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Automation and Orchestration Strategies for Intelligent Networking

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BRKCRtv-1901



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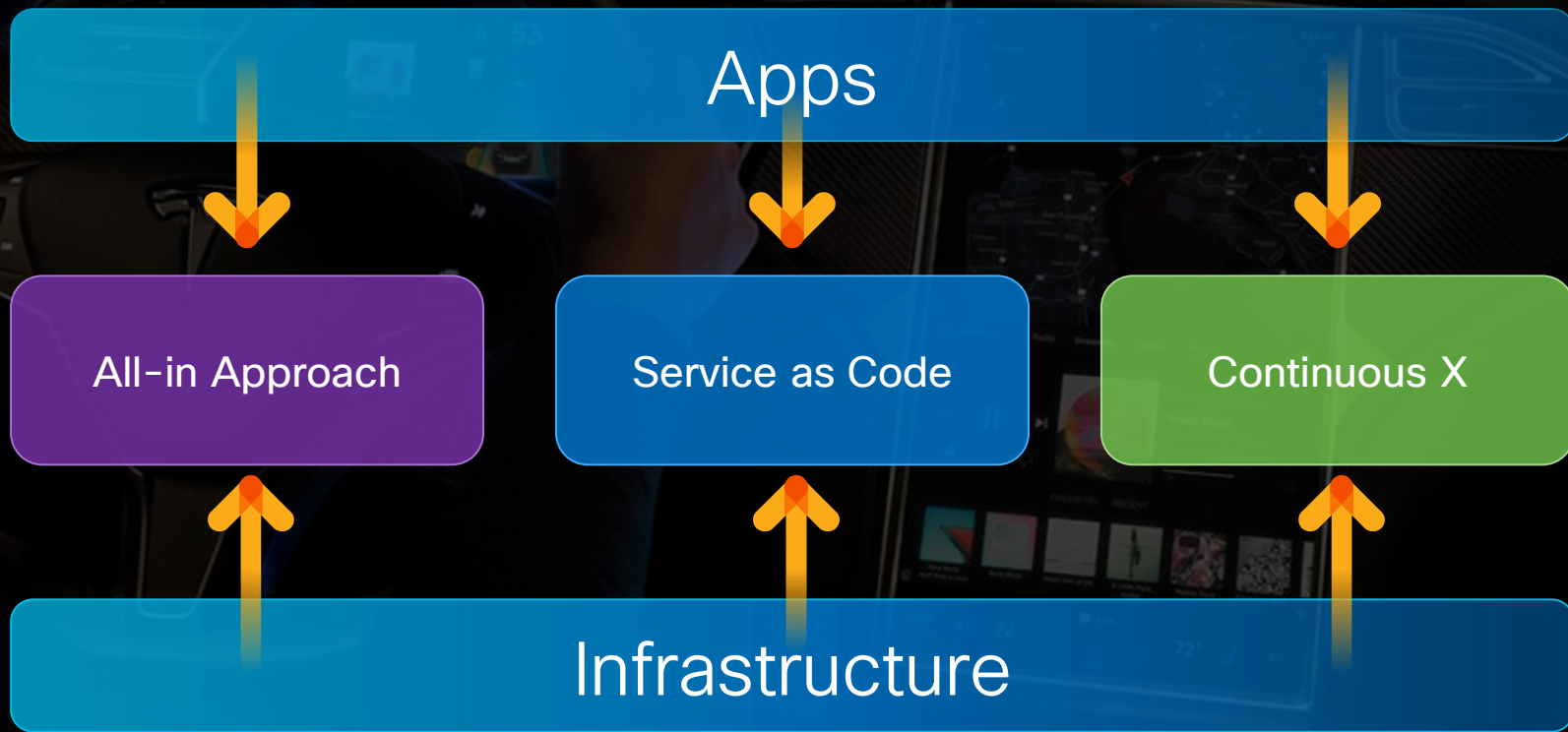
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Agenda

- Infrastructure and Applications
- Market Landscape
- Automation Framework
- Use Cases
- DevOps Relevance
- Customer Experience Driving Value

Between Applications and Infrastructure... There's a Bridge



Market Landscape

28.5B

IP devices

Connected to the
network by 2022



95%

changes

Network changes
performed manually



5X faster

demand for apps

Growing beyond IT
capacity to deliver



“We value Automation as a
team player versus a
replacement for humans”

– **NETFLIX**

Market Drivers for Automation and Orchestration

Customers are demanding end-to-end Automation and Orchestration solutions that include Workflow and Process Automation across multiple domains



Open and Extensible Framework
Leverage Open Source community projects to complement Cisco innovation



DevOps and CI/CD Mindset
Co-Development model and Agile methodologies



Business Process Automation
Integrate and optimize complex workflows in Multi-Domain, Cross-Domain, and Multi-Vendor environments



Greenfield and Brownfield
Consistent experience to support diverse estate of controllers and orchestrators



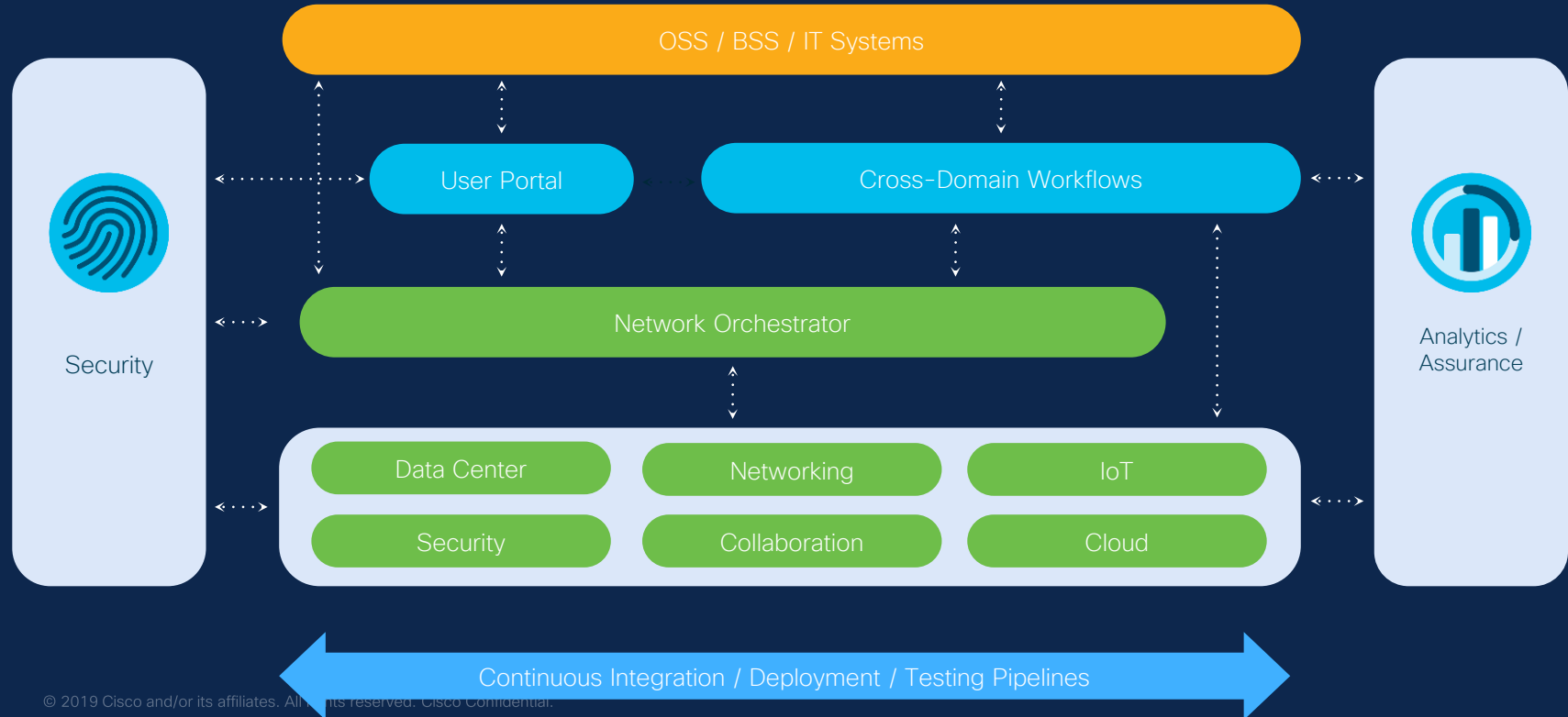
Scalable, Secure, Highly Available
Mass-Scale, Encryption/ Vaulting, HA/DR



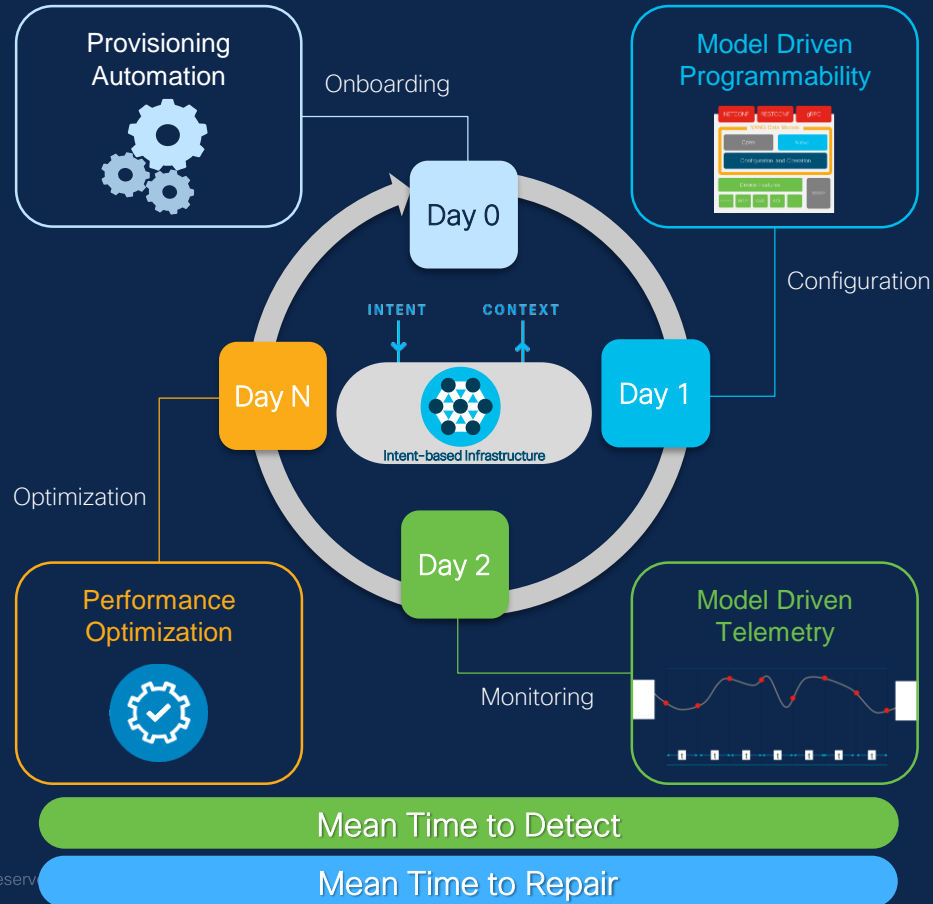
Closed-Loop Automation
Framework to leverage Analytics for Self-remediation

Automation and Orchestration Framework

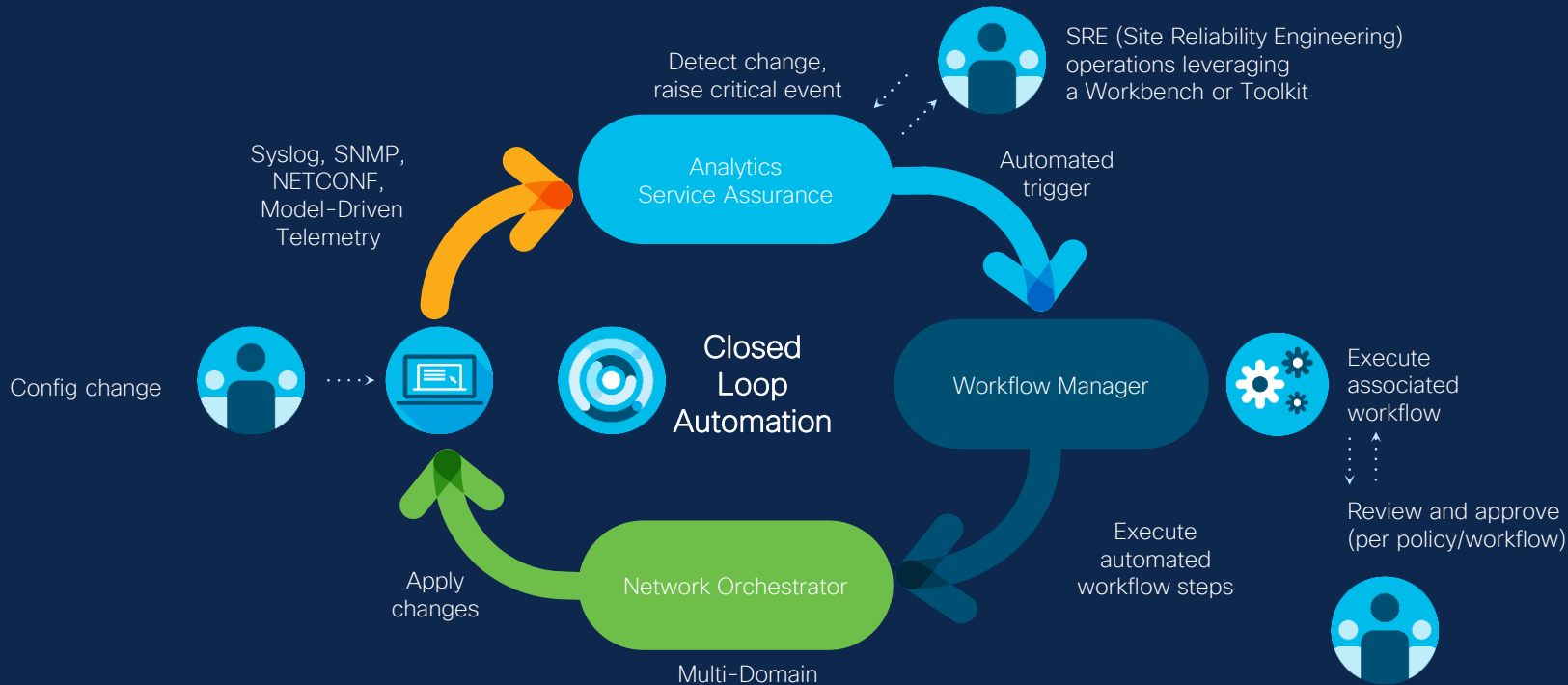
High-Level View



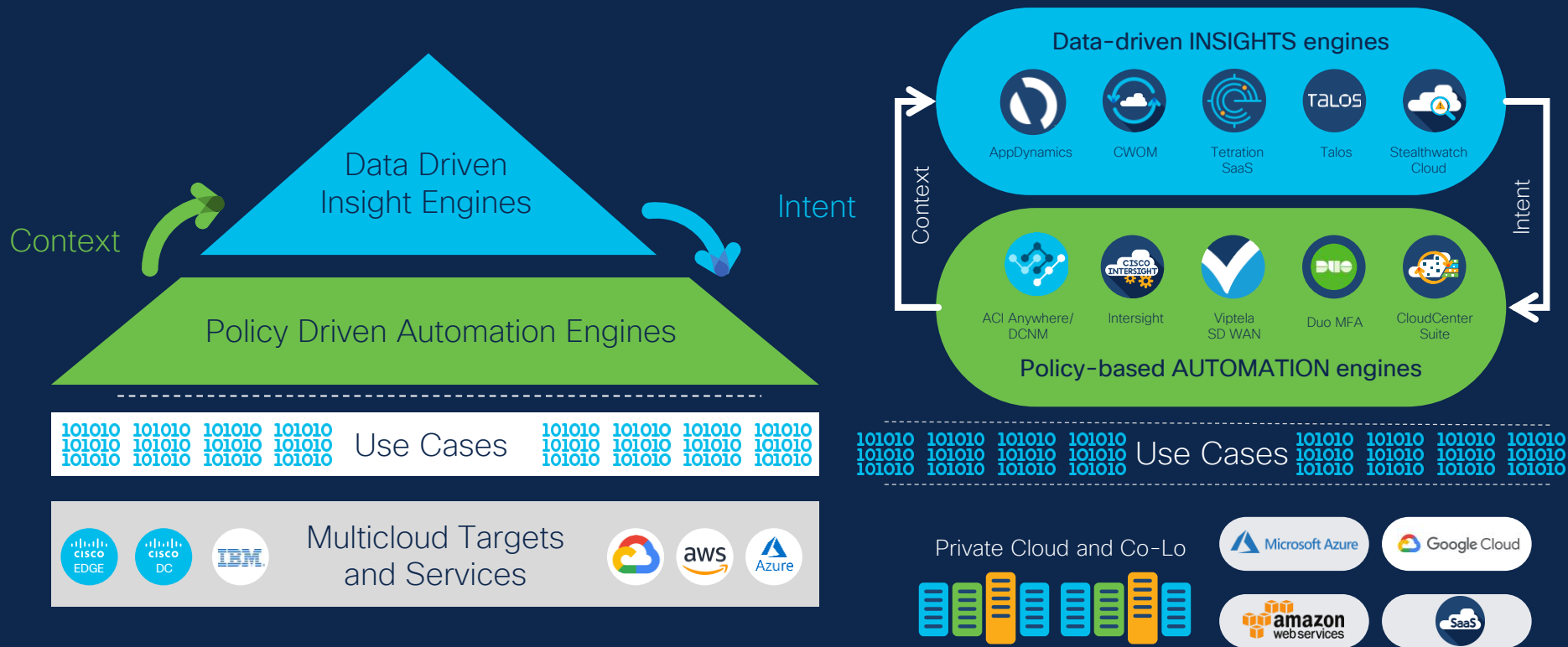
Operating across an Intent-based Lifecycle



Automation Delivering Closed-Loop Systems



Leverage an End-to-End Architecture Approach



Top use cases

Closed-loop Automation

Cloud Governance

Cloud Migration

Zero Touch Provisioning

SD-WAN Automation

NetOps

Network Migration

Golden Config Compliance

Application Workload Mgmt

CI/CD

DevOps

IT As-a-Service

Multicloud Networking

ACL Mgmt / Policy Mgmt

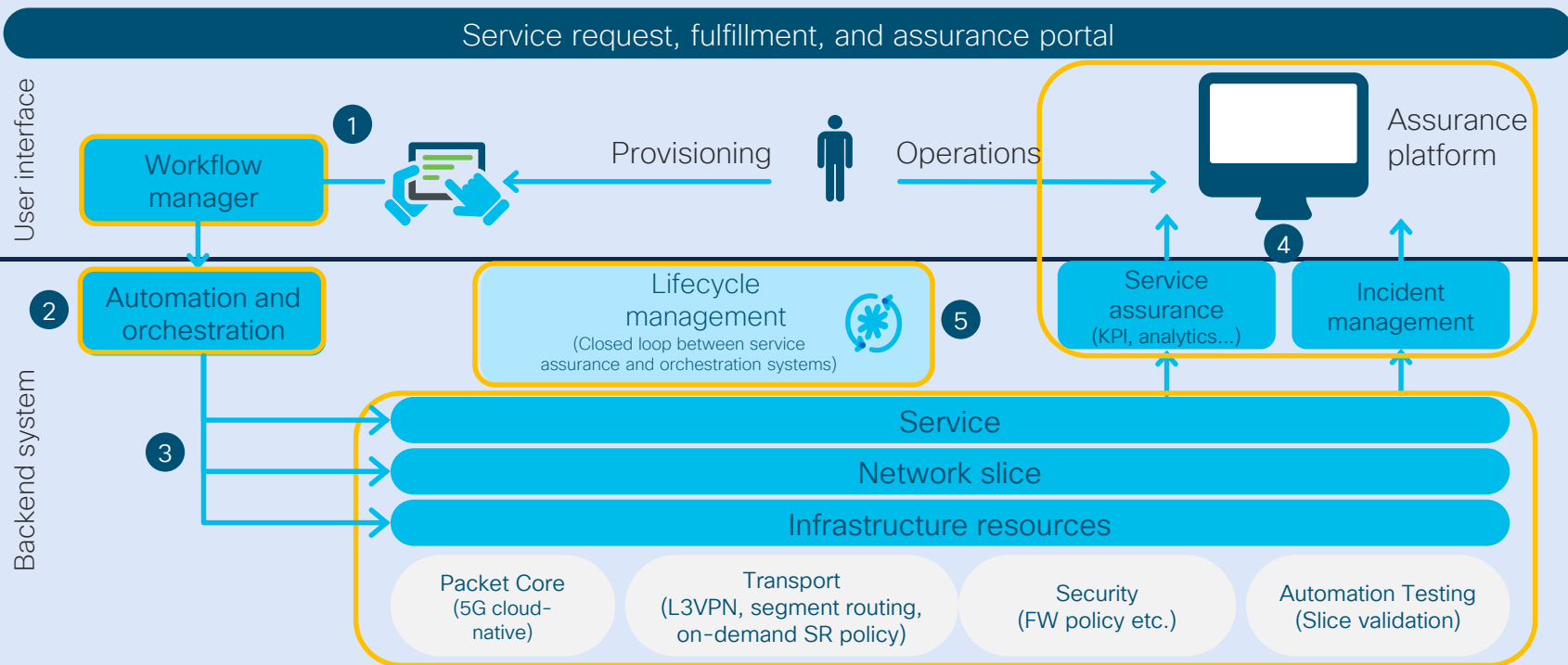
OS Upgrade

Transport SDN Management

DC Fabric Provisioning

Cloud Disaster Recovery

5G Network Slice Deployment Workflow



Continuous Testing Automation Pipeline

Agile Software
Delivery

Continuous Test
Automation

Automation of CI/CD
integrated with
DevOps Tools

Ease of Use

Automate Everything, Everywhere - Pipeline

Code | Integrate | Build



Functional
& UA Testing



Performance
Testing



Push to Production



Customer
Experience

BUILD



Developers

TEST



Testers

DEPLOY



Release Team

OPERATE



Operations

Site Reliability Engineering



DevNet- Empowering Automation Engineers



The DevNet website, developer.cisco.com, is free-to-use and provides learning & sandbox environments for those trying to learn coding and testing apps



DevNet is now a community of **500,000+ developers**, leveraging code and sharing code to build better solutions.



DevNet helps developers and IT professionals who want to **write applications and develop integrations** with Cisco products, platforms, and APIs.

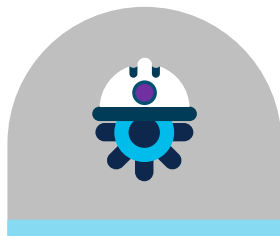
Accelerate Your Automation journey

Value of Cisco CX Services for Automation



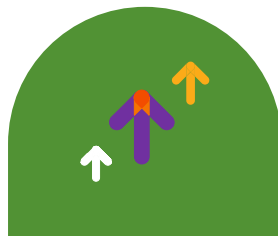
Align business and IT goals

Develop a strategy and roadmap across your entire operation



Consolidate Data

Integrate a vendor neutral platform across technology, operations, and application domains



Enable ML/AI

Enable real-time advanced analytics apps for mass awareness, performance and fault management



Enable Network Automation

Increase Operational Efficiency through closed loop remediation and orchestrated service assurance



Reduce Disruption

Increase network performance and uptime for always-on service availability



Build in-house Expertise

Equip IT staff with new skills and knowledge with virtual and hands-on technical training



Thank you





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