



Cloud Migration & Modernization in the Public Sector

AWS solutions and services to help you
with your cloud journey

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Business drivers for migrating to the cloud



Migration to AWS creates value beyond cost savings



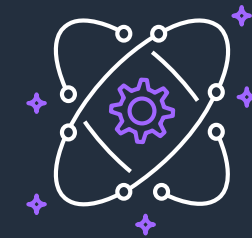
Cost savings (TCO)



Staff productivity



Operational resilience



Mission agility

—What is it?—

Infrastructure cost savings/avoidance from moving to the cloud

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

Benefit of improving SLAs and reducing unplanned outages

Deploying new features/applications faster and reducing errors

—Examples—

31% Average infrastructure cost savings

62% IT staff productivity boost

Critical workloads in multiple Azs and regions 7x less downtime








3X More features delivered per year

← Typical focus →

← Most compelling cloud benefits →
Mission/value

Sources: IDC, AWS Analysis

What sets AWS apart?

-  Security
Fine-grained control
-  Service Breadth & Depth; pace of innovation
175+ services to support any cloud workload; rapid customer driven releases
-  Experience: 1M+ customers
Building and managing cloud since 2006
-  Global Footprint
76 Availability Zones within 24 geographic Regions, 1 Local Zone, 216 Points of Presence (205 Edge Locations and 11 Regional Edge Caches) in 84 cities across 42 countries.
-  Machine Learning
More machine learning happens on AWS than anywhere else. Machine learning in the hands of every developer and data scientist.
-  Ecosystem
Tens of thousands of APN partners. The AWS Marketplace offers 39 categories, and more than 7,000 software listings
-  Enterprise leader
AWS positioned as a Leader in the Gartner Magic Quadrant for Cloud Infrastructure as a Service, Worldwide

Global Footprint

AWS Regions provide multiple, physically separated and isolated Availability Zones which are connected with low latency, high throughput, and highly redundant networking

AWS now spans 76 Availability Zones within 24 geographic regions around the world, and has announced plans for nine more Availability Zones and three more AWS Regions in Indonesia, Japan, and Spain.

With AWS Local Zones, you can easily run highly-demanding applications that require single-digit millisecond latencies to your end-users.

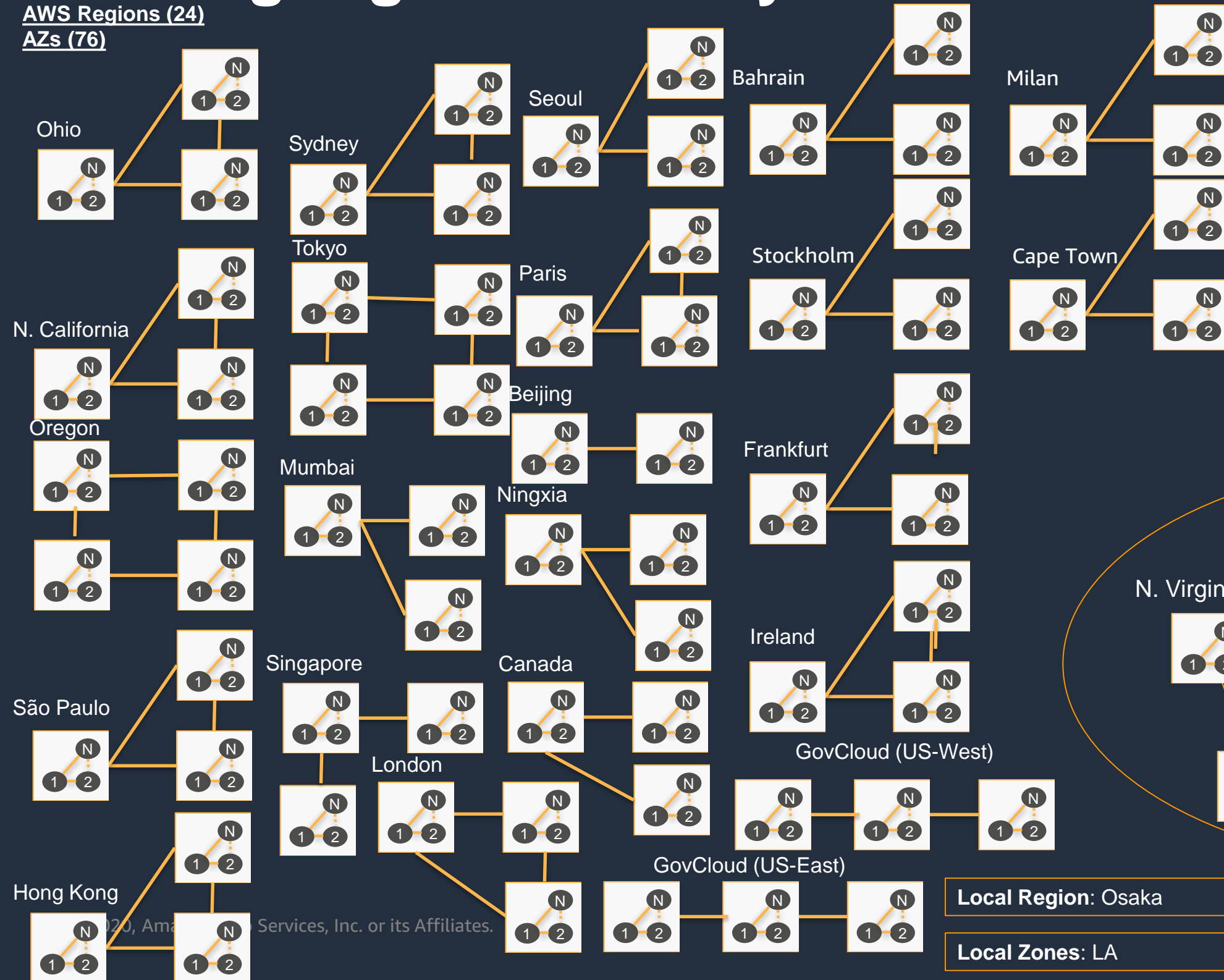
Amazon CloudFront uses a global network of 216 Points of Presence (205 Edge Locations and 11 Regional Edge Caches) in 84 cities across 42 countries.



Ensuring High Availability

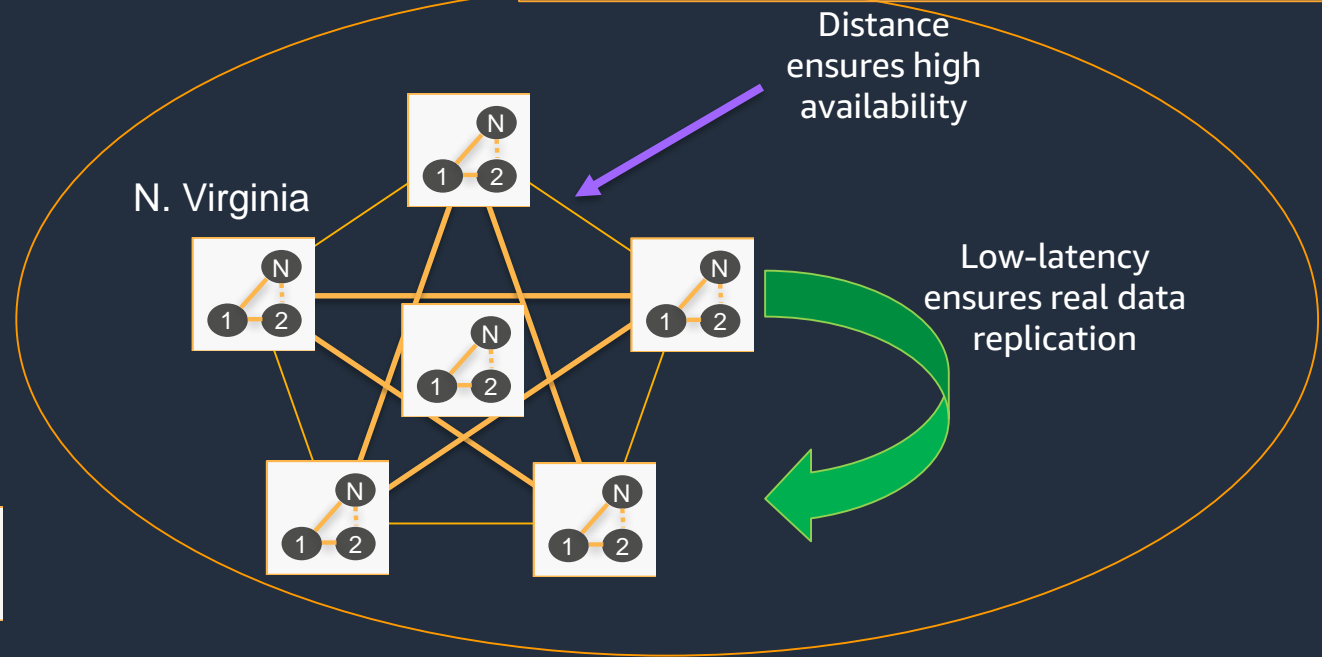
AWS Regions (24)

AZs (76)



The AWS Cloud infrastructure:

- A **Region** is a physical location in the world where we have multiple Availability Zones
- **Availability Zones (AZ)** consist of one or more discrete data centers, each with redundant power, networking, and connectivity, housed in separate facilities. Applications and Data are replicated in real time and consistent in the different AZs
- **AWS Local Zones** place compute, storage, database, and other select AWS services closer to end-users.



Local Region: Osaka

Local Zones: LA

Breadth and Depth of Services

More services and more functionality within those services

ANALYTICS

ANALYTICS	STREAMING
DATA EXCHANGE	ETL
DATA LAKE	HADOOP/SPARK
DATA PIPELINES	INTERACTIVE SQL QUERIES
DATA WAREHOUSE	VISUALIZATIONS
ELASTICSEARCH	

AR + VR

AR/VR EXPERIENCES

AWS COST MANAGEMENT

ANALYZE AWS COSTS
COST & USAGE BUDGETS
COST & USAGE REPORTS
RESERVED INSTANCES REPORTING

APPLICATION INTEGRATION

EMAIL	SEARCH
MESSAGE BROKER	TRANSCODING
QUEUEING & NOTIFICATIONS	WORKFLOW

BUSINESS APPLICATIONS

EMAIL & CALENDARING	UNIFIED COMMUNICATIONS
ONLINE MEETINGS	VOICE-ENABLED WORKPLACE
SHARING & COLLABORATION	

BLOCKCHAIN

BLOCKCHAIN TEMPLATES
LEDGER DATABASE
MANAGED BLOCKCHAIN

CUSTOMER ENGAGEMENT

CONTACT CENTER
EMAIL TARGETING
USER ENGAGEMENT ACROSS CHANNELS

COMPUTE

COMPUTE	CONTAINERS
AUTO SCALING	CONTAINER SERVICE
BATCH JOBS	MANAGED KUBERNETES
EVENT-DRIVEN SERVERLESS COMPUTING	STORE & RETRIEVE DOCKER IMAGES
INSTANCE TYPES	
MANAGED VIRTUAL PRIVATE SERVERS	
MANAGED REPOSITORY FOR SERVERLESS APPS	
RUN & MANAGE WEB APPS	
SERVERLESS COMPUTE	
VIRTUAL SERVERS	

DATABASE

REALTIONAL DATABASES	PURPOSE-BUILT DATABASES
HIGH-PERFORMANCE RELATIONAL DATABASE BUILT FOR THE CLOUD	DOCUMENT DATABASE
MANAGED MARIADB	GRAPH DATABASE
MANAGED MYSQL	IN-MEMORY CACHING
MANAGED ORACLE	KEY-VALUE STORE DATABASE
MANAGED POSTGRESQL	LEDGER DATABASE
MANAGED SQL SERVER	TIME SERIES DATABASE

DEVELOPER TOOLS

ANALYZE & DEBUG
APPLICATION LIFECYCLE MANAGEMENT
AUTHORING
BUILD & TEST
CONTAINERS
DEVOPS RESOURCE MANAGEMENT
ONE-CLICK APP DEVELOPMENT
PATCHING
PIPELINE ORCHESTRATION
RESOURCE TEMPLATES
TRIGGERS

END USER COMPUTING

APP STREAMING	MOBILE ACCESS
DESKTOP COMPUTING	STORAGE & COLLABORATION

HYBRID ARCHITECTURE

AWS SERVICES ON PREMISES	INTEGRATED NETWORKING
DATA INTEGRATION	INTEGRATED RESOURCE & DEPLOYMENT MANAGEMENT
INTEGRATED DEVICES & EDGE SYSTEMS	VMWARE CLOUD ON AWS
INTEGRATED IDENTITY & ACCESS	

GAME TECH

CROSS-PLATFORM 3D GAME ENGINE
GAME SERVER HOSTING

INFRASTRUCTURE

AVAILABILITY ZONES
CUSTOM HARDWARE
DATA CENTER INFRASTRUCTURE
GLOBAL NETWORK BACKBONE
POINTS OF PRESENCE
POWER INFRASTRUCTURE
REGIONS

INTERNET OF THINGS (IOT)

RULES ENGINE
DEVICE ANALYTICS
DEVICE GATEWAY
DEVICE SDK
DEVICE SHADOWS
EVENT DETECTION & RESPONSE
LOCAL COMPUTE
LOCAL DATA COLLECTION MANAGEMENT & SECURITY
MICROCONTROLLER OPERATING SYSTEM
REGISTRY
VISUAL APPLICATIONS DEVELOPMENT

MACHINE LEARNING

ML FRAMEWORKS	SAGEMAKER
DEEP LEARNING AMIs & CONTAINERS	AUTOMATIC MODEL TUNING
HARDWARE ACCELERATION	DATA LABELING
ML AT THE EDGE	HOSTED NOTEBOOKS
TENSORFLOW, PYTORCH, MXNET	ML MARKETPLACE
	MODEL HOSTING
	MODEL OPTIMIZATION
	MODEL TRAINING
AI SERVICES	PRE-BUILT ALGORITHMS
CHATBOTS	TOPIC MODELING
ENTITY EXTRACTION	DEEP LEARNING MODELS
FACE ANALYTICS	REINFORCEMENT LEARNING
FACE SEARCH	SPOT INSTANCES
FORECASTING	BATCH PREDICTIONS
IMAGE LABELING	REAL-TIME PREDICTIONS
NATURAL LANGUAGE PROCESSING	
PERSONALIZATION & RECOMMENDATION	
SENTIMENT ANALYSIS	
SPEECH TRANSCRIPTION	
TEXT & DATA EXTRACTION	
TEXT TO SPEECH	
TRANSLATION	
VIDEO & IMAGE ANALYSIS	
CONTENT MODERATION	

MANAGEMENT & GOVERNANCE

ACTIVITY & API USAGE TRACKING	MONITORING
CHATBOT	PROVISIONING
CONFIGURATION TRACKING	RESOURCE TEMPLATES
GOVERNANCE	SECURITY RECOMMENDATIONS
INVENTORY TRACKING	SERVER MANAGEMENT
LICENSE MANAGER	SERVICE CATALOG
MANAGE POLICIES	SYSTEMS MANAGER
MANAGE RESOURCES	

MARKETPLACE

ANALYTICS	MACHINE LEARNING
DATA PRODUCTS	NETWORKING
DATABASES	OPERATING SYSTEMS
DEVOPS	SECURITY
IOT	STORAGE

MEDIA SERVICES

LIVE VIDEO TRANSPORT	VIDEO PERSONALIZATION & MONETIZATION
MEDIA STORAGE	VIDEO PROCESSING & DELIVERY
TRANSCODING	VIDEO ORIENTATION & PACKAGING
VIDEO ORIENTATION & PACKAGING	VIDEO STREAMING ANALYSIS

MIGRATION & TRANSFER

APPLICATION MIGRATION
DATABASE MIGRATION
EXABYTE-SCALE MIGRATION
ONLINE DATA TRANSFER
SCHEMA CONVERSION
SERVER MIGRATION
TRANSFER FOR SFTP

MOBILE

API GATEWAY	MOBILE APP TESTING
DEVELOPMENT FRAMEWORK	SINGLE INTEGRATED CONSOLE
IDENTITY	SYNC
MOBILE ANALYTICS	TARGETED PUSH NOTIFICATIONS

NETWORKING & CONTENT DELIVERY

APPLICATION DELIVERY
DEDICATED NETWORK CONNECTION
DOMAIN NAME SYSTEM
LOAD BALANCING
MONITOR APIS
MONITOR MICROSERVICES
NETWORK TOPOLOGY
NETWORKING HUB
PRIVATE CONNECTION TO APPS
SCALE VPC & ACCOUNT CONNECTIONS
SERVICE DISCOVERY
VIRTUAL PRIVATE CLOUD

ROBOTICS

CLOUD ROBOTICS

SATELLITE

SATELLITE OPERATIONS

SECURITY, IDENTITY, & COMPLIANCE

ACCESS CONTROL
ASSESSMENT & REPORTING
CONFIGURATION COMPLIANCE
DATA PROTECTION
DDOS PROTECTION
IDENTITY MANAGEMENT
KEY MANAGEMENT & STORAGE
MONITORING & LOGGING
RESOURCE MANAGEMENT
THREAT DETECTION
WEB APPLICATION FIREWALL

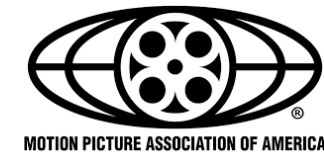
STORAGE

ARCHIVE STORAGE
BACKUP & RESTORE
BLOCK STORAGE
DATA TRANSFER
EDGE PROCESSING & COMPUTING
FILE STORAGE
HIGH-PERFORMANCE FILE SYSTEM
HYBRID CLOUD STORAGE
OBJECT STORAGE
WINDOWS FILE SYSTEM

CUSTOMER ENABLEMENT

ACCOUNT MANAGEMENT
DASHBOARD PERSONALIZATION
ENTERPRISE SUPPORT
EXPERTS MARKETPLACE
OPTIMIZATION GUIDANCE
PARTNER ECOSYSTEMS
PROFESSIONAL SERVICES
SECURITY & BILLING REPORTS
SOLUTIONS MANAGEMENT
TRAINING & CERTIFICATION

Architected for Government Security Requirements



And many more...

<https://aws.amazon.com/compliance/>



Why use AWS to migrate your workloads?



Most migration experience

Over a million active customers; leading brands migrate to AWS



Most comprehensive and mature migration tools

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



Broad partner ecosystem

80+ Migration certified partners, ISVs, and system integrators to help customers assess, mobilize and execute their cloud migration



Most complete migration solutions

Set of programs and solutions to accelerate your cloud journey

Thoughtful, methodical multi-year plan for cloud migration includes...



Senior leadership conviction
and alignment



Top-down quantifiable goals



Establish accountable leads,
train your teams



Build experience,
don't overanalyze

Migration process



Assess



Mobilize



Migrate & modernize



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“The successful migration of mission-critical DLA applications to AWS GovCloud (US) delivered significant cost savings to the government, as well as increased efficiency for application management and improved customer experiences”

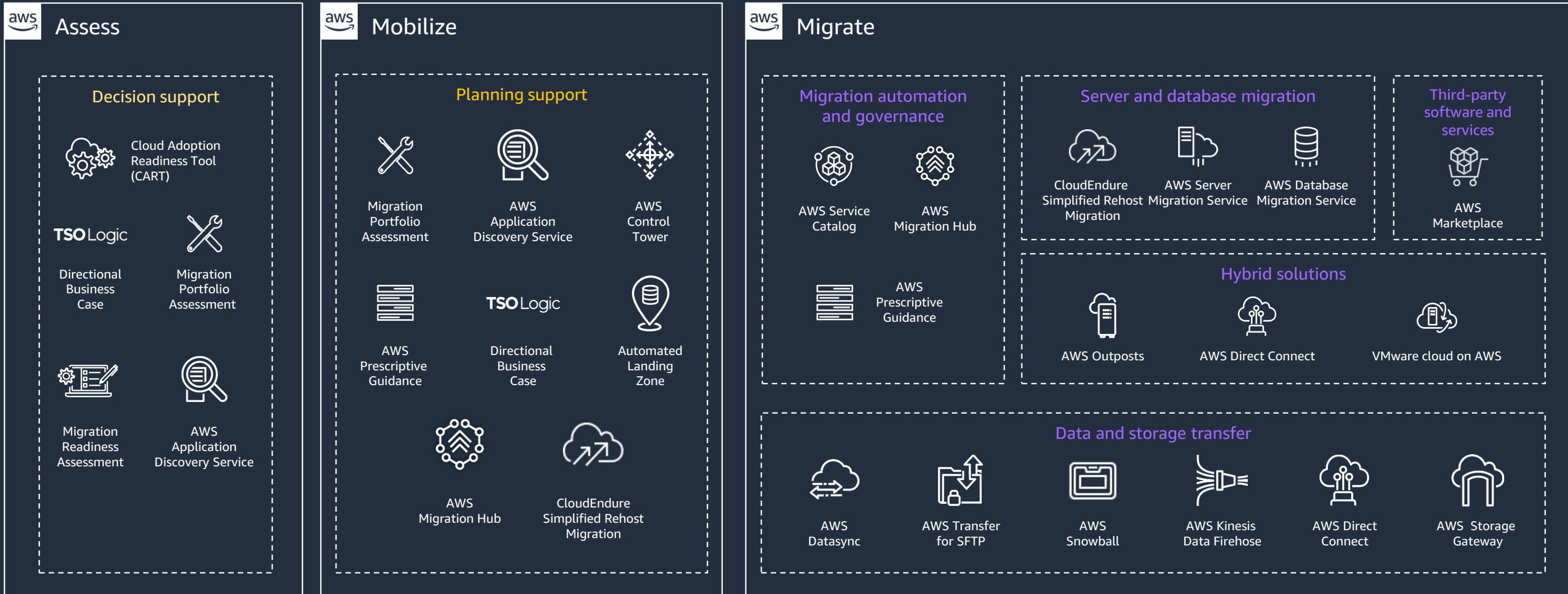
-Atul Mathur, PIEE Program Manager

”

Public sector customers



Broadest and deepest set of capabilities to accelerate your migration



Migration readiness assessments highlight key areas of focus



Assessment
focus



Customer data sources
Self-service and
guided assessments
Stakeholder
conversations



Business
capability assessment

Business
Value realization

People
Roles & readiness

Governance
Prioritization & control



Technical
capability assessment

Platform
Applications & infrastructure

Security
Risk & compliance

Operations
Hybrid & dynamic

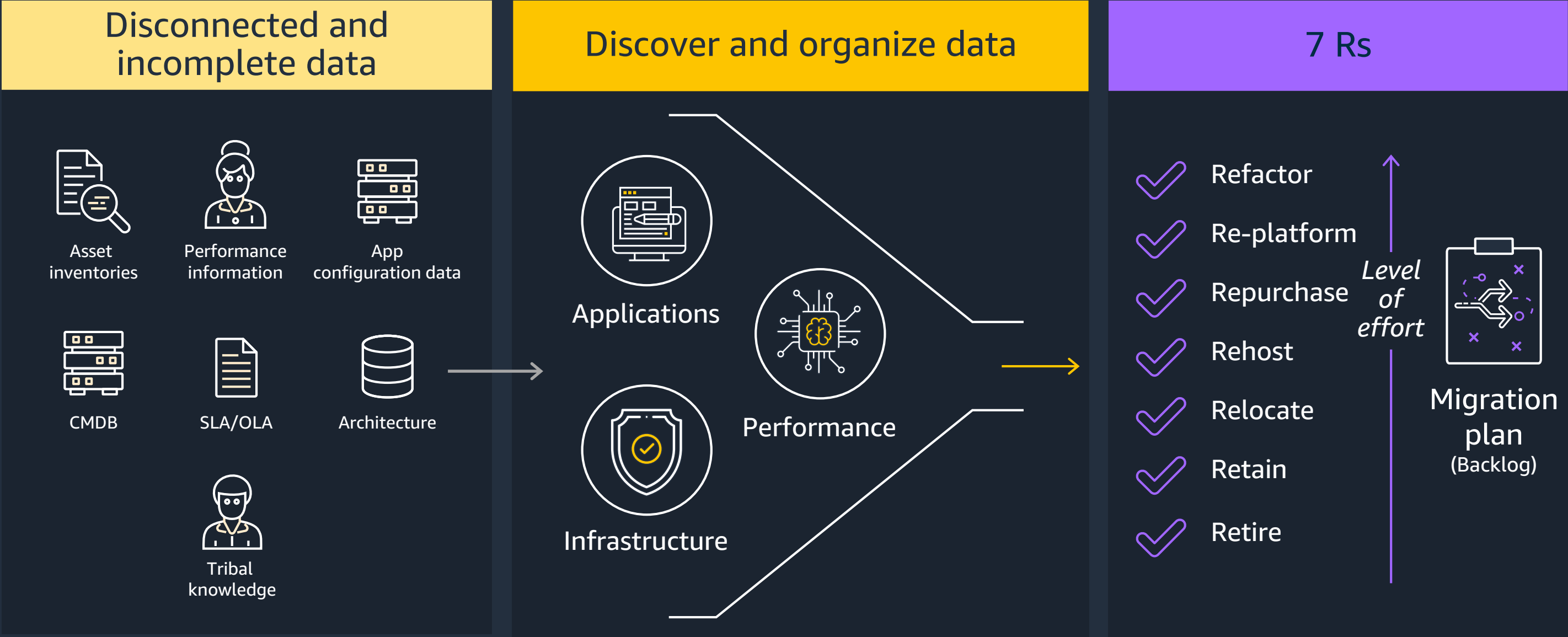


**Readiness
assessment results**

Determine the right migration pattern for your apps



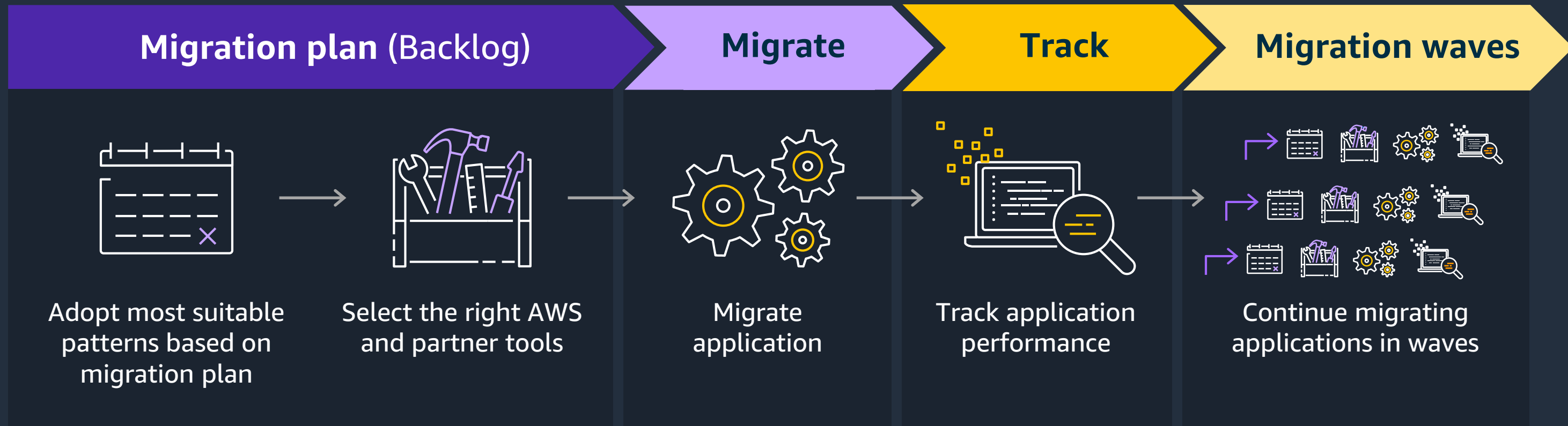
Mobilize



Application migration workflow



Migrate & modernize



Develop an optimization roadmap

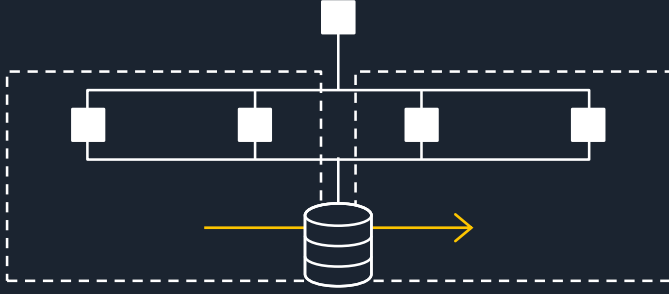


Migrate & modernize



Migrated applications

Optimize availability and performance
 Portfolio tier: commodity
Characteristics
 Non-business-critical, low change, minimal risk
Approximate % portfolio**
 50%

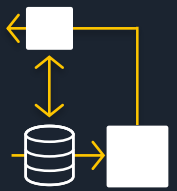


Rehosted and repurchased apps



Non-migrated applications

Evolve to breathe new life into your applications
 Portfolio tier: critical
Characteristics
 Business critical, but low rate of change
Approximate % portfolio**
 30%



Replat, rearchitect



Rearchitect, refactor

Split-off microservices from the monolith
 Portfolio tier: differentiated
Characteristics
 High rate of change & customer-facing
Approximate % portfolio**
 20%



Modernized applications

**by number of applications, not percent of spend, as seen in typical customer environments

Architecture evolution

When the impact of change is small, release velocity can increase



Monolithic application

- Does everything
- Shared release pipeline
- Rigid scaling
- High impact of change
- Hard to adopt new technologies



Microservices

- Does one thing
- Independent deployments
- Independent scaling
- Small impact of change
- Choice of technology

AWS Partner Competency Program

Recognizing partners with proficiencies in key solutions, verticals & infrastructure



Big Data



Mobile



Security



DevOps



Migration



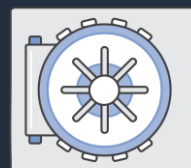
Digital Media



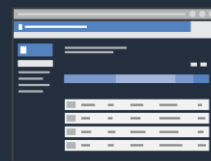
Healthcare



Life Sciences



Storage



Microsoft

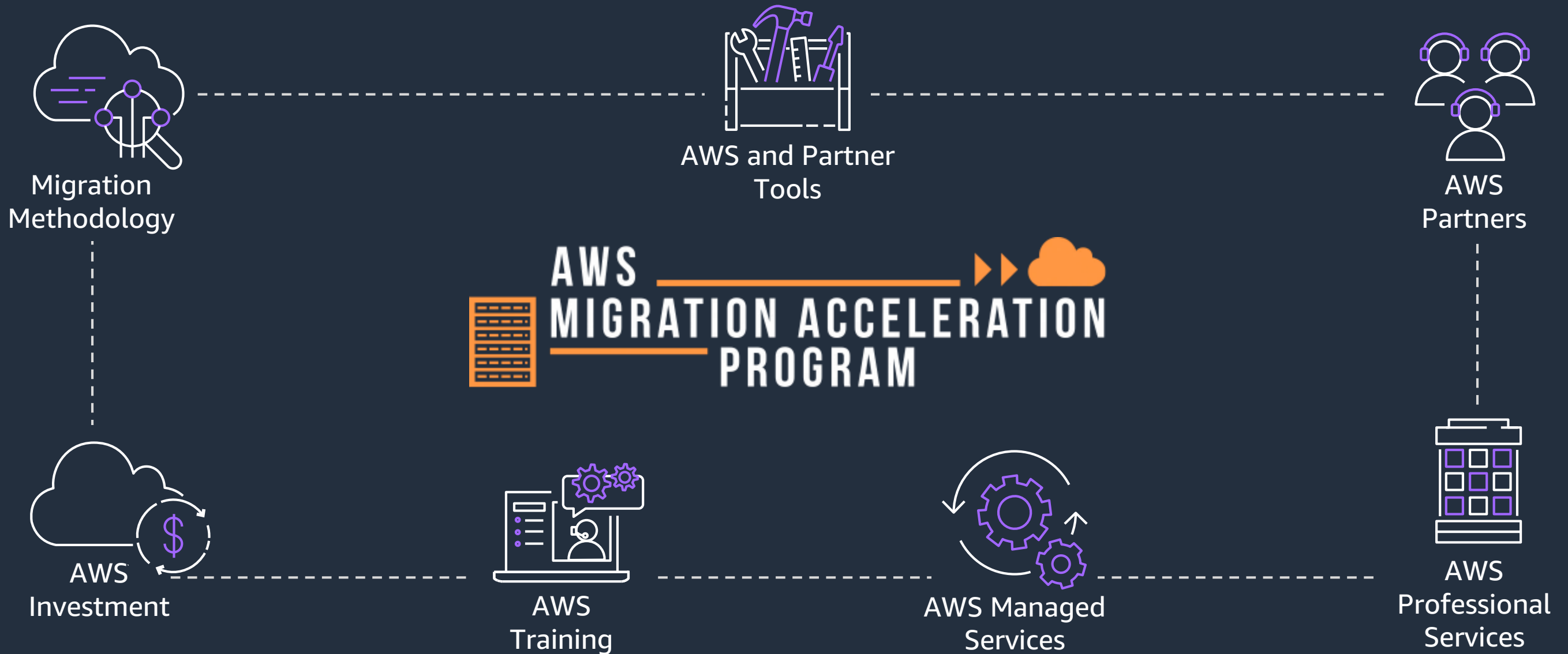


SAP




Oracle

The most comprehensive set of services and expertise



GDIT Partner Overview



Premier
Consulting
Partner

MSP Partner

Well Architected

Government
Competency

Public Safety and
Disaster Response
Competency

Public Sector Partner

Public Sector Channel
Partner

- 2019 AWS Public Sector Partner of the Year Award
- AWS Premier Partner
- AWS Authorized Public Sector Partner
- AWS Authorized Government Reseller
- Managed Services Competency
- AWS Authorized Well-Architected Partner
- AWS Public Safety & Disaster Response Competency
- All AWS services available on GSA Schedule 70
- Support 30+ AWS Enterprise Programs across the Federal Government
- 10+ Enterprise Cloud Brokerages
- 80+ Enterprise Cloud Projects
- 2,000+ AWS accounts under management
- 50,000+ AWS instances under management
- 370+ AWS Certifications

Corent Technology Partner Overview

Corent's SurPaaS® Platform automates some of the most complex, time and labor-consuming Cloud migration, modernization and management tasks. SurPaaS® is used by AWS clients and partners to accelerate Discovery/Assessment, Cloud Migration, PaaS Integration, Containerization, SaaS-enablement, Marketplace Publishing, and Cost Optimization, as a fully integrated automation platform for the entire AWS Cloud Journey.

