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How to Solve the Cloud Puzzle and Unlock Business Value

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AGENDA

01 Understanding the Cloud Puzzle
- ✓ Yesterday and the today
- ✓ Cloud current movement
- ✓ Current situation
- ✓ Challenges

02 Unlocking the puzzle with a real case
- ✓ Understanding the challenges
- ✓ Transformation Journey
- ✓ Migration strategy
- ✓ Benefits and outcomes

03 Overcome the challenges and build the puzzle
- ✓ Elite cloud Performer
- ✓ Azure cloud adoption framework
- ✓ Overcome your challenges

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01 Understanding the Cloud Puzzle

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Unfolding the cloud Puzzle

Yesterday

Application silos, built for web

Static apps, serve up stored data

Servers and infrastructure to manage

Upfront capacity planning, fixed scale

Optimized for decade old security threats

Built for hardware + software refresh cycles

Today

Multi-channel applications, web, mobile, agents, IoT

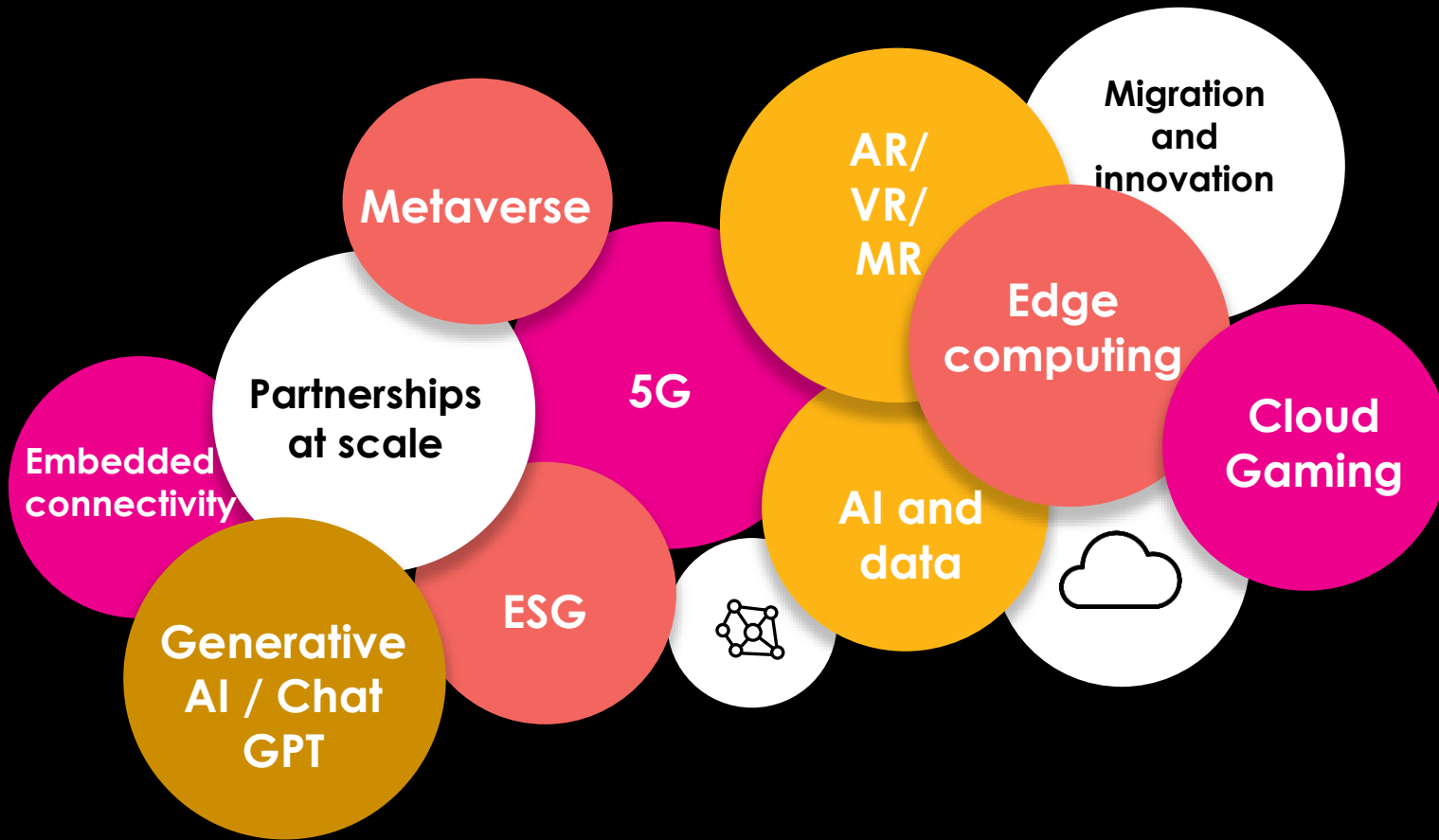Data-driven apps, personalize in real-time

Remove maintenance efforts, redirect to innovation

Elastic, unlimited scale

Intelligent protection detects threats, notifies

Ongoing + seamless innovation built-in

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New trends and technologies rely on the cloud

Metaverse

AR/VR/MR

Migration and innovation

Partnerships at scale

5G

Edge computing

Embedded connectivity

Cloud Gaming

AI and data

Generative AI / Chat GPT

ESG

Trends are accelerating the need for capabilities that cloud delivers:

- Launch new services and business models to grow revenues faster
- Optimize operations and reduce costs
- Enhanced agility and shorten time to market
- Better service and an amazing customer experience

aws

Azure

ORACLE CLOUD

Google Cloud

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Triggers cloud Transformation

Migration Triggers
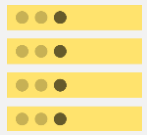
Datacenter contracts expiring	Mergers, acquisition or divestiture	Urgent capacity needs	Security & Compliance threats	Software and hardware refresh

Modernization Triggers

Rapidly scale web apps and infrastructure	Cost-optimizing applications	Application innovation	Application delivery speed	Enable Product Centric Organizations

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The tech landscape has already evolved

Organizations are moving faster
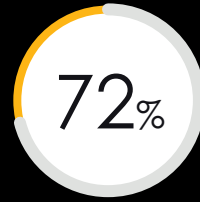
72% of industry's pace of transformation has accelerated as a result of the pandemic [1]

… but existing IT platforms prevent the agility we need
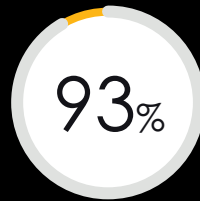
Infrastructure has changed

95% of new digital initiatives are projected to be on cloud platforms by 2025 [2]

… but where do we start?

Security everywhere

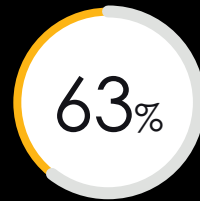**93%** of company networks can be penetrated by a cybercriminal [3]

… but security and compliance is resource intensive

Teams work more dynamically

63% of high-growth companies use hybrid work models [4]

… but how can we scale to meet the growing demand

1. The transformation imperative: Digital drivers in the Covid-19 pandemic, *The Economist Intelligence Unit, sponsored by Microsoft, 2021*
2. Top strategic technology trends for 2022: 12 trends shaping the future of digital business, Gartner, 2022
3. Positive Technologies. "Positive Technologies: Cybercriminals Can Penetrate 93% of Local Company Networks, and Trigger 71% of Events Deemed 'Unacceptable' for Their Businesses." *Positive* Technologies - Vulnerability Assessment, Compliance Management and Threat Analysis Solutions, Positive Technologies, 20th Dec. 2021
4. "19 Important Hybrid Working Statistics to Know Now (2022)." Apollo Technical LLC, 17th Aug. 2022

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Cloud transformational challenges

Data Security + Regulation compliance

- Ensuring data protection, a privacy.
- Managing access control an encryption

Downtime and Disruptions

- Minimizing disruptions during migration
- Avoid downtimes that impact operations

Integration Issues

- Seamless integration with on-prem
- Compatibility with legacy apps

Cost Management

- Cost optimization with cloud services
- Monitoring and controlling expenses.

Skill GAP

- Acquiring the skill for cloud.
- Training existing or hiring staff

Reliability and redundancy

- Ensure the HA and reliability of cloud
- Implementing effective backup and DR strategies

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02

Unlocking the puzzle with a real case

- ✓ Understanding the challenges
- ✓ Transformation Journey
- ✓ Migration strategy
- ✓ Benefits and outcomes

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The largest cloud migration ever, entrusted to Amdocs

The largest telecommunications company in the world, headquartered in North America,(provider of mobile, wireline, internet and TV with 120M+ subs) needed to exit its data centers by a hard deadline in order to close the sale of these data centers to Microsoft Azure , and become a public cloud-oriented company

Business Needs

- Focus IT on 5G growth and core telco business

- Consolidate data center infrastructure & operations

- Make business faster and more agile using public cloud capabilities

- Reduce costs and improve operations

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Workload Classification

Amdocs assessed and scoped the appropriate cloud migration strategy for key applications in the telco's portfolio, following cloud-native principles. Our two key classifications for application transformation were Optimization and Modernization.

200+ non-Amdocs apps migrated

Rapid ramp-up of a 300+ strong team

Develop reusable best practices through DevOps Automation
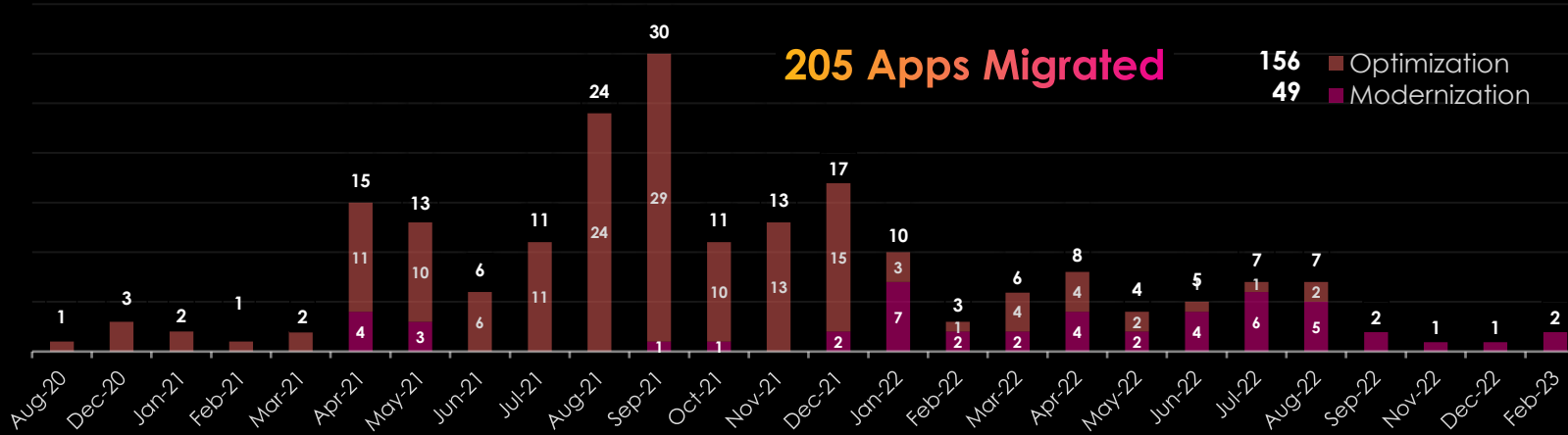
Key Classifications

Optimization + **Modernization**

>200 Applications Transformed

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NA Tier 1 - Journey & Roadmap

205 Apps Migrated

156 ■ Optimization
49 ■ Modernization

Q1 2020
Deal signed with for Cloud optimization project

Q2 2020
Team Ramp up initiated across delivery Units
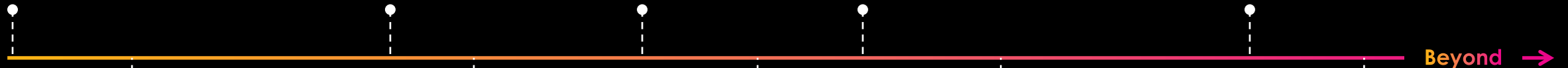
Q3 2020
Quick Ramp up Delivery unit Expansion

Q2 2021
GSI with **Most apps migrated in Jun 2021.**
Met or exceed commitment for last six months

Target FY2022-23
Modernization Application Migration

Factory Maturity Model to Improve Maturity of Standardized Factory

Beyond →

- Leadership visit to Amdocs India
- Dallas and Hyderabad Bootcamp
- Engagement Model

Set-up Architecture Practice

Active engagement with Customer and Microsoft

Modernization **assessments** started for 20 applications

Modernization

First set of Modernization applications migrated

Q1-Q2 2021

40 Applications Migration Acceptance Testing completed 60 Cutover to Azure completed

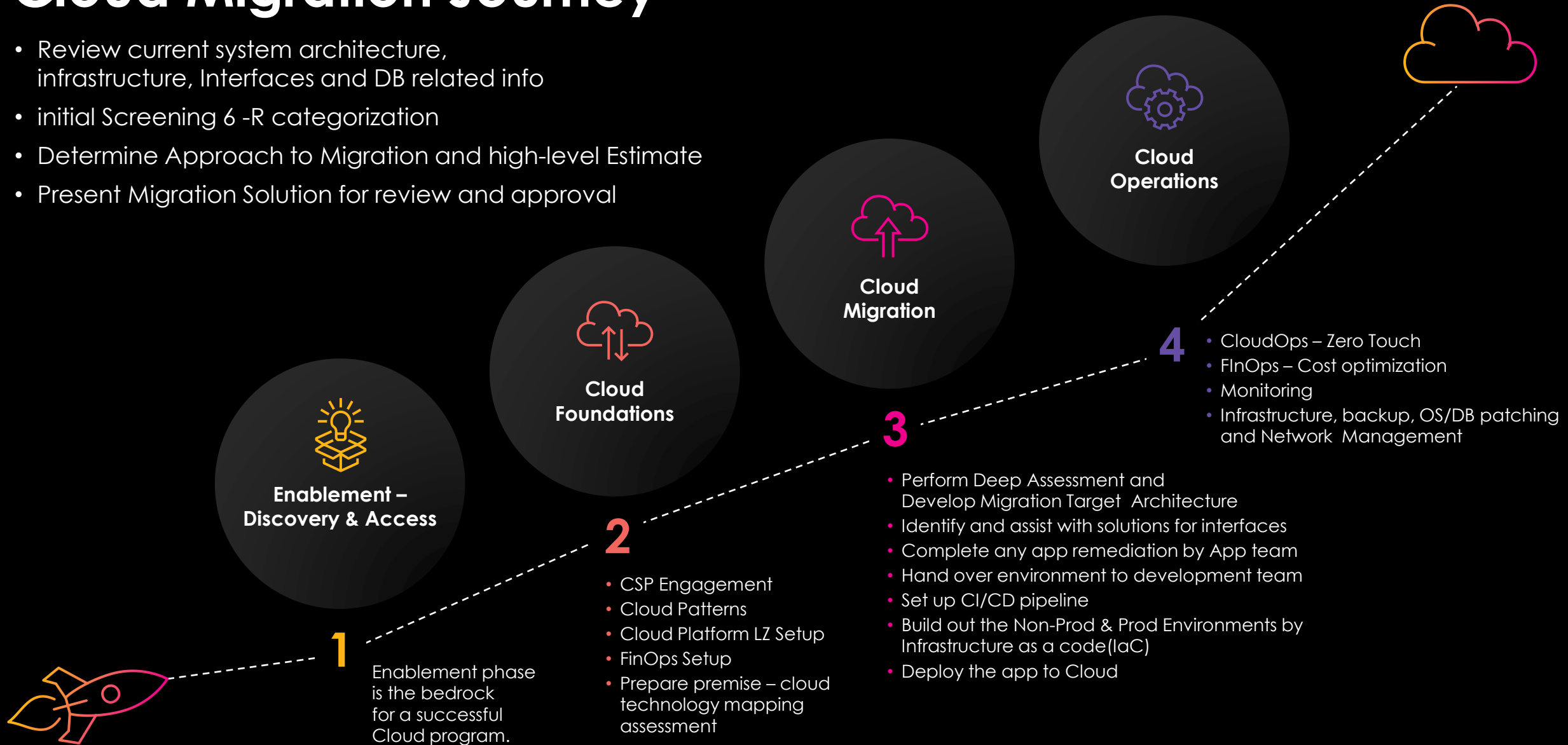**70+ Modernization assessments completed**

Q4 2021

Modernization and in collaboration with External Vendors

Mainframe Modernization

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Cloud Migration Journey

- Review current system architecture, infrastructure, Interfaces and DB related info
- initial Screening 6 -R categorization
- Determine Approach to Migration and high-level Estimate
- Present Migration Solution for review and approval

Cloud Operations

Cloud Migration

Cloud Foundations

Enablement – Discovery & Access

1

Enablement phase is the bedrock for a successful Cloud program.

2

- CSP Engagement
- Cloud Patterns
- Cloud Platform LZ Setup
- FinOps Setup
- Prepare premise – cloud technology mapping assessment

3

- Perform Deep Assessment and Develop Migration Target Architecture
- Identify and assist with solutions for interfaces
- Complete any app remediation by App team
- Hand over environment to development team
- Set up CI/CD pipeline
- Build out the Non-Prod & Prod Environments by Infrastructure as a code(IaC)
- Deploy the app to Cloud

4

- CloudOps – Zero Touch
- FInOps – Cost optimization
- Monitoring
- Infrastructure, backup, OS/DB patching and Network Management

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Enablement – Discovery Phase

Analysis
Amdocs Cloud Assessment Framework

Migration Treatment

Actions

Ready for Migration

Interview
Questionnaire
Discovery
Assess
CMDB
OPEX

Our methodology determines the appropriate migration strategy for your business, by applying our industry-proven cloud assessment toolkit

Rehost
Replatform
Refactor
Retain
Replace
Retire

Compacting
Private Cloud
Move to Private
Move to Hybrid
Legacy to Open
Recompile
Cloud native
DC Move
Retain
Decommission

Transform	Complexity			
App 1	L	M	H	VH
App 2	L	M	H	VH
App 3	L	M	H	VH
App 4	L	M	H	VH
App 5	L	M	H	VH
App 6	L	M	H	VH
App 7	L	M	H	VH
App 8	L	M	H	VH

Workload Application Groups → Cloud Suitable Evaluation Groups → Cloud Mapped Workload → Migration Eligible Workloads

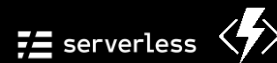Continuous Improvement Iterations

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Application Migration
Key Considerations

Container based deployments PaaS over IaaS

Recode applications by utilizing cloud native services

Application Re-Design Serverless

Technology Replacements

CI/CD Automation Inventory Updates

Operational Considerations Training Considerations

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4

Key accomplishments

Early
exit from data centres, ahead of deadline

200+
applications migrated

20%
operational cost reduction

Standardized upgrades to an **agreed target application stack**

Everything as code:
Infra as Code,
CI/CD Pipeline,
Operation as Code

3rd party apps and tech, **eliminating licensing with open-source tools**

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Holistic Cloud Perspective

Value of Cloud

Business agility
Deploying new software faster and reducing errors

Operational resilience
Improving SLAs and reducing unplanned outage
- Decrease in incidents
- Decrease in MTTR

Productivity
Efficiency improvement by function on a task-by-task basis, server configuration time

Cost Savings
Infrastructure cost savings

	Business agility	Operational resilience	Productivity	Cost Savings
IDC	47%	32%	13%	8%
Amdocs	50%	12%	16%	22%

Amdocs delivers a variety of cloud engagements very successfully

Cloud Native dev
25% increase in new feature development
80% decrease in non-development labor
20 minute code to live
Microservices factory

Lift & Shift to public cloud
10% cost optimization YoY
45% of total applications on cloud
50% Less test environment costs
65% Improvement in defect management
25PB of Content routed on cloud

DC Consolidation & rehost

Tier 1 NAM Telco

Data center consolidation &closure
622/4000 workloads move to public cloud
Refactoring of monolith to revise

Data transformation of cloud
Deployment of Amdocs data hub on Google Cloud,
- Google Big Query
- Leverage aLDM data model
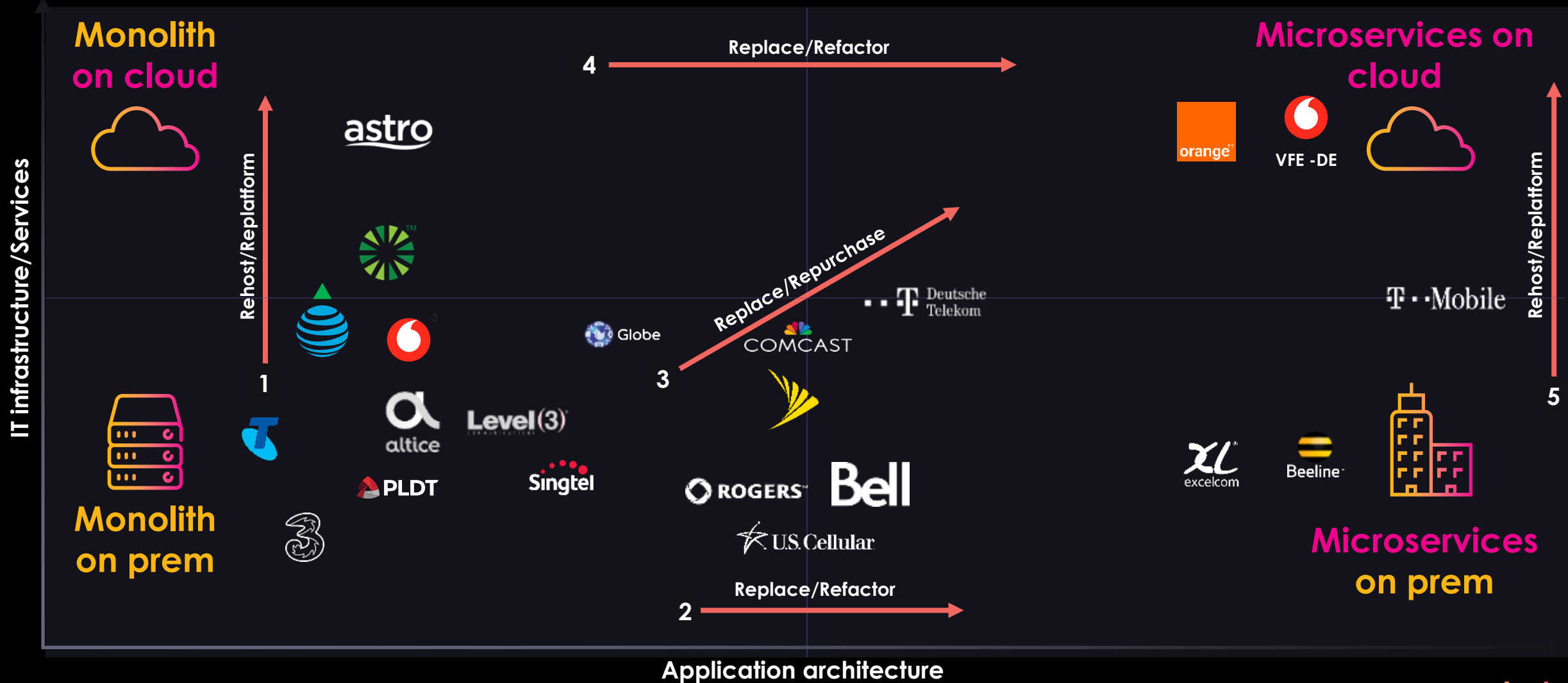
Cloud Strategy & journey plans
Establish a center of excellence CCoE and communities of practice for Enterprise

Analysis of a mission-critical application architecture
Formulated prioritized cloud migration strategy

Quadrant model with operators with varying Cloud strategies

Monolith on cloud

Microservices on cloud

Monolith on prem

Microservices on prem

Replace/Refactor 4

Replace/Repurchase 3

Replace/Refactor 2

Rehost/Replatform 1

Rehost/Replatform 5

IT infrastructure/Services

Application architecture

astro · AT&T · Vodafone · Globe · Deutsche Telekom · COMCAST · T-Mobile · altice · Level(3) · Singtel · PLDT · Sprint · ROGERS · Bell · U.S.Cellular · orange · VFE -DE · XL excelcom · Beeline

Amdocs is engaging with its customers towards Microservices

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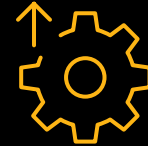**03** Overcome the challenges and build the puzzle

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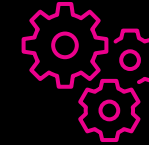
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Elite Cloud Performance **looks like..**

You are delivering a constant stream of value to your customers.

Your return on investment is continually increasing.

Your employees have a consistent workload and are high levels of satisfaction.

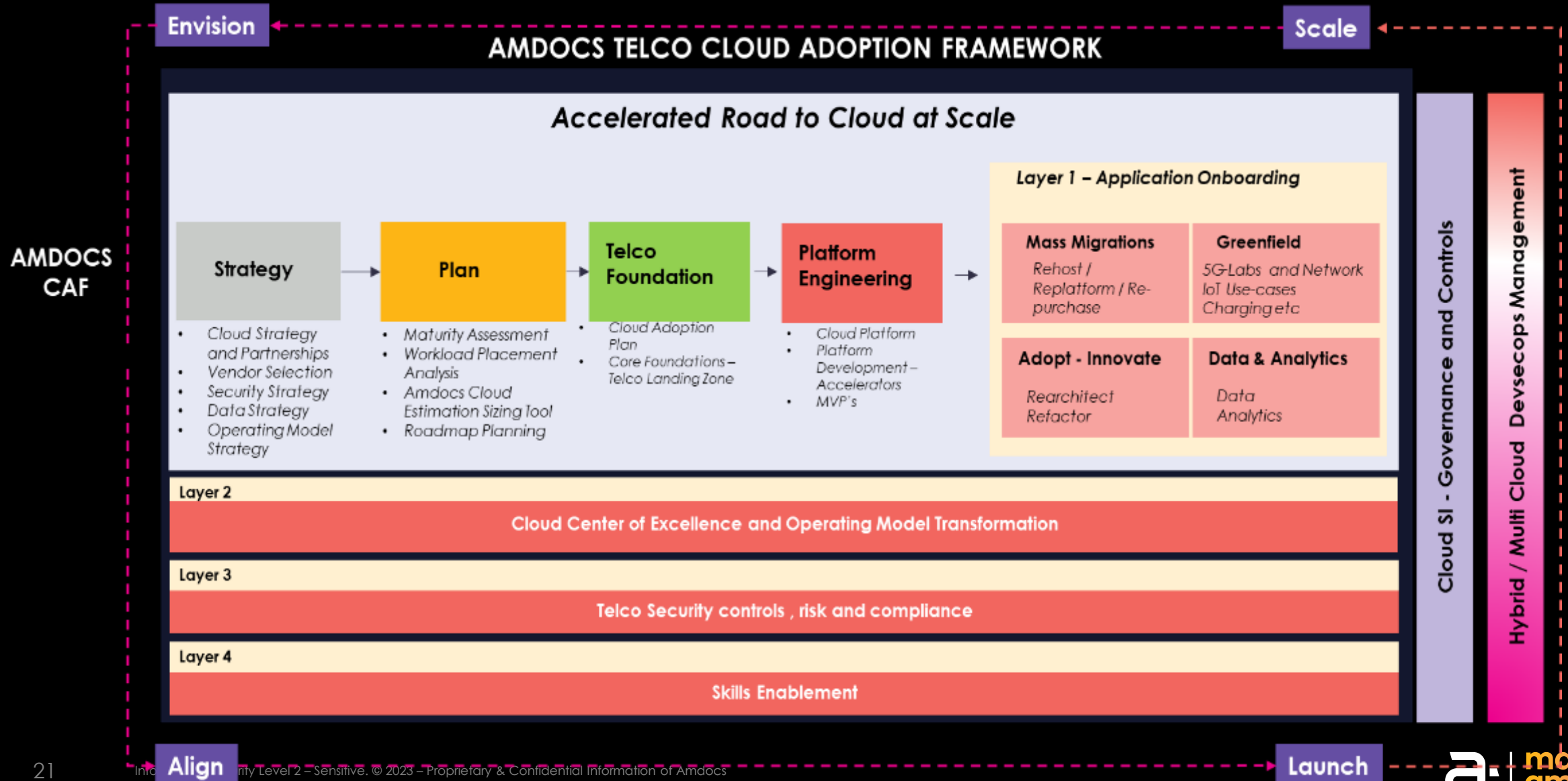All improvements can be associated to a measurable outcome:

Deployment Frequency

Lead Time for Changes

Change Failure Rate

Mean Time to Recovery

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Amdocs Telco Cloud Adoption Framework

Unlocking the puzzle

Amdocs has services and solution to support with your challenges

Cost optimization areas ✔
Long Term Savings ✔

Challenges

Challenge	Description
Data Security + Regulation compliance	Risk of data leaving the company and security challenges and regulation
Downtime and Disruptions	Minimize downtime during go live of the applications and migrations
Integration	Seamless integrations and complexity of interconnecting cloud applications with the on-premise legacy.
Cost Management	Controlling expenses and focus on the current utilization of services.
Skill GAP	Acquire new cloud skill by develop this new skill in house or hire new talent.
Reliability and redundancy	Meet the SLA, DR and high availability that the company requires. On the correct time

Solutions

- Use cloud-native features to improve security and select a cloud provider that adheres to your local and regional regulations. ✔ ✔
- During deployment, it is important to conduct thorough testing and staging in different environments and implement a rollback procedure. ✔ ✔
- Conduct an integration analysis before migration and on develop a scale migration plan identifying dependencies. ✔
- Use cloud monitoring solutions to track consumption and develop a FinOps methodology by detecting unused resources. ✔ ✔
- Build your skill plan for the cloud. Use the first project with the support of Amdocs to acquire this new knowledge ✔
- Create architectures leveraging the hyperscaler region to achieve redundancy and meet the business SLAs

Thank You

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