

The Amdocs Open Network

Evolve into a service driven network

Oren Marmur

Head of NFV, Amdocs Open Network

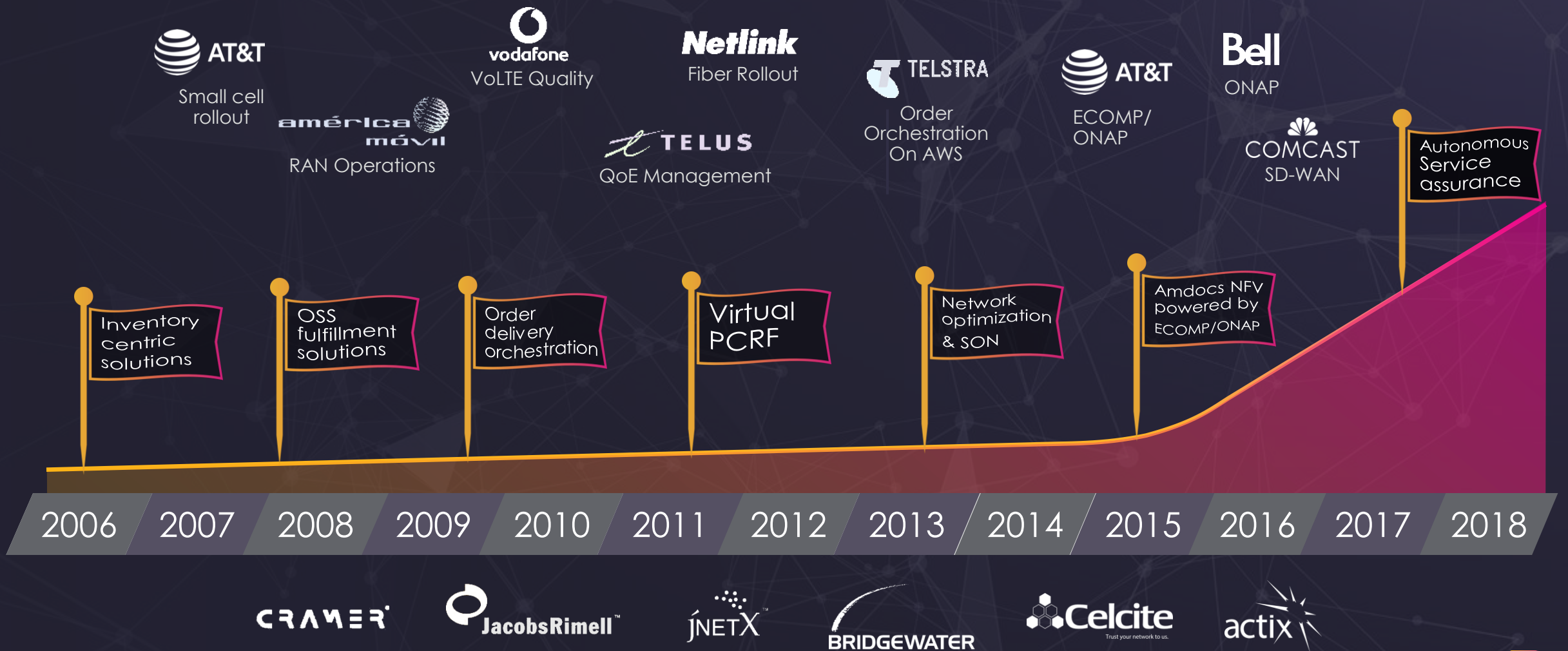
Dec. 2018



Agenda

- Evolution of the Amdocs Network Offering
- How are service provider networks evolving?
- The Service Driven Network
- The Open Network Ecosystem
- The road to 5G
- Amdocs Open Network – why will we win?

Building our network offering since 2006



Amdocs network offering

Driving the network evolution



HYBRID NETWORK OPERATIONS

Continued investments in network upgrades – **\$82B in 2019** for global network infrastructure

Harmonize operations such across hybrid physical and virtual networks



VIRTUAL NETWORK EXPANSION

NFV market continues to grow at a 36% CAGR

Accelerate service agility, innovation and time to delivery through virtualization and orchestration



AUTONOMOUS OPERATIONS

Significant pressure on OPEX reduction due to **1-2%** top-line revenue growth through 2025

Pave the way for full autonomous / zero-touch operations



NETWORK ROLLOUT ACCELERATION

30% annual growth in the rate of new non-residential deployments of small cells by 2025

Boost network densification through highly automated rollout for Fiber and RAN deployments



MOBILE/5G REALIZATION

\$120B 5G investment worldwide by 2020, with 1.3B 5G connections by 2025

Optimize current & transition to 5G using design, deployment & operations

Amdocs network offering

Driving the network evolution



HYBRID NETWORK OPERATIONS

Continued investments in network upgrades – **\$82B in 2019** for global network infrastructure

Harmonize operations such across hybrid physical and virtual networks



VIRTUAL NETWORK EXPANSION

NFV market continues to grow at a 36% CAGR

Accelerate service agility, innovation and time to delivery through virtualization and orchestration



AUTONOMOUS OPERATIONS

Significant pressure on OPEX reduction due to **1-2%** top-line revenue growth through 2025

Pave the way for full autonomous / zero-touch operations



NETWORK ROLLOUT ACCELERATION

30% annual growth in the rate of new non-residential deployments of small cells by 2025

Boost network densification through highly automated rollout for Fiber and RAN deployments



MOBILE/5G REALIZATION

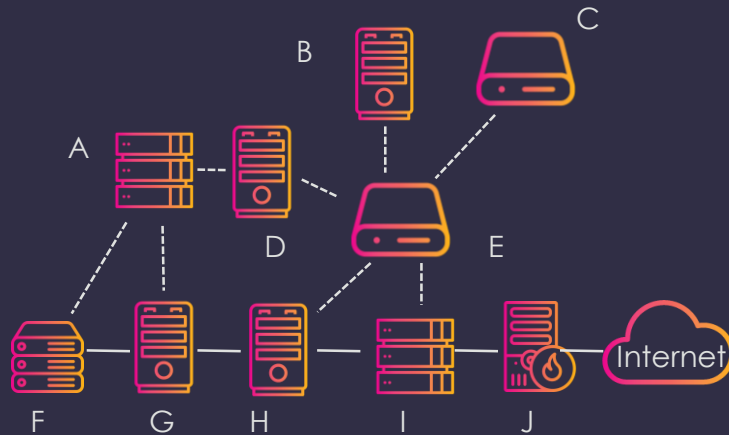
\$120B 5G investment worldwide by 2020, with 1.3B 5G connections by 2025

Optimize current & transition to 5G using design, deployment & operations

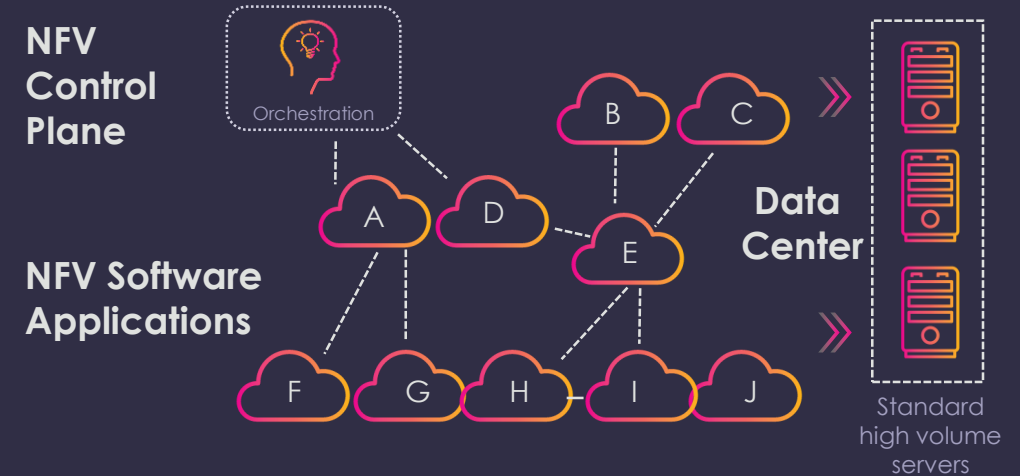
Virtualizing the network

What Is It All About?

Physical Network



Future Virtual Network



Service Agility

Deliver services in **seconds/minutes**—NOT weeks/months
Design and launch new services in **weeks** —NOT 9–18 months



Operational Efficiency

On-demand service selection and delivery
Automation of network operations



Cost Reduction

Standard hardware
High resource utilization
Multiple vendors

What should service providers aim for?

High degree of automation, service agility

Digital marketplace of capabilities

Customers can **order at click of a button** and are **delivered in minutes**, not weeks-months

Agility to on-board and expose partners

& vendors capabilities
Introduce new service in weeks, not months



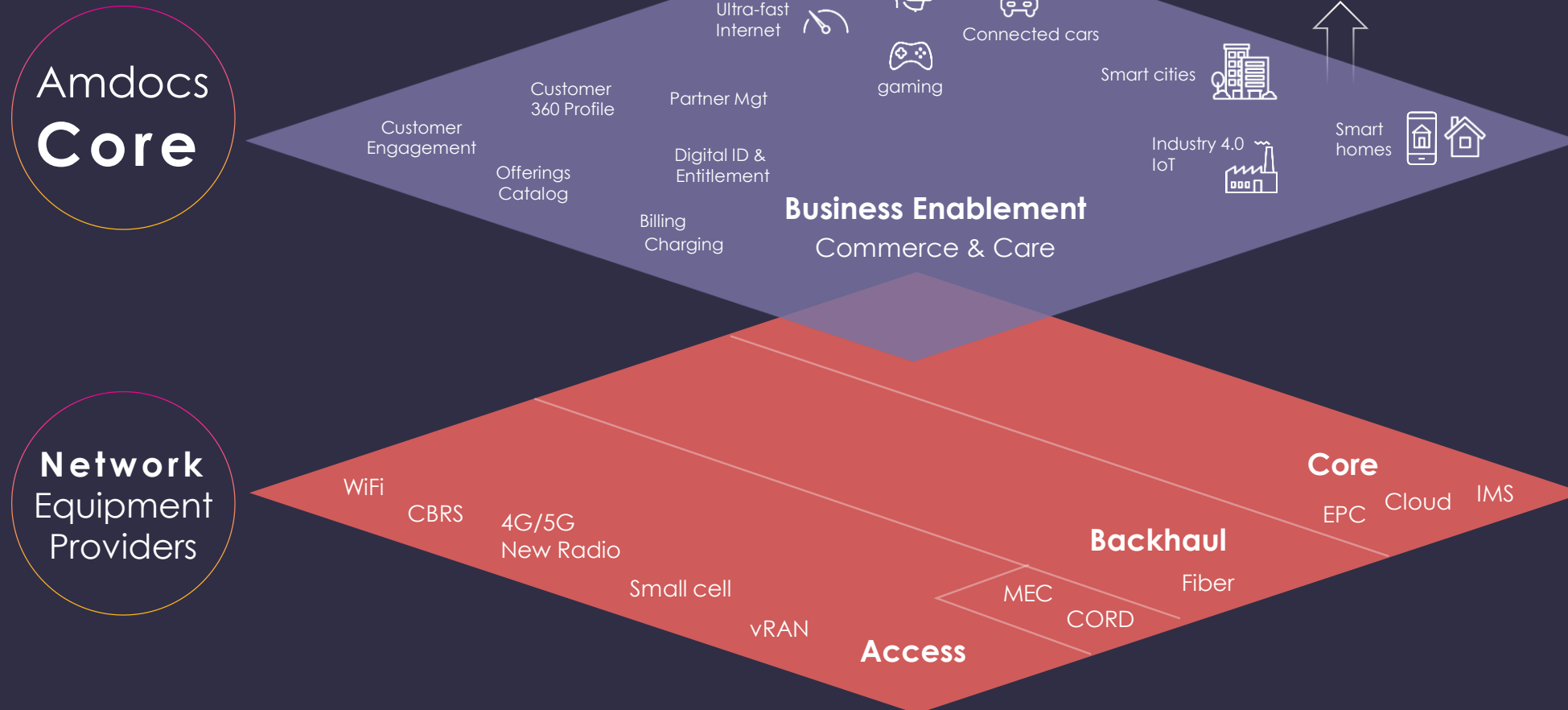
Autonomous network operation

Remove manual complexity – **reduce operational costs**

Scale out quickly
through a cloud
based environment

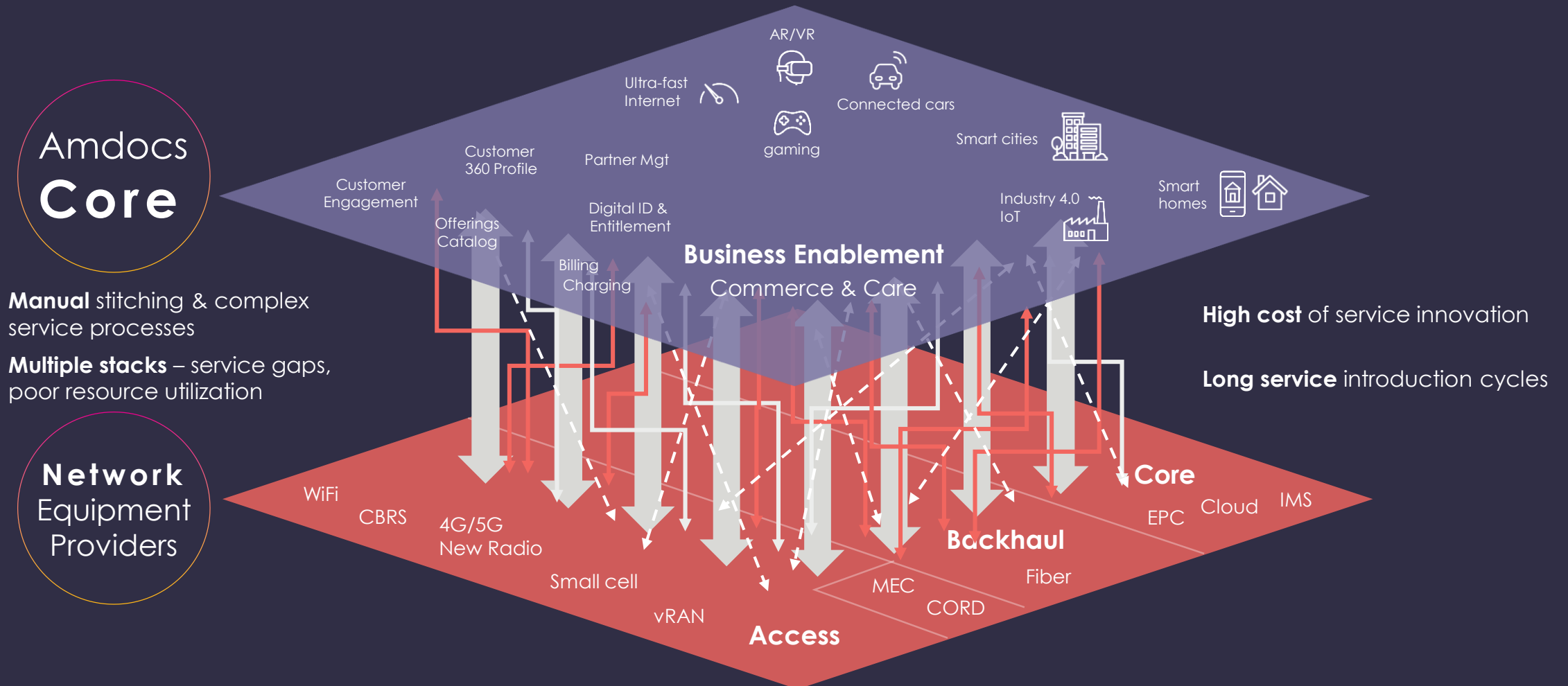
Current network reality

Disconnected layers



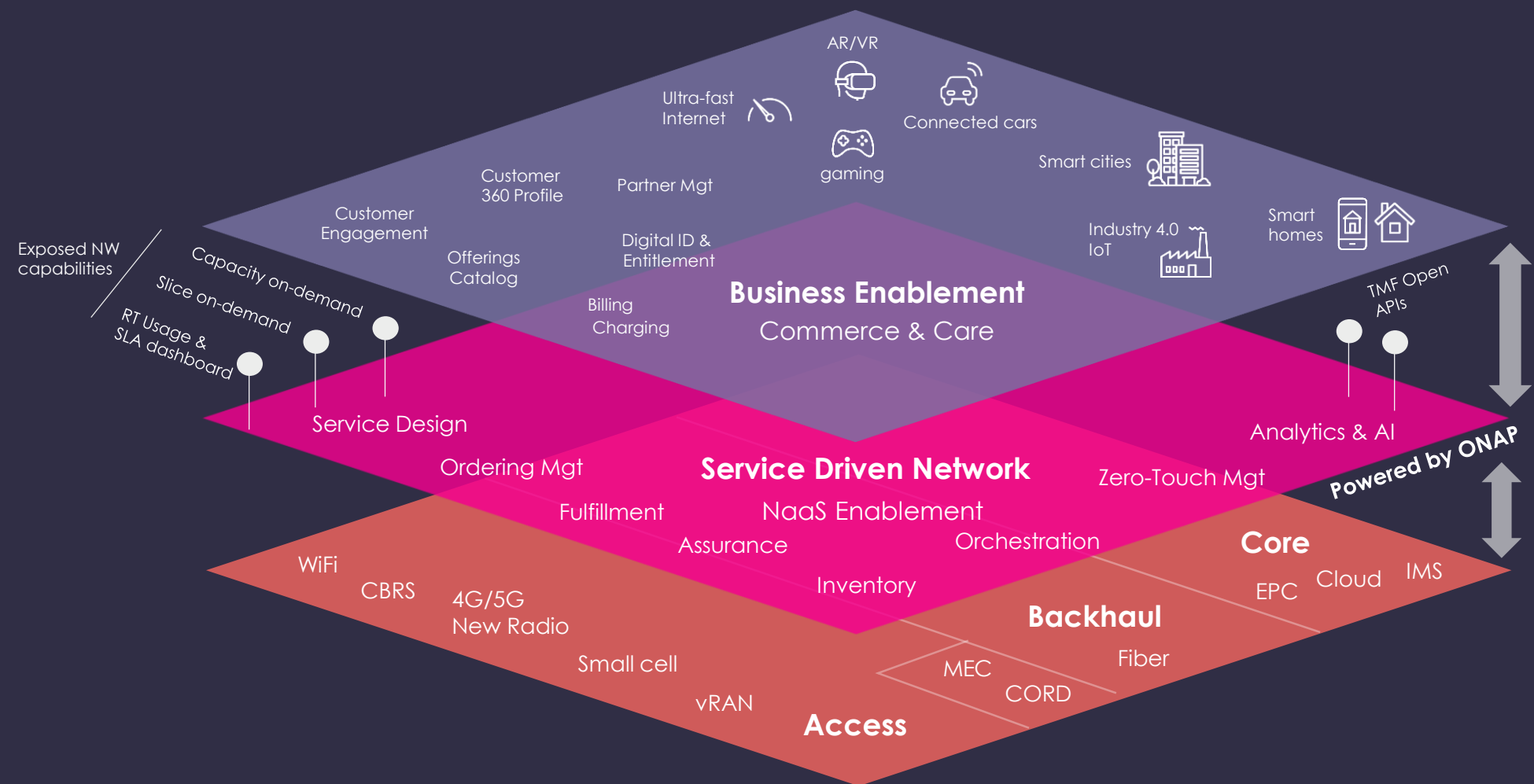
Current network reality

No automation – manual complexity, limited agility



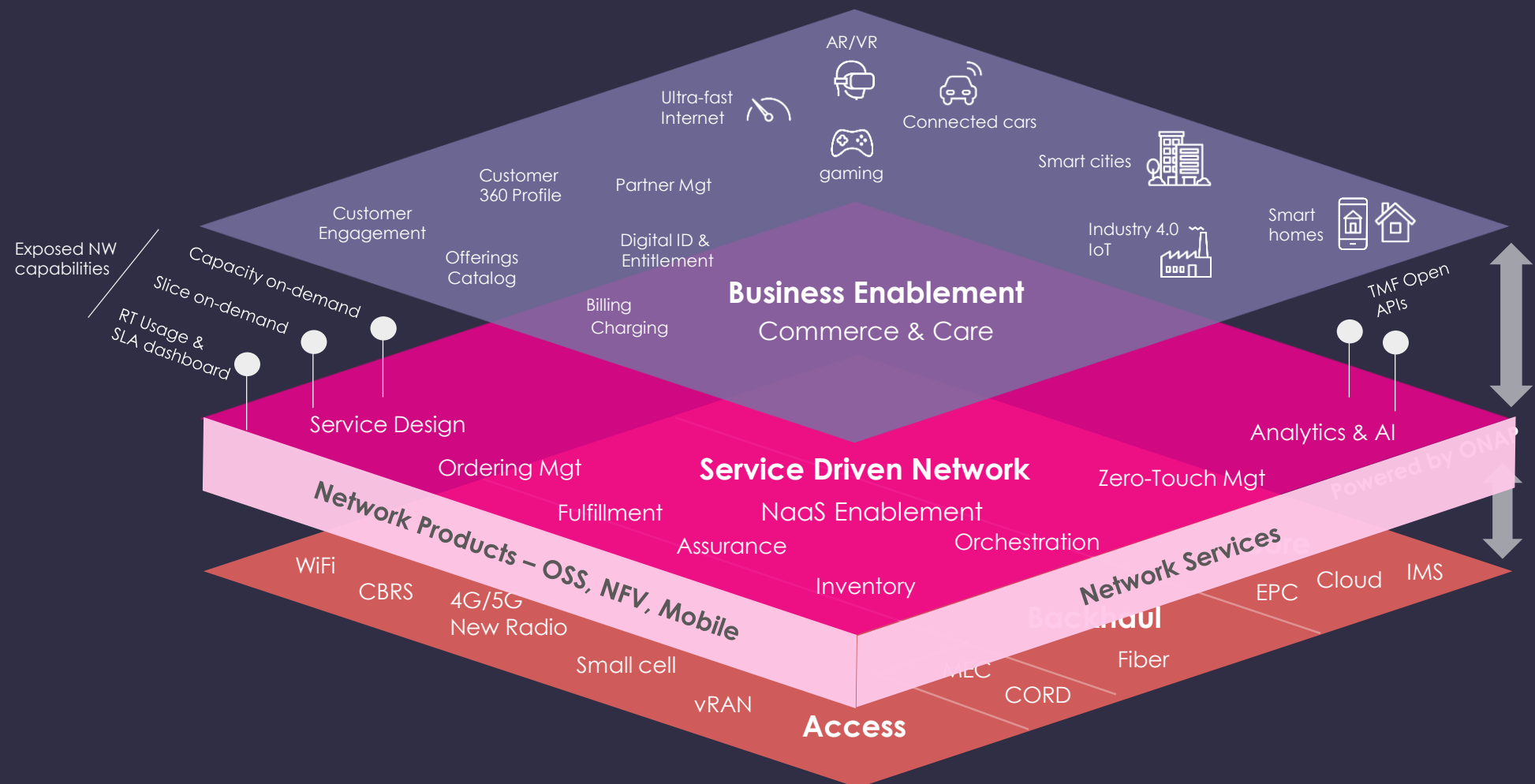
Service driven network

It's all about Automation



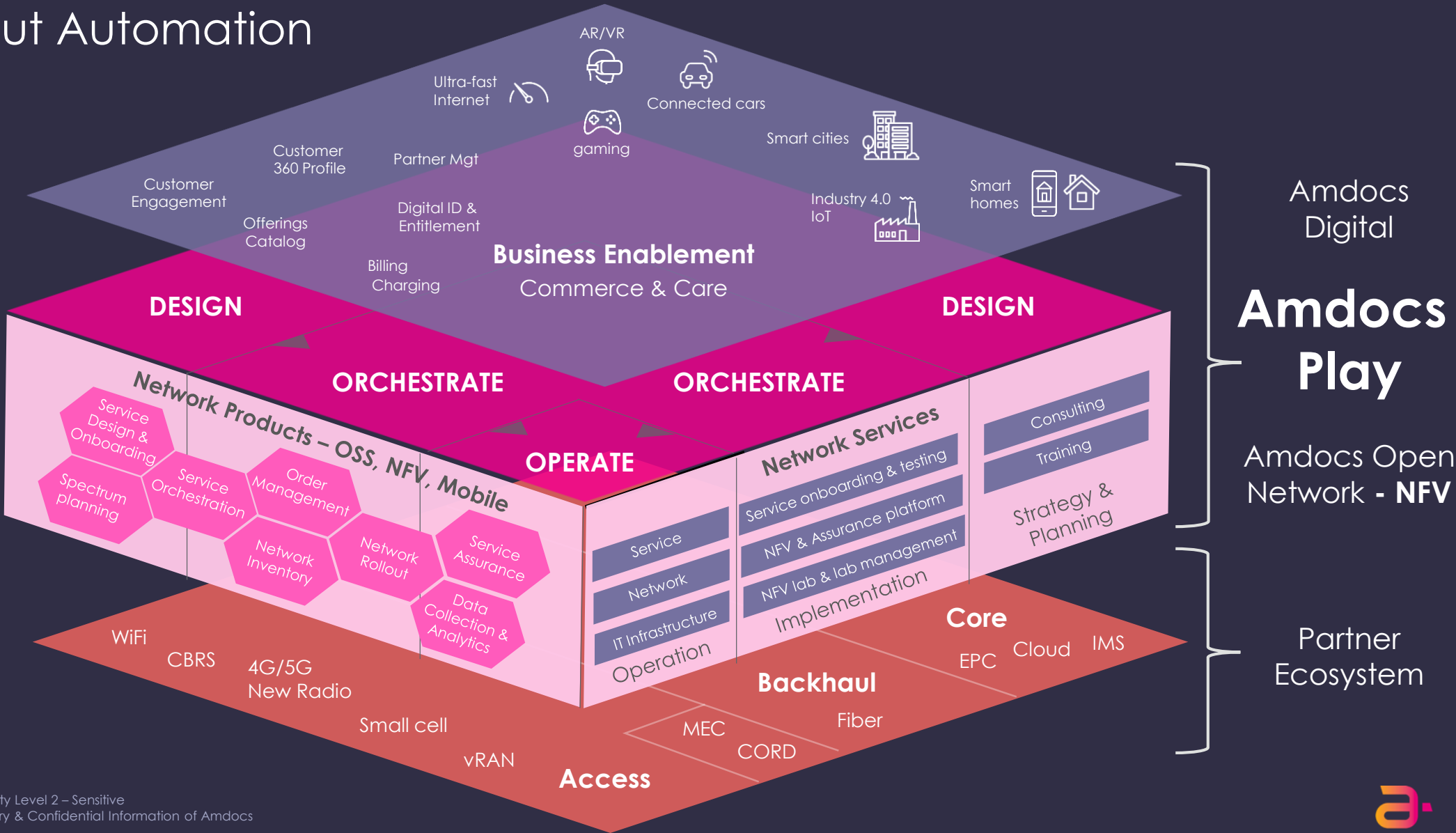
Service driven network

It's all about Automation



Service driven network

It's all about Automation



Open Network ecosystem

Standardization

Faster innovation

Break the vendor lock-in

Expedite market adoption





Amdocs NFV Powered by ONAP

We are leading the Open Network initiative

Track record, experience and best practices form the **world's first production projects**



Strong services play – to leverage the best parts in the industry: standards, open source, open ecosystem, own technology

Service driven network



ECOMP / ONAP

Open Network Automation Platform



E2E Network Automation, Virtualization, Cloudification, Orchestration



Network-as-a-Service (NaaS)



Creating a bridge between Network and IT



Automation Platform

Service Network Automation Platform



#1 Enterprise connectivity (SD-WAN)
#2 Automation Platform
#3 Core and Enterprise use cases

Same goal. Different approach.



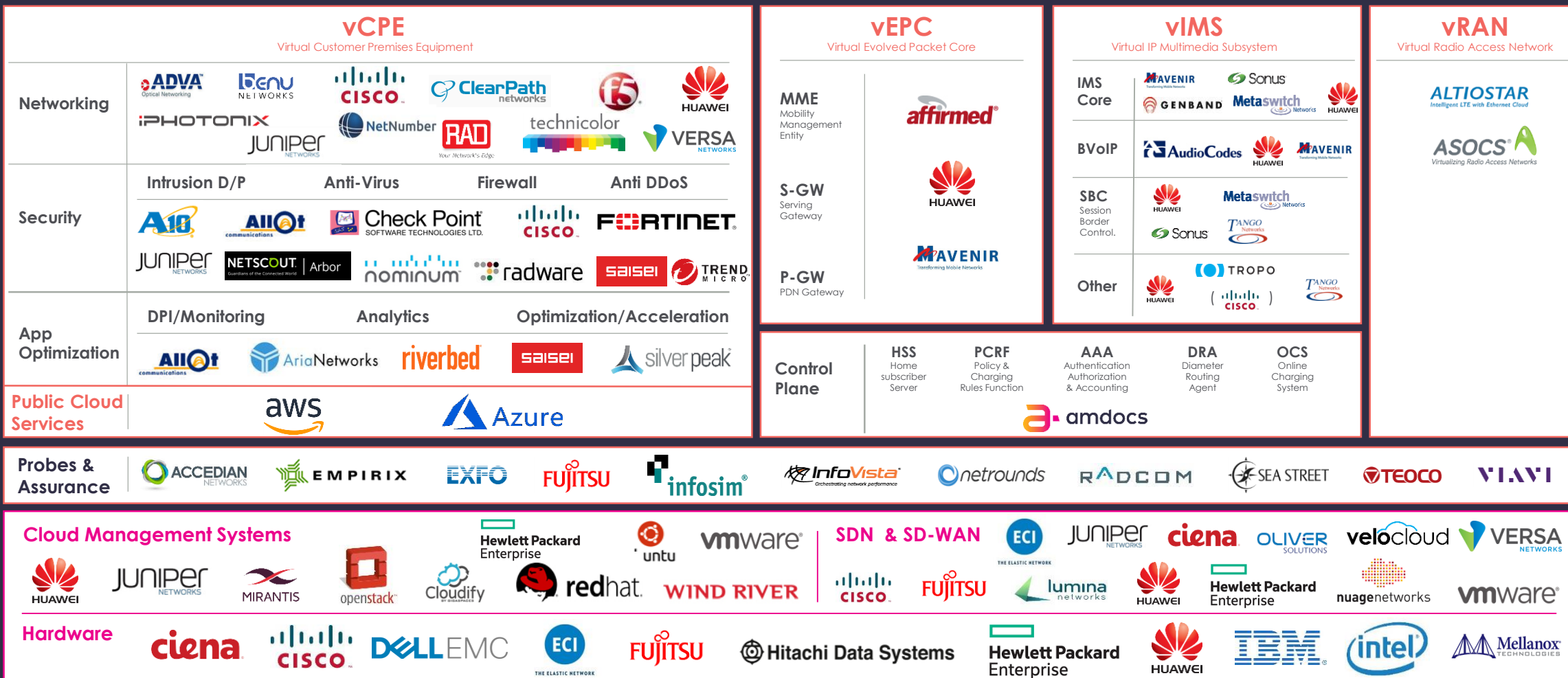
Open service driven network

NFV
Orchestration

NFV
Applications (VNF)

NFV
Infrastructure

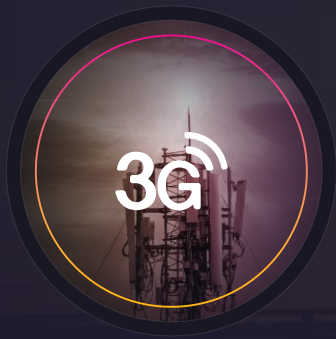
Service Lifecycle Management



The road to 5G



Pay for what you use
Voice, SMS



Bundles, GB plans
Mobile Internet
Mobile Apps



All you can eat
Voice, text and data

...



Pay for what you need (QoS), when you need it
Capacity Enhancement
Massive Connectivity
Ultra-low latency

'connectivity'

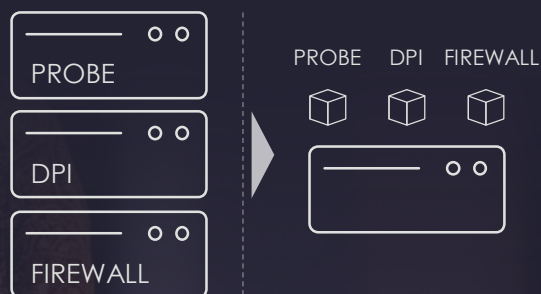
High CAPEX investments -
Frequencies, RAN, Core,
Operation systems...

Brand Awareness -
Competition, innovation

Monetization -
evolving opportunity

5G enabling technologies

Virtualization



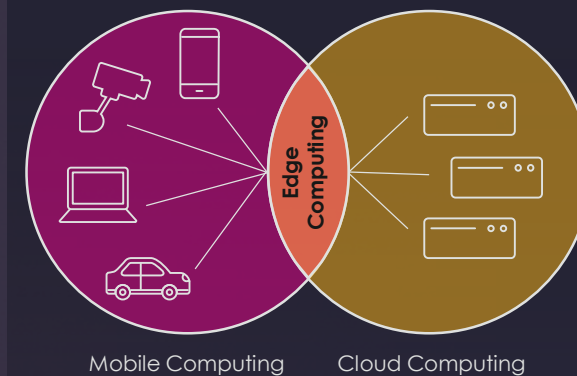
Elastic and dynamic network, with move to white box appliances

Slicing



Reconfigurable network with disparate demands - low latency, high density, high speed

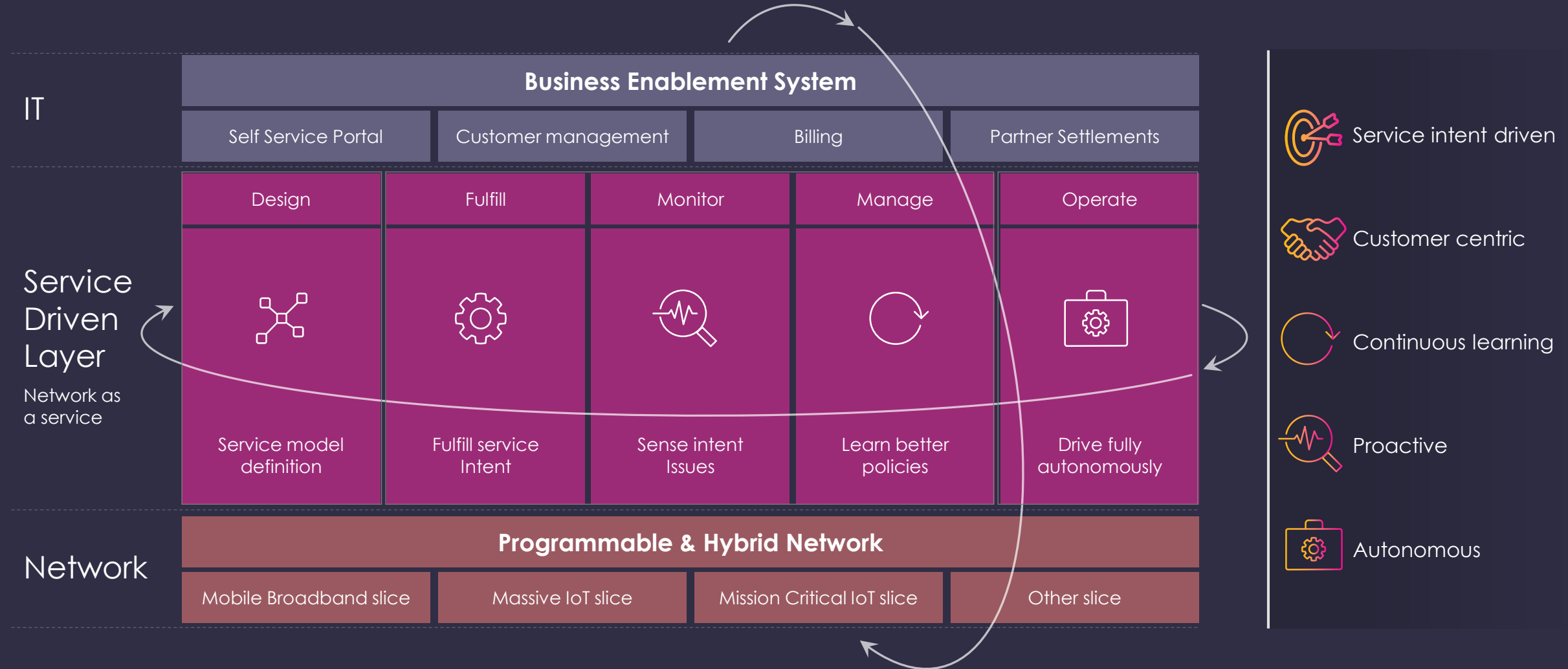
Edge Computing



Connected compute and storage resources closer to the user

5G – further drives for a service driven network

Break down IT-Network barriers – automate network complexity



Amdocs Open Network – why will we win?

01

Network world is in transformation

- It's all about automation
- Evolving into a an agile Service Driven Network
- Avoiding silo'd operation, maximizing resource efficiency

02

We are providing the critical “glue”

- Enabling service agility & automation
- Provide seamless interoperability to ordering & monetization
- Open supporting multi-vendor innovation

03

We are the new domain experts

- SPs view Amdocs as a disruptor to the network
- Proven track record in delivering telco-grade software – world's 1st production projects
- Broad network offering – product, services & skilled experts

A woman with long brown hair, wearing a black leather jacket, is shown in profile, blowing a cloud of colorful confetti into the air. The background is dark with out-of-focus warm lights, creating a bokeh effect. The text "Thank you" is overlaid in white, centered horizontally, with a short white horizontal line above it.

Thank you