

# Microsoft Cloud Adoption Framework- Ready

Landing a Cloud Adoption Plan

# Objectives of the CAF Ready Module



Introduce you to the Landing Zone, before an adoption can begin, you must create a landing zone to host the workloads that you plan to build in the cloud or migrate to the cloud.



Understand the mandatory steps before you start building. We introduce features that help you organize resources, control costs, and secure and manage your organization.



Learn the process of creating the first environment in Azure: The Landing Zone-a logical construct capturing everything that must be true to enable the desired cloud adoption.



Explore available tools, Templates, and Examples

# Agenda for CAF Ready Module



## Pre-Landing Zone

- Manage Costing and Billing
- Identity, Access & Azure RBAC
- Plan for Governance, security, and compliance in Azure
- Agree of telemetry and Reporting



## Build an Enterprise Class Landing Zone

- Plan to Migrate: Rehost
- Plan for Modernization: Refactor
- Plan for Innovation: Getting Business Value



## Drafting a Cloud Readiness Plan: Big Rocks

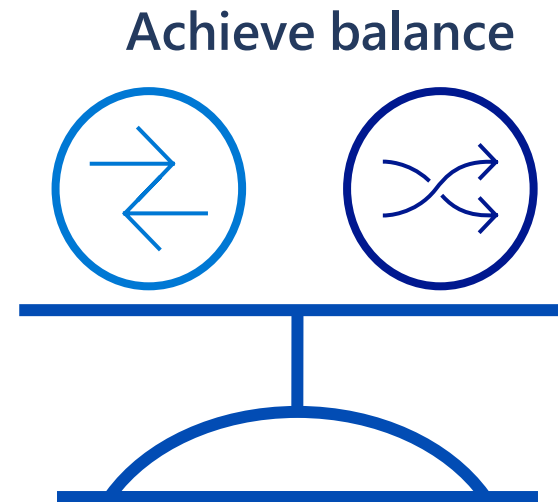
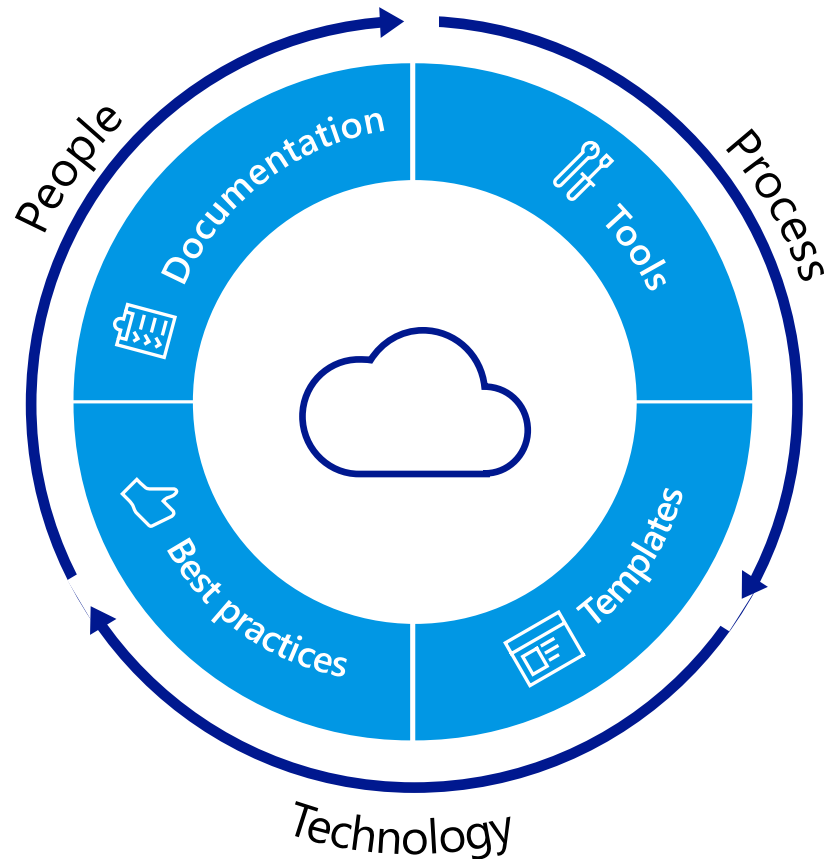
- Considerations for Compute, Networking & Storage
- Consideration for Application, Data & Monitoring
- Consideration for Operation management, Support, Security & Compliance



## Tools-Templates-Examples

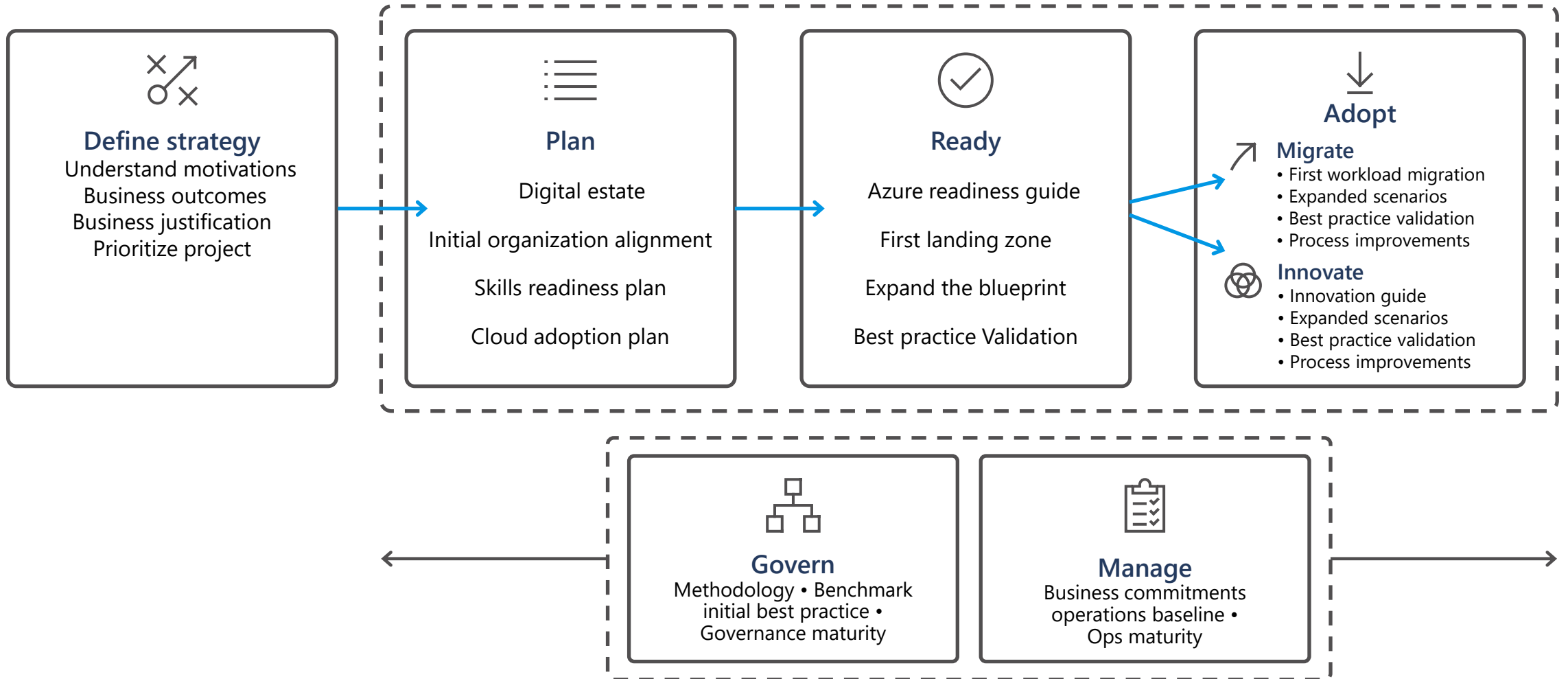
- Governance Benchmark Tool
- Microsoft Learn
- CAF Migrate Landing Zone Blueprint

# Microsoft Cloud Adoption Framework for Azure



Align **business, people and technology strategy** to achieve business goals with **actionable, efficient, and comprehensive** guidance to deliver fast results with control and stability.

# Microsoft Cloud Adoption Framework for Azure



# Ready

Ready establishes a cloud foundation or adoption target that can provide hosting for any adoption efforts.

1

## Azure Readiness Guide

Azure Readiness guidance in the Cloud Adoption Framework

2

## First landing zone

Leverage the Cloud Adoption Framework migrate landing zone blueprint

3

## Expand the blueprint

Use the landing zone considerations to enhance the blueprint template

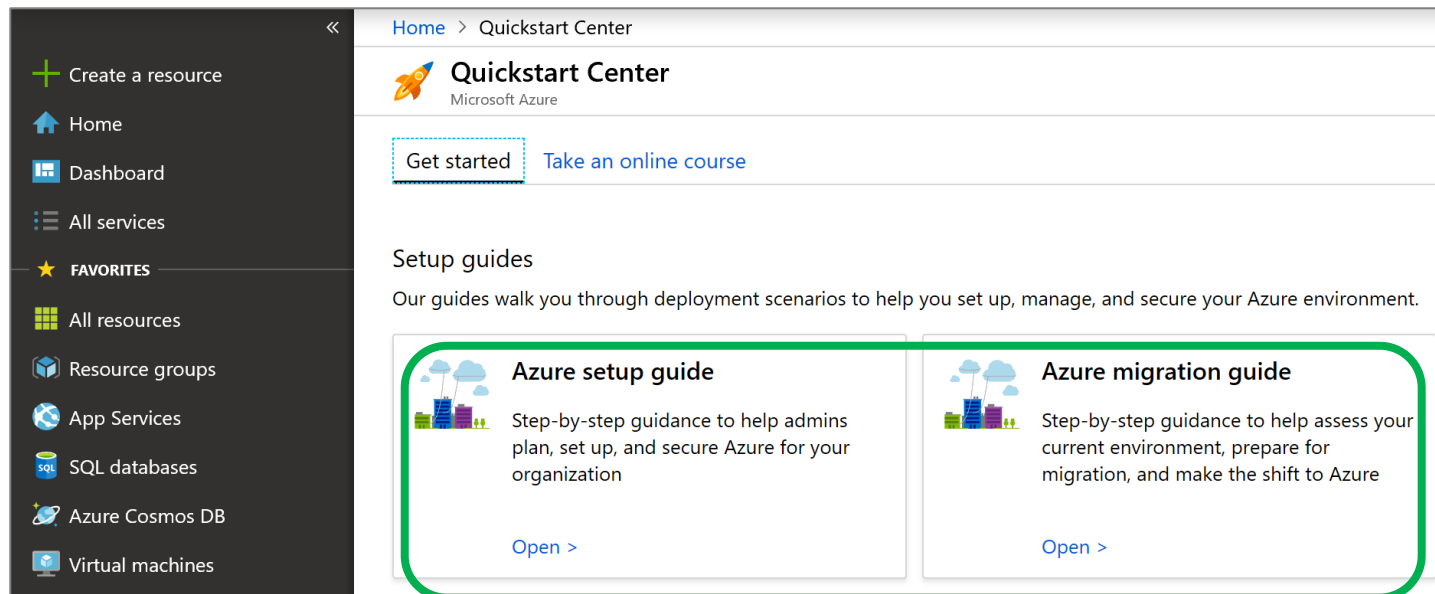
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## Best practices

Validate landing zone modifications against best practices

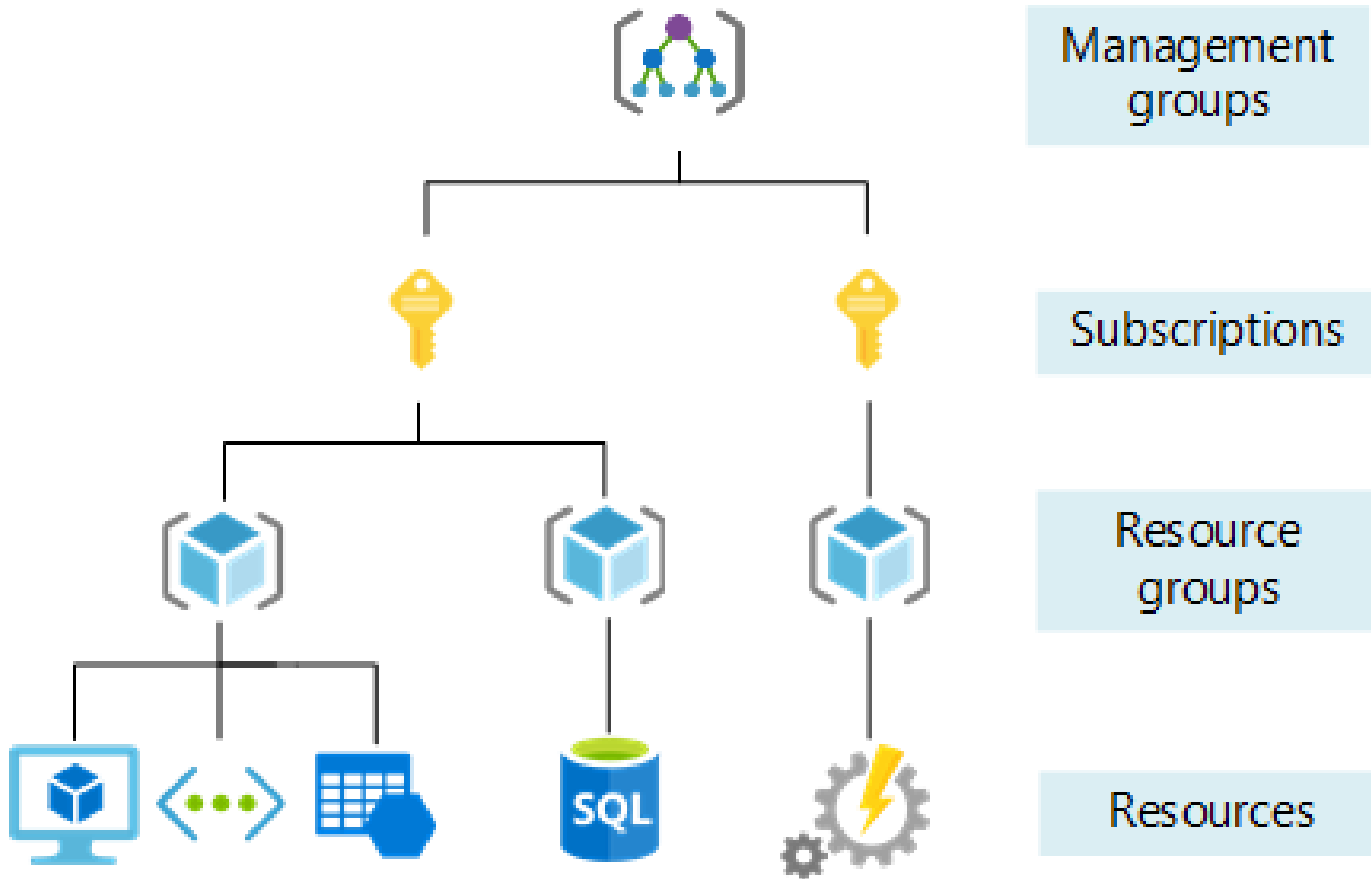
# Azure Readiness Guide

- Prepare the cloud environment before building and deploying solutions using Azure services
- The Azure Readiness Guide provides guidance on how to organize resources, control costs, and secure and manage your organization helping you create your landing zone in Azure



The guide is also published in the **Azure Quickstart Center** within the Azure Portal

# Organize your Azure Resources






- Use the management hierarchies within the Azure platform.
- Implement well-thought out naming conventions
- Apply resource tagging





# Manage access using role-based access controls

|       |   | Role                |                                  |             |        |
|-------|---|---------------------|----------------------------------|-------------|--------|
|       |   | Reader              | Resource-specific or custom role | Contributor | Owner  |
| Scope | <br>Subscription   | Observers           | Users managing resources         |             | Admins |
|       | <br>Resource group |                     |                                  |             |        |
|       | <br>Resource      | Automated processes |                                  |             |        |

- The more specific or detailed permissions are that you define, the more likely it is that your access controls will become complex and difficult to manage. This is especially true as your cloud estate grows in size.
- Avoid resource-specific permissions. Instead, use management groups for enterprise-wide access control and resource groups for access control within subscriptions.
- Also avoid user-specific permissions. Instead, assign access to groups in Azure AD.

# Manage costs and billing

- **Analyze cloud costs** helps you explore and analyze your costs. You can view aggregated cost for your account or view accumulated costs over time.
- **Monitor with budgets** allows you to create a budget and then configure alerts to warn you when you're close to exceeding it.
- **Optimize with recommendations** helps identify idle and underused resources so you can take action to reduce waste.
- **Manage invoices and payments** gives you visibility to your cloud investment.

# CAF Governance Model

Governance End State that fosters trust and builds confidence

**Govern** <http://aka.ms/CAF/Gov>

## Define Corporate Policy

### Business Risks



Document evolving business risks and the business' tolerance for risk, based on data classification and application criticality



### Policy & Compliance

Convert Risk decisions into policy statements to establish cloud adoption boundaries.



### Process

Establish processes to monitor violations and adherence to corporate policies.

## Five Disciplines of Cloud Governance



### Cost Management

Evaluate & monitor costs, limit IT spend, scale to meet need, create cost accountability



### Security Baseline

Ensure compliance with IT Security requirements by applying a security baseline to all adoption efforts



### Resource Consistency

Ensure consistency in resource configuration. Enforce practices for on-boarding, recovery, and discoverability



### Identity Baseline

Ensure the baseline for identity and access are enforced by consistently applying role definitions and assignments



### Deployment Acceleration

Accelerate deployment through centralization, consistency, and standardization across deployment templates

## Corporate Policy

Governance is a big, intimidating topic. Establish proper scope by mitigating *tangible* risks through corporate policy.

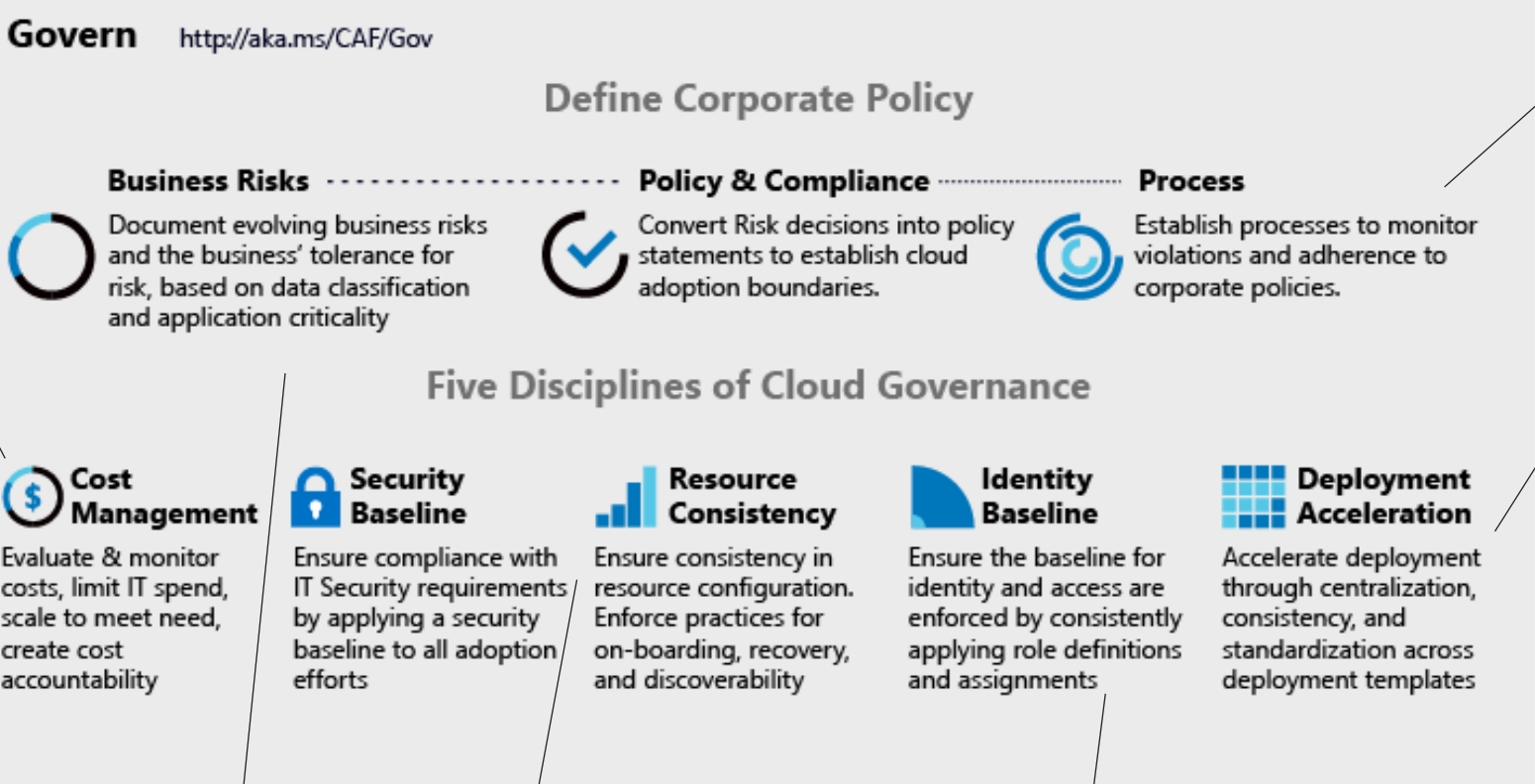
## Cloud Governance Disciplines

Governance is a team sport. Empower multiple team members by decomposing corporate policy changes into five actionable disciplines.

## Cloud Governance Team

A team of governance minded cloud architects can evolve these disciplines, ensure governance consistency, and accelerate deployment.

# Making Governance Actionable with Native Tools



- Azure Monitor**

- Azure Blueprint
- Azure Policy
- Resource Grouping & Tagging
- Resource Manager Templates
- **Azure Advisor**
- Azure DevOps
- Azure Site Recovery
- Azure Backup
- Azure Automation

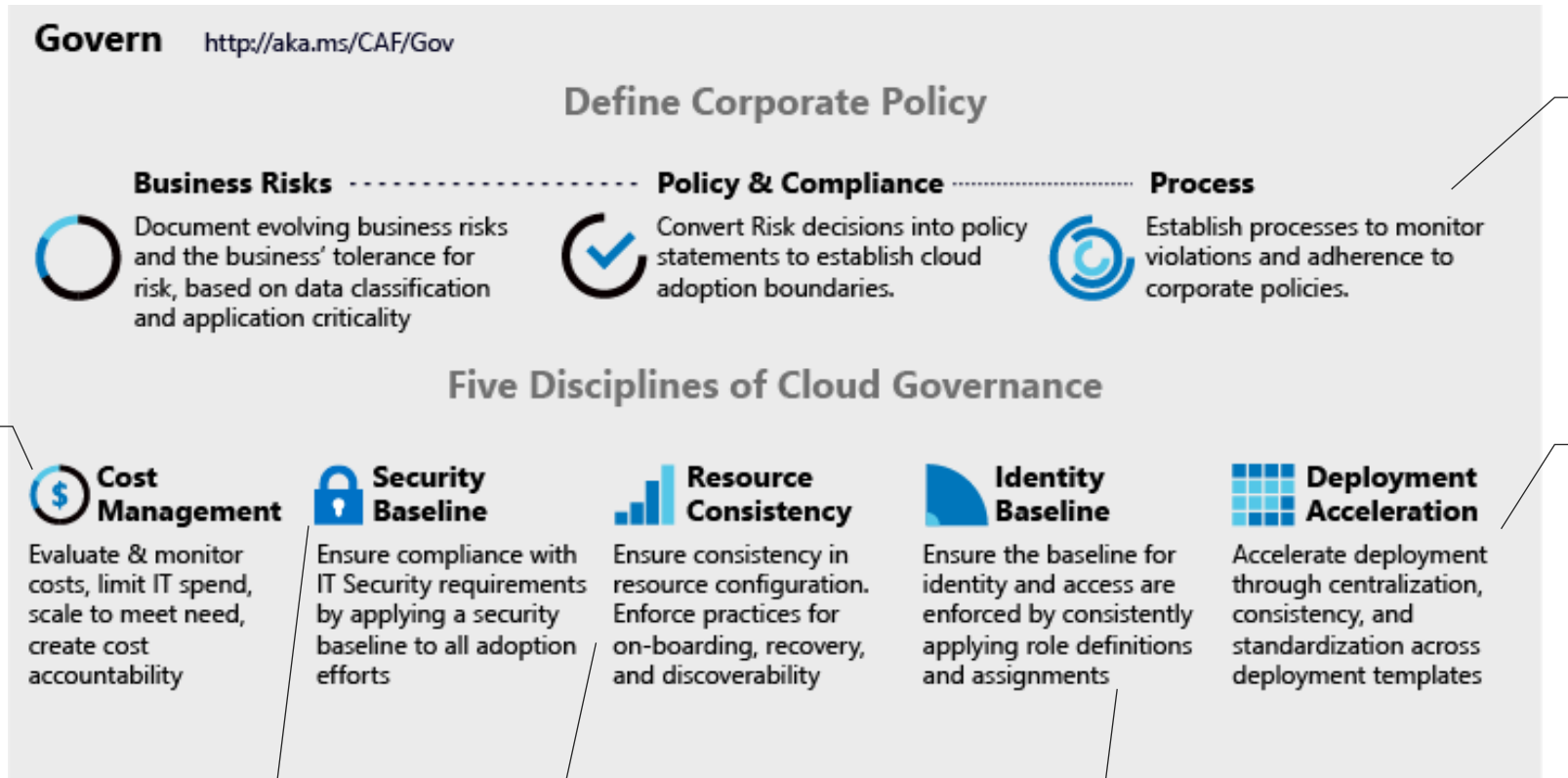
- Azure Blueprints
- Azure Policy
- **Azure Cost Management**
- **Azure Advisor**
- Azure Portal
- Azure EA Content Pack

- Azure Blueprints
- Azure Policy
- **Azure Security Center**
- **Azure Sentinel**
- Subscription Design
- Encryption
- Hybrid Identity
- Azure Networking
- Azure Automation

- Azure Blueprints
- Azure Policy
- **Azure Monitor**
- **Azure Advisor**
- Resource Manager Templates
- Resource Graph
- Management Groups

- Azure Blueprints
- **RBAC**
- Azure AD
- Azure AD B2B
- Azure AD B2C
- Directory Federation
- Directory Replication

# Integrating 3<sup>rd</sup> Party Tools



**Monitoring 3<sup>rd</sup> parties**

- OpsCompass

**Cost Management 3<sup>rd</sup> parties**

- HashiCorp Terraform (ROI tools)

**Deployment 3<sup>rd</sup> parties**

- Nagios
- HashiCorp Terraform
- devops tools like Chef, Puppet, Zabix

**Security baseline 3<sup>rd</sup> parties**

- Splunk
- HashiCorp Vault
- F5
- Gemalto
- Palo Alto

**Discovery, onboarding, and recovery 3<sup>rd</sup> parties**

- ServiceNow
- HashiCorp Terraform

**3<sup>rd</sup> party identity providers**

- HashiCorp Vault
- RSA
- Omada
- Ping Identity
- SailPoint

# Monitoring and reporting in Azure

A comprehensive solution for collecting, analyzing, and acting on telemetry from your applications and the Azure resources that support them.

## Azure Monitor

- Monitor and visualize metrics
- Query and analyze logs.
- Set up alerts and actions.

## Azure Service Health

- Azure Status
- Service Health
- Resource Health

## Azure Advisor

- High Availability
- Security
- Performance
- Cost
- Operational Excellence

## Azure Security Center

- Strengthen Security posture
- Protect against threat

# Stay Current

## Microsoft

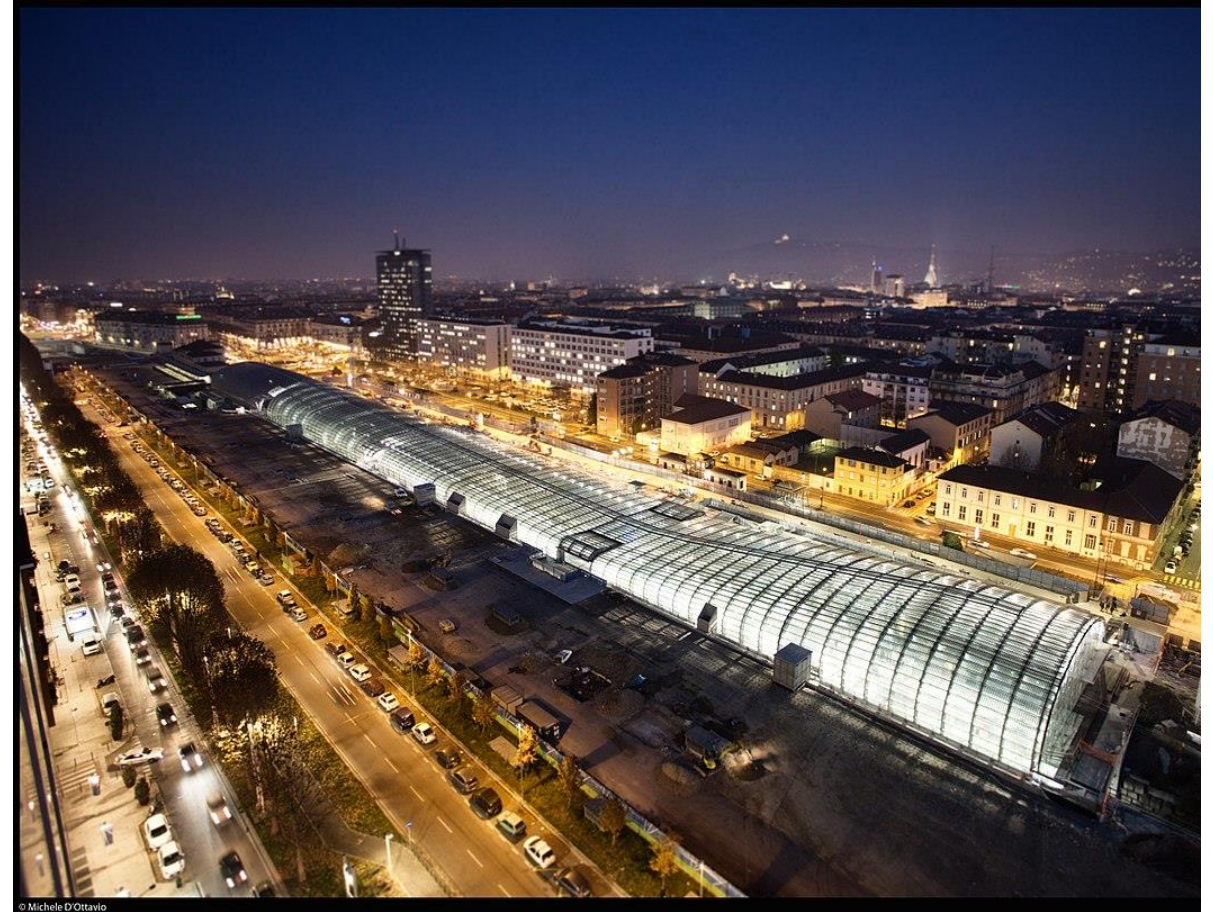
- [Azure Service Health](#)
- [Azure Updates](#)
- [Azure Blog](#)
- Service-specific blogs
- [Azure Info Hub](#)

## Community

- [Azure Friday](#)
- [Azure Charts](#)
- [AzAdvertiser](#)
- [Azure Weekly](#)

# Metropolis

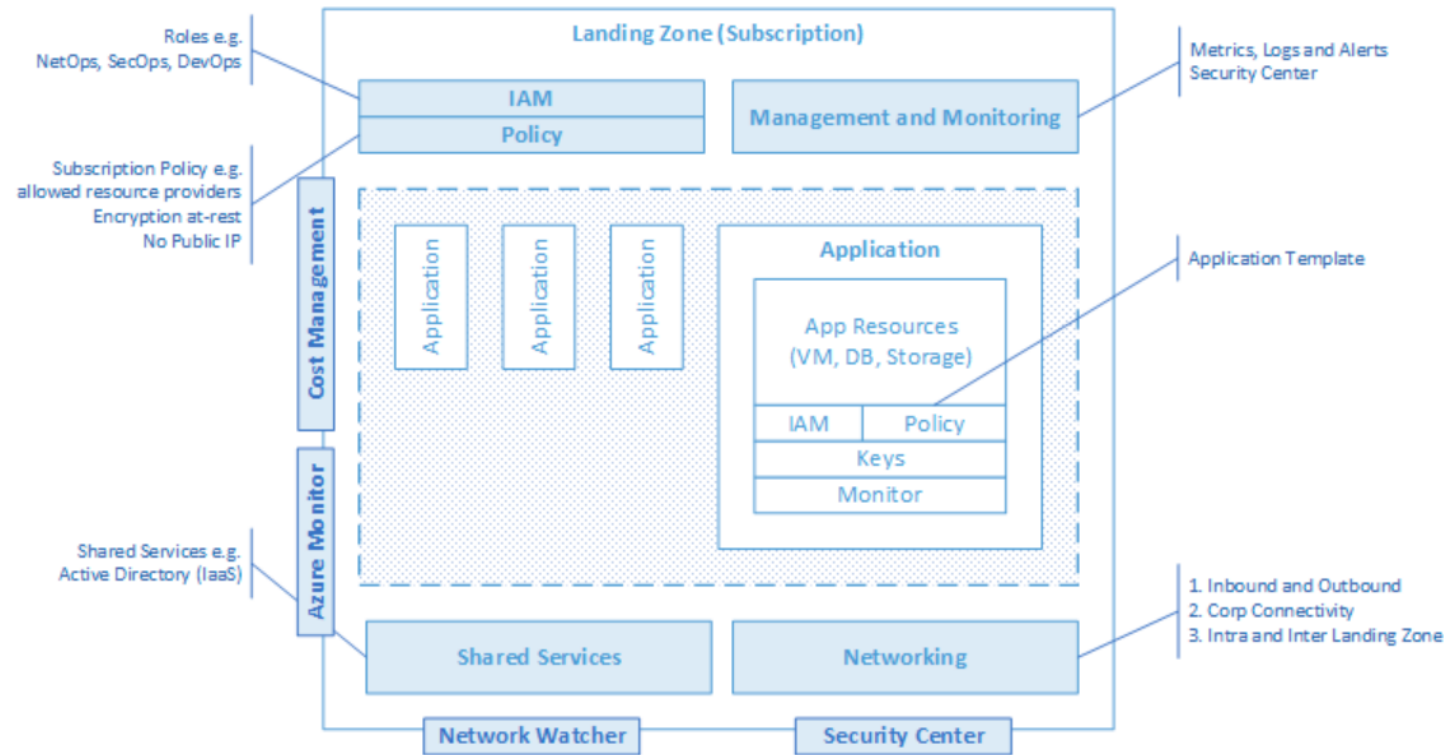
*Using an analogy, this is similar to how city utilities such as **water**, **gas**, and **electricity** are accessible before new houses are constructed. In this context, the network, IAM, policies, management, and monitoring are shared '**utility**' services that **must be readily available** to help streamline the application migration process.*



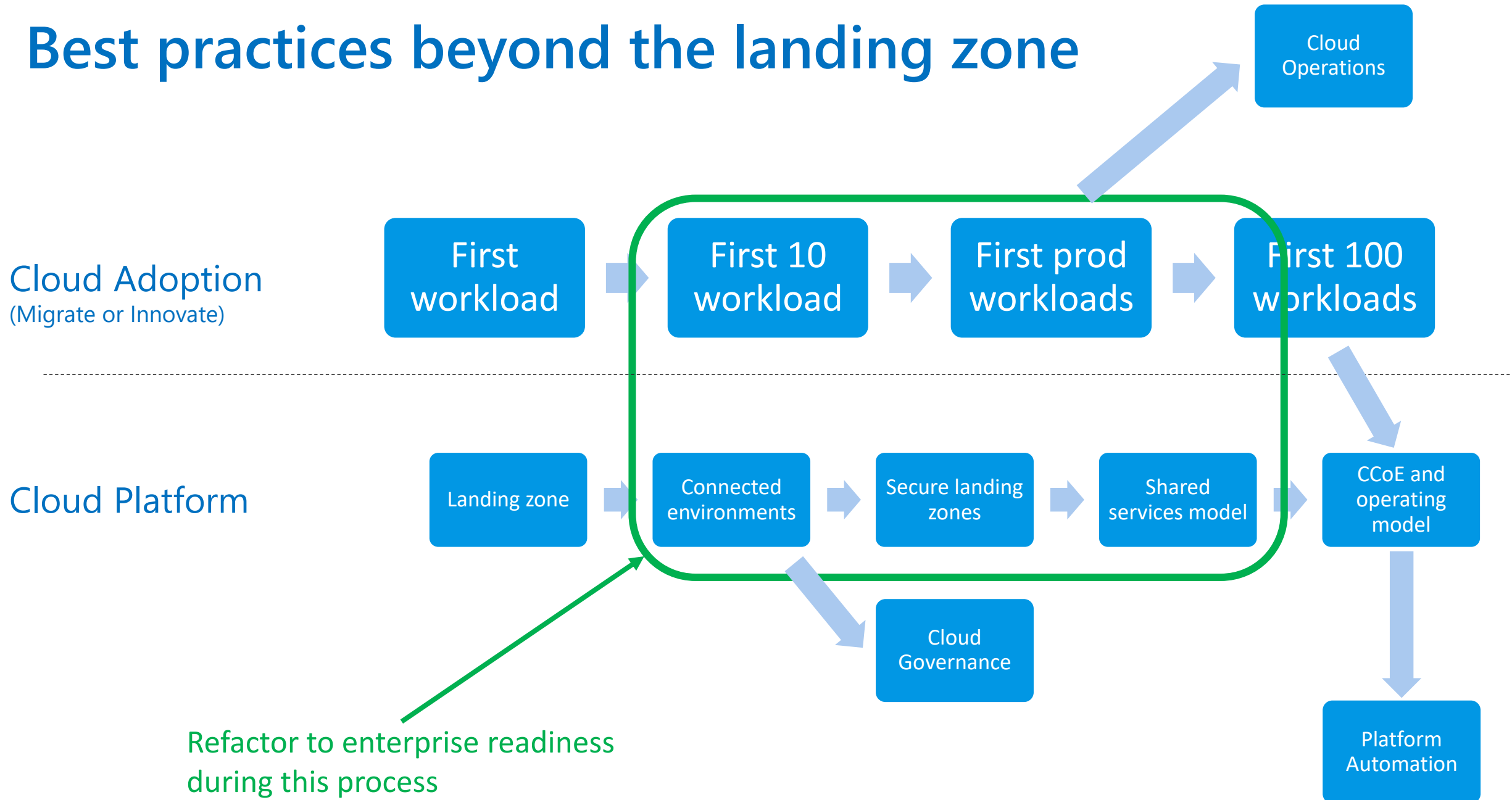


# Landing Zones

The principle purpose of the “Landing Zone” is therefore to ensure that when an application lands on Azure, the required “plumbing” is already in place, providing greater agility and compliance with enterprise security and governance requirements.

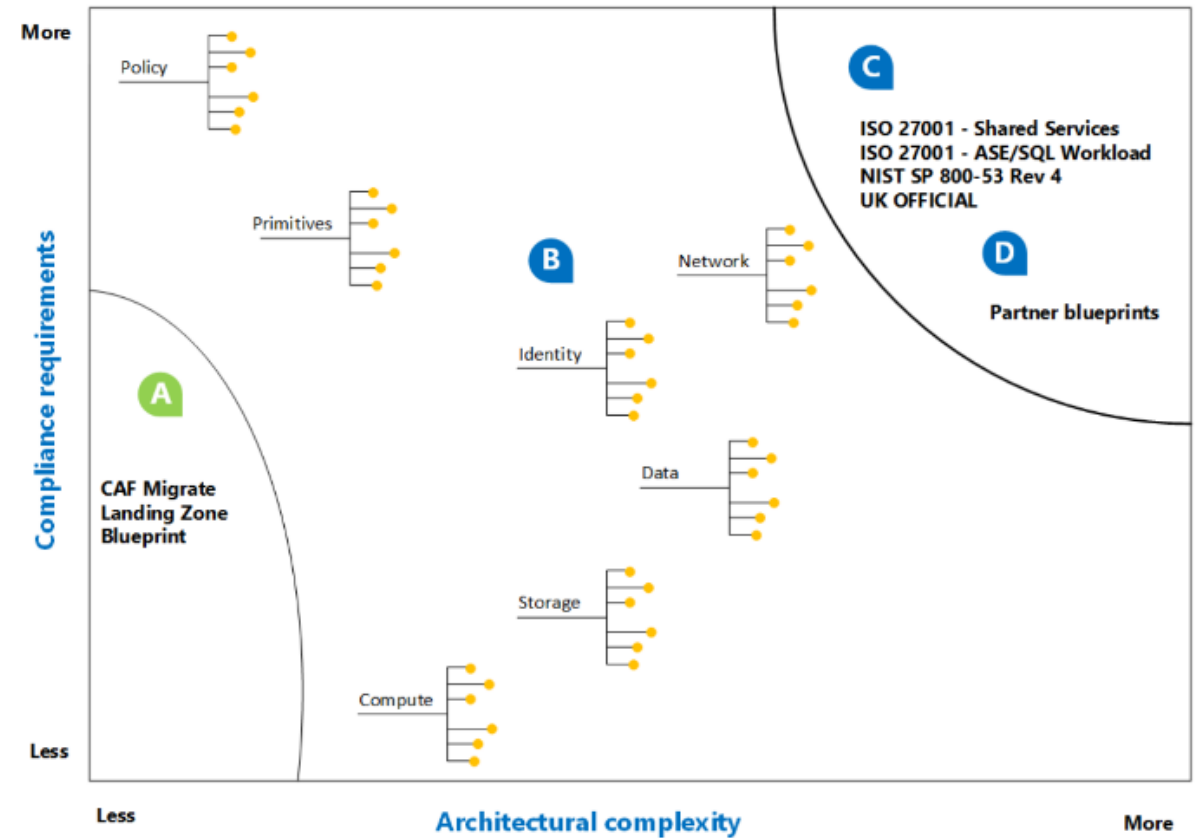


# Best practices beyond the landing zone



# First Landing Zone

- Landing zone is the environment that is provisioned to host workloads being migrated from an on-premises environment into Azure.
- The Cloud Adoption Framework migrate landing zone blueprint creates a landing zone which can be updated to meet your specific needs.



# Key Challenges



**Architecture Complexity:** Customers lack the required level of understanding and experience on Azure. The mismatch between on-premises infrastructure and cloud-design considerations creates dissonance and friction with respect to defining architectures and standards for their migration to the cloud. They are struggling with the translation of their requirements to Azure concepts, capabilities, constructs and security model.



**Operating Compatibility:** Existing approaches and functions for the traditional delivery and management of IT services are not compatible with the Azure platform and cloud operating models. When combined with a lack of skills and experience, customers are struggling to define and therefore transform their operating model to manage and support large-scale cloud infrastructure.



**Lack of Trust and Desire for Control:** The absence of a precise and detailed cloud architecture that is compliant with their requirements, and the lack of a well-defined operating model to support such a platform, leads IT not to trust Azure and instead strive to maintain full control. This often involves building 'walls' and complicated processes which ultimately get in the way of business lines adopting Azure.

# Shared architecture principles



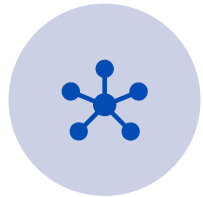
Enterprise Enrolment  
and Azure AD Tenants



Identity and Access  
Management



Management Group  
and Subscription  
Organisation



Network Topology  
and Connectivity



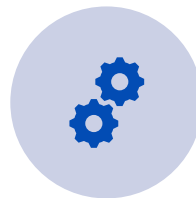
Management and  
Monitoring



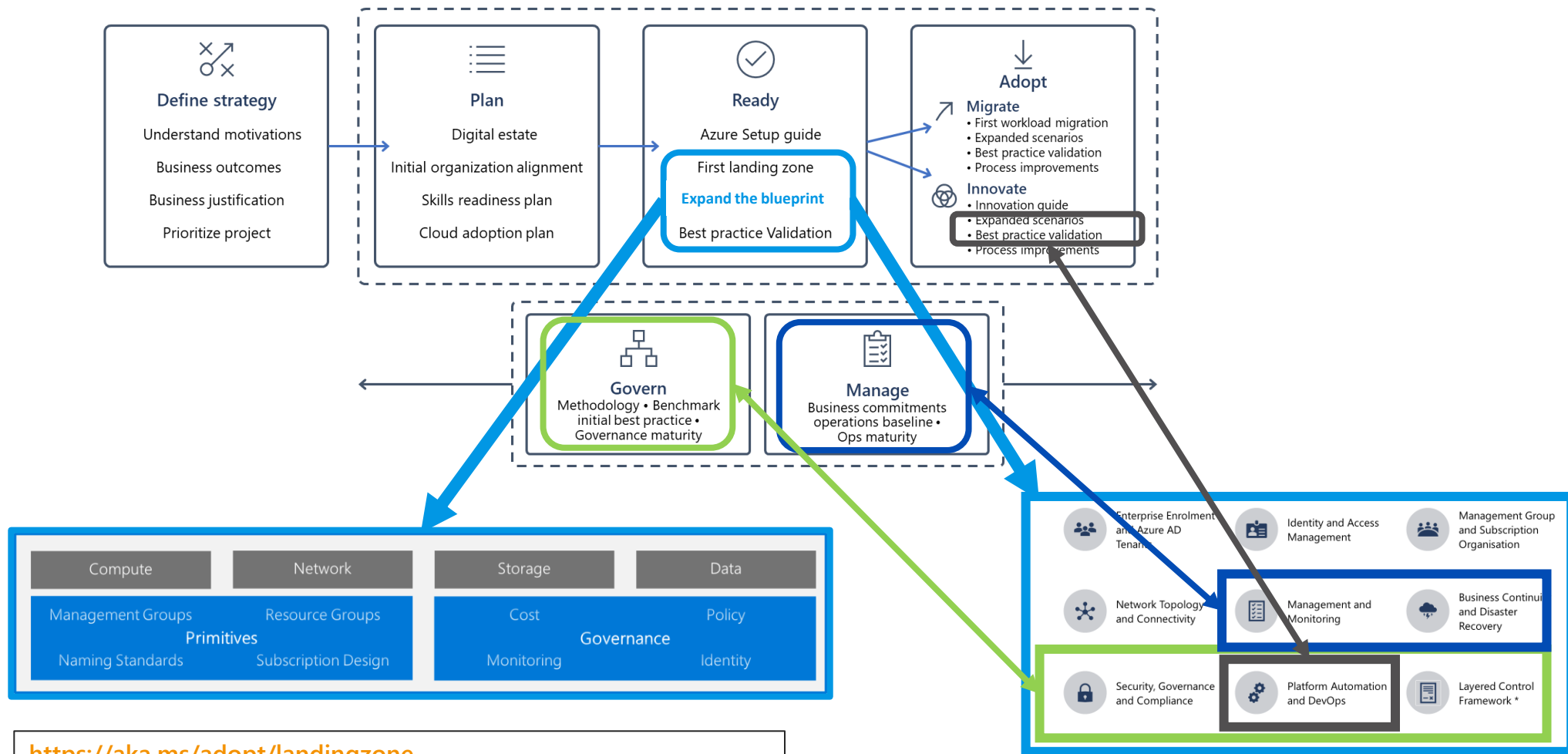
Business Continuity  
and Disaster  
Recovery



Security, Governance  
and Compliance



Platform Automation  
and DevOps



<https://aka.ms/adopt/landingzone>

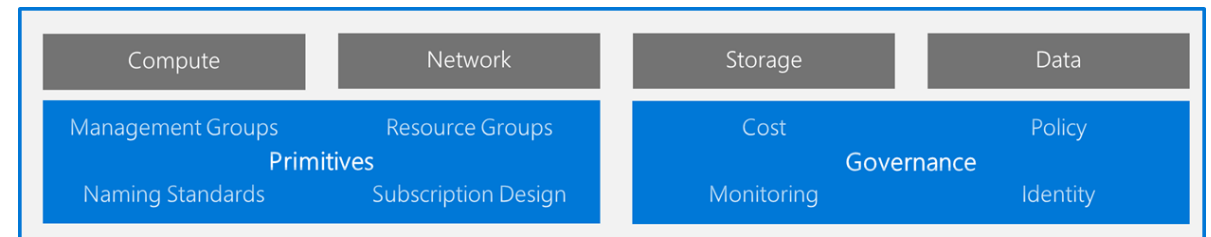
- Light-weight, fast, opinionated
- Limited initial scope: Prod is ok, but no mission critical, sensitive data, or complex architecture during early iterations.
- Recognizes parallel iterations with different sprint velocity and release cadences across Platform, Ops, and Govern teams.
- Provides opinionated starting point but outlines multiple options to expand the scope of that starting point.

- More opinionated implementation, longer discovery time
- Unlimited scope: Mission critical, sensitive data, and complex architectures are enabled in the first migration wave.
- Addresses interdependencies between Platform, Ops, and Govern teams before migration begins.
- Provides opinionated final state architecture with options to control variable inputs.

# Expand the landing zone blueprint

The considerations for implementing a landing zone fall into three categories

- Hosting - decisions need to be made around compute, storage, networking, databases to help create hosting options in the landing zone blueprint
- Azure fundamentals - these are the foundational building blocks for organizing resources in the cloud environment.
- Governance considerations – applying governance principles on each landing zone



# Recommended Practices

- Leverage best practices in Cloud Adoption Framework to help your teams establish and prepare Azure environment. These include guidance in the areas of
  - [Azure fundamentals](#)
  - [Networking](#)
  - [Identity and Access Control](#)
  - [Storage](#)
  - [Databases](#)
  - [Cost Management](#)



# Learning offerings from Microsoft

|                          | Microsoft Community Training                                    | Microsoft Learn*  | Educator Center   | Microsoft Learning Pathways                                   | LinkedIn Learning  |
|--------------------------|---|---|---|---|--|
| <b>Value Proposition</b> | Enable learning for everyone, everywhere                        | Self-pace learning portal on Microsoft Technologies     | Learn how to make best use of Microsoft products in the classroom | On-demand, custom training platform for Microsoft 365 content | Offer video courses from industry experts on variety of topics |
| <b>Target Audience</b>   | Firstline workers, Extended enterprise & Educators              | Developers & IT Professionals                           | Educators   | Knowledge workers   | Knowledge workers  |
| <b>Content Type</b>      | Customer-owned content  | Pre-built content on Microsoft cloud technologies       | Pre-built content on Microsoft products and services              | Only Microsoft 365 product and services                       | Pre-defined courses. Own content only for Pro-Version          |
| <b>Customization</b>     | Look & feel, manage content hierarchy & custom learning paths   | No customization possible                               | No customization possible   | Create learning paths and change look & feel of the portal    | Create learning paths; No support for whitelabelling           |
| <b>Analytics</b>         | Exhaustive instrumentation. Create custom dashboard if required | No analytics available for the organization             | No analytics available for the organization                       | Minimal analytics & reporting available to the organization   | Access to in-built reports to track & monitor engagement       |
| <b>Cost</b>              | Only pay for Azure consumption                                  | Content consumption is free; Only pay for certification | Free  | Included in Microsoft 365                                     | Per user licensing fee   |
| <b>Offline Support</b>   | Download content on the mobile app                              | No download option available                            | No download option available                                      | No download option available                                  | Download content on the mobile app                             |
| <b>End Point</b>         | Web, Mobile and Microsoft Teams; Custom end point with APIs     | Only web app  | Only web app  | Only web app  | Web & Mobile   |

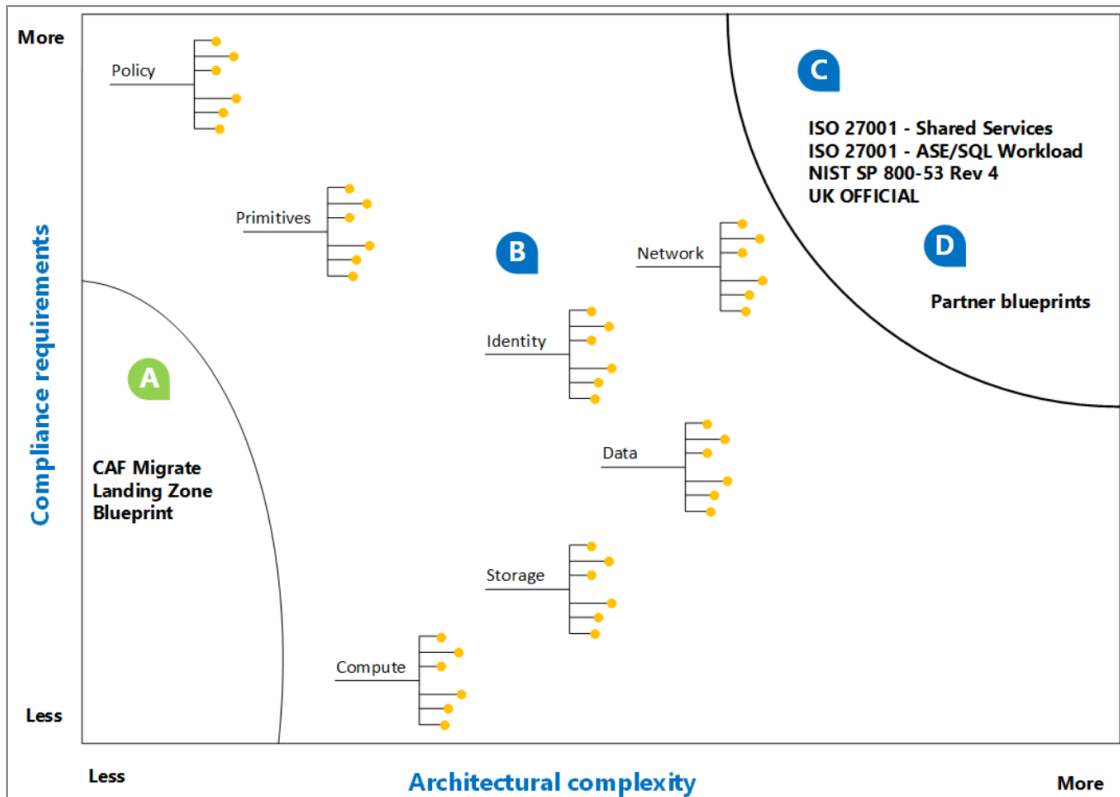
*\*All the previous learning solutions like Microsoft Virtual Academy, Microsoft Professional Program, etc. are getting merged into Microsoft Learn*

# Landing zone blueprints

## Migration Landing zone blueprint

<http://aka.ms/adopt/landingzone>

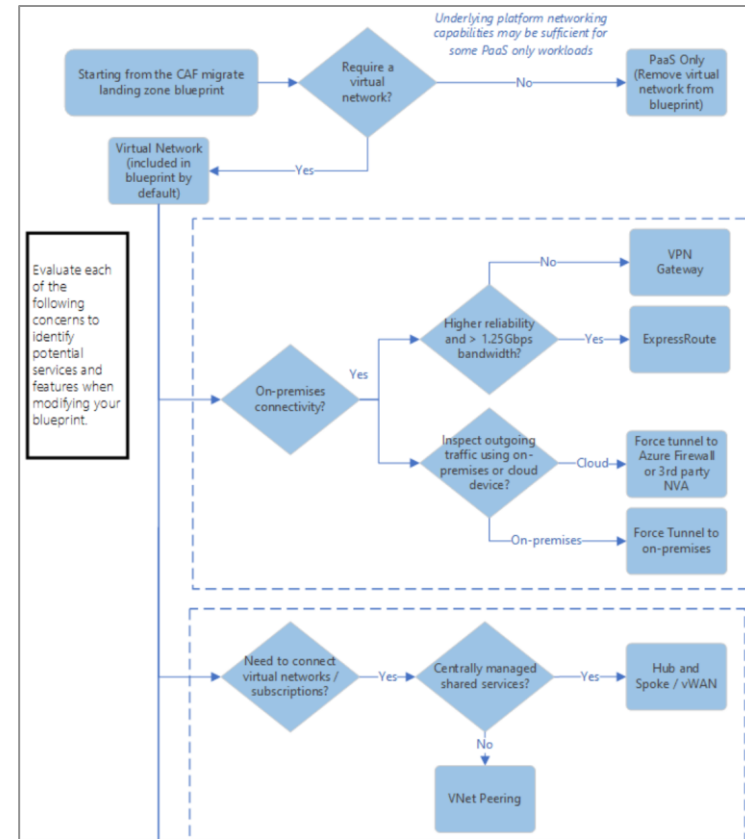
Start with consistent infrastructure-as-code blueprints. Change only what needs to be changed to get to business value faster.



## Landing zone decision guide

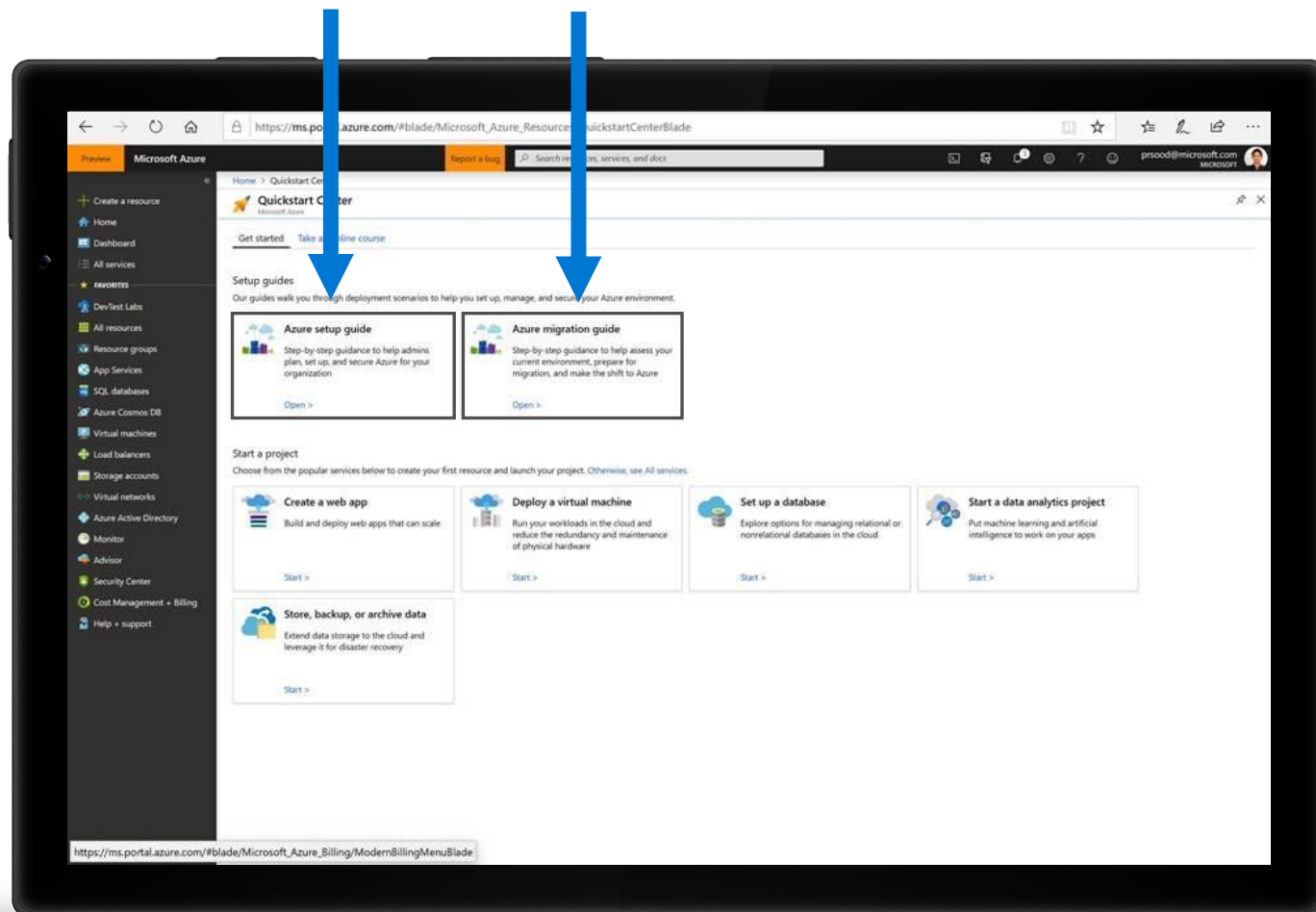
<http://aka.ms/adopt/landingzone>

Leverage decision guides to quickly align blueprints with customer requirements.



## Azure Setup Guide

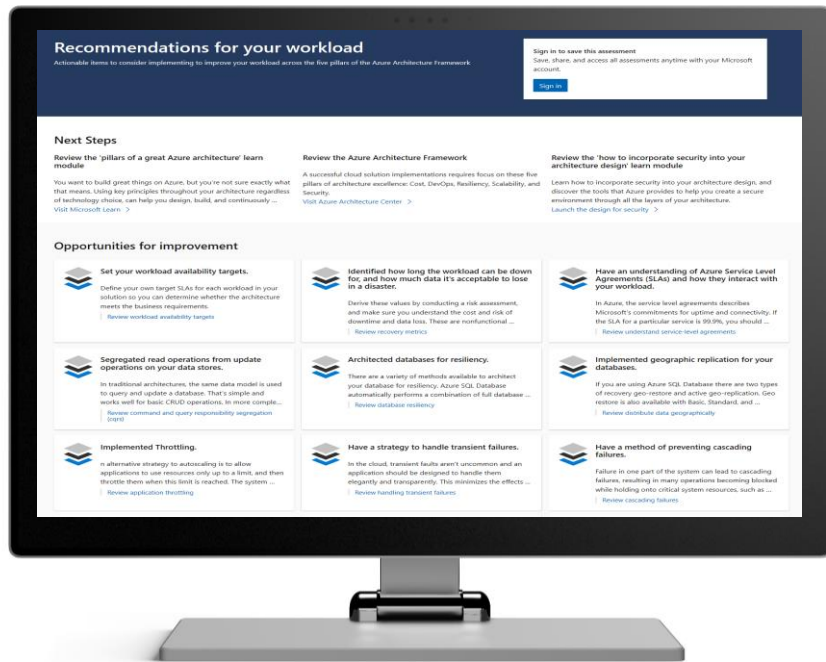
## Azure Migration Guide



Implementation Guides are available in Azure QuickStart Center inside the Azure portal ([portal.azure.com](https://portal.azure.com))

# Azure architecture review

This assessment helps examine your workload through the lenses of resiliency, cost, devops practices, security and scalability.

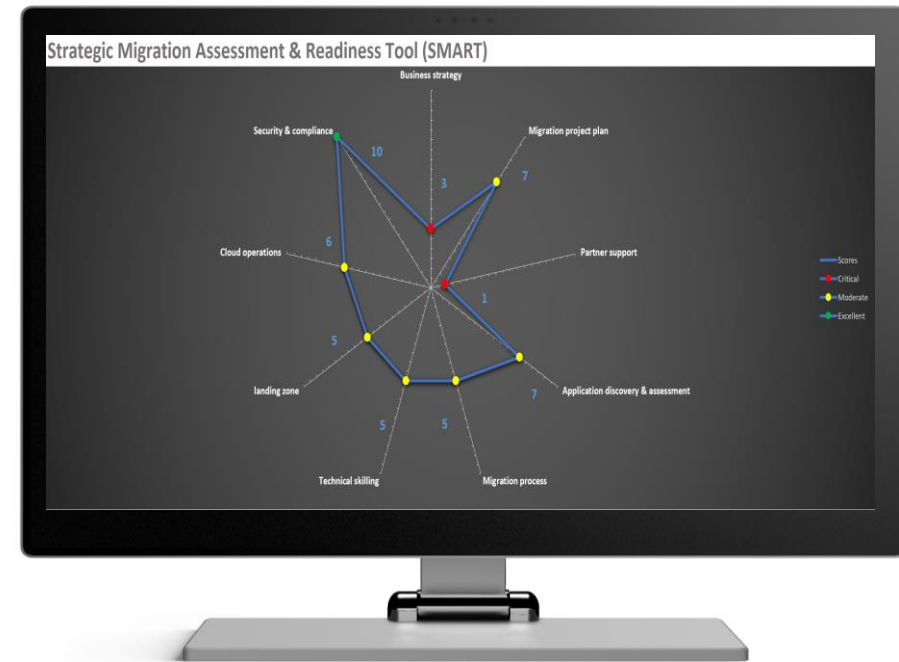


Assessments home page : [aka.ms/adopt/assess](https://aka.ms/adopt/assess)

Link – Azure architecture review

# Migration readiness assessment

Completing the Strategic Migration Assessment & Readiness Tool (SMART) questions will provide details on the level of migration readiness across 9 dimensions.



<https://aka.ms/smarttool>

# Ready



Ready establishes a cloud foundation or Adoption Target that can provide hosting for any adoption efforts. This should consist of common denominators across 80–90% of cloud adoption.

## Azure readiness guide

- **Resource management:** management groups, subscriptions, resource groups, resources tree hierarchy
- **Naming Standards**
- **Resource tags**

## Landing zone infrastructure

- **Network design:** Vnet, hybrid, firewall, hub, front door, endpoints
- **Storage design:** disk, file, blobs, CDN
- **Compute design:** VMs, containers, apps, serverless
- **Data design:** Structured/unstructured

## Landing zone ID

- **Identity and access**
- **Role-based access control RBAC**
- **Manage to least privilege**

## Landing zone cost

- **Costs and billing**
- **Analyze Cloud Costs**
- **Monitor with budgets**
- **Optimize with recommendations**
- **Manage invoices and payments**

## Blueprints

- **AI**
- **BigData**
- **Hybrid networks**
- **Identity management**
- **IoT**
- **Serverless**
- **SAP**
- **VMs**
- **WebApps**
- **DevOps**

# Questions

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