Microsoft Azure

[Partner Logo]

Microsoft Azure Well-Architected

[Name]
[Title]
[Partner Organization Name]

Agenda

- Why is being well-architected important?
- Overview: Microsoft Azure Well-Architected
- Overcoming workload quality inhibitors
- Resources

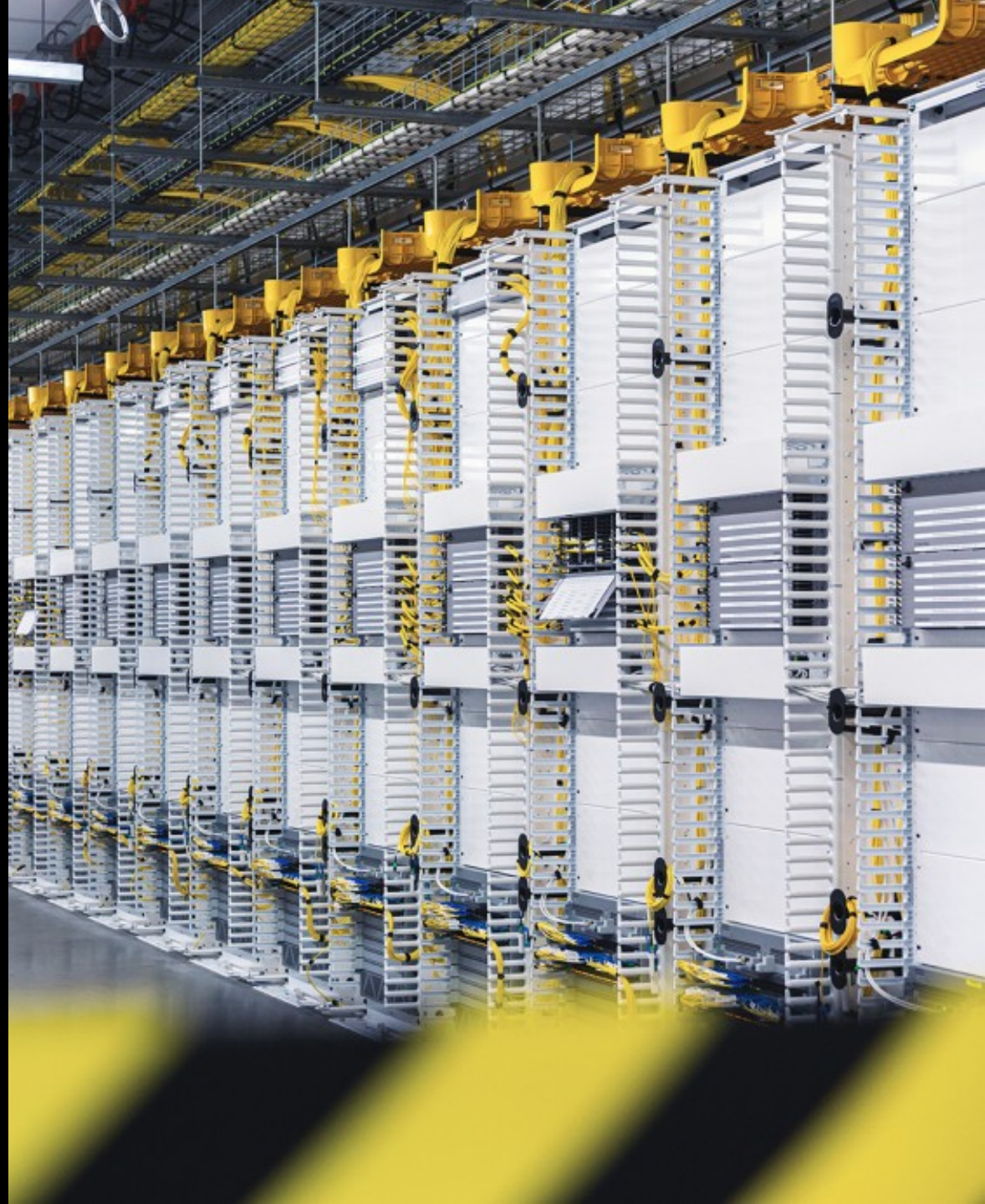
It’s real. It’s tangible. It happens.

*The **average total cost per breach** has increased from $3.54 million in 2006 to **$8.19 million in 2019.**[1]*

*Companies with incident response teams with testing of IR plans **—saved over $1.2 million.**[2]*

*Customers expect their **cloud spend** to further **increase by 47%** in the next 12 months.[2]*

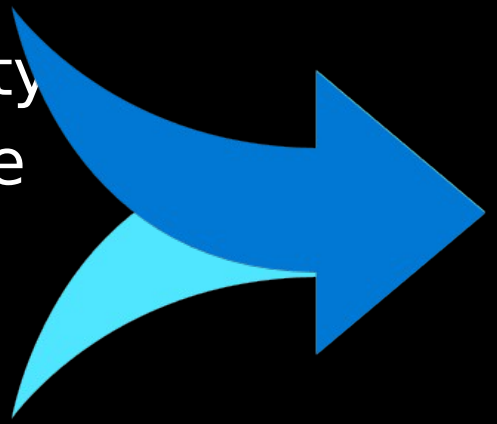
***Encryption reduced breach costs** by an average of $360,000.[3]*



1 What Is The Cost Of A Data Breach? By Marty Puranik. Forbes. Dec 2019
2 Flexera 2020 State of the Cloud Report
3 The Cost of a Data Breach Report, IBM Security, 2019. Conducted by Ponemon Institute LLC.

The value of running well-architected cloud workloads

- ☑ Manage budget
- ☑ Improve workloads security
- ☑ Increase incident response
- ☑ Streamline internal processes
- ☑ Avoid costly mistakes
- ☑ Efficient performance



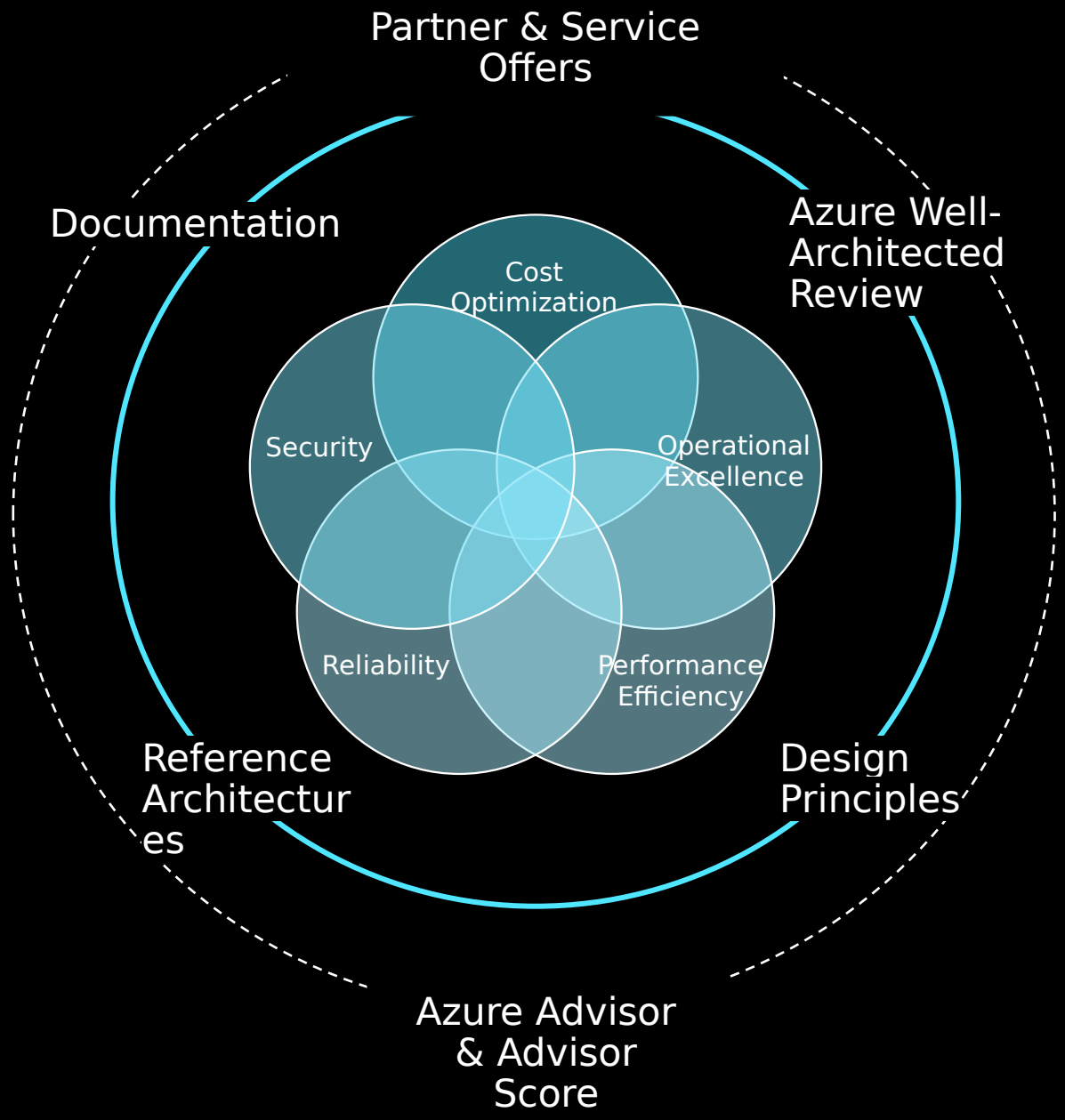
Expenses, losses

Trust

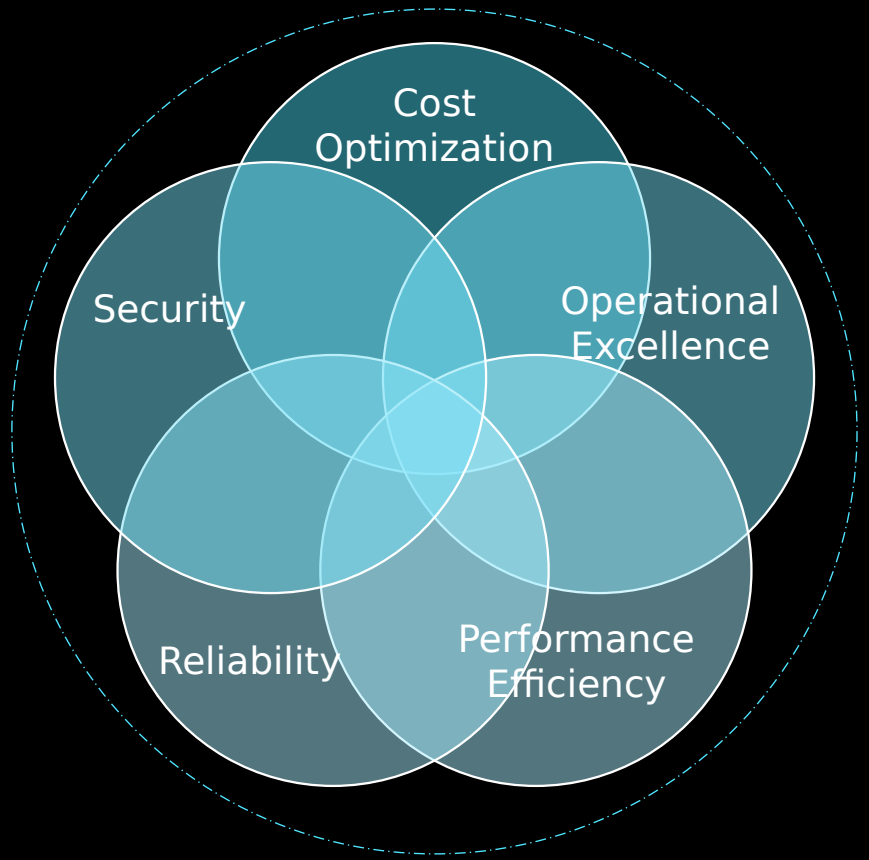
Damages

What Is The Cost Of A Data Breach? By Marty Puranik. Forbes. Dec 2019

Microsoft Azure Well-Architected



Microsoft Azure Well-Architected Framework



Well-architect & optimize workloads for success

Build workloads with **confidence** using proven best practices

Actionable & simple-to-use deep technical resources to design workloads that show results

Know where to **focus** to optimize workloads

Microsoft Azure Well-Architected Framework

Architecture guidance and best practices, created for architects, developers and solution owners, to improve the quality of their workloads, based on 5 aligned and connected pillars

Cost Optimization

Operational Excellence

Performance Efficiency

Reliability

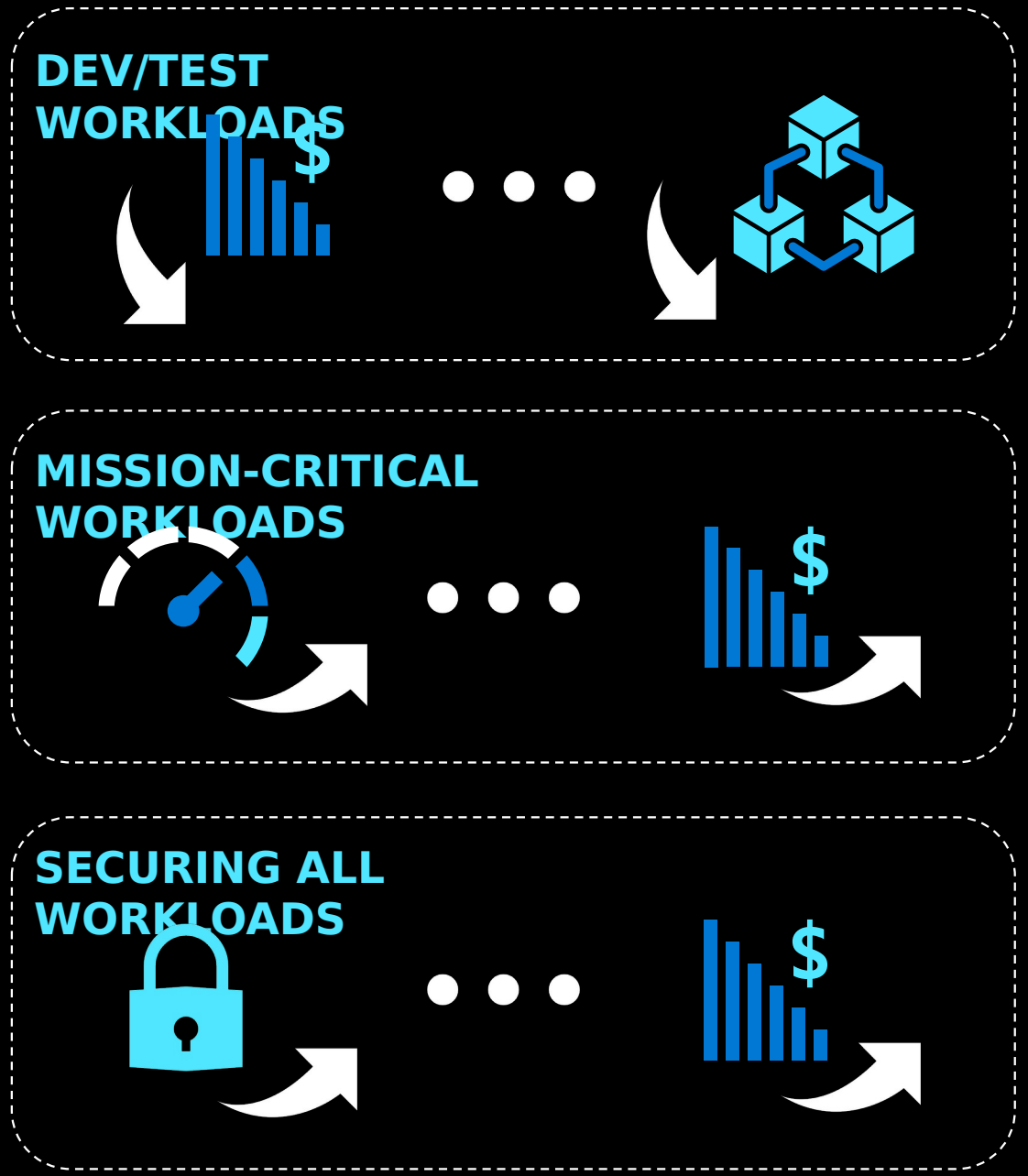
Security

https://aka.ms/wellarchitected/framework

It’s all about the trade-offs

Business requirements influence workload architecture decisions

https://aka.ms/wellarchitected/framework



Overcoming workload quality inhibitors

Cost Optimization

- No cost and usage monitoring
- Unclear on underused or orphaned resources
- Lack of structure billing management
- Budget reductions due to lack of support for cloud adoption by LT/board

Operational Excellence

- Lack of rapid issue identification
- No deployment automation
- Absence of communication mechanisms and dashboards
- Unclear expectations and business outcomes
- No visibility on root cause for events

Performance Efficiency

- No monitoring new services
- No monitoring current workloads health
- No design for scaling
- Lack of rigor and guidance for technology and architecture selection

Reliability

- Unclear on resiliency features/capabilities for better architecture design
- Lack of data back up practices
- No monitoring current workloads health
- No resiliency testing
- No support for disaster recovery

Security

- No access control mechanism (authentication)
- No security threat detection mechanism
- Lack of security thread response plan
- No encryption process

https://aka.ms/wellarchitected/framework

Best practices to drive workload quality

Cost Optimization

- ✓ Azure Hybrid Benefit
- ✓ Reserve Instances
- ✓ Shutdown
- ✓ Resize
- ✓ Move to PAAS

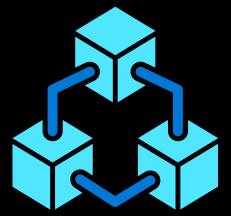
Operational Excellence

- ✓ DevOps
- ✓ Deployment
- ✓ Monitor
- ✓ Processes and cadence

Performance Efficiency

- ✓ Design for scaling
- ✓ Monitor performance

Reliability



- ✓ Define requirements
- ✓ Test with simulations and forced failovers
- ✓ Deploy consistently
- ✓ Monitor health
- ✓ Respond to failure and disaster

Security

- ✓ Identity and access management
- ✓ Infra protection
- ✓ App security
- ✓ Data encryption and sovereignty
- ✓ Security operations

https://aka.ms/wellarchitected/framework

When to think about getting well-architected?

DESIGN & DEPLOY **NEW** WORKLOADS

- ☑ Align workload architecture to business priorities
- ☑ Review Well-Architecture Framework
- ☑ Leverage the Azure Well-Architected Review to assess workload architecture design
- ☑ Consider architecture design trade offs to achieve business goals
- ☑ Build, deploy and manage workloads on Azure

OPTIMIZE **EXISTING** WORKLOADS

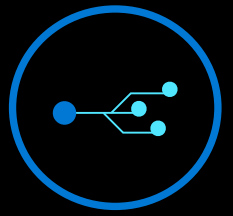
- ☑ Leverage Azure Advisor Score to identify optimization opportunities
- ☑ Understand changes needed or incidents occurred
- ☑ Review Well-Architecture Framework
- ☑ Consider architecture design trade offs to achieve business goals
- ☑ Define and implement recommendations
- ☑ Establish a regular cadence for workload optimization

Architect & optimize workloads for success, with these Microsoft resources

Leverage assessment
Azure Well-Architected Review
(aka.ms/wellarchitected/review)

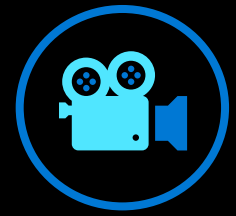
Get trained
Well-Architected Learning Path
(aka.ms/wellarchitected/learn)

Browse Reference Architectures
Azure Architectures
(aka.ms/wellarchitected/referencearch)



Review Design Principles
Well-Architected Design Principles
(aka.ms/wellarchitected/designprinciples)

Review the Documentation
Azure Well-Architected Framework
(aka.ms/wellarchitected/framework)



Azure Enablement Show
Channel 9 Show
(aka.ms/azenable)

NEW

Well-Architected Engagement Flow

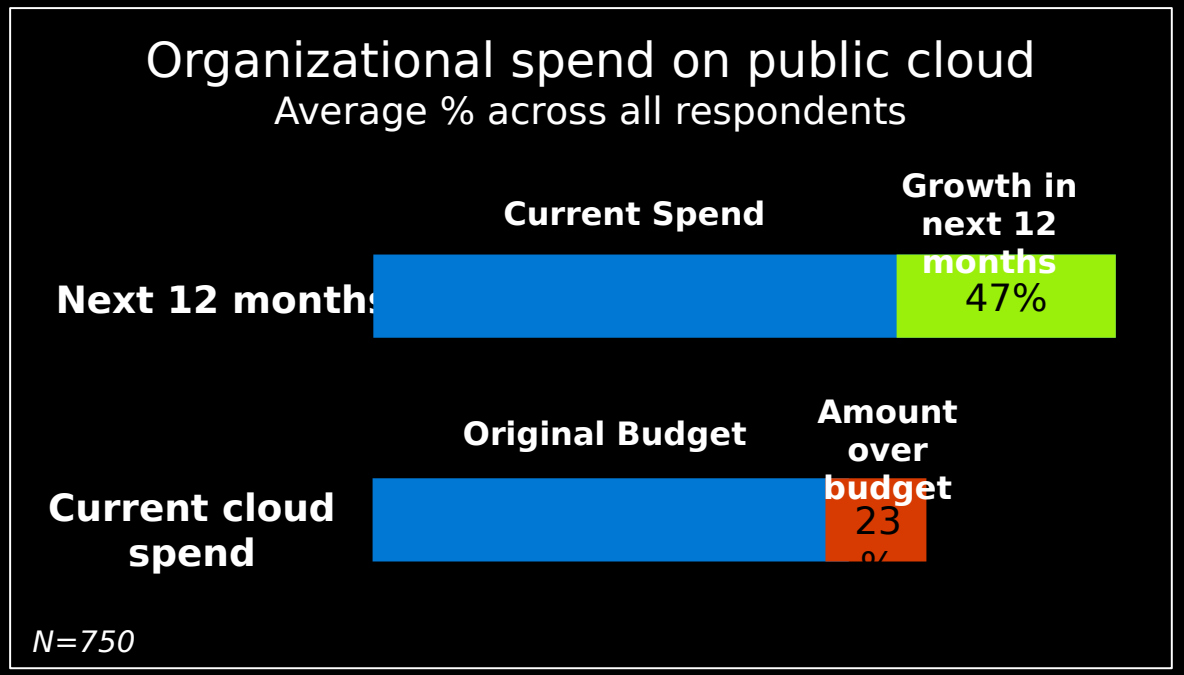
Microsoft Consumption Process	KNOW YOUR CUSTOMER	1- ENVISION	2- VALIDATE	3-COMMIT	4- ONBOARD	5-REALIZE VALUE
KEY OUTCOMES	Team alignment, customer/ workload(s) Identified	Customer commitment & engagement planning	Assess workload(s)	Customer commitment & action planning	Recommendation & implementation	Enhancement of Azure environment & measure progress
SUCCESS CRITERIA	***Opportunity identified and resources committed***	***Customer stakeholder buy-in and sponsorship confirmed***	***Technical deep-dive to identify recommendations***	***Implementation plan finalized and agreed***	***Customer implements the agreed plan***	***Platform Operationalization***
KEY ACTIVITIES	**Align Business Outcomes** Identify customer for well-architected engagement and identify potential workload(s) based on business criticality. Understand customer context, including impacting events like outages, security breaches, and related engagements. Identify customer stakeholders and leadership sponsors.	**Define Scope & Objectives** Establish the value and benefits of the Well-Architected engagement. Understand experienced issues, if any. Agree on target workload(s) and key pillars (WAF). Execute Well-Architected Review, accordingly.	**Gather Data & Assess** Assess the end-to-end workload(s) current architecture and design trajectory. Identify critical risks jeopardizing workload(s) architecture. Gather key subscription IDs and Advisor Score data.	**Report Findings & Create Action Plan** Capture key findings and recommendations in a report. Prioritize recommendations according to risk, customer impact or priority. Gain customer commitment to action provided recommendations. Define an implementation plan and establish next steps to action committed recommendations.	**Recommendations Implementation** Customer implements recommendations captured in the plan report Support customer execution and address any questions or comments from the customer Ensure the customer understands the approaches taken so that they can replicate it to other workload(s)	**Measure & Optimize** Measure implementation for issued recommendations, through Advisor Score and Well-Architected Review. Compare to these two at the beginning of the engagement and discuss new posture with customer. Report against quantified data points to capture remaining risk exposure. Ensure the customer knows how to continuously measure well-architected workloads
KEY RESOURCES		✓ **Overview deck** ✓ **Well-Architected Review**	✓ **Advisor Score** ✓ **WA gather and analyze guidance** ✓ **Workshop deck**	✓ **Action Plan Template** Track and maintain for recommendations the customer will not		✓ **Well-Architected Review** ✓ **Advisor Score**

Thank you!

Well-architected solutions enable—cost optimization

It's more **critical** than ever for customers to **get a handle on forecasting and cost optimization**[1]

- Customers reported their public cloud spend was over budget by an average of 23 percent[1]
- Respondents expect their cloud spend to further increase by 47 percent in the next 12 months.



[1] *Flexera 2020 State of the Cloud Report*

Well-architected solutions enable—cost savings in security spen

In 2019, encryption, business continuity management, DevSecOps, and threat intelligence sharing **mitigated cost**[1]

- Encryption reduced breach costs by an average of $360,000.
- Business continuity management reduced the total cost of a data breach by an average of $280,000.

1 The Cost of a Data Breach Report, IBM Security, 2019. Conducted by Ponemon Institute LLC

Well-architected solutions enable— cost savings with resiliency, high-availability, and security automation strategies

Companies with incident response teams with testing of IR plans **—saved over $1.2 million[1].**

Organizations without security automation experienced breach costs 95 percent higher

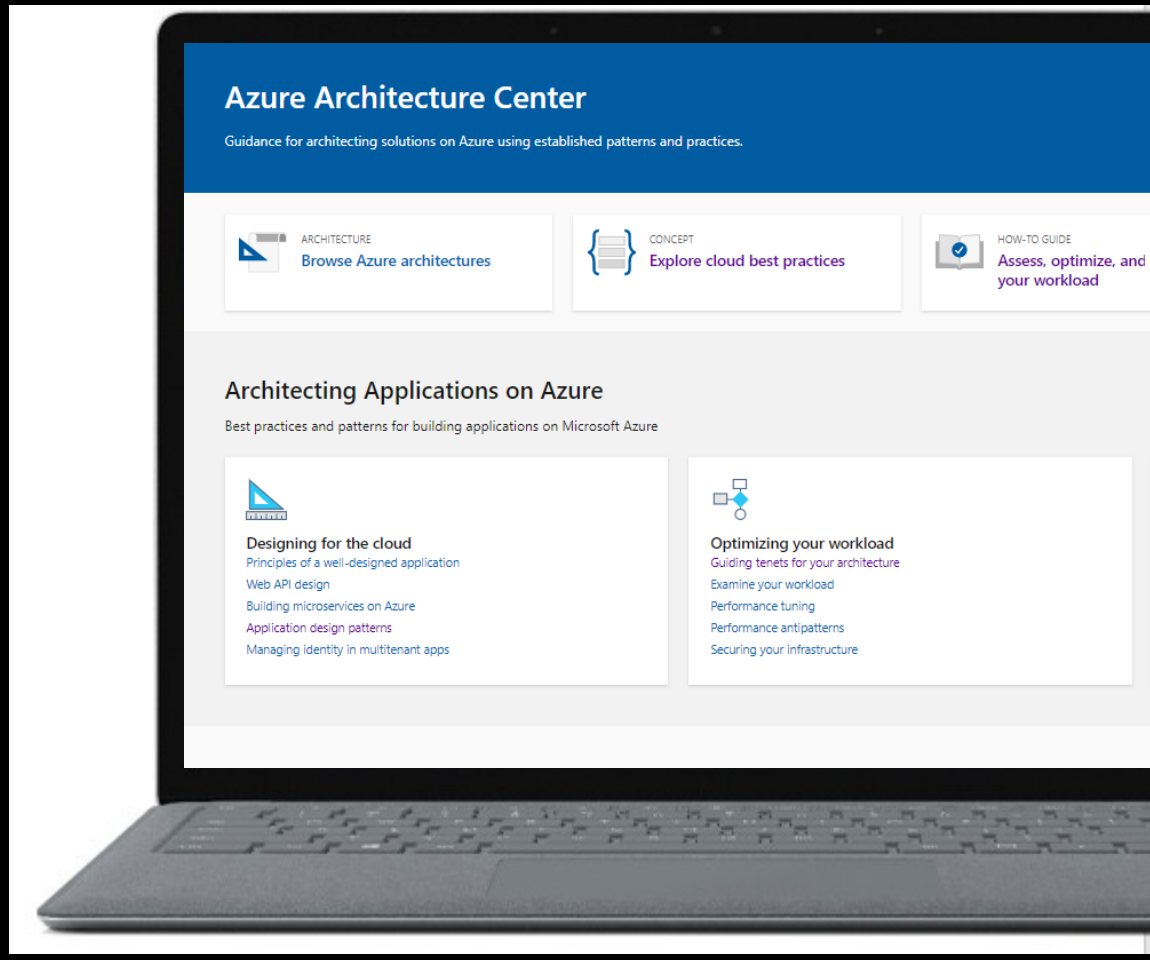
- Breach costs rose above 16 percent at organizations without automation deployed, going up from an average of $4.43 million in 2018 to $5.16 million in 2019.
- Breach costs decreased by 8 percent at organizations with fully deployed automation, from 2018 to 2019, from an average of $2.88 million in 2018 to $2.65 million in 2019.

1 The Cost of a Data Breach Report, IBM Security, 2019. Conducted by Ponemon Institute LLC

Documentation

Microsoft Azure Architecture Center

https://aka.ms/architecture



Documentation

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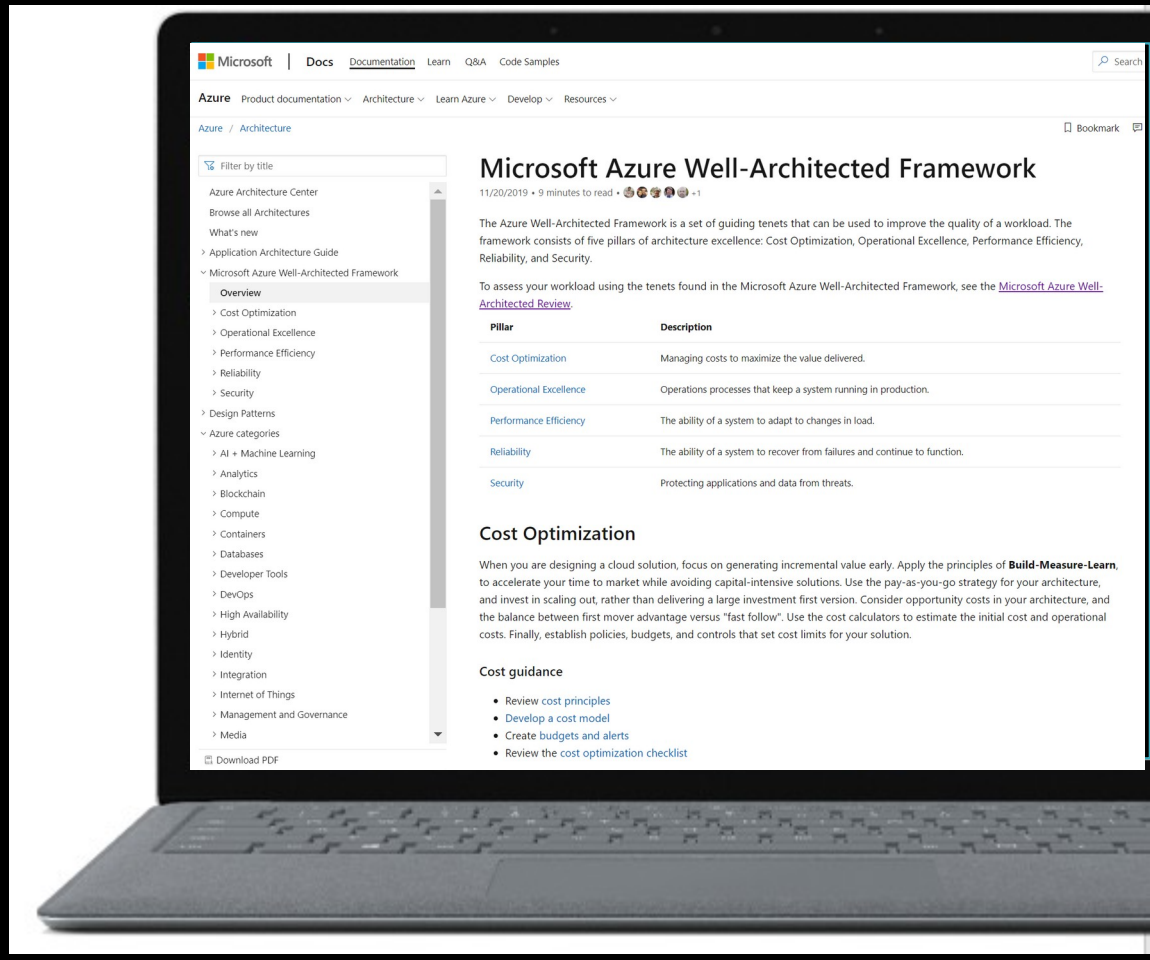
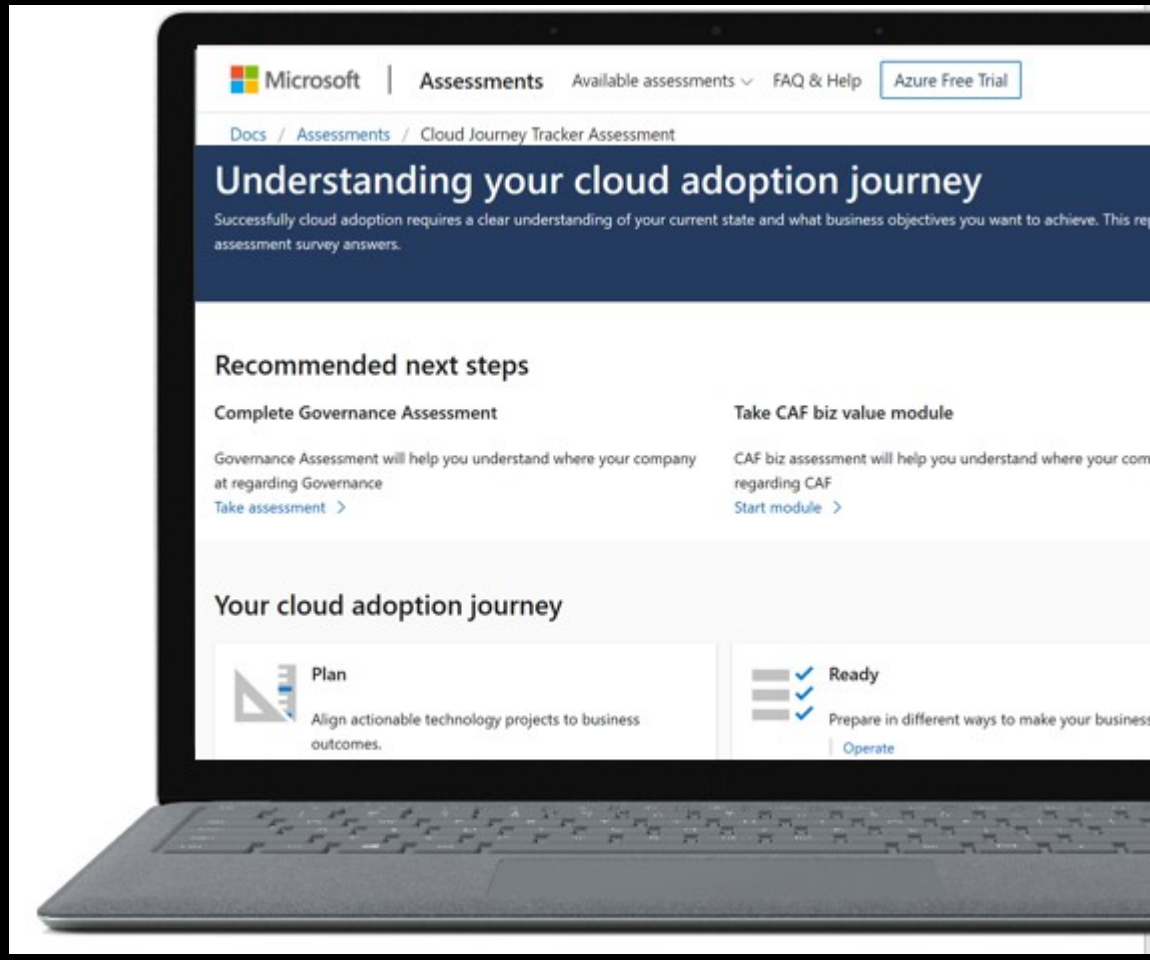


Assessment

Microsoft Azure Well-Architected Review

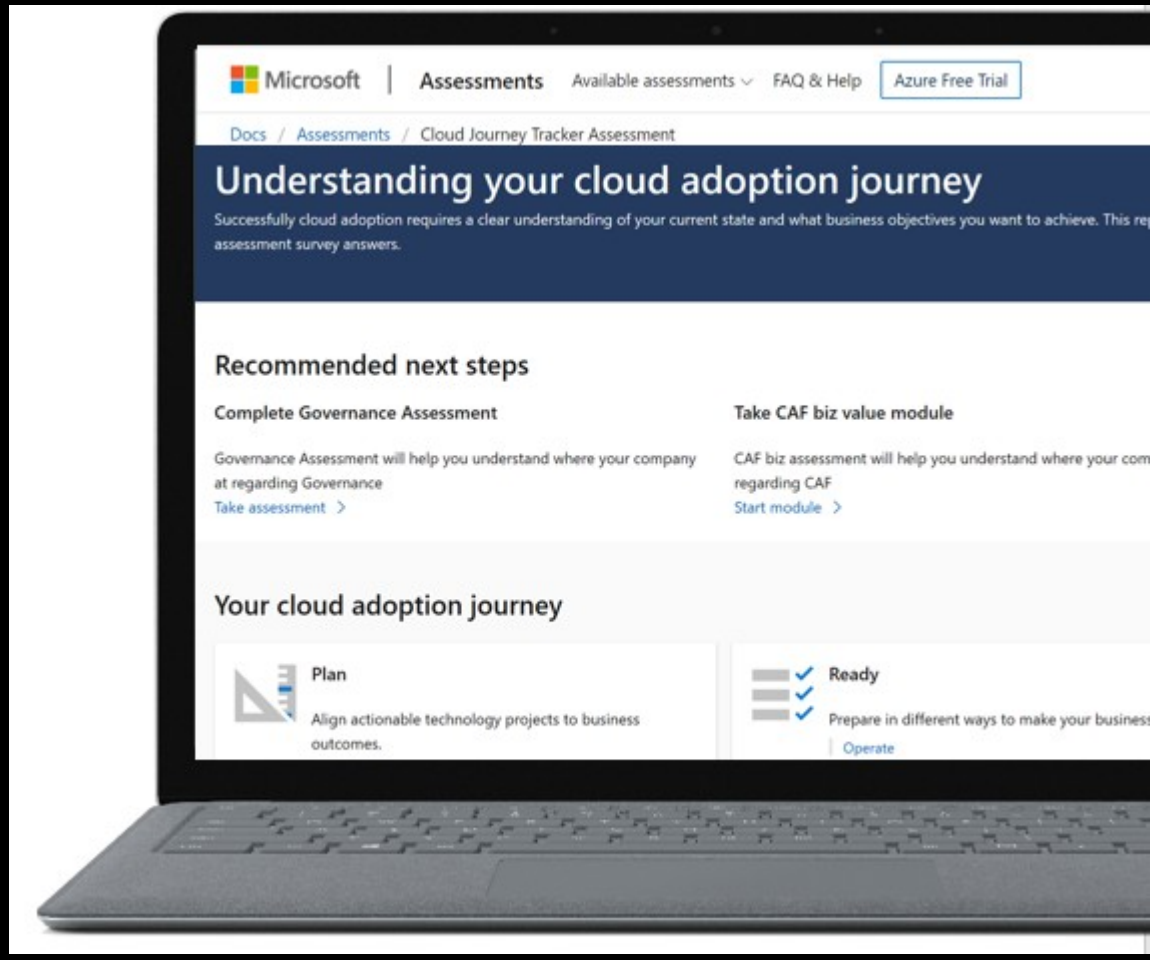
https://aka.ms/wellarchitected/review



Score

Microsoft Azure Advisor Score

https://aka.ms/advisorscore



Microsoft

Individual Pillars Messaging & Positioning Framework

Design cloud workloads able to adapt to changes and maintain performance levels

Performance Efficiency offers you the knowledge to improve the performance of your workloads by optimizing network and storage resources, monitoring processes, and designing efficient and scalable applications.

Active response to performance issues

- Evaluate workload quality levels with Azure Monitor and Log Analytics
- Assess and remediate deep application performance issues and trends with Azure Application Insights.
- Adopt optimal performance

Optimal service execution

- Manage resource scaling with Azure SQL Database and Azure App Services
- Optimize your network and storage with Azure Cosmos DB, Azure Traffic Manager and Azure Cache for Redis, etc.
- Select the right type of resources for your business needs.

Efficient trade-offs within applications

- Design cost-efficient data management and storage processes facilitated by Azure Advisor.
- Develop and implement queueing processes with Azure Functions to hand-off processing work to a service.

Build, deploy, and manage workloads with trustworthy processes

Operational Excellence offers you the guidelines to create a sustainable application environment within building, deploying and maintaining workloads, while relying on automation, monitoring and testing.

Agile and Accurate Processes

- Apply DevOps to break down barriers between development and operations within the cloud journey.
- Reduce process risks by automating workloads with Azure Automation, Azure CLI and Azure PowerShell.
- Enjoy the flexibility of creating agile and independent

Focused and assertive application monitoring

- Dive deep into your workloads' information with Log Analytics for infrastructure and with Azure Application Insights for application trends.
- Manage the health of your system and activity logging by consuming core monitoring insights provided by Azure Monitor.

Continuous Improvement

- Build and test workloads with Continuous Integration and Continuous Delivery (CI/CD) both in development and production stages.
- Perform extensive automated testing with Azure Pipelines or manual testing with Azure Testing Plans.

Reliability

Enable systems to recover from failures and continue to function

Define availability and recovery requirements based on decomposed workloads and business needs

Use architectural best practices to identify possible failure points in your proposed/existing architecture and determine how the application will respond to failure

Test with simulations and forced failovers to test both detection and recovery from various failures

Deploy the application consistently using reliable and repeatable processes

Monitor application health to detect failures, monitor indicators of potential failures, and gauge the health of your applications

Respond to failures and disasters by determining how best to address it based on established strategies

Well-Architected | WA Framework | Security

Build and manage proactively secured workloads

Security offers you the guidelines to protect, detect and respond to threats across your Azure environment.

Built on a secure foundation

- Build zero-trust architecture across workloads with end-to-end security.
- Embrace ‘shared’ responsibility to leverage Azure’s security investments, resources and compliance certifications.
- Design assuming failure with multi-layer protection controls.

Proactively stay secure with native controls

- Continuously manage your cloud security posture from a single pane of glass with Azure Security Center.
- Protect your applications, networks, and workloads with Azure Network Security Solutions.
- Manage identity and access across workloads with Azure Active Directory.

Detect and respond to threads

- Detect and investigate attacks with Azure Sentinel providing intelligent security analytics.
- Work with the Microsoft Intelligent Security Graph and leverage large-scale intelligence from 8 trillion collected threat signals analyzed daily.
- Embrace automation and native tools like Azure Defender to get threat protection for all workloads