Microsoft

Microsoft Cloud Adoption Framework for Azure Migrate

Speaker
Title

Agenda

Cloud Adoption Framework Overview

Motivations

Prerequisites

1st Workload

Mature Process

Expert MSP's
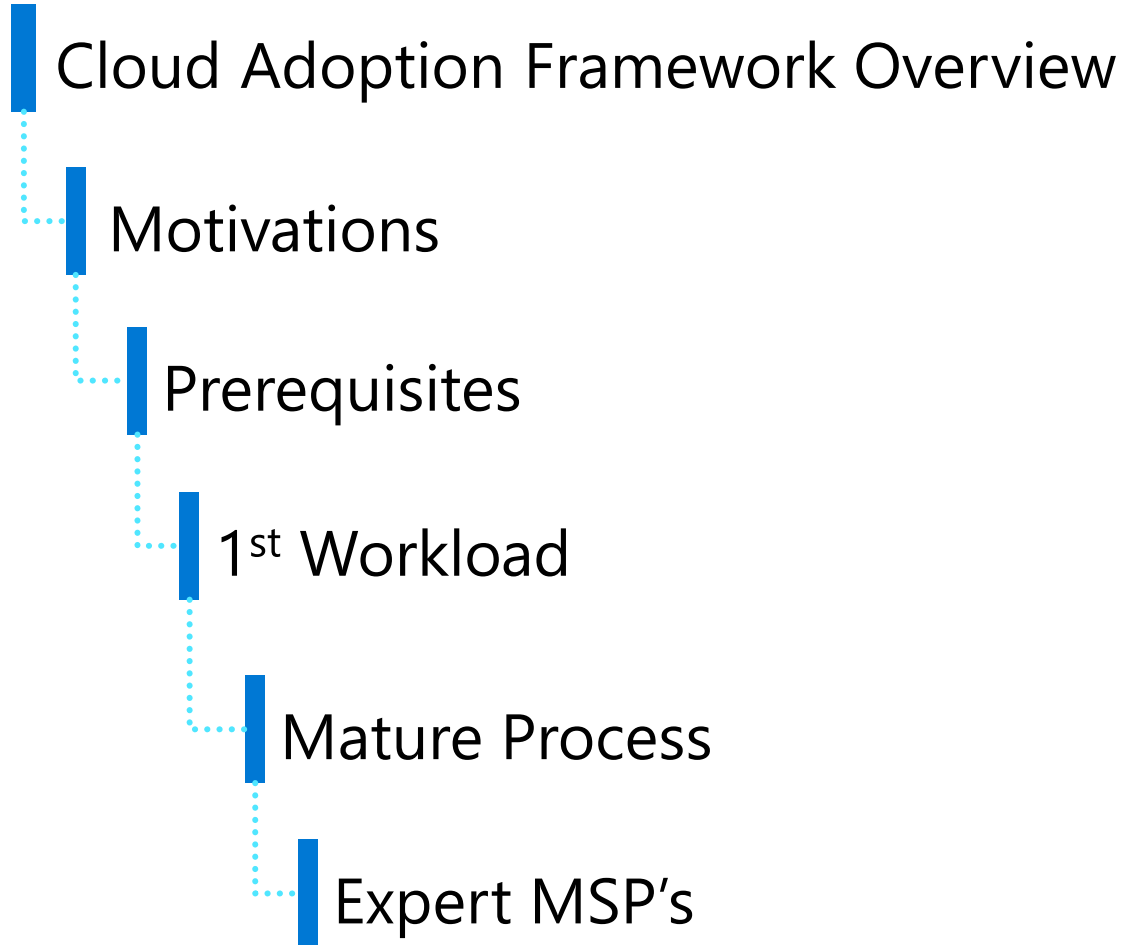
Key Business Drivers

Business Transformation enabled by Cloud Technologies

Modernization

Improving customer and employee experiences

Transformation

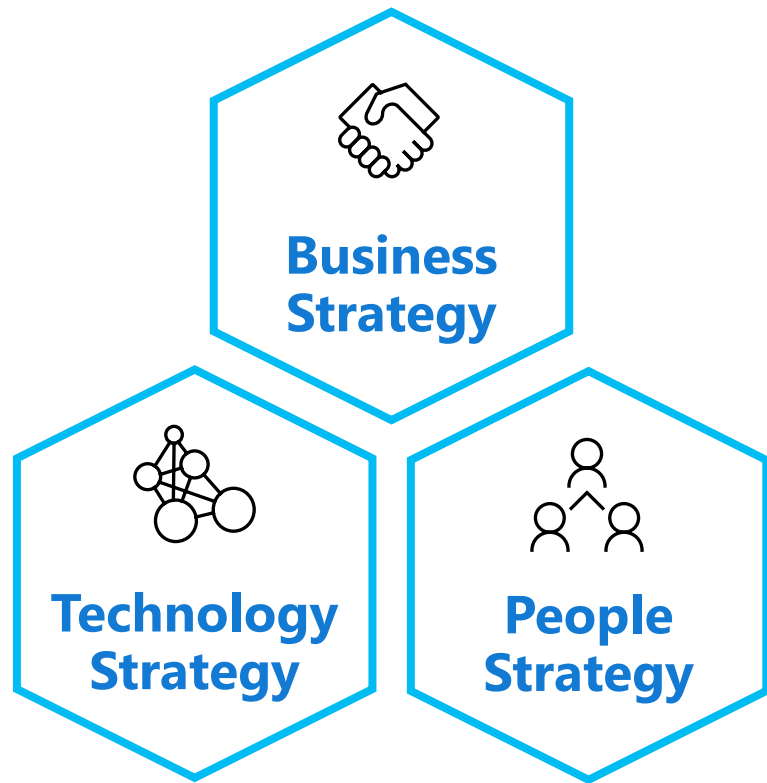Evolving how businesses operate and interact with the market

Growth

Scaling products and services to meet ever growing business needs

Business Returns

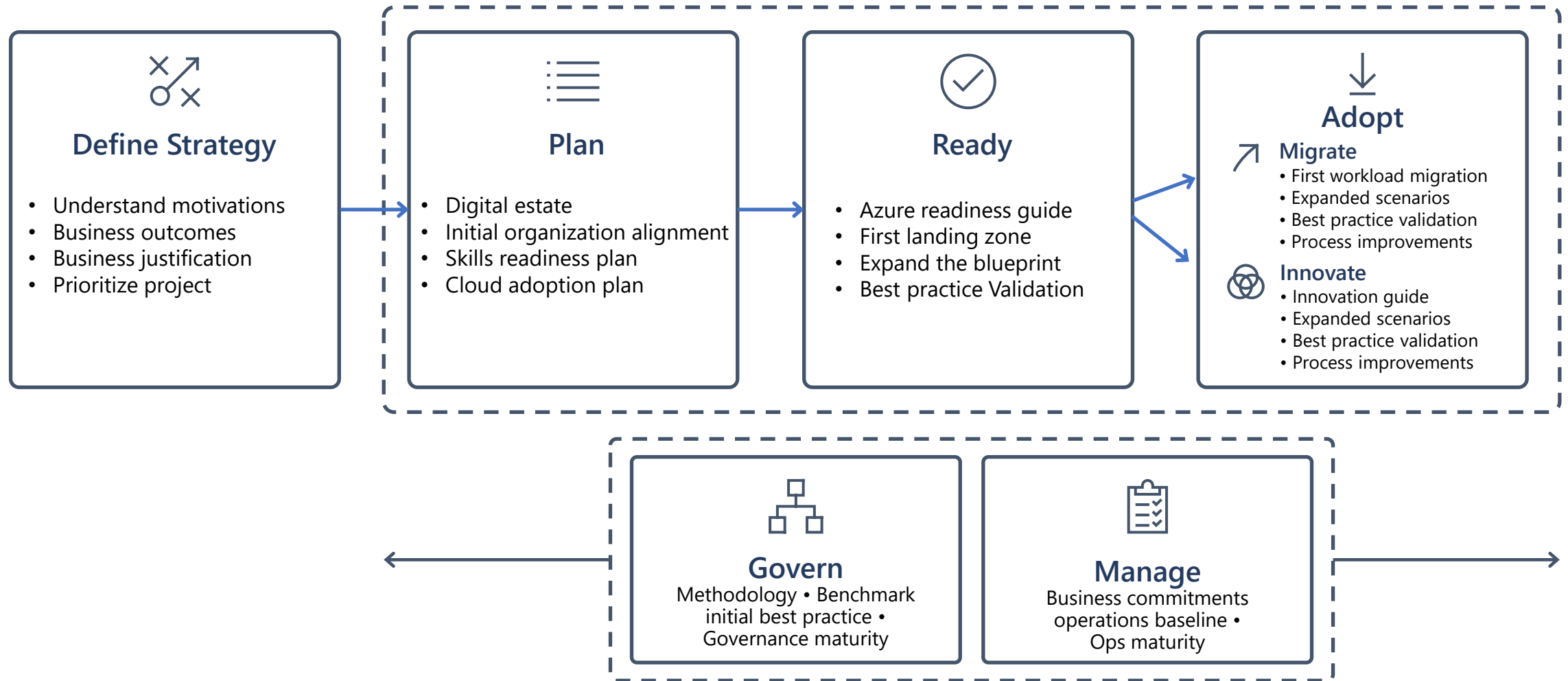IT must rapidly produce measurable business returns to stay relevant

Microsoft Cloud Adoption Framework for Azure

Business Strategy

Technology Strategy

People Strategy

Actionable, efficient, and comprehensive Azure cloud guidance from Microsoft to accelerate your adoption journey
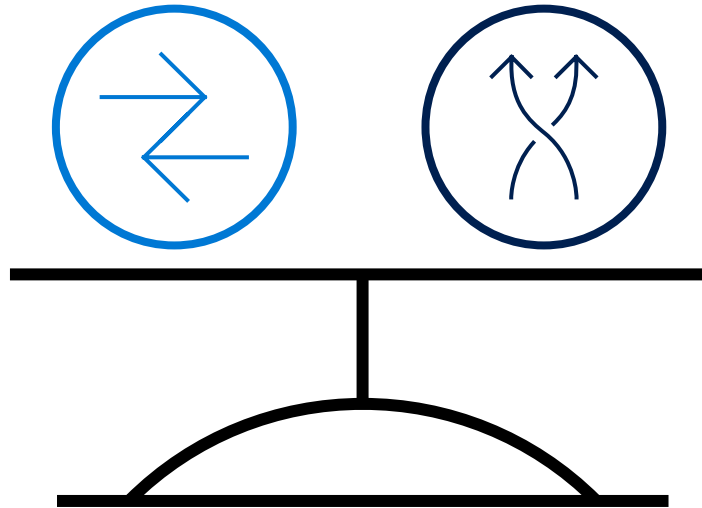
Microsoft Cloud Adoption Framework for Azure enables you align **business, people and technology strategy** to achieve your business goals

Microsoft Cloud Adoption Framework for Azure

Define Strategy

- Understand motivations
- Business outcomes
- Business justification
- Prioritize project

Plan

- Digital estate
- Initial organization alignment
- Skills readiness plan
- Cloud adoption plan

Ready

- Azure readiness guide
- First landing zone
- Expand the blueprint
- Best practice Validation

Adopt

Migrate
- First workload migration
- Expanded scenarios
- Best practice validation
- Process improvements

Innovate
- Innovation guide
- Expanded scenarios
- Best practice validation
- Process improvements

Govern
Methodology • Benchmark initial best practice • Governance maturity

Manage
Business commitments operations baseline • Ops maturity

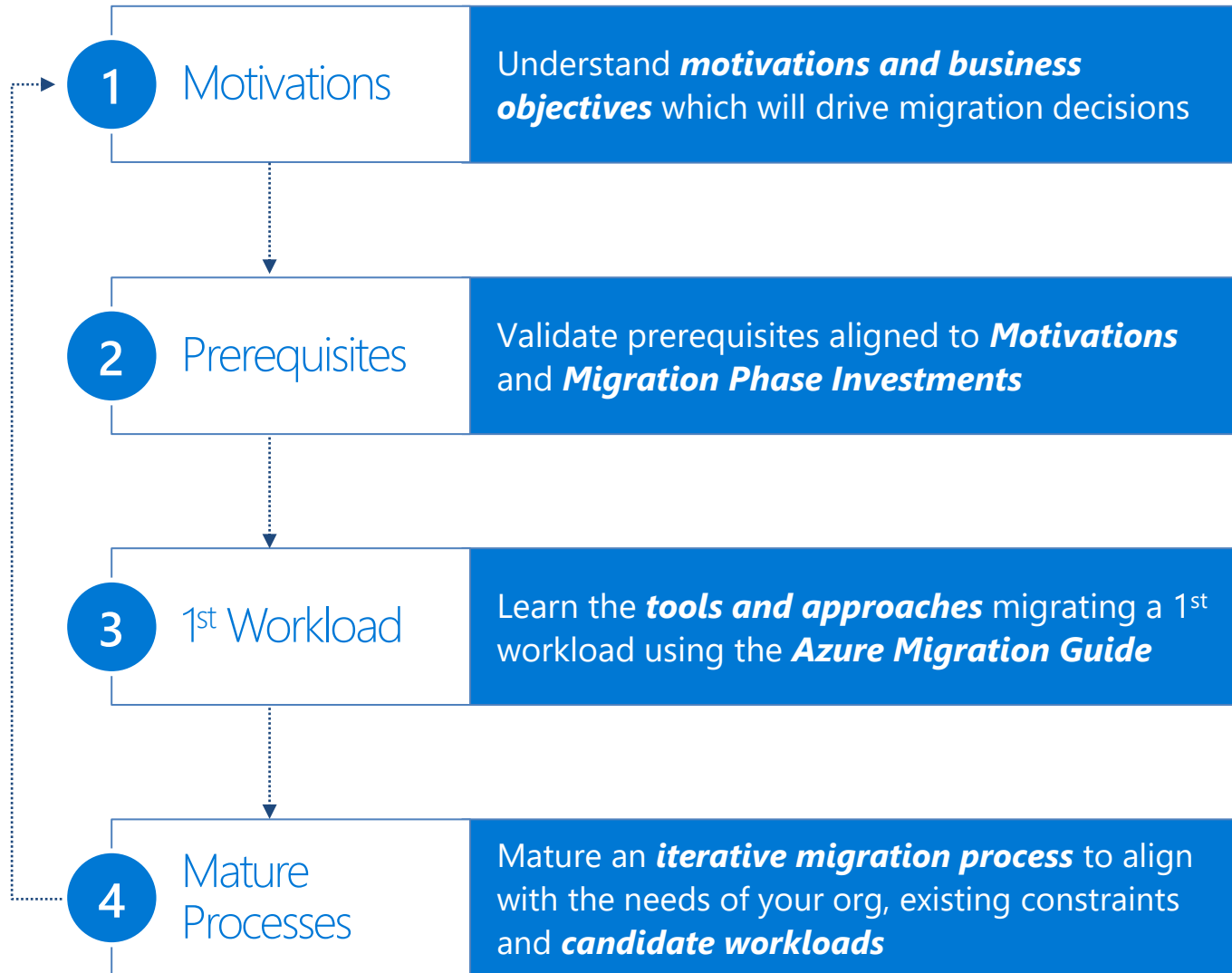# Cloud Adoption Framework Migrate: Balance within migration efforts

Lift, Shift, & Optimize

Modernize

Cloud Adoption Framework Migrate provides a single migration methodology that balances Lift, Shift, & Optimize motions and Modernization motions, into one fluid process
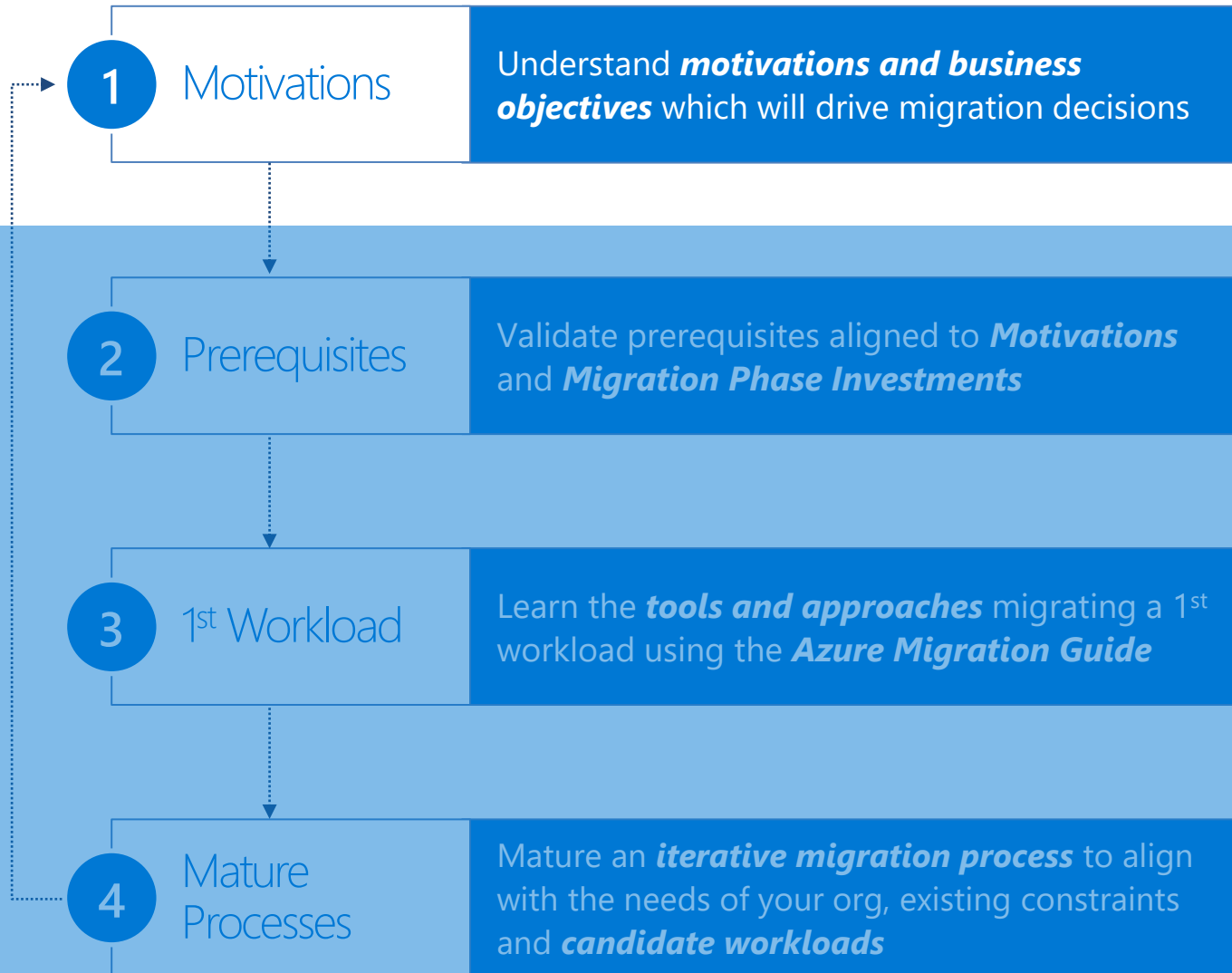
How Do I Get Started?

1 Motivations — Understand ***motivations and business objectives*** which will drive migration decisions

2 Prerequisites — Validate prerequisites aligned to ***Motivations*** and ***Migration Phase Investments***

3 1st Workload — Learn the ***tools and approaches*** migrating a 1st workload using the ***Azure Migration Guide***

4 Mature Processes — Mature an ***iterative migration process*** to align with the needs of your org, existing constraints and ***candidate workloads***

Motivations

Understand the motivation and objectives behind the desire to migrate to the cloud

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Cloud Adoption Motivations

Why is the company adopting the cloud?
More than one motivation is common in most cloud adoption efforts

Critical Business Events

- Data center exit
- Mergers, acquisition or divestiture
- Reductions in capital expenses
- End of support for mission critical technologies
- Regulatory compliance, data sovereignty requirements
- Reduce disruptions and improve IT stability

Migrate Motivations

- Cost Savings
- Reduction in vendor or technical complexity
- Optimization of internal operations
- Increase business agility
- Prepare for new technical capabilities
- Scale to meet market demands
- Scale to meet geographic demands

Innovation Motivations

- Prepare for new technical capabilities
- Build new technical capabilities
- Scale to meet market demands
- Scale to meet geographic demands
- Improve customer experiences / engagements
- Transform products or services
- Disrupt the market with new products or services

Simplified migration objectives

Migrate **Assets** (Infra, Apps, or Data) in response to a critical event or need to move specific assets

Migrate **Workloads** to streamline cost, complexity, and operations

Migrate the **Portfolio** to improve business agility, tech capability & scale

Clarifying Motivations

Migration Leaning:

Do the team's plans lean more to one of the following approaches?

Shift & Lift   Modernization

Objective Focus:

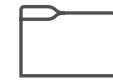Is the team focused most heavily on one of the following objectives?

Assets   Workloads   Portfolio
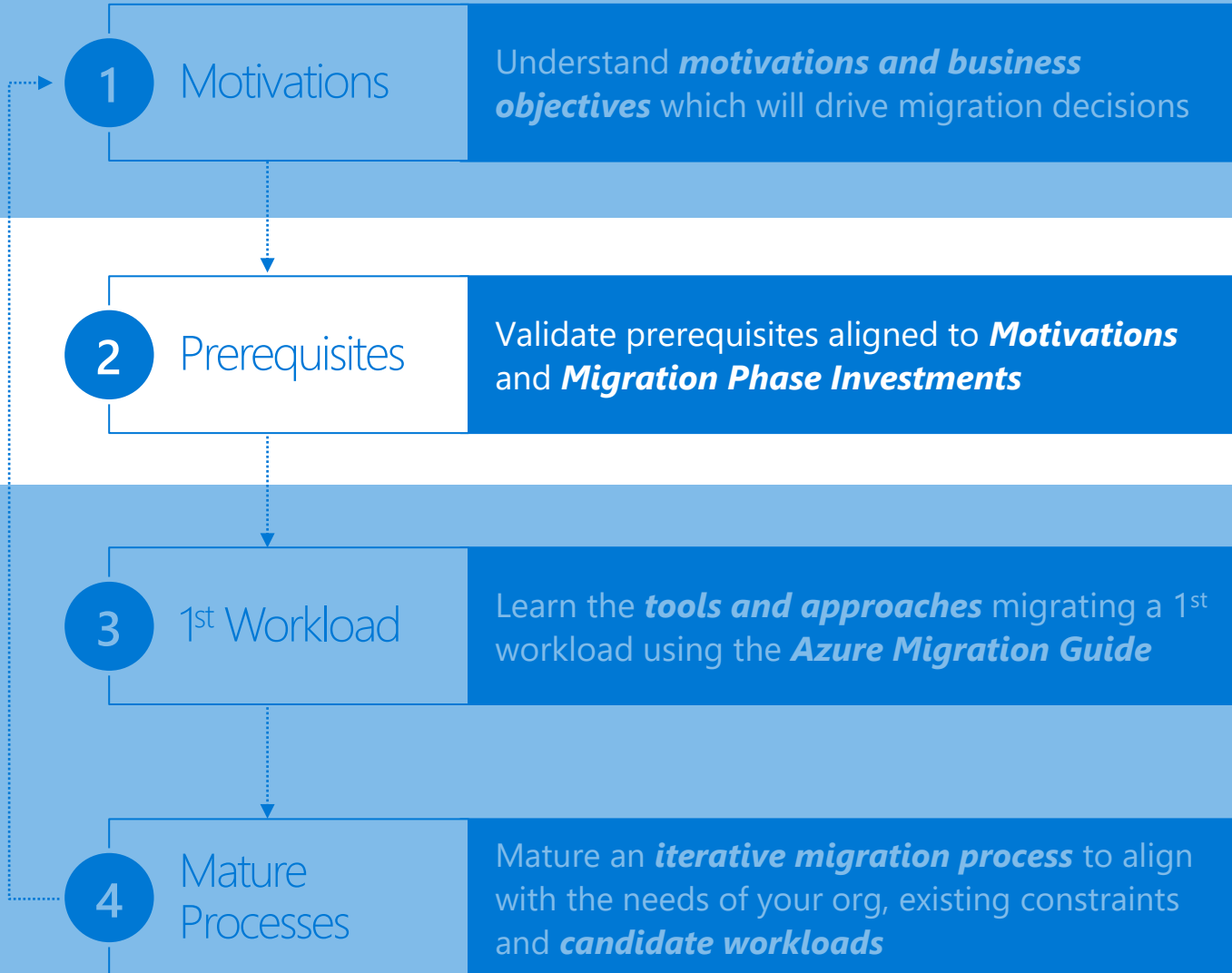(infra, apps, & data)

Motivations:

Prioritize the following motivations based on desired business outcomes
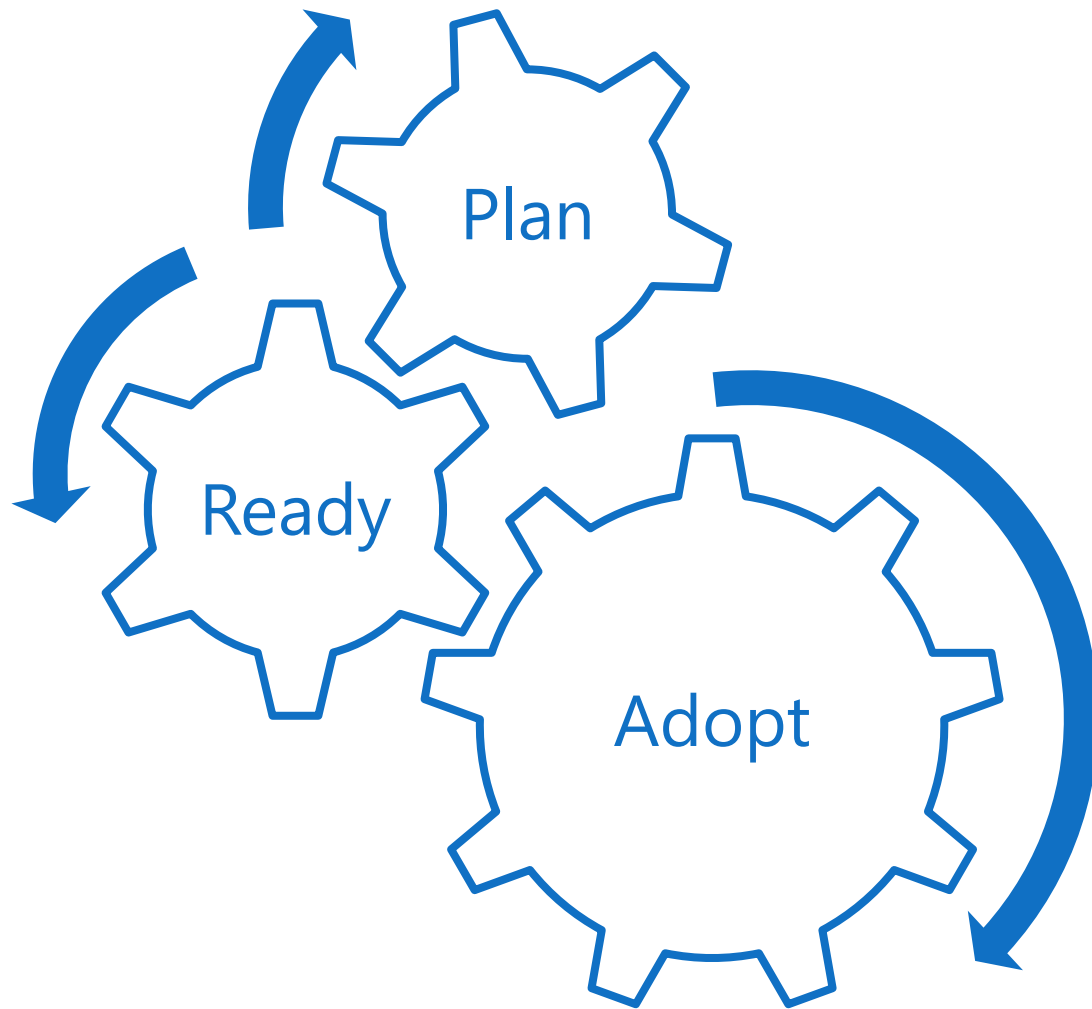
1. Data center exit
2. Mergers, acquisition or divestiture
3. Reductions in capital expenses
4. End of support for mission critical technologies
5. Regulatory compliance, data sovereignty requirements
6. Reduce disruptions and improve IT stability

7. Cost Savings
8. Reduction in vendor or technical complexity
9. Optimization of internal operations
10. Increase business agility
11. Prepare for new technical capabilities
12. Scale to meet market demands
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20. Disrupt the market with new products or services

Prerequisites

Checklist of things that need to be done before migration

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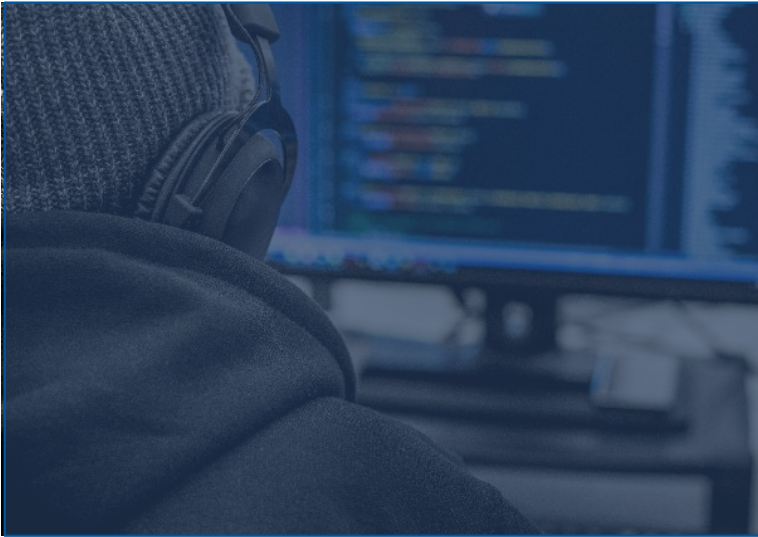
You are here

This deck assumes you are ready to execute the migration process, which is distinct methodology within the Adopt phase of CAF guidance.

This section of the deck helps the customer test readiness assumptions to prevent future roadblocks or re-work

Plan Prerequisites

First workload

Demonstrate a growth mindset by choosing a small, low impact, self-contained first workload for the Cloud Adoption Team to migrate & learn. See next section for guidance on execution.

Business justification

Align the right level of business justification using calculators and Azure Migrate, digital estate rationalization, and/or a migration business case.
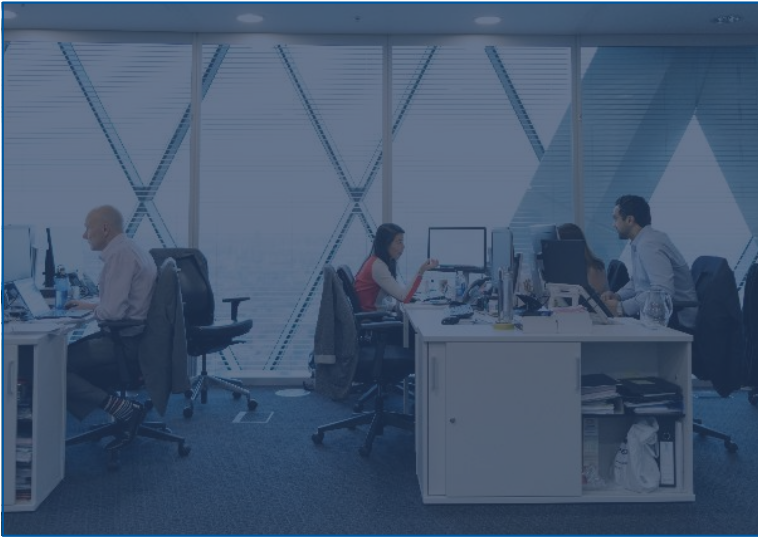
Build a migration plan

Align business and technical strategies to rationalization the digital estate and create an initial migration backlog.
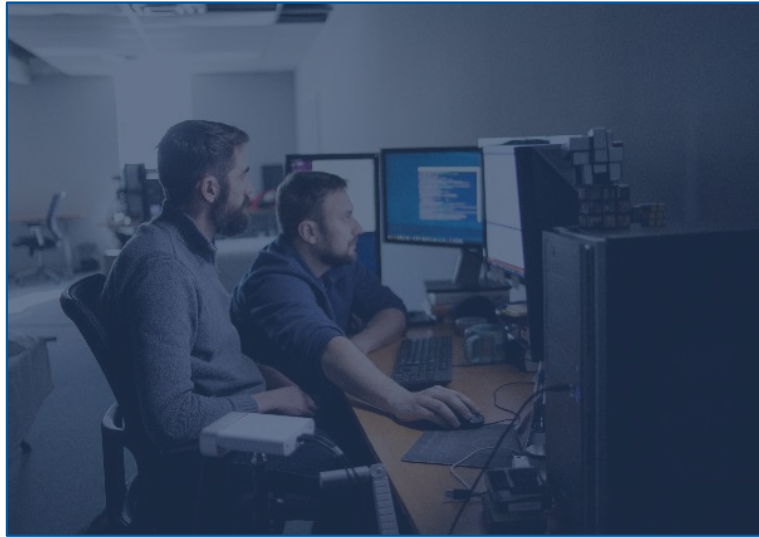
Ready Prerequisites

Business readiness

Create initial org alignment with a Cloud Strategy Team to represent business needs and market changes in the migration backlog

Skill & support readiness

Create a skills readiness plan for staff (IT and Business Staff), identify execution gaps, align key partners, choose support and services options

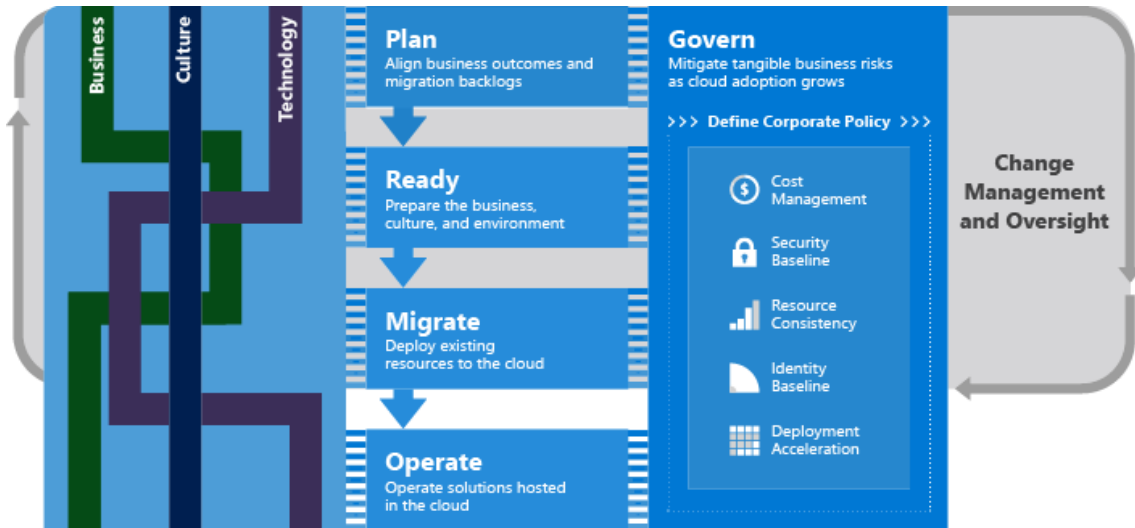### Environment Readiness

Establish a Landing Zone in the cloud. This target should be readied to handle the workloads and assets being migrated to the cloud

Migration methodology

Prioritize investments of time and energy based on migration objectives

Migration Strategy & Plan

Migration Implementation

Migration Strategy & Plan

Align the business outcomes, priorities, and constraints to establish a migration strategy & plan that outlines the approach to migration and modernization of the IT portfolio, which spans the full collection of data centers, workloads, and/or misc. IT assets supported across all of IT. Proper management of the portfolio across the migration effort will drive the desired business impact.
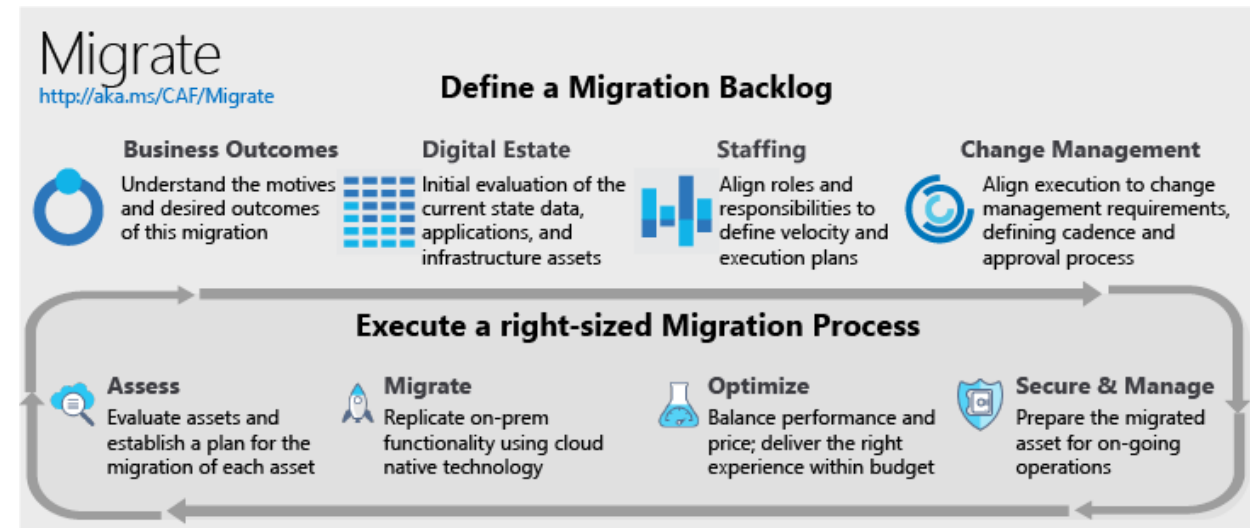
Migration Implementation

Iterative process for migrating and modernizing the digital estate in alignment with targeted business outcomes and change management controls. During each iteration, workloads are migrated &/or modernized in alignment with the strategy & plan. Decisions regarding IaaS, PaaS, or hybrid are made during the assess phase to optimized control and execution. Those decisions will drive the tools used during the Migrate phase.

First Workload

Select a workload. Execute the Readiness and Migration Guidelines

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Azure Readiness Guide (Create the first landing zone)

Naming Standards	Resource Organization	Identity and Access

Compute

Configuring virtual machines for availability, scale and performance

Network

Designing the network for current and future connectivity requirements

Storage

Planning for performance, durability, scalability and archival

Manage

Planning for production operations for monitoring and disaster recovery
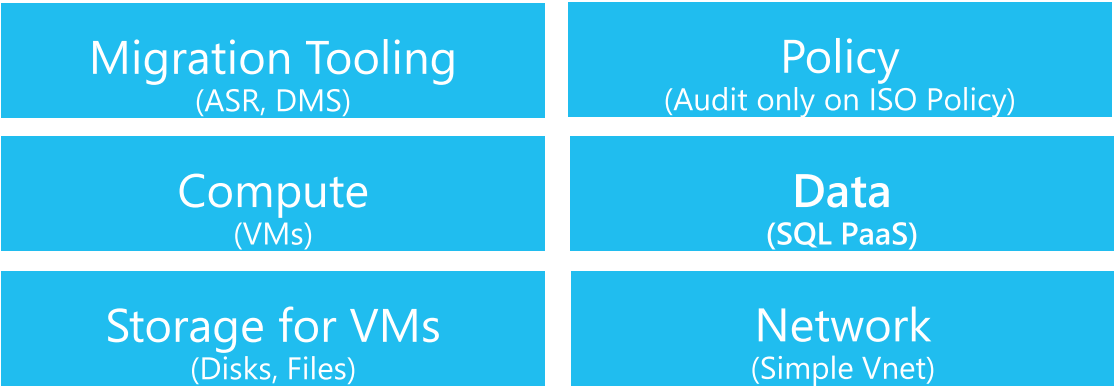
Governance

Control access to resources, what can be used, setup cost management and chargeback

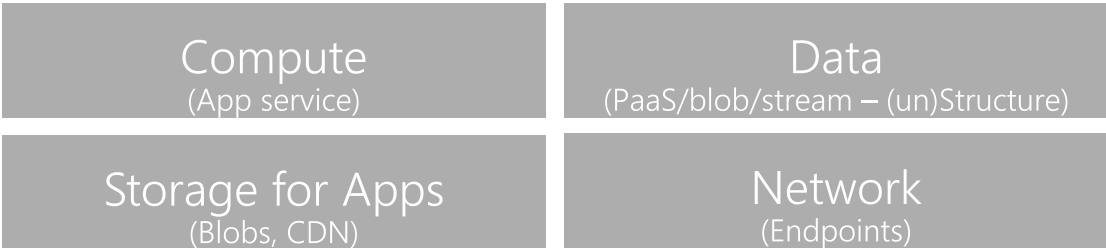**Build a solid foundation using best practices and prescriptive guidance prior to starting migration efforts**

Azure Readiness Guide: https://review.docs.microsoft.com/en-us/azure/architecture/cloud-adoption/ready/azure-readiness-guide/?branch=CAF%2Fmigrate-v1

CAF Ready: Landing Zones (Coming Soon)

Migration Landing Zone (Blueprint 1: CAF Migrate Landing Zone)

		Next: Out of scope for this release
Migration Tooling (ASR, DMS)	**Policy** (Audit only on ISO Policy)	
Compute (VMs)	**Data** (SQL PaaS)	**Compute** (App service) / **Data** (PaaS/blob/stream – (un)Structure)
Storage for VMs (Disks, Files)	**Network** (Simple Vnet)	**Storage for Apps** (Blobs, CDN) / **Network** (Endpoints)

Generic Landing Zone

Network Design (Vnet, Hybrid, Firewall, Hub/Spoke, Front Door, Endpoints, xxx)	Storage Design (Disks, Files, Blobs, CDN)	Compute Design (VMs, Containers, Apps, etc…)	Data Design (Structured, unstructured)
Management Groups	Resource Groups	Identity and Access	Policy / Security Center
Naming Standards	Subscription Design	Cost & Billing	Monitoring

Color Code: | Tweak the Readiness Guide | Theory/Considerations/Decision Guides | Prescriptive guidance in Readiness Guide (Extends theory)

Azure Readiness Guide (Use the native tools to migrate your first workload)

Assess

Azure Migrate

Data Migration Assistant

SQL Server Migration Assistant

Migrate

Site Recovery

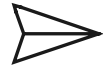Database Migration Service

Data Box

Optimize

Cost Management

Secure & Manage

Security & Management

Azure Migration Guide: http://aka.ms/caf/migrate

Planning for the first workload

Objective: Migration of the first workload is a highly suggested learning experience, which should come early in any migration effort. The goal is to deploy one or more production ready workloads. However, this is done to provide the team with the ability to learn the tools and the Azure platform. That learning will help make the right long-term decisions, even if those workloads don't ever get promoted to production traffic.

Domain Alignment:

Choose a workload that represents the domain focus that will be used throughout the migration plan.

Workloads   Applications   VMs
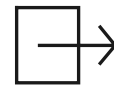
Select a Toolchain:

Choose one or two migration tools to use for this first migration

Azure Site Recovery   App Service Migration Tool   Data Migration Service

Workload Selection:

The following checklist can aid in selection of a first workload

1. Low impact to end users & business processes
2. Performance of the workload is established and can be tested
3. Performance impacts during this experiment won't negatively impact critical processes
4. Application Owner is supportive of the cloud migration objectives

5. Subject Matter Experts for the workload should be aware or even involved in the migration
6. Operations staff for the workload should be aware or even involved in the migration
7. IT experts from networking, identity, security, governance, and compliance should be aware or even involved in the migration
8. The migration landing zone should be validated prior to migration

9. Well maintained (Current on patches & updates)
10. Limited infrastructure complexity (Small number of assets)
11. Limited dependencies (All dependencies should be moved in the first workload migration)
12. Limited exposure (No mission critical applications or sensitive data)

Iteratively mature migration processes

Mold the baseline guidance to fit your business objectives, organizational structure, existing constraints, and individual workloads.

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Mature migration processes (End state & actions)

Aggregate data to execute a workload, constraint, & dependency analysis

Align sub-processes to fit the teams, roles, & responsibilities

Ensure every member of the team can use business outcomes as a test for decisions

Align sub-processes to fit change management and change approval processes across IT and business unit

Migrate
http://aka.ms/CAF/Migrate

Define a Migration Backlog

Business Outcomes
Understand the motives and desired outcomes of this migration

Digital Estate
Initial evaluation of the current state data, applications, and infrastructure assets

Staffing
Align roles and responsibilities to define velocity and execution plans

Change Management
Align execution to change management requirements, defining cadence and approval process

Execute a right-sized Migration Process

Assess
Evaluate assets and establish a plan for the migration of each asset

Migrate
Replicate on-prem functionality using cloud native technology

Optimize
Balance performance and price; deliver the right experience within budget

Secure & Manage
Prepare the migrated asset for on-going operations

Mature Assessment:
- Quickly evaluate cloud compatibility
- Align appropriate cloud architecture
- Match the appropriate migration tool

Mature Migration:
- Standardized process
- Allow multiple migration tools
- Enable limited workload modernization during migration

Mature Optimization:
- Data-driven testing
- Balance of performance and cost
- Low impact promotion process
- Consistent on-boarding

Mature Operations:
- Integration with ops, governance, and security
- High workload reliability
- Well-governed environment.

Maturing Migrating Processes

Key maturity motions

Business →

Migration backlog review, release, & realignment processes

First Workload (Migrate MVP)

Naming Standards | Resource Organization | Identity and Access

Compute | Network | Storage | Manage | Governance

Azure Readiness Guide

People →

Evolve and align Definition of Done to match org structure

Culture of learning; continuously expand skills

Assess | Migrate | Optimize | Secure & Manage

Azure Migration Guide

Target: ~50 assets
(Infra, Apps, & Data)

Technology →

Increase assessment decisions accuracy w/ better data

Expand workload architecture options w/ broaden tooling

Improve optimization w/ testing & monitoring options

Expand initial architectures for reliability and resiliency

Improve assessment accuracy
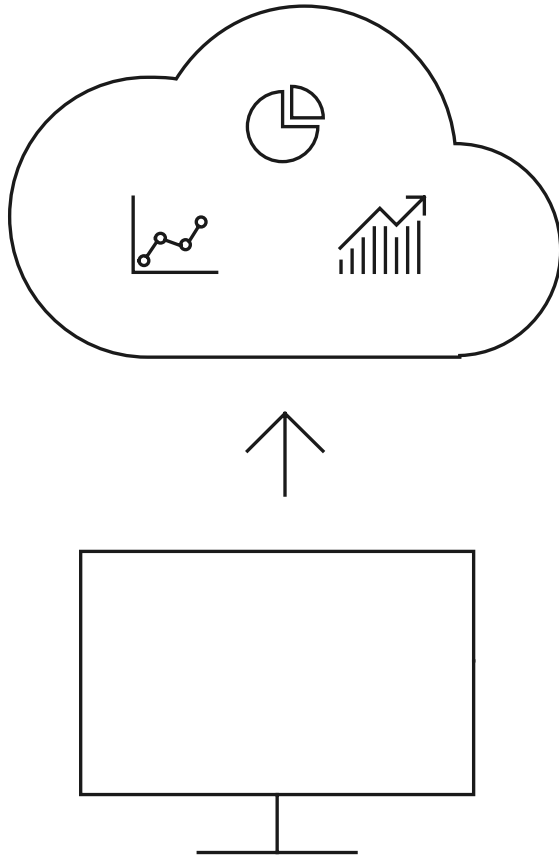
With each release leverage Azure Migrate to improve workload definitions by grouping relevant servers

Improve assessment decision accuracy by aligning the business value of workloads with key technical decisions regarding **compatibility**, **performance**, **dependency**, and **costs**
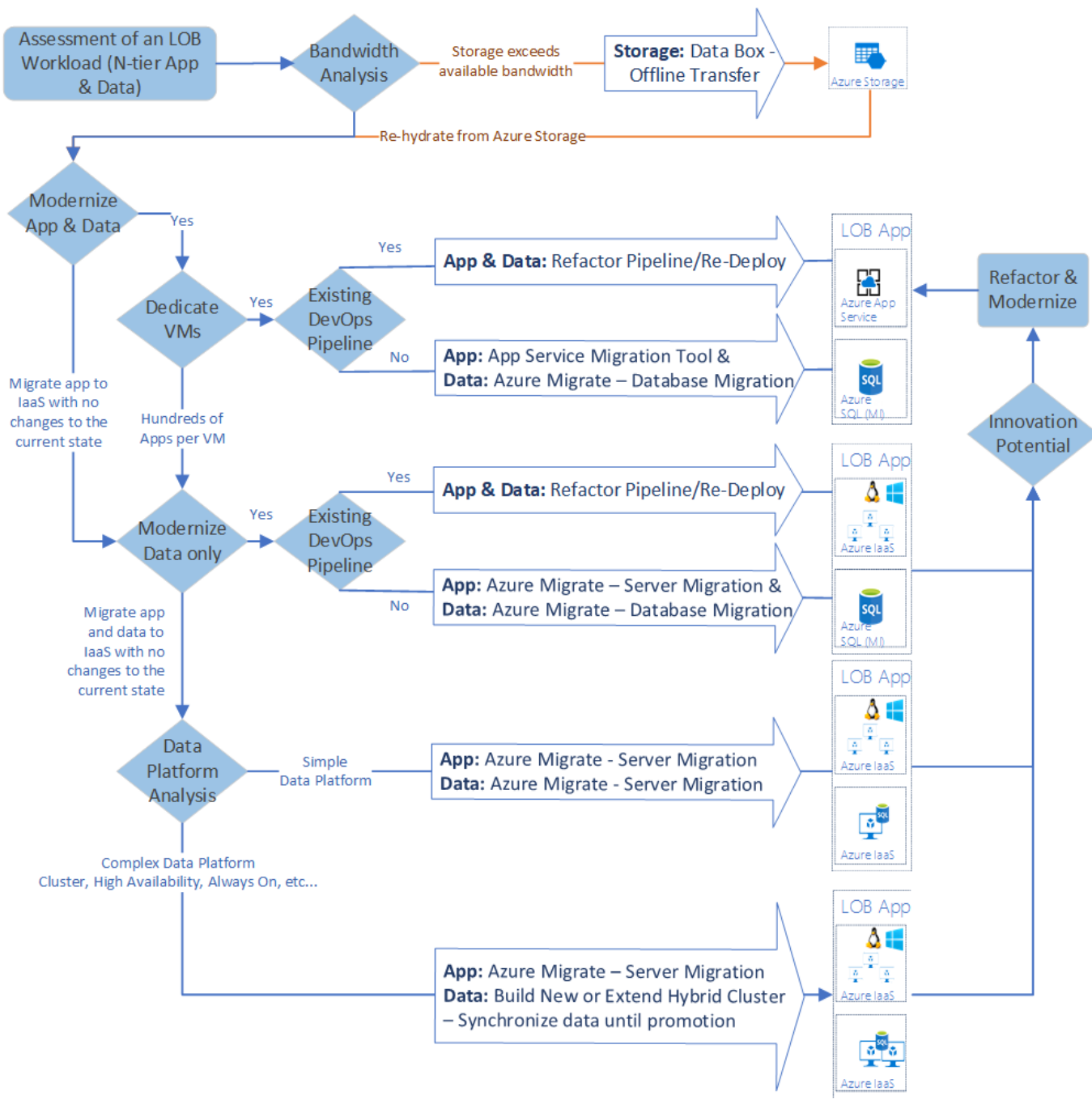
Migration tooling Options

Migration is more than a shift & lift rehost to IaaS using tools like Azure Site Recovery.
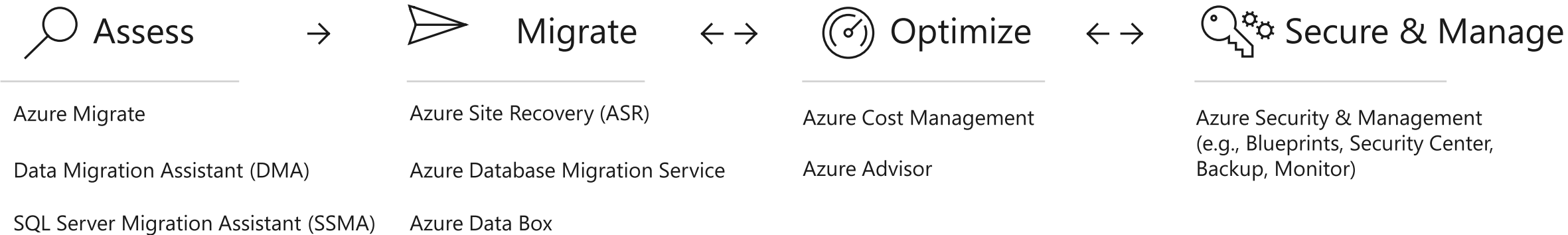
Modernize some assets during migration with PaaS focused solutions like Database Migration Service

Over time, refactor and modernize any workloads that represent innovation potential

Migration tooling options

Assess → **Migrate** ←→ **Optimize** ←→ **Secure & Manage**

Assess	Migrate	Optimize	Secure & Manage
Azure Migrate	Azure Site Recovery (ASR)	Azure Cost Management	Azure Security & Management (e.g., Blueprints, Security Center, Backup, Monitor)
Data Migration Assistant (DMA)	Azure Database Migration Service	Azure Advisor	
SQL Server Migration Assistant (SSMA)	Azure Data Box		

ISV solutions (as needed)

MOVERE   Cloudamize   CloudAtlas®   BitTitan   CHEF

STRATOZONE®   turbonomic   Zerto   Corent   intigua

stiim   ATTUNITY   DATOMETRY   MORPHIS   Ispirer   Informatica   QuerySurge

Continuously optimize resources during and after migration
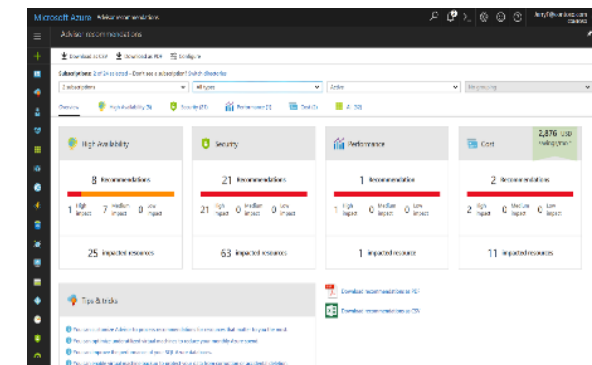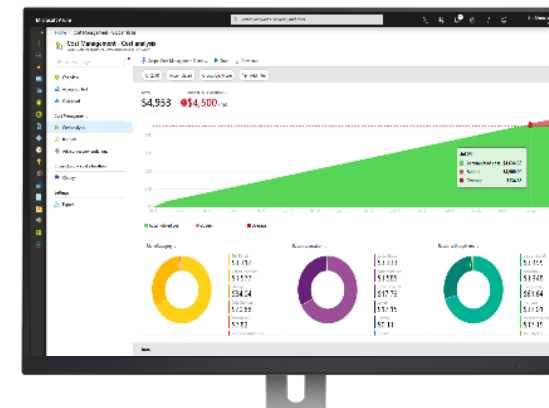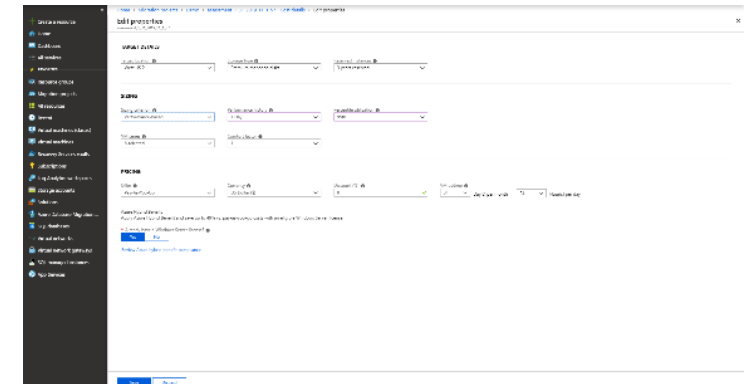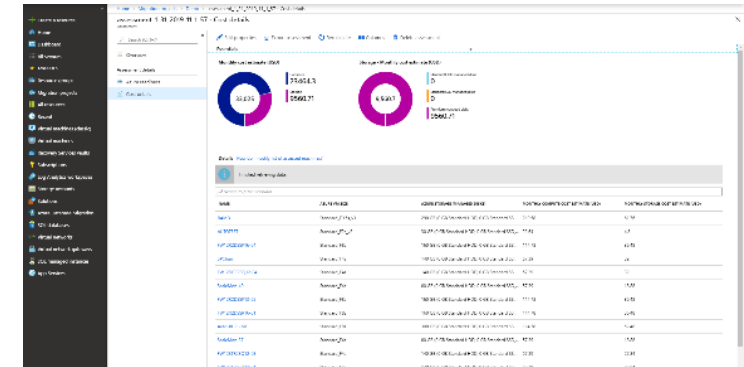
As you move

- Right-size Azure resources based on assessment guidance

- Use Azure Hybrid Benefit and Azure Reserved Instances to save money
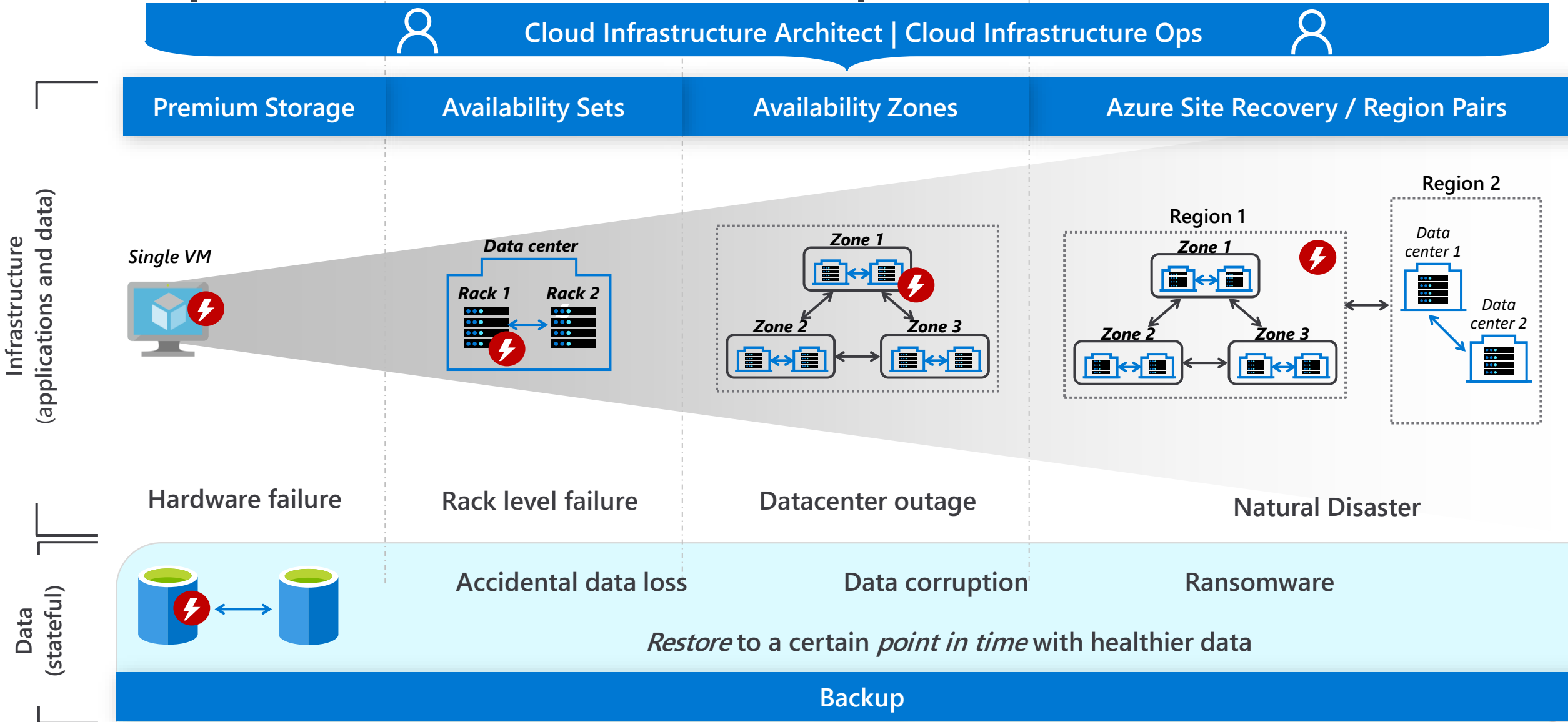
After you move

- Unified experience to optimize cloud spends: Azure Cost Management

- Azure Advisor: Built-in best practice recommendations (e.g., turn off idle VMs)
- Balance optimization and performance decisions with Azure Monitor

Modernize for longer term value

Example of resilient architecture options

Cloud Infrastructure Architect | Cloud Infrastructure Ops

Premium Storage	Availability Sets	Availability Zones	Azure Site Recovery / Region Pairs

Infrastructure (applications and data)

Single VM

Data center
- Rack 1
- Rack 2

Zone 1
Zone 2
Zone 3

Region 1
- Zone 1
- Zone 2
- Zone 3

Region 2
- Data center 1
- Data center 2

Hardware failure   Rack level failure   Datacenter outage   Natural Disaster

Data (stateful)

Accidental data loss   Data corruption   Ransomware

Restore to a certain *point in time* with healthier data

Backup

Learn more about org roles, best practices, and Azure capabilities at the 4/19 briefing: Achieving Resilience in the Cloud

Thank You