AWS re:Invent

ENT218-R

Executing a large-scale migration to AWS

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Agenda

Large-scale migrations
Key drivers and outcomes

Learnings from Nationwide's migration journey

AWS migration playbook



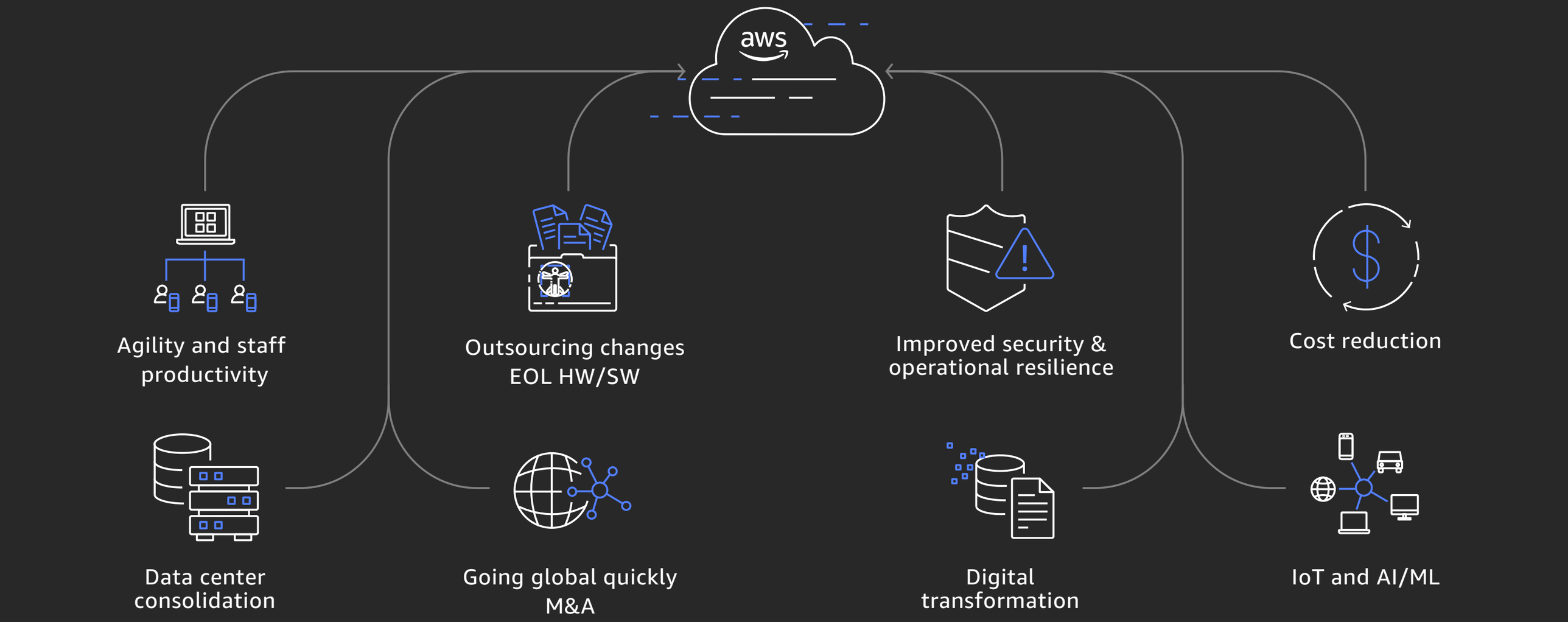
Large-scale migrations—Key drivers and outcomes

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Common migration drivers



Migration business outcomes

Agility	Build and operate your **foundation for innovation**
Operational efficiency	Obtain substantial **cost savings,** freeing up resources to **focus on what differentiates your business**
Reduced risk	Migrate through a secure and proven approach that reduces IT risks by moving to a more **resilient IT model**

Migration to AWS creates value beyond cost savings



Cost savings

Infrastructure cost savings/avoidance from moving to the cloud

"Expect to save $32 million in the first five years."
Edmunds

"Avoided acquiring additional data center space, saving an estimated $1M+ over three years."
Lionsgate



Staff productivity

Efficiency improvement by function on a task-by-task basis

"We have enhanced software development by 20%."
Orbis

"Without AWS, we would need the DevOps team to be at least twice the size."
Avizia



Operational resilience

Benefit of improving SLAs and reducing unplanned outages

"30–40% increase in operational performance."
Conde Nast

"We're seeing up to 99.99% availability."
Vodafone Italy



Business agility

Deploying new features/applications faster and reducing errors

"Gone from deployments taking 6 weeks to 1 per week."
3M

"Buildouts and deployments happen 5x faster."
Intuit

Why do customers migrate to AWS?



Most migration experience

Over a million active customers; leading brands migrate to AWS



Most comprehensive and mature migration solutions

AWS migration tools, as well as mature third-party migration tooling ecosystem to simplify and accelerate each step of the migration process



Faster time to business results

Customers on AWS delivered 3X more features per year

enel

Migrated ~5,500 instances in 9 months, reduced storage costs by 50% and compute costs by 20%, and sped up provisioning 10x from 4 weeks to 2 days

Coca-Cola

Migrated more than 600 workloads to AWS in under 14 months, including some Unix to Linux conversions, driving year-over-year cost reduction, and cut processing time from 36 hours to 10 seconds

The Washington Post

Releases over 50+ deployments per hour

Learnings from Nationwide's large-scale migration journey

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"Having an IT executive sponsor for cloud is key, but having an sponsor in the business is transformational."

Nationwide®

Ryan Hughes
VP, Cloud Solutions

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Nationwide®

Helping members protect what's important since 1925

We are a Fortune 100 company:

FORTUNE
World's Most Admired Companies

FORTUNE
100 Best Companies to Work For

FORTUNE
50 Best Workplaces for Diversity



Financial Services
$23.5 billion in sales

Commercial lines
$7.8 billion total direct—written premium

Personal lines
$11.7 billion total direct—written premium

Our Cloud Journey Progress

2017

- Experimented on cloud providers
- Cloud strategy defined—80% to the cloud in 3-5 years
- Entire application portfolio (2,000+) assigned 7 R's

2018

- Formed dedicated cloud team
- Built controls, pipelines, & documentation to enable self-service
- First apps migrate and succeed

2019

- 315 migrations started
- 80 production cutovers
- 63 new apps created

Migration model

2019

2020

Volunteer backlog

Variable financial impact

Likely lower complexity

Lower priority

Just migrate, continuously improve



Accelerators

Economic patterns

Technical patterns

Migration mechanisms



Priority backlog

Highest financial impact

Likely more complexity

Business alignment

Plan migration using accelerators

Migration mechanisms



Cloud clinics

4 hours, twice-a-week

drop-in sessions

all app teams welcome anytime



Migration parties

3 days, once a month

first come/first serve sign up



Dojos

4-6 weeks

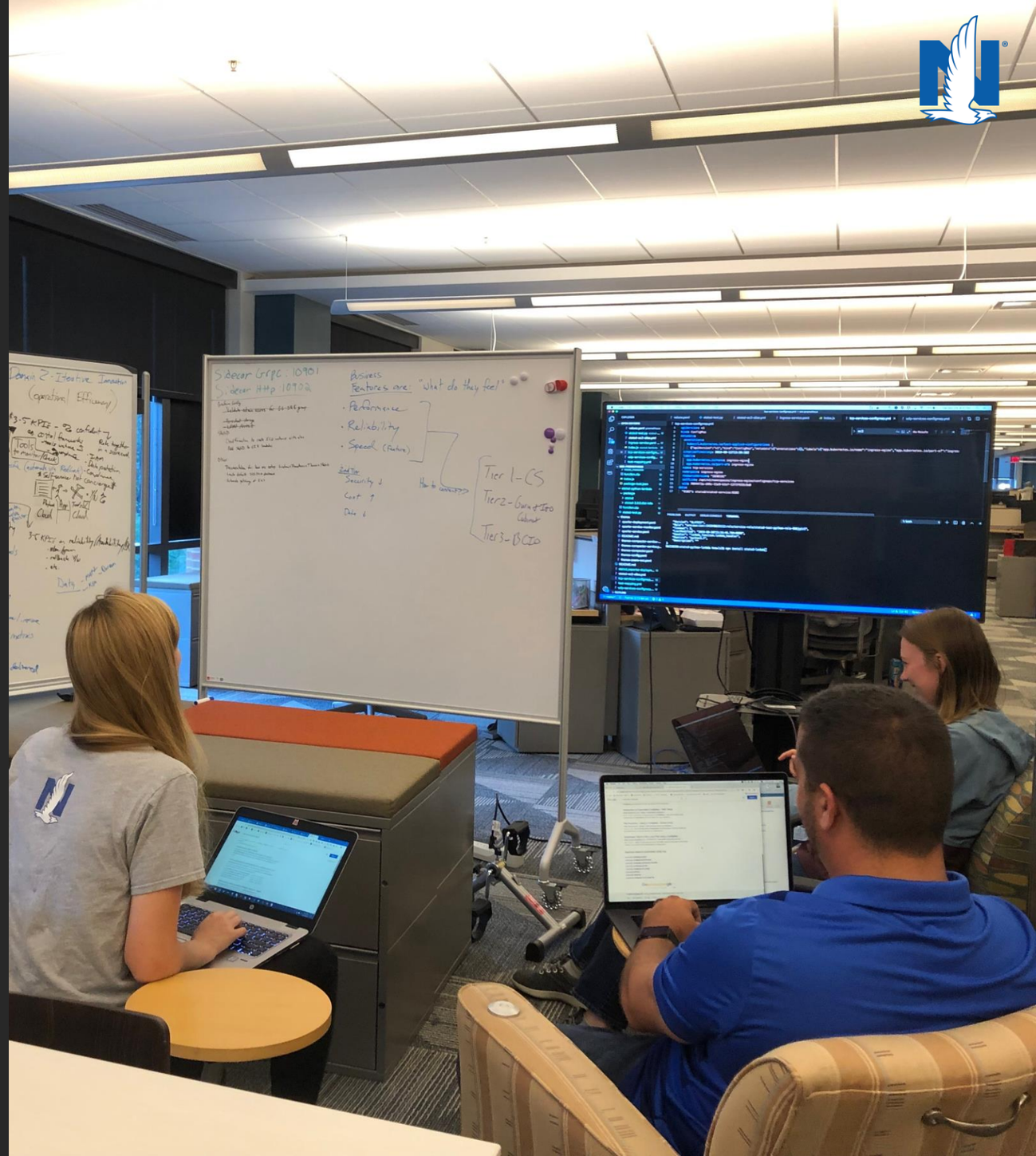
immersive learning

must meet admission criteria

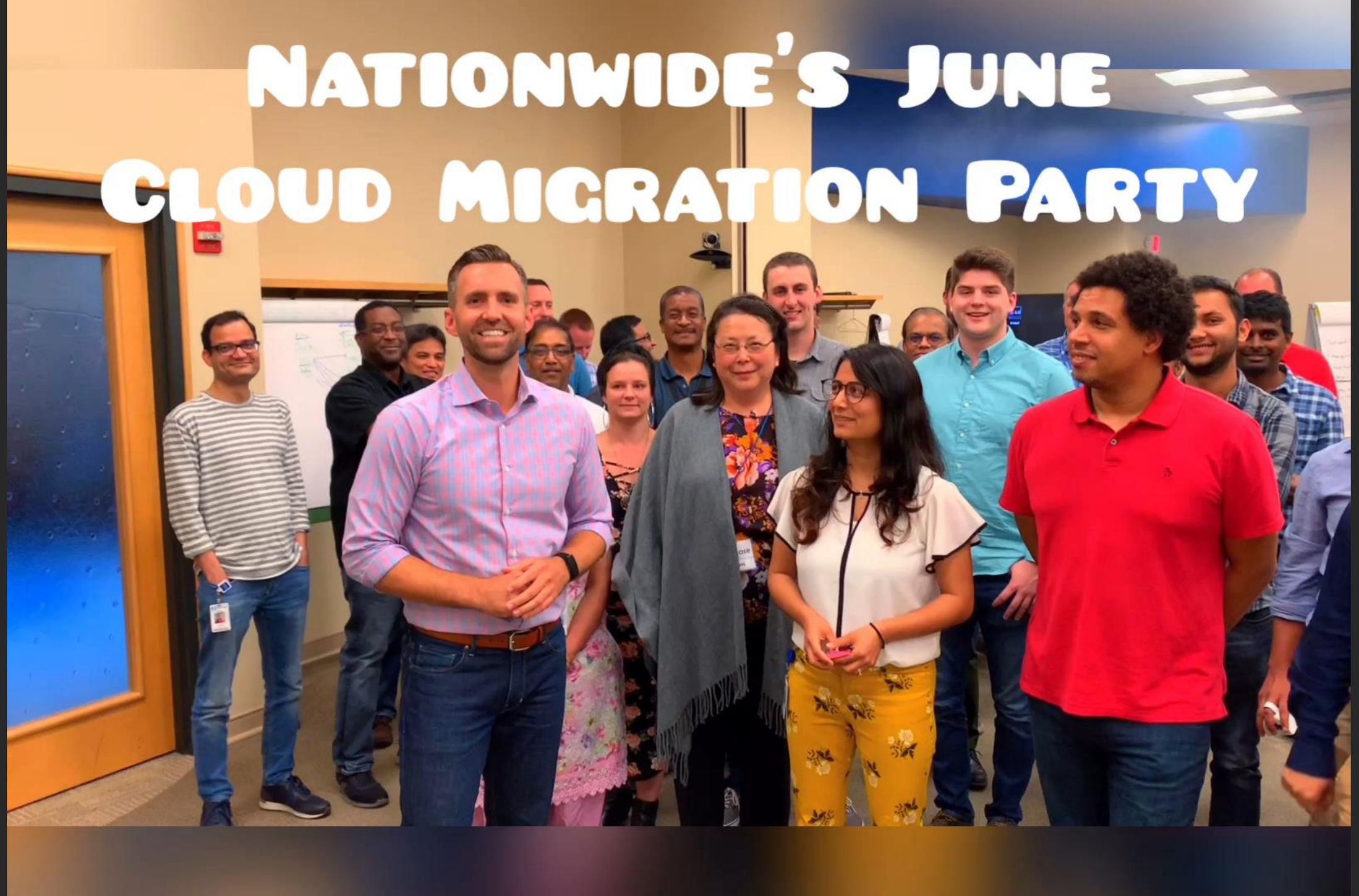
Cloud clinics

Unblocking & learning

Mob programming is one of
the best learning mechanisms ever



Nationwide's June Cloud Migration Party



Migration model evolution

Volunteer backlog

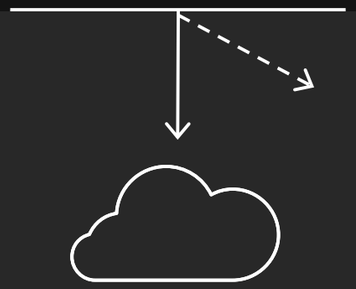
Accelerators

Economic patterns

Technical patterns

Migration mechanisms

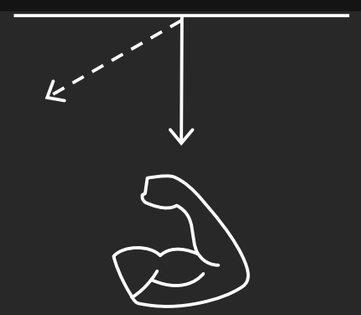
Priority backlog



Cloud clinics



Migration parties

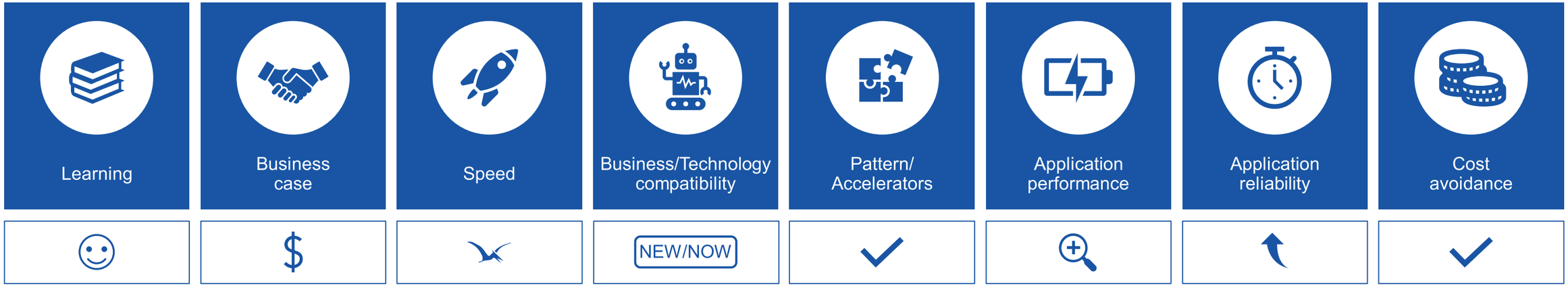


Dojos

Remember to memorialize your success

[Business area] | [Application name]

CLOUD SOLUTIONS



Overview

Couple sentences

Big wins

- Couple bullets
- TBD
- TBD
- TBD

Key learnings

- Couple bullets
- TBD
- TBD
- TBD


EXIT
September Cloud Migration Party

AWS migration playbook

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Migration projects can be challenging

Deconstruct the on-premises technical environment

Performance and relationship of migrating applications

Understand the current operational processes

Policy issues and business rules

Security policies

Embedded tribal knowledge

People/Culture issues

Regulations

Best practices

- **Demonstrated leadership**
- **Set clear business goals**
- **Develop cloud skills/address gaps**

The highest risk has been in a stalled project or a false start—these can set a cloud program back by months, even years

Migration customer journey

Assessment | **Readiness & planning** | **Migrations** | **Operations**

Migration readiness assessment (MRA)



Rapid migration business case (RMBC)

Rapid discovery

TCO report

Pre-MRP accelerators

Briefings & workshops

Immersion day

Migration readiness & planning (MRP)

- Discovery & planning
- Landing zone
- Skills/Center of excellence
- Migration experience
- Business case
- Migration plan
- Operating model
- Security & compliance

Migrations

Migrate

Operate

Optimize

Create a case for change

Mobilization through experiences

Accelerate migration at scale

MRA to build the case for change

- Diagnose migration readiness and build a case for change
- 1-day workshop, ~70 questions to identify readiness and gaps for a large-scale migration
- Followed by an action plan proposal to close the gaps (e.g., accelerators, an MRP project plan by ProServe/partner)
- A business case based on total cost of ownership conducted in parallel

Business capability focused

Business
Value realization

People
Roles and readiness

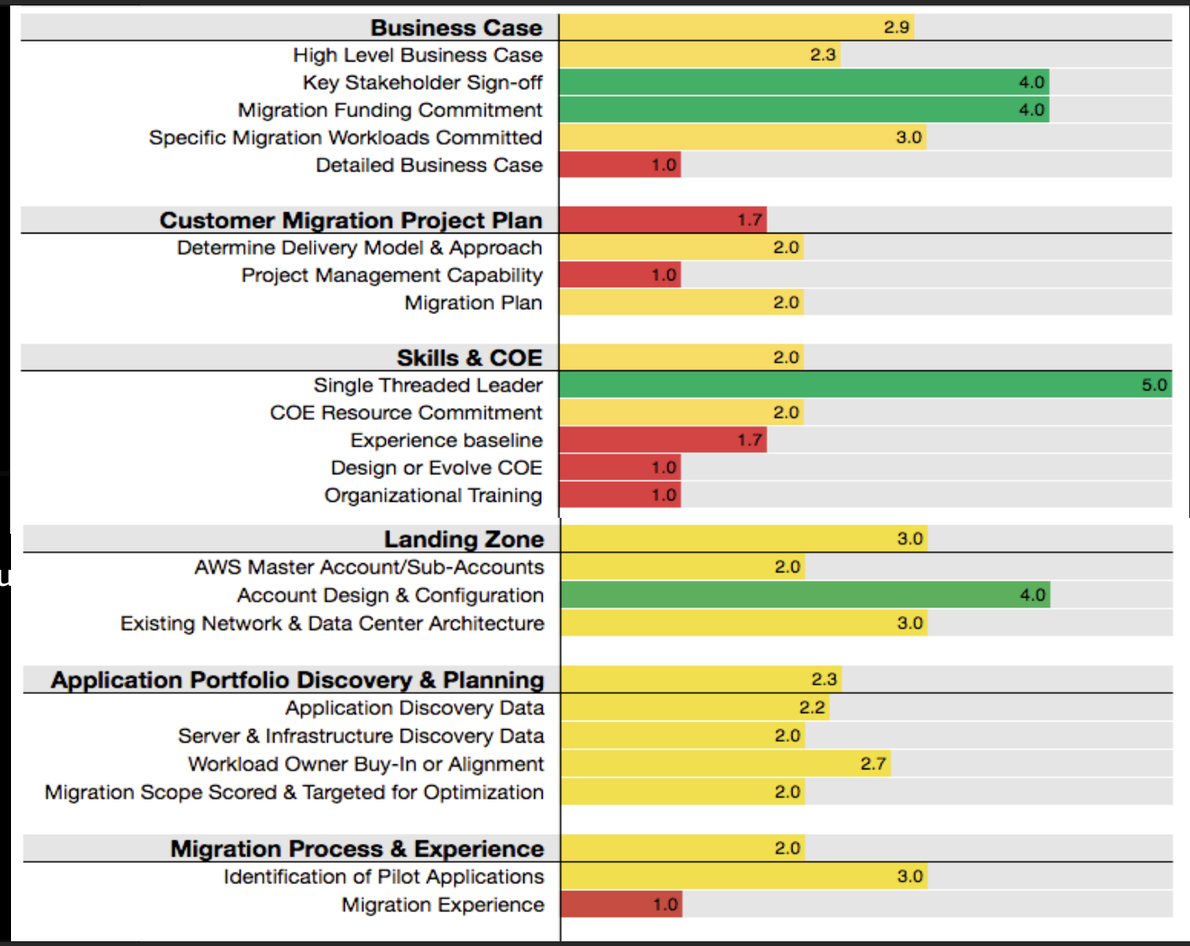
Governance
Prioritization and control

Technical capability focused

Platform
Applications and infrastructu

Security
Risk and compliance

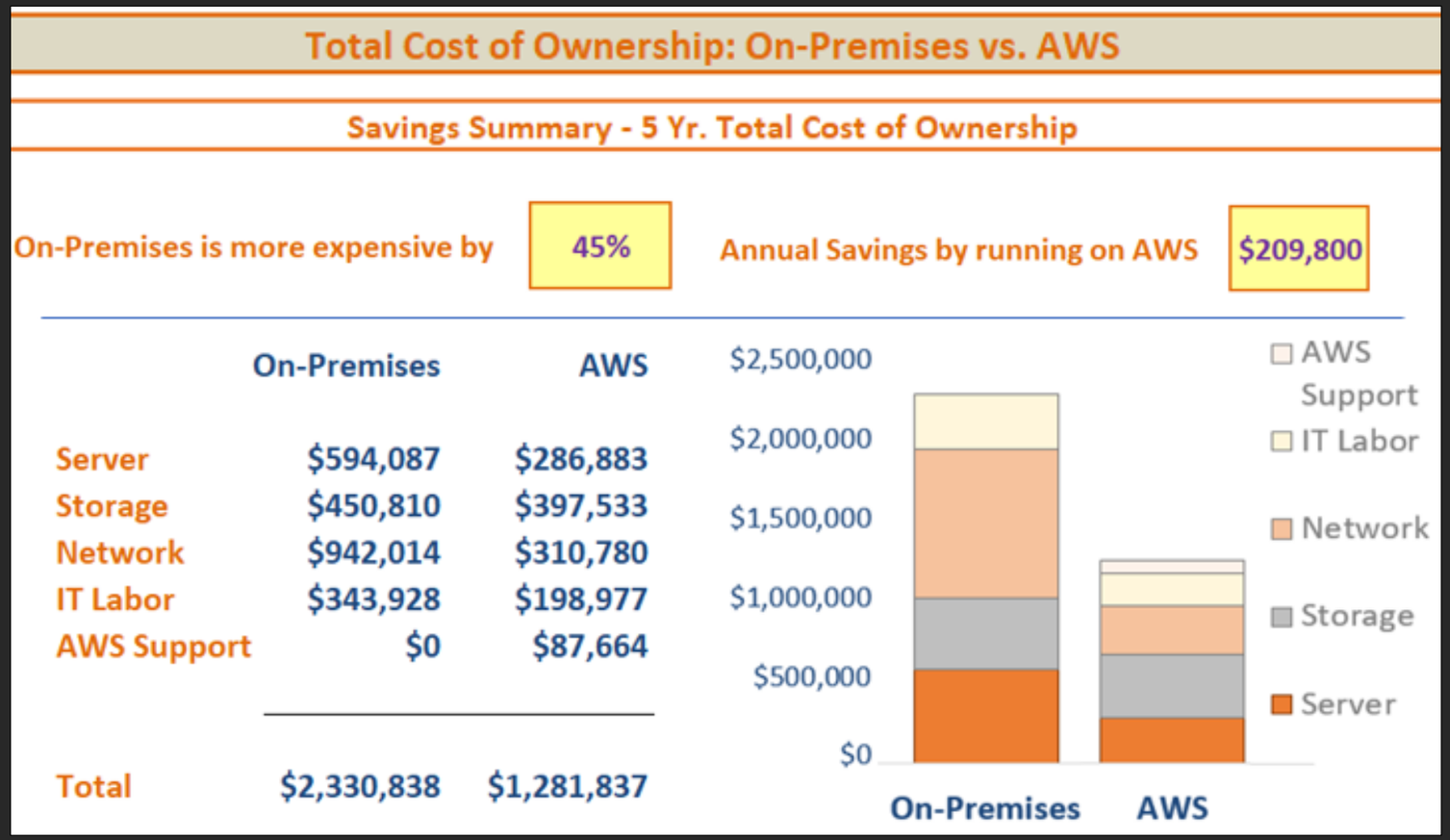
Operations
Hybrid and dynamic



https://aws.amazon.com/professional-services/CAF/

Rapid migration business case to jump-start your migration effort

- Energize your migration and align business goals
- Automated discovery and advanced analytics using TSO Logic
- TCO report containing your specific cost-savings analysis
- An executive-level presentation that you can leverage internally



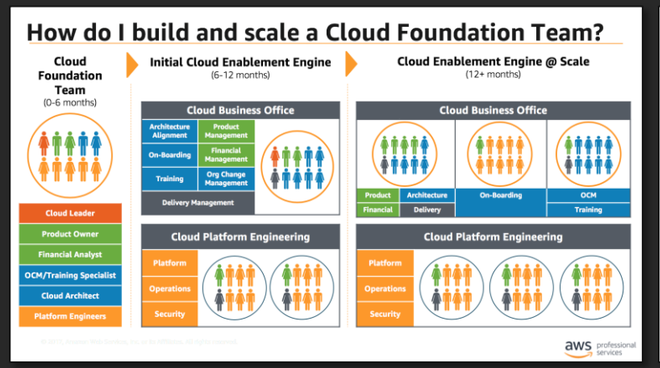
Articulate TCO & ROI using real data from our actual environment *at no charge*

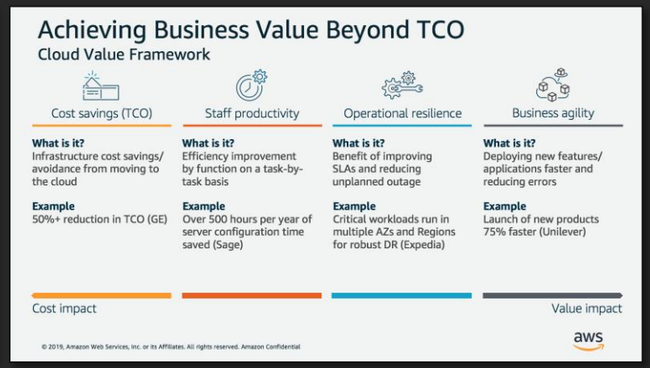
Pre-MRP accelerators to accelerate your momentum

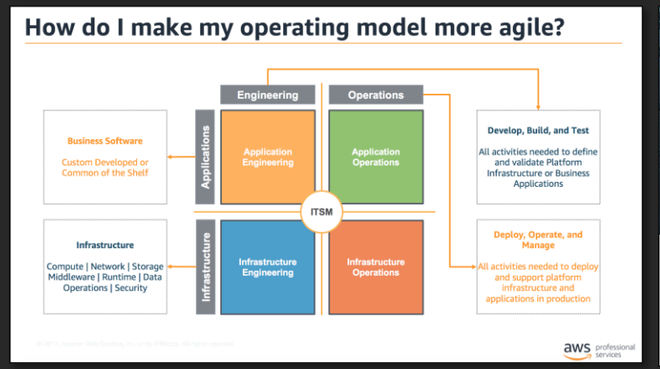
- Build a head start in key migration capabilities before committing to MRP
- A set of curated workshops and experiences that address common customer gaps
- Tailored based on your needs
- Created and delivered by AWS domain experts or migration specialists

Additional topics include:

- *Culture of Innovation*
- *Cloud Envisioning Workshop*
- *AWS Landing Zone/AWS Control Tower*







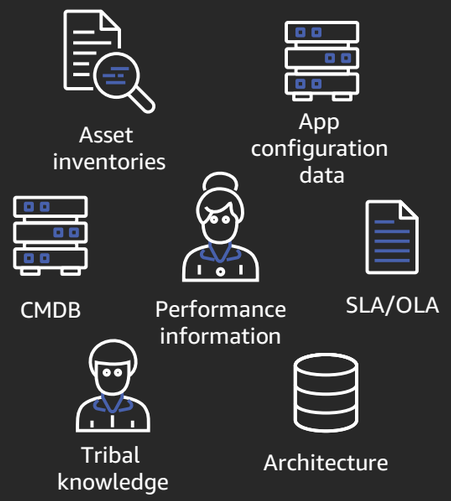




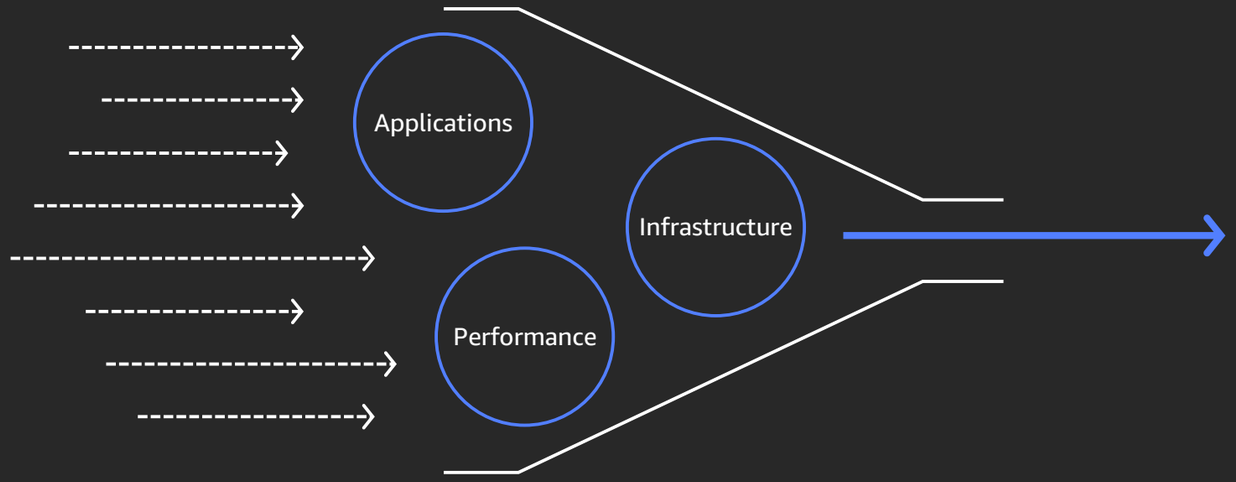


Migration planning

Disconnected and incomplete data



Discover and organize data



7 Rs

- Refactor
- Replatform
- Repurchase
- Rehost
- Relocate
- Retain
- Retire

Level of effort

Automation and guidance

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TSO Logic

AWS Application Discovery Service

AWS Migration Portfolio Assessment

awsmarketplace

bmc turbonomic Cloudamize RISC Networks AppDynamics New Relic.

TSO Logic automates the migration business case

TSO Logic

Simplifies discovery

On-premises compute, local storage, memory, Microsoft licenses

Identifies resources and consumption

Optimizes cloud planning

Finds the best instance size, licensing option, and storage type

All regions and payment models

Delivers business case

Directional or detailed reports, including Windows OLA

Delivered via AWS teams or partners

- ✓ **Fast**
- ✓ **Agentless**
- ✓ **Leverage existing data**
- ✓ **Reduce time to analysis**
- ✓ **No additional cost**
- ✓ **Integrate with AWS services**

Free for MAP-qualified customers and migration certified partners!

Simplify and accelerate migration with CloudEndure



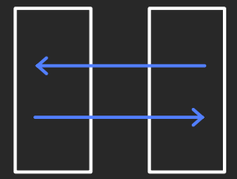
Fast

Simple setup lets you start in minutes



Flexible

Wide range of OS, application, and database support



Non-disruptive

Robust, predictable, nondisruptive continuous replication and minimal cutover windows



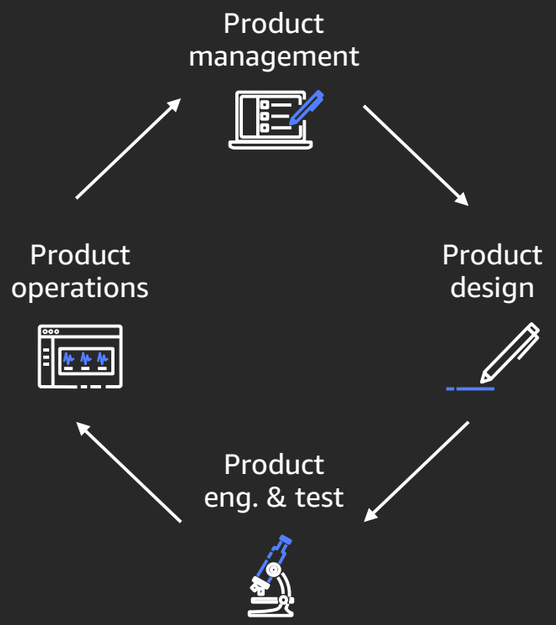
Secure

Highly secure for regulated environments

CloudEndure migration is now free to all AWS customers

The cloud foundation team

A dedicated team with end-to-end accountability—across Business, Design, Engineering, and Operations—for the first release of platform capabilities



IT | Product owners



Singularly accountable for the "product" of cloud, and its viability from a business perspective

Fin | Financial analysts



Financial budgeting, tracking and reporting; show-back/charge-backs and cost optimization

Product management

IT | Cloud architects



Translates business objectives and governance requirements to platform architecture

HR | OCM specialists



Workforce preparedness, communications, training, and resource and career management plans

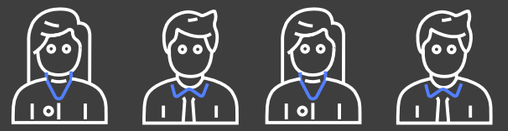
Product design

IT | Engineering manager



Accountable for team management, quality of product delivered, team-member development, and overall HR responsibilities

IT | Engineers



Accountable for product technical feasibility and delivery across platform, operations, and security; engineering, testing, and operations

Product engineering & testing

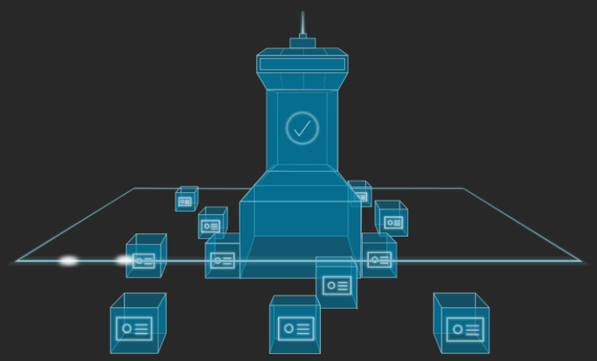
IT | Scrum master



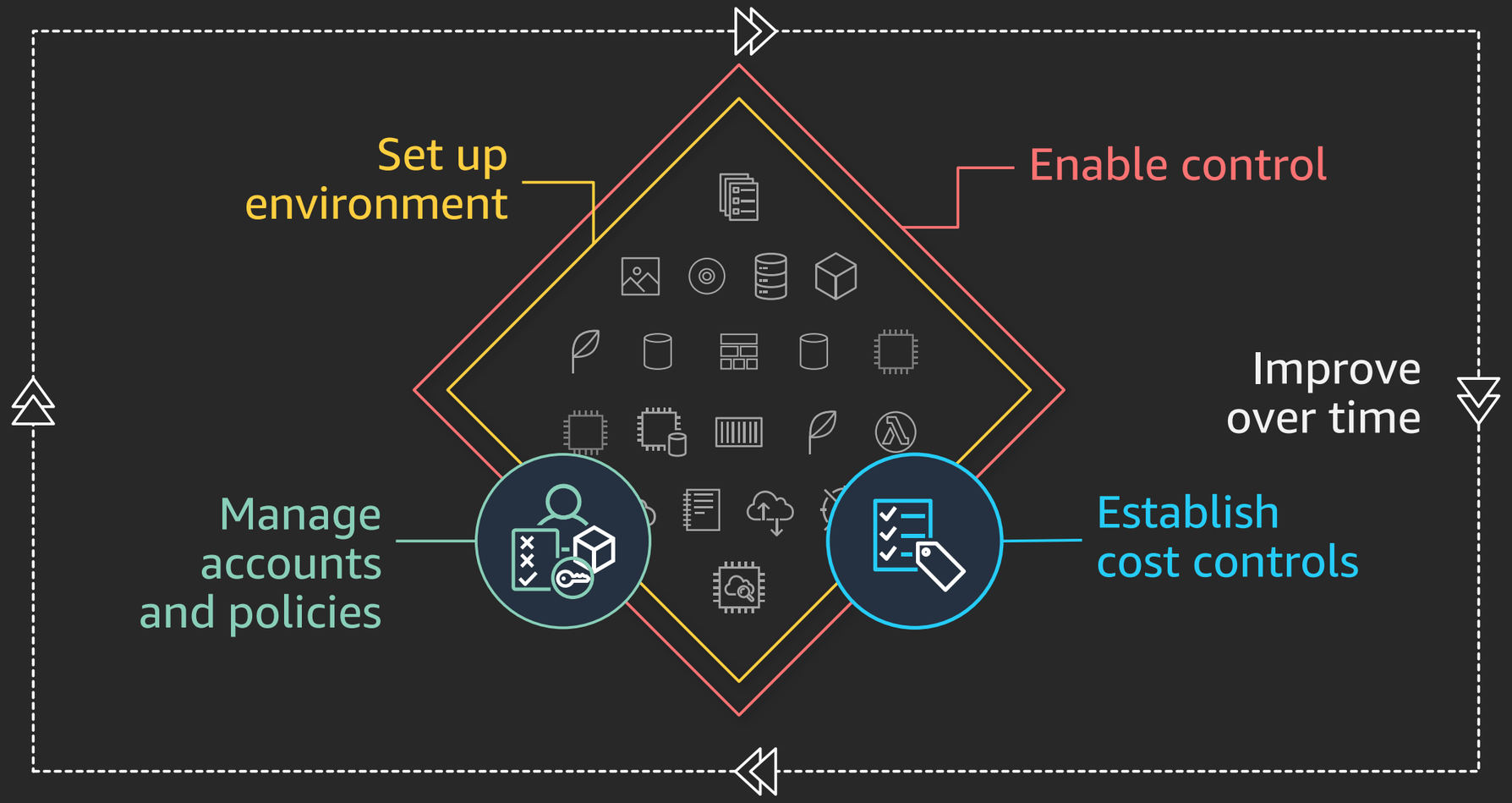
Facilitates agile process and ensures forward progress toward business outcomes by the product team

Product operations

Landing zone facilitates getting started



AWS Control Tower



AWS Prescriptive Guidance for time-tested strategies & guidance

- **Standardized** and **consolidated**
  (as solutions, guides, and patterns on AWS Documentation site)
- **Organized** by business outcomes, target audience, use cases, industry verticals

IT and business executives

What is the strategy for mobilizing my organization for a large-scale migration?

Program managers, architects, team leads

How do I automate my migration with AWS tools and partners?

Builders

How do migrate from Oracle to Amazon Aurora PostgreSQL?

https://docs.aws.amazon.com/prescriptive-guidance/index.html

Migration customer journey

Assessment | **Migration Readiness & Planning (MRP)** | **Migrations & Operations**


MRA Workshop


Opportunity evaluation/ workload selection


Rapid discovery


Deep portfolio discovery


TCO report


Detailed business case


Migration plan

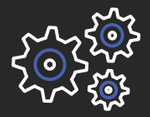

Landing zone


Application design, migration, & validation


Wave 1


Wave 2


Wave 3


Wave 1 (10-20) Applications


Cloud operating model

Skills | Center of excellence (people)

Operational model & policy

Security & compliance policy

Migration planning/PMO

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 Sprints

Business case & TCO	Execution & migration planning	Portfolio discovery & analysis	Migration readiness & assessment	AWS Landing Zone	Operational integration
Security, risk, & compliance	People, skills, and OCM	Application migration	Migration patterns	Automation/ AWS tools	Partner tools


Migration Central

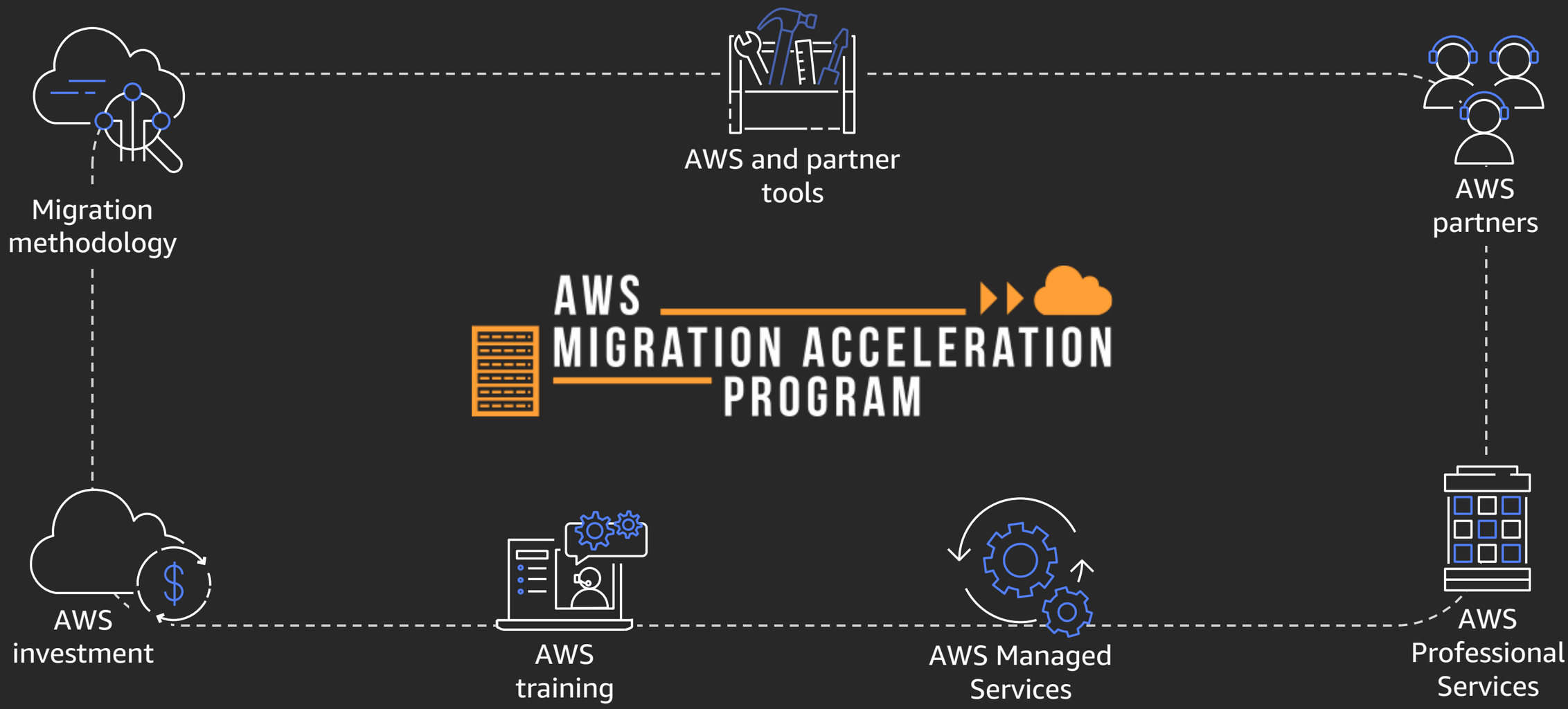
Partners to help you migrate



- AWS Migration Competency Partners (40+)
- Established AWS migration practice
- Current Managed Services or DevOps Competency

- At least Advanced level AWS Consulting Partner
- AWS certifications and certified consultants
- Audited annually against competencies

AWS Migration Acceleration Program (MAP)



AWS Training and Certification for the enterprise

Resources to help your organization build cloud skills and achieve business objective



Cost savings (TCO)



Staff productivity

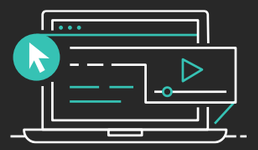


Operational resilience



Business agility

Comprehensive skill development plan for broad cloud fluency



Digital training



Classroom training



AWS Certification



Enterprise resources



Talent pipeline

Visit aws.amazon.com/training/enterprise

Recommended Sessions

Session ID	Title	Type
ENT303-R	Plan and architect an application portfolio migration to AWS	Workshop
ENT319-R	Migration to AWS: A foundation for enterprise transformation	Session
ENT218-R	Executing a large-scale migration to AWS	Session
ENT311-R	Accelerate migration planning using automated processes	Builders Session
ENT313-R	Migrate to AWS using CloudEndure and AWS Migration Hub	Builders Session
ENT304-R	Build a migration factory with CloudEndure and Migration Hub	Workshop
ENT301-R	Create a migration strategy for your application portfolio	Chalk Talk
ENT307-R	Strategies and tools to migrate hundreds of applications	Session
ENT302-R	Accelerate migration to AWS with the right tools	Chalk Talk
ENT226	Increase business value through modernization	Session
ENT237	Transform your enterprise using AWS experience-based accelerators	Session

Thank you!

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