Technology Trial

SEBA/VOLTHA GPON Solution

19 Oct 2023

PTCL Group Nurturing Human Connection

Being the **largest ICT provider** of Pakistan, PTCL aims to **connect people in every corner of the country** through its **rich Portfolio of Services**

Pakistan Telecommunications Company Limited (PTCL) is the carrier of carriers & the largest ICT Services Provider in Pakistan

PTCL Group offers widest array of services across Fixed, Wireless & IT domains...

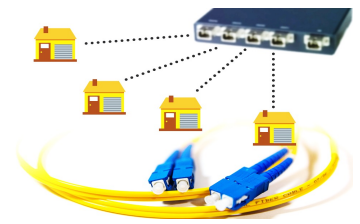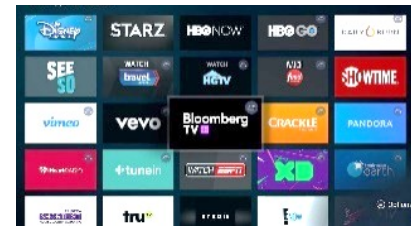| Fixed Broadband	Mobile Broadband	Fiber Optic Networks	Satellite Network	Submarine Cable Network	Cloud, Data Center & BPO
860K Home Passes	11,600 Sites	63,000 Kms	700+ Circuits	SMW1, SMW2, IMW, AA	12 DCs (4 x T3 Cert.)

...serving a phenomenal subscribers and traffic across the Country

25M Mobile Subs
4PB Daily Data Vol.

1.6M Fixed BB Subs
16PB Daily Data Vol.

250K IPTV Subs

3500 Corporate Customers

200+ Cloud & Data Center Services

FTTH provides a massive opportunity for growth

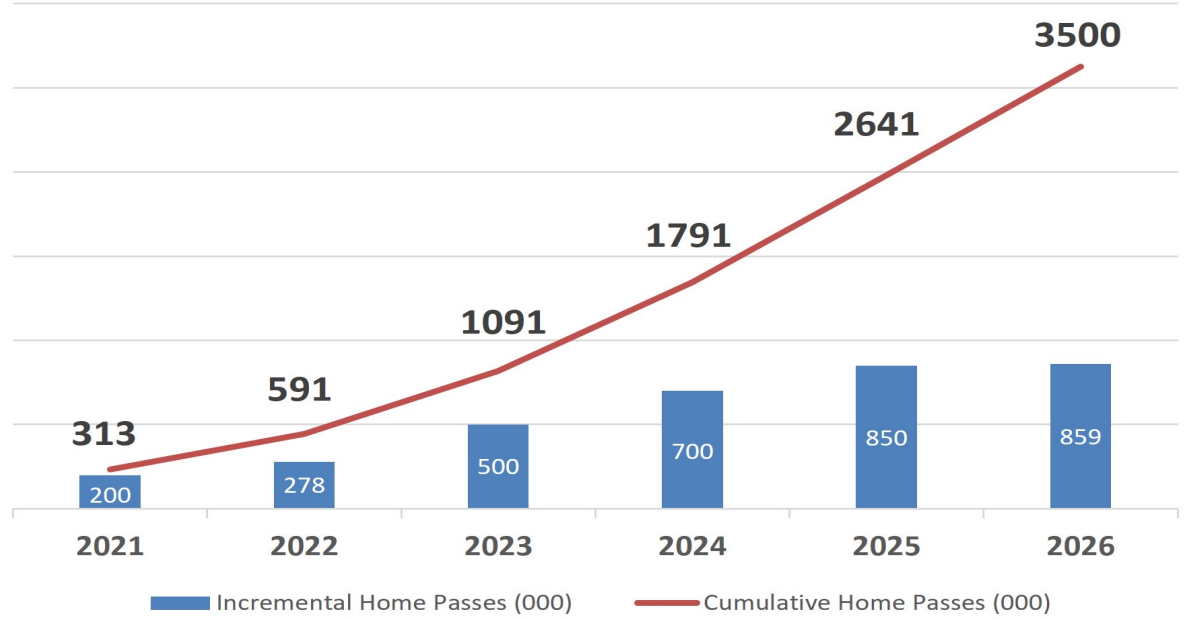**PTCL aims to reach 3.5 Million FTTH Home Passes by Y2026 to lead the Market**

1
Become the No. 1 FTTH Service Provider in Pakistan

2
Gain first mover advantage in new markets

3
Controlling PTCL xDSL churn to competition

4
Achieve operational efficiency by sunsetting Copper

Planned PTCL FTTH Rollout

Year	2021	2022	2023	2024	2025	2026
Incremental Home Passes (000)	200	278	500	700	850	859
Cumulative Home Passes (000)	313	591	1091	1791	2641	3500

- Incremental Home Passes (000) — Cumulative Home Passes (000)

- Having doubled its capacity, PTCL delivered **278.5K Home Passes** last year (Y2022), while whole competition delivered 245K collectively.

- In Y2023 we are on track to deliver additional **500k Home Passes**, to reach 1.1M FTTH Footprint

PTCL is constantly on the look out for new technologies to optimally address Business requirements...

We are evaluating SEBA/VOLTHA based GPON solution to complement our conventional GPON footprint with intent to optimize cost, expedite TTM, and to open our network to new solutions & vendors.
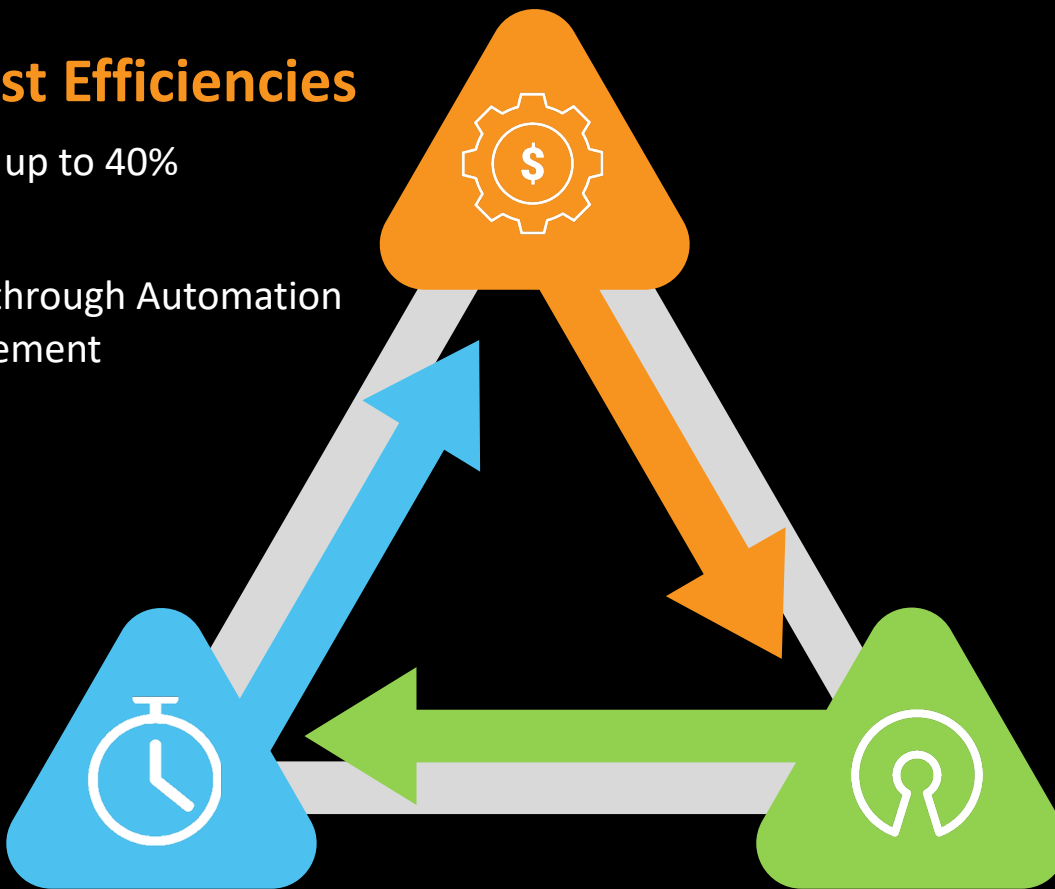
PTCL Drivers

Achieve Cost Efficiencies

- Achieve TCO savings of up to 40%
- Scalability
- Operational efficiency through Automation and centralized management

Enhance Service Delivery

- Software-defined nature
- Agile deployment of new services and features
- Faster Time-to-Market

Open up the Network

- Open Source and Vendor-Neutral
- Standards based-approach
- Innovation & Automation
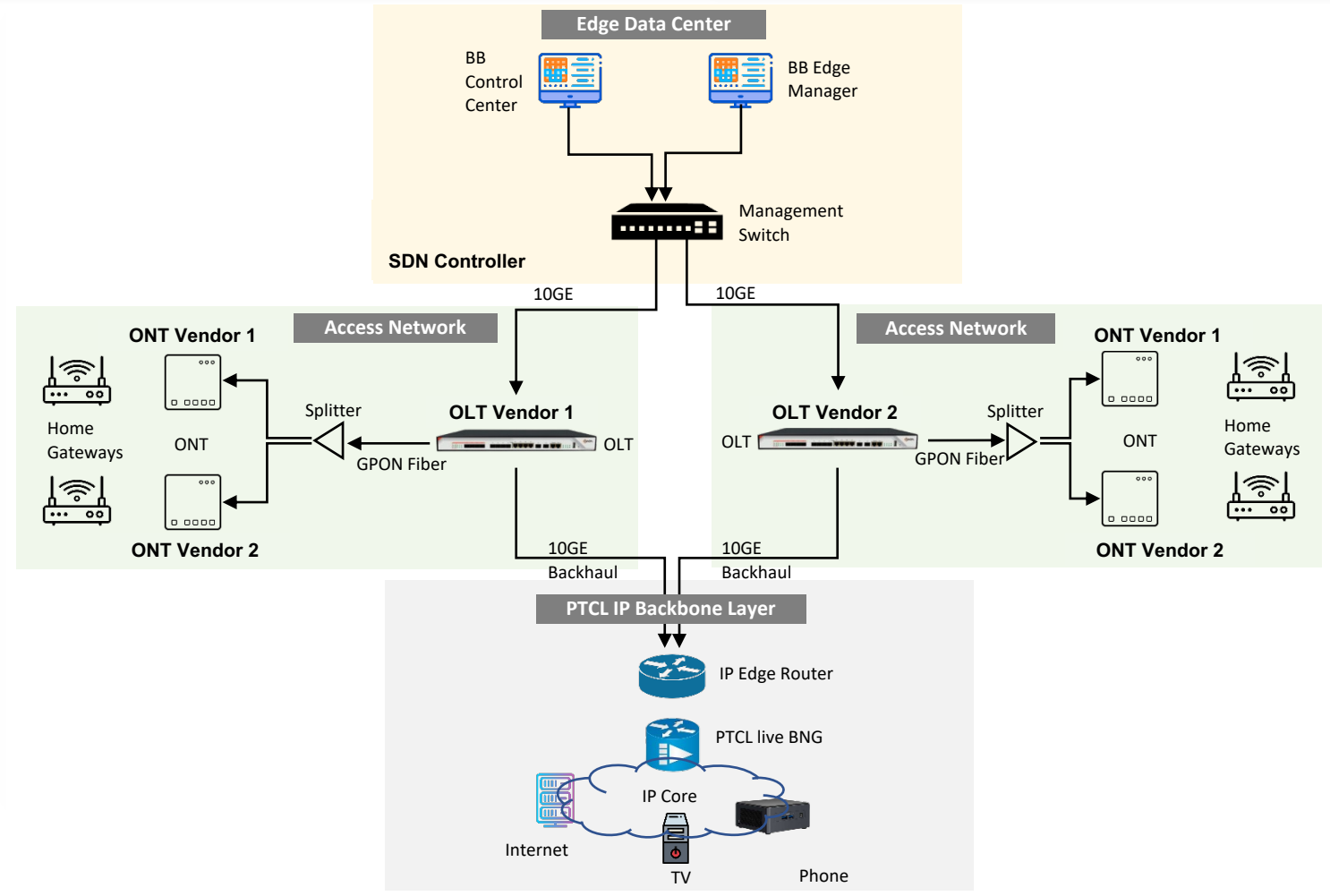- Network Virtualization
- SDN / NFV Integration

PTCL is undertaking a trial of SEBA/VOLTHA based GPON solution...

1 How seamlessly such an open-source solution would **integrate in our network?**

2 **Validate performance** of PTCL live triple play services (HSI, IPTV & VoIP)

3 Assess our **technical ability** to deploy, operate and maintain such a solution

4 How well such a solution **aligns with our business and technical objectives?**
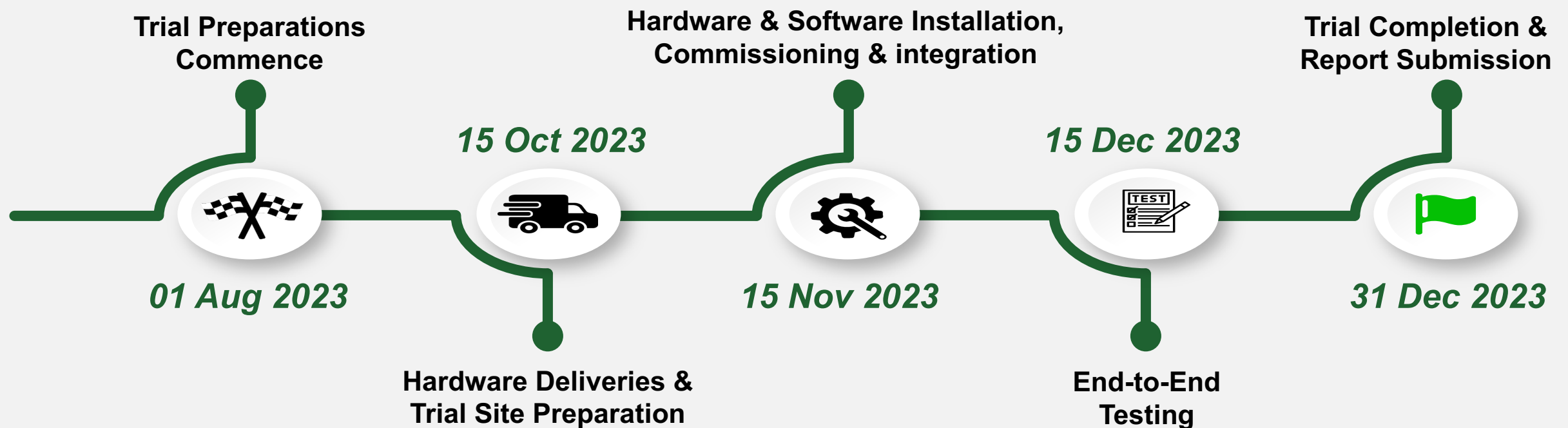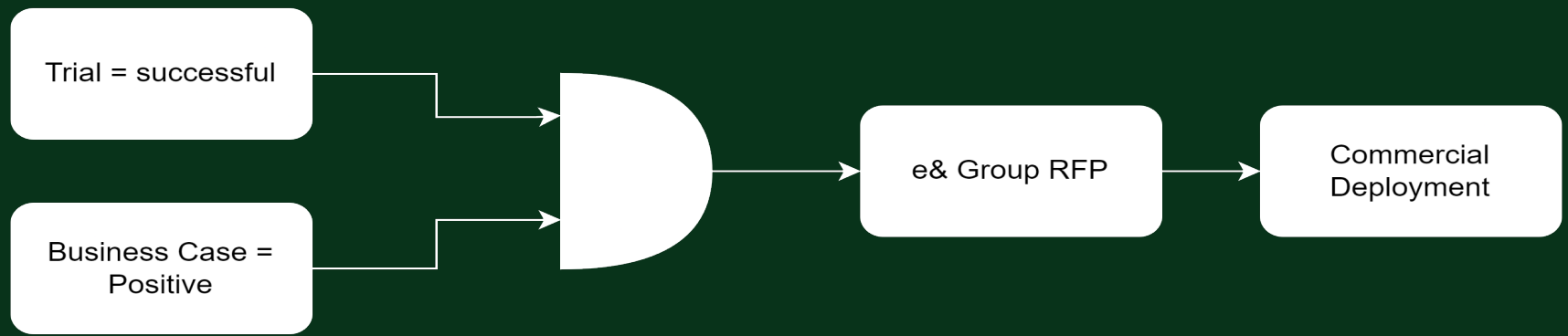

NETSIA Broadband Suite
@ SEBA/VOLTHA Reference Model
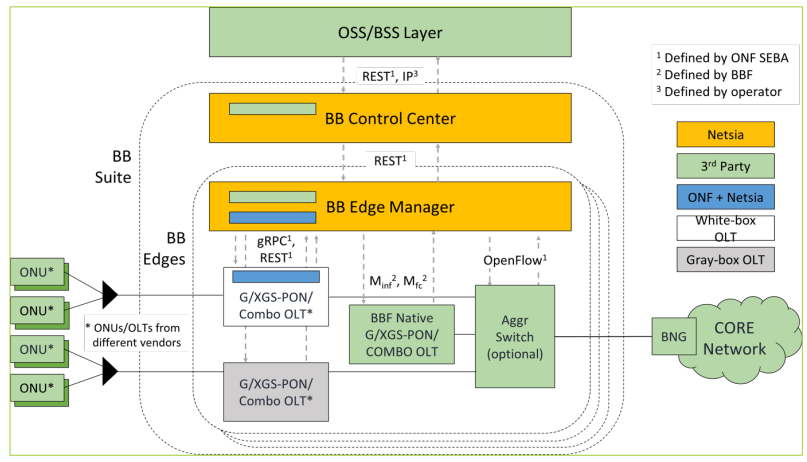
Our Partners	Controller	OLT	ONT
Vendor 1	NETSIA	ZyXEL	ZyXEL
Vendor 2	----	?	SERCOM

Trial Timelines & Next Steps

Trial Preparations Commence

Hardware & Software Installation, Commissioning & integration

Trial Completion & Report Submission

15 Oct 2023

15 Dec 2023

01 Aug 2023

15 Nov 2023

31 Dec 2023

Hardware Deliveries & Trial Site Preparation

End-to-End Testing

Next Steps

Trial = successful

Business Case = Positive

e& Group RFP

Commercial Deployment

Closing remarks…

We would like to thank our partners Netsia, Zyxel, and Sercomm for agreeing to and extending us excellent support for the trial.

We will look forward to working with our partners to make this trial successful with the intent that it leads to a commercial deployment across e& Opcos.

We welcome any other OLT vendor who may wish to join us in this trial.

We would like to thank Turk Telecom & Open Networking Foundation (ONF) for giving us this opportunity to present our trial on this forum.

Thank you!

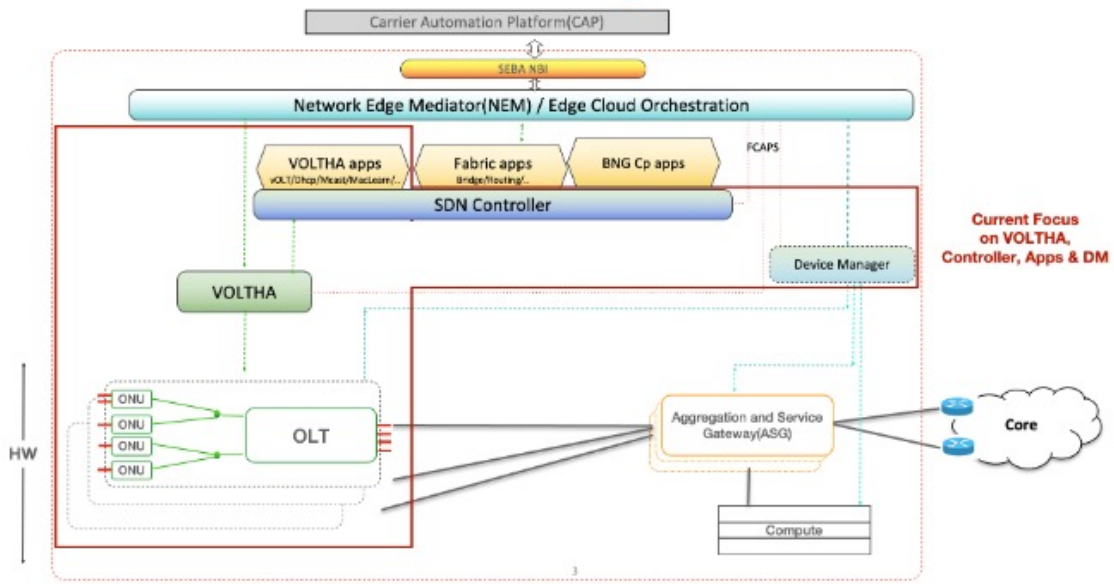# SEBA / VOLTHA Reference Architecture

https://opennetworking.org/voltha/

VOLTHA is an open source project for PON broadband access equipment, supporting the principle of multi-vendor, disaggregated, "any broadband access as a service" for the Central Office.

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