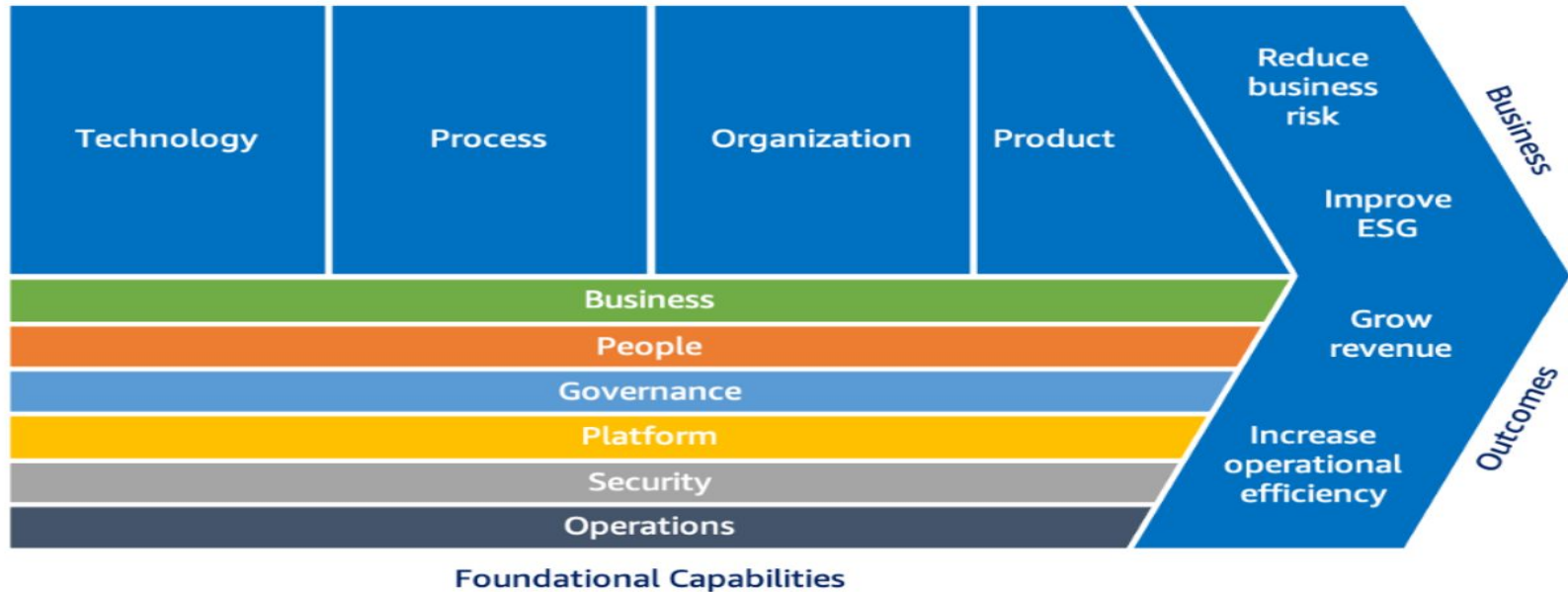
# Cloud Transformation Journey
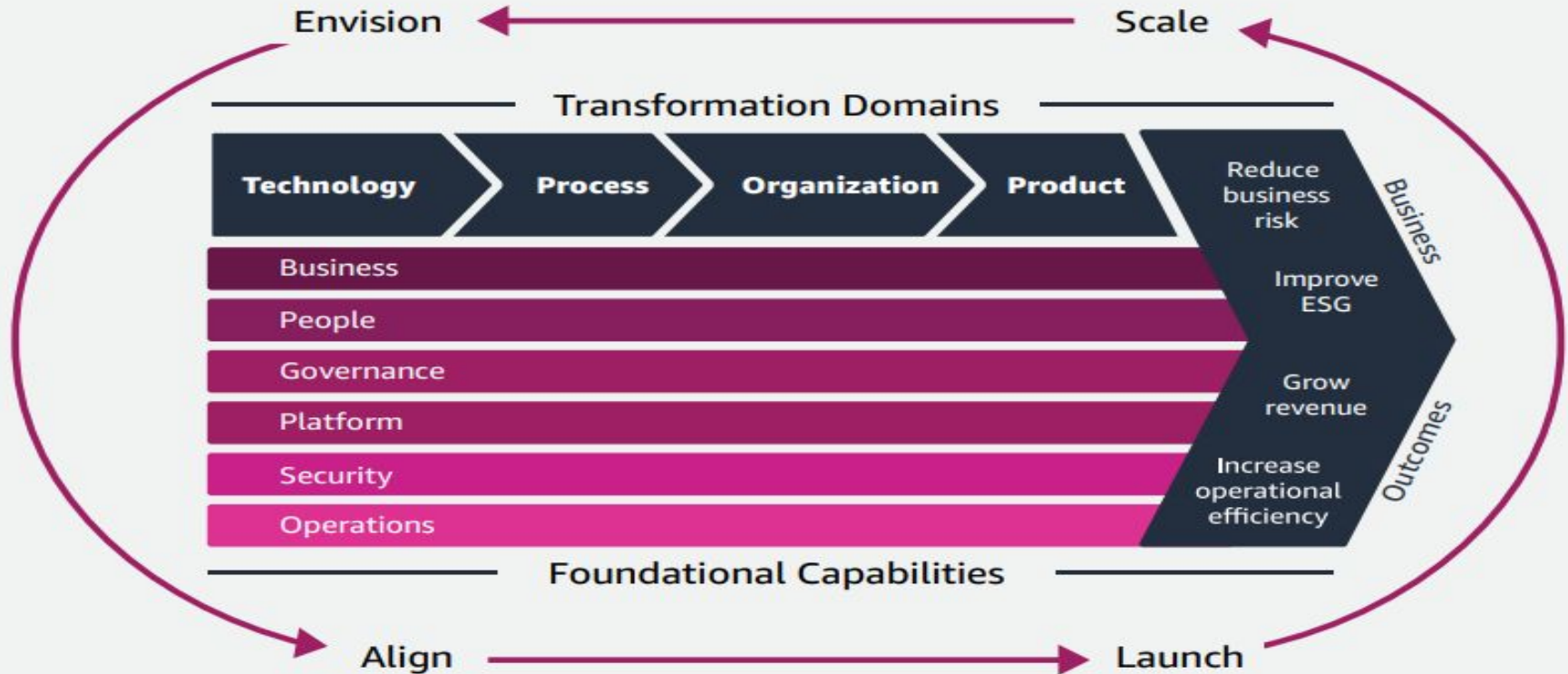
# AWS Cloud Adoption Framework

AWS Cloud Adoption Framework (AWS CAF) is a comprehensive model developed by Amazon Web Services to guide organizations through the process of cloud adoption and transformation.

# AWS Cloud Adoption Framework

The AWS Cloud Adoption Framework (AWS CAF) leverages AWS experience and best practices to help you digitally transform and accelerate your business outcomes through the innovative use of AWS.  AWS CAF groups its capabilities in six perspectives: Business, People, Governance, Platform, Security, and Operations. Each perspective comprises a set of capabilities that functionally related stakeholders own or manage in the cloud transformation journey

*– Amazon Web Services*

References:
https://aws.amazon.com/cloud-adoption-framework/

https://docs.aws.amazon.com/whitepapers/latest/overview-aws-cloud-adoption-framework/platform-perspective.html

# The Cloud Adoption Framework

| PERSPECTIVE | PURPOSE | STAKEHOLDERS |
|---|---|---|
| **BUSINESS** | Helps ensure that your cloud investments accelerate your digital transformation ambitions and business outcomes | • CEO    • COO<br>• CFO    • CIO    • CTO |
| **PEOPLE** | Serves as a bridge between technology & business, accelerating the cloud journey to help organizations more rapidly evolve to a culture of continuous growth, learning, & where change becomes business-as-normal, with focus on culture, organizational structure, leadership &workforce | • CTO   • Cloud Directors<br>• COO   • Cross-functional Leaders<br>• CIO   • Enterprise-wide Leaders |
| **GOVERNANCE** | Helps you orchestrate your cloud initiatives while maximizing organizational benefits and minimizing transformation-related risks | • CIO   • CFO<br>• CTO   • CDO   • CRO |
| **PLATFORM** | Helps you build an enterprise-grade, scalable, hybrid cloud platform; modernize existing workloads; and implement new cloudnative solutions | • Technology leaders   • CTO<br>• Architects<br>• Engineers |
| **SECURITY** | Helps you achieve the confidentiality, integrity, and availability of your data and cloud workloads. | • Internal Audit Leaders   • CISO<br>• Security Architects   • CCO<br>• Engineers |
| **OPERATIONS** | Helps ensure that your cloud services are delivered at a level that meets the needs of your business. | • Infrastructure & Operations Leaders<br>• Site Reliability Engineers<br>• IT Service Managers |

# AWS CAF
# at a
# glance

## AWS CAF perspectives and foundational capabilities

### Business
Ensure that cloud investments accelerate your digital transformation ambitions and business outcomes.

- Strategy Management
- Innovation Management
- Strategic Partnership
- Business Insights
- Product Management
- Portfolio Management
- Data Science
- Data Monetization

### People
Evolve to a culture of continuous growth and learning, where change becomes business-as-usual.

- Culture Evolution
- Workforce Transformation
- Transformational Leadership
- Organizational Alignment
- Change Acceleration
- Organization Design
- Cloud Fluency

### Governance
Orchestrate cloud initiatives, maximize organizational benefits, and minimize transformation-related risks.

- Program and Project Management
- Cloud Financial Management
- Application Portfolio Management
- Risk Management
- Benefits Management
- Data Curation
- Data Governance

### Platform
Accelerate delivery of cloud workloads via an enterprise-grade, scalable, hybrid cloud environment.

- Platform Architecture
- Platform Engineering
- Provisioning and Orchestration
- Modern Application Development
- Data Engineering
- Data Architecture
- Continuous Integration and Delivery

### Security
Achieve confidentiality, integrity, and availability of data and cloud workloads.

- Infrastructure Protection
- Security Governance
- Vulnerability Management
- Incident Response
- Application Security
- Threat Detection
- Data Protection
- Security Assurance
- Identity and Access Management

### Operations
Ensure cloud service delivery at a level that satisfies your business stakeholders.

- Event Management (AIOps)
- Incident and Problem Management
- Configuration Management
- Application Management
- Performance and Capacity
- Patch Management
- Availability and Continuity Management
- Observability
- Change and Release Management

# Business Perspective Capabilities

The business perspective focuses on ensuring that your cloud investments accelerate your digital transformation ambitions and business outcomes. It comprises eight capabilities shown in the following figure. Common stakeholders include the CEO, CFO, COO, CIO, and CTO.

**Strategy Management**
*Leverage cloud to accelerate your business outcomes*

**Product Management**
*Manage data and cloud-enabled offerings as products*

**Business Insights**
*Gain real-time insights and answer questions about your business*

**Portfolio Management**
*Prioritize delivery of high-value cloud products and initiatives*

**Strategic Partnership**
*Build or grow your business through a strategic partnership with your cloud provider*

**Data Science**
*Leverage advanced analytics and machine learning to solve complex business problems*

**Innovation Management**
*Develop new processes, products, and experiences and improve existing ones*

**Data Monetization**
*Leverage data to obtain measurable business benefit*

# People Perspective Capabilities

The people perspective serves as a bridge between technology and business, accelerating the cloud journey to help organizations more rapidly evolve to a culture of continuous growth and learning, where change becomes business-as-normal. In addition to culture, the focus is on organizational structure, leadership, and workforce. This perspective comprises seven capabilities shown in the following figure. Common stakeholders include CIO, COO, CTO, cloud director, and crossfunctional and enterprise-wide leaders.

| Capability | Description |
|---|---|
| **Culture Evolution** | Evaluate, incrementally evolve, and codify organizational culture with digital transformation aspirations |
| **Workforce Transformation** | Enable talent and modernize roles to attract, develop, and retain a digitally fluent and high-performing workforce |
| **Transformational Leadership** | Strengthen leadership capability and mobilize leaders to drive transformational change |
| **Change Acceleration** | Accelerate adoption of the new ways of working by applying a programmatic change acceleration framework |
| **Organizational Alignment** | Establish ongoing partnership between organizational structures, business operations, talent, and culture |
| **Cloud Fluency** | Build digital acumen to confidently and effectively leverage the cloud to accelerate business outcomes |
| **Organization Design** | Assess and evolve organization design for alignment with the new cloud ways of working |

# Governance Perspective Capabilities

The governance perspective focuses on orchestrating your cloud initiatives while maximizing organizational benefits and minimizing transformation-related risks. It comprises seven capabilities shown in the following figure. Common stakeholders include chief transformation officer, CIO, CTO, CFO, CDO, and CRO.

| Capability | Description |
|---|---|
| **Program and Project Management** | *Deliver interdependent cloud initiatives in a flexible and coordinated manner* |
| **Cloud Financial Management** | *Plan, measure and optimize your cloud spend* |
| **Benefits Management** | *Ensure that the business benefits of your cloud investments are realized and sustained* |
| **Application Portfolio Management** | *Manage and optimize your application portfolio in support of your business strategy* |
| **Data Curation** | *Organize an inventory of data products in a data catalog* |
| **Risk Management** | *Leverage the cloud to lower your risk profile* |
| **Data Governance** | *Exercise authority and control over your data to meet stakeholder expectations* |

# Platform Perspective Capabilities

The platform perspective focuses on accelerating the delivery of your cloud workloads via an enterprise-grade, scalable, hybrid cloud environment. It comprises seven capabilities shown in the following figure. Common stakeholders include CTO, technology leaders, architects, and engineers.

| Capability | Description |
|---|---|
| **Platform Architecture** | *Establish guidelines, principles, patterns, and guardrails for your cloud environment* |
| **Data Engineering** | *Automate and orchestrate data flows throughout your organization* |
| **Data Architecture** | *Design and evolve a fit-for-purpose analytics and data architecture* |
| **Provisioning and Orchestration** | *Create, manage, and distribute catalogs of approved cloud products to end users* |
| **Continuous Integration and Delivery** | *Rapidly evolve and improve applications and services* |
| **Platform Engineering** | *Build a compliant cloud environment with enhanced security features and packaged, reusable products* |
| **Modern Application Development** | *Build well-architected cloud-native applications* |

# Security Perspective Capabilities

The security perspective helps you achieve the confidentiality, integrity, and availability of your data and cloud workloads. It comprises nine capabilities shown in the following figure. Common stakeholders include CISO, CCO, internal audit leaders, and security architects and engineers.

| Security Governance | Develop and communicate security roles, responsibilities, policies, processes, and procedures |
| --- | --- |
| Threat Detection | Understand and identify potential security misconfigurations, threats, or unexpected behaviors |
| Data Protection | Maintain visibility and control over data and how it is accessed and used in your organization |
| Security Assurance | Monitor, evaluate, manage, and improve the effectiveness of your security and privacy programs |
| Vulnerability Management | Continuously identify, classify, remediate, and mitigate security vulnerabilities |
| Application Security | Detect and address security vulnerabilities during the software development process |
| Identity and Access Management | Manage identities and permissions at scale |
| Infrastructure Protection | Validate that systems and services within your workload are protected |
| Incident Response | Reduce potential harm by effectively responding to security incidents |

# Operation Perspective Capabilities

The operations perspective focuses on ensuring that cloud services are delivered at a level that is agreed upon with your business stakeholders. Automating and optimizing operations will allow you to effectively scale while improving the reliability of your workloads. This perspective comprises nine capabilities shown in the following figure. Common stakeholders include infrastructure and operations leaders, site reliability engineers, and information technology service managers.

| | |
|---|---|
| **Observability** | Gain actionable insights from your infrastructure and application data |
| **Event Management (AiOps)** | Detect events, assess their potential impact, and determine the appropriate control action |
| **Incident and Problem Management** | Quickly restore service operations and minimize adverse business impact |
| **Change and Release Management** | Introduce and modify workloads while minimizing the risk to production environments |
| **Performance and Capacity** | Monitor workload performance and ensure that capacity meets current and future demands |
| **Configuration Management** | Maintain a record of cloud workloads, their relationships, and configuration changes over time |
| **Patch Management** | Systematically distribute and apply software updates |
| **Availability and Continuity** | Ensure availability of business-critical information, applications, and services |
| **Application Management** | Investigate and remediate application issues in a single pane of glass |

# AWS Cloud Readiness Assessment

View Assessment

(0/47)

**Business**   People   Governance   Platform   Security   Operations

## Strategy management

**Are you using cloud to enable and shape your long-term business goals?**

○ 1 - No / I don't know.
○ 2 - Starting to think about it.
○ 3 - Experimenting with pilot initiatives.
○ 4 - Yes, but inconsistently implemented across the organization.
○ 5 - Yes, and consistently implemented across the organization.

## Portfolio management

**Are you prioritizing your cloud initiatives in line with your strategic intent, operational efficiency, and your capacity to deliver?**

○ 1 - No / I don't know.
○ 2 - Starting to think about it.
○ 3 - Experimenting with pilot initiatives.
○ 4 - Yes, but inconsistently implemented across the organization.
○ 5 - Yes, and consistently implemented across the organization.

## Innovation management

**Are you leveraging cloud to develop new, and improve existing, processes, products, and experiences?**

○ 1 - No / I don't know.
○ 2 - Starting to think about it.
○ 3 - Experimenting with pilot initiatives.

# AWS Cloud Readiness Assessment

Assess your organization's readiness for cloud-powered digital business transformation.

**Start Assessment**

The AWS Cloud Adoption Framework (AWS CAF) leverages AWS experience and best practices to help you digitally transform and accelerate your business outcomes through innovative use of AWS. Use this assessment to evaluate your cloud readiness and identify gaps and opportunities against 47 AWS CAF capabilities, across six perspectives.

## AWS Cloud Readiness Assessment Summary Report

See your responses and scores across the six AWS Cloud Adoption Framework (CAF) perspectives summarized in detail

### Assessment Summary

⚠ **Business Section**

**Strategy management**
Question: Are you using cloud to enable and shape your long-term business goals?
Response: 2 - Starting to think about it.
Rating: 2

**Portfolio management**
Question: Are you prioritizing your cloud initiatives in line with your strategic intent, operational efficiency, and your capacity to deliver?
Response: 3 - Experimenting with pilot initiatives.
Rating: 3

**Innovation management**
Question: Are you leveraging cloud to develop new, and improve existing, processes, products, and experiences?
Response: 2 - Starting to think about it.
Rating: 2

**Product management**
Question: Do you organize your cross-functional teams around cloud-enabled digital products?
Response: 2 - Starting to think about it.
Rating: 2

**Strategic partnership**
Question: Are you leveraging your cloud provider to build or grow your business?
Response: 4 - Yes, but inconsistently implemented across the organization.
Rating: 4

**Data monetization**
Question: Have you identified opportunities for leveraging data to improve operations, customer and employee experience, decision-making, or to enable new business models?
Response: 5 - Yes, and consistently implemented across the organization.
Rating: 5

**Business insights**
Question: Are you able to gain real-time insights and answer questions about your business?
Response: 4 - Yes, but inconsistently implemented across the organization.
Rating: 4

**Data science**
Question: Do you leverage experimentation, advanced analytics, and machine learning to solve complex business problems?
Response: 4 - Yes, but inconsistently implemented across the organization.
Rating: 4

### Recommended Actions

**Strategy management**
- Identify opportunities for retiring technical debt and leverage cloud to optimize your technology and business operations.
- Explore new cloud-enabled value propositions and revenue models.
- Consider how new or improved cloud-enabled products and services can help you reach new customers or enter new market segments.
- Prioritize your strategic objectives and evolve your strategy over time in response to technological developments and changes in your business environment.

**Portfolio management**
- Leverage automated discovery tools and the seven common migration strategies for moving applications to the cloud (known as the 7 Rs) to rationalize your existing application portfolio and build a data-driven business case.
- Balance your cloud portfolio by considering short-term and long-term outcomes as well as low-risk (proven) and higher-risk (experimental) opportunities.
- Include migration, modernization, and innovation initiatives, and consider financial and non-financial benefits.
- Optimize the business value of your portfolio in line with your resource, financial, and schedule constraints.
- To reduce your time-to-value, consider increasing the frequency of your planning cycles or adopting a continuous planning strategy.

**Innovation management**
- Develop an innovation strategy that includes a mix of incremental innovation initiatives focused on optimizing your existing products, processes, and experiences, as well as disruptive innovation initiatives focused on enabling new business models.
- Create mechanisms for soliciting and selecting ideas in line with your strategic priorities, and develop an end-to-end process for scaling successful innovation pilots.

**Product management**
- Develop a balanced product portfolio that supports your business strategy.
- Establish small, enduring, and empowered cross-functional teams that champion the needs of internal and external customers.
- Identify product owners, understand customer journeys, define and create product roadmaps, and manage end-to-end product lifecycles and associated value streams.
- Leverage your cloud platform and agile methods to rapidly iterate and evolve.
- Reduce dependencies between product teams and effectively integrate them into your broader operating model via well-defined interfaces.

**Strategic partnership**
- If you offer cloud-hosted software solutions, cloud-integrated products, or cloud-related professional, consulting, or managed services, strategically partnering with your cloud provider can help you build your cloud expertise, promote your solutions to customers, and drive successful customer engagements.
- As you progress along your partnership journey, leverage promotional credits, funding benefits, and co-selling opportunities to help you build or grow your business.
- Leverage your cloud provider's marketplace channel to expand reach, and technical resources to help you mature your cloud-based products and services.
- Publish joint case studies to highlight success in solving specific business challenges.

**Data monetization**
- To obtain measurable business benefits, develop a comprehensive and long-term data monetization strategy that's aligned with your strategic intent.
- Focus on transactional value that helps you understand and complete business transactions, informational value that helps you describe past performance and infer conclusions, and analytical value that helps you automate activities, guide decisions, and predict outcomes.
- Monetize data internally within your organization before considering opportunities for external monetization (for example, selling data via a marketplace).

**Business insights**
- Establish cross-functional analytics teams with a good understanding of the business context.
- Focus on technical (such as statistics) and non-technical (such as visualization and communication) skills.
- Align your analytics efforts with business goals and key performance indicators (KPIs).
- Leverage a Data Catalog to locate relevant data products, and visualization tools and techniques to discover trends, patterns, and relationships in the data.
- Focus on the "big picture" first and drill down into the details as required.

**Data science**
- Once you've identified opportunities for business process transformation, ensure that your Data Catalog contains the data products required to support the building, training, and testing of your machine learning models.
- Leverage continuous integration and continuous delivery (CI/CD) practices to improve operational resilience and reproducibility of your machine learning workflows.
- Understand how your models make predictions and identify any potential biases.
- Deploy suitable models to production and monitor their performance.
- To mitigate risk, delegate low confidence predictions for human review.

# Practice Questions

Which of the following are the relevant stakeholders in the Platform perspective of the AWS Cloud Adoption Framework (AWS CAF)? (Select two)

A. Technology Leaders
B. Chief Financial Officer (CFOs)
C. IT Architects
D. Chief Information Security Officer (CISO)
E. Chief Information Officer (CIOs)

ANSWER: A, C

# Question 6

A company plans to migrate its existing on-premises infrastructure to the AWS Cloud. Since their current business workflows heavily rely on legacy systems, they want to evaluate their AWS Cloud readiness first and prioritize any business transformation opportunities before commencing their migration activities.

Which AWS service or tool can the company use to help them meet these requirements?

A. AWS Prescriptive Guidance
B. AWS Cloud Adoption Framework (AWS CAF)
C. AWS Migration Hub
D. AWS Support

ANSWER: B

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# Question 12

Which of the following options is an AWS Cloud Adoption Framework (CAF) perspective specifically tailored to ensure your cloud investments expedite your digital transformation goals and business outcomes?

A. Governance perspective
B. Business perspective
C. People perspective
D. Operations perspective

ANSWER: B

DON'T FORGET TO
DO HARD THINGS