



# Orange Welcome to the community

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SVP quality, operations and performance

January 8<sup>th</sup>, 2019

# ORANGE at a glance (March 18)



## 1 role

Multi-services operator

## 5 activities



- Communication services for individuals
- Communication services for businesses
- Content
- Mobile financial services
- Wholesale



## 3 types of customer

- Individuals
- Businesses
- Operators and service providers

orange™



**273 million** customers



**28 countries** for consumer services and a global presence with Orange Business Services



**152,000** employees



**51<sup>th</sup> global brand**

in the Brand Finance  
2018 Global 500 ranking



**22 million fans**



**3 million followers**



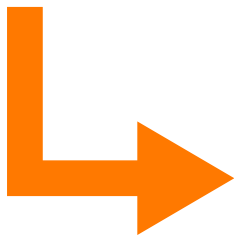
**1.5 million visitors**  
on Orange.com every month



**360,661 followers**

# ORANGE Network Ops transformation with automation

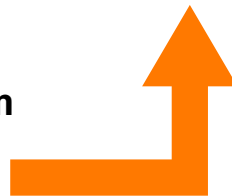
2017



## Key success factors

- Excellence on **basics**
- **Review processes & transform operations** in-depth
- **Cultural** transformation
- **Automation** : virtualization, **ONAP**, Big Data, RPA and AI/ML...
- **Energy** : sharing & datamining...

2022



**20%**

Savings in  
network  
operations OPEX \*



\*Investor day 12/17

# Automation alone is not enough!

## EFFICIENCY

- **Basics** as a prerequisite
- **Sharing/mutualization** both on **engineering & operation**
- **Convergence of Integration & Delivery** (CI/CD\*) for agility
- Functional **consolidation IT & Network** (IaaS)

## TRANSFORMATION

- **Process transformation in Field Ops, Front/Back Office** (close the loop)
- **New ways of working** : Devops
- **New tools** for automation
- **Make or Buy, outsourcing contracts negotiation**

## INNOVATION

- **Virtualisation & software networking** for better scalability & agility
- **Automation** in support of network operations
- **ONAP** for new orchestration/OSS
- **AI / Big data** for **predictive approach & incident avoidance**



\* Continuous Integration / Delivery

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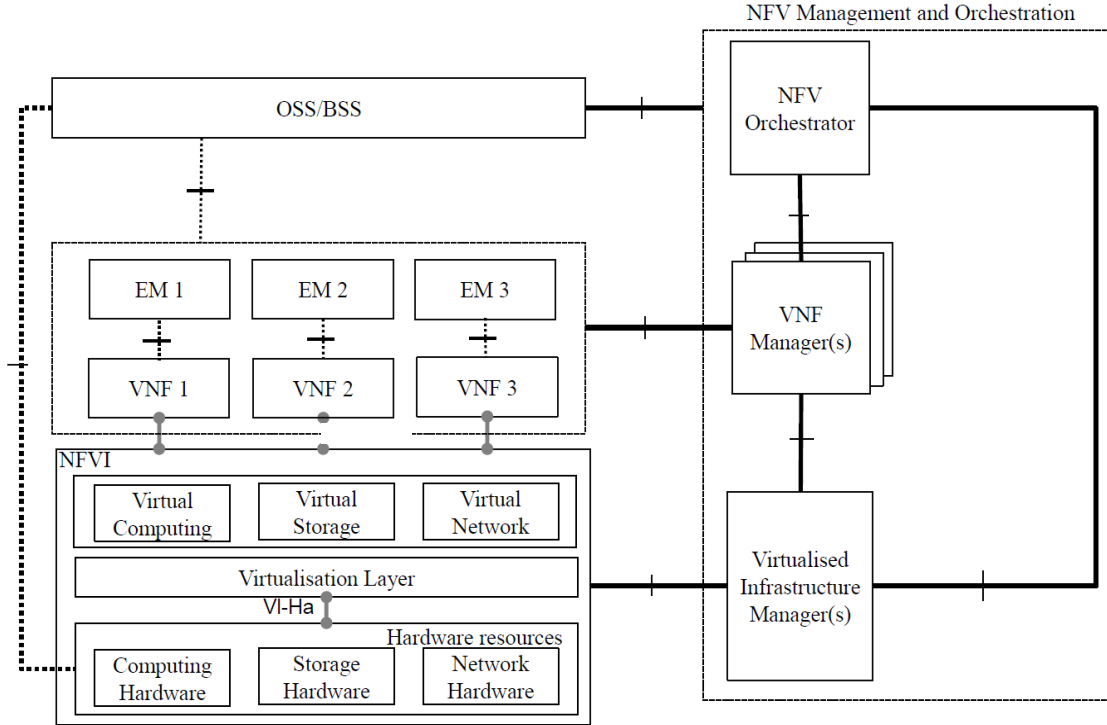
automation

First transformations are to be done, so as to be able to use automation tools. Then what is the place of ONAP in automation tools?

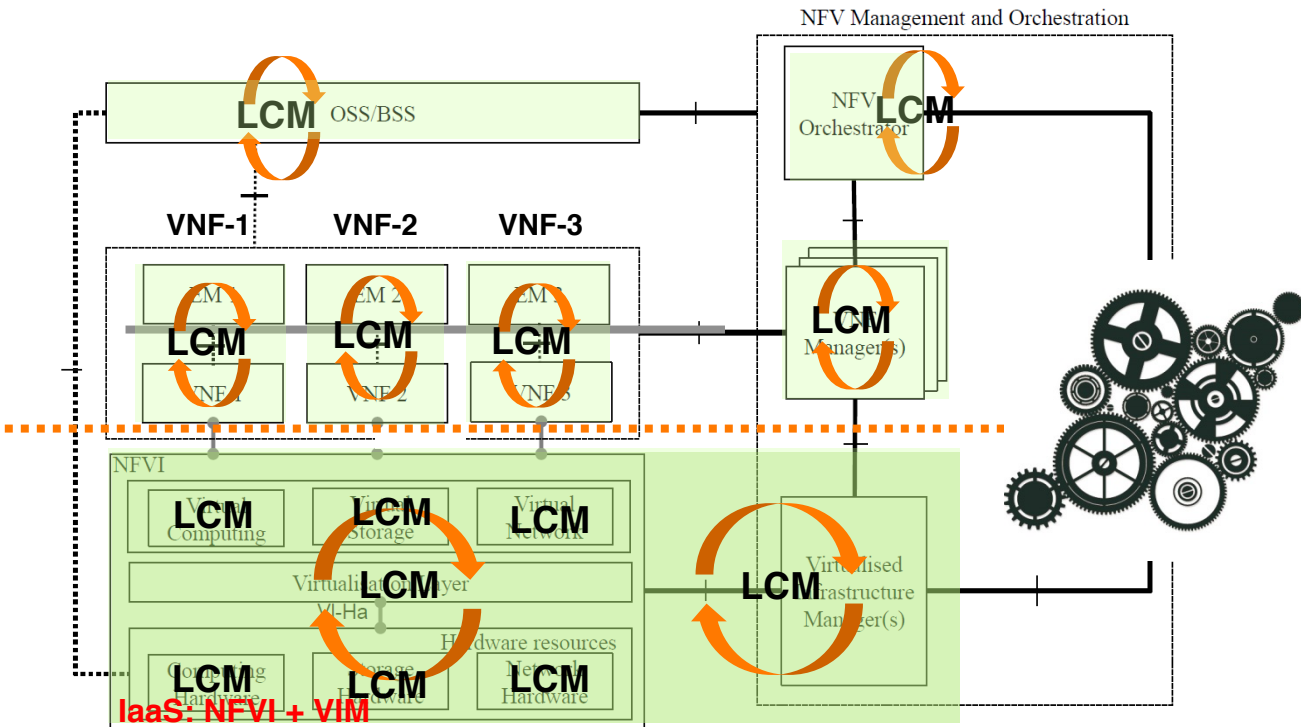


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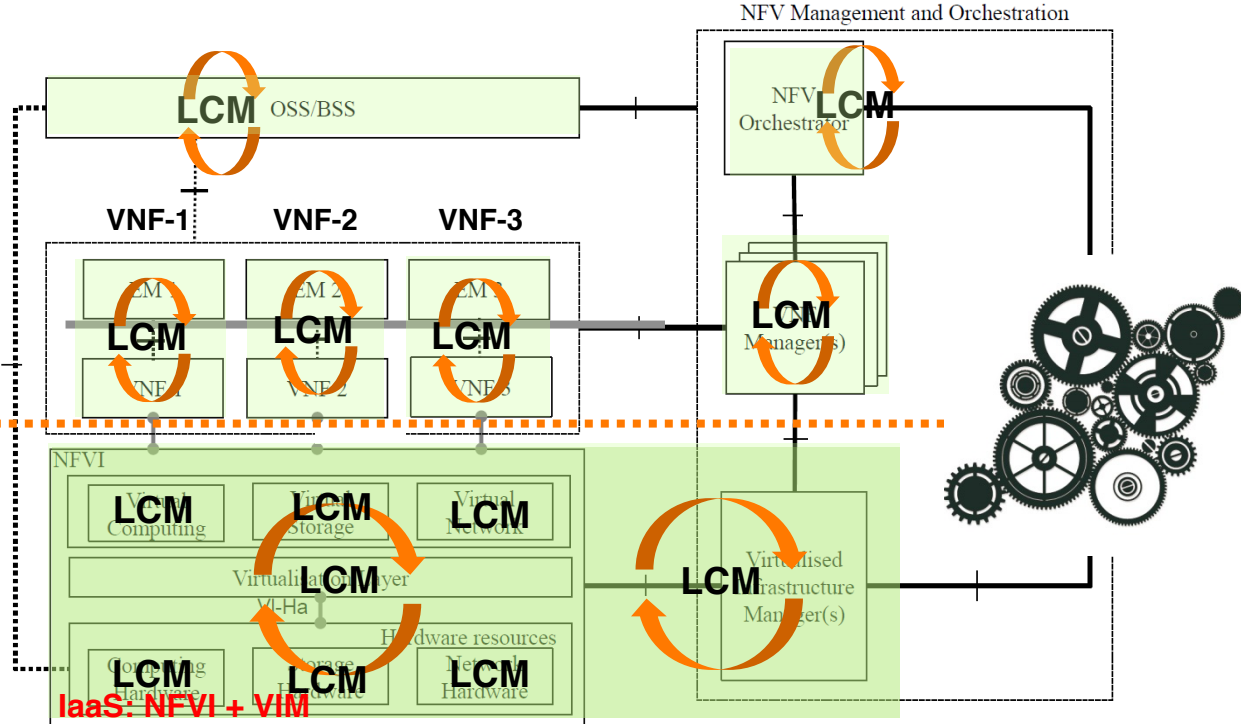
# Virtualization for better scalability and agility



# Virtualization: complex LCM (Life Cycle Management)



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Today, a key hot topics

- laaS must be handled in an agile way, with maximum automated test between components
- VNF – laaS testing to be automated
- ➔ Minimize the impact of laaS evolution on VNF evolution. **ONAP** to help (VNF certification) – link with **OPNFV**



# ONAP as ORANGE solution for automation (LCM of VNF, Orchestration for V and PNF)

Industry de facto standard  
Comprehensive toolkit to  
automate fulfillment and  
assurances processes.



ONAP to be the main OSS for  
all ORANGE countries: drive  
to transform and harmonize.  
Both for physical and virtual.



## ❖ Enable Agility

- On-boarding new services rapidly (e.g. VPN on-demand, APN on-demand...) with **VNF certification**
- Automation including PNF (from Casablanca Release) as a global **'umbrella'** if required with ongoing automation (eg. IP configuration automation, outsourcing contracts...)

First

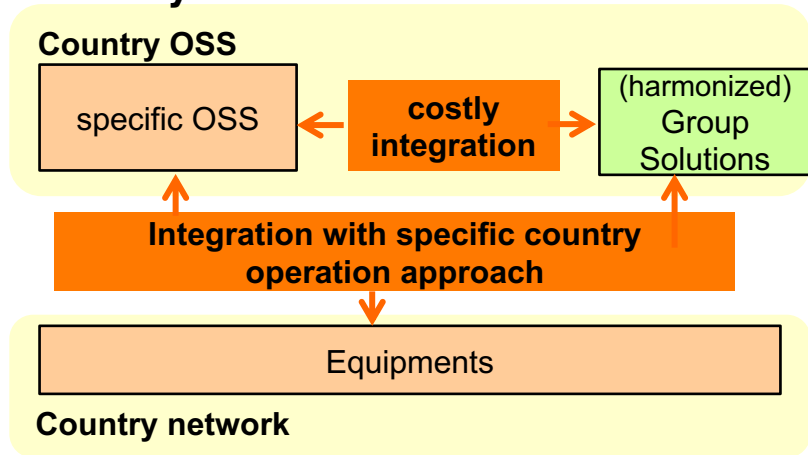
2<sup>nd</sup> step

## ❖ Transform to a Digital Operation

- Manage Complexity and **close loops**
- Improve Process and Skills. Need to create Operation automation skill center.

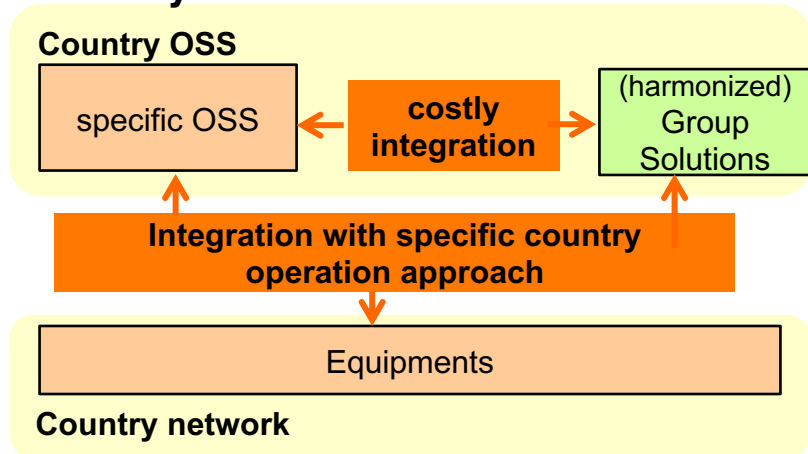
# ONAP also as a driver for OSS transformation/harmonization

## Today in our 28 countries



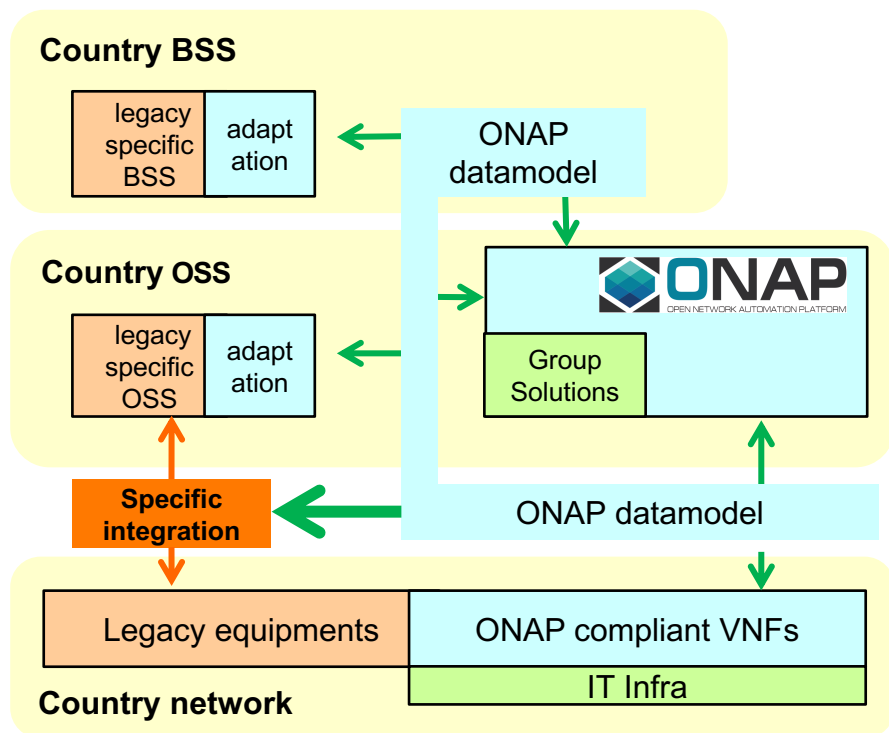
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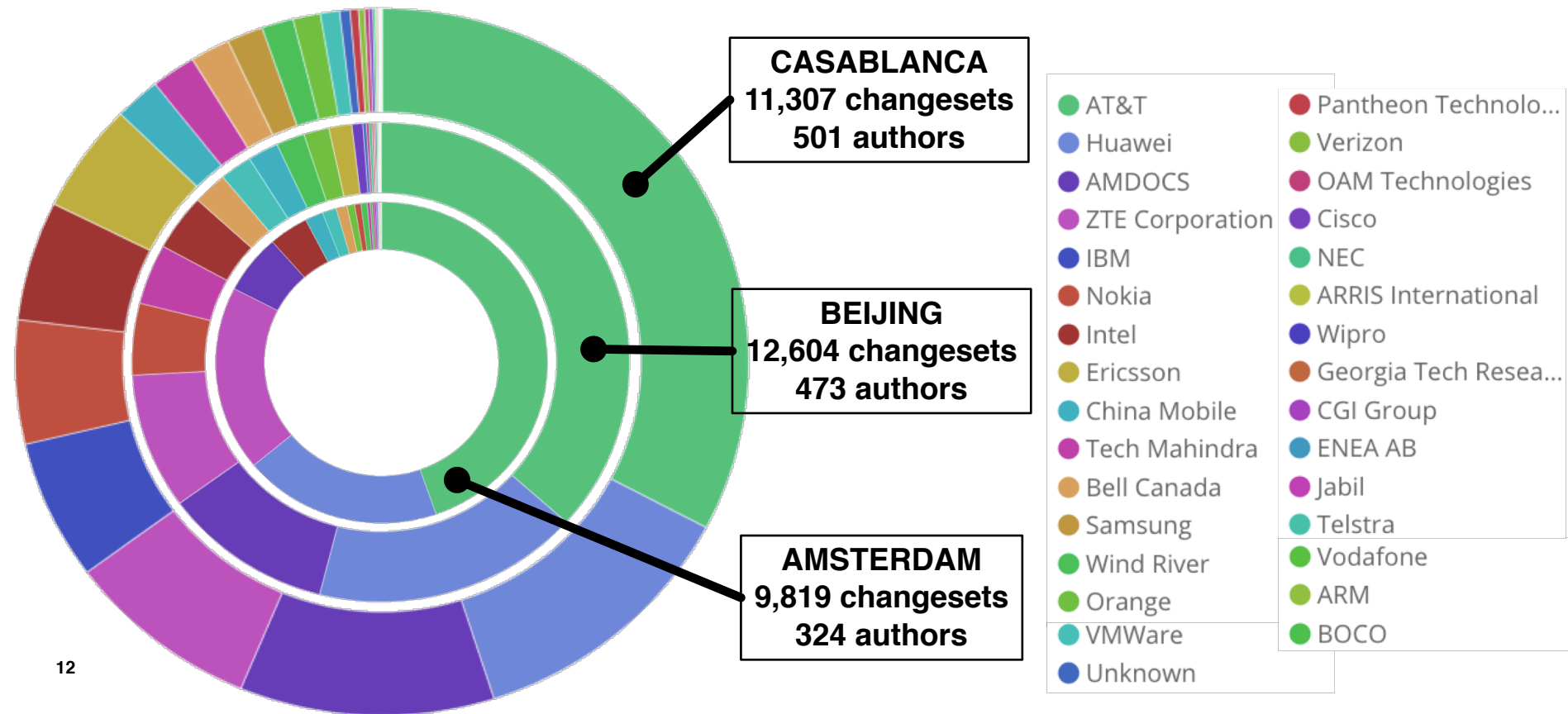
- Open API (Metadata based, TMF), model Driven Micro-Service Chaining
- E2E Orchestration, closed-loop Assurance
- Integrated with legacy network, Cloud and NFV: take into account 'fast loop' (agility) and 'slow loop' (PNFs, legacy).

## With ONAP



# ORANGE, as many others, is actively contributing in ONAP

(APIs, Orange Open lab, link with OPNV...)



# Many ways to start to use ONAP (presented in TMF June 2018)



There are many ways to start with ONAP.

- Design, installation, monitoring, optimizing, closing loops...
- Equipment to provide **data collection / configuration interfaces** to ONAP
- Need to clarify how to incorporate **automation engines in ONAP**.

## Examples

- Design what is to be automated. **One design tool** for operation!
- Onboard/instantiate resources, services & configuration (including **PNF**)
- Manage and provide dynamic inventory (necessary for trouble shooting)
- Monitor fault/performance data, based on ONAP data collection
- Apply analytics that can be **AI/ML based**.
- Automate by handling open or closed-loops for resource or service assurance (policies, recipes for optimization...)
- Manage VNF lifecycle (e.g. scale-in/scale-out, software management...)
- Automate or orchestrate operations not directly linked to VNF lifecycle (for instance related to **PNF** lifecycle)....

# ONAP is been delivered

## ❖ Candidate for deployment

- vProbes (in-house made probe for data traffic analysis) onboarding and instantiation.
- SDWAN VNFs deployment and configuration. Been compared to existing operational solutions.
- vBOX (vCPE) for H1...

## ❖ Deployment

- PITEC vProbes (in-house probe for GNOC NMS access network supervision) data collection. *To be shared in this forum.*
- Operation training sessions (starts in February)
- Coming ONAP integrator RFP

## ❖ In each country network master plan

- Along with virtualization use cases
- Will be requested in 5G RFP (January)

# Orange presentations (with partners)

- Keynote Orange welcome
- Xprojects collaboration on integration
- ONAP – pre and post instantiation configuration
- Functest on steroids
- Functest 2019
- Orange ONAP first real life operational implementation
- NBI enhancement, service modification and notifications



**ONAP**

OPEN NETWORK AUTOMATION PLATFORM

Thanks to the community!