AWS Cloud Migration

How to Migrate Enterprise Infrastructure to AWS Cloud

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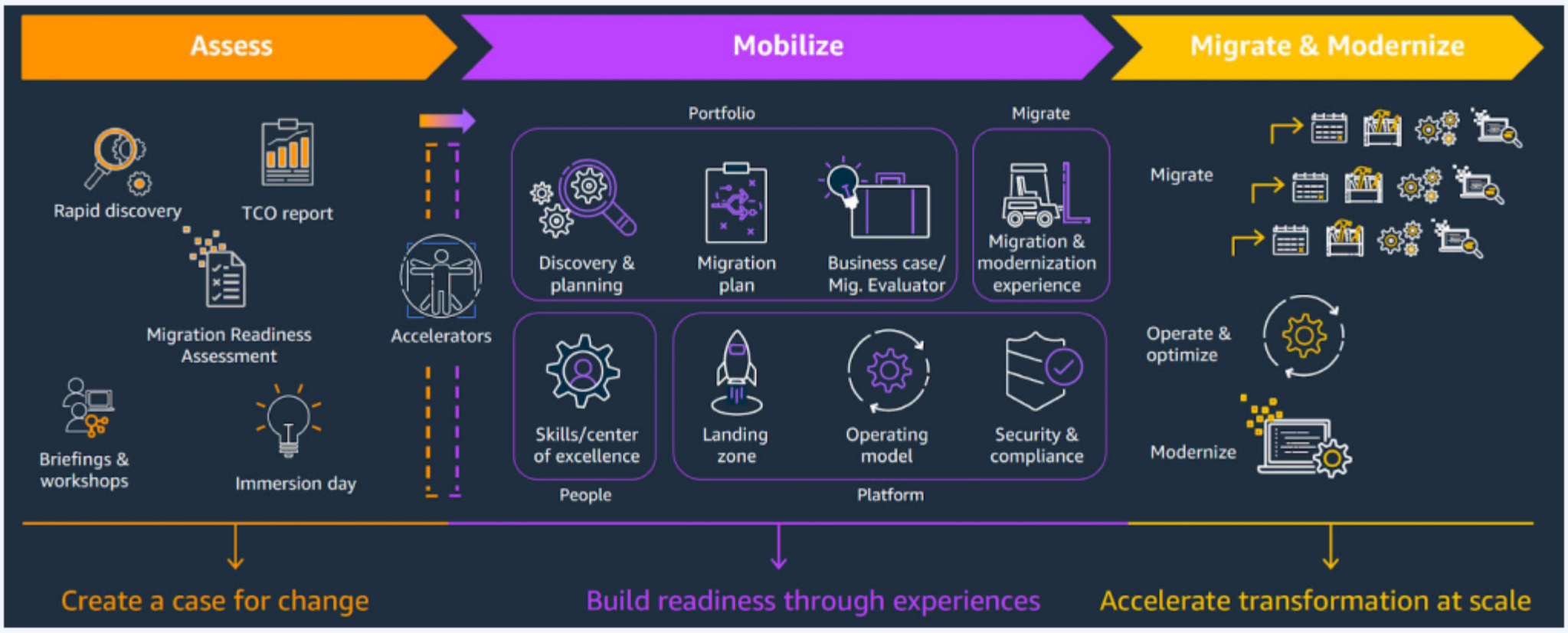
What is AWS MAP

In October 2019, Amazon completed the migration of its own databases from Oracle to the AWS cloud. They moved 75 petabytes of internal data that were stored across nearly 7,500 Oracle databases to specially created AWS databases.

Building on this massive experience and scaling the successful migration approach, AWS developed a comprehensive strategy called the AWS Migration Acceleration Program (MAP).



Reasons to migrate to AWS cloud

1. **Cost Savings**: AWS can help reduce infrastructure and operational costs through pay-as-you-go pricing and efficient resource allocation.
2. Scalability: AWS provides on-demand scaling, allowing companies to easily adapt to changing workloads and customer demands.
3. Global Reach: Access to a global network of data centers and regions to serve customers worldwide.
4. Security: AWS offers robust security features and compliance certifications to protect data and applications.
5. Reliability: High availability and redundancy ensure minimal downtime and data loss.
6. Innovation: Leveraging AWS services allows companies to experiment with new technologies and accelerate innovation.
7. Data Analytics: AWS provides powerful tools for data analytics, machine learning, and AI.
8. Disaster Recovery: AWS offers built-in disaster recovery solutions to safeguard against data loss and downtime.
9. DevOps Integration: Supports DevOps practices, automating deployment and infrastructure management.
10. Elasticity: Easily adjust resources to match demand, reducing over-provisioning and underutilization.

Reasons to migrate to AWS cloud

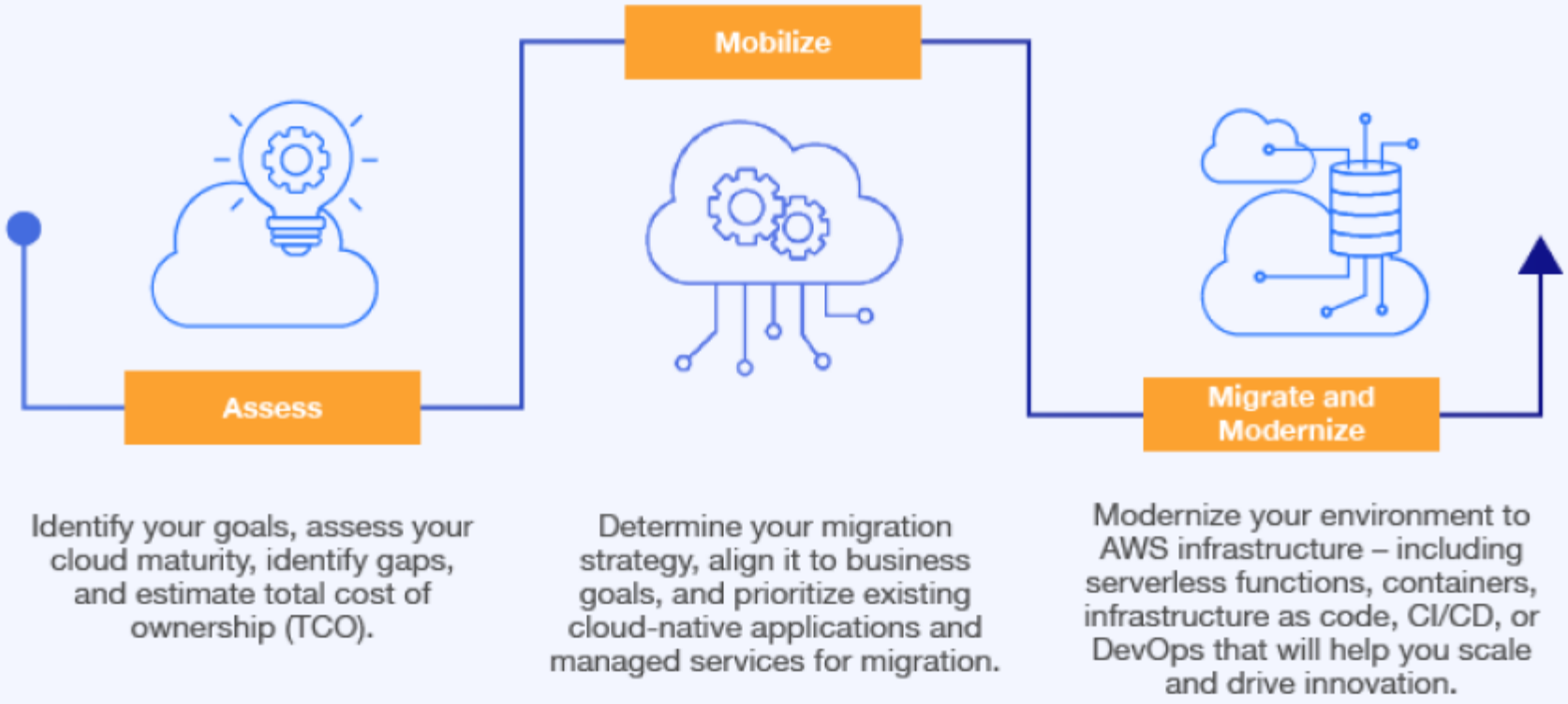
11. Global Content Delivery: AWS content delivery networks (CDNs) improve the delivery of web content and applications.
12. Hybrid Cloud: AWS allows integration with on-premises infrastructure for a hybrid cloud approach.
13. Compliance: Helps meet industry-specific compliance requirements and regulations.
14. Managed Services: AWS manages and maintains infrastructure, reducing the burden on IT teams.
15. Environmental Sustainability: AWS is committed to renewable energy and reducing its carbon footprint.
16. Data Center Retirement: Transitioning from legacy data centers to the cloud can simplify operations.
17. Faster Time to Market: Streamlined development and deployment processes lead to quicker product releases.
18. Access to AI/ML: Utilize AWS's machine learning and artificial intelligence capabilities for data insights.
19. Community and Support: Access to a vast community and AWS support for troubleshooting and guidance.
20. Agility: AWS facilitates rapid application development and deployment.

The three stages of AWS MAP

The MAP strategy consists of three phases designed to facilitate effective migrations to the AWS cloud. This strategy is adaptable to various scales, whether it involves dozens, hundreds, or even thousands of databases and applications.

Each phase contributes to a successful migration, but all these phases are interconnected and form an iterative process, depending on the progress of clients in their cloud journey.

1. Assessment
2. Mobilize
3. Migration and Modernization

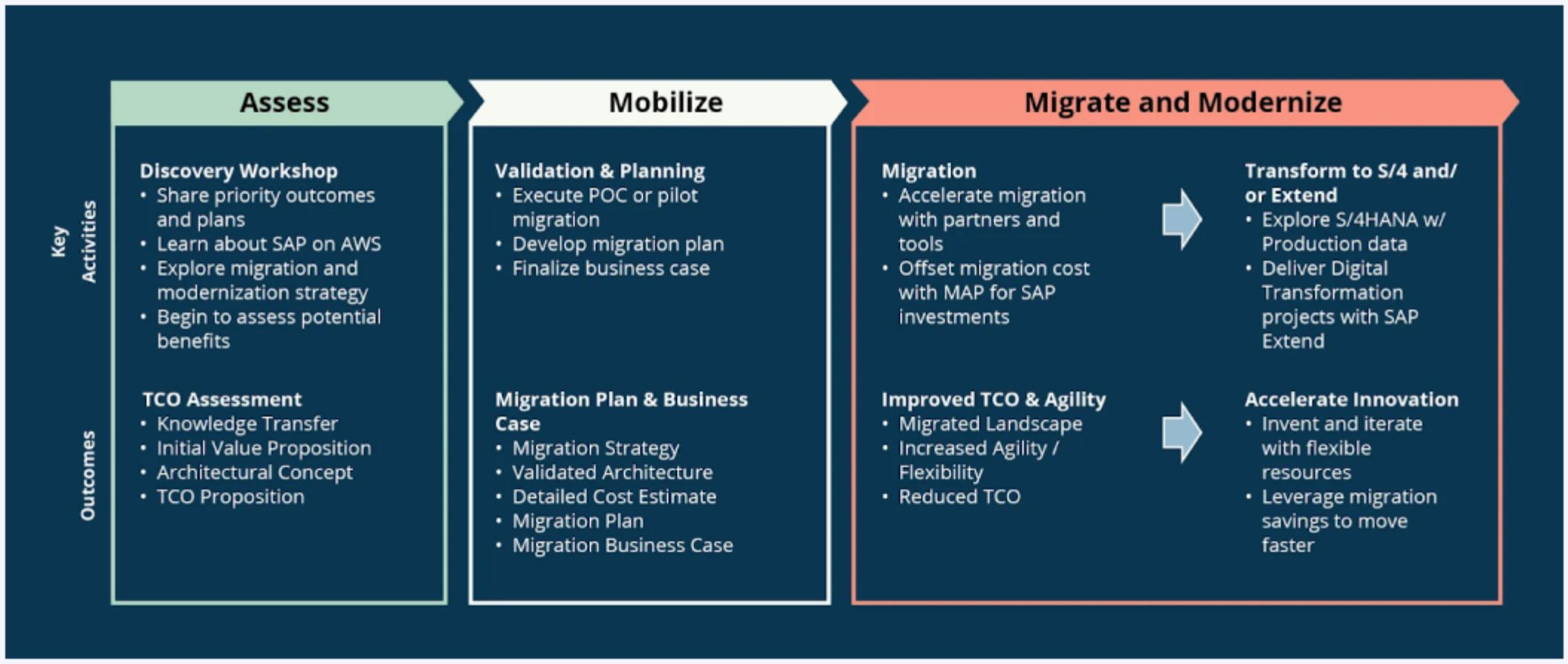


Assessment

During the assessment phase, we evaluate the client's readiness for cloud adoption. Together with the client, we identify the workloads to be migrated to AWS.

We also analyze infrastructure dependencies and application complexity. Subsequently, we conduct a cost analysis to compare the client's current expenses with the projected costs after transitioning to AWS.

At this stage, we discuss migration and modernization strategies for the client's infrastructure and develop a business case to justify the decision to move to AWS.



Migration Readiness Assessment

The primary outcome of this initial phase is a document called the Migration Readiness Assessment, which characterizes the readiness for migration. This document provides the client with compelling business information to proceed to the next phase of the MAP program. It thoroughly describes the strengths of the client's infrastructure that can be swiftly transferred to AWS. It also points out areas requiring improvement or the client's increased attention for a smooth migration to the cloud.

Mobilize

The preparation phase involves planning and expanding the client's capabilities for transitioning to the AWS cloud through migration or modernization. We analyze the infrastructure from various angles, identify key migration zones, and ensure compliance with security standards. Following this, we develop migration templates, identify dependent components, and create plans using a phased development approach. Ultimately, we validate the concept and conduct pilot tests.

Customer core IT resources

- SAP migration manager
- Security lead
- Networks lead
- SAP application owners

AWS resources

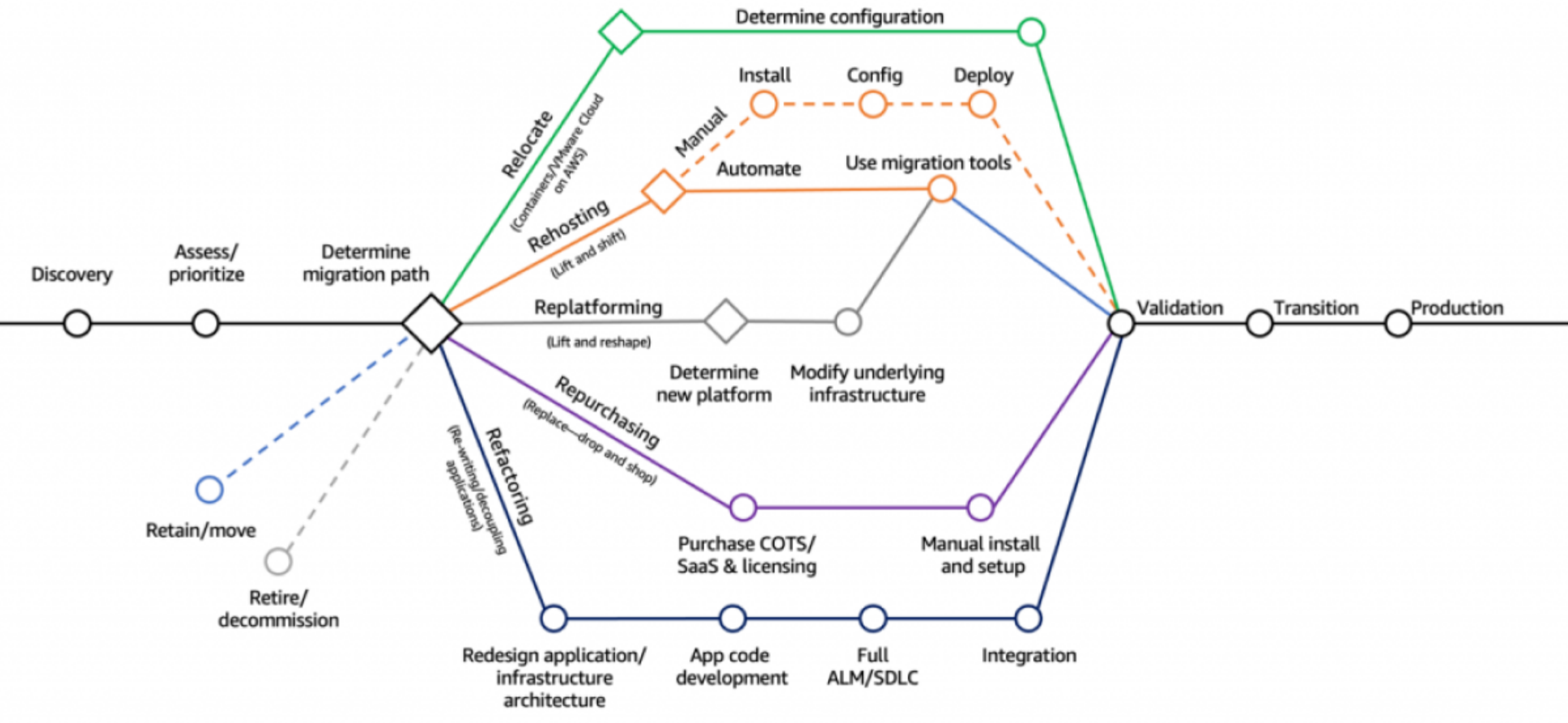
- SAP engagement manager
- SAP practice manager
- SAP technical consultant
- Cloud infrastructure consultant
- Security consultant

AWS Partner SAP resources

- SAP project manager
- SAP Basis administrator - onshore
- SAP Basis administrator - offshore
- SAP ABAP/Java developer
- SAP PI consultant
- SAP testing

Migration Path

The primary outcomes of the preparation phase are a clearly defined migration pathway and readiness to commence a large-scale migration. Suppose clients are seeking incentives such as credits or partner support. In that case, this phase also includes commitments from the client to achieve post-migration annual recurring revenue and complete a Well-Architected Review analysis for the pilot workloads transitioning to AWS at this stage.



Migration and Modernization

This final stage represents the culmination of the client's efforts in migrating to the AWS cloud. The primary focus at this stage is to ensure the timely execution of the migration, attainment of recurring annual revenue, achievement of established business goals, and identification of new workloads to be transitioned to AWS in the next wave.

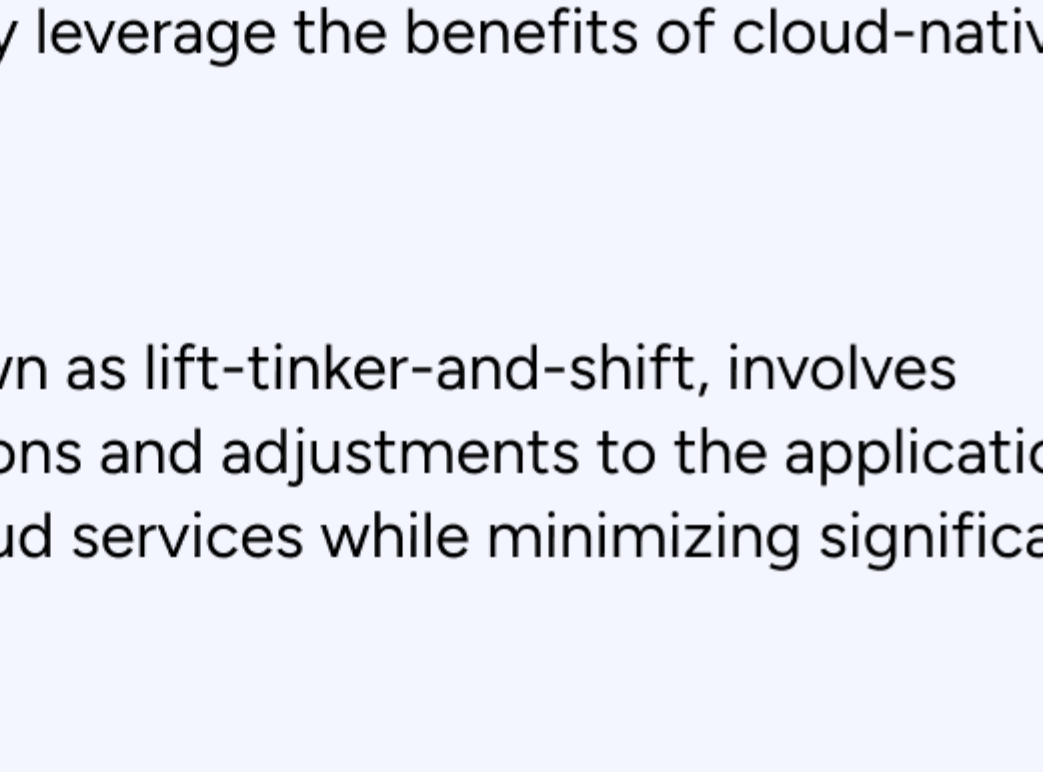
The third stage concludes the client's migration journey with a well-calculated and optimized operation.

Migration Approach

Lift-and-Shift
This approach involves migrating applications and workloads to the cloud with minimal changes. It is a quick and straightforward method but may not fully leverage the benefits of cloud-native services.

Replatforming
Replatforming, also known as lift-tinker-and-shift, involves making some optimizations and adjustments to the applications to take advantage of cloud services while minimizing significant code changes.

Refactoring
This approach involves rearchitecting and reengineering applications to be cloud-native, fully leveraging the benefits of cloud services, scalability, and agility.



Case Study

Migration from On-Premise to AWS for a Financial Company

Our client, a prominent financial company with over two decades of experience in the payment industry, offers a wide range of services, including banking processing, card product launches, and payment acceptance solutions.

The client sought Gart's expertise to migrate its Visa Mastercard processing application from on-premise infrastructure to the AWS cloud.

The shift to AWS offered:

01

Cost Savings
Through AWS's pay-as-you-go model, upfront investments were eliminated, potentially leading to long-term savings.

02

Scalability and Flexibility
AWS's elastic infrastructure ensured smooth operations during peak times.

03

Enhanced Performance
The global data center network improved application performance.

04

Security and Compliance
Robust security and compliance with industry standards were ensured.

05

Reliability and High Availability
AWS's high availability minimized downtime.

05

Global Reach
Expansion to new markets was made effortless.

Let's connect and explore your project's unique needs and goals.

Together, we'll make your migration to AWS easy and comfortable.

Roman Burdiuzha

Cloud Architect | Co-Founder & CTO at Gart

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