

# Cloud Migration & Modernization

Which workloads should I containerize, and which should I move to serverless?

How can I reduce dependency on Microsoft and VMware licensing?

What does modernization mean?

Which workloads should I modernize?

How can I lower my application and database costs?

How does migrating help me reduce my operating costs?

What are the security advantages on the cloud?

How do I justify the additional cost and resources to migrate?

Does it make sense to migrate large datasets?

# Where migrations go off the rails



Poor planning:  
execution and  
cost



Not  
understanding  
your security  
responsibilities



No Cloud Center  
of Excellence



Treating the  
cloud as a data  
center

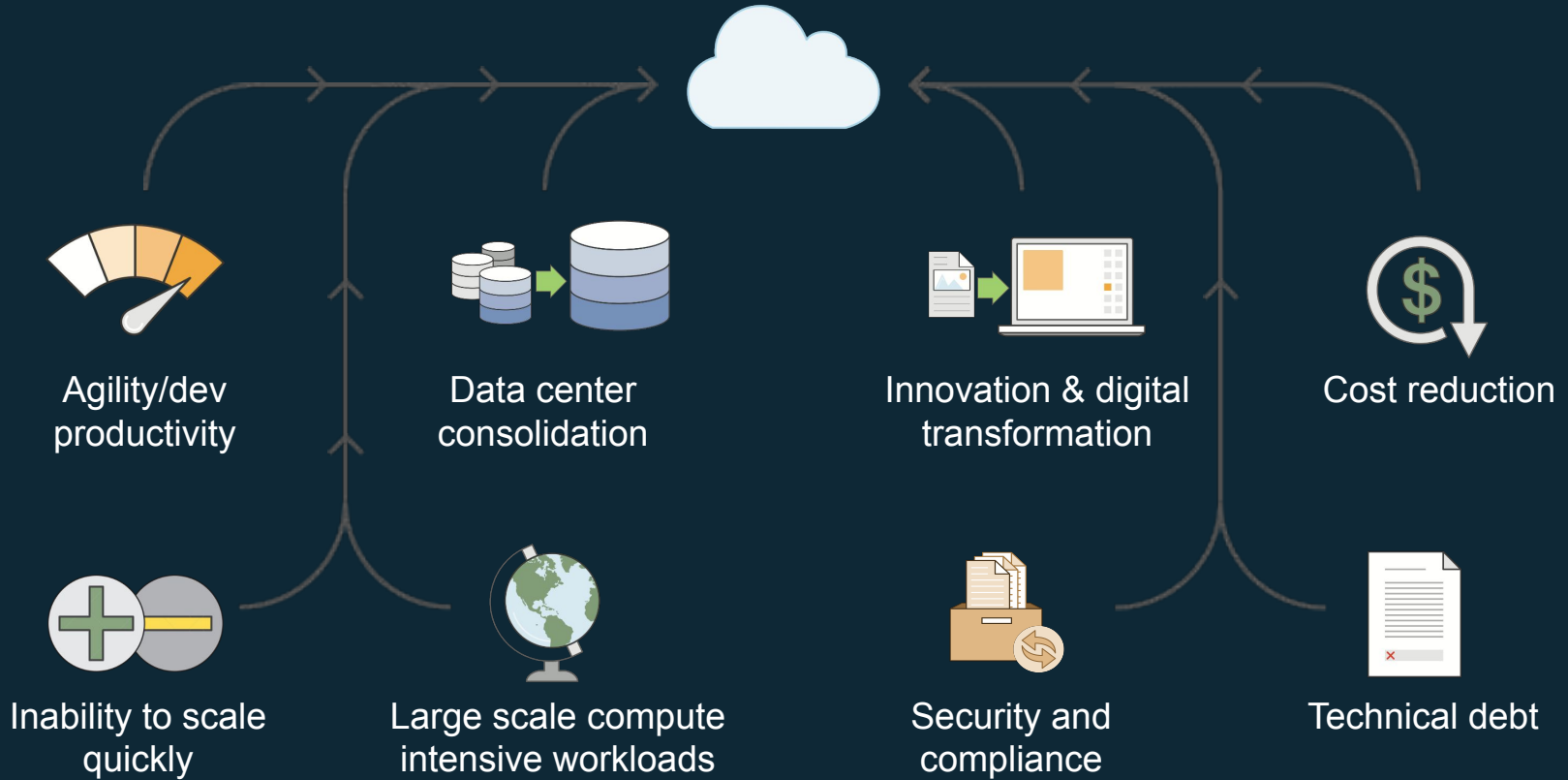


Not addressing  
skill gaps with  
training



Failure to involve  
all business  
stakeholders

# Common migration drivers



# Why?



## Average ROI

**300%+**  
ROI over 8-12 months, with payback periods consistently under one year



## Productivity gains

**35%**  
IT team efficiency improvements through automation and reduced infrastructure overhead



## Reduced downtime

**85%**  
Significant improvement in system availability and business continuity through cloud resilience



## Faster innovation

**40%**  
Accelerated access to new technologies and reduced time-to-market for digital initiatives



## Cost reduction\*

**30-55%**  
Lower infrastructure costs through optimized resource utilization and reduced data center expenses

# Elements of a successful journey



Executive sponsorship



Cloud-first strategy



Organizational change



Adoption roadmap



Cloud Center of Excellence



Principles & standards



Experiment

# Migration Framework

Assess



Mobilize



Migrate & Modernize



Quick discovery



TCO report



Business case



Briefings & workshops



Staff training



Discovery and planning



Migration plan



Account organization



Security & compliance



Operating model



Skills / center of excellence



Migrate



Operate



Modernize



# AI Tools

## Migration

AWS  
Transform

AWS App  
Migration  
Service

Azure  
Migrate

Azure  
Advisor

## Code Modernization

GitHub  
CoPilot

Azure  
AppCAT

Amazon Q  
Developer

# Data-driven decisions

## Detailed Assessment Overview

### Assumptions & Modeling Details

- Cost model: 3 YR / 1 YR NURI & AURI
- Region: Virginia
- Right sized
- Zombies Removed from Scope

Infrastructure	Count
VMware	431
Hyper-V	0
Bare Metal	0
<b>Total</b>	<b>431</b>

Environment & Licensing	Count
Windows Servers	0
Windows Desktops	0
Linux	431
RHEL	0
Zombies	0 (0%)
<b>Total</b>	<b>431</b>

SQL Servers	Count
Enterprise	0
Standard	0

Time In-Use



■ In-Use ■ Idle

Time In Use %	Count
In-Use	100.00%
Idle	0.00%

Zombies



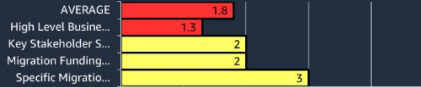
## Financial Overview

	Option 1	Option 2	Option 3	
	On-Premises Cost Estimate	3 YR AURI - LI	1 YR AURI - LI	3 YR NURI
Compute	\$394,802	\$155,307	\$242,919	\$178,000
Storage	\$63,928	\$31,422	\$31,422	\$31,422
Network		\$26,113	\$26,113	\$26,113
<b>Infrastructure Total</b>	<b>\$458,730</b>	<b>\$212,842</b>	<b>\$300,454</b>	<b>\$235,535</b>
AWS Business Support	-	\$18,499	\$24,632	\$20,088
<b>Annual Total</b>	<b>\$458,730</b>	<b>\$231,341</b>	<b>\$325,086</b>	<b>\$255,623</b>
Annual Savings		50%	29%	44%

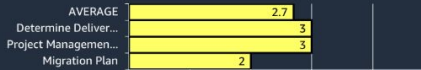
- Modeled to Shared Tenancy
- Reserved Instances (RIs) with Windows & SQL Server License included (LI)
- Assumed storage utilization = 50% of provisioned storage
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## Readiness Score

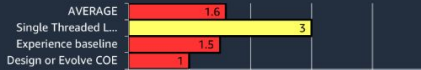
### Business Case



### Customer Migration Project Plan



### Skills & COE



### Landing Zone



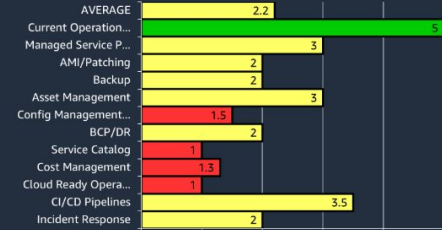
### Application Portfolio Discovery & Planning



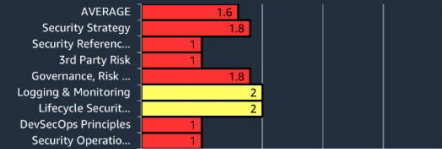
### Migration Process & Experience



### Operating Model



### Security & Compliance



# 6R approach - migration strategies at a glance

1 Rehost (lift-and-shift)

2 **Replatform** → Determine new platform → Modify underlying infrastructure

3 Repurchase

4 **Re-architect (refactor)** → Redesign application / infrastructure → Application code development → Full ALM / SDLC → Integration

5 Retire

6 Retain

# Data migration

## Plan & Options

- Analysis
- Schema conversion
- Application conversion
- Data migration

## Challenges

- Cost
- Complexity
- Application downtime
- Engine specific database code

Snowcone



8-14 TB

Snowball



42-210 TB

Snowmobile



100PB

Data Box Disk



8 TB

Data Box



100 TB

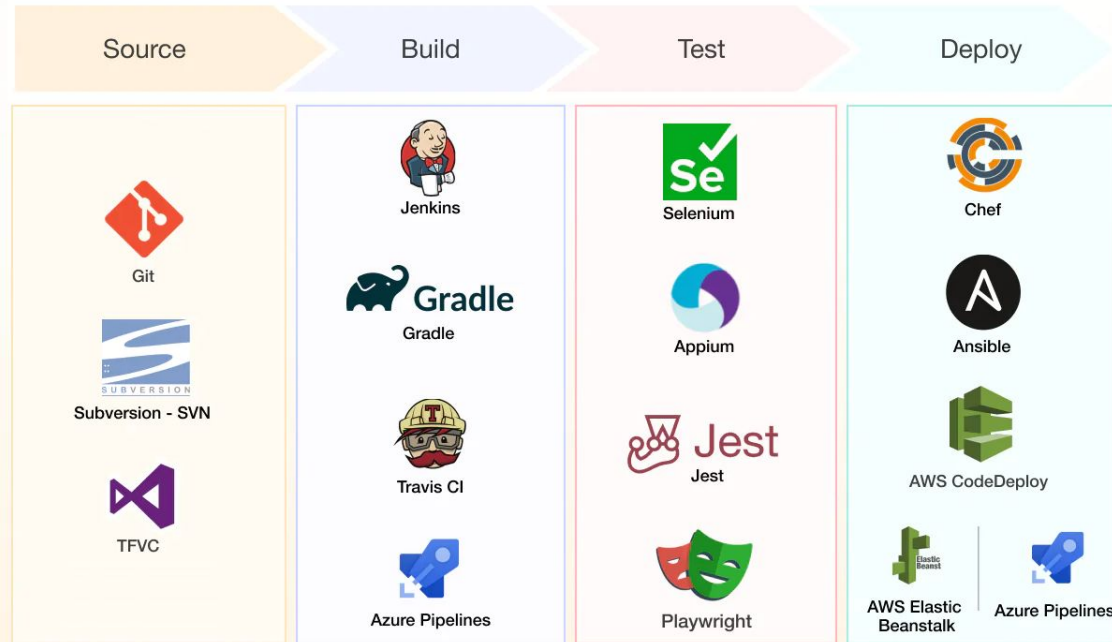
Data Box Heavy



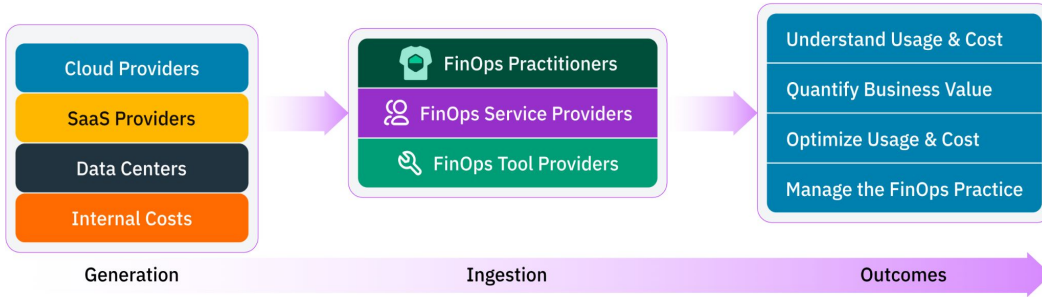
1 PB

# Continuous Integration & Continuous Delivery

## CI/CD Pipeline



## A unifying format for cloud + billing data



## Principles



Teams need to collaborate



Business value drives technology decisions



Everyone takes ownership for their technology usage



FinOps data should be accessible, timely, and accurate



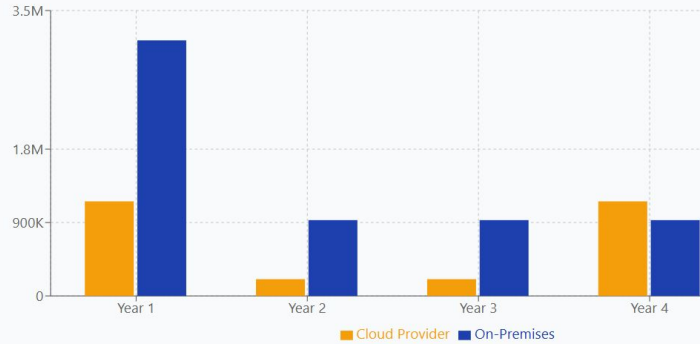
FinOps should be enabled centrally



Take advantage of the variable cost model of the cloud

# Compare on-prem vs. cloud (TCO)

## IT Infrastructure Cost Comparison



## Cash Flow Summary

		Year 1	Year 2	Year 3	Year 4	Year 5
Cloud	Server	\$1,010,454	\$117,785	\$117,785	\$1,010,454	\$117,785
	Network	\$0	\$0	\$0	\$0	\$0
	Storage	\$7,941	\$7,941	\$7,941	\$7,941	\$7,941
	IT Labor	\$67,597	\$67,597	\$67,597	\$67,597	\$67,597
	Support	\$73,720	\$12,401	\$12,401	\$73,720	\$12,401
	<b>Total</b>	<b>\$1,159,713</b>	<b>\$205,724</b>	<b>\$205,724</b>	<b>\$1,159,713</b>	<b>\$205,724</b>
	On-Premises	Server	\$1,256,852	\$0	\$0	\$0
Server Maintenance		\$188,528	\$188,528	\$188,528	\$188,528	\$188,528
Rack Infrastructure		\$339,685	\$0	\$0	\$0	\$0
Facilities		\$496,248	\$496,248	\$496,248	\$496,248	\$496,248
Software and License		\$570,205	\$0	\$0	\$0	\$0
Storage		\$71,183	\$33,600	\$33,600	\$33,600	\$33,600
Network		\$0	\$0	\$0	\$0	\$0
IT Labor		\$211,424	\$211,424	\$211,424	\$211,424	\$211,424
<b>Total</b>		<b>\$3,134,124</b>	<b>\$929,799</b>	<b>\$929,799</b>	<b>\$929,799</b>	<b>\$929,799</b>
<b>Gain/Loss</b>	<b>-\$1,974,411</b>	<b>-\$724,075</b>	<b>-\$724,075</b>	<b>\$229,914</b>	<b>-\$724,075</b>	

# Purchase Options

## On-Demand

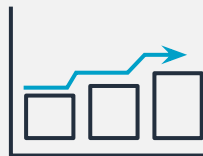
Pay for compute capacity by the hour or second



Spiky workloads, to define needs

## Reservations & Savings Plan

Make a commitment and receive a discount



Committed and steady-state usage

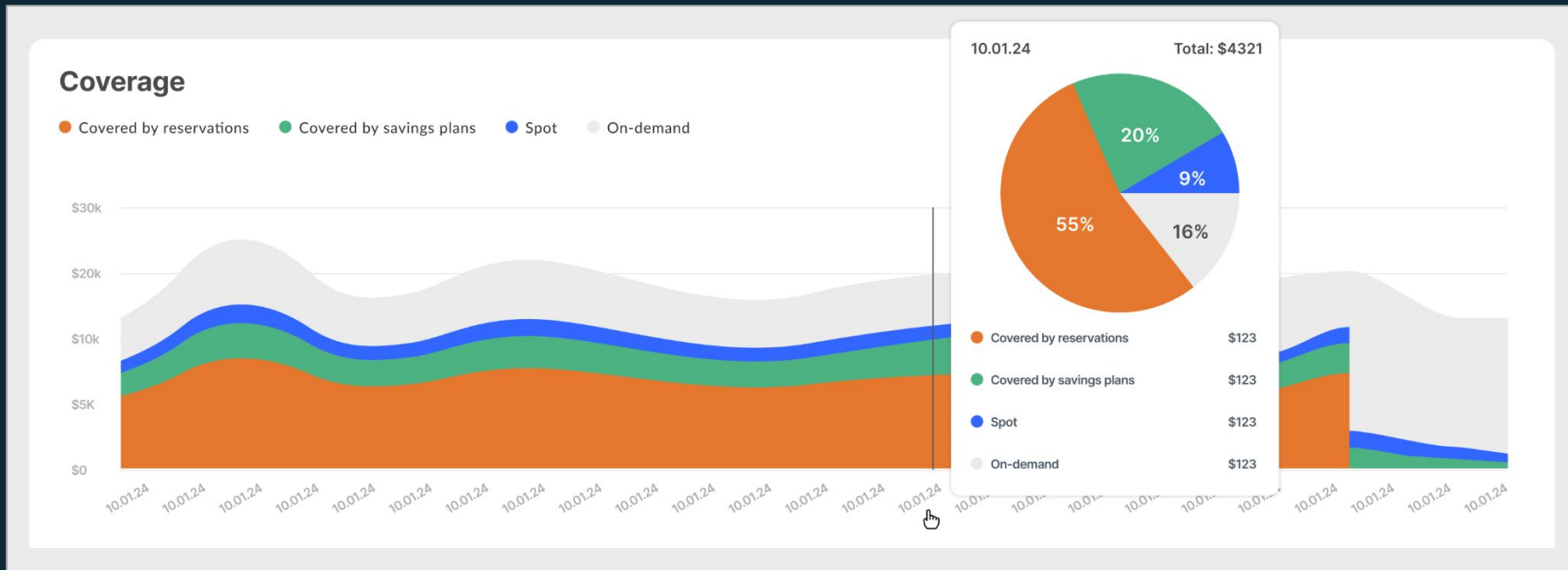
## Spot Instances

Spare VM capacity at savings of up to 90%



Fault-tolerant, flexible, stateless workloads

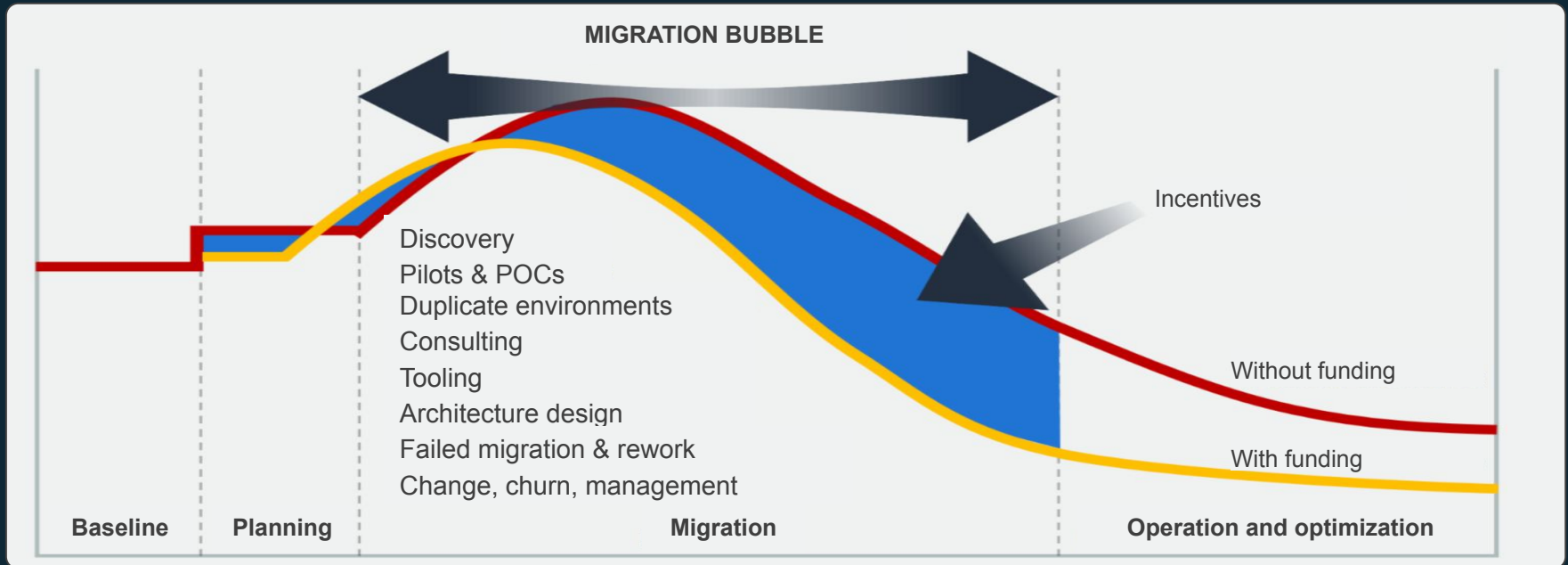
# Maximizing Purchase Options



- Combine different purchase options
- Utilize on-demand and spot for spikes or scaling events
- Leverage services like Fargate Spot (AWS) to optimize costs for containers



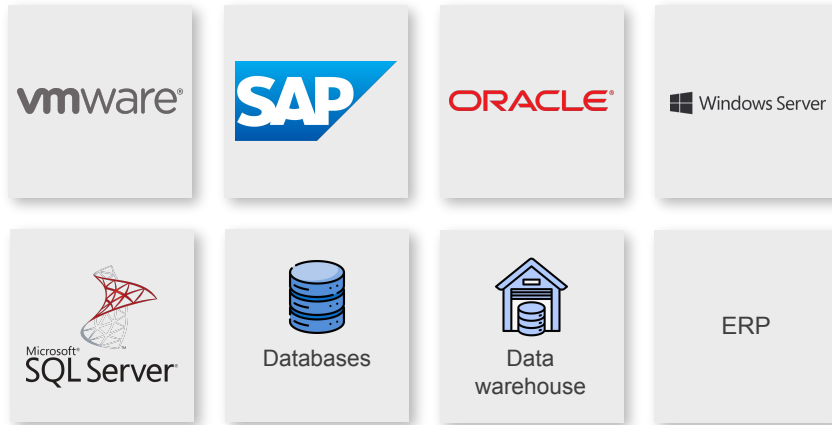
# Funding from Cloud Providers



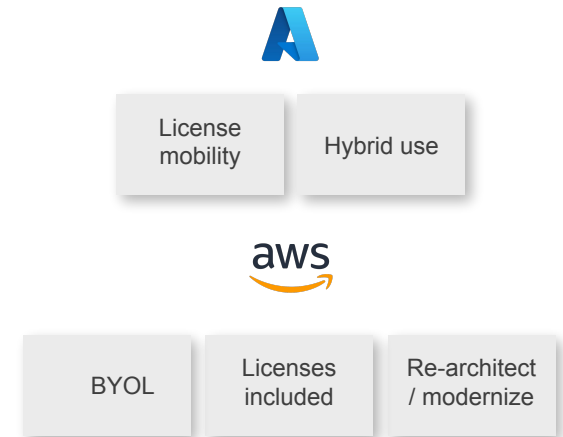
Azure: up to \$400,000      AWS: up to \$1,000,000

# Licensing costs

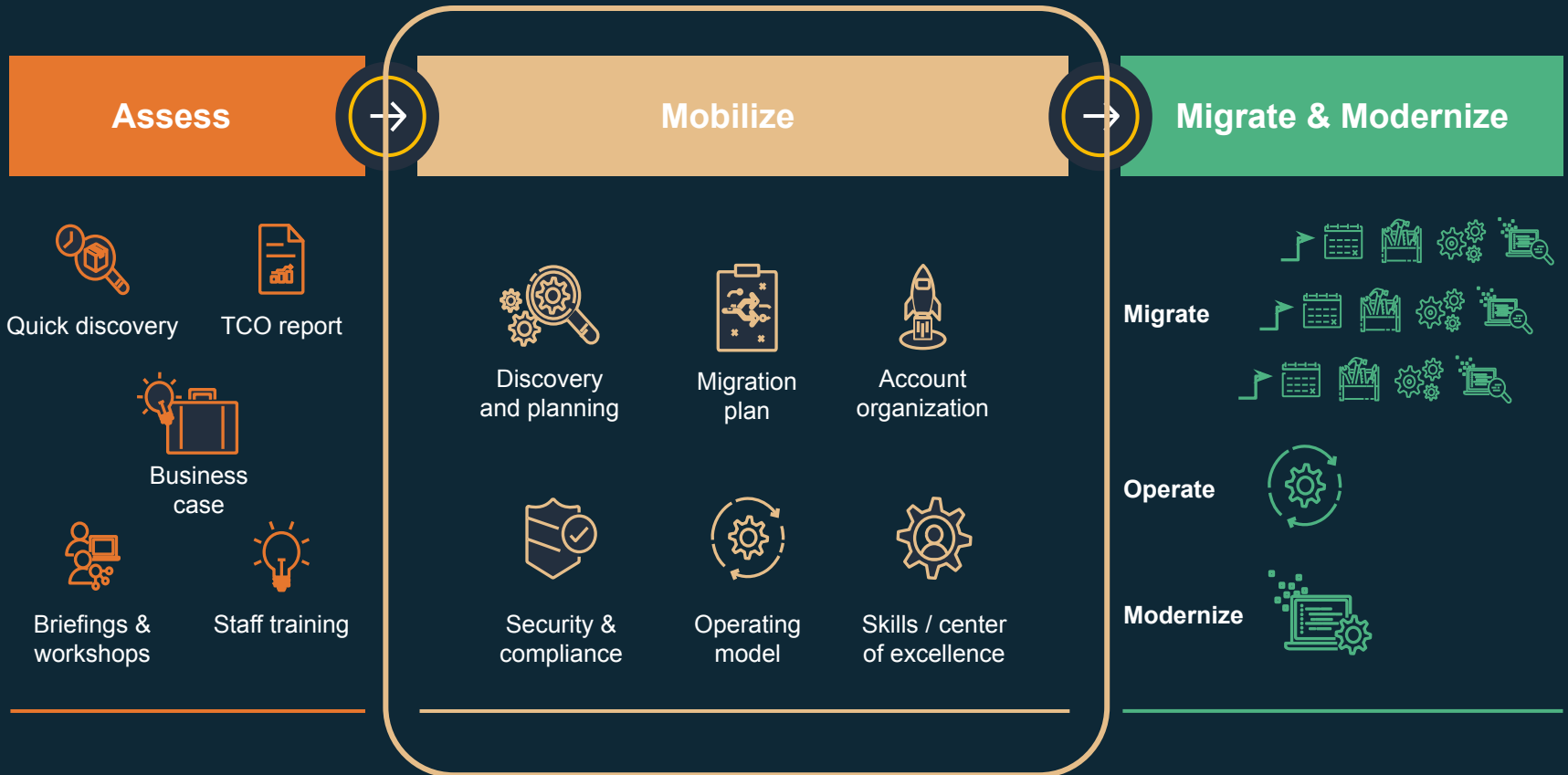
## Enterprise Applications



## Licensing Options



# Migration Framework



# Shared responsibility model

	IaaS	PaaS
Always customer's responsibility		
Information and data	Customer	Customer
Devices (mobile & PCs)	Customer	Customer
Accounts and identity	Customer	Customer
Responsibility varies by service type		
Identity & directory infrastructure	Customer	Shared
Applications	Customer	Shared
Network connections	Customer	Shared
Operating System	Customer	Cloud provider
Always cloud provider's responsibility		
Physical hosts	Cloud provider	Cloud provider
Physical network	Cloud provider	Cloud provider
Physical datacenter	Cloud provider	Cloud provider



HIGH

~40% foundation



MODERATE

~30% foundation



FedRAMP

HIGH

~50% foundation



MODERATE

~30% foundation

# Account Organization



Cloud Provider



Organizations Management



SCP



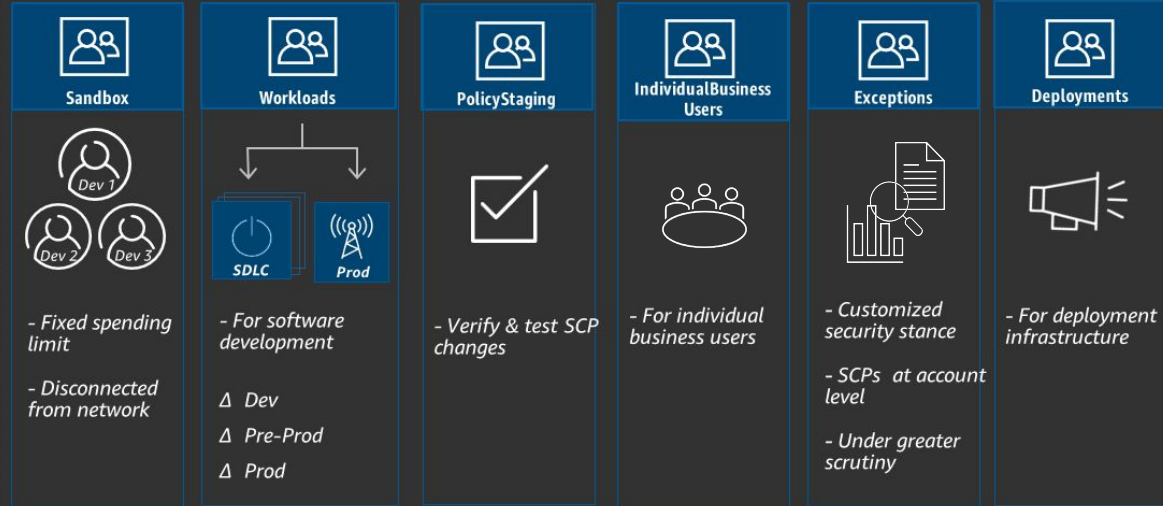
OUs

## Foundational Organizational Units (OU)

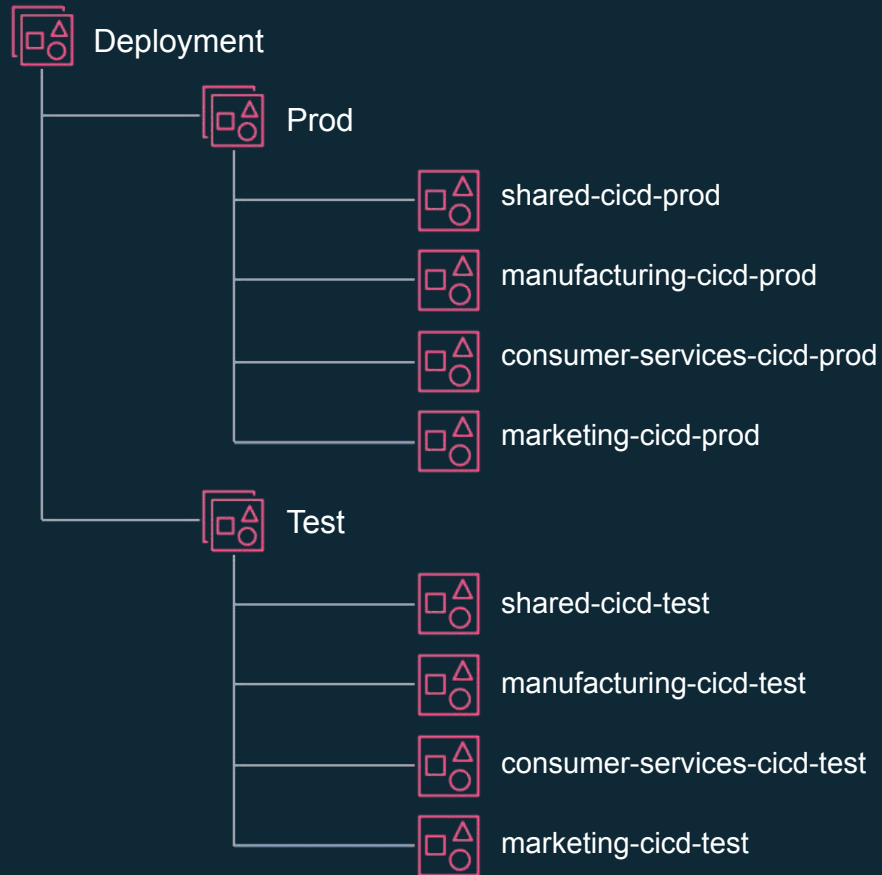


- Δ Log Archive
- Δ Security Tooling
- Δ Shared Services
- Δ Network
- Δ Ops Tooling

## Additional OUs



# Account structure



# Automating security on the cloud



Identity &  
Access  
Management



Configuration  
management



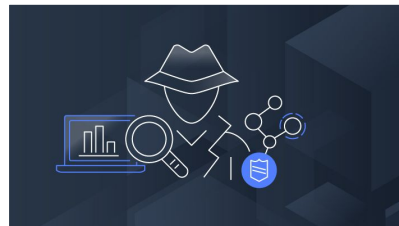
Data security  
(key rotation)



WAAP  
• WAF  
• Bot control  
• DDoS  
protection



Active  
monitoring  
(network &  
account)  
+ guardrails

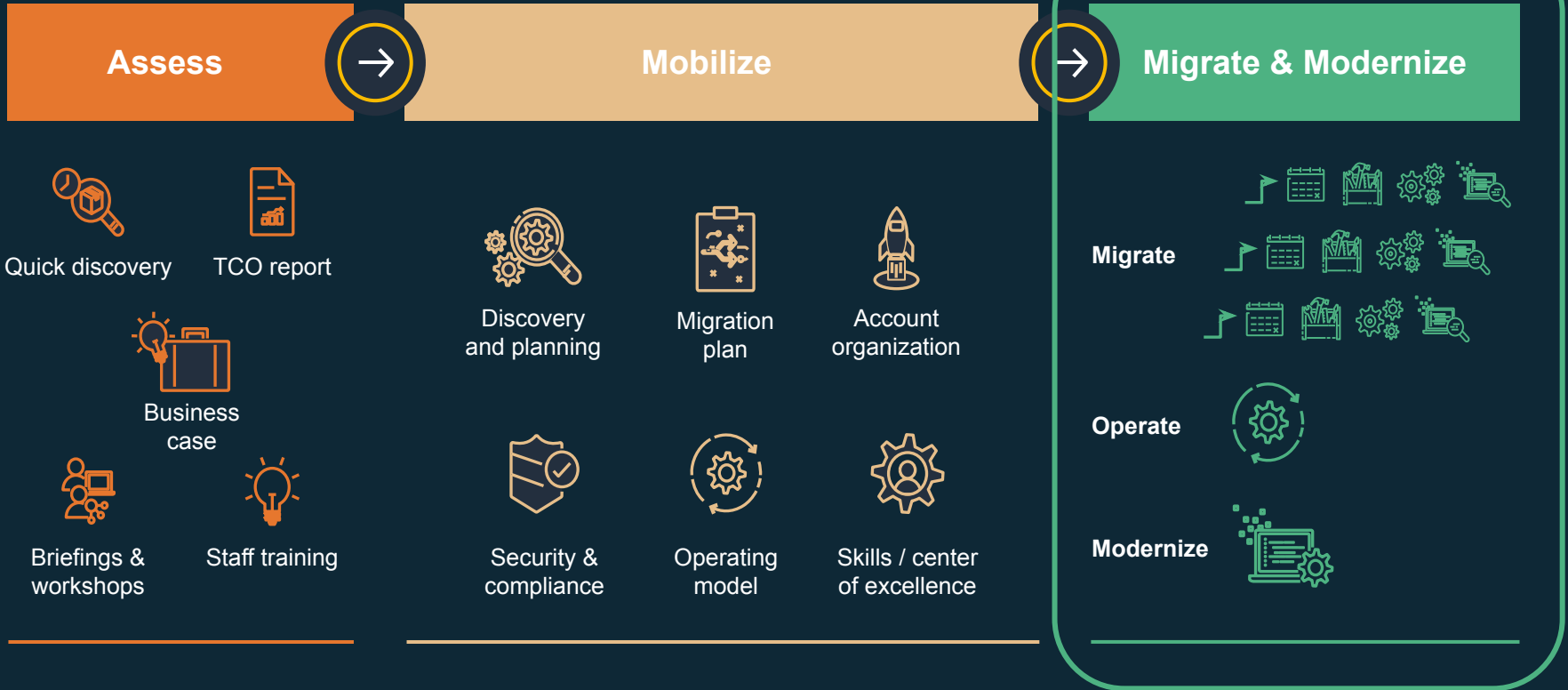


Amazon Detective



Microsoft Security Copilot

# Migration Framework



# Operating model



Centralized logging



Provisioning processes



Configuration management



Monitoring and alerting



FinOps



Disaster recovery

# Observability

## Components



Events



Dashboards



Alarms



Synthetics



Serverless



Logs



Metrics



Containers

## Management Tools



Azure Monitor



Prometheus



Datadog



Dynatrace

KALOS  
by StratusIO

splunk >



Insights

# Keys to a successful migration/modernization

1	Get executive sponsorship	✓
2	Conduct an assessment and build your business case	✓
3	Create a realistic plan that can be executed	✓
4	Choose the right migration strategies (6 Rs)	✓
5	Consider security and cost at each step	✓
6	Due diligence for the right cloud operating model (self-managed, partner managed, combo)	✓
7	Modernize sooner rather than later to maximize ROI	✓

# Resources & Next Steps

## Tools to try:

- ❑ **AWS AI**  
Transform, Detective
- ❑ **Azure AI**  
Copilot, Migrate, Advisor, Security Copilot
- ❑ **Cloud Readiness (AWS)**  
[cloudreadiness.amazonaws.com](https://cloudreadiness.amazonaws.com)
- ❑ **Migration Readiness (Azure)**  
[aka.ms/smarttool](https://aka.ms/smarttool)

## Free migration and modernization assessments:

For AWS and/or Azure

- ★ More in-depth
- ★ Human analysis & recommendations
- ★ Minimal effort, zero commitment

Receive an Apple Watch with an assessment!\*



<https://stratus10.com/assessment-offer>

## Free cloud workload assessments:

- ❑ Cost optimization
- ❑ Security compliance
- ❑ DevOps Maturity
- ❑ Well-Architected Review

# About Us



Oscar Moncada  
Co-Founder & CEO,  
Stratus10

- Background in software engineering & IT
- 12+ years experience with AWS
- Led cloud infrastructure at FICO, Digitaria/Mirum, and Events.com
- Co-founded Stratus10 in 2017
- Experience across dozens of cloud migration projects—from startups to global enterprises
- Contributor to Forbes and technical publications on cloud strategy, optimization, and security



Kevin RisonChu  
Co-Founder & CTO,  
Stratus10

- Background in systems administration & IT
- 16+ years experience with AWS and Azure
- Experienced in Linux/Unix and data center ops
- Led engineering and cloud transformation for global clients
- Among the earliest AWS-certified professionals
- Co-founded Stratus10 to help businesses modernize, optimize, and secure their cloud environments