Microsoft

Azure Essentials resource kit

Elevate **reliability, security**, and **ongoing performance of workloads** for your cloud and AI investments to **maximize value** and **empower transformation.**

Accelerate business outcomes - Azure Essentials resource kit

In this resource kit, you'll discover Microsoft's best practices for approaching key business priorities from AI to resiliency with guidance to help you maximize your business value on Azure with Azure Essentials.

For expert support powered by Azure Essentials with migration-related projects, try Azure Migrate and Modernize; for support with AI and analytics projects, try Azure Innovate.

This kit provides step-by-step guidance for you to enhance your cloud and AI investments across common scenarios to help you:

- Successfully adopt AI and build new AI-infused apps.

- Migrate your SAP workloads, infrastructure, and databases.

- Unify your data platform and empower your developers.

- Proactively keep critical workloads reliable and secure.

Curated guidance to help you improve your stance on Azure

Azure offers a solution to support your end-to-end cloud journey:

Azure Essentials helps you elevate reliability, security, and ongoing performance of workloads for your cloud and AI investments to maximize value and empower transformation. It provides comprehensive resources in one place, extensive coverage, and expert help from Microsoft or partners.

This offering includes:

Comprehensive resources in one place

- Take advantage of guidance and free training to design and build secure, reliable workloads.

- Get insights and recommendations from products, tools, and interactive assessments.

- Manage your cloud investments efficiently by choosing the pricing offers that best meet your needs.

Direct access to experts

- Receive assistance from Microsoft experts or specialized partners.

- Benefit from Microsoft-led delivery of engagements for Microsoft Unified customers.

Extensive coverage—from migration to innovation

- Cover all your cloud journey needs from reliability and security to ongoing performance management and AI.

- Design for resiliency and performance proactively from the start.

- Enhance your existing deployments to address core business priorities.

Common scenarios for new Azure projects

From transforming your stance on Azure to cloud management, **choose the scenario** that best matches your needs:

[Innovate with AI platform](#)

[Build and modernize AI apps](#)

[Activate data for AI innovation](#)

[Migrate to innovate](#)

[Migrate SAP workloads](#)

[Accelerate software development](#)

Common scenarios for existing Azure projects

Building and managing resilient workloads is key to success in the cloud to address possible issues related to reliability and security, **choose the scenario** that best matches your needs:
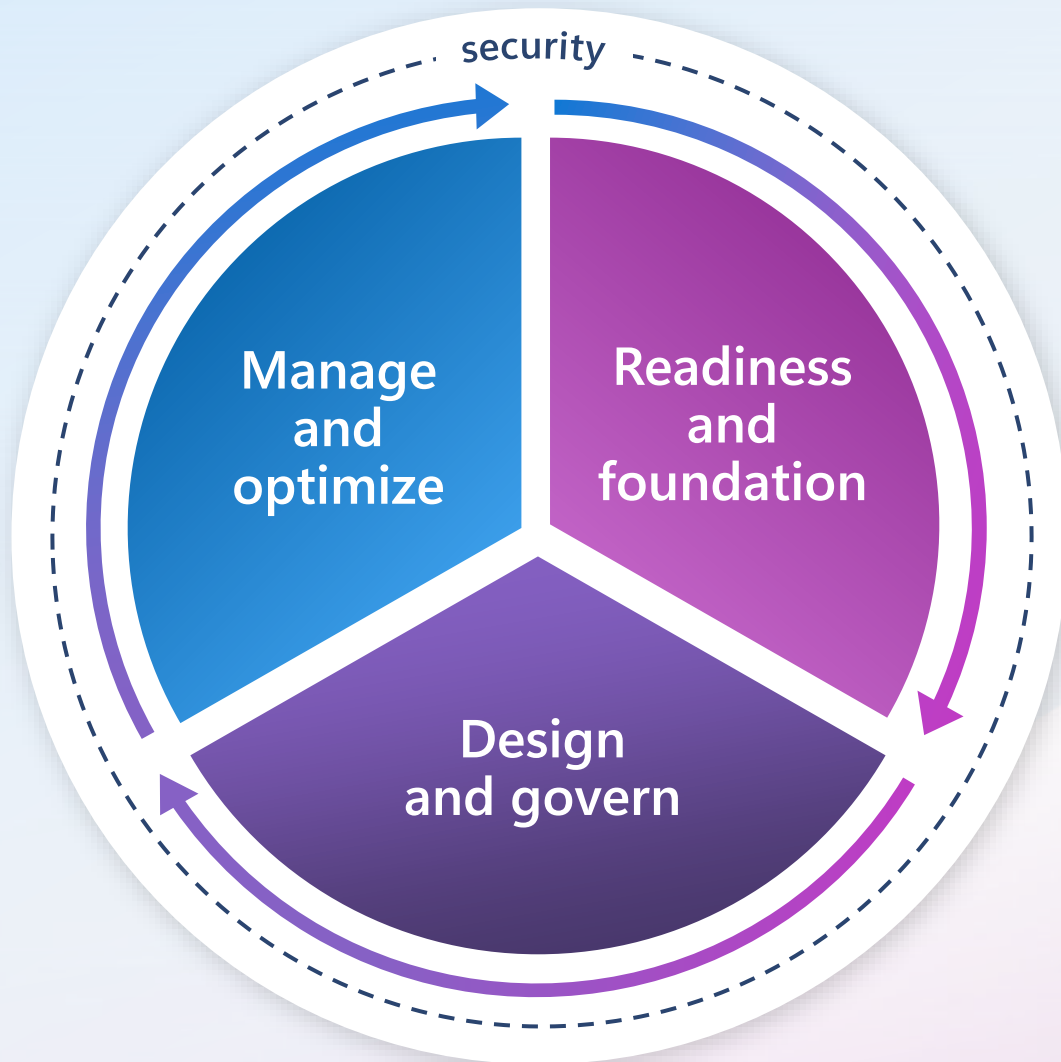
Azure Proactive Resiliency

→ **Infrastructure**

→ COMING SOON
Applications

→ COMING SOON
Data

→ COMING SOON
Security

Innovate with AI Platform

Best practices for getting AI-ready

Use the concepts in each phase to ensure successful AI adoption on Azure at scale.

security

Manage and optimize

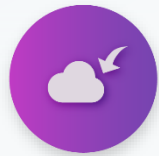Readiness and foundation

Design and govern

- Data collocation
- Financial best practices
- Pricing
- Platform landing zone
- Skilling

- Trustworthy AI
- Architectural guidance
- GenAIOps

- Monitoring
- Management
- Reliability

Readiness and foundation

Azure Essentials assists in optimizing your cloud investments during each phase.

Data collocation

Achieve optimal performance

Build a business case

Azure Migrate overview

Migration tools

Migration FAQ

Financial best practices

Manage investments with FinOps

Cost optimization of AI workloads

How to forecast AI services costs in the cloud

FinOps Framework

FinOps Review

Pricing

Optimize cost with flexible spending

Azure pricing calculator

PTU Reservations blog

Azure OpenAI capacity calculator

Azure pricing overview

Pricing blog

Platform landing zone

Accelerate workload deployments

Landing zone deployment options

ISV considerations

Get landing zone help

Landing zone FAQ

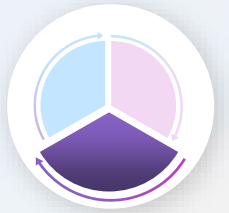## Skilling

Empower teams with training and resources

Azure AI fundamentals

Azure AI Engineer Associate

Azure Data Scientist Associate

Transform your business with Microsoft AI

Design and govern

Azure Essentials assists in optimizing your cloud investments during each phase

Trustworthy AI

Instill trust through security, privacy and safety

[Responsible AI Toolbox](#)

[Responsible AI Impact Assessment](#)

[Azure AI content safety](#)

[Introducing modern data governance for the era of AI](#)

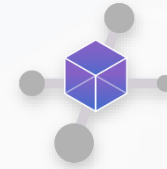[Unpacking AI governance to shape digital transformation](#)

Architectural guidance

Design and operate with confidence

[Baseline OpenAI end-to-end chat reference architecture](#)

[Access Azure OpenAI and other language models through a gateway](#)

[Azure OpenAI chat baseline architecture in an Azure landing zone](#)

GenAIOps

Operationalize AI development

[GenAIOps Assessment](#)

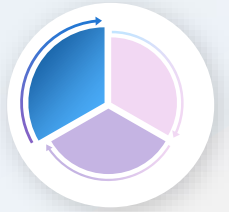[GenAIOps with prompt flow and GitHub](#)

[Designing and developing a RAG solution](#)

[RAG with Azure Machine Learning prompt flow](#)

[Build apps with GenAI](#)

Manage and optimize

Azure Essentials assists in optimizing your cloud investments during each phase.

Monitoring

Comprehensive observability for performance and security

[Model monitoring for GenAI applications](#)

[Inference data collection from models in production](#)

[Shared responsibility AI](#)

Management

Tools and guidance to maximize ROI

[Optimizing Generative Applications on Azure Open AI](#)

[Azure OpenAI Studio](#)

[Service Benchmarking tool](#)

[Solution sizing tool](#)

[Resource utilization and efficiency](#)

[Understand and optimize costs with the cost optimization workbook](#)

[Azure carbon optimization](#)

[Optimize costs with Azure pricing](#)

Reliability

Assessments and remediations for improved resiliency

[Azure Advisor](#)

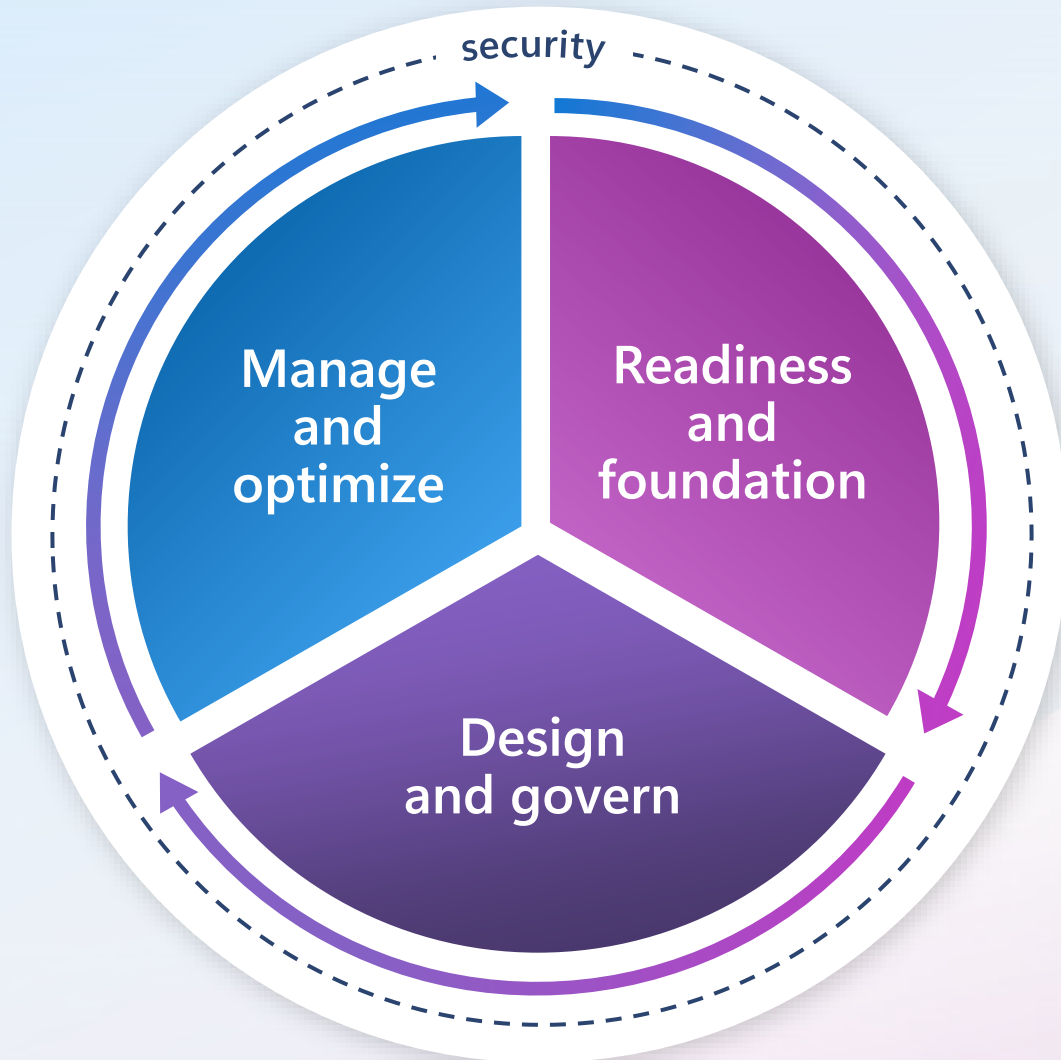[Well-Architected Review - MLOps](#)

[Groundedness tests](#)

[GovViz Tool](#)

Build and modernize AI apps

Build and modernize AI apps

Use the concepts in each phase to ensure the successful deployment and operation of AI apps.

- **Migration strategy**
- **Security and compliance planning**
- **Pricing and financial best practices**
- **Platform landing zone**
- **Skilling**

- **App and data estate modernization**
- **Application patterns**
- **API management**
- **Data needs**
- **AI considerations**

- **Application testing**
- **Monitoring**
- **Database tuning**
- **Continued innovation and modernization**
- **Workload improvement**

Readiness and foundation

Azure Essentials assists in optimizing your cloud investments during each phase.

Migration strategy

Identify opportunities to drive AI impact

Azure Migrate
Azure Verified Modules
Azure Proactive Resiliency Library
Azure Monitor Baseline Alerts
Azure Site Recovery
Azure Database Migration Service
Azure Migrate demo

Security and compliance planning

Identify and address requirements early

Azure Security Center
Azure Defender for Servers
Microsoft Copilot for Security
Confidential computing
Microsoft Purview
Extended Security Updates enabled by Azure Arc
GitHub Advanced Security for Azure DevOps
Azure Monitor, Azure Backup and Site Recovery

Pricing and financial best practices

Optimize cost with flexible spending

Cost optimization of AI workloads
Forecasting AI services costs
FinOps Framework
FinOps Review
Azure pricing overview
PTU Reservations blog
Azure Hybrid Benefit
Azure OpenAI capacity calculator

Platform landing zone

Accelerate workload deployments

Prepare your landing zone for migration
Azure landing zone
Landing zone deployment options
ISV considerations
Landing zone FAQ

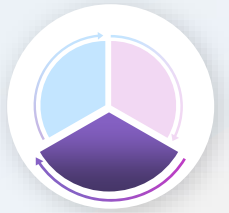## Skilling

Empower teams with training and resources

Plans on Learn: Apps platform and data solutions
Plans on Learn: Build AI apps
Plans on Learn: Modernize AI apps
Azure cost optimization workbook

Design and govern

Azure Essentials assists in optimizing your cloud investments during each phase.

App and data estate modernization

Ready your IT estate for AI-powered apps

- Azure Verified Modules
- The Total Economic Impact™ of Azure PaaS
- Modernize any application
- Migrate ASP.NET apps to Azure
- Modernize apps with Azure apps platform and data solutions

Application patterns

To build reliable, secure, and scalable apps

- Cloud monitoring service level objectives
- Azure Pipelines baseline architecture
- Azure App Configuration
- Azure Developer CLI templates

API management

Scale up your app

- GenAI gateway capabilities in Azure API Management
- Azure OpenAI Service REST API reference
- Azure AI Model Inference API
- Gartner® Magic Quadrant™ for Enterprise Low-Code Application Platforms

Data needs

Superior performance and scalability

- Choose a data storage approach in Azure
- Microsoft Intelligent Data Platform
- Choose an Azure data service
- Choose an Azure service for vector search

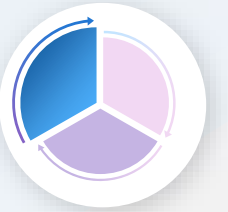## AI considerations

Infuse AI capabilities and best practices

- Responsible AI resources
- Responsible AI standard
- AI impact assessment template
- AI impact assessment guide
- Transparency notes

Manage and optimize

Azure Essentials assists in optimizing your cloud investments during each phase

Application testing

Test to optimize for performance

- Azure Load Testing
- Recommendations for performance testing
- Azure Chaos Studio
- Workload operations in cloud management
- Microsoft Playwright Testing

Monitoring

Through monitoring and remediation

- The Total Economic Impact™ Of Microsoft Azure Resilience Guidance
- Application Health extension- Azure Virtual Machines
- Monitor Azure Container Instances
- Application Insights-Azure Monitor

Database tuning

For faster and more efficient GenAI apps

- Enable semantic caching
- Query Performance Insight
- Query Performance Insight - Azure Database for PostgreSQL

Continued innovation and modernization

Constant, evergreen process

- Resource management best practices for Azure Kubernetes Service
- Build AI apps with Azure services and best practices
- Multi-tier web application built for HA/DR

## Workload improvement

Explore best practices to enhance your apps

- Azure Code Optimizations
- Azure Cache for Redis
- Performance & latency with Azure OpenAI
- PTU Management for GenAI
- Optimizing Azure OpenAI
- Performance tips -Azure AI Search

Activate data
for AI innovation

Activate data for AI innovation

Use the concepts in each phase to ensure successful cloud-scale data analytics.

security

Manage and optimize

Readiness and foundation

Design and govern
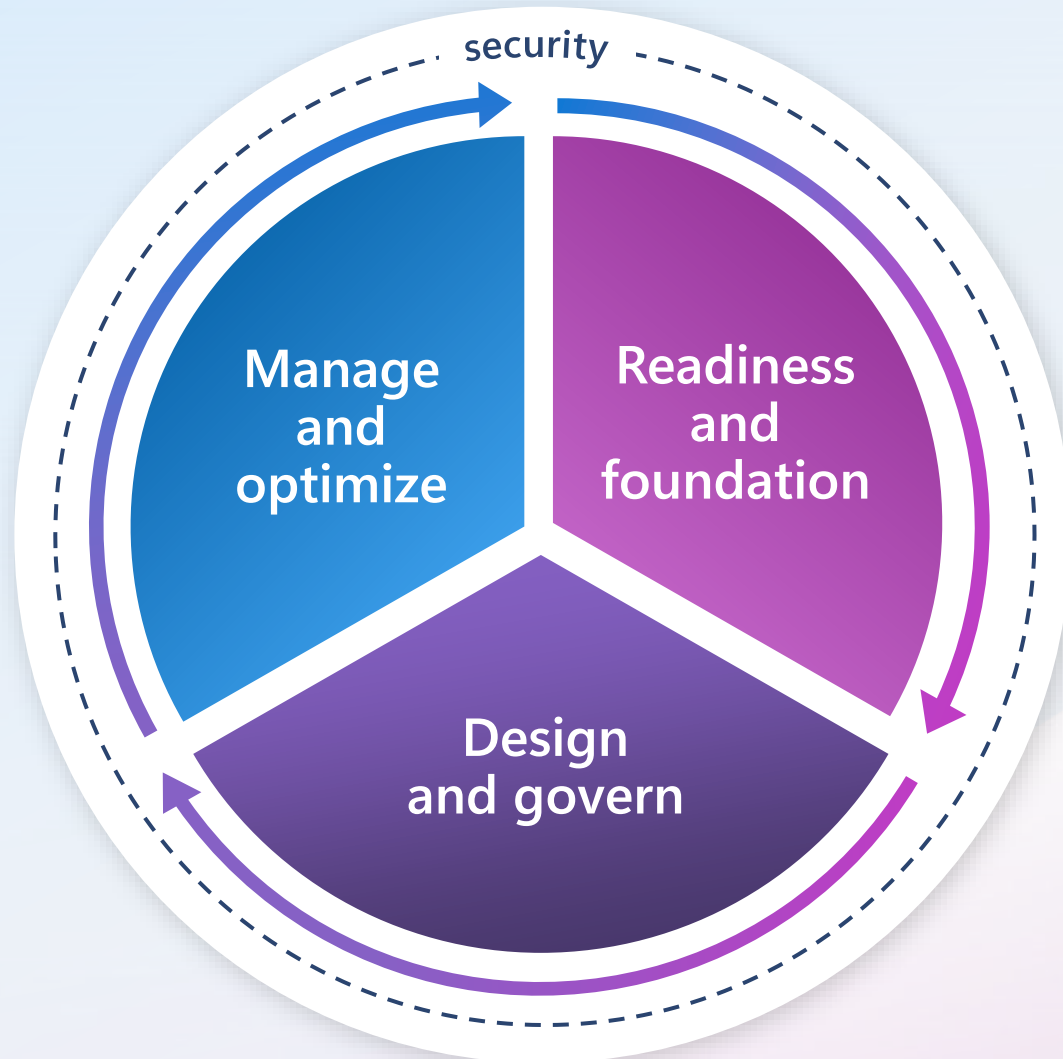
- Cloud-scale analytics strategy
- Secured data analytics estate
- On-premise data consolidation
- Pricing and financial best practices
- Platform landing zone
- Skilling

- Architectural guidance
- Analytics governance
- AI-ready data foundation

- Monitoring
- Management
- Reliability
- Workload improvement

Readiness and foundation

Azure Essentials assists in optimizing your cloud investments during each phase.

Cloud-scale analytics strategy

Alignment with business outcomes

[Roles and teams for cloud-scale analytics](#)

[Integrating cloud-scale analytics into your cloud adoption strategy](#)

Secured data analytics estate

Identify and address requirements early

[Microsoft Fabric security](#)

[Microsoft Fabric end-to-end security scenario](#)

[Secure cloud-scale analytics in Azure](#)

On-premise data consolidation

Prepare for move to cloud

[OneLake in Microsoft Fabric](#)

[Integrating on-premises data into Fabric using data pipelines in Data Factory](#)

[Accessing on-premises data sources in Data Factory](#)

[Data pipeline connectors in Microsoft Fabric](#)

Pricing and financial best practices

Optimize cost with flexible spending

[FinOps Framework](#)

[FinOps Review](#)

[Azure pricing overview](#)

[Azure Reservations](#)

Platform landing zone

Accelerate workload deployments

[Cloud Adoption Framework enterprise-scale landing zones](#)

[Deploying Azure landing zones](#)

[Azure landing zones for cloud-scale analytics](#)

Skilling

Empower teams with training and resources

[Evaluate an enterprise data scenario](#)

[Create a data product batch](#)

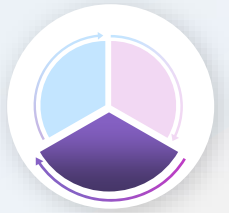[Set up a data product batch](#)

[Clean up resources](#)

[End-to-end Fabric tutorials](#)

[Azure Data Fundamentals](#)

[Implement a machine learning solution with Azure Databricks](#)

Design and govern

Azure Essentials assists in optimizing your cloud investments during each phase

Architectural guidance

Design and operate with confidence

[Implement medallion lakehouse architecture in Fabric](#)

[Data architectures overview](#)

Analytics governance

Establish governance for your data workloads

[Data governance overview](#)

[Requirements for governing data](#)

[Data catalog](#)

[Data governance processes](#)

[Lineage in Microsoft Fabric](#)

[Microsoft Fabric governance](#)

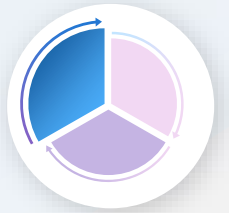[Governance and compliance in Microsoft Fabric](#)

AI-ready data foundation

AI-specific considerations for data workloads

[Azure Machine Learning as a data product for cloud-scale analytics](#)

Manage and optimize

Azure Essentials assists in optimizing your cloud investments during each phase.

Monitoring

Comprehensive observability for performance and security

OneLake disaster recovery

Azure Security Center

Azure Defender for Servers

Microsoft Copilot for Security

Confidential computing

Microsoft Purview

Extended security updates - Azure Arc

GitHub Advanced Security - Azure DevOps

Azure Monitor

Azure Backup Site Recovery

Management

Tools and guidance to maximize ROI

Resource utilization and efficiency

Cost optimization workbook

Azure carbon optimization

Optimize spend with savings plan and reserved instance

Reliability

Assessments and remediations for improved resiliency

Azure Advisor

Azure Well-Architected Review

Reliability in Microsoft Fabric

Workload improvement

Constant, evergreen process

Databases: Azure service guidance mapped to Azure Well-Architected Framework
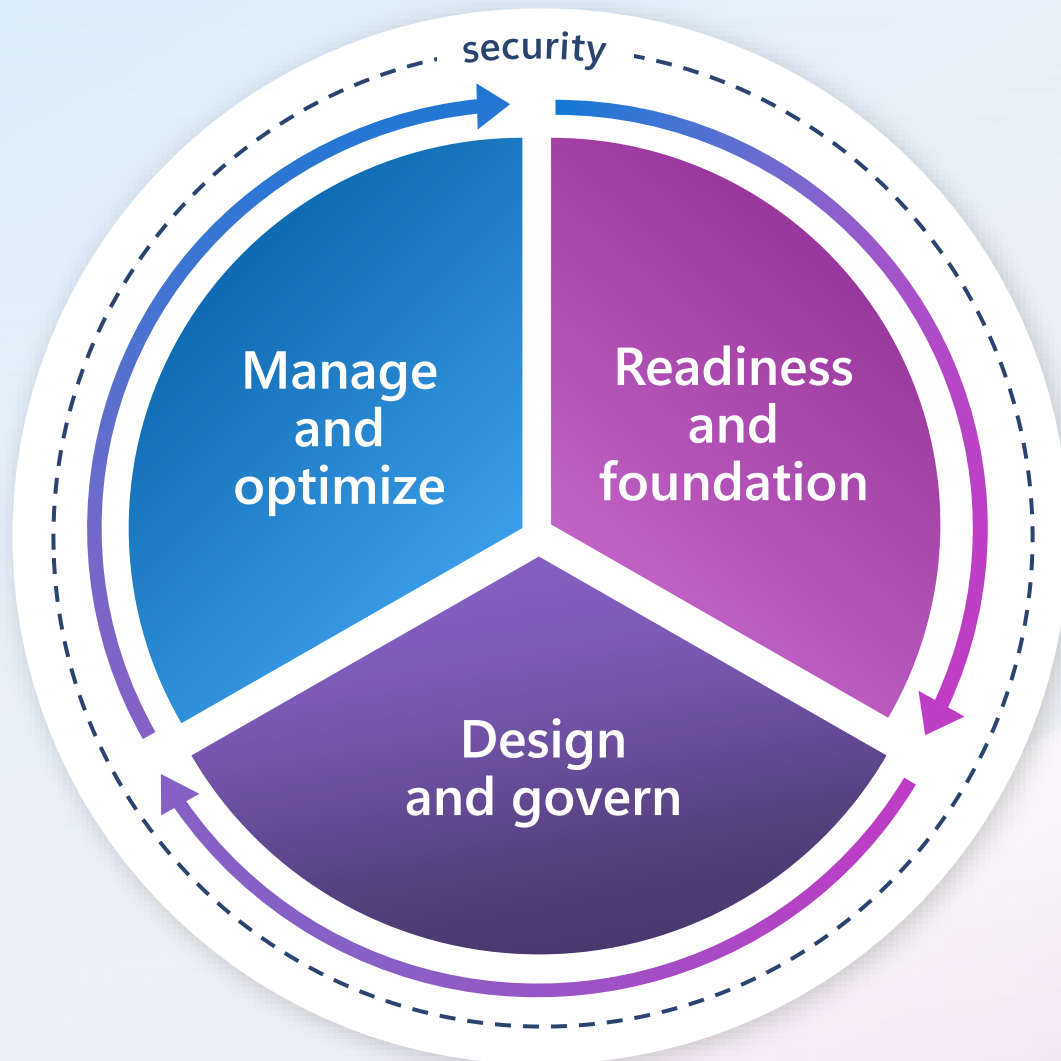
What's new in the Azure Well-Architected Framework

Azure Well-Architected Framework for data workloads

Migrate
to innovate

Migrate to innovate

Use the concepts in each phase to ensure successful migration.

- **Migration strategy**
- **Security and compliance training**
- **Pricing and financial best practices**
- **Platform landing zone**
- **Skilling**

- **Architectural guidance**
- **Cloud governance**
- **Workload deployment**
- **AI-ready migration**

- **Monitoring**
- **Management**
- **Reliability**
- **Workload improvement**

Readiness and foundation

Azure Essentials assists in optimizing your cloud investments during each phase.

Migration strategy

Alignment with business outcomes

[Migrate overview - Cloud Adoption Framework](#)

[Azure Site Recovery](#)

[Azure Database Migration Service for SQL Server migrations](#)

Security and compliance planning

Identify and address requirements early

[Security overview - Cloud Adoption Framework](#)

[Define a security strategy](#)

Pricing and financial best practices

Optimize cost with flexible spending

[FinOps Framework](#)

[FinOps Review](#)

[Azure pricing overview](#)

[Azure Hybrid Benefit cost calculator](#)

Platform landing zone

Accelerate workload deployments

[Prepare your landing zone for migration](#)

[Landing zone deployment options](#)

[ISV considerations](#)
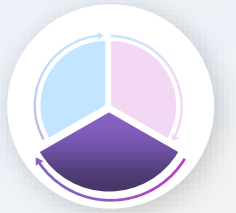
[Get landing zone help](#)

[Landing zone FAQ](#)

Skilling

Empower teams with training and resources

[Azure Fundamentals](#)

Leverage Plans on Microsoft Learn for [Windows Server](#), [SQL Server](#), and [Linux](#)

[Virtual Training Days](#)

[Azure Credentials](#)

Design and govern

Azure Essentials assists in optimizing your cloud investments during each phase.

Architectural guidance

Design and operate with confidence

[Design workload architecture before migration](#)
[Design migration to Azure](#)
[Deploy Azure SQL Database](#)
[Azure database and analytics services](#)
[Securing Azure SQL](#)
[Azure Cosmos DB](#)
[Azure Database for PostgreSQL](#)
[Azure Database for MySQL](#)
[SQL Server on Azure VMs](#)
[Run a Linux VM on Azure](#)

Cloud governance

Establish governance for your cloud workloads

[Cloud Adoption Framework governance overview](#)
[Migration release checklist](#)

Workload deployment

Assess, test, and deploy cloud workloads

[Migration assessment checklist](#)
[Migration deployment checklist](#)

AI-ready migration

AI-specific considerations for migration

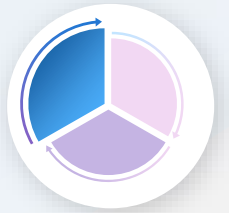[Microsoft's Responsible AI principle](#)
[Azure AI Content Safety](#)
[Learn how to build responsible AI](#)
[Azure AI Content Safety pricing](#)
[Azure AI Content Safety videos](#)

Manage and optimize

Azure Essentials assists in optimizing your cloud investments during each phase.

Monitoring

Comprehensive observability for performance and security

[What is Microsoft Defender for Cloud?](#)
[Azure Security Center](#)
[Azure Defender for Servers](#)
[Microsoft Copilot for Security](#)
[Confidential computing](#)
[Microsoft Purview](#)
[Extended Security Updates enabled by Azure Arc](#)
[GitHub Advanced Security](#)
[Azure Monitor](#)
[Azure Backup Site Recovery](#)

Management

Tools and guidance to maximize ROI

[Resource utilization and efficiency](#)
[Cost optimization workbook](#)
[Azure carbon optimization](#)
[Optimize costs with Azure pricing](#)

Reliability

Assessments and remediations for improved resiliency

[Azure Advisor](#)
[Azure Well-Architected Review](#)

Workload improvement

Constant, evergreen process

[Databases: Azure service guidance mapped to Azure Well-Architected Framework](#)
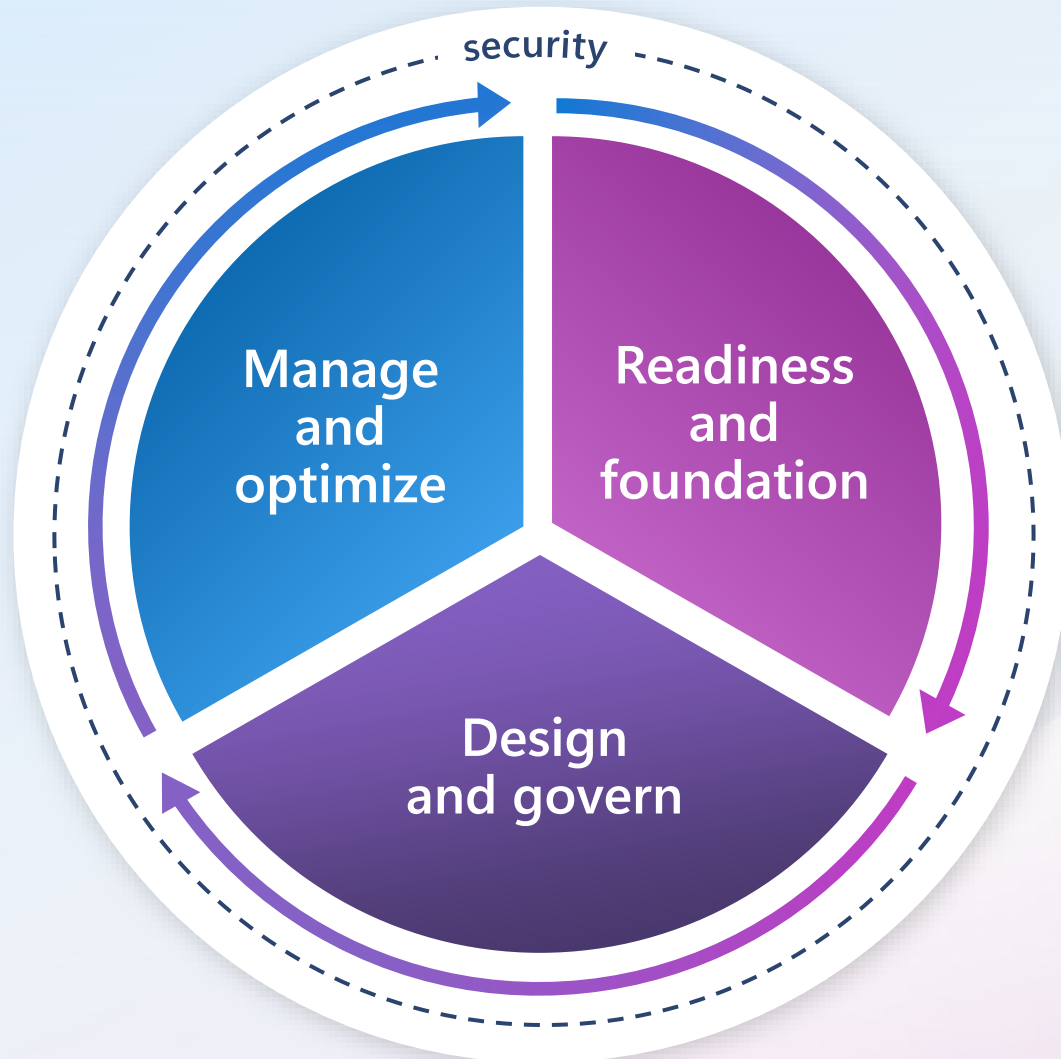[What's new in the Azure Well-Architected Framework](#)

Migrate
SAP workloads

Readiness and foundation

Azure Essentials assists in optimizing your cloud investments during each phase.

Deployment model strategy

RISE or native deployment aligned with business outcomes

[Microsoft and SAP Partnering for Customer Success](#)

[Cloud Adoption Framework for SAP](#)

[Integrating Azure with SAP RISE](#)

[Migration assessment checklist](#)

Security and compliance planning

Identify and address requirements early

[Cloud Adoption Framework security overview](#)

[Microsoft Entra ID Governance](#)

[Plan to deploy the Microsoft Sentinel solution for SAP](#)

Pricing and financial best practices

Optimize cost with flexible spending

[FinOps Framework](#)

[FinOps Review](#)

[Azure pricing overview](#)

[Microsoft Azure pricing calculator](#)

Platform landing zone

Accelerate workload deployments

[Azure landing zones](#)

[Azure landing zone for SAP migration](#)

[Azure Center for SAP solutions](#)

Skilling

Empower teams with training and resources
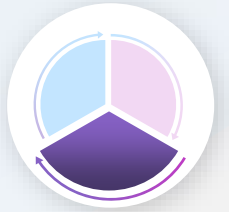
[Azure Fundamentals](#)

[Skilling Plan on Microsoft Learn for SAP](#)

[SAP on Azure Virtual Training Days](#)

[Azure Credentials](#)

Design and govern

Azure Essentials assists in optimizing your cloud investments during each phase.

Architectural guidance

Design and operate with confidence

[Foundations of IaaS for SAP on Azure](#)

[Integrating Azure with SAP RISE](#)

[SAP on Azure Architecture Center](#)

[SAP reference architectures](#)

[SAP workload documentation](#)

Governance

Establish governance for your SAP workloads

[Governance disciplines for SAP on Azure](#)

[Foundations of identity and governance for SAP on Azure](#)

[Cloud Adoption Framework governance overview](#)

[Migration release checklist](#)

[Microsoft Purview](#)

Workload deployment

Assess, test, and deploy SAP workloads

[Deploy SAP on Azure](#)

[Integrate Azure with SAP RISE](#)

[Explore Azure Center for SAP solutions](#)

[SAP deployment using an Oracle DB](#)

[Migration process of SAP on Azure](#)

AI-ready SAP migration

AI-specific considerations for migration

[Microsoft's Responsible AI principle](#)

[Azure AI Content Safety](#)

[Joint capabilities from Microsoft and SAP](#)

[Integrate your SAP data into Fabric](#)

[Streamline SAP processes with Microsoft AI services](#)

[Combine SAP and other data](#)

[Connect Power Platform to SAP on Azure](#)

[Import an SAP API using the Azure portal](#)

Manage and optimize

Azure Essentials assists in optimizing your cloud investments during each phase.
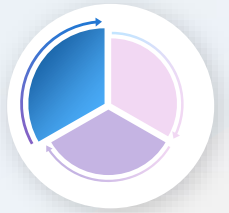
Monitoring

Comprehensive observability for performance and security

[Identity and security in Azure with SAP RISE](#)

[Azure Well-Architected Framework](#)

[Azure Security Center](#)

[Microsoft Purview](#)

[Microsoft Defender for Cloud](#)

[Manage access to your SAP applications - Microsoft Entra ID Governance](#)

[Plan to deploy the Microsoft Sentinel solution for SAP](#)

Management

Tools and guidance to maximize ROI

[Introduction to Azure Advisor](#)

[Resource utilization and efficiency](#)

[Cost optimization workbook](#)

[Azure carbon optimization](#)

[Optimize costs with Azure pricing](#)

Reliability

Assessments and remediations for improved resiliency

[Ensure stable operations and optimization](#)

[Azure Well-Architected Review - SAP assessment](#)

[Introduction to application resiliency in Azure](#)

[Reliability guidance overview](#)

[Design and architect Azure ExpressRoute for resiliency](#)

Workload improvement

Constant, evergreen process

[Well-architected SAP workload](#)

[Databases: Azure service guidance mapped to Well-Architected Framework](#)

[What's new in the Azure Well-Architected Framework](#)
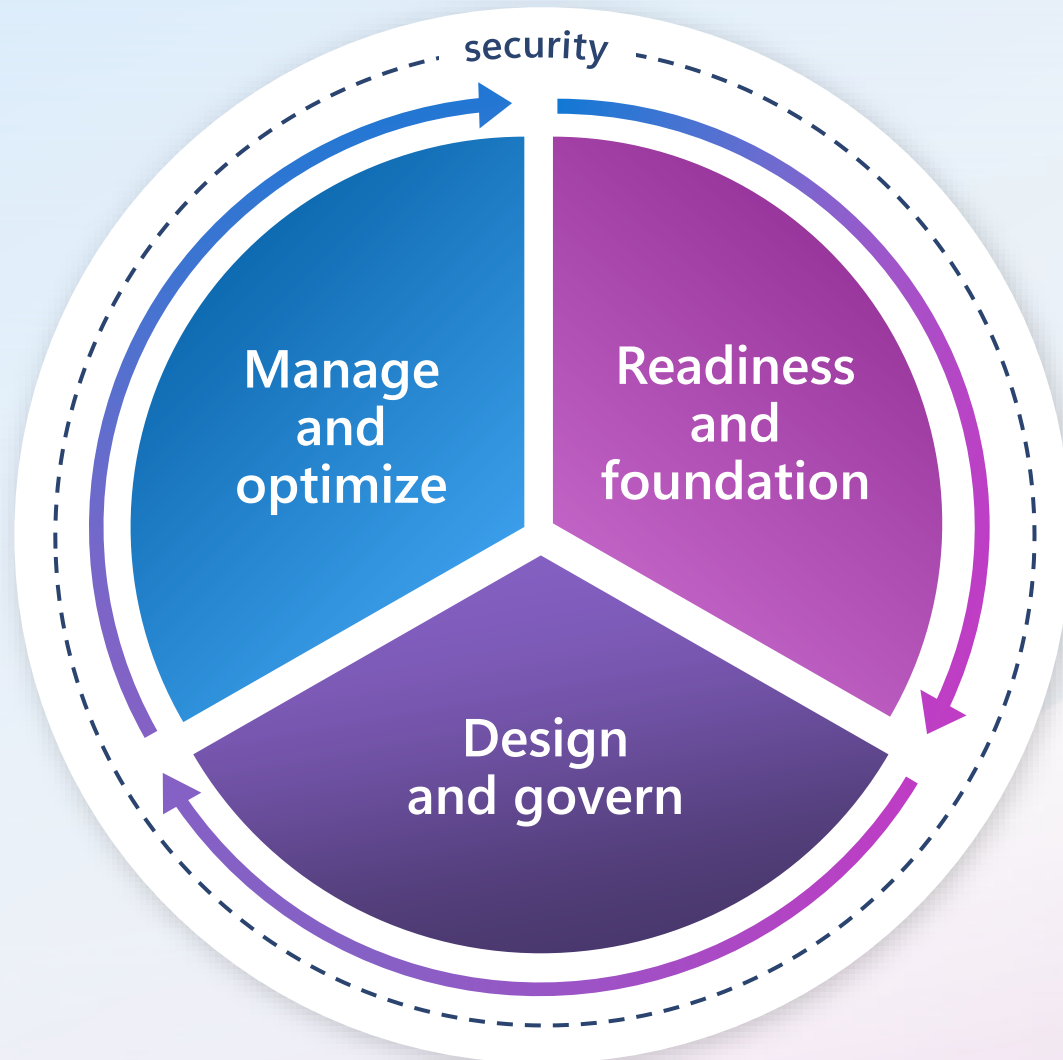
[Azure Advisor resiliency reviews](#)

[Azure for SAP workloads Specialty](#)

Accelerate software development

Accelerate software development

Use the concepts in each phase to accelerate developer productivity.

security

Manage and optimize

Readiness and foundation

Design and govern

- Data sources and infrastructure
- DevOps enablement
- Pricing and financial best practices
- Platform landing zone
- Skilling

- Architectural guidance
- AI-ready app development
- Application landing zones

- Monitoring
- Management
- Emergency response strategy

Readiness and foundation

Azure Essentials assists in optimizing your cloud investments during each phase.

Data sources and infrastructure

Access and secure early in the lifecycle

Solution architect's checklist

DevOps enablement

Set up a modern software development lifecycle

DevOps resource center

Microsoft Dev Box

Pricing and financial best practices

Optimize cost with flexible spending

FinOps Framework

FinOps Review

Azure pricing overview

Azure Hybrid Benefit cost calculator

Platform landing zone

Accelerate workload deployments

Deploy Azure landing zones

Bicep modules design considerations

Terraform module design considerations

Subscription vending implementation guidance

Skilling

Empower teams with training and resources

Training for DevOps Engineers

Introduction to GitHub Copilot

GitHub Copilot fundamentals

Accelerate app development using GitHub Copilot

Use GitHub Copilot with Python

Add AI-generated code using Copilot

Design and govern

Azure Essentials assists in optimizing your cloud investments during each phase
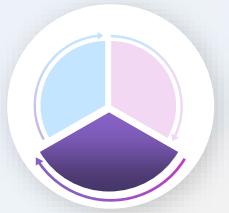
Operations excellence guidance

Design and operate with confidence

Cloud design patterns that support operational excellence

Operational excellence quick links

Recommendations for designing and creating a monitoring system

AI-ready app development

AI-specific considerations to accelerate app development

DevOps architecture design

Azure Well-Architected Review assessment

Azure Well-Architected Review

GitHub Actions for Azure

GitHub Copilot extension overview
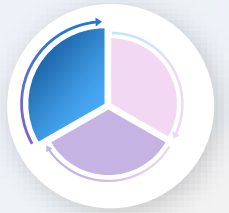
Azure and GitHub integration

Infrastructure-as-code

Workload-specific environments to automate deployment and ensure proper consistency

What is infrastructure as code (IaC)?

Azure Verified Modules

Manage and optimize

Azure Essentials assists in optimizing your cloud investments during each phase.

Monitoring

Comprehensive observability for logging, tracing, debugging, performance and security

Get compliance data - Azure Policy

Azure Governance Visualizer

Manage Azure Policies with GitHub

DevOps tooling for Well-Architected Recommendation Process

Determine causes of non-compliance - Azure Policy

Remediate non-compliant resources - Azure Policy

Management

Tools and guidance to maximize ROI

Optimize workload design using flows

Cost Optimization workbook

Use Azure Advisor score

Microsoft Cost Management

Make resources more secure with Azure Advisor

Service Retirement workbook

Workload sustainability

Sustainability assessment

Reliability workbook

Optimize costs with Azure pricing

Reliability

Prepare, detect and mitigate incidents and risks

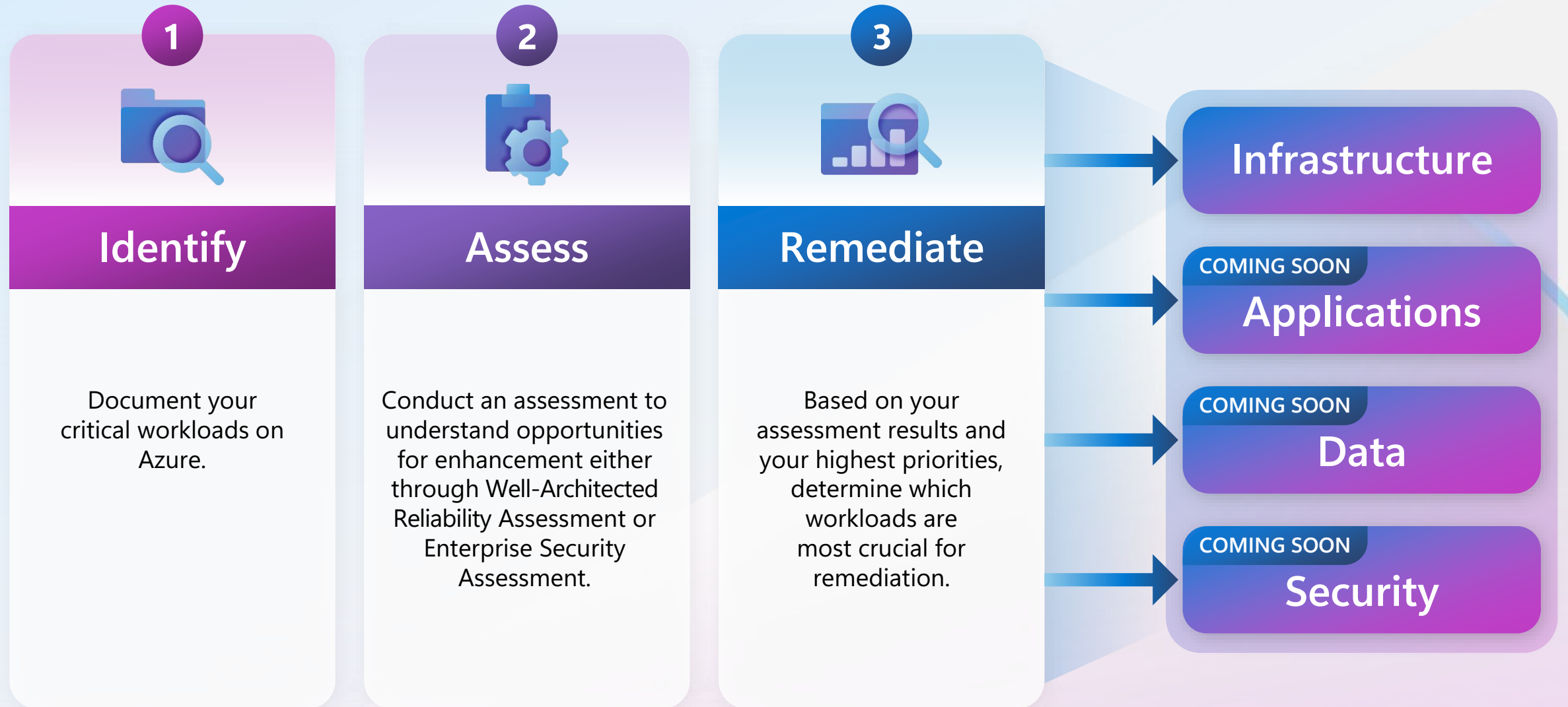Designing an emergency response strategy

Creating an observability framework

Designing a monitoring and alerting strategy

Recommendations for self-healing and self-preservation

Azure proactive resiliency

Azure proactive resiliency

1

Identify

Document your critical workloads on Azure.

2

Assess

Conduct an assessment to understand opportunities for enhancement either through Well-Architected Reliability Assessment or Enterprise Security Assessment.

3

Remediate

Based on your assessment results and your highest priorities, determine which workloads are most crucial for remediation.

Infrastructure

COMING SOON
Applications

COMING SOON
Data

COMING SOON
Security

Infrastructure resiliency

1

Identify and document

- Identify a business-critical workload that you would like to assess for its resiliency.

- Understand the [Business critically in cloud management](#).

2

Assess and recommend

- The [Well-Architected Reliability Assessment](#) offers technical analysis of all Azure services in critical workloads, including shared services. It covers high availability, backup and recovery, disaster recovery, monitoring, alerting, maintenance control, outage history, performance, and security. The results are shared via Azure Advisor and support needs are documented for regular follow-up.

- [Define the workload](#) to be assessed.

- Use the Azure Proactive Resilience Library ([APRL](#)) to discover deficiencies.

- Load recommendations into [Azure Advisor](#) for monitoring status.

- Learn about the [overview and usage of APRL Scripts](#) in the APRL v2.

3

Plan for remediation and execute

- Communicate findings and discuss potential remediation with all relevant stakeholders.

- Focus on highest risk areas, select services aligned to the remediation recommendations.

- Execute recommendations to reduce gaps.

- Explore how to use the [Reports Generator PowerShell script.](#)

Key gaps to address

Single availability-zone deployments:

[Multi-zonal deployment](#) of services can prevent customer impact during outages, ExpressRoute Gateways should be deployed across multiple availability zones.

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