

The background features an aerial view of a city at night, with numerous skyscrapers and illuminated buildings. A semi-transparent digital network overlay is present, consisting of a complex web of white and blue lines connecting various points across the city. The overall color palette is dominated by blues and greens, with a gradient effect from top to bottom.

**kontron**

# Vendor Update: Kontron

Simon Čimžar, CTO Business Unit Broadband

October 2023

# Agenda

## Why?

The global challenges of broadband

## How?

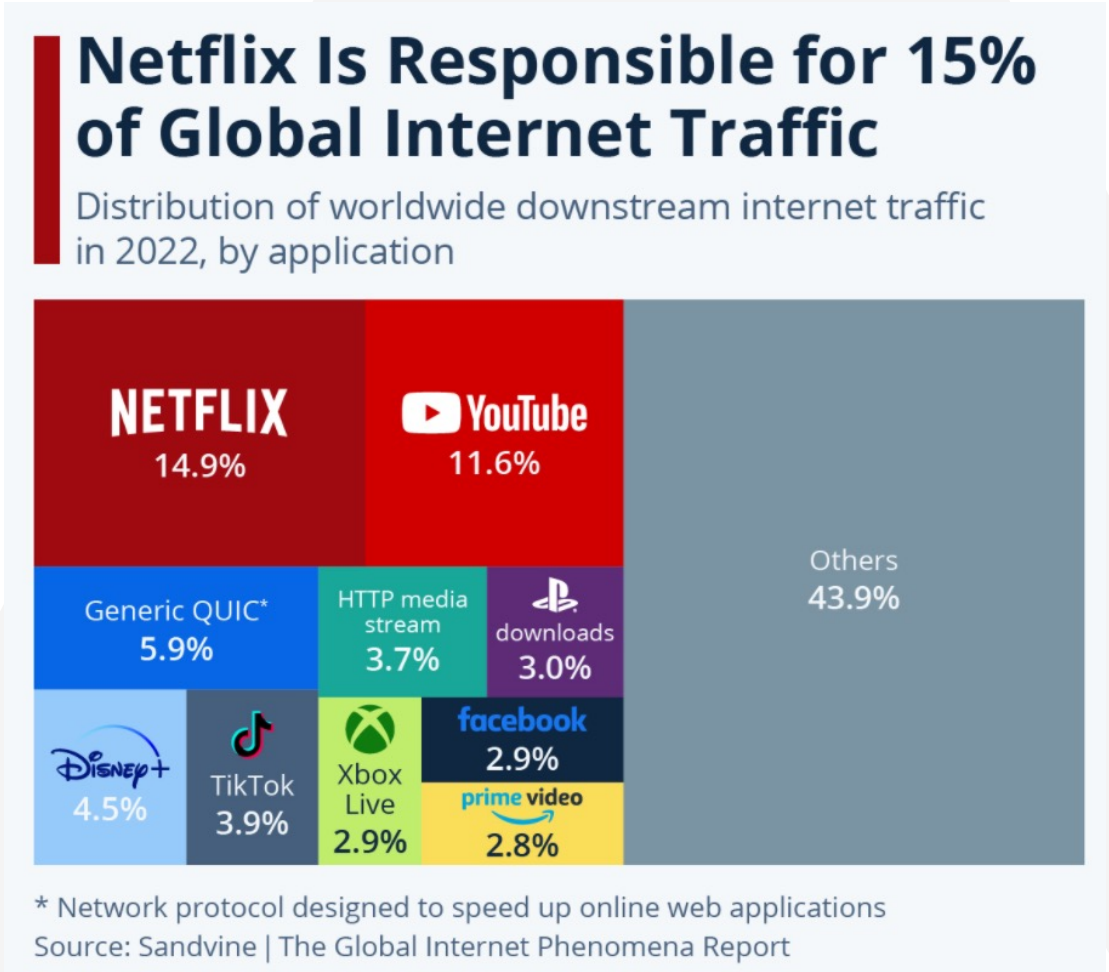
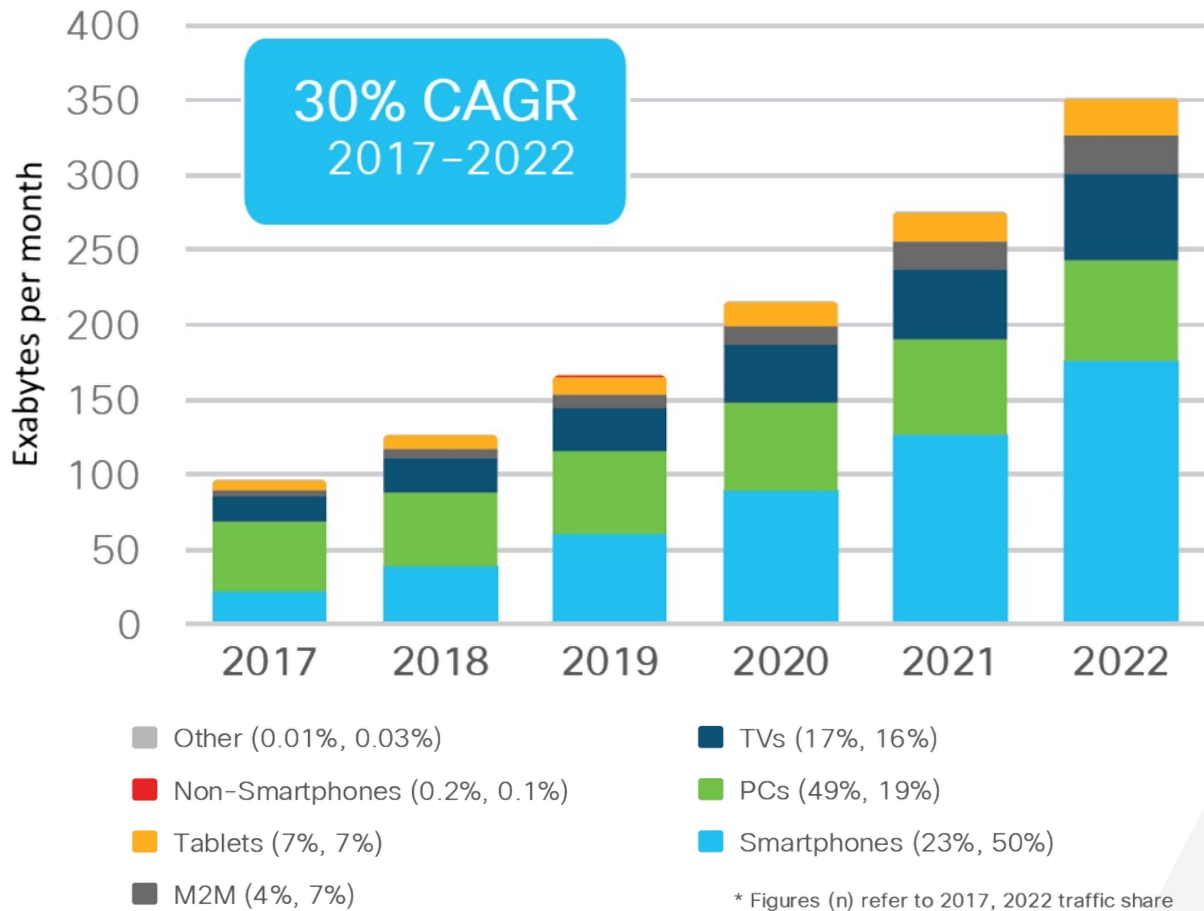
Addressing the challenges

## What?

Status of solutions

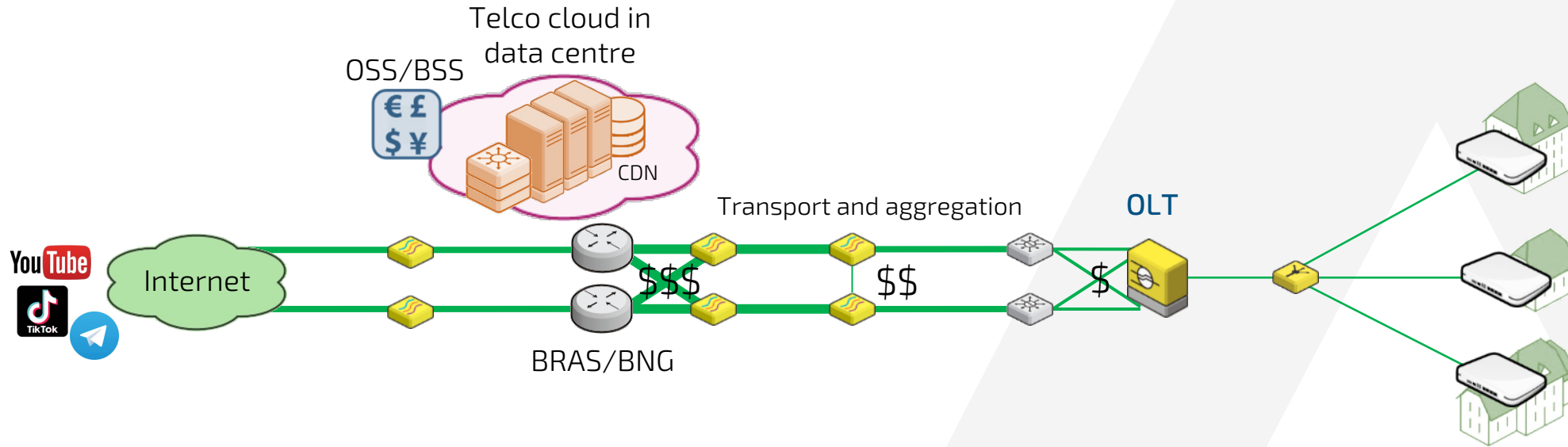


# Global Internet Traffic



Source: Cisco VNI Global IP Traffic Forecast, 2017-2022

# Investments in Telco Network



## Cost of integration

SLA, testing

## Cost of BRAS/BNG HW expansion

Capacity increase, licenses, SLA

## Cost of OLT and CPE upgrade

XGS-PON, Wi-Fi 6/7

## Cost of link/capacity upgrade

Interfaces, wavelengths

**30% capacity (and cost) increase each year**

# Operator Challenges

**EFFICIENT FIBRE  
EXPANSION**

**SUPPLY-CHAIN  
DISRUPTION**

**VENDOR  
LOCK-IN**

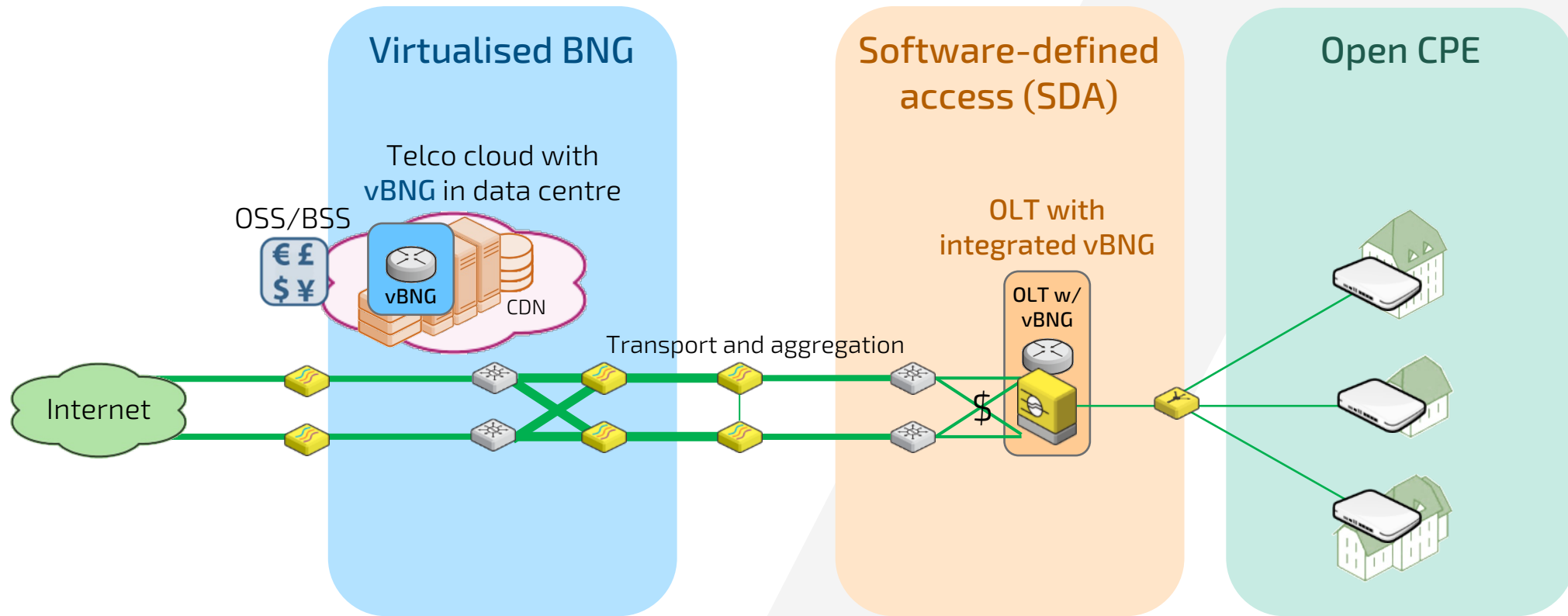
**Lack of personnel**

Different look & feel between vendors, different apps, features

Interoperability challenges between various systems

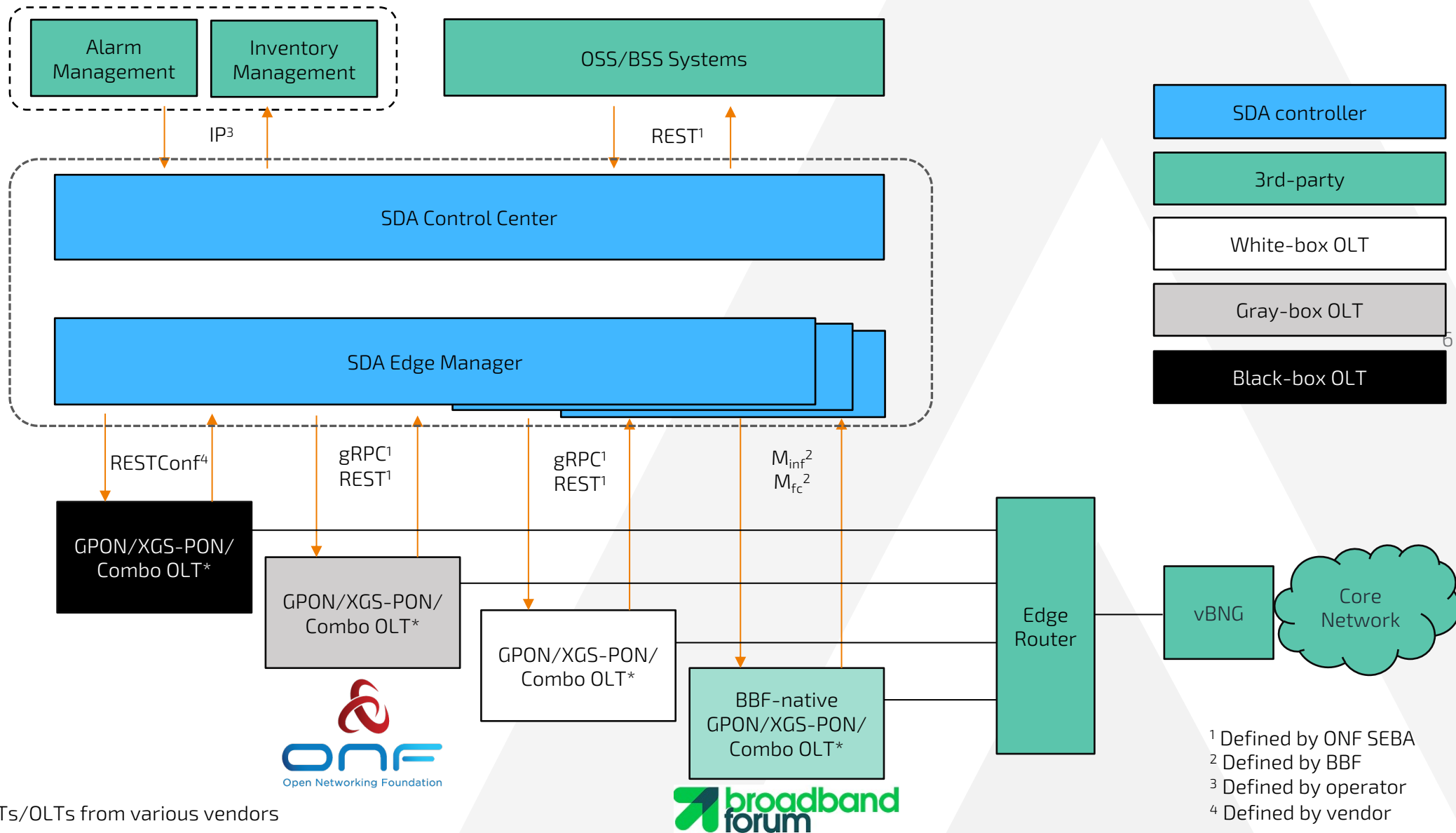
Constant technology upgrade, permanent investment

# Open Broadband Solution and Its Components



Field-proven technology and business model

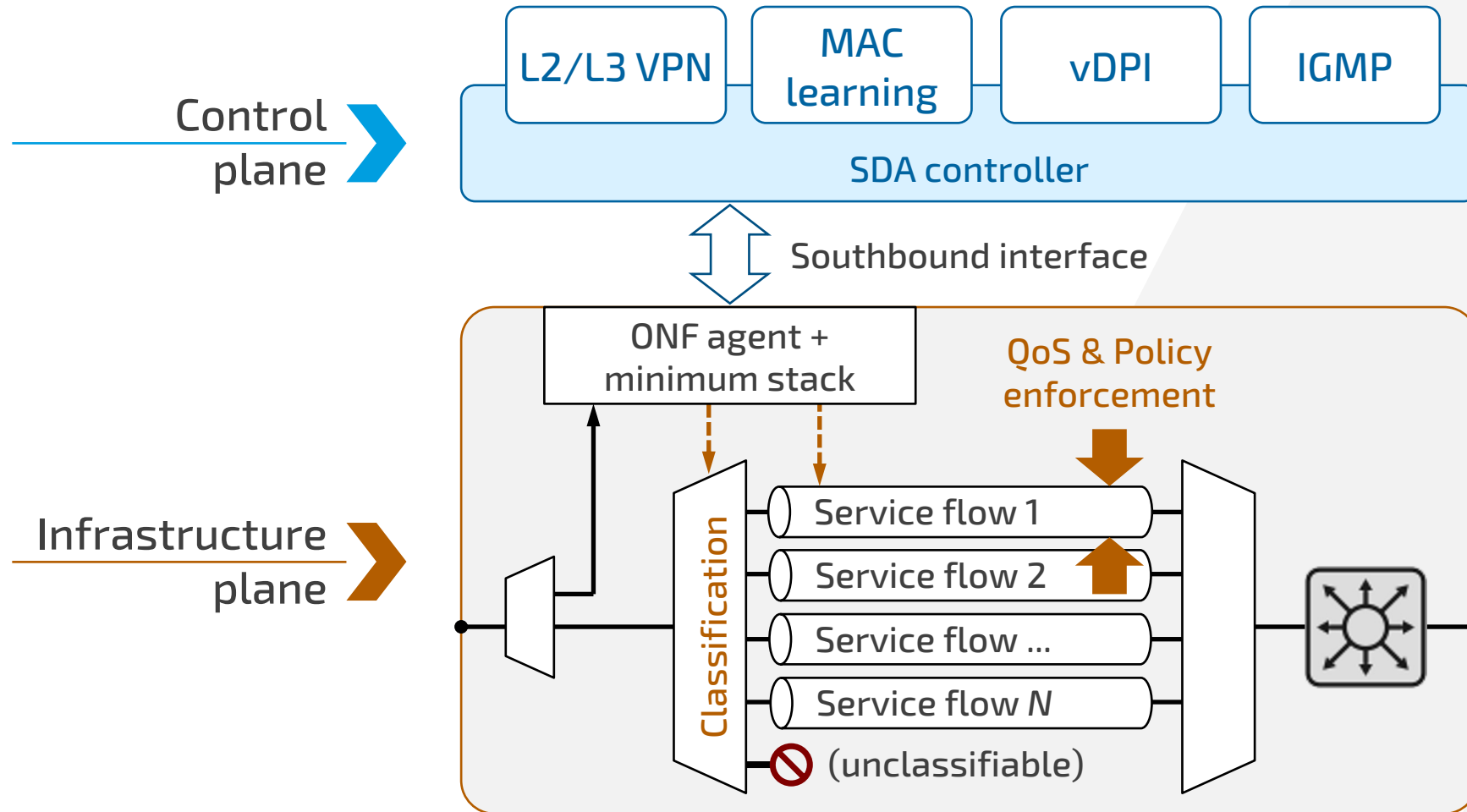
# Iskratel SDA Solution



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# OLT: Programmability is Key

Flexible network infrastructure with support for traditional and SDN networks

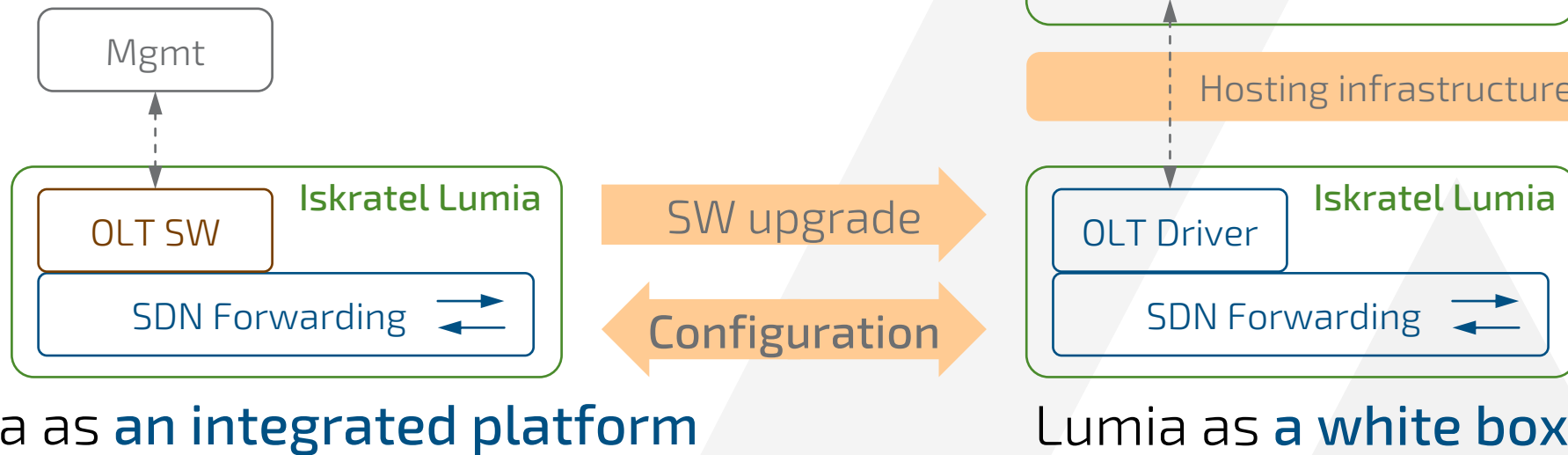




# Iskratel Lumia: World's First Dual-Nature OLT

Verified in **conventional**  
and **virtualised** setups

**Cost-effective evolution** to  
disaggregated fibre network



# vBNG: A Distributed, Virtualised BNG

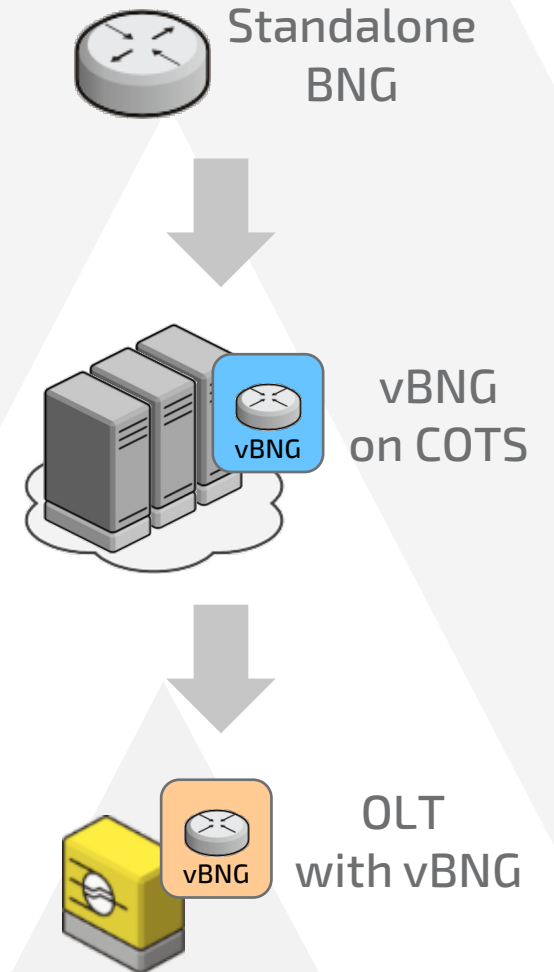
Border Network Gateway manages subscriber services and performs *accounting* – a base for *billing* and *revenues*

*Virtualised BNG* is SW-based and runs on *x86 servers* or *cloud* platforms

vBNG also *extends BNG* with central management, address allocation, real time telemetry, EVPN, etc.

*Distributed vBNG* runs at edge locations, including *Iskratel Lumia Edge OLT* or x86 COTS server

Virtualising BNG significantly *reduces CAPEX and OPEX*



# CPE Challenges

Constant need to upgrade CPE due to **Wi-Fi saturation**,  
interferences, **coverage** issues



Interoperability challenges between various systems  
(OLTs, VoIP, management)

Different look & feel between vendors, different apps, features  
(each vendor develops its own solution)

Significant operational effort to select, test and approve various vendors,  
SW releases; add costs of customisation and helpdesk support

# Solution: Future-Proof Design of Open CPE

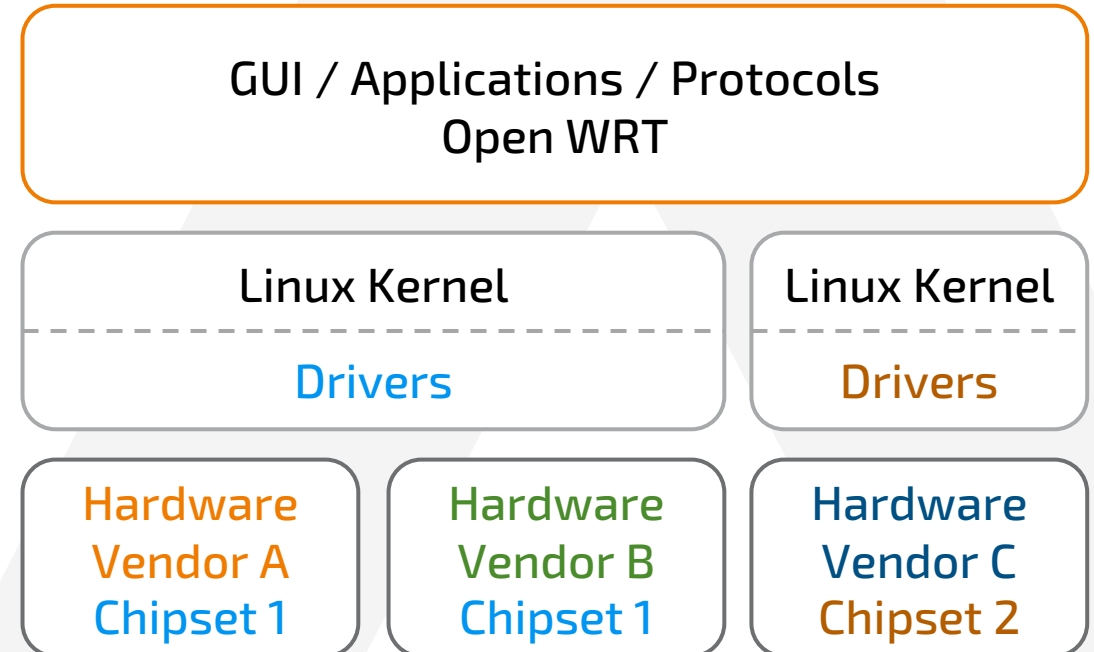
## Separate HW from SW

- Select chipset platforms
- Reduce CAPEX: Engage directly with ODMs
- Local HW manufacturing

## Open and future SW platform: OpenWRT

- Use of open-source applications
- **Open interfaces** for integration
- Same look & feel, same application
- Full interoperability (single protocol stacks)
- Select reliable partner for SW platform (drivers, apps)
- Focus on operator applications, services, user experience
- **Reduced OPEX**: single protocol, interop, app testing

Proven with Orange, Telefonica and others



OpenWrt  
Wireless Freedom

EasyMesh™



# Thank You for Attention



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Family  
Friendly  
Enterprise

# Q & A



The background features an aerial view of a city at night, with numerous skyscrapers and illuminated buildings. A semi-transparent digital network overlay, consisting of interconnected nodes and lines in shades of blue and green, is superimposed over the cityscape. The network lines form a complex web across the top and middle of the image. The overall color palette is dominated by blues and greens, with the city lights providing a warm, yellowish glow.

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