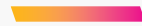


# Your Journey for NFV

Shlomo Kalter | Director, NFV Business Development | Amdocs



Jan. 2018



# Market disruptions in the last year

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# Open by design

Customer engagement  
and experience

Customer enablement

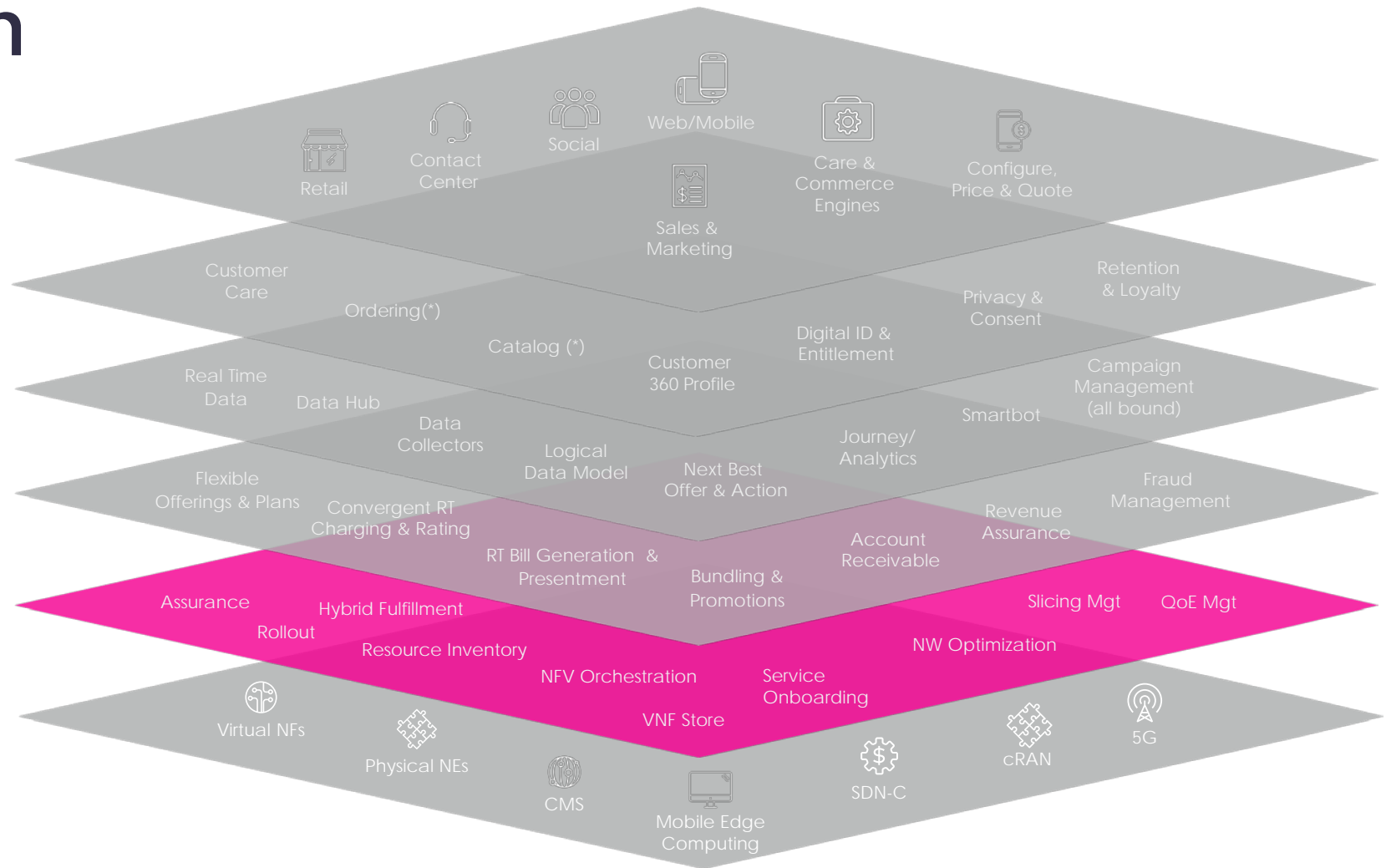
Intelligence

Digital monetization

## Service-driven network

Data powered, software controlled,  
orchestrated, automated, operated

NW functions and  
infrastructure



Digital services and  
operation practices

Cloud native  
public & private

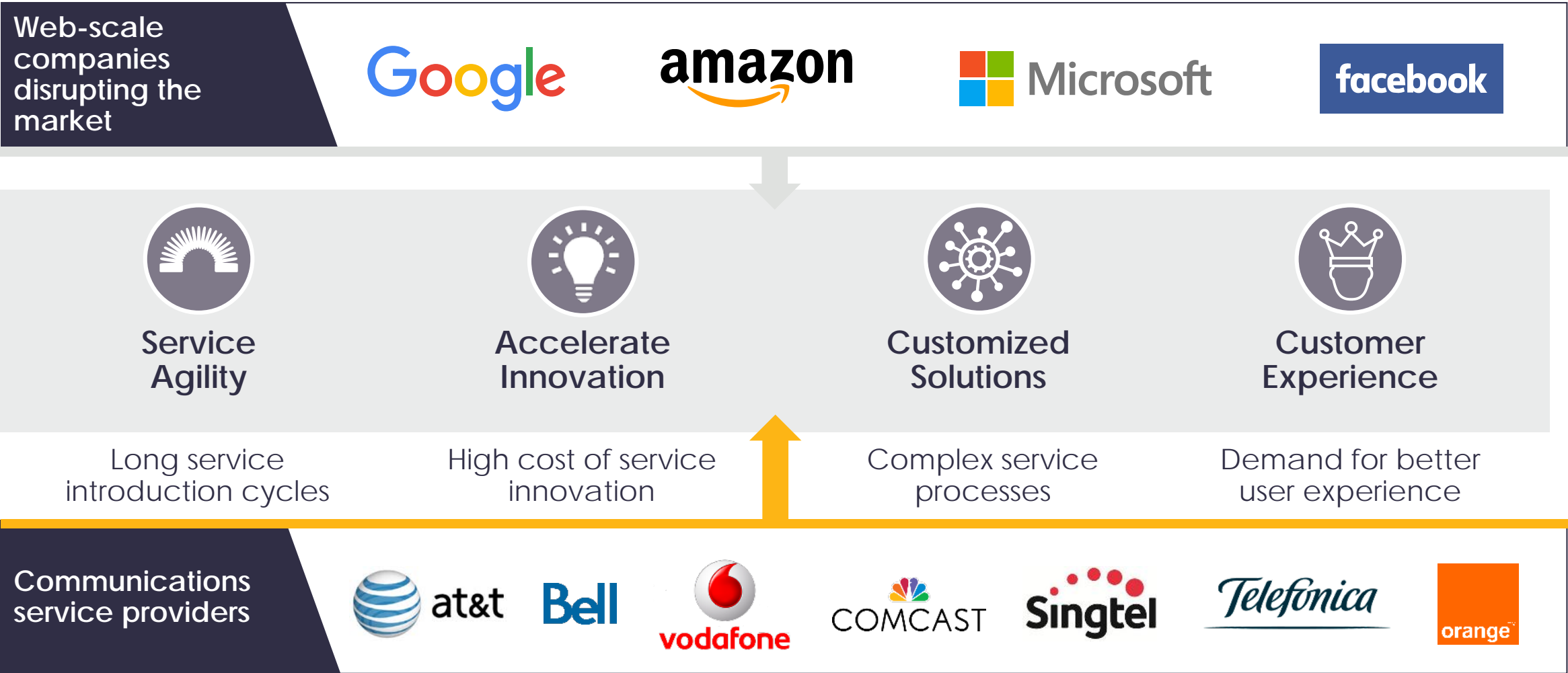
Containers  
microservices

Design-led thinking  
DevOps

Open APIs  
NoSQL

Open source  
Open data model

# Market Dynamics



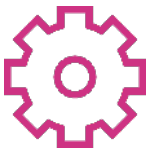
# Digital Service Providers (DSP): Operational challenges



Digital engagement – processes / partners



Agile and real time – service abstraction

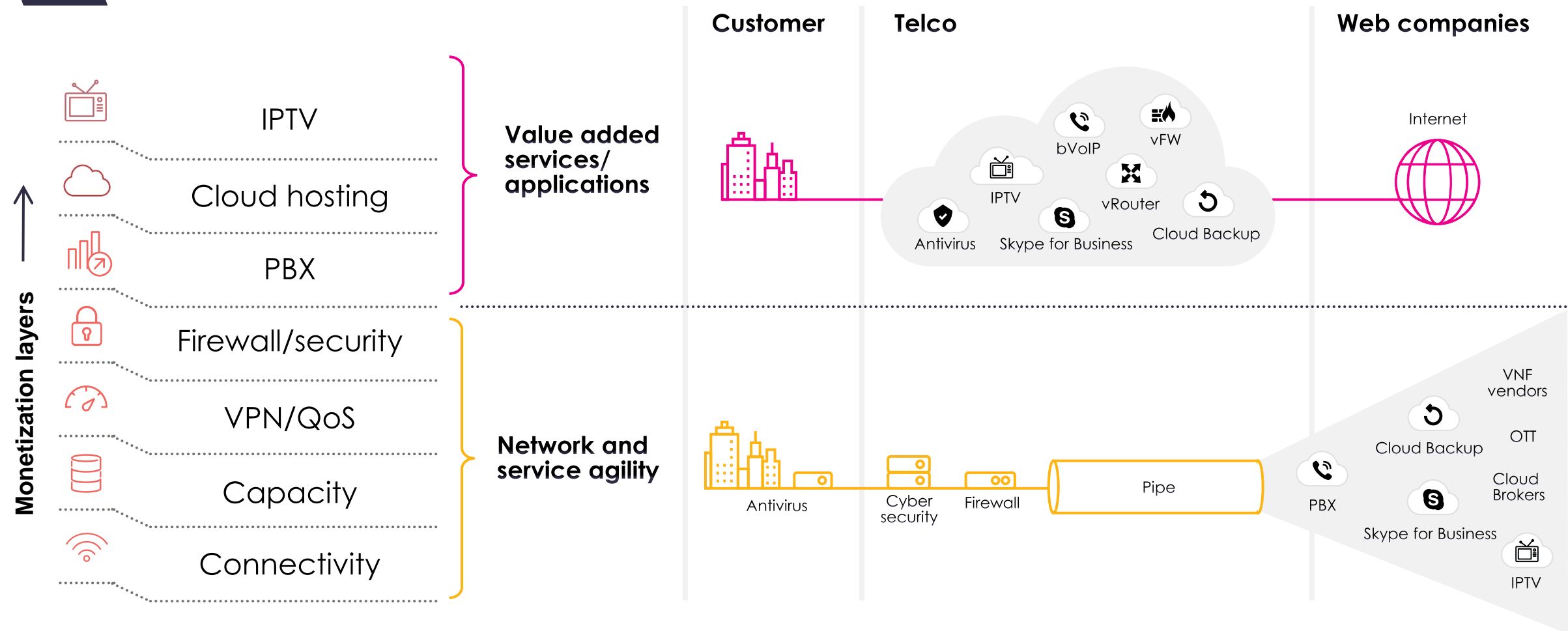


Automation is key – “zero-touch”

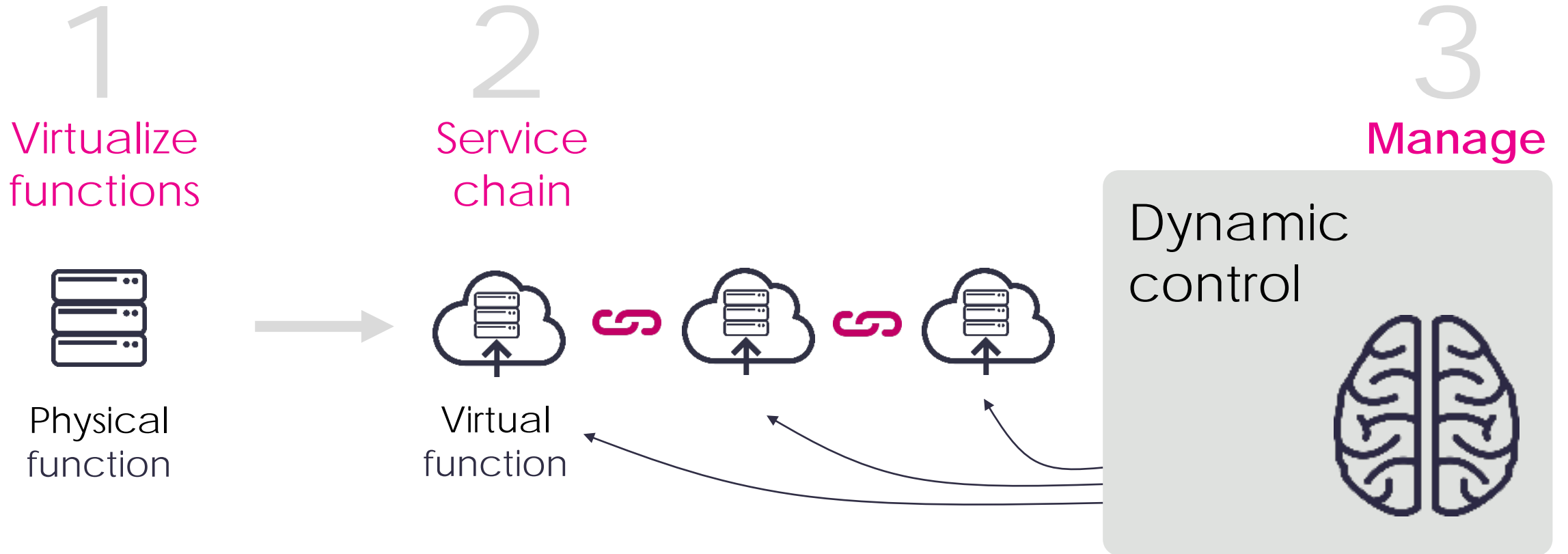


# The NFV Promise

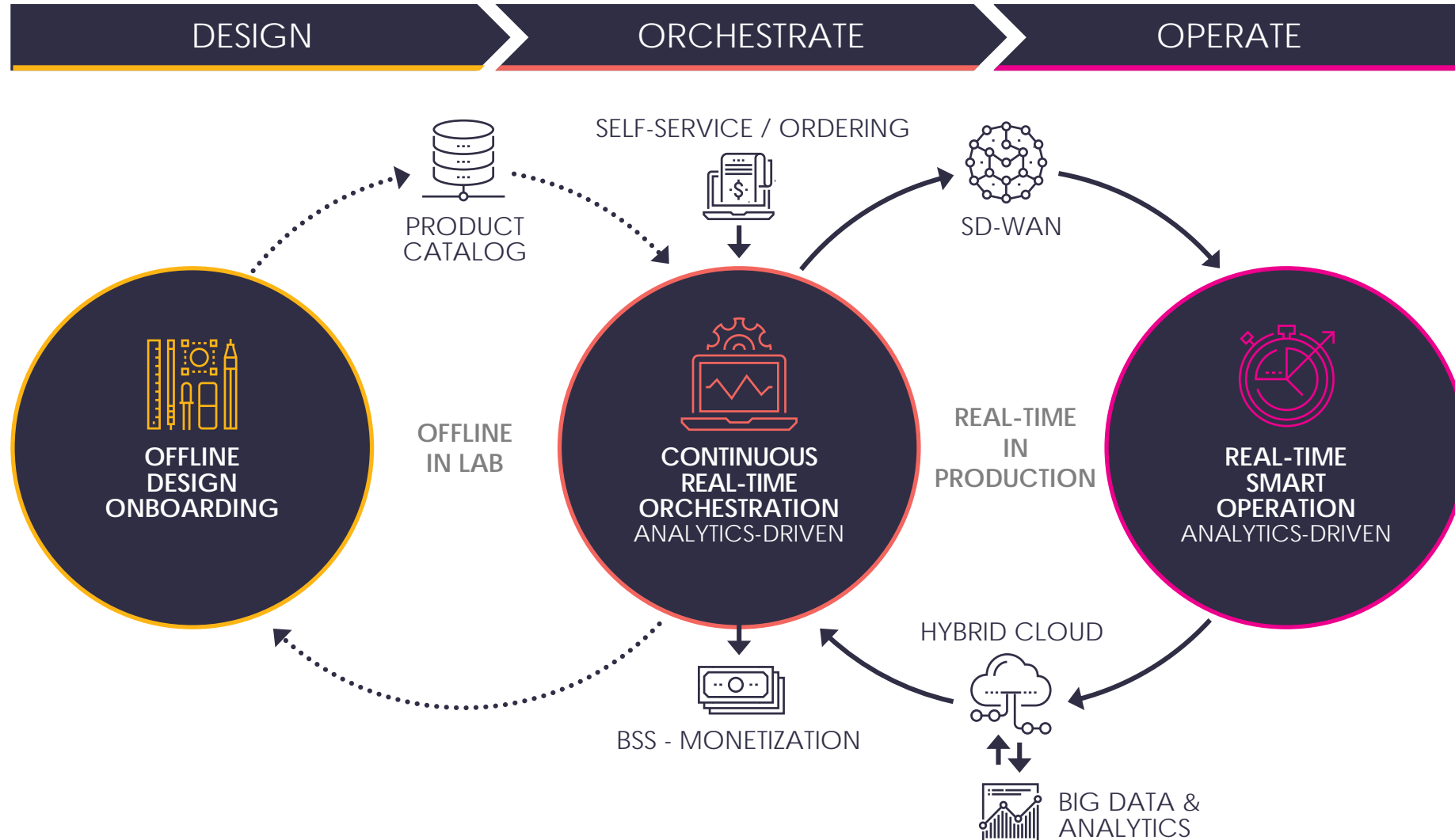
Agility and new monetization layers



# What is NFV/SDN ?



# Service Lifecycle Management





# So, where's the catch?

CSP organizations  
need to evolve

## People skills

Hardware → Software

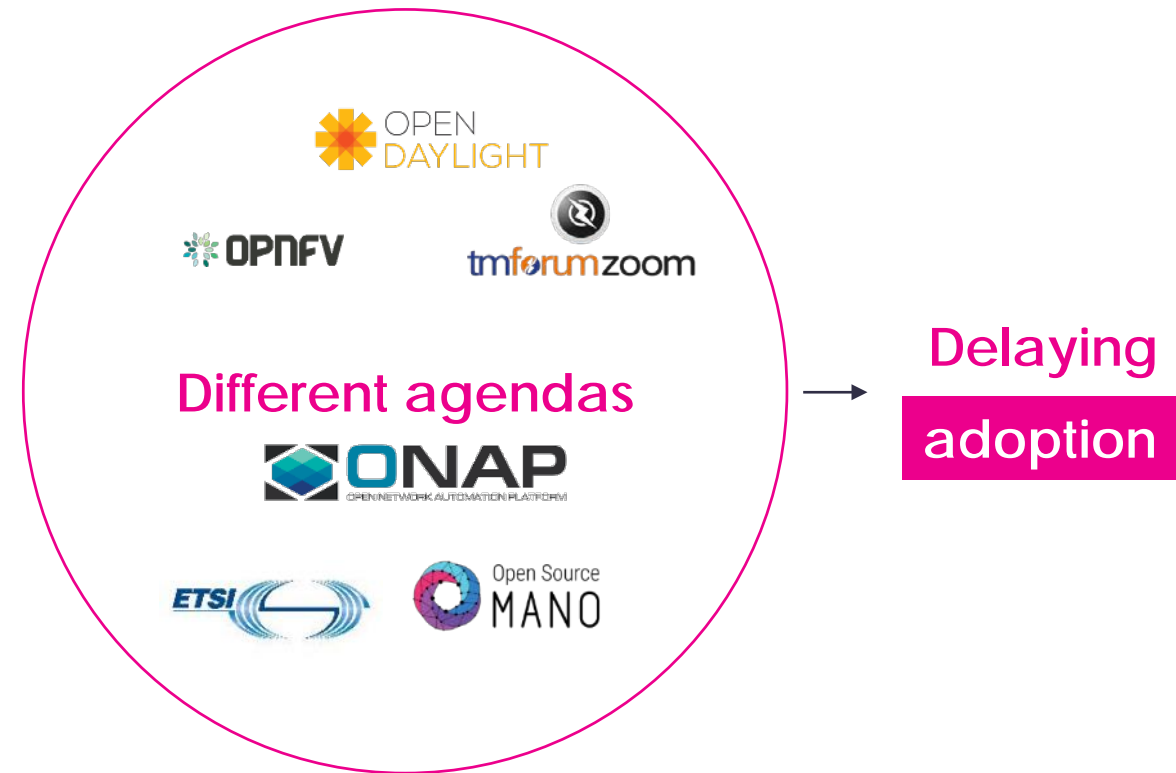
## Processes

Network-focused → Service-focused

## Attitude

Walled-garden → Open & cooperative

Competing approaches  
need to consolidate





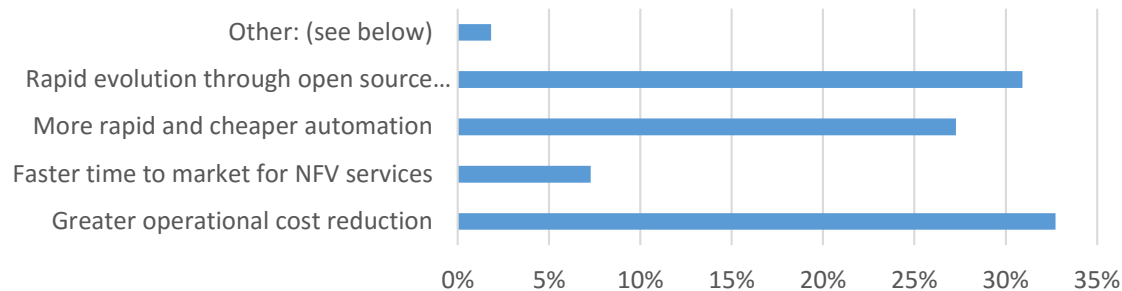
# Open Source

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# Market dynamics

## Perspectives on open source for NFV/SDN

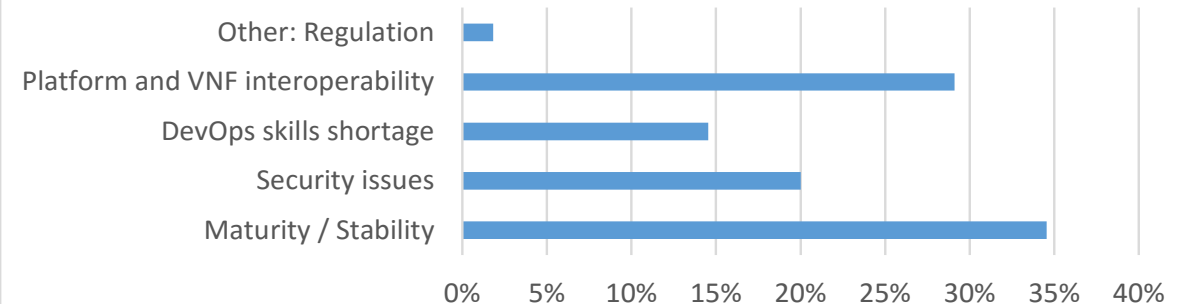
Q2. What value will open source for NFV bring to your organization?



	Greater operational cost reduction	Faster time to market for NFV services	More rapid and cheaper automation	Rapid evolution through open source collaboration	Other: (see below)
■ Series1	33%	7%	27%	31%	2%

>50% expect open source for NFV to deliver cost efficiencies

Q3. What do you consider to be the most significant barrier to implementing open source NFV?



	Maturity / Stability	Security issues	DevOps skills shortage	Platform and VNF interoperability	Other: Regulation
■ Series1	35%	20%	15%	29%	2%

Barriers to entry are maturity/stability and platform & VNF interoperability

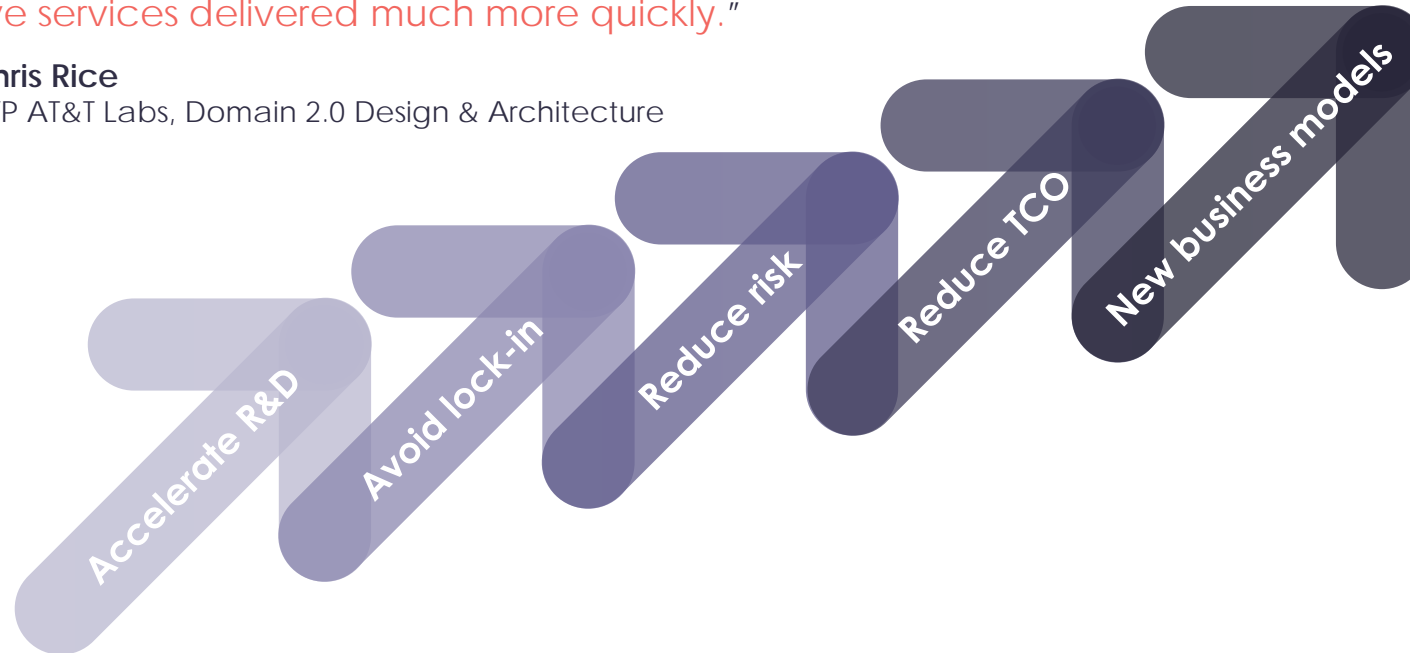
# Why SPs are embracing Open Source?

"...for integrators and service providers that adopt in this platform and are part of this ecosystem, they'll see **new and innovative services delivered much more quickly.**"



**Chris Rice**

SVP AT&T Labs, Domain 2.0 Design & Architecture



"...we need a way, **a common way, to bring different vendor solutions on the same infrastructure,** and open-source is a way to address this very complex issue."



**Laurent Leboucher**

Vice President APIs and Digital Ecosystems

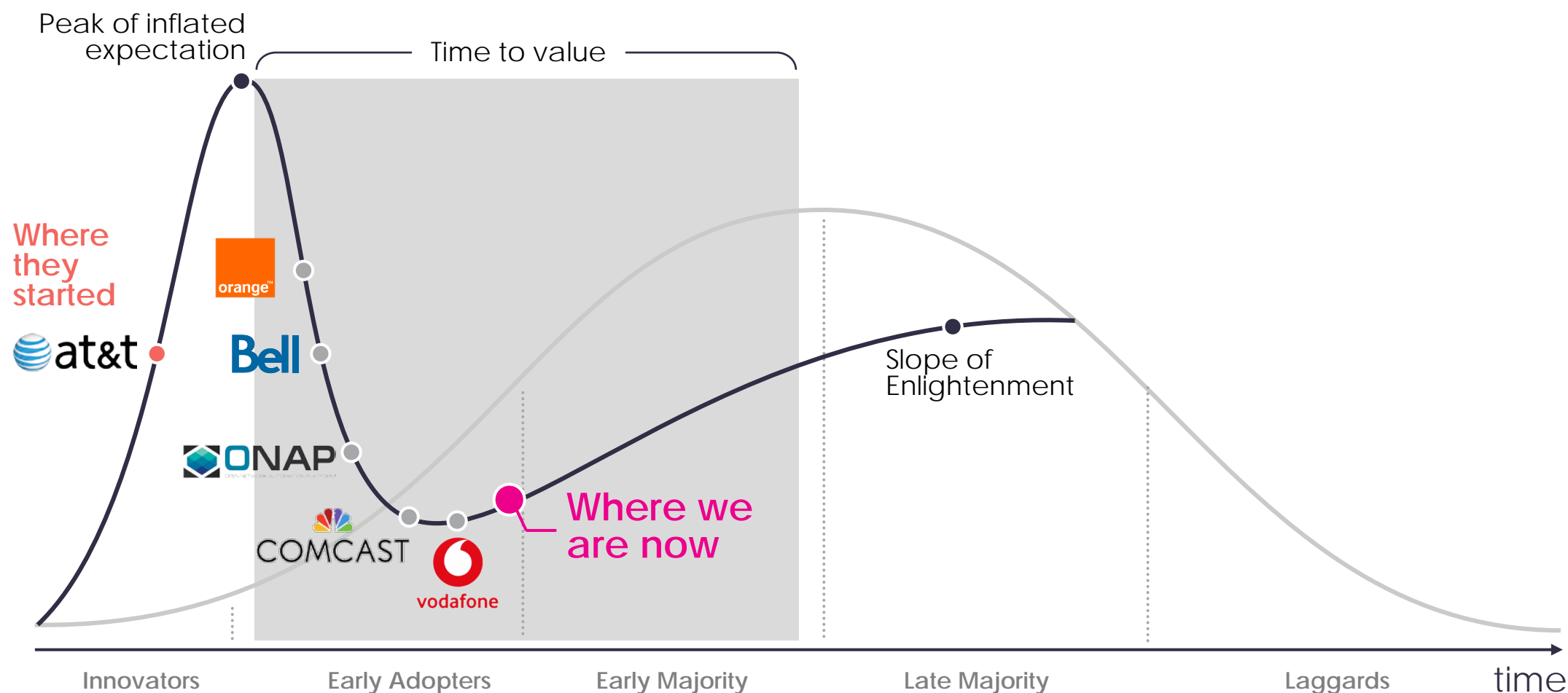
"...it forces vendors to open and standardize their interfaces and protocols, which helps us as an industry to **become more agile and drive our costs down...** In general service providers are **no longer locked in to any vendor.**"



**Petri Lyytikainen**

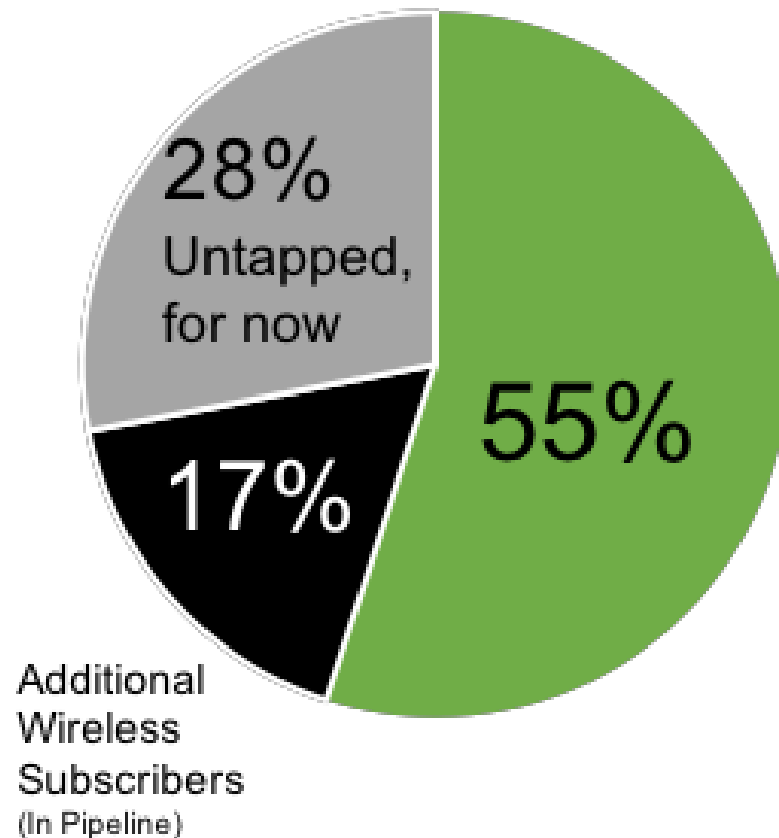
VP Technology Strategy & Planning

# ONAP – Reality Check



# ONAP now the De-Facto Automation Platform for Carriers

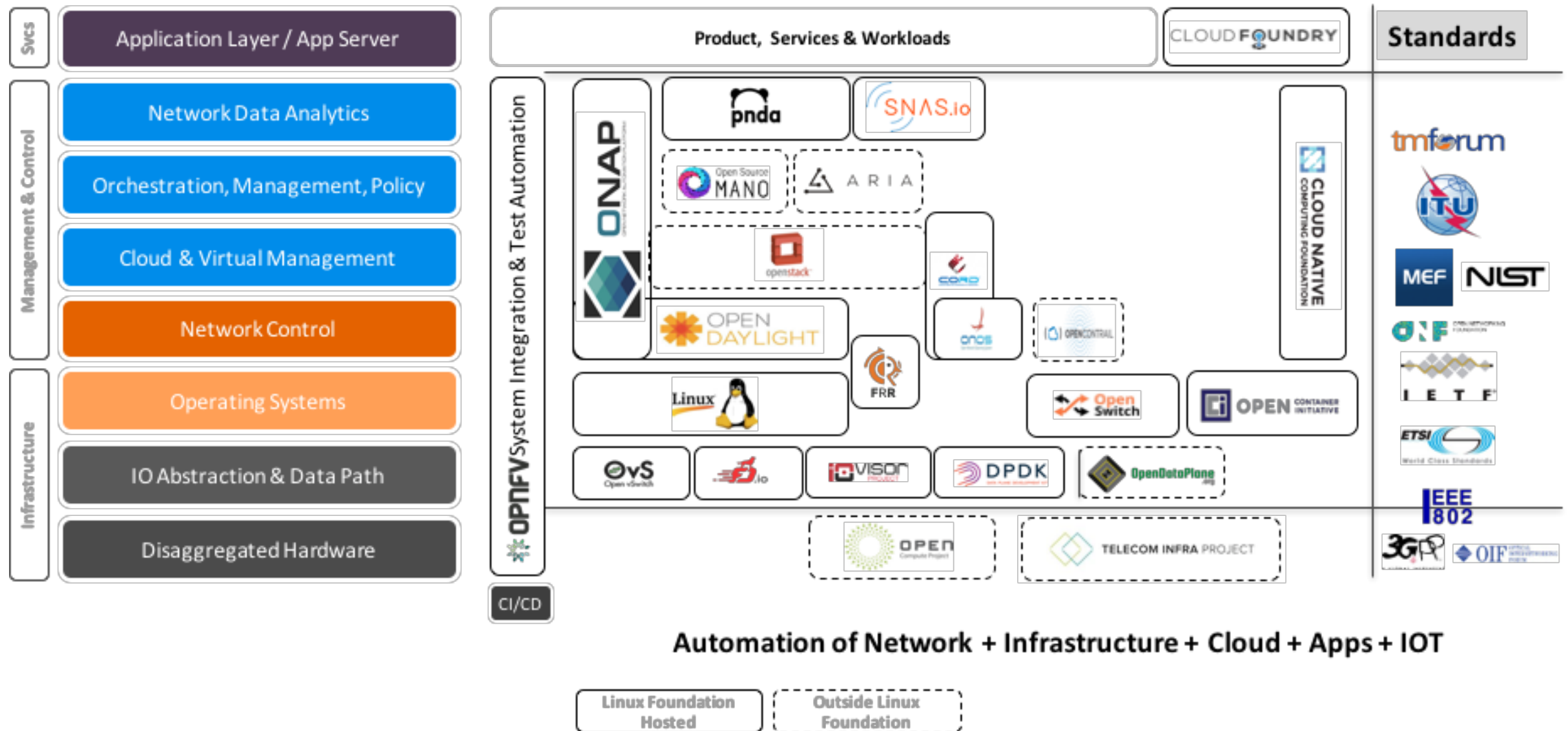
## Global Subscribers



- ✓ Model driven service design
- ✓ Multivendor VNF and PNF support
- ✓ MultiVIM/Cloud
- ✓ Cross WAN DCI underlay and overlay network support
- ✓ Workflow driven service orchestration
- ✓ Multiple ONAP controllers support
- ✓ Closed loop automation with data collection, data analytics and policy



# Open Networking – Open Source & Standards



# ONAP Members

OPEN NETWORK AUTOMATION PLATFORM

## ■ Platinum members



### Governing board

Responsible for budget, trademark/legal, marketing, compliance, and overall direction

### Technical steering committee

Technical board starting—LF-based consistent process and governance

## • Silver members





# Linux Foundation Networking (LFN)

- A new entity that increases collaboration and operational excellence across networking projects.
- LFN integrates the governance of participating projects in order to improve operational efficiencies and simplify member engagement.
- Each technical project retains its technical independence and project roadmaps.
- The founding projects within LFN are:



IO services framework



Predictive Network Analytics



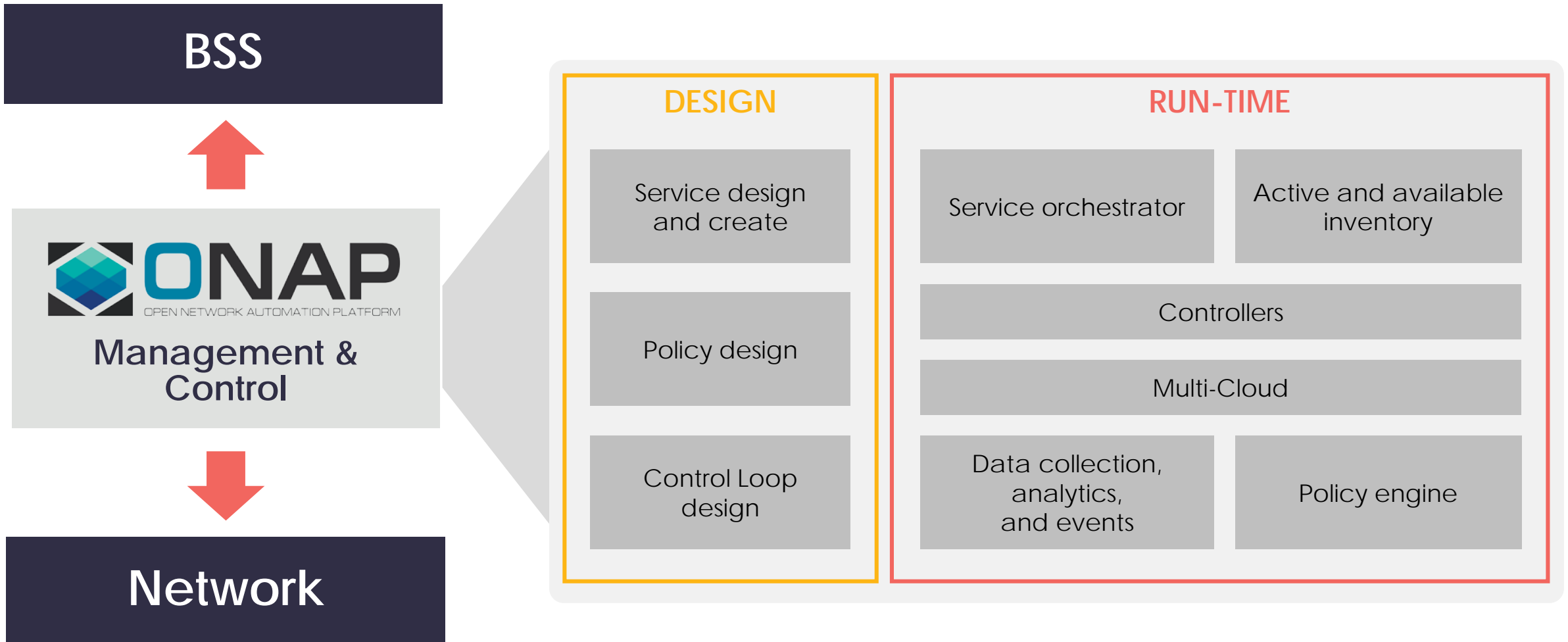
Big Data Analytics

## Examples of Cross-Project Architecture

- › VNF on-boarding
- › End to End Lab Testing
- › CI/CD Efficiencies
- › OpenStack Dependencies
- › Kubernetes Integration
- › SDO Collaboration
- › Multi-Cloud Integration

<https://www.linuxfoundation.org/projects/networking/>

# ONAP – Managing the network



# ONAP: The Business Value

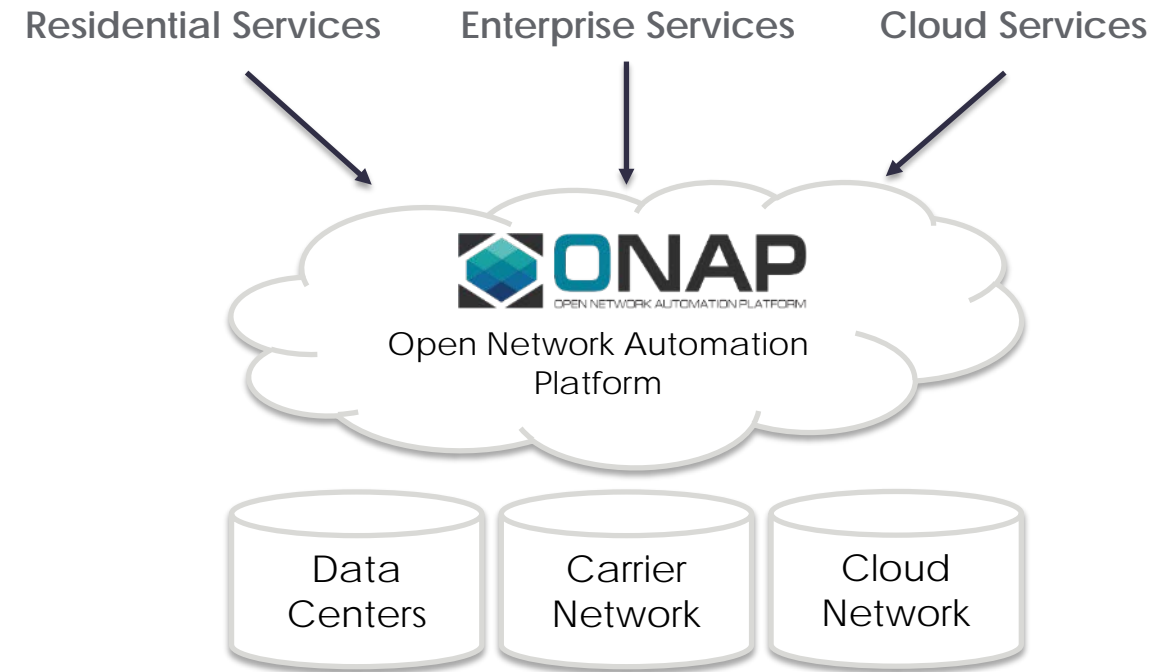
## Accelerate Services with Network Automation

### Service Providers Value

1. Faster Services on Demand including 4G, 5G and Business/Enterprise solutions
2. Elimination of manual steps/errors/time
3. Design, Agility & Automation enabler for 5G

### Open Source Ecosystem Value






1. Harmonized shared investment in technology across major carriers globally
2. Neutral platform that will foster innovation on top of SDN/NFV e.g. Services, Virtual Functions, 5G Apps, IOT ecosystem

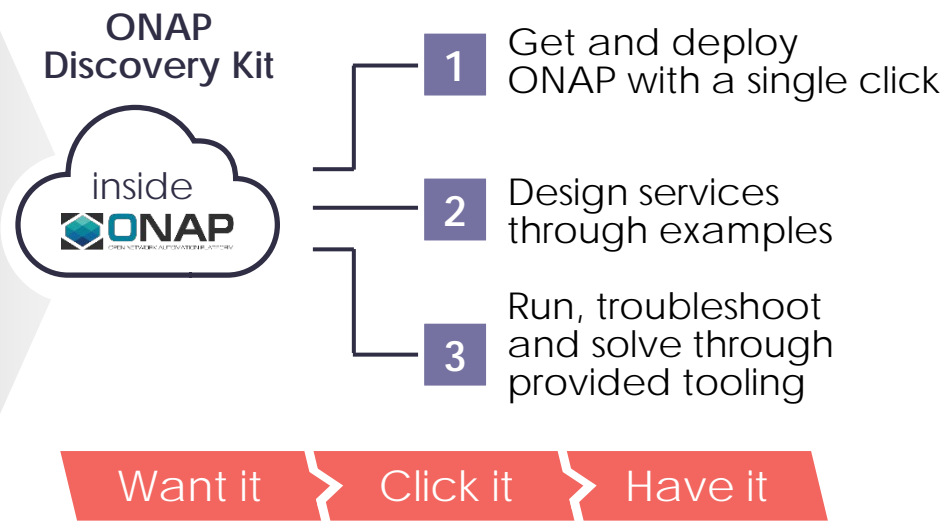


At Inception, ONAP enables up to 40% of Global Subscribers

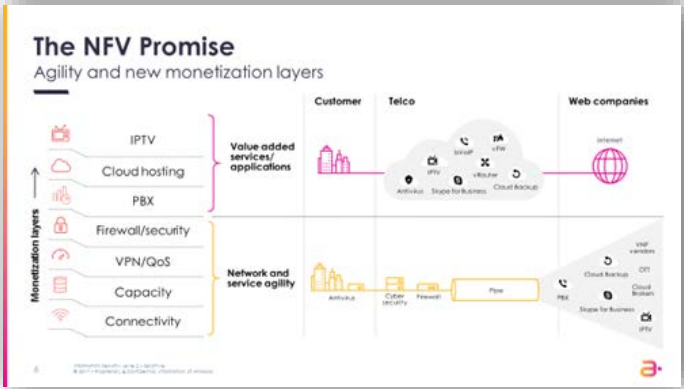
# Simplify your ONAP experience

## Amdocs ONAP Discovery Kit

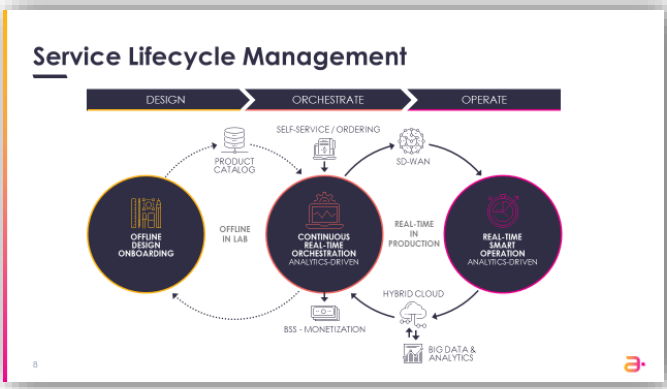
<b>HOSTED ONAP</b> 	Immediately accessible Supported by best industry experts
<b>DEPLOYMENT</b> 	Self service – Deploy your environment in minutes
<b>PACKAGES</b> 	Pre-defined services ( SD-WAN) Pre-loaded VNFs (vFW) Detailed best practice doc
<b>CUSTOMIZATION</b> 	Framework to deploy Amdocs value added packages on top of ONAP
<b>TROUBLESHOOTING TOOLS</b> 	Administration tools including simple APIs to execute order



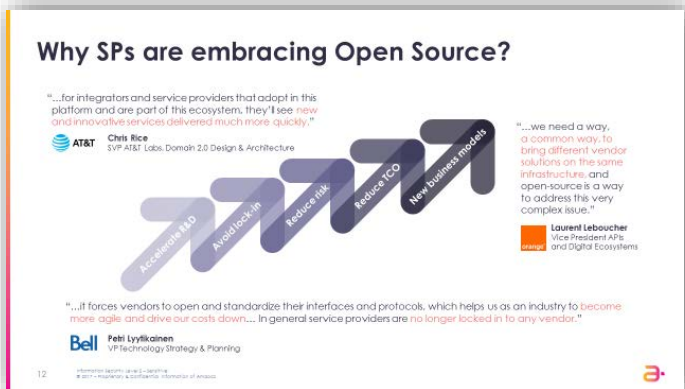
# Summary



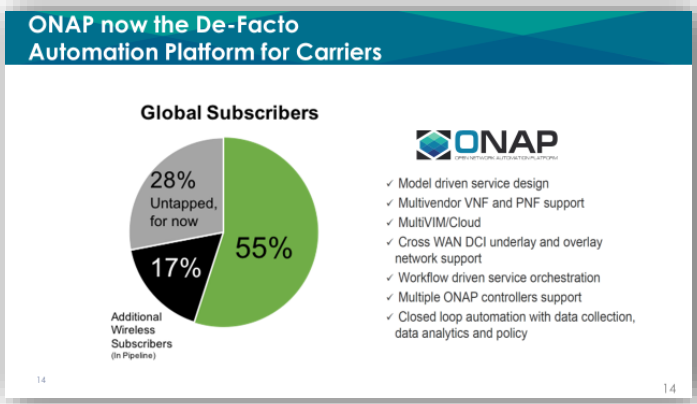
Bringing back Customer Stickiness



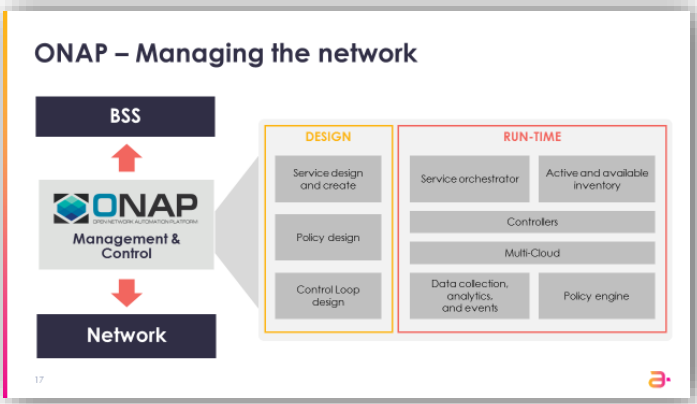
E2E Orchestration



Open Source Drivers



The De-Facto Standard



Modular Framework





Thank you