Hawaiʻi Cloud Innovation Summit 2023

Migration Journey from Mainframe to the Cloud

Transforming the business to improve customer service with cloud capabilities

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CSEA KEIKI System

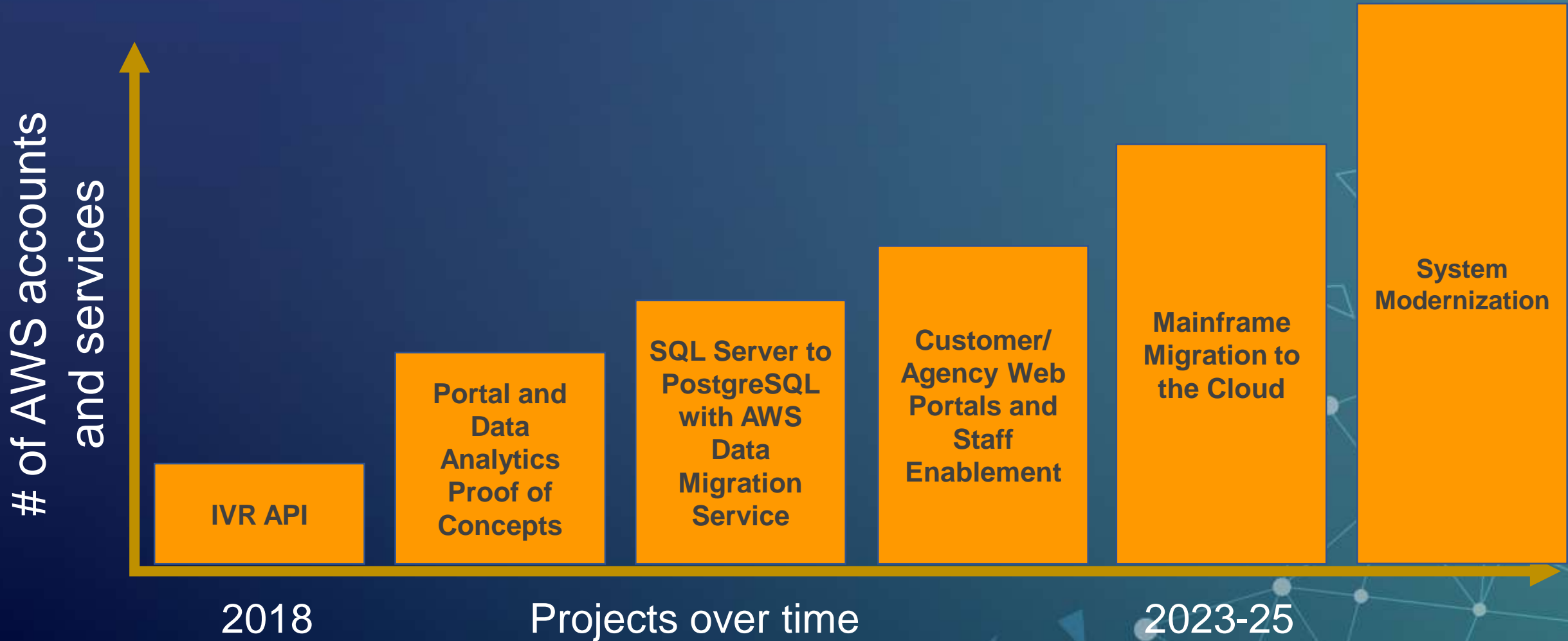State of Hawaii
Child Support Enforcement Agency

To promote the well-being of children and the self-sufficiency of families through the timely and accurate delivery of Child Support Services, while providing excellence in customer care.

Mainframe Migration ROI

Mainframe	Cloud
Major upfront CapEx or higher MFaaS	Pay-as-you-go OpEx
Legacy skill sets	Modern skill sets
Operational support	Business Agility – Innovate!

CSEA Cloud Maturity

# of AWS accounts and services (vertical axis)

- IVR API
- Portal and Data Analytics Proof of Concepts
- SQL Server to PostgreSQL with AWS Data Migration Service
- Customer/Agency Web Portals and Staff Enablement
- Mainframe Migration to the Cloud
- System Modernization

2018 — Projects over time — 2023-25

CSEA Staff Enablement

of AWS skills

**Accounts
VPC
API Gateway
Network Security**

**Well-Architected
Framework
CloudFormation
SQL Server RDS
EC2
S3
DynamoDB
Data Migration
Service
QuickSight
Lambdas**

**PostgreSQL RDS
Data Migration
Service
EC2
Multi-AZs
Code Commit
Code Pipeline
Code Deploy
IRS 1075
compliance**

**CloudFront
WAF
Route 53
CloudWatch
CloudTrail
WAF
ELB
Cognito
API Gateway
SES, SNS
Node.js
Python
React.js
Cypress.io**

**Mainframe
Migration to
the Cloud**

**System
Modernization**

2018

2023-25

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1075 Compliance

Mainframe migration strategies
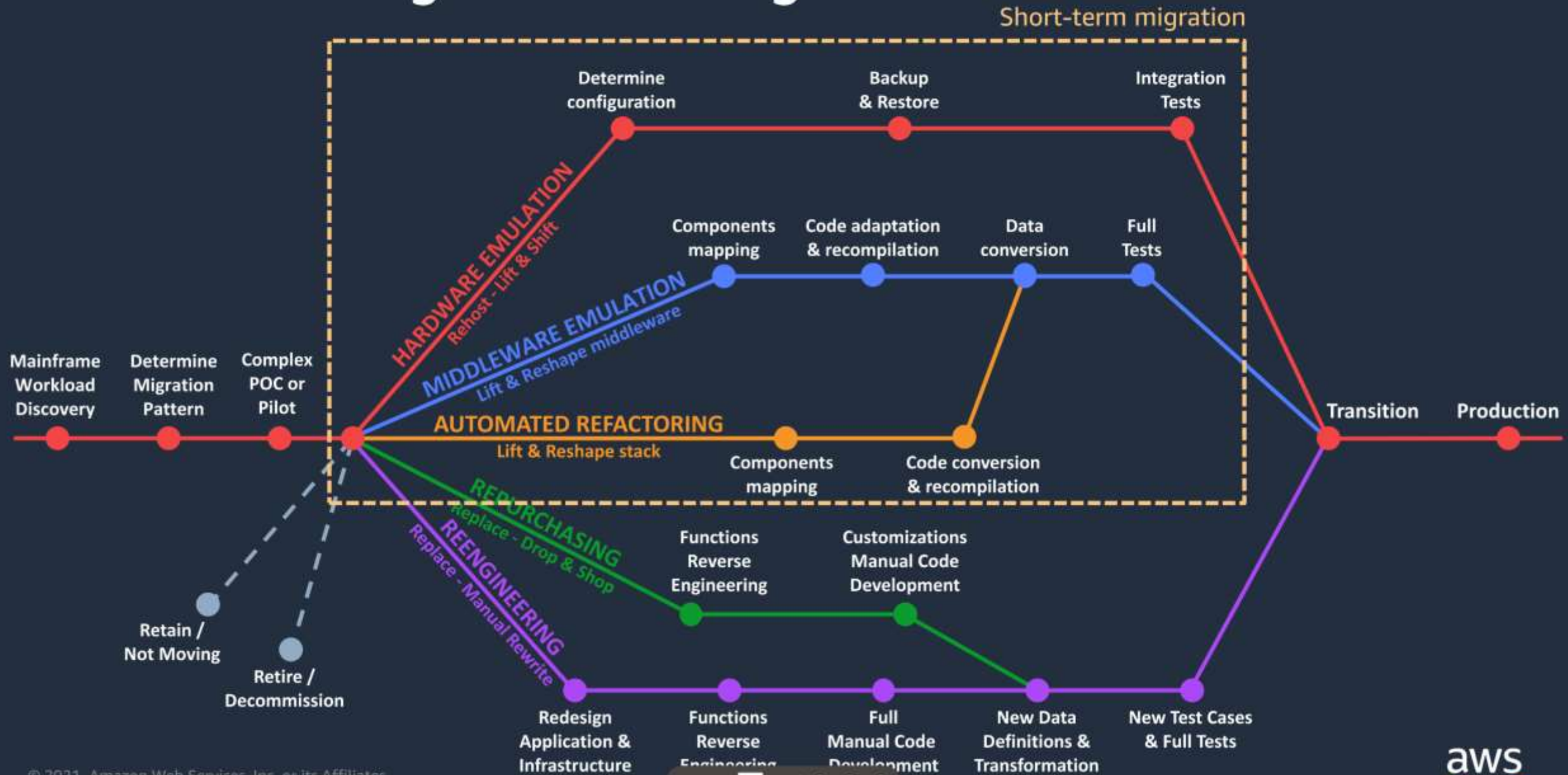
Mainframe short-term migration patterns

Mainframe Platform

- Business functions
  - Application code
  - Utilities
  - Data format
- Application middleware | Database & Files
- Mainframe operating system
- Mainframe Hardware

1. Legacy Hardware Emulation

- Business functions
  - Application code
  - Utilities
  - Data format
- Application middleware | Database & Files
- Mainframe operating system
- Hardware emulator
- Linux operating system
- AWS Cloud

2. Legacy Middleware Emulation

- Business functions
  - Application code
  - Utilities
  - Data format
- Application middleware emulator | Database & Files emulator
- Linux operating system
- AWS Cloud

3. Legacy Automated Refactoring

- Business functions
  - Application code
  - Utilities
  - Data format
- Application middleware | Database & Files
- Linux operating system
- AWS Cloud

4. Modern Middleware Replatforming

- Business functions
  - Application code
  - Utilities
  - Data format
- Application middleware | Database & Files
- Linux operating system
- AWS Cloud

Legend: ■ Same ■ Changed

aws

AWS Customer Enablement

AWS Professional Services

Skills and experience from AWS experts to supplement your team

AWS Support

Go beyond reactive break-fix with proactive Support programs

AWS Managed Services

Offload day-to-day AWS infrastructure management and operation

AWS IQ

A marketplace of AWS Certified third-party experts

AWS Training and Certification

Advance your team's skills and build cloud fluency by learning from AWS experts

APN Partners

A global network of APN Partners with deep AWS expertise

AWS Immersion Days

Price: Free.

Where: Virtual or Customer Site

Outcome: unlock business potential and meet key objectives

Audience: Architect, Developer, IT Professional, Operations, or C-Suite

Work with AWS Solution Architects and Service Specialists to understand how AWS is the right choice for your business.

ImmersionDays leverage presentations and hands-on labs in the AWS Service(s) of your choice to get the real feel of "how it works".

Choose from 100+ ImmersionDays across 20+ domains.

What is the AWS Well-Architected Framework?

Pillars

Design principles

Questions

Pillars of the AWS Well-Architected Framework

Operational Excellence

Security

Reliability

Performance Efficiency

Cost Optimization

Sustainability

Review Process

Identify a significant workload

Prepare for review

Review architecture

Review results and improvement plan

Create a plan to fix high risk issues

AWS Support - Technical and Business

- Child Support Enforcement Agency Specialist
- Compliance Specialist – IRS 1075
- Mainframe Migration Specialist
- ONE Team (AWS; CSEA; DataHouse)

Modernizing mainframe unlocks business value

As customers modernize and migrate mainframe workloads to cloud, they are looking for ways to get a better value for their modernization efforts based on the following key drivers that drive their migration to cloud

Financial outcomes

Mainframe operating and maintenance costs are rising faster than those for any other form of computing

Business risk reduction

Limited scalability, competitiveness, and constrained customer responsiveness.
MIPS are a finite resource

Legacy skill shortage

Aging workforce maintaining legacy applications, creating a need to modernize and migrate mainframes to reduce cost, technical debt, and operational complexity

Agility and insights

Accelerate time to market, gain visibility to legacy data, and apply advanced analytics capabilities to uncover key business insights

Migration Cost Bubble

Cost

Current operating cost

Migration cost bubble

| 5% | 10% | 30% | 60% | 80% | 100% |

Benefit realization schedule

Target operating cost

Time
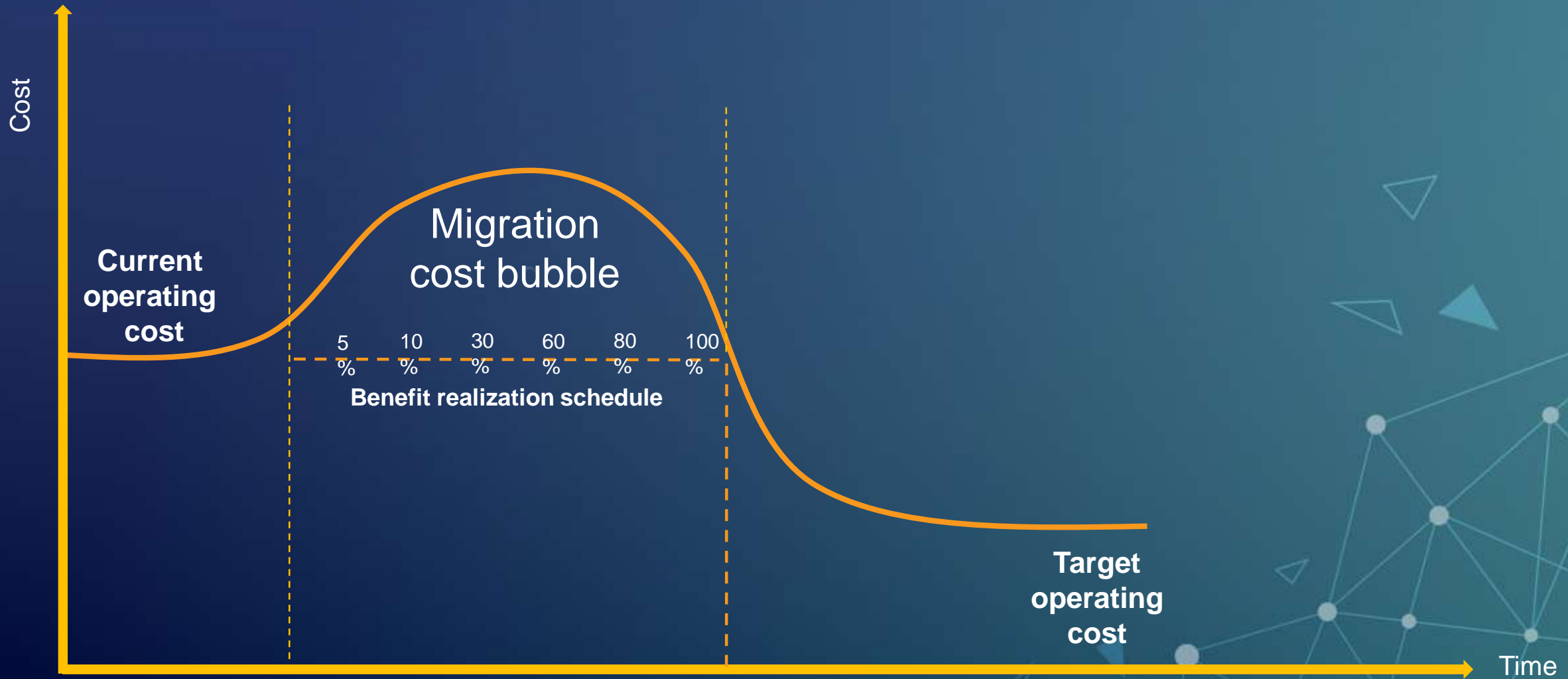
Migration Acceleration Program (MAP)

Flagship AWS program to help customers migrate and modernize to AWS using a proven approach

AWS and Partner
Tools

Migration
Methodology

AWS
Partners

AWS MIGRATION ACCELERATION PROGRAM

AWS
Investment

AWS
Training

AWS
Professional
Services
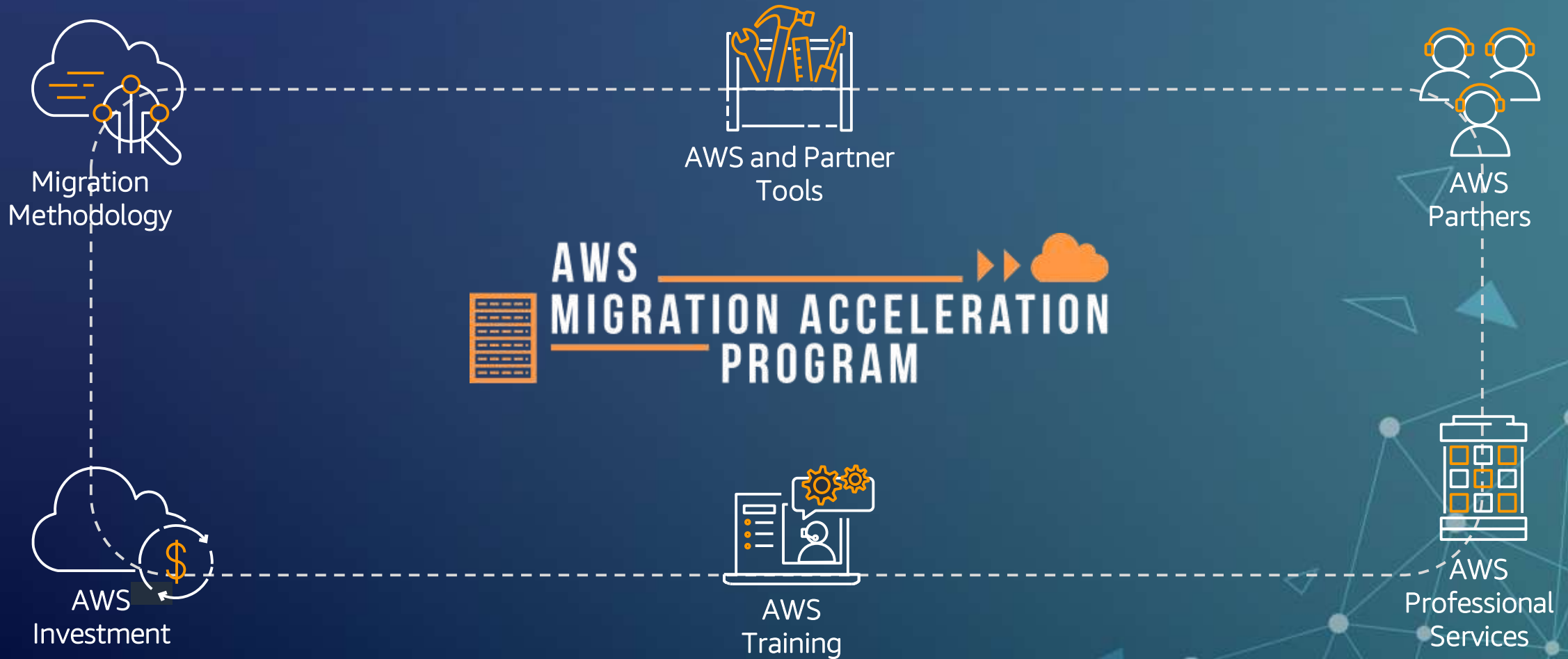
Using a proven framework greatly increases your speed to market

MAP Phases

STEP 1

ASSESS

DISCOVERY

Identify workload(s) with discovery tool of choice

MIGRATION & MODERNIZATION PATTERNS

Recommend Migration & modernization strategy

Prep source and target architecture diagrams and/or data flow diagrams

TCO ANALYSIS

Compare current state costs to target state

Identify best AWS pricing model for workloads in scope

STEP 2

MOBILIZE

VALIDATE MIGRATION PATTERN(S)

Identify workload candidates to be used as Pilot/MVP

SUCCESS CRITERIA

Define operating model and assess organizational readiness

WELL-ARCHITECTED REVIEW (WA-R)

Establish full operating capability

WA-R required for Pilot/POC workloads in Mobilize

STEP 3

MIGRATE & MODERNIZE

MIGRATE

Migration plan per pattern(s) validated in mobilize

Milestones & ARR Estimates

Customer Sign-off is required for each project milestone

OPERATE

Implement Operating Model

Business Continuity/Disaster Recovery

Customer Enablement/ Training Plan

OPTIMIZE/ INNOVATE

Continuously refine operating model & cloud capabilities for Strategic impact

Drive broader adoption and extend cloud capabilities where possible

DELIVERABLES

Step 1: SOW/ Project Plan · Calculated ARR · Assess Analysis Report · Customer Sign-off

Step 2: SOW/ Project Plan · Calculated ARR · Success Criteria Report · WA-R Report · Customer Sign-off

Step 3: SOW/ Project Plan · Calculated ARR · Customer Sign-off

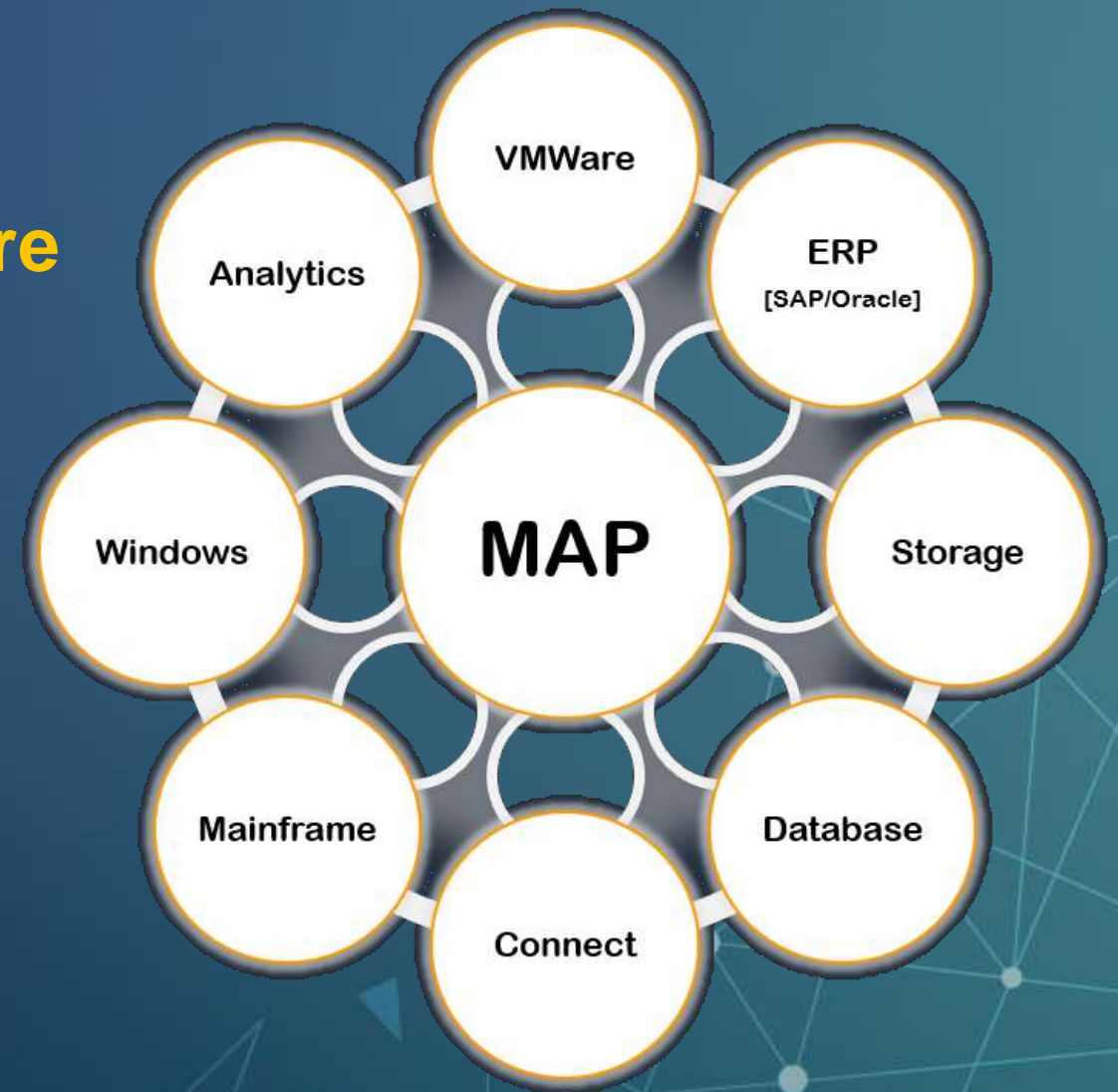TRUE · TRANSFORM HAWAI'I GOVERNMENT · DataHouse · aws | Hawai'i Cloud Innovation Summit 2023
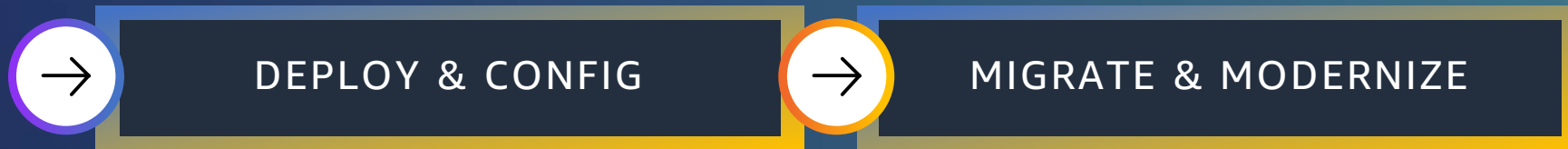
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MAP for Specialized workloads

AWS supports you with one or more of the following:

- Specialized services and tools
- Proof of concept investments
- Advisory and technical guidance
- Curated training

LZAP Partner Funding Benefits

Landing Zone Accelerator on AWS for Industry Program (LZAP) funding is designed to help our customers cover costs to not only deploy and configure the LZA solution, but also take their first step in migrating a first workload.

→ **DEPLOY & CONFIG**   → **MIGRATE & MODERNIZE**

$300k ARR or Lower	**30%** of post migration ARR (max of $90K) in cash. Above $300k ARR LZA opportunities should consult the MAP program	**15%** of post migration ARR (max of $45K) in cash. Above $300k ARR LZA opportunities should consult the MAP program

Learn in-demand AWS Cloud skills
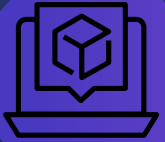
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Deepen your skills with digital learning on demand

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Receive Foundational, Associate, Professional, and Specialty certifications

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Gain free, hands-on experience with the AWS platform, products, and services

Types Of Offers

Explore more than 100 products and start building on AWS using the Free Tier. Three different types of free offers are available depending on the product used. Click icon below to explore our offers.

Free trials

Short-term free trial offers start from the date you activate a particular service

12 months free

Enjoy these offers for 12-months following your initial sign-up date to AWS

Always free

These free tier offers do not expire and are available to all AWS customers

Feedback Please!

URL: https://www.pulse.aws/survey/WSJTSC1F

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Thank you!

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