



The bridge to possible

stc TelcoCloud: The Automation Journey

Workloads, Infrastructure, Testing & Operations

Saad S. Al Qahtani, Telco Cloud Manager, Saudi Telecom Company (stc)
Stefan Manza, Principal Architect CX SP EMEA Cisco

Cisco Webex App

Questions?

Use Cisco Webex App to chat with the speaker after the session

How

- 1 Find this session in the Cisco Live Mobile App
- 2 Click “Join the Discussion”
- 3 Install the Webex App or go directly to the Webex space
- 4 Enter messages/questions in the Webex space

Webex spaces will be moderated until February 24, 2023.





Agenda

stc Telco Cloud Drivers, Execution and Achievements

- stc Telco Cloud Drivers
- Telco Cloud Journey Phases
- Telco Cloud Deployment Timeline
- Telco Cloud Achievements

Telco Cloud Architecture

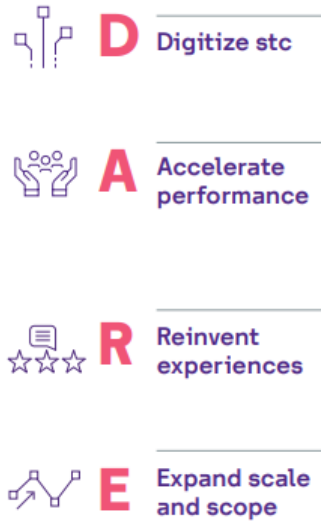
- Onboarding Overview
- Implementation Journey
- Looking into the Future

stc Telco Cloud Drivers, Execution and Achievements

stc as digital enabler for Saudi 2030 vision, and in the light of its DARE strategy, is moving forward to achieve the maximum benefits of its infrastructure cloudification.



stc strategy



- Improve business agility through simplified architecture and change in culture
- Evaluate and introduce emerging technologies to strengthen stc position as innovation leader
- Enhance experience by stepping up of speed, capacity, coverage and network cloudification.
- Enhance financial efficiency by smarter investment and optimized operating model

Journey Phases





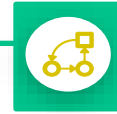
It is NOT About Technology Only



Technology

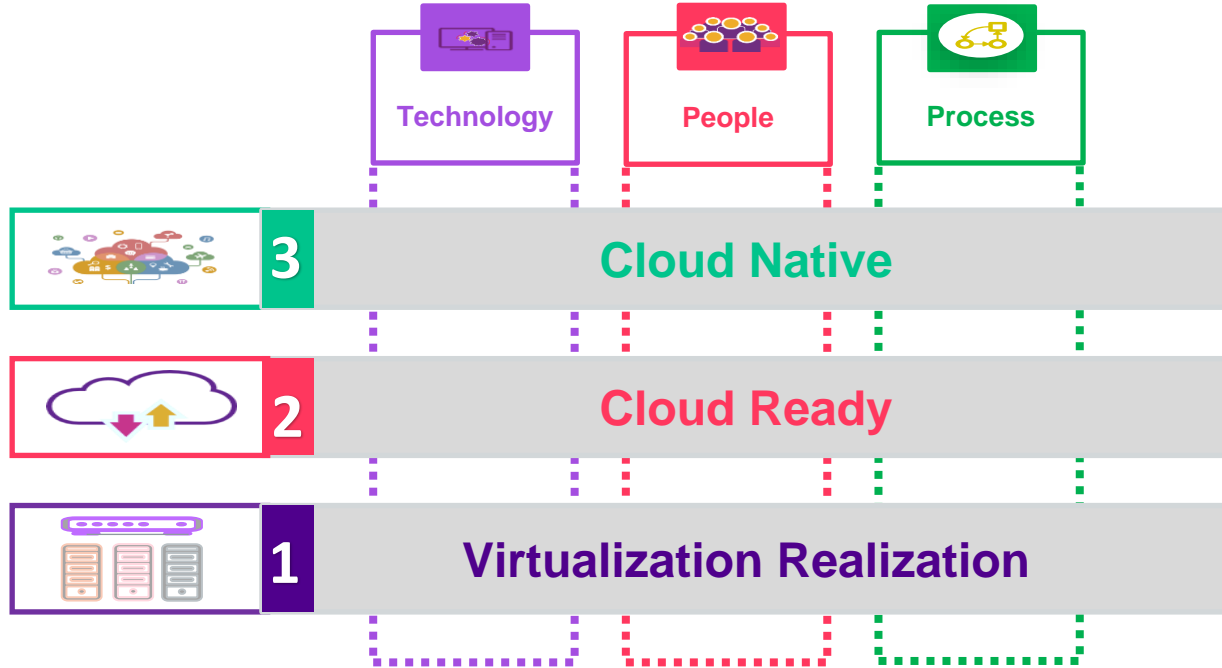


People

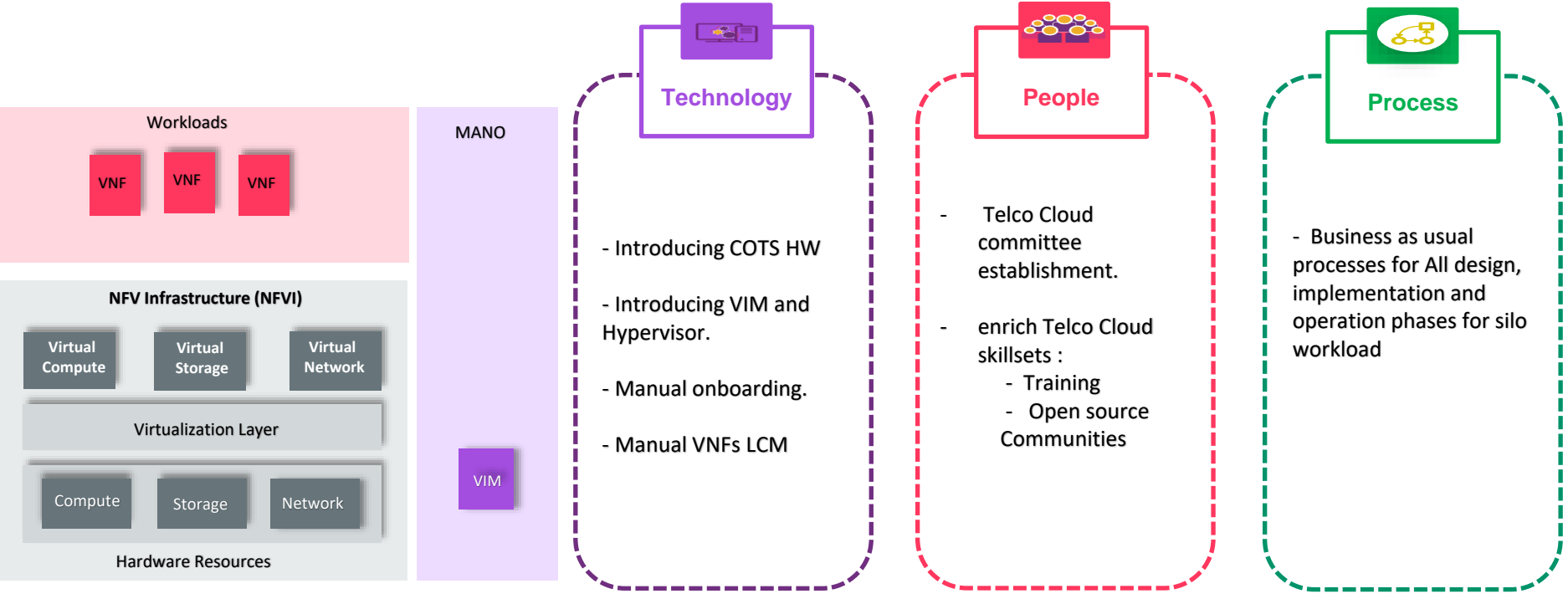


Process

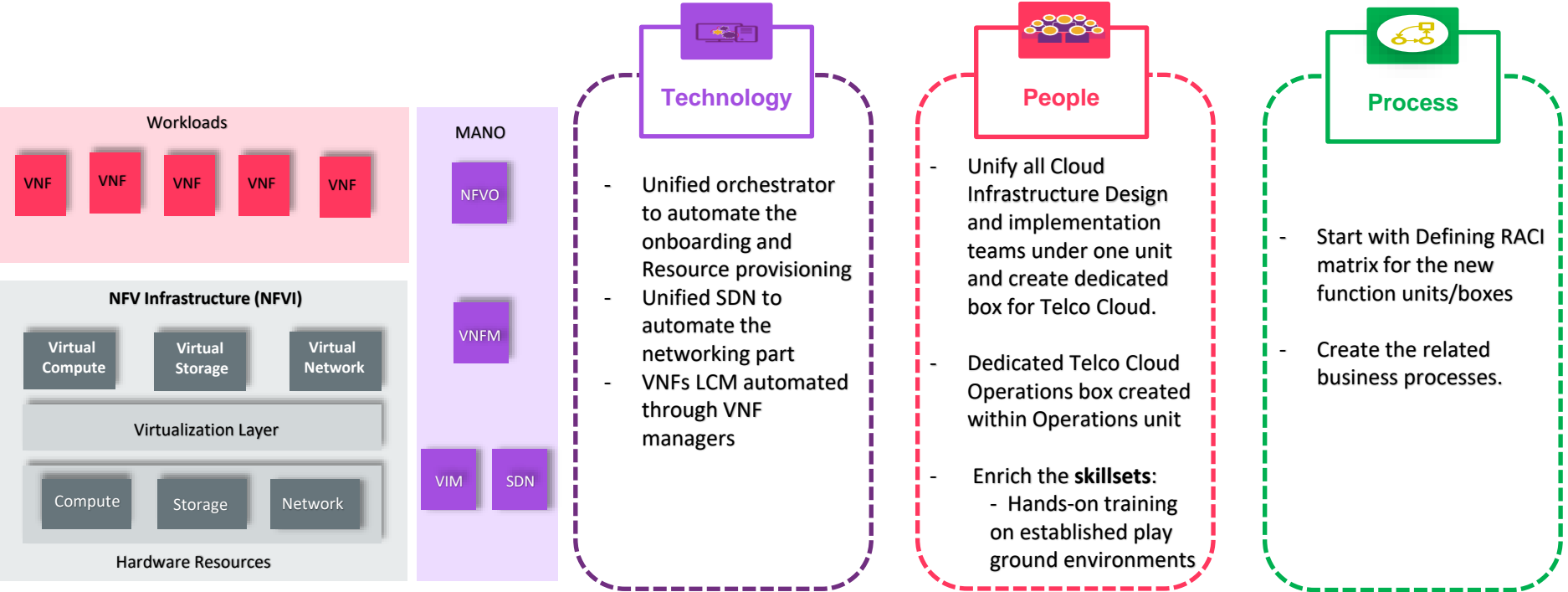
Journey Phases



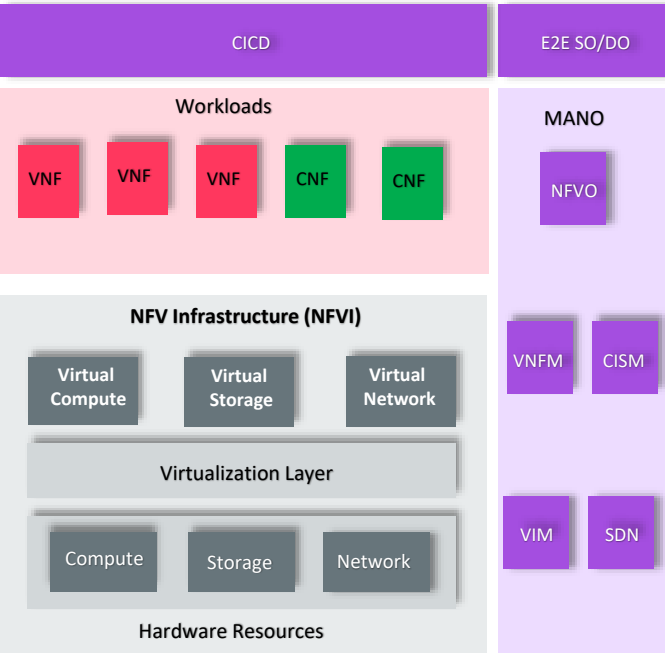
Virtualization Realization Phase



Cloud Ready Phase



Cloud Native Phase



Technology

- evolution towards **unified, agnostic cloud native platform**
- Introduce DevOps and CICD Pipeline.

- Introduce service and Domain Orchestration

People

- moving applications /workloads teams and Cloud Infra. Operations to Cloud Functional unit
- Introduce and Enable DevOps **mindset**

- Establish Innovation Centers to realize use-cases

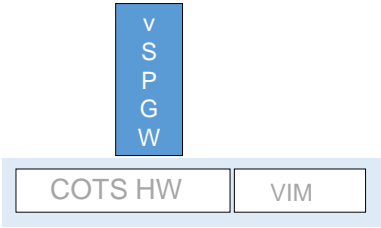
Process

- Create the service catalogue and Market place.
- Process Re-engineering to enable Devops

- No vendors any more!

2016 Virtualization Realization Phase

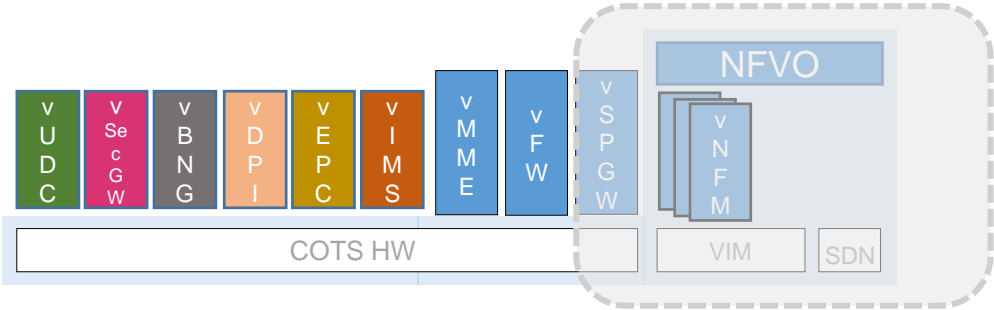
Small scale virtualization on one VNF to realize the concept



2017/2019 Cloud Ready Phase

2017
Build the Platform , Freeze the VNFs

2018/2019
Freeze the Platform , Diversify the VNFs



2021+ Cloud Native Phase

Diversify the platform gradually

Introduce new HW , Networking , VIM and NFVO on a step by step basis .
Accurate TCO can be built based on 2017/2018 experience to include MS,PS,HW,SW,PSI and Testing Costs .



Build, Scale, and Optimize



- Cloud Platform Deployment
- Automation everywhere
- CIP – Scale up – Scale out
- Resource Optimization
- CIP Audit

Conceptualize



- Use Cases conceptualization and Development
- Technical Architecture Blueprints.

Business Value Realization (BVR)



- Operational Efficiency
- Customer Experience
- Financial Efficiency

Operate



- KPI/SLA based Operations Model.
- Knowledge Transfer and Competence building programs.

Source and Procure



- Hardware and Software: On-Demand/IaaS model enabled by % buffer on top of annual Consumption.

Governance




- Partnership Governance Model/Structure.
- Partnership Program and Transformation Processes.


Business Values
30 ~ 75% enhancements



Operational Efficiency

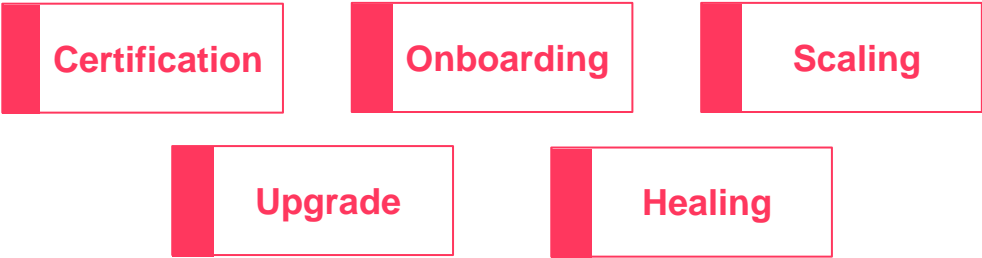


Customer Experience

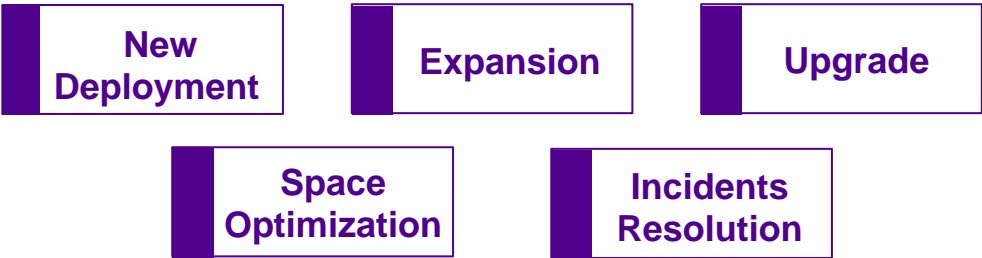


Financial Efficiency

Workload BVRs :



Infrastructure BVRs :



Cloud Partnership significantly Improved Business Agility, Financial and Operational Efficiency of Telco Cloud Workload

Virtualized Network Functions

> 60% NFs

Certified and On-boarded

Containerized Functions

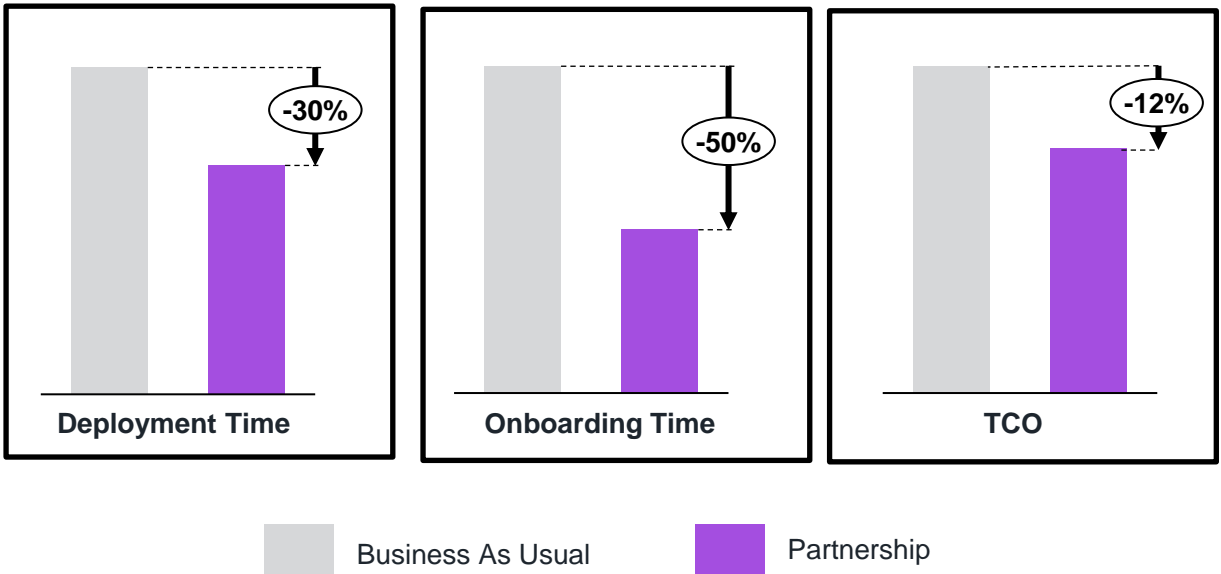
5G core

Certified and On-boarded

No. of Cores

+30,000 cores

Carrying live Traffic



Key Success Factors

Technology

Unify life cycle management of cloud Infrastructure components

People

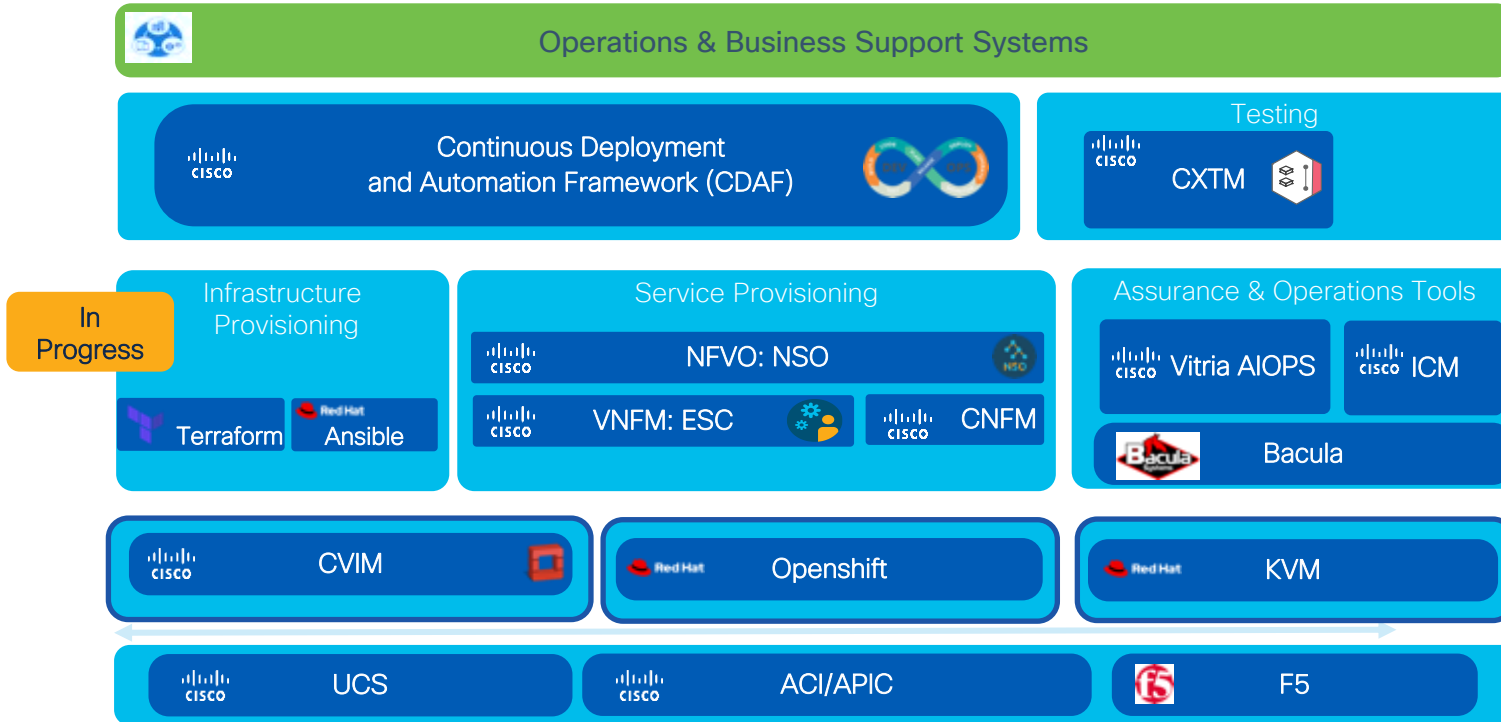
Enable DevOps by Revamp the organization structure

Process

Cloud deployments should be driven by partnership and business values realization

Telco Cloud Architecture

STC Telco Cloud Solution – Architecture overview



Guiding Principles

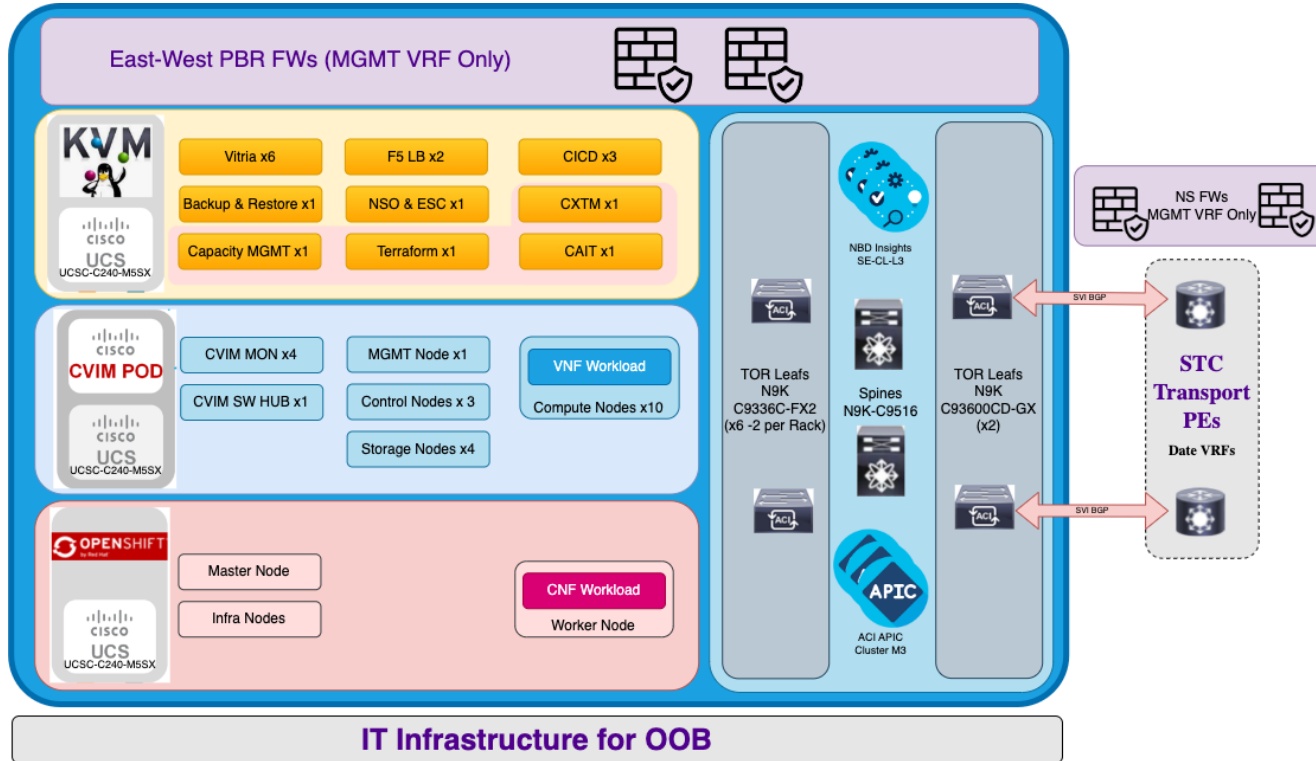
Architecture evolution

- Scalability
- Security
- Simplicity
- Reusability
- Modularity
- Interoperability
- Geo-Redundancy

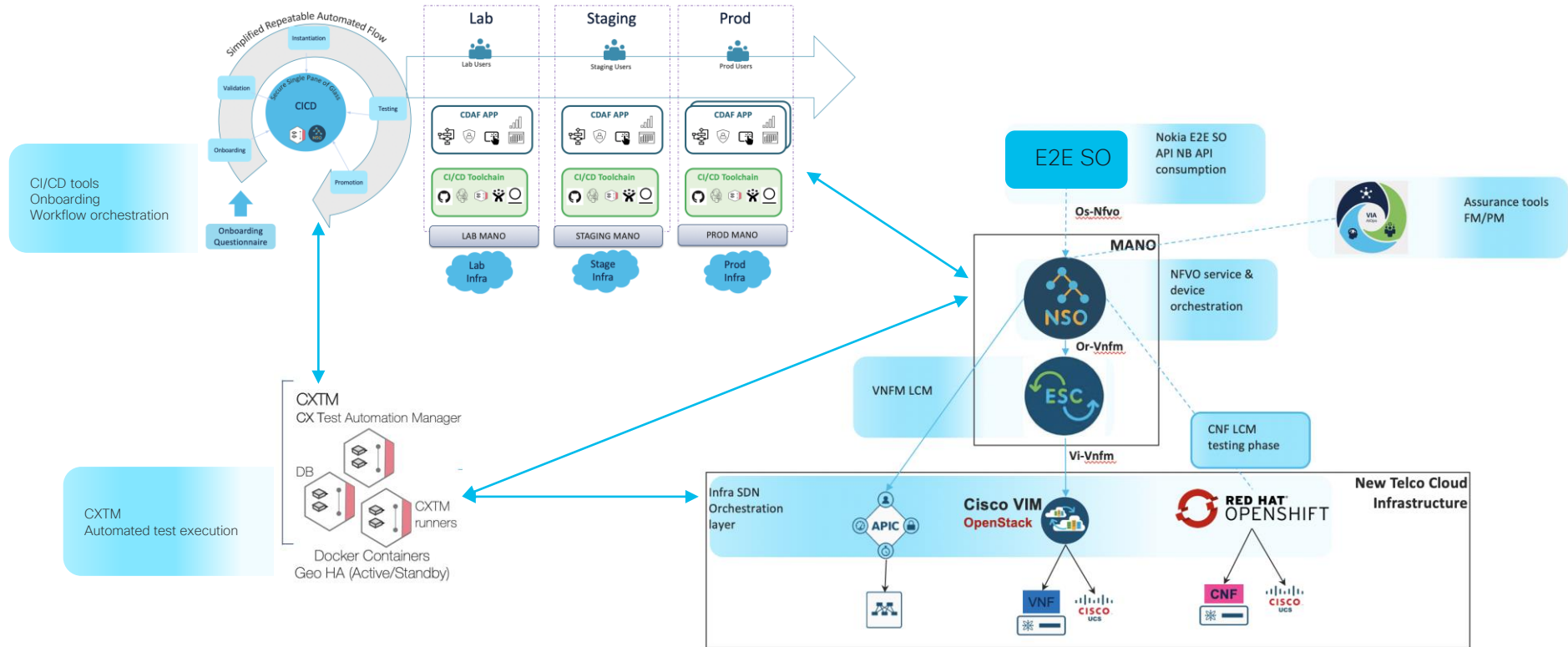
Enhancing Digital Experience

- Single pane of glass
- Automation-first
- Standardized onboarding

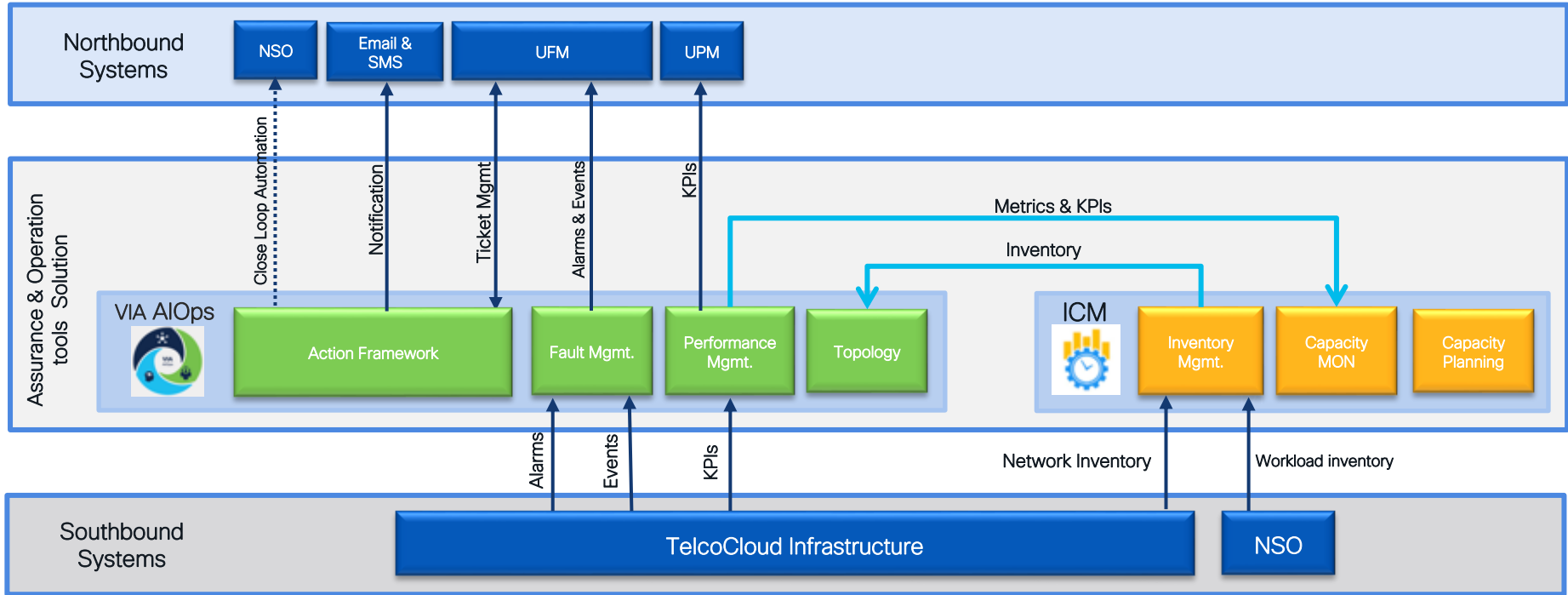
Telco Cloud Infrastructure setup overview



Automation Architecture



Assurance Architecture



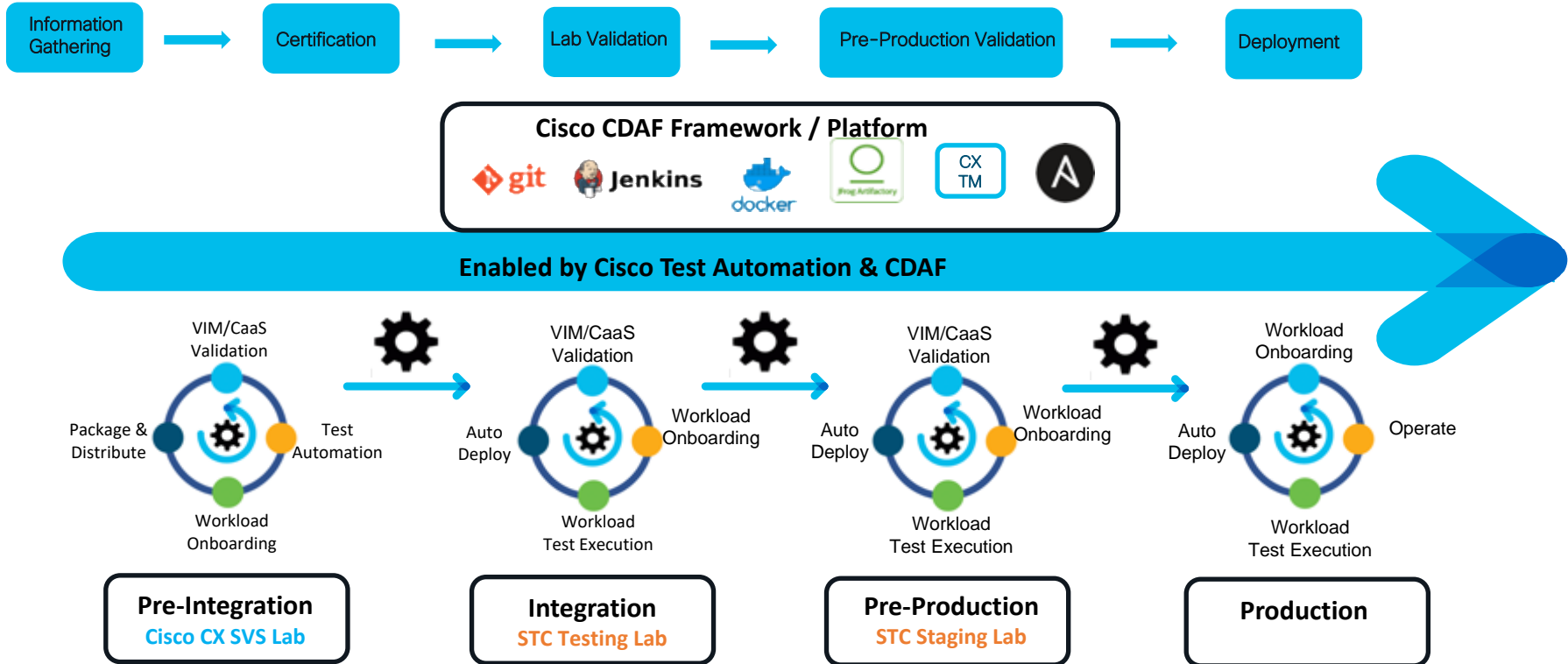
ICM: Inventory & Capacity Management

VIA AIOps: Assurance Performance

Onboarding Overview



Workload Deployment with CDAF Integration

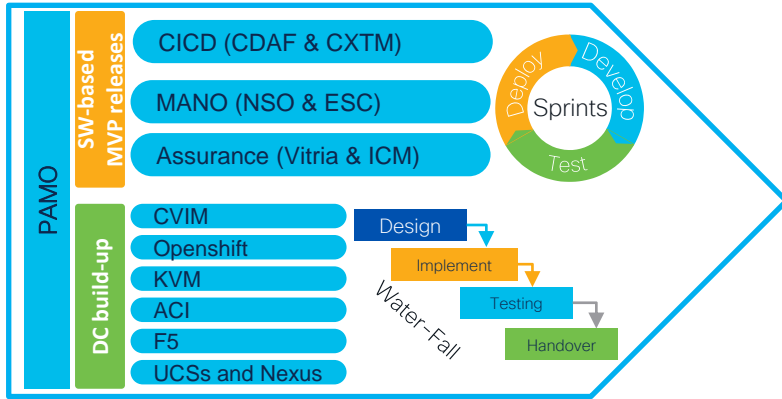


Implementation Journey



Infrastructure implementation & MVP Journey

Flexibility



Predictability

MVP 1

Foundation

- Automated VNF onboarding
- Essential operation tools to monitor the node

MVP 2

Advanced

- Inventory management of TC
- Capacity Monitoring of TC
- Alarm correlation
- Workload LCM

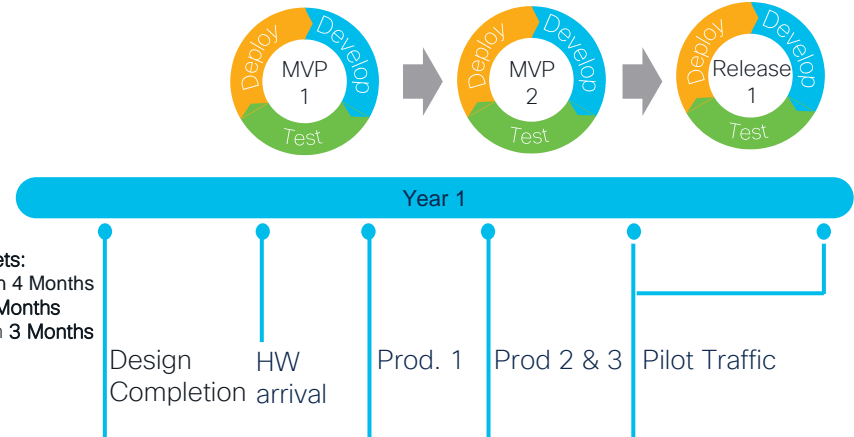
Release 1

Operational ready

- Capacity Planning for TC
- Production workload deployment

Implementations targets:

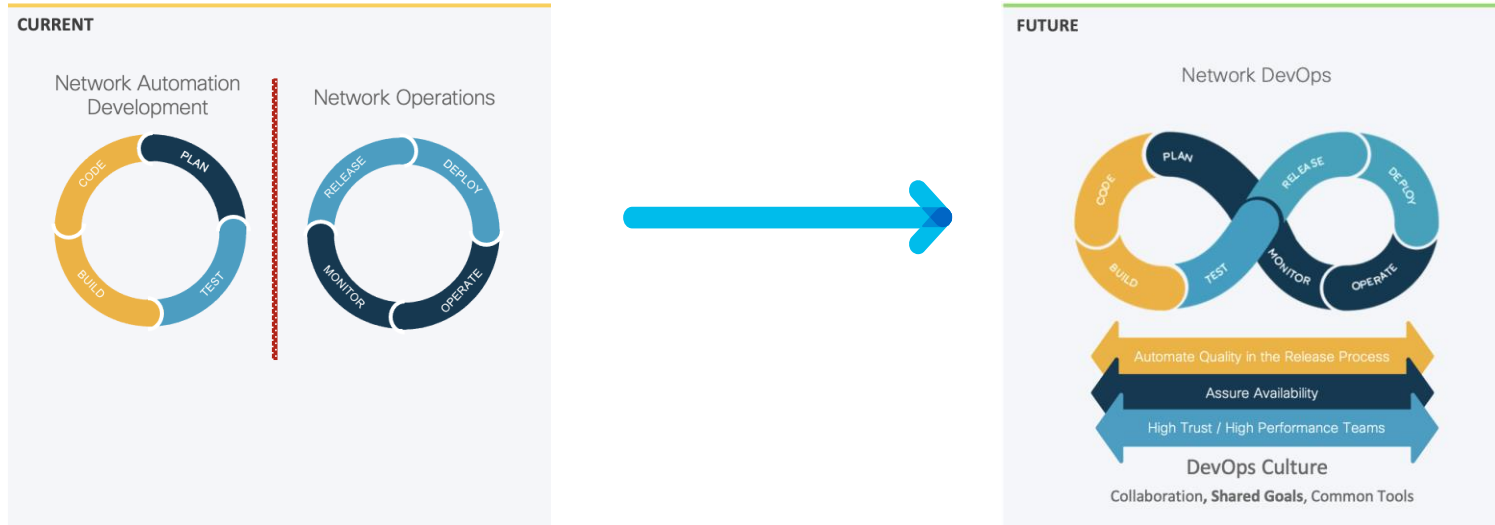
- CIP Foundation in 4 Months
- Pilot Traffic in 2 Months
- Stability Period in 3 Months



Looking into the Future



DevOps Transformation



Performance
Fault
Disaster Recovery

Reporting
Inventory
Change Management

Security
Proactive maintenance
Compliance

Key takeaways

Implementing a modern
Telco Cloud is a journey

- Agile and waterfall can be delivered in parallel with the right governance
- The architecture must be aligned from the start with the business objectives
- Onboarding standardization and workload vendor collaboration is key
- The deployment lays the foundation for enabling DevOps evolution

Complete your Session Survey

- Please complete your session survey after each session. Your feedback is important.
- Complete a minimum of 4 session surveys and the Overall Conference survey (open from Thursday) to receive your Cisco Live t-shirt.
- All surveys can be taken in the Cisco Events Mobile App or by logging in to the Session Catalog and clicking the "Attendee Dashboard" at <https://www.ciscolive.com/emea/learn/sessions/session-catalog.html>



Continue Your Education



Visit the Cisco Showcase for related demos.



Book your one-on-one Meet the Engineer meeting.



Attend any of the related sessions at the DevNet, Capture the Flag, and Walk-in Labs zones.



Visit the On-Demand Library for more sessions at ciscolive.com/on-demand.



The bridge to possible

Thank you

CISCO *Live!*

Are you playing the Cisco Live Game?

Scan the QR code and earn your
Customer Success Stories Theater
points here



CISCO *Live!*

ALL IN