WORKSHOP

Dall’ Offloading al Cloud: le strategie di migrazione per l'evoluzione digitale delle Banche con meno costi e più servizi

Relatori

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Agenda

Evolving IT Banking architecture towards Specialized Solutions and Cloud

Modernizing your Mainframe applications using AWS

Migration Strategies for Digital Evolution

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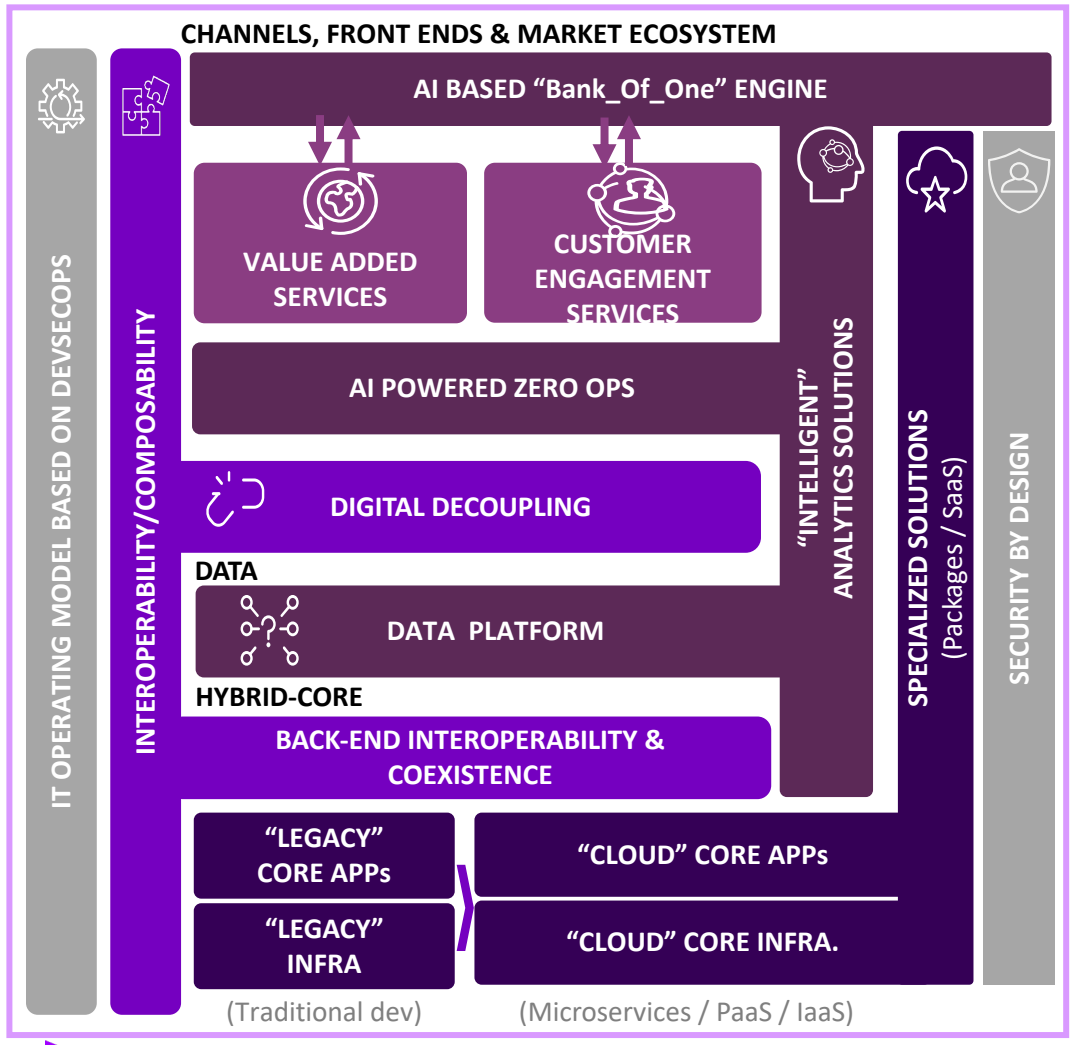
Bank of the future: next gen banking IT architecture

Our **view of the future banking IT architecture** is based on four main components.



1. **AI** based "**Bank of One" engine** where the best choice of products, services and experiences are created

2. **Interoperability**/composability abstraction **engine** that ensures the decoupling

3.
   - **Hybrid-Core** applications, legacy and next-gen, on-premise, cloud and SaaS working together

4.
   - **Specialized** solutions, where **package** is **preferred** to custom development

Maturity Level

The path to modernization requires a combination of evolution to Specialized Solutions and Cloudification

REAL CASE

THE STARTING POINT

- Multichannel
- JMC Architecture
- "Old" core banking based on Cobol on mainframe
  - Custom based areas
  - Package based solutions
- Governance & Control
- DWH

- **Mainframe** based core banking
- **Limited cloud** enablement
- **Limited open banking**/ ecosystem **enablement**

OPENBANKING & DECOUPLING

- Multichannel
- Openbanking & Digital Decoupling → Analytics
- "Old" core banking based on Cobol on mainframe
  - Custom based areas
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- **High speed data platform** updated in **real time**
- **High-end microservice/ APIs platform** open to **ecosystem**
- **Fast-data analytics** engine

CORE MODERNIZATION

- Multichannel
- Openbanking & Digital Decoupling → Analytics
- "Old" core banking
  - Custom based areas
  - Package based Solutions
- Modernized core banking
  - Custom based areas
- Governance & Control
- DWH

- **Re-engineering to Java of most relevant areas** of the **custom based core banking** (current account, customer files, contracts)

MODERNIZED AND CLOUD

- Multichannel
- Marketplace
- Openbanking & Digital Decoupling → Analytics
- "Old" core banking
- Modernized core banking
  - Custom based areas
  - Package based solutions
- Governance & Control
- DWH

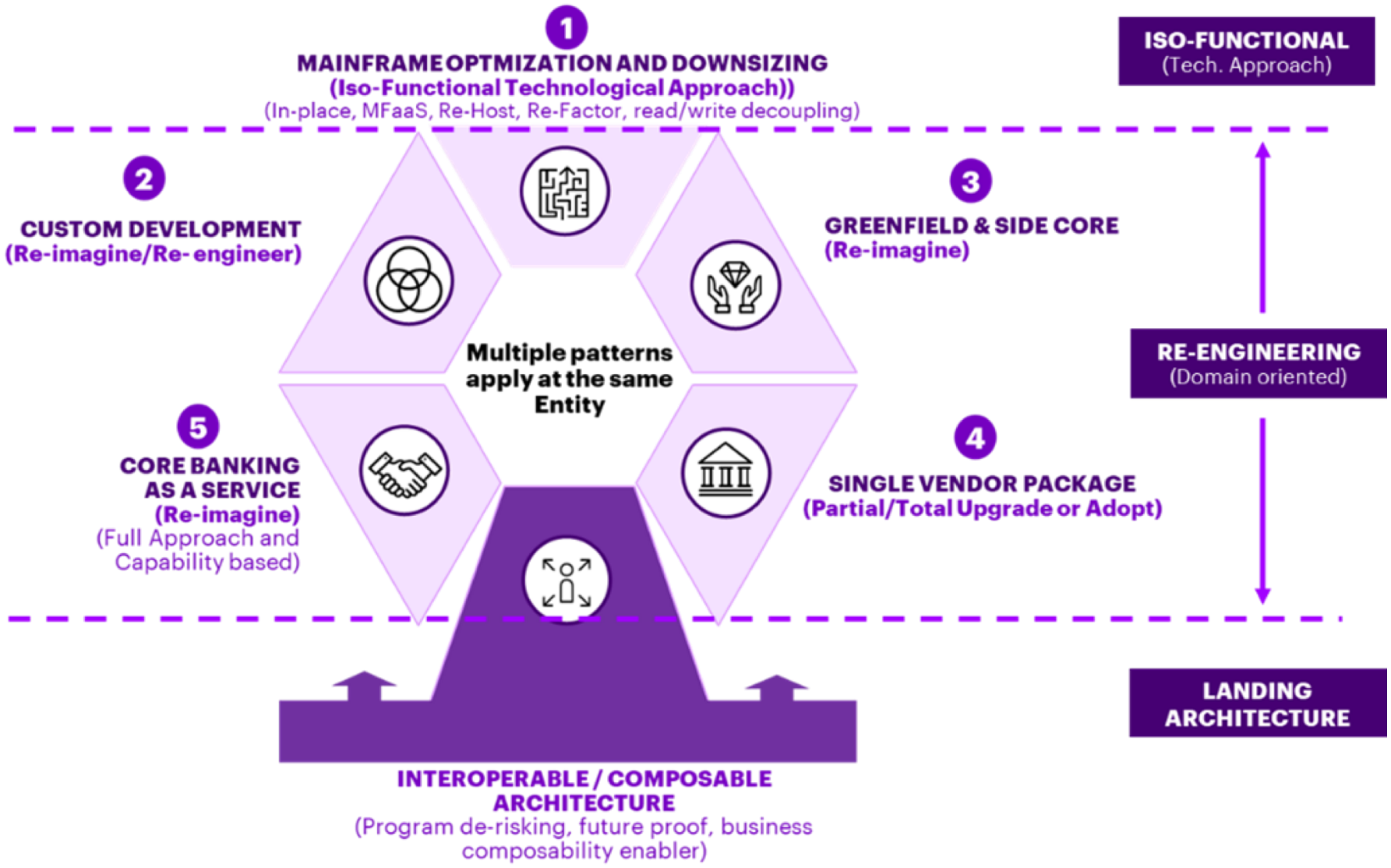
- **Rehosting to public cloud** of residual custom core banking components
- Migration in **public clouds** of the majority of the existing open application
- Overall. **60% of total workloads**[1] migrated to public cloud

Legenda

Non cloud-ready | *Mainframe* | *Cloud ready* | *Cloud deployed* | *Package – Focus of today*

1. Up to 80% of workloads including core banking areas based on packages

A selective approach is driving core modernization initiatives where business priorities are key



There's no single approach to core modernization

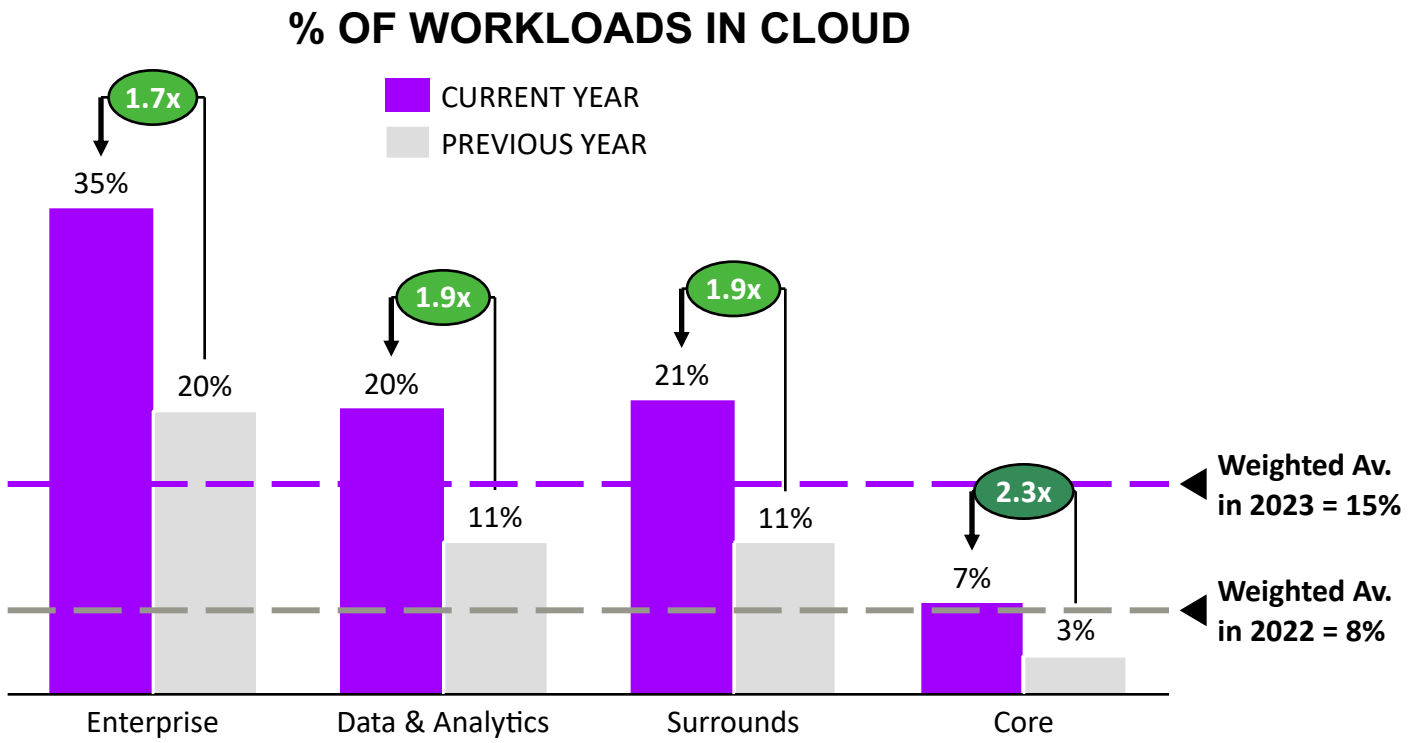
Successful transformations require a **tailored, fit-for-purpose mix of strategies based on each Bank's** starting point, context, and **goals** to maximize value

Source: "Key strategies and approaches for core Banking Modernization", Accenture, Global Core Banking

There is also a trend of adopting Cloud in Banking: our Banking Cloud Rotation index shows that there is a significant growth year after year

WORKLOADS IN THE CLOUD BY FUNCTIONAL AREA

Current year vs. previous year



Q. What percentage of [each functional area] workload has moved to cloud?

Source: Accenture Research based on Banking Cloud Rotation Index

Computed weighted average:

The computed weighted workloads average for the functional areas was calculated by applying the following weights to the different functional areas.

- Enterprise (10%)
- Data & Analytics (15%)
- Surrounds (25%)
- Core (50%)

In all cases, we removed the "Not applicable/I don't know" cases. When a bank is planning to move or is not moving to cloud, the % of workloads was set as 0%.
Since there is a considerably high dispersion on the values of the sample, the computed weighted average might not be statistically significant at an industry level.

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Modernizing mainframe applications unlocks value

AWS CLOUD SERVICES CAN ACCELERATE MODERNIZATION

Cost savings

Lower operating cost for managed runtime

Unified procurement of modern toolchains

Consumption-based, flexible pay-as-you-go pricing

Agility

Pre-integrated toolchains

Modernization to macroservices

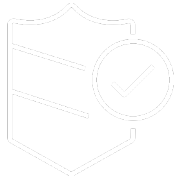
Access to modern development practices like DevOps & SysOps

Innovation

Near real-time data replication

Cloud-native access to analytics, AI/ML

Hundreds of AWS services and thousands of partner solutions



Resilience

Automated runtime health monitoring

Centralized security and compliance

Cloud-native built-in high availability and elasticity

AWS offers modernization and augmentation patterns

Application modernization

Strategic journey to cloud

- Automated refactor
- Reimagine
- Replatform
- Repurchase

Fast paced & tool-based migration

Mainframe augmentation

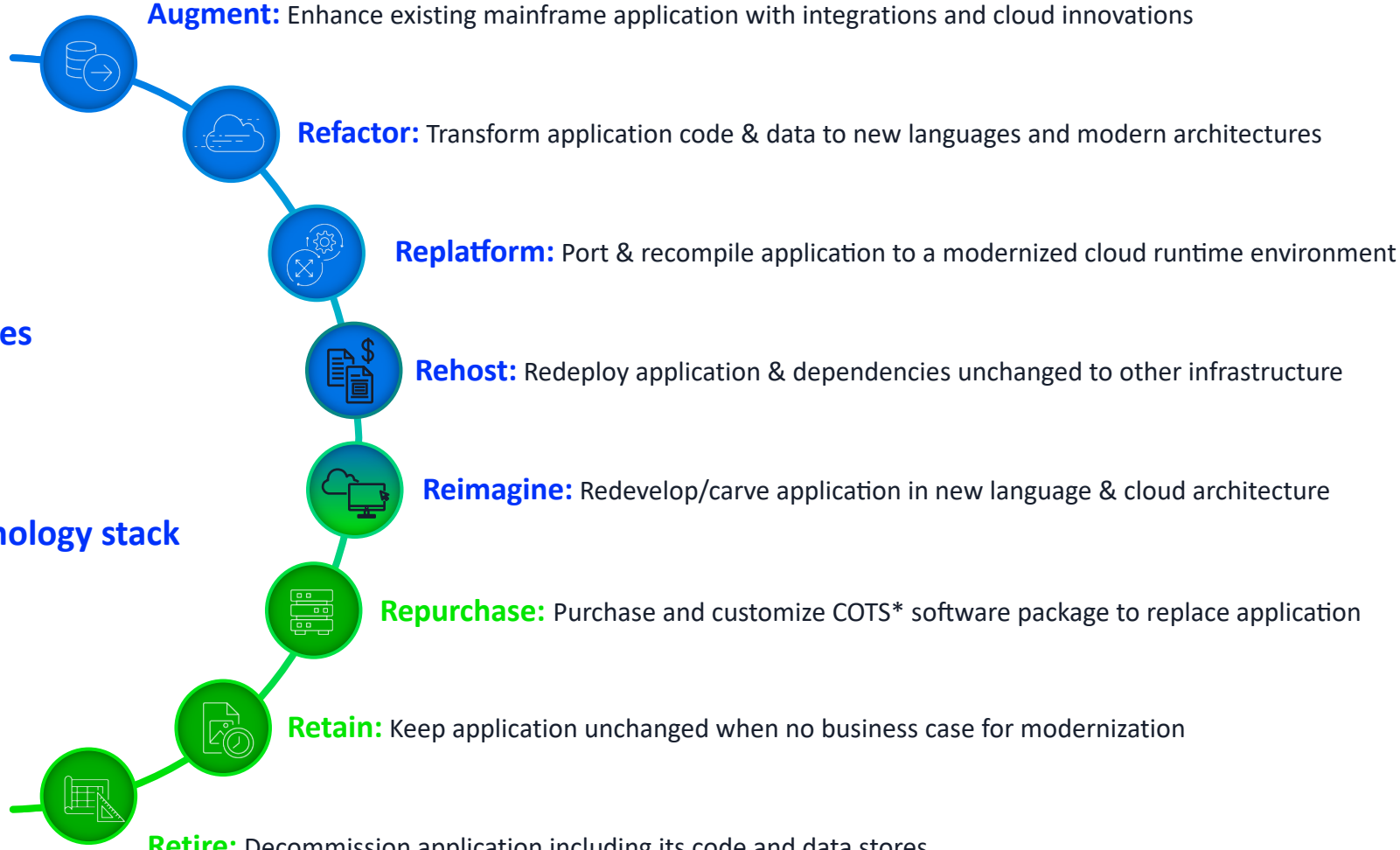
Tactical innovations for cloud-driven benefits

- New channels & new functions
- Data analytics, AI, and generative AI
- Backup and archival with cloud storage
- Development and test with DevOps

Customers leverage multiple approaches

THE BUSINESS AND TECHNOLOGY ENVIRONMENTS CAN DICTATE THE CHOICE

- **Business goals and objectives**
- **Technical constraints**
- **Mainframe/midrange technology stack**



From AWS or Partners

From Partners

* COTS—Commercial Off The Shelf

AWS Mainframe Modernization toolchains

SUPPORT FOR YOUR PATTERN OF CHOICE

Modernize applications

while migrating them to cloud

AWS Mainframe Modernization

Refactor

Automate modernization of the complete application software stack, infrastructure, and processes

Powered by AWS Blu Age

AWS Mainframe Modernization

Replatform

Preserve application assets with minimal changes while modernizing the infrastructure and processes

Powered by Micro Focus or NTT DATA UniKix

Augment mainframe

and innovate with your data

AWS Mainframe Modernization

Data replication

Replicate data changes in near real time from mainframes to AWS unleashing data-based innovations and use cases

Powered by Precisely

AWS Mainframe Modernization

File transfer

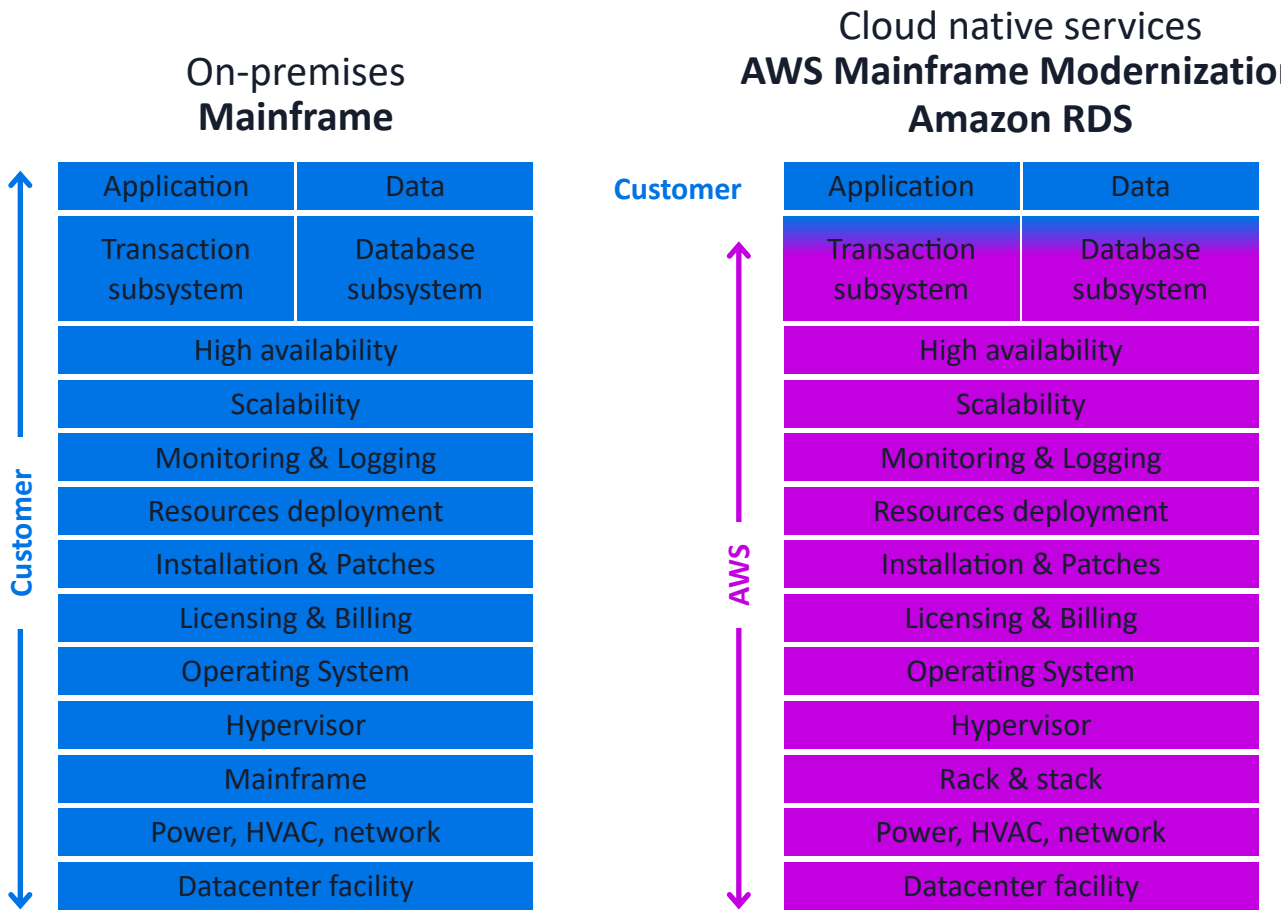
Transfer data sets and files from mainframes to AWS for migration and modernization use cases

Powered by BMC

Integrated elastic toolchains augmented by a range of AWS native services

AWS Mainframe Modernization is a cloud native service

AWS FULLY MANAGED INFRASTRUCTURE AND MIDDLEWARE ACCESSIBLE FROM AWS CONSOLE, APIS, AND CLIS



Scalable and agile
On-demand, elastic, DevOps

Cloud native fully-managed
Built-in automation, integrations

Proven toolchains
Replatform, refactor, data transfer

Resilient
Secure, compliant, highly available

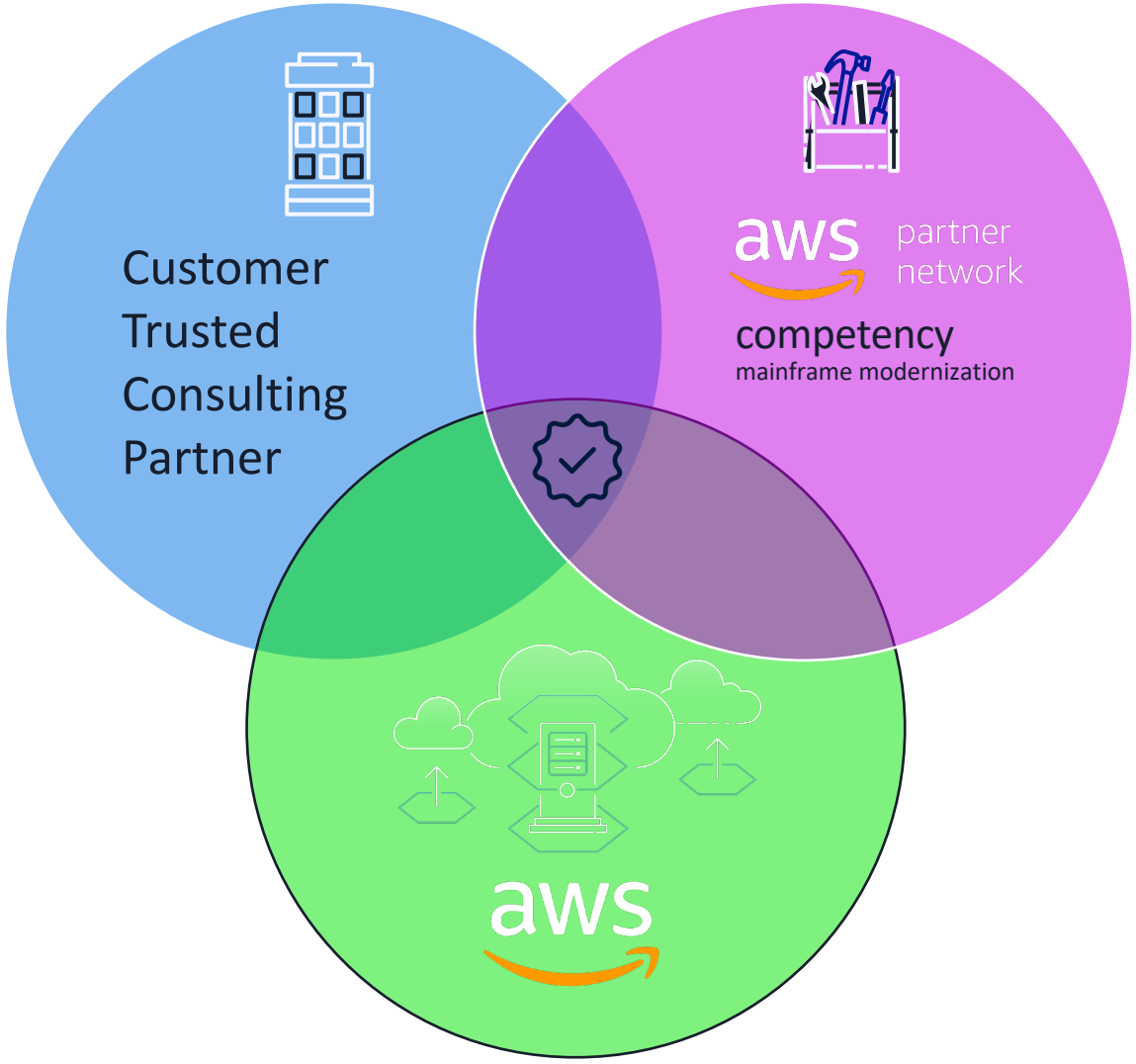
Cost-efficient
Pay-as-you-go, low-cost entry

Spend time innovating and building new capabilities, not managing infrastructure

Mainframe modernization projects can be challenging

THREE ESSENTIAL DOMAINS TO IMPROVE MAINFRAME MODERNIZATION PROJECT SUCCESS RATES

- Consulting and migration delivery expertise
- Mainframe Modernization Competency Partner Technologies and Subject Matter Experts
- Cloud platform domain experience, mainframe specialist resources, supporting programs and services



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Why mainframe offloading

KEY REASONS TO MAKE THE MOVE

DIGITAL TRANSFORMATION

Digital revolution of new customer experiences strengthens revenue streams. For this, agility is required.

OPERATING & POWER COSTS

The hardware, operating system, database, and third-party application costs associated with mainframes are high and they continue to increase. Standards-based cloud platforms now match the performance of mainframes while using less power.

OMNICANALITY

Traditional back-end systems are organized in technological silos. In this scenario, applying a rudimentary multichannel approach, in which channels are integrated one by one directly with the existing systems, keeps each one of them separated from the others and results in a non-unified user experience.

AVAILABILITY OF SKILLS

Staffing needs are much easier to meet when you run workloads on cloud platforms. As the mainframe operations workforce gets older, these skills may no longer be available.

COMPLIANCE

The effort to ensure regulatory compliance on mainframes is often high due to systems that have evolved on obsolete technologies adding functional layers on top of each other making adaptive interventions increasingly difficult.

VOLUMES

Mainframes have traditionally been run in a hosted IT environment, a structure that makes it very expensive to scale.

TAS field of action

Global presence with customers in

40+ years of experience

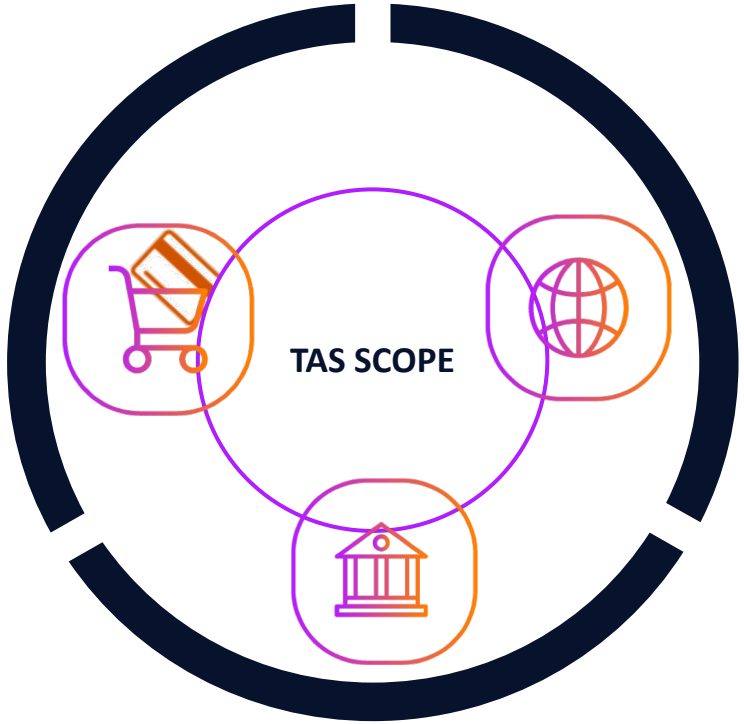
20+ countries

75% market share in the Italian banking sector

100+ Mln payment cards managed

- Card Issuing
- Card Authorization
- POS Acquiring
- ATM Acquiring
- Digital Wallet

E-MONEY



PAYMENTS

- Instant Payments
- Payment Hub
- Global Payment Platform

- Back Office Titoli

SECURITIES

The area of interest that TAS has defined for offloading initiatives is based on 3 DIFFERENTIATING PILLARS

Guidelines

GENERAL PRINCIPLES

ARCHITECTURAL

- Infrastructure that replicates the instances currently present with vertical and horizontal scalability
- Integration layer on the online channels side
- Integration with the bank's subsystems
- Maintenance or replacement of security systems
- Functional ISO

MINIMIZING OPERATIONAL IMPACTS

- Maintaining Branch Interfaces
- Platforms parallelism - duality
- Creation of new products
- Migrating existing applications - flexibility

DATA MIGRATION

- Maintain historical files from DB2, generate new files, migrate data during project
- creation of an intermediate layer that decouples both calls and data
- Maintain and feed the existing DB2 database to minimize impacts on existing batch components
- Review of batch procedures used by external applications

CERTIFICATION

- PCI
- Swift
- EBA Regulatory Technical Standards

OPERATIONS

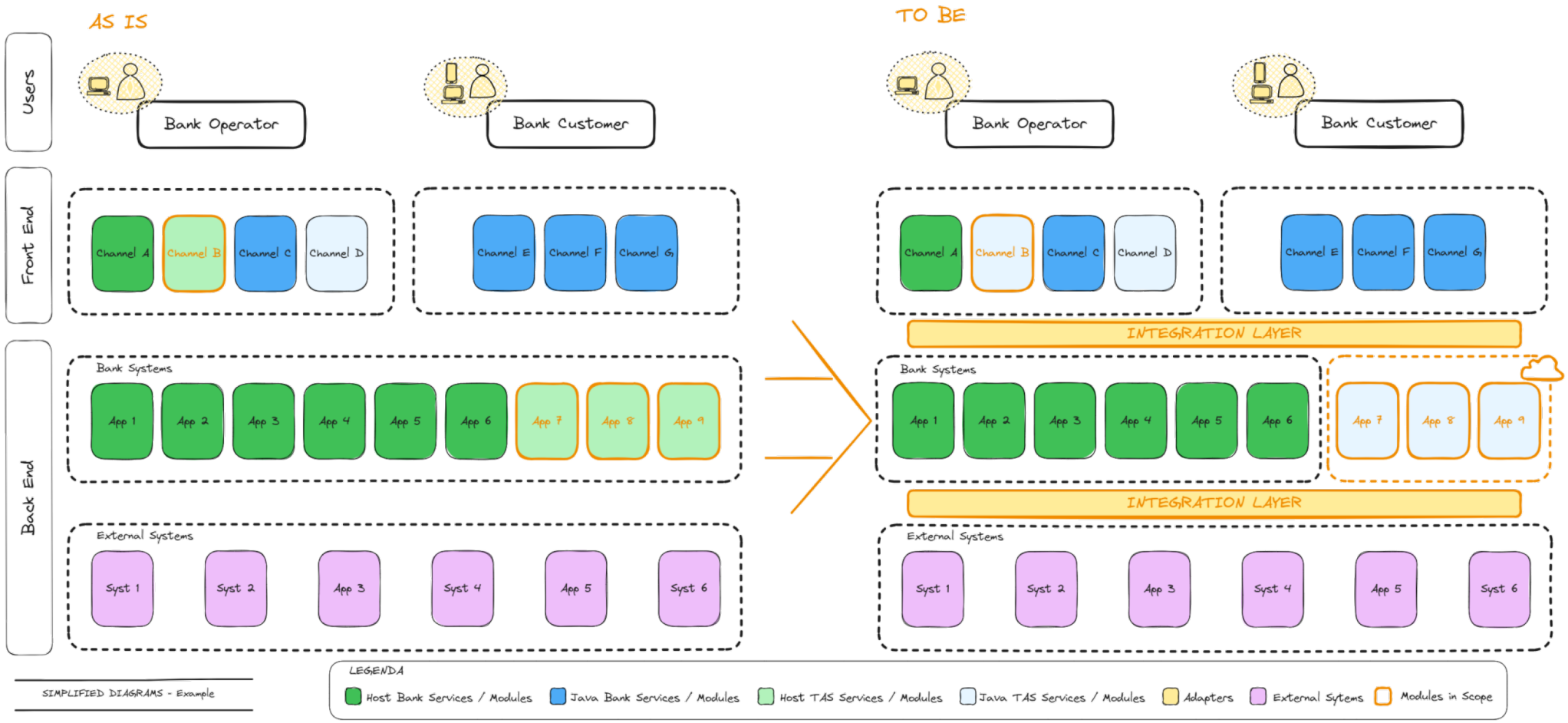
- New Monitoring
- DevOps (CI/CD)
- Ticketing cycle Integration

PROJECT

- Sharing the principles and methods of engagement
- Operational management and performance methods
- Containment of duality management (if not Big Bang)
- Definition of check points on the correctness of migration and operational data

Reference models for transformation (1/2)

BIG BANG OR MICRO BIG BANG



Advantages

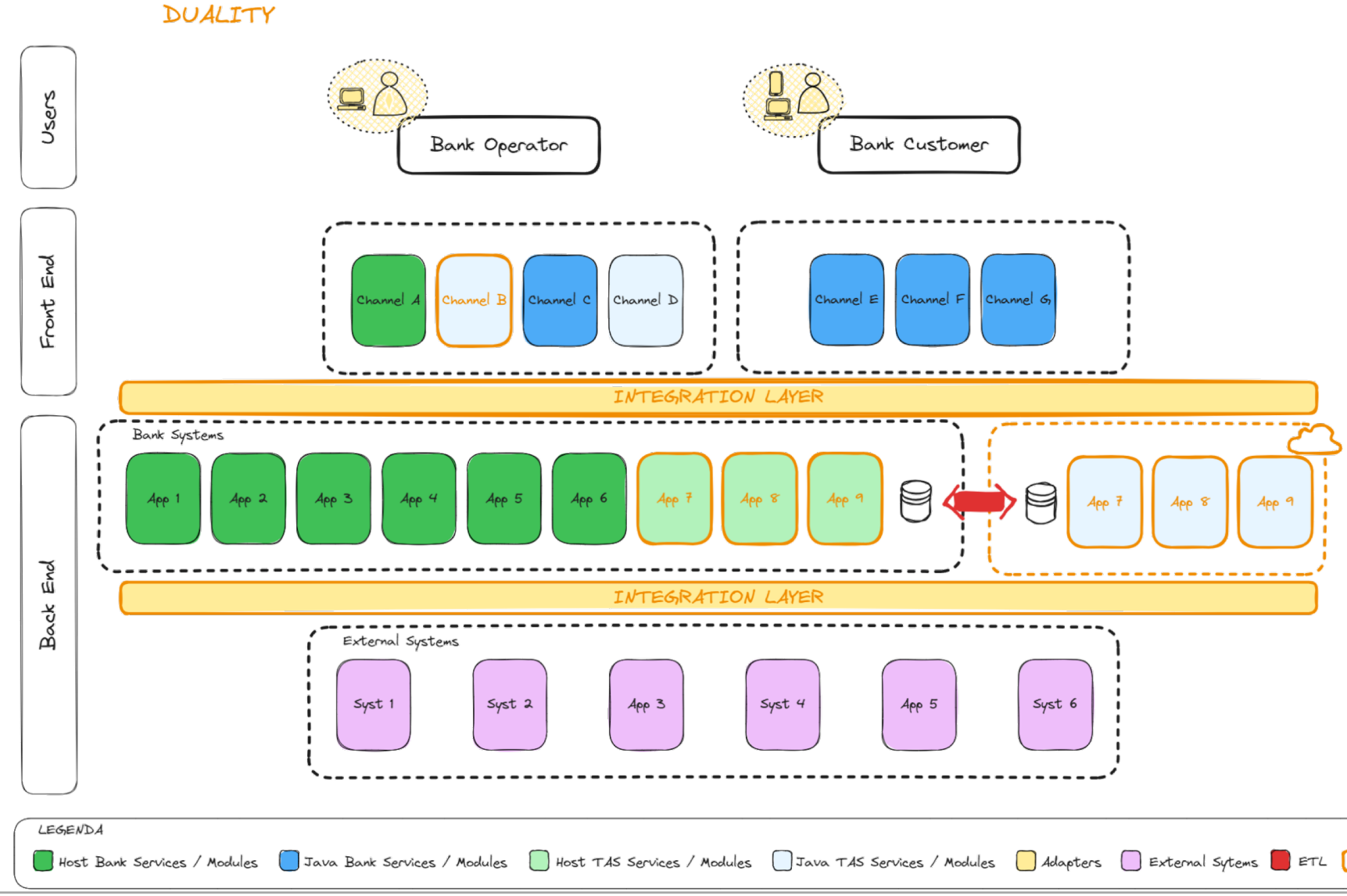
- Simplicity of Planning
- Lower Long-term Costs
- Immediate Full Functionality
- Less Time-Consuming
- Clear Transition

Disadvantages

- High Risk
- Difficult to Test and Troubleshoot
- Potentially Disruptive
- User Adaptation Challenges
- Limited Flexibility for Adjustments
- Resource Intensive

Reference models for transformation (2/2)

PARALLEL MANAGEMENT



Advantages

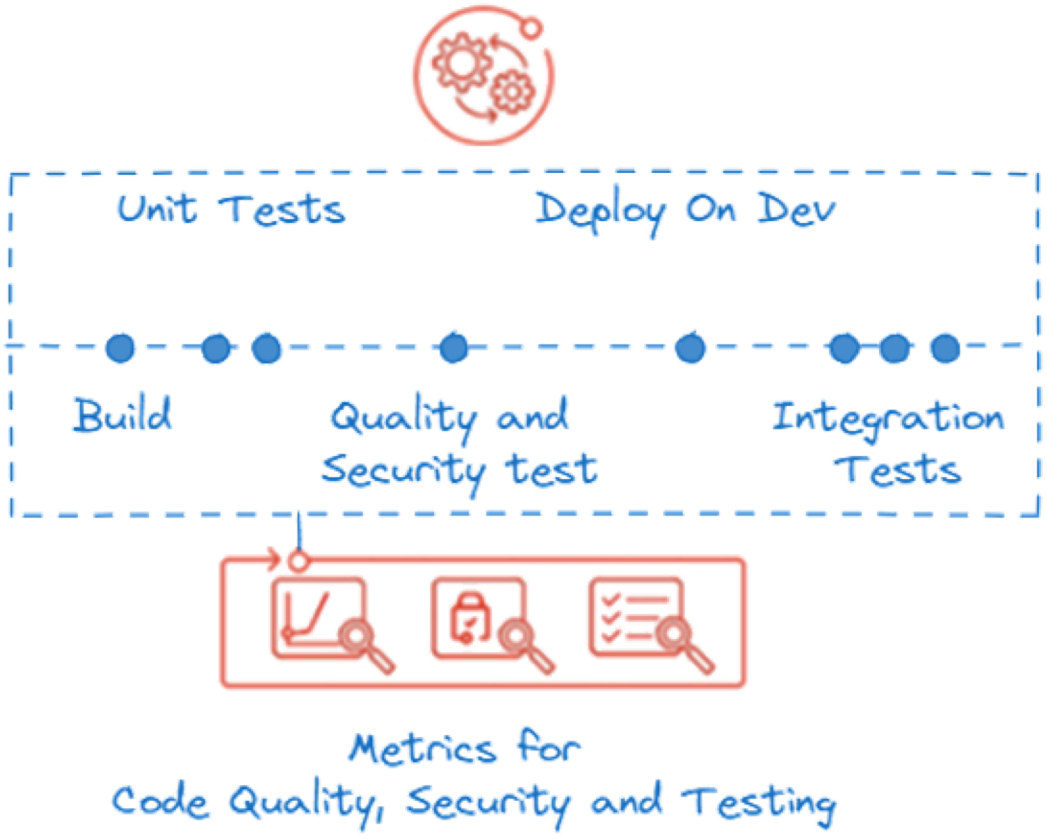
- Gradual and controlled evolution
- Lower Risk
- Minimal Disruption
- Easier to Manage and Test
- Flexibility

Disadvantages

- Longer Duration
- Higher Costs
- Complexity in Synchronization

DevOps models

C I / C D



- Continuous integration (CI) and continuous delivery/deployment (CD) aims to streamline and accelerate the software development lifecycle.
- CI refers to the practice of automatically and frequently integrating code changes into a shared source code repository.
- CD is a second part process that refers to the integration, testing, and delivery of code changes.
- Continuous delivery is not sufficient for automatic production deployment, while continuous deployment automatically releases the updates into the production environment.

MAIN BENEFITS

- CI/CD helps organizations avoid bugs and code failures while maintaining a continuous cycle of software development and updates.
- CI/CD can help decrease complexity, increase efficiency, and streamline workflows.
- Because CI/CD automates the manual human intervention traditionally needed to get new code from a commit into production, downtime is minimized and code releases happen faster.

Thank you!

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