



Azure EOS Modernization Series

Microsoft Cloud Adoption Framework for Azure

Workshop 3 – Adopt - Migrate or Innovate

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Agenda

Migrate to Azure

- Cloud Adoption Framework Overview
- Motivations
- Prerequisites
- First Workload
- Mature Process



Key Business Drivers

Business Transformation Enabled by the Cloud



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

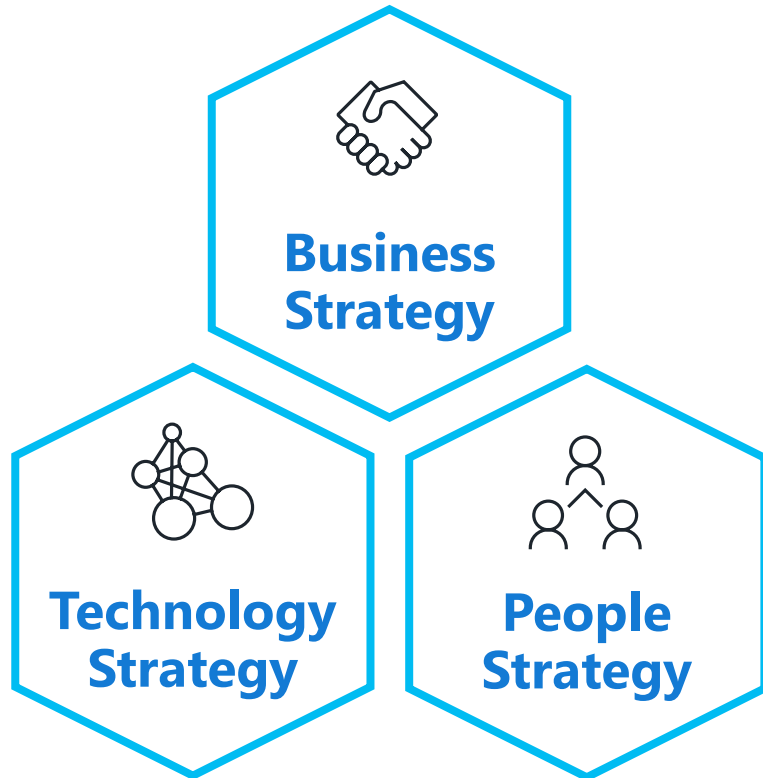


Business Returns

IT must rapidly produce measurable business returns to stay relevant



Microsoft Cloud Adoption Framework for Azure




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

Azure




Define Strategy

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




Plan

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




Adopt




Migrate

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



Innovate

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



Adopt

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Innovate

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Govern

Methodology • Benchmark initial best practice • Governance maturity

Manage

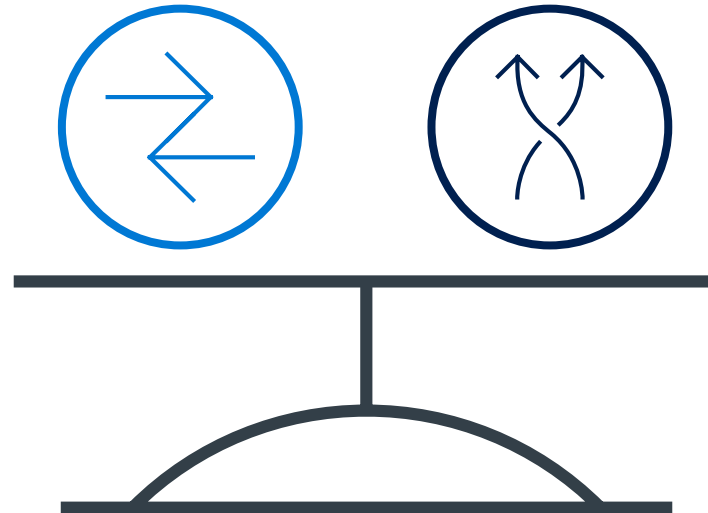
Business commitments operations baseline • Ops maturity



Cloud Adoption Framework Migrate

Balance within Migration Efforts

Lift, Shift, & Optimize



Modernize

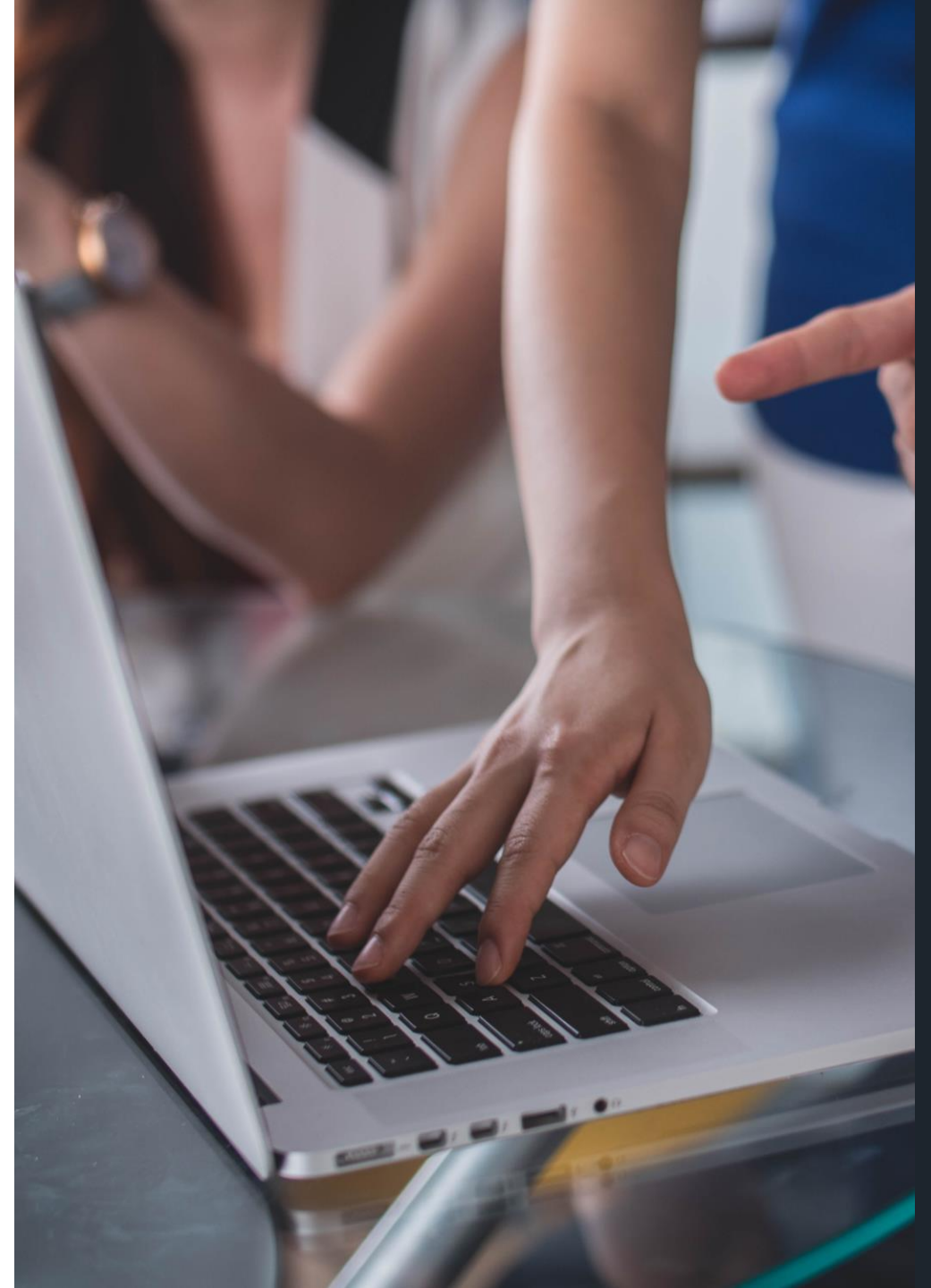
Cloud Adoption Framework Migrate provides a single migration methodology that balances Lift, Shift, & Optimize motions and Modernization motions, into one fluid process



Getting Started

1 Motivations

Understand ***motivations and business objectives*** which will drive migration decisions



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

(infra, apps, & data)



Workloads



Portfolio

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
13. Scale to meet geographic demands
14. Prepare for new technical capabilities
15. Build new technical capabilities
16. Scale to meet market demands
17. Scale to meet geographic demands
18. Improve customer experiences / engagements
19. Transform products or services
20. Disrupt the market with new products or services

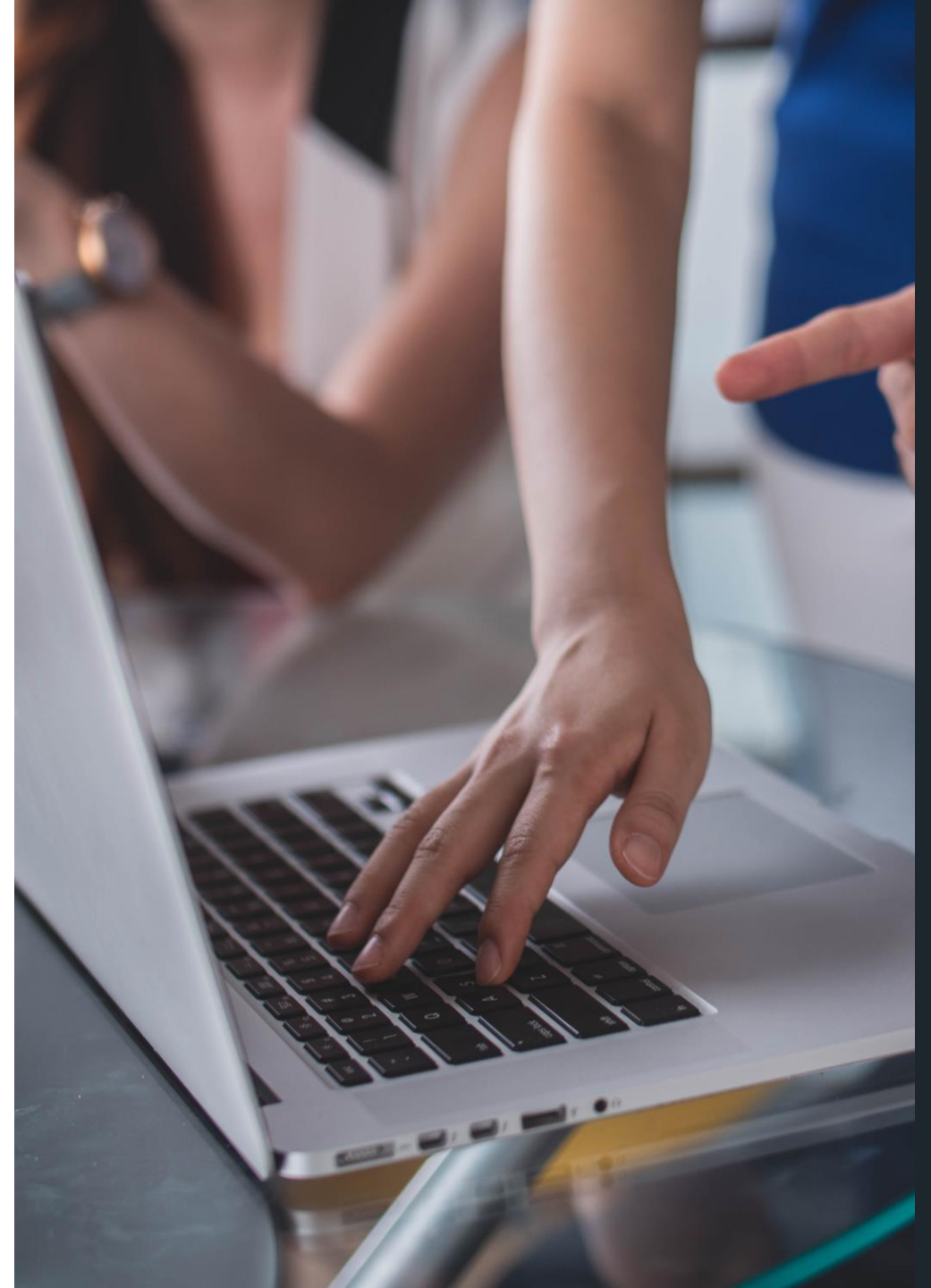
Getting Started

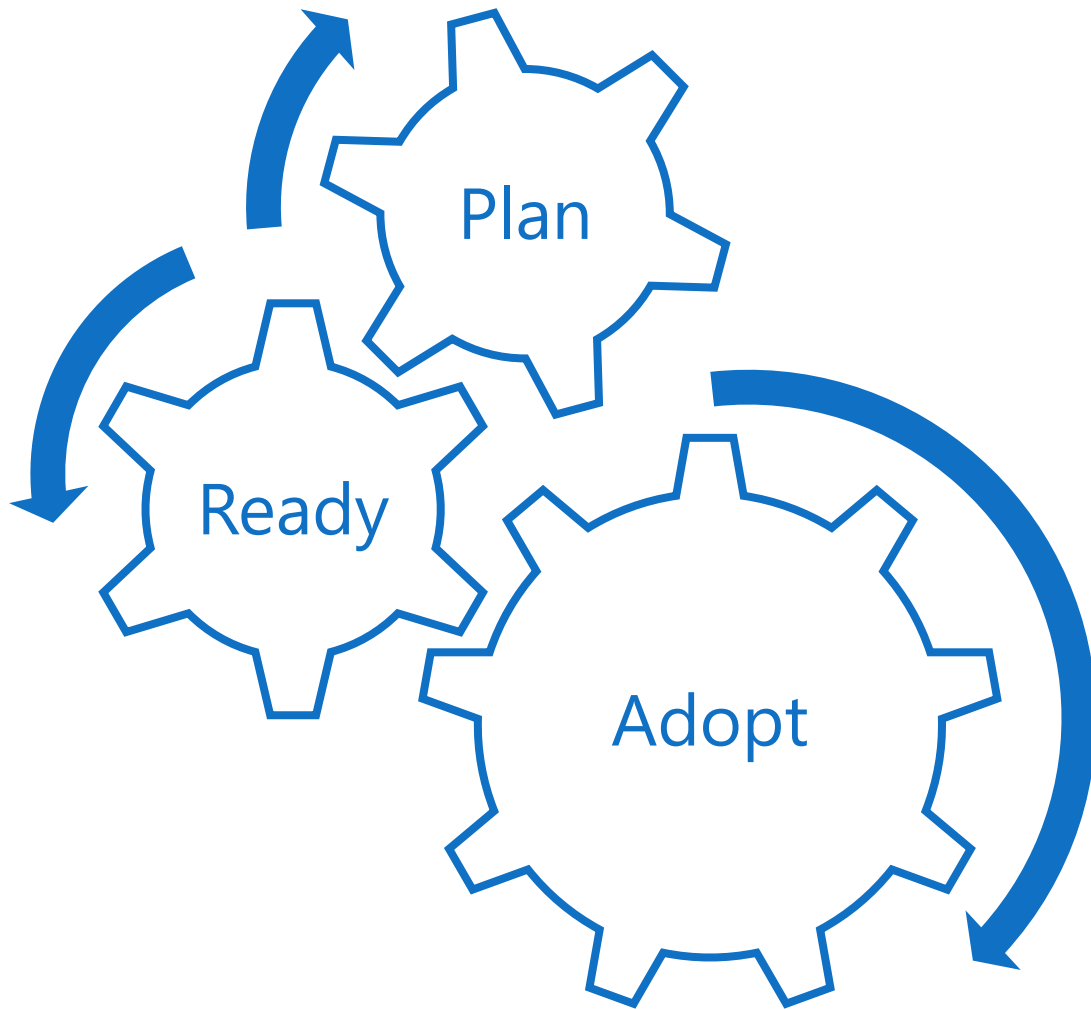
1 Motivations

Understand ***motivations and business objectives*** which will drive migration decisions

2 Prerequisites

Validate prerequisites aligned to ***Motivations*** and ***Migration Phase Investments***





Now you are ready to execute the migration process, which is distinct methodology within the Adopt.

We will 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.



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

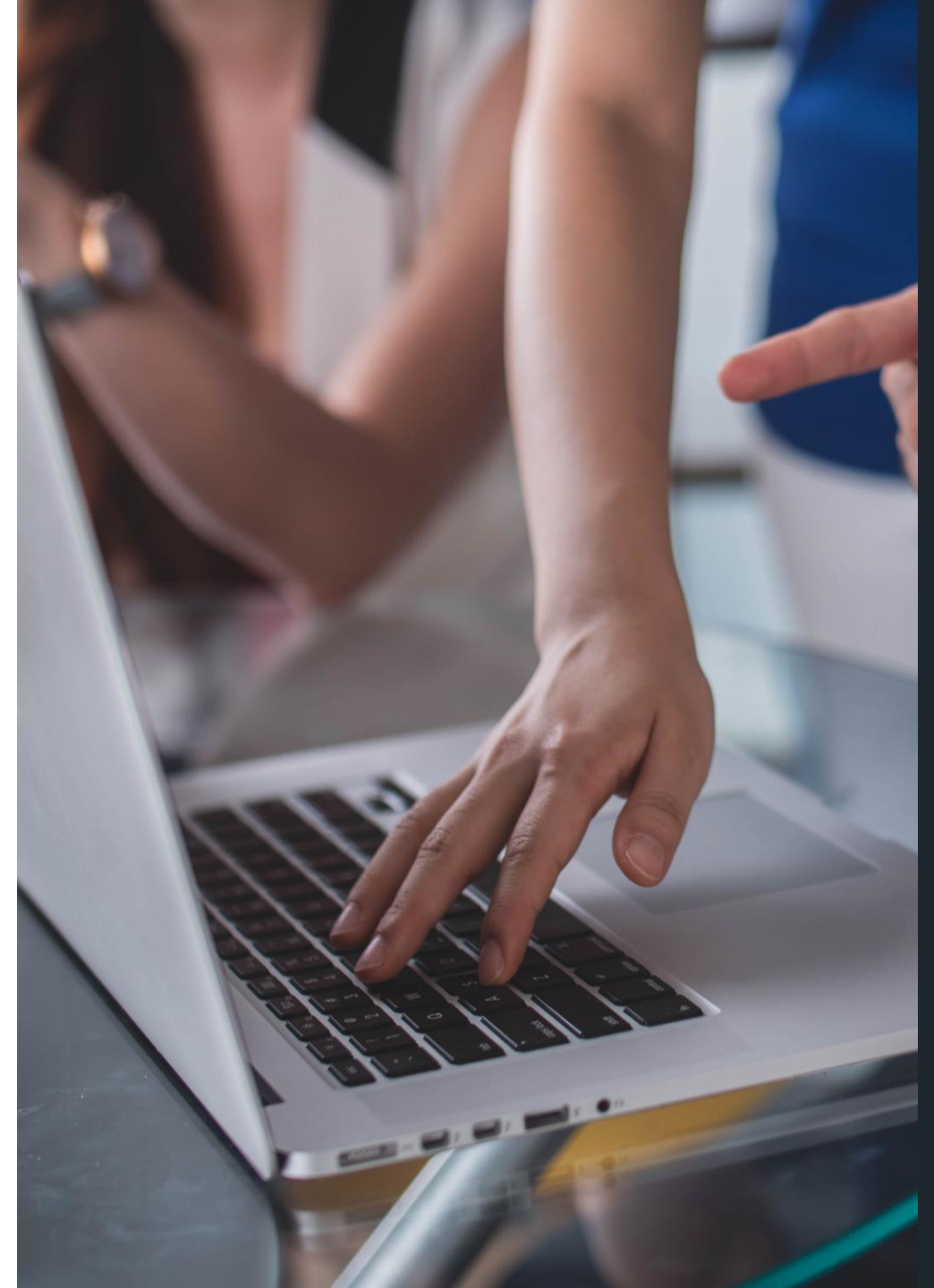
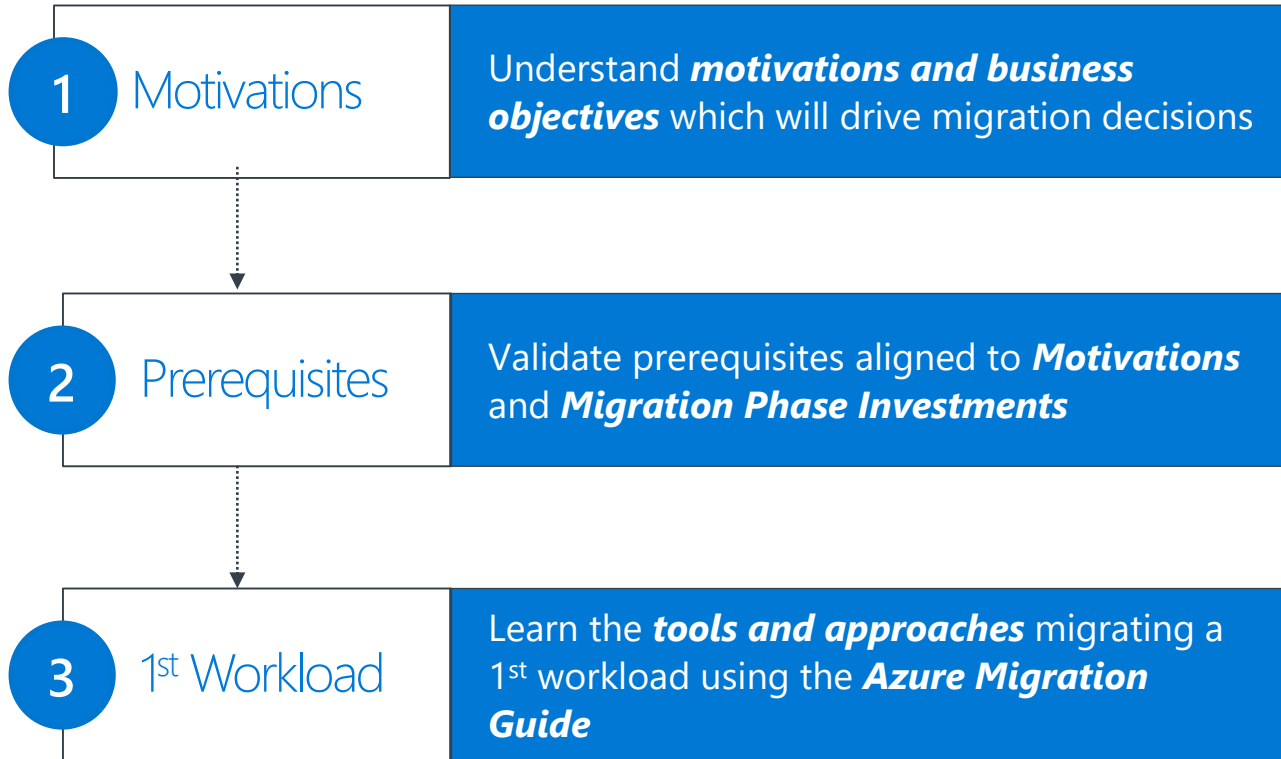


Environment Readiness

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



Getting Started





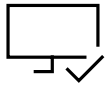
Azure Readiness Guide

Creating the first landing zone

Naming Standards

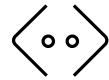
Resource Organization

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



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

Migration Tooling
(ASR, DMS)

Policy
(Audit only on ISO Policy)

Compute
(VMs)

Data
(SQL PaaS)

Storage for VMs
(Disks, Files)

Network
(Simple Vnet)

Next:

Compute
(App service)

Data
(PaaS/blob/stream – (un)Structure)

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

Tweak the Readiness Guide

Theory/Considerations/Decision Guides

Prescriptive guidance in Readiness Guide (Extends theory)

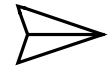
Azure Readiness Guide

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



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)

Getting Started

1 Motivations

Understand **motivations and business objectives** which will drive migration decisions

2 Prerequisites

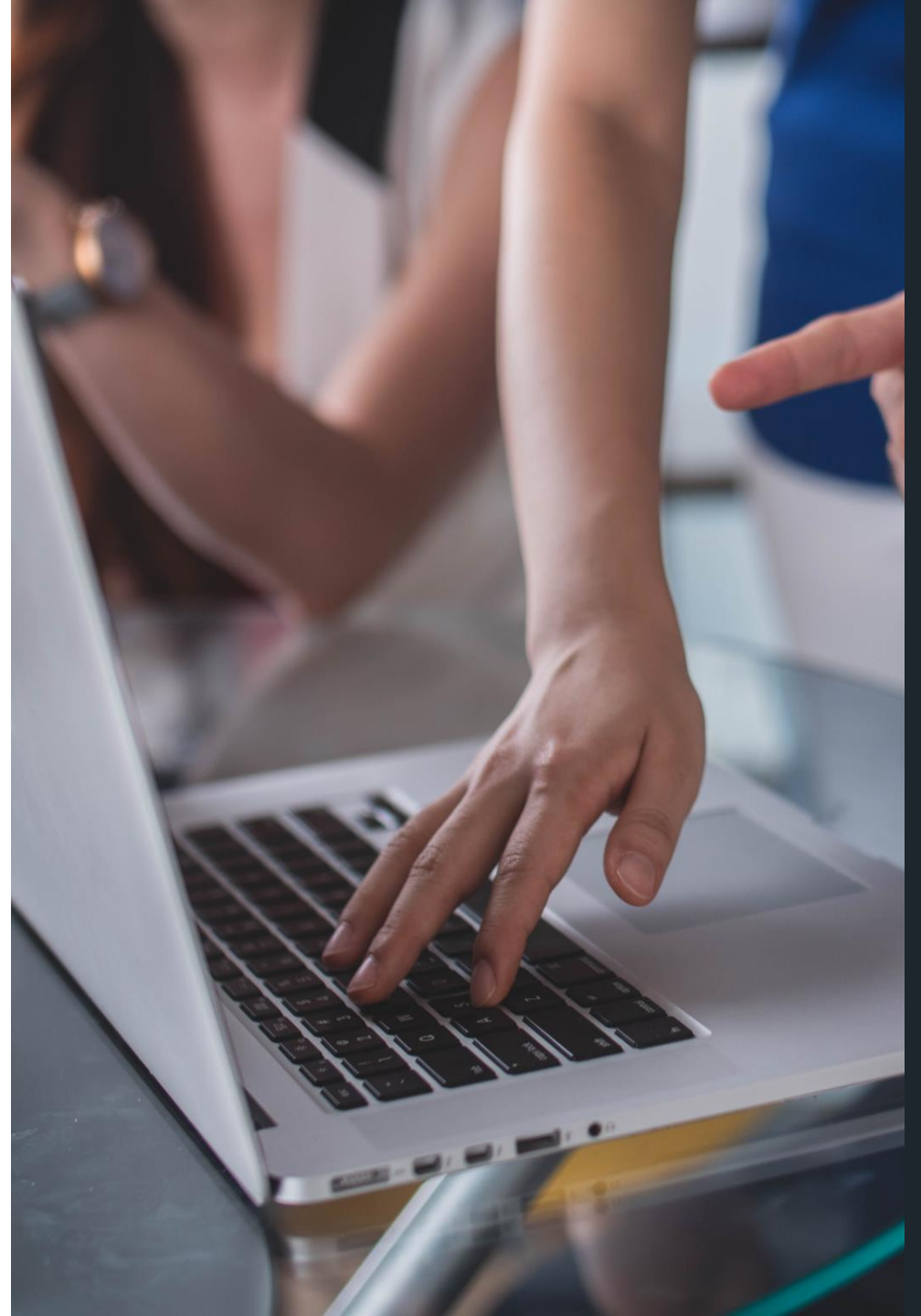
Validate prerequisites aligned to **Motivations** and **Migration Phase Investments**

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**





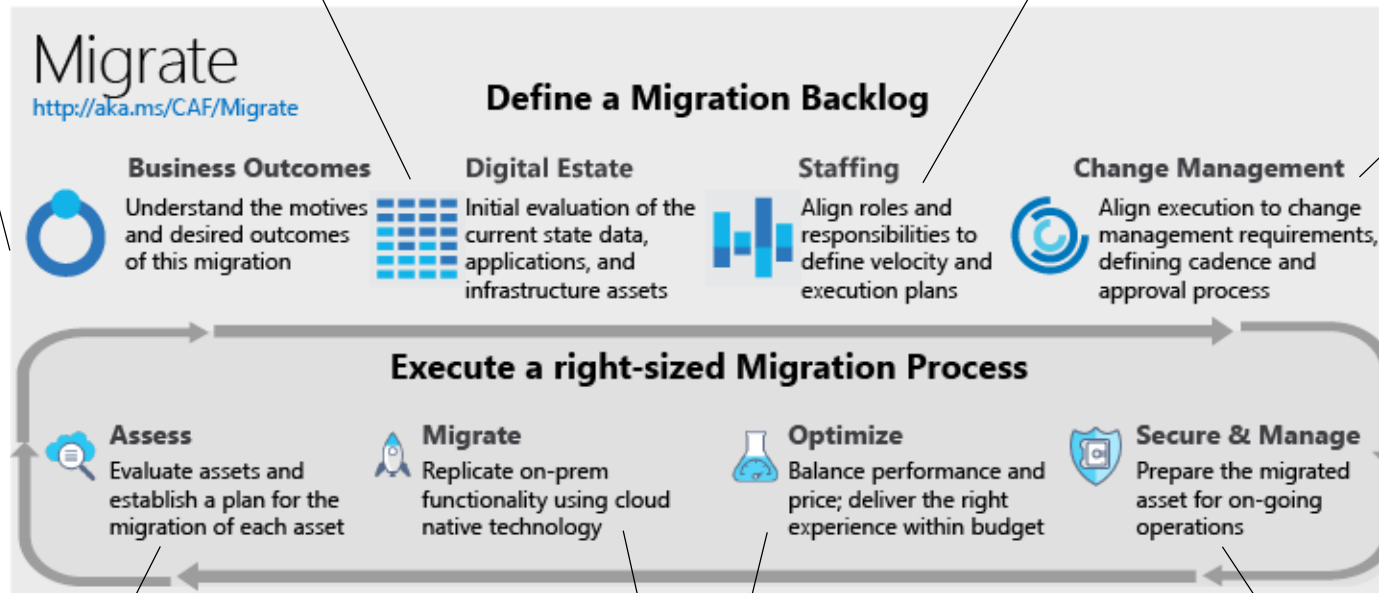
Mature Migration Processes

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



- 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

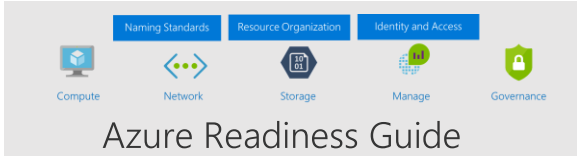
- Mature Optimization:
- Data-driven testing
 - Balance of performance and cost
 - Low impact promotion process
 - Consistent on-boarding

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

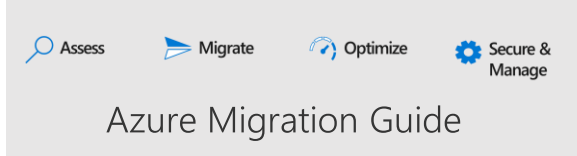
Maturing Migrating Processes

Key Maturity Motions

First Workload (Migrate MVP)



Azure Readiness Guide



Azure Migration Guide

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

Business →

Migration backlog review, release, & realignment processes

People →

Evolve and align Definition of Done to match org structure
Culture of learning; continuously expand skills

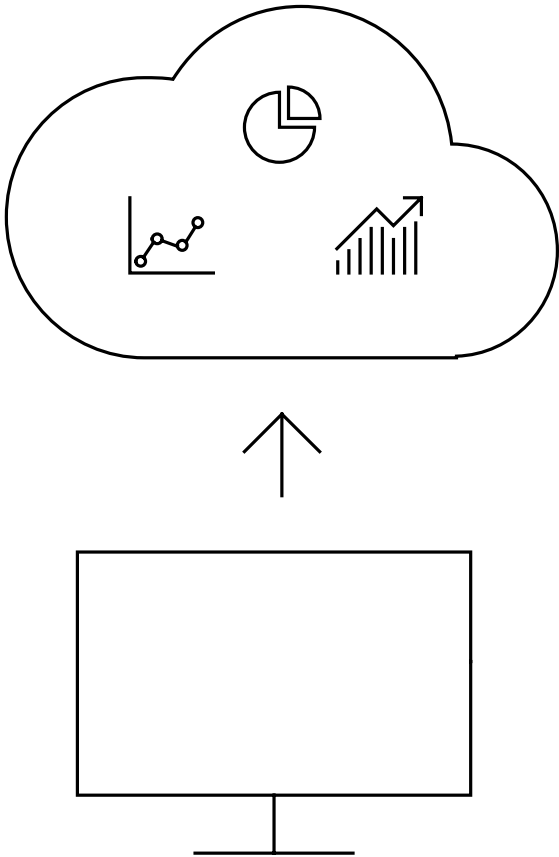
Technology →

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

Increase assessment decisions accuracy w/ better data

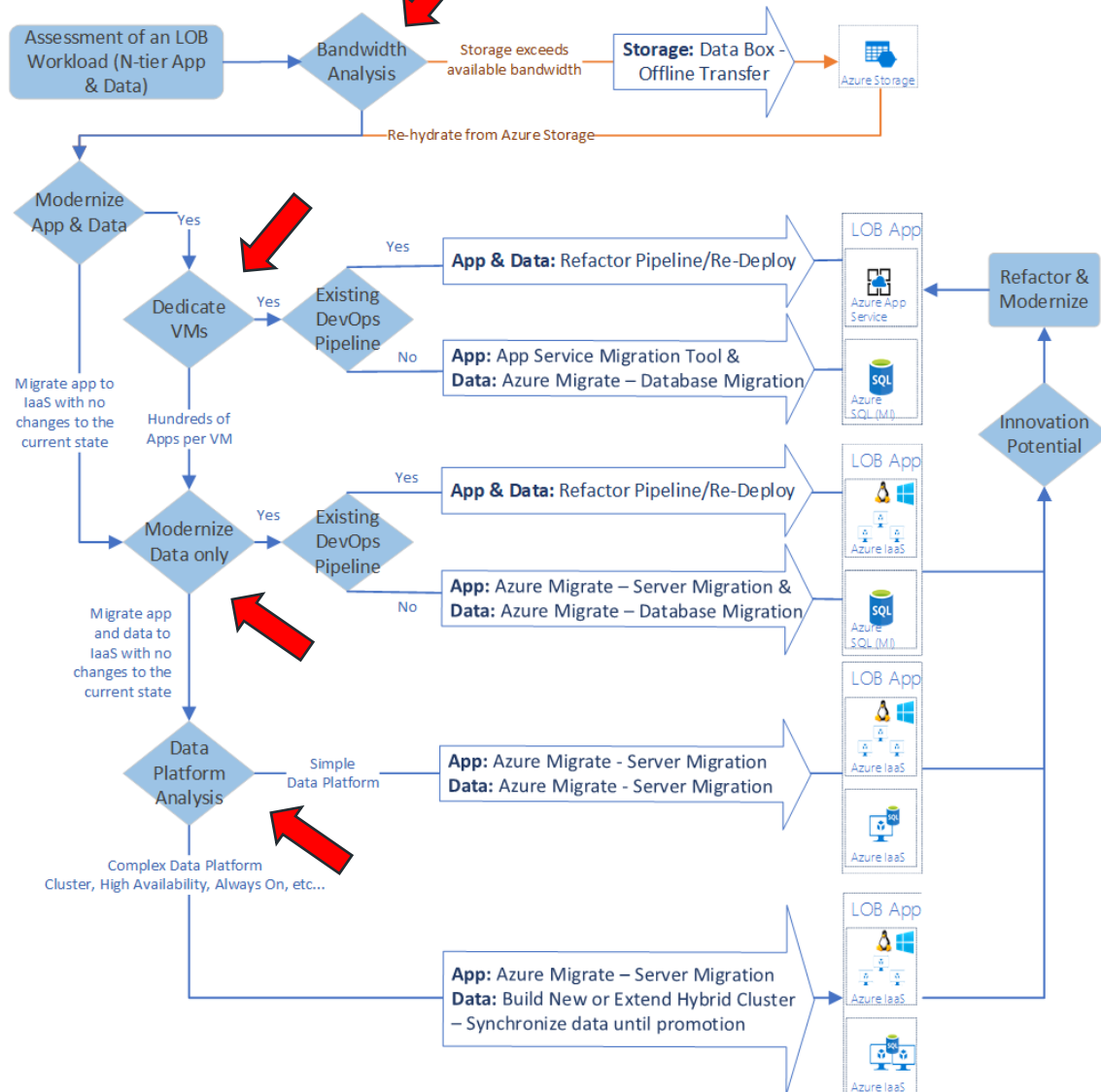


- With each release leverage Azure Migrate to improve workload definitions by grouping relevant servers
- Improve assessment decision accuracy by aligning the business value of workloads with key technical decisions regarding **compatibility**, **performance**, **dependency**, and **costs**



Migration Tooling Options

Expand workload architecture options w/ broad tooling



Migration is more than a lift & shift 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

Expand workload architecture options w/ broad tooling

 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)

































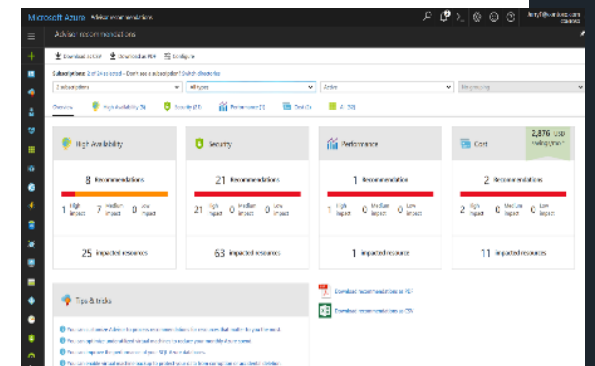
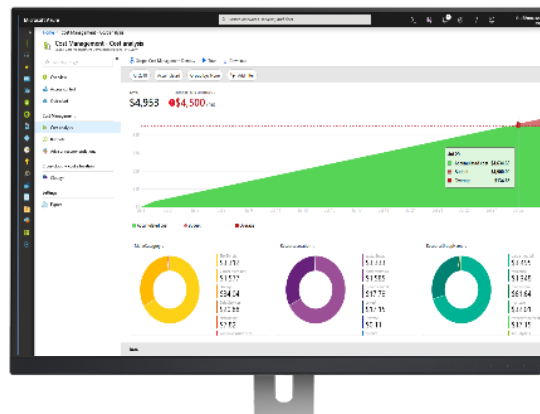
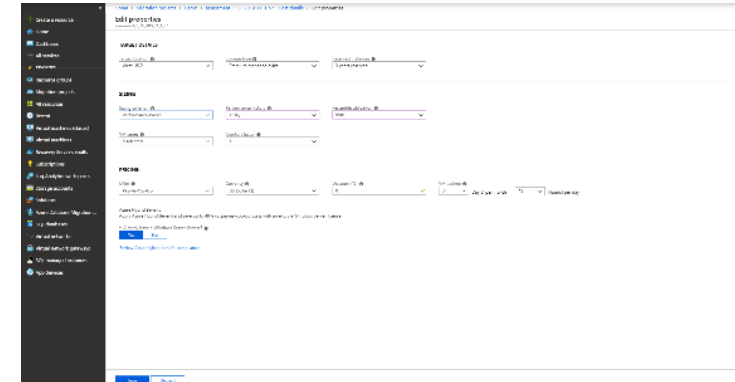
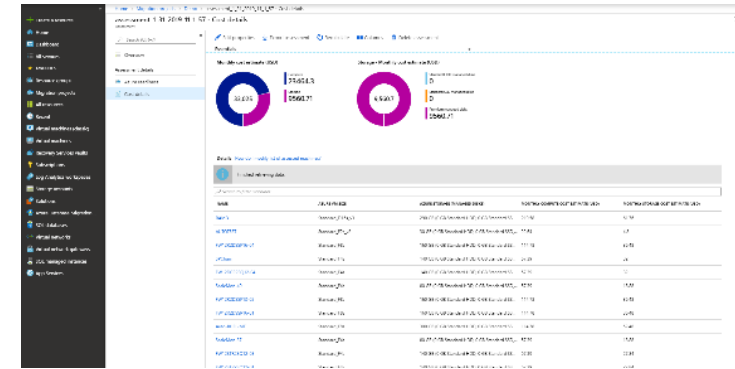




Continuously Optimize Resources

Improve optimization w/ testing & monitoring options

- 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 or Flexera Optima
 - 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



Thank You

