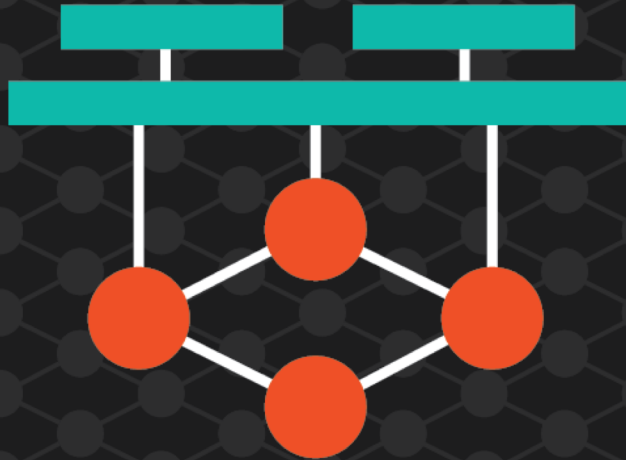


September 25 - 27, 2018
Amsterdam, The Netherlands



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Amsterdam, The Netherlands

Zero Touch XGS-PON

David Pérez Caparrós, Swisscom

Swisscom. Key figures

1.5 million
Swisscom TV customers



6.6 million
mobile communications
customers



3.9 million
Ultra-fast broadband
connections



2 million
All IP customers



inOne

1.3 million
inOne customers

As of December 2017

Fixed networks

3.9 million

homes and businesses connected
with ultra-fast broadband

Ambitious expansion targets

Fibre-optic technologies in every district in
Switzerland by end-2021

Digital pioneer in Europe

Compliance with the EU's digital agenda for 2020 –
99% of all households covered with at least 30 Mbps

2 million customers on All IP

Call filter, HD sound quality, fixed network to go,
simplified business communication





Our strategy

Model-driven Service Orchestration & Automation

Open Platforms & Open Standards

**Best customer
experience**

New growth

**Operational
Excellence**

Innovation Project: **Zero Touch XGS-PON**

Mission & Architectural Principles

6

 **Mission:** Improve customer experience and operational excellence with network automation

> **Zero Touch XGS-PON:**

- ONT & OLT provisioning
- Nomadic ONT
- Fixed broadband access E2E service closed-loop automation:
 - Change automation, auto-detection, auto-remediation...

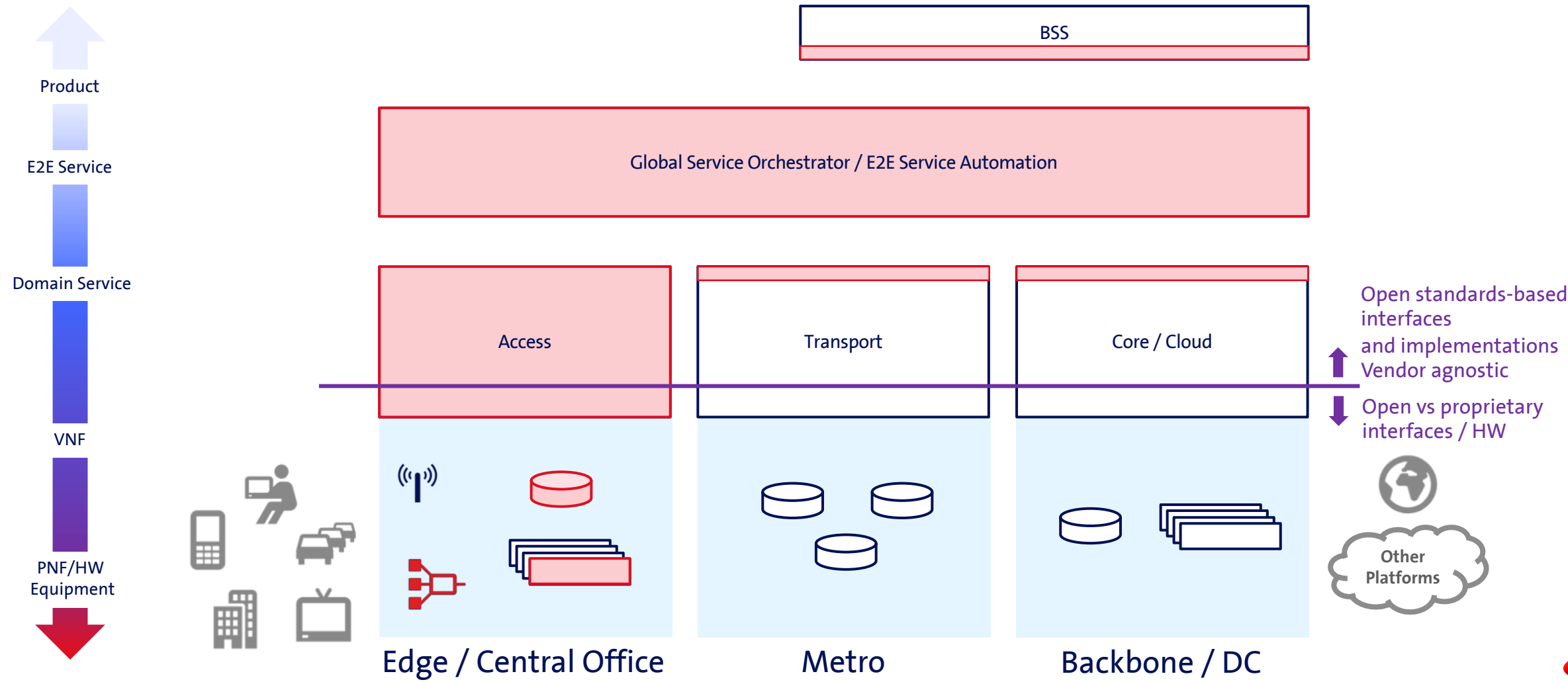
> **Architectural principles:**

- E2E, multi-domain, and access technology agnostic orchestration and automation platform
- Vendor neutral (= decouple OSS from specific vendor equipment/software)
- Extensible to other services/domains, e.g. mobile, enterprise...
- Open standards/reference platforms, e.g. OCP, ONF, LFN

Zero Touch XGS-PON

Bird's-Eye View. Project Scope

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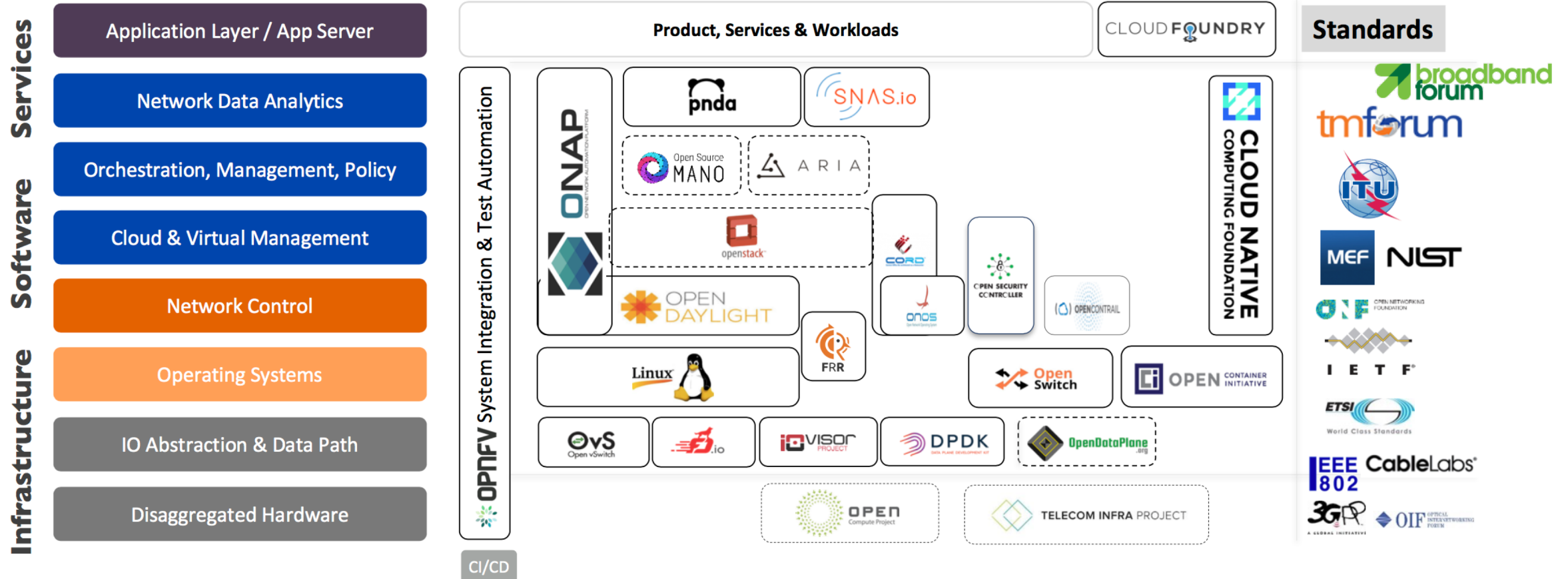


Open Source Networking Landscape

Linux Foundation
Hosted

Outside Linux
Foundation

8



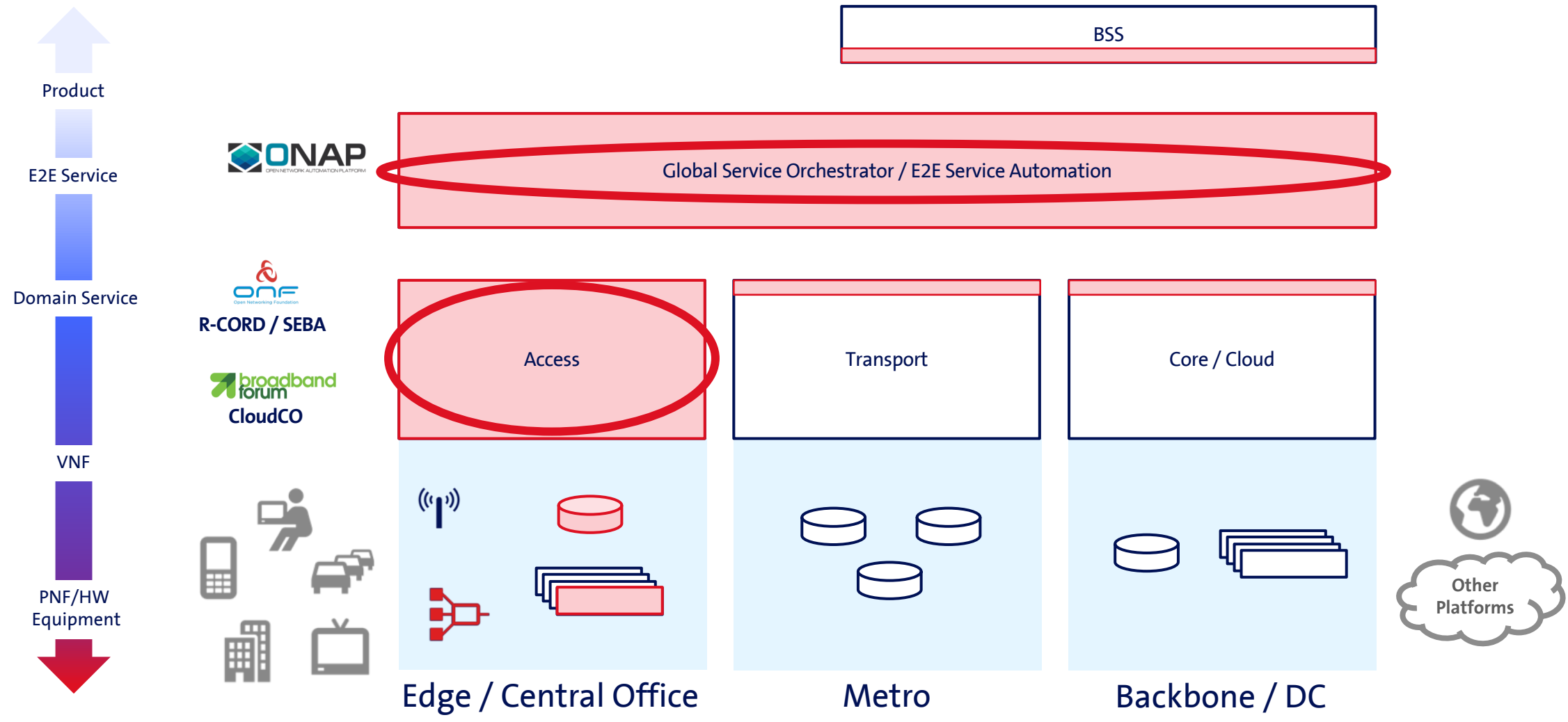
THE **LINUX** FOUNDATION

Automation of Network + Infrastructure + Cloud + Apps + IOT

Ref: <https://actionweek.tmforum.org/wp-content/uploads/2017/09/TMF-Keynote-LF-Networking-ONAP-Sept-2017-vfinal.pdf>

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Zero Touch XGS-PON Platform Options



Global Service Orchestrator & E2E Service Automation

ONAP: Open Network Automation Platform

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- > Open source platform for the **design, orchestration, monitoring, and life cycle management** of
 - Physical/Virtual Network Functions (P/VNF)
 - Carrier-grade SDNs
 - Higher-level services combining SDN+P/VNF
- > ONAP provides comprehensive tools for **real-time, policy driven** orchestration and automation
- > ONAP enables developers to **rapidly automate new services** & support complete lifecycle management.
- > Supported by the Linux Foundation and 50+ members, including major operators and vendors

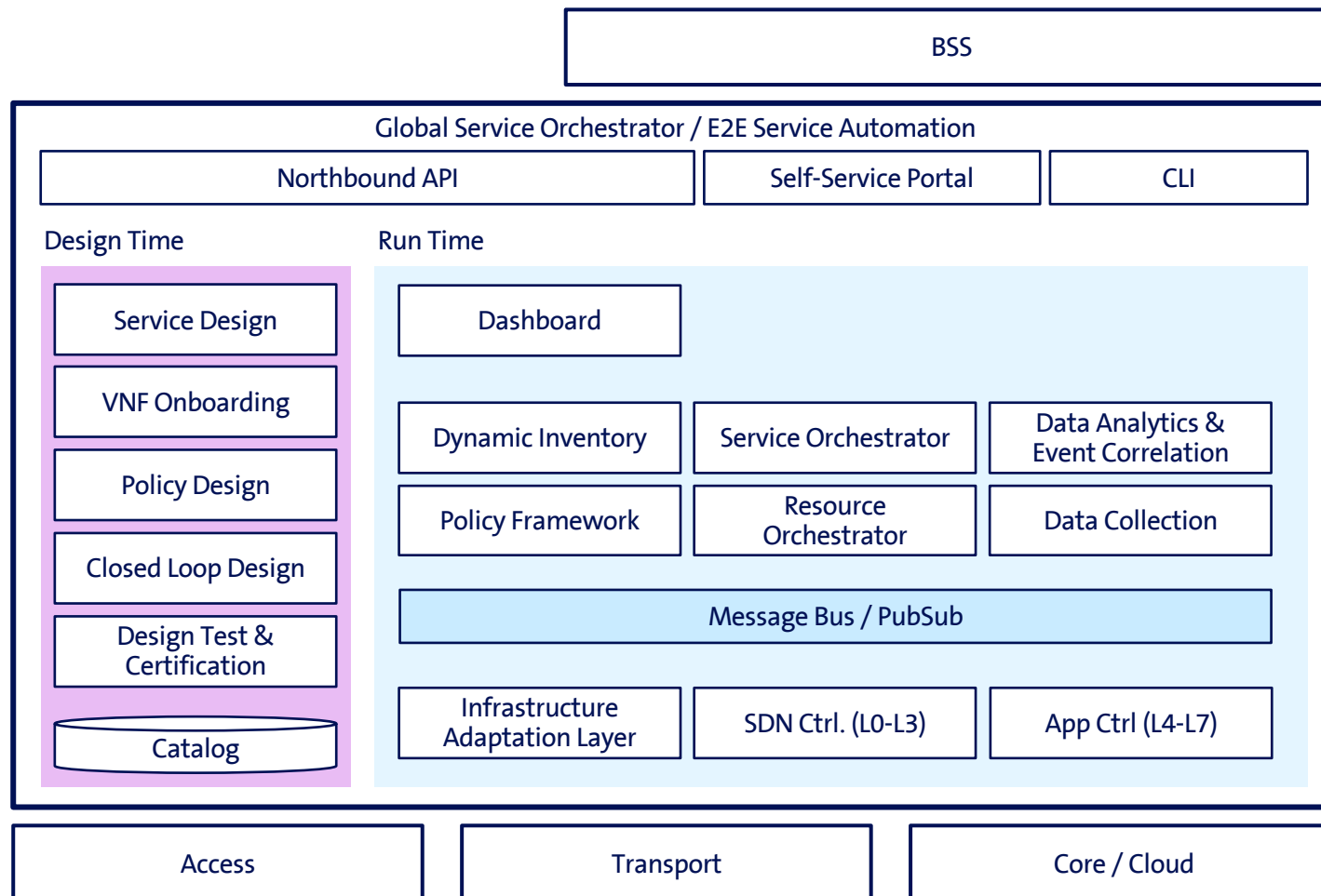


- > Two releases per year. 3rd release (Casablanca) in Nov 2018

Global Service Orchestrator & E2E Service Automation

ONAP: Open Network Automation Platform

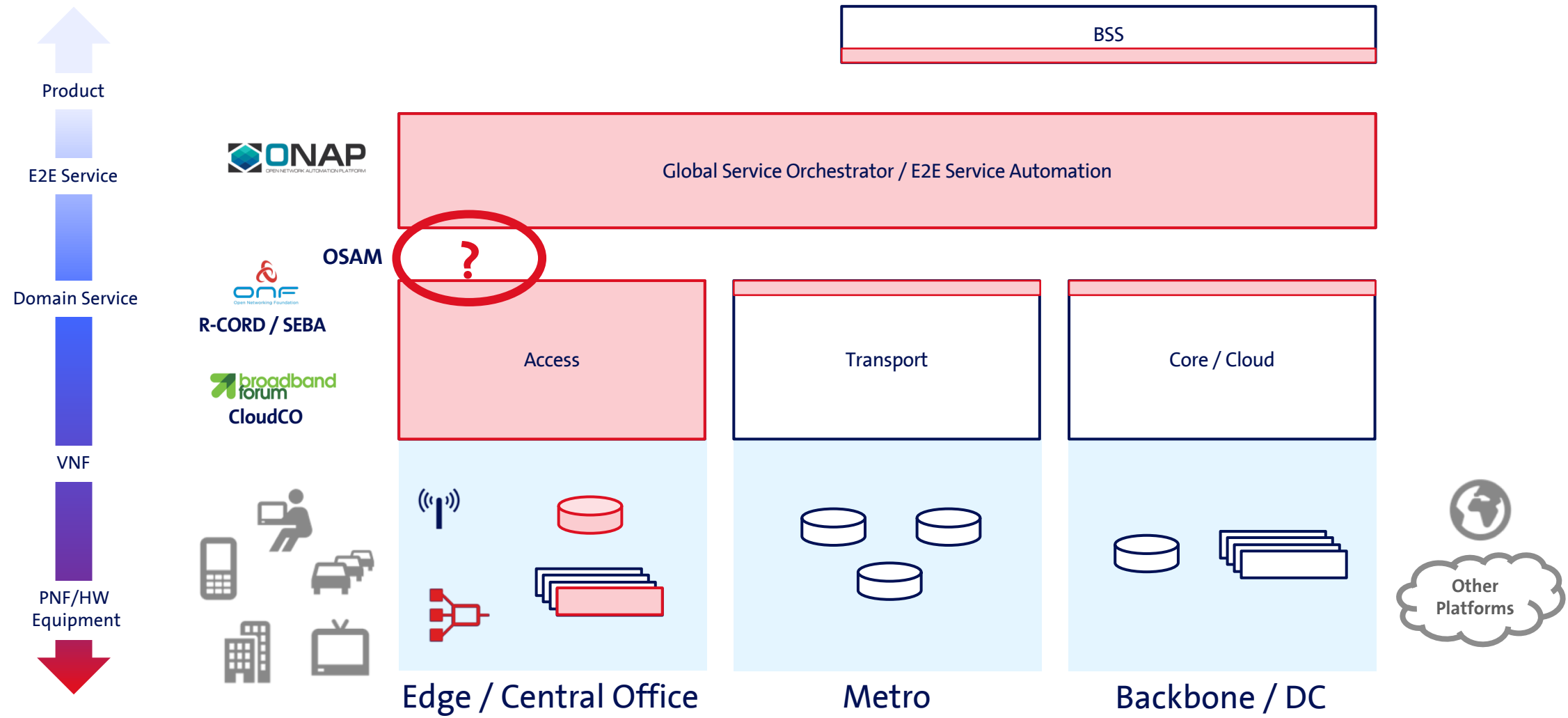
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- Provides tooling for E2E service design (VNFs, PNFs, links, policies, closed-loops...) and validation
- Overarching view of the infrastructure for E2E network and service orchestration
- Decomposes high-level service description into deployable resources and provides policy-based resource placement
- Dynamic inventory provides a central view of active services and resources and their relationships
- High-level service assurance by relying on data analytics, event correlation and closed-loop automation

ONAP – Access

Bridging the Gap



OSAM (Open Source Access Manager)

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> ONAP Use Case for Casablanca Release (Nov 2018)

> Description

- Vendor agnostic operation suite for managing consumer broadband network elements
- Management and control of the Access Peripheral POD (located in Telco Central Offices) as a PNF. Provides monitoring capabilities and support 100's of thousands of Access Peripheral PODs

> Contributors



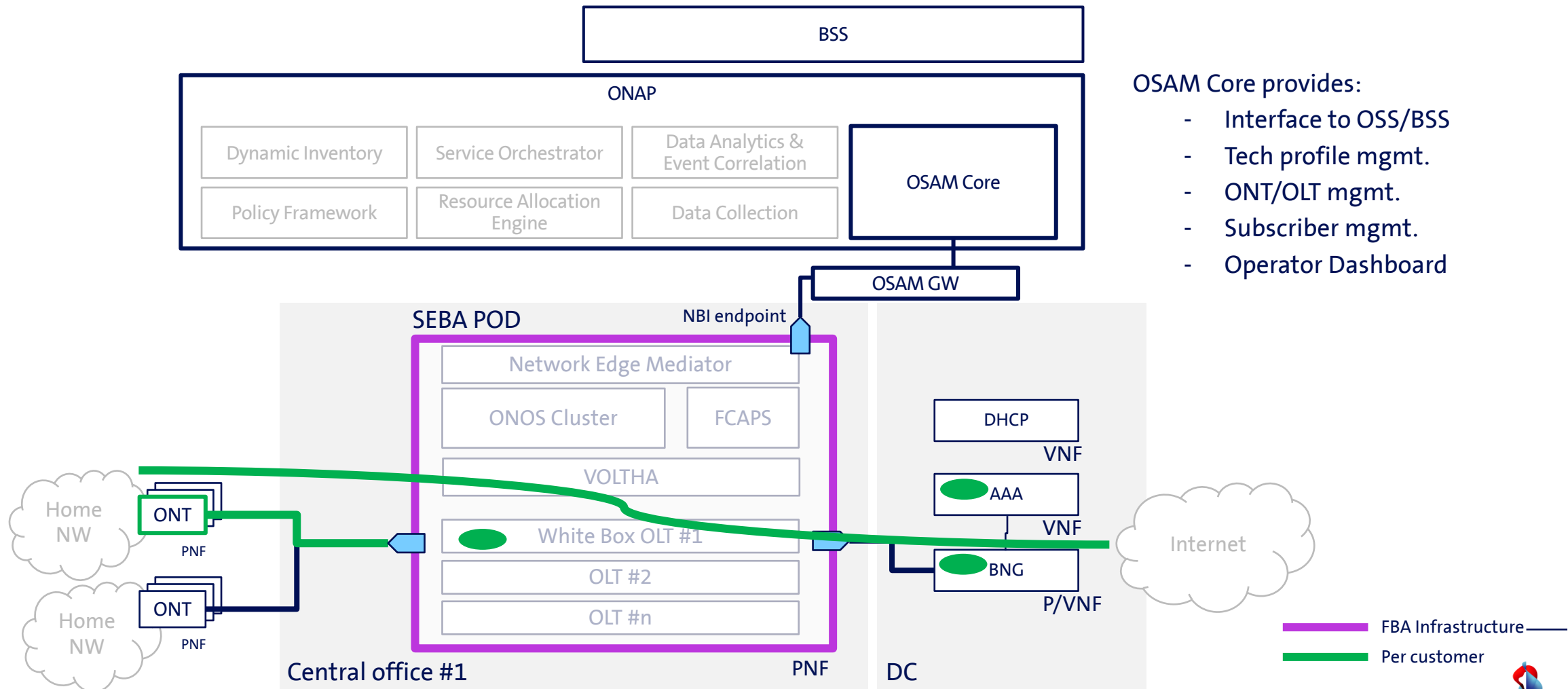
> Relevant ONAP Projects

- SDC/Modeling, External API, SO, SDNC, APPC, DCAE, AAI, Policy, OOF

OSAM R1

ONAP Casablanca Release

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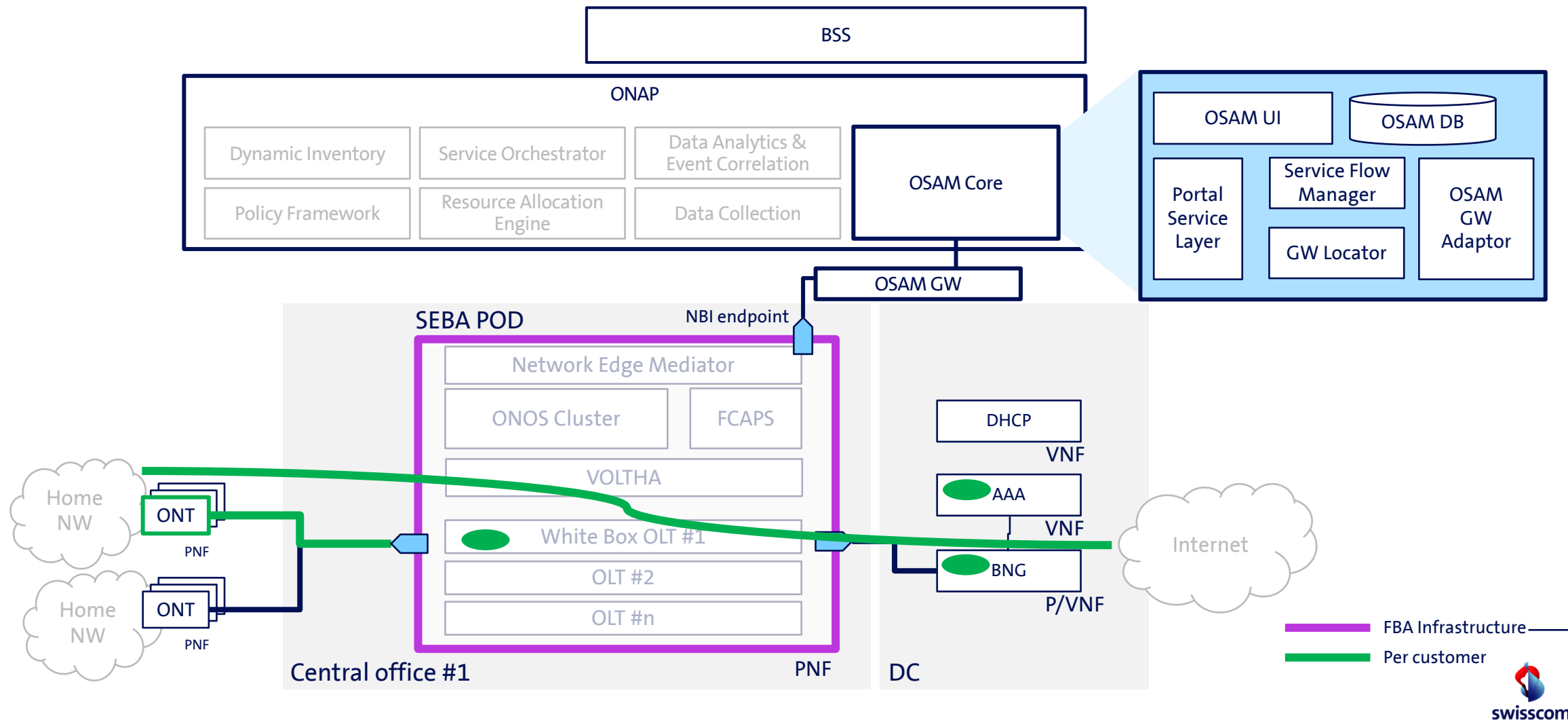


OSAM Core provides:

- Interface to OSS/BSS
- Tech profile mgmt.
- ONT/OLT mgmt.
- Subscriber mgmt.
- Operator Dashboard

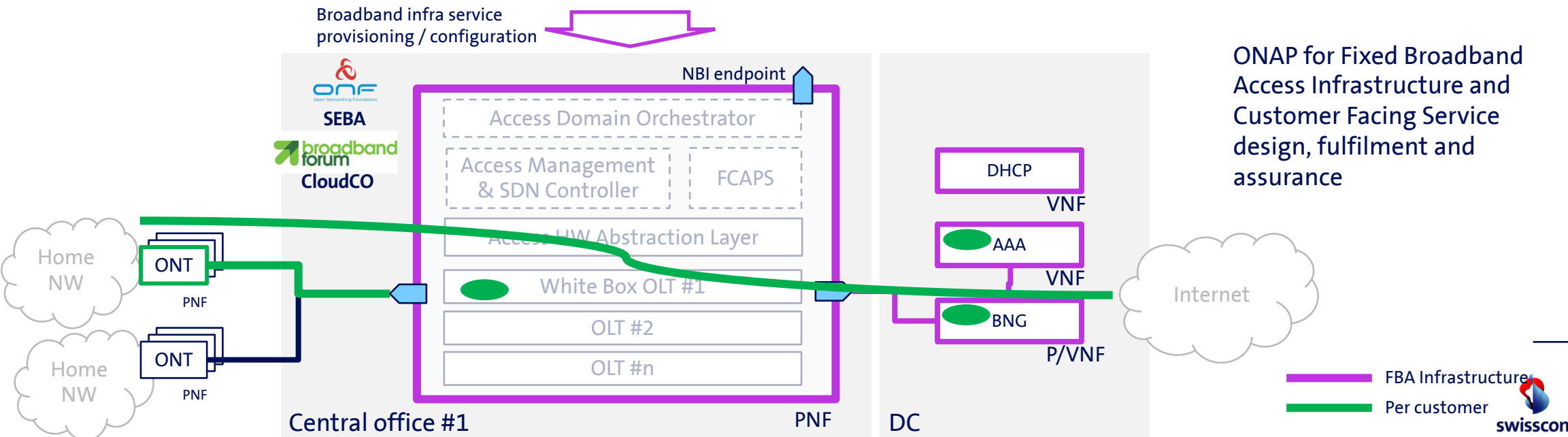
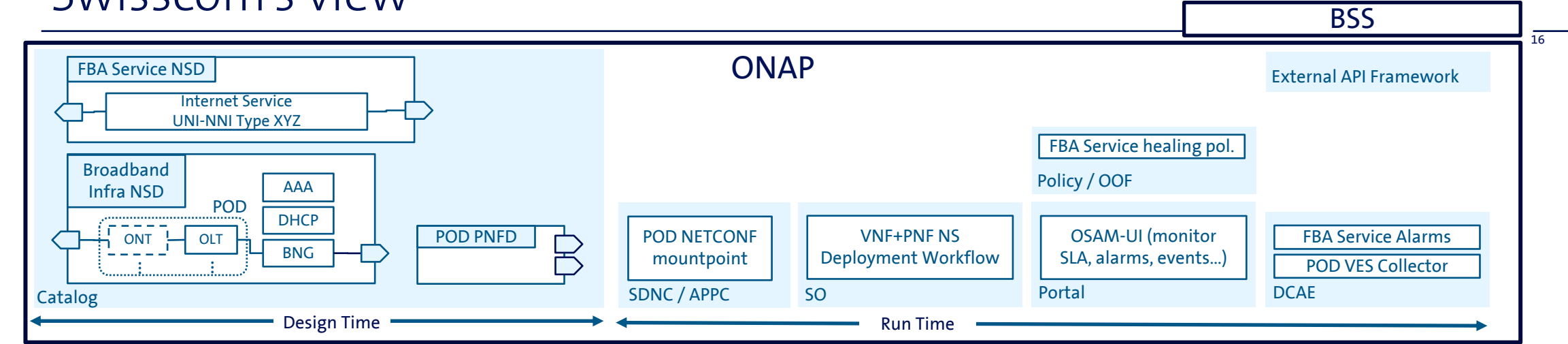
OSAM R1

ONAP Casablanca Release



OSAM R2+

Swisscom's view



Summary

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- > ONAP as global E2E service orchestrator
 - Fixed Access as use case
- > Customer Broadband Services via ONAP
- > OSAM use case
 - Access Peripheral POD onboarding and monitoring
 - Abstract Access POD Model
 - Engagement with SDO's and open source communities, e.g. ONF/VOLTHA, BBF CloudCO/BAA
 - ONAP – Access POD:
 - OLT auto-discovery, registration and configuration (zero touch provisioning)
 - ONT zero touch provisioning (registration, authentication and activation)
 - ONT deletion (release OLT port)
 - Nomadic ONT use case (automatic service reconfiguration)

Thank you!

David Pérez Caparrós
Senior Innovation Engineer

david.perezcaparros@swisscom.com

Open Networking Summit Europe
September 27, 2018. Amsterdam

