## aws summit

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MIG006

# Migration factory: Axis Bank's journey to the Cloud

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## Agenda

- Why Migration?
- What are the challenges?
- Which path should you take?
- How do you pave through the path?
- Who can help you in this?
- Lets hear from our customer Axis Bank



## Business drivers for migrating to the cloud





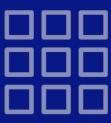
## Migration challenges



Time constraints



Multiple team coordination



Scale



Manual error



Small repetitive tasks



Centralized tracking

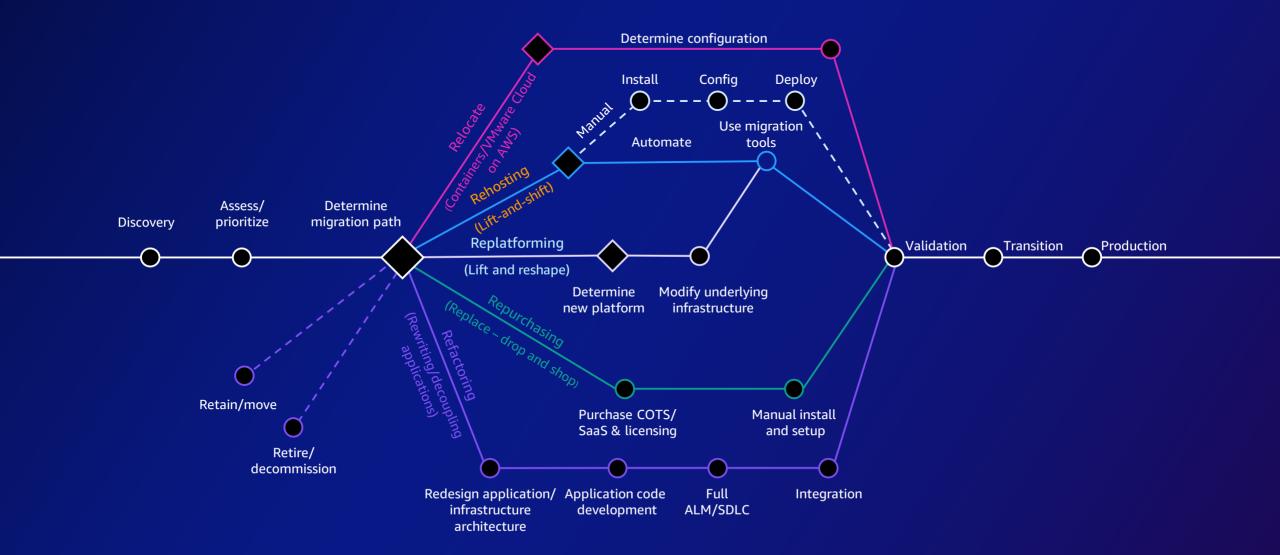


## Which path should you follow?





## Different paths to reach the end outcome

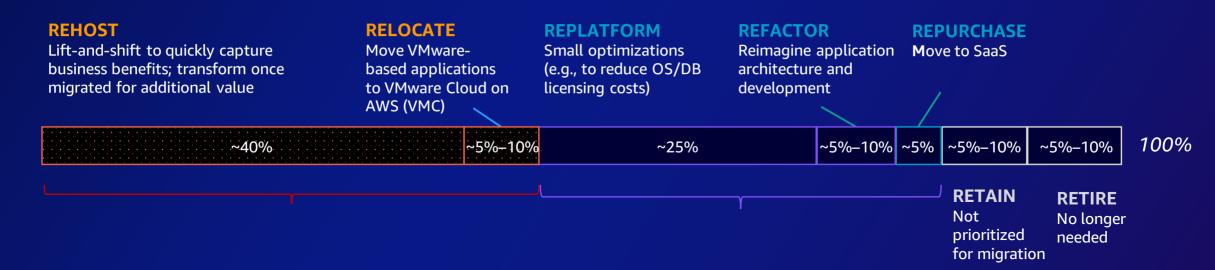




## Portfolio assessment will be continual

#### **AVERAGE CUSTOMER ENVIRONMENT, BY MIGRATION PATTERN**

(based on AWS experience)



Full spectrum of patterns is important for transformation – but up to ~50% of typical environment can be *rapidly migrated*, freeing time and budget to focus on modernization



## Scale up the team as you go

**CCoE** (0–6 months)



Cloud leader

**Product owner** 

Financial analyst

**OCM/training specialist** 

**Cloud architect** 

**Platform engineers** 

#### **Scaling team**

(6–12 months)

#### **Cloud business office**

Architecture alignment	Product management
Onboarding	Financial management
Training	Org change management



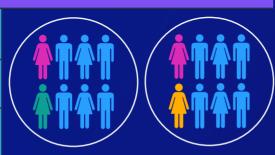
Delivery management

#### **Cloud platform engineering**

Platform

Operations

Security



#### Migration at scale

(12+ months)

#### **Cloud business office**







Product Architecture

Financial Delivery

Onboarding

OCM Training

#### **Cloud platform engineering**

Platform

Operations

Security









# The way you operate today will not be the same in the cloud



#### Selfmanaged

#### **Full control simplified with AWS tools**

- AWS Service Catalog
- AWS Systems Manager
- AWS management tools & services
  - Modeling and provisioning, automation and operations, monitoring and logging
- Third-party tools

#### AWS Managed Services (AMS)

We operate your cloud with AWS best practices and compliance standards so you can focus on your business priorities

- · Addresses security & compliance
- Managed AWS landing zone
- Self-service automation
- 24/7 worldwide AWS operations support engineers
- Month-to-month terms you can take back control any time

#### Partnermanaged

## Use AWS Certified Managed Service Partners to help operate your cloud

- 100+ Managed Service Partners (MSPs)
- Certification program
- Third-party audit
- Full lifecycle services

https://aws.amazon.com/partners/msp/



## Lessons learned: Migrate and modernize



Rehost and then optimize is a powerful combo

A reorg is not required

Dive deep on the options available to you in each R

Respect Parkinson's Law on migration

Wave planning and execution should be iterative

MAP credits can smooth the way

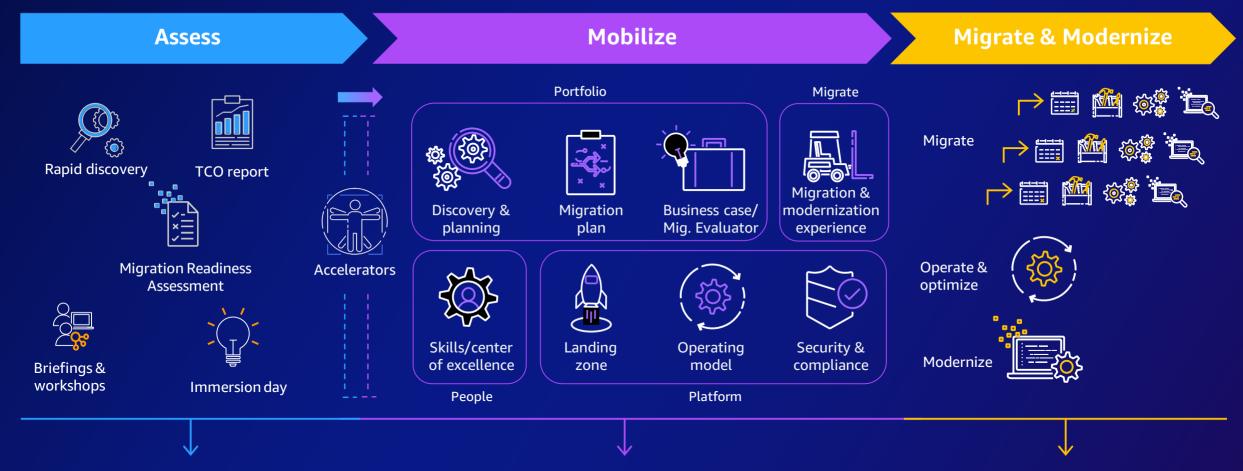
Momentum and blockage removal is key!

Don't forget all the data; there's more than apps/databases

Clean up resources as you go

**Biggest lesson learned:** Post-migration cost optimization

## How did AWS help Axis Bank?



Create a case for change

Build readiness through experiences

Accelerate transformation at scale

Using a proven framework greatly increases your odds of success and speed to market





## Digital Banking has been Axis Bank's silent revolution ...



**D2C** products



**Transformation** 



**Capabilities** 

94% Digital transactions1

79% **Credit Cards** issued<sup>2</sup>

70% New SA acquisition<sup>3</sup>

4.8 Mobile App rating4

54% PL disbursed (End-to-end digital) 73% New MF

SIP volume<sup>2</sup>

250+

1600+

People

dedicated to

digital agenda

Services available on digital channels

17% Market share

in UPI<sup>2</sup>

~370

In-house

development

digital team

15% Market share in mobile<sup>5</sup>

67%

**New hires** 

from non-

banking

backgrounds

Mobile Banking MAUs<sup>2</sup>

~11 Mn 103500+ 2,750+

**Automated** Devices on Processes (IA) **BYOD** 

PB Scale big data Hadoop clusters

~76

Apps on Cloud

Agile

**Enabled teams** with CI/CD. micro-services architecture



## **Axis Bank - Cloud footprint**





#### **Cloud Adoption**

38%

Increase in new applications adopting cloud in FY22-23

96%+

CIS Benchmark score across bank public cloud.

#### **Process**

Continuous improvements and process streamlining.

75+

Applications Hosted on Cloud

30+

Cloud Native Managed Service leveraged across multiple applications

3000+

Virtual Machines running across multiple operating system

98%+

VA and IPT Compliance across bank public cloud.

150+

Use cases across credit, fraud, marketing & analytics on cloud decisioning platforms..

#### Security

Guard Rails in place with robust Landing Zone architecture.

100+

Containerized environments to support microservices based architecture



#### **Cost Control & Optimization**

26%

Cost Optimization



#### Architecture & security

50+

Standard Security Document created for Cloud services.

10+

Reference architecture created with Security Best practice adoption.





300+

Staff benefitted from the curated training programs and Learning Needs Assessment





## The cloud CoE at Axis Bank







#### **Cloud Business office**

#### Solution Architecture

- App stakeholders facing
- Cloud adoption support
- Reference architecture alignment
- · Engineering support

#### **FinOPS**

- Cost optimization
- Reporting & forecasting
- Prevent sprawl of cloud spend
- Financial accountability & visibility

## Product delivery management

- Prioritization and roadmap
- Agile execution support
- Invoice management
- Functional work decomposition
- Sourcing

#### Cloud Platform Engineering

#### Cloud Networking & security

- VPC network services
   & connectivity
- Perimeter & internal network security
- Firewall/IPS/DDoS/W AF/LB
- Virtual vulnerability patching at WAF.

#### Cloud Governance & compliance

- Audit support
- Infra threat vulnerabilities
- Policy Management
- Identity & access
   Management
- Security posture & control support

#### **Cloud Ops**

- Provisioning
- Day to day support
- Patching
- Monitoring & alerts
- Platform health & reliability
- Vendor oversight

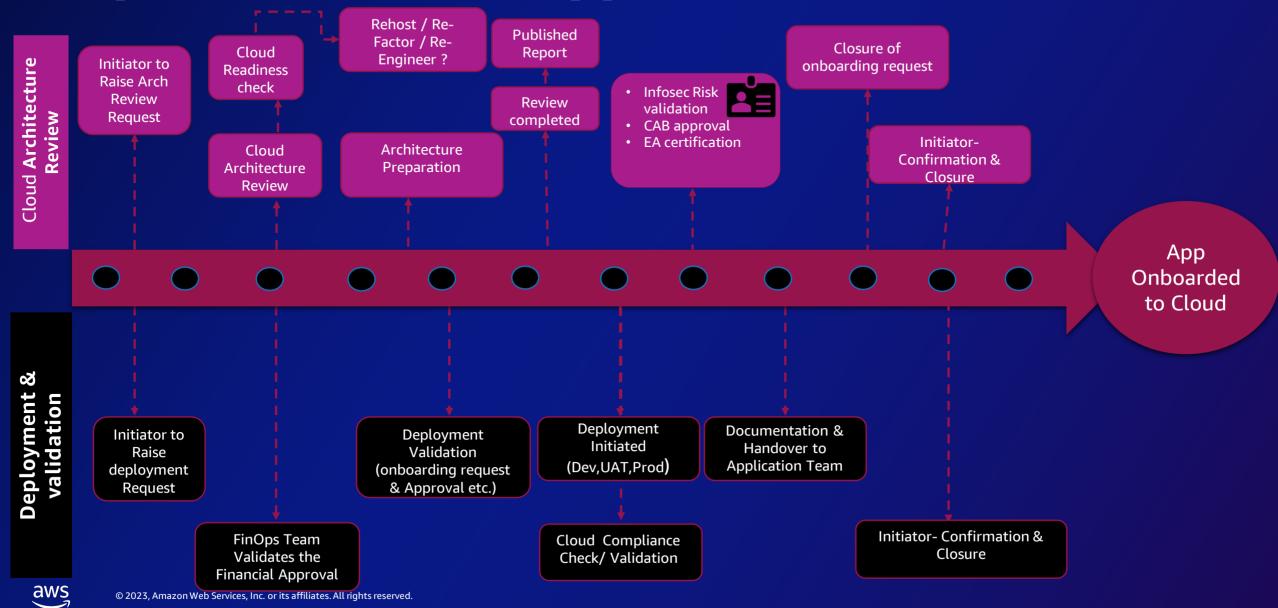
#### Services Enablement

- Enabling new Cloud services.
- Automation
- Support infra as code life cycle setup
- Codifying versioning IAC module
- New Product& Services valuations.





## Steps to onboard an application to cloud





## Cost optimization is a continuous journey







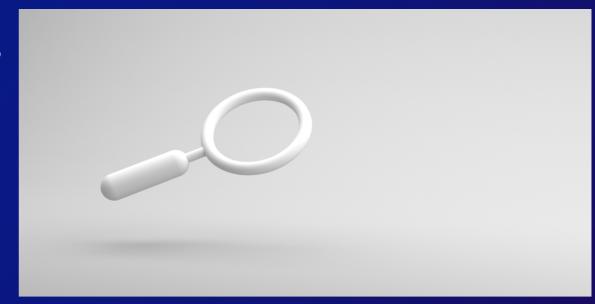
## Journey of app migration & modernization

#### **Application Overview**

 Centralized Platform to cater name screening against negative and sanctions list while onboarding journeys

#### **Current State**

- 500 Screening Per Minute
- 50 source system
- Average Response time 900 MS
- 3 Sec (2% Breach)









## Challenges

- Scalability
- High availability
- Monolithic architecture
- IaaS based deployment

### **Business expectations**

- 2000 Screening per minute
- 120+ Bank source system
- Average Response time 100 ms





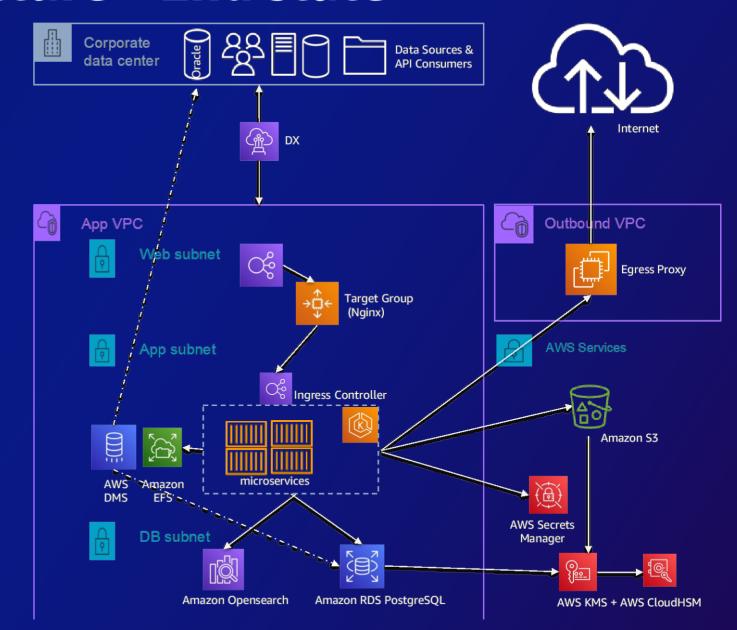
## **Modernized architecture – End state**

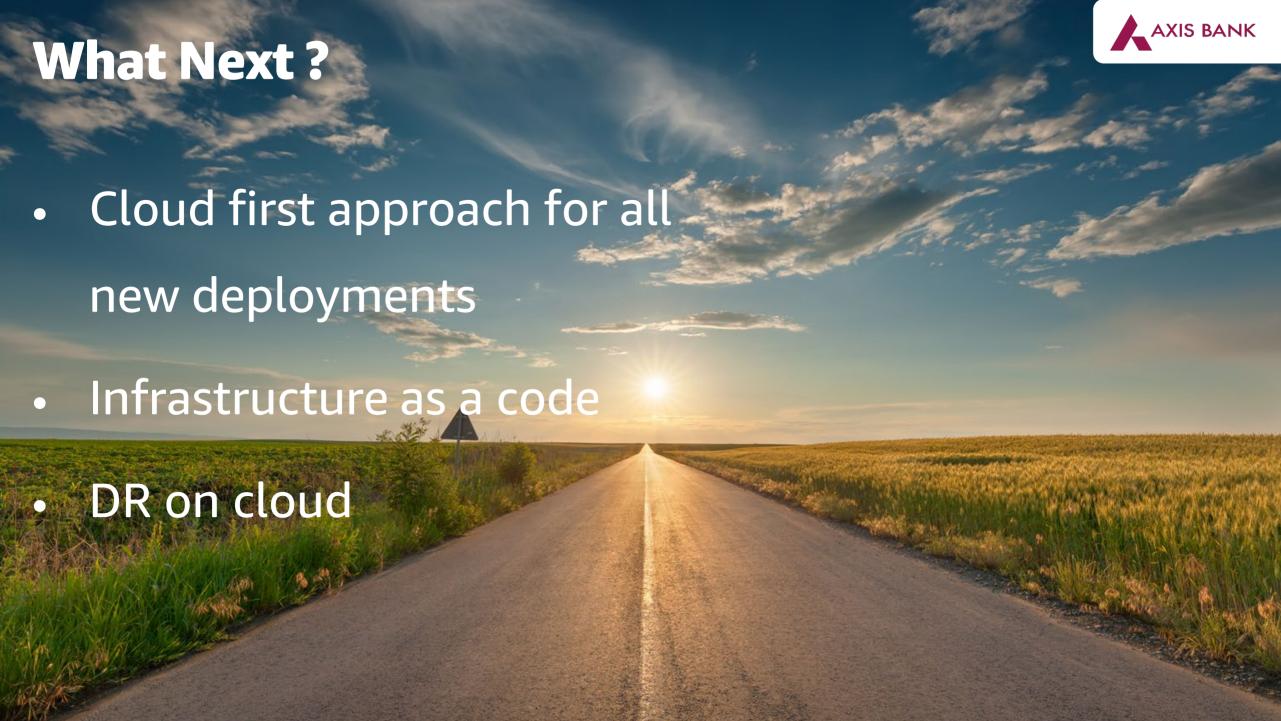
Microservices based architecture

Multi AZ deployment

Adoption of managed services - Amazon OpenSearch, ASG, Amazon EKS, AWS KMS.

Database modernization – Oracle to Managed PostGreSQL (RDS)







## Your time is now

Build in-demand cloud skills your way



# Thank you!

Harsh Wardhan SVP, Head Cloud CoE Axis Bank Ramakrishnan K Senior Solutions Architect Manager AWS India



Please complete the session survey

