

# OCP U.S. SUMMIT 2016

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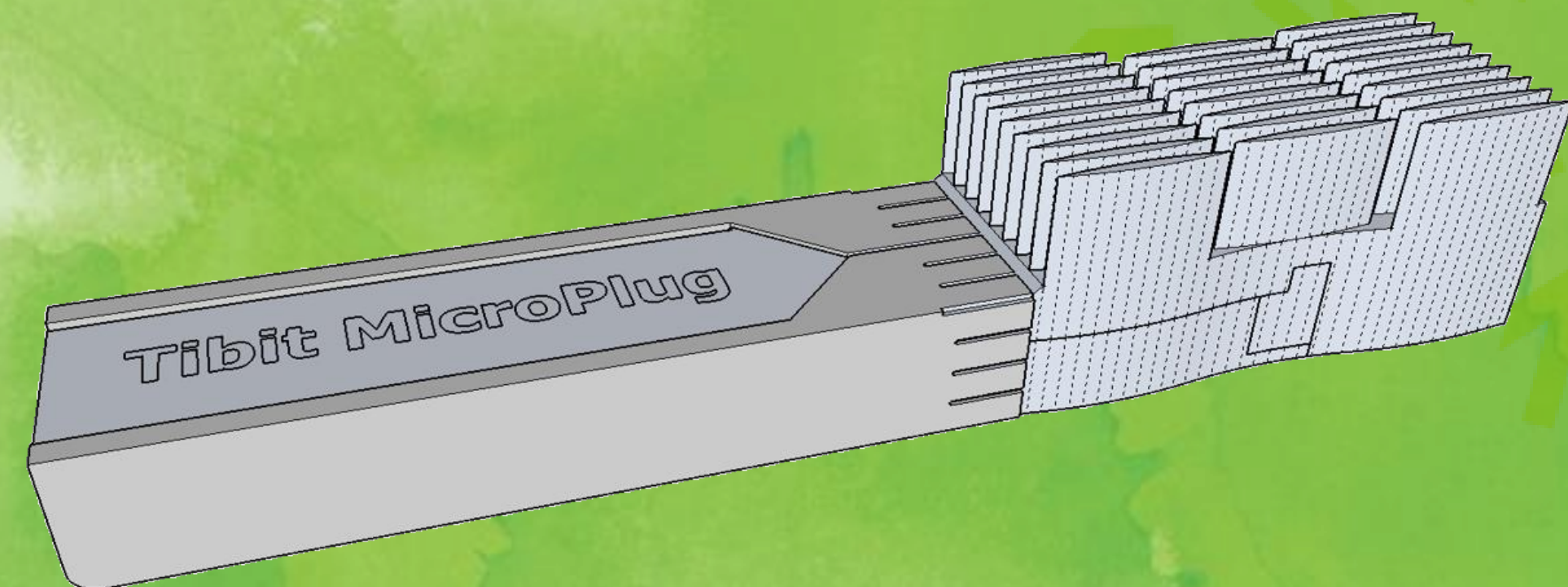


OCP U.S. SUMMIT 2016

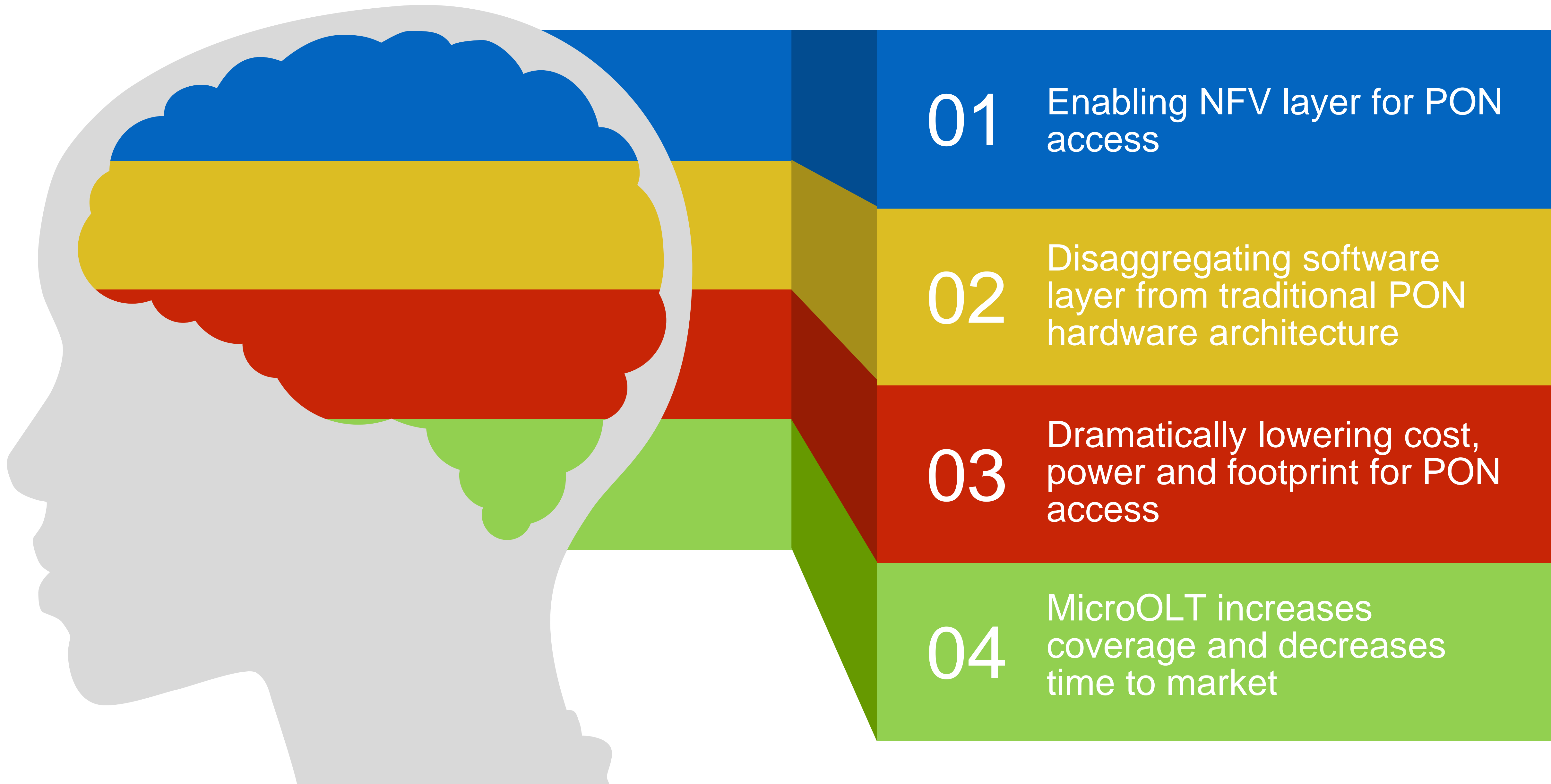
# XGS MicroOLT Solution

An innovative approach to virtualizing access

Mike Meche  
Senior Member Technical Staff

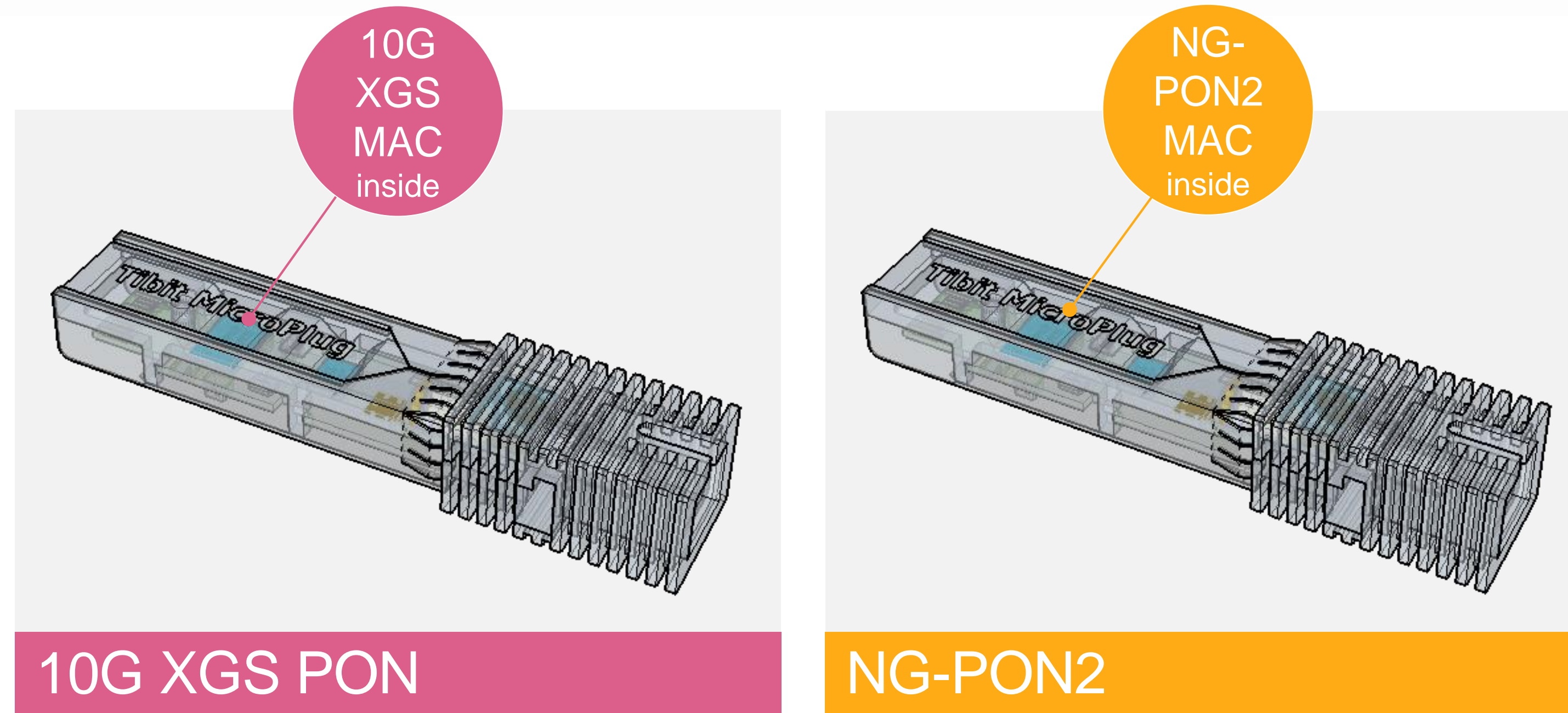


# Innovative Hardware Access Solution for the industry





# MicroOLT SFP+



SFP+ OLT optics modules provide PON connectivity for Ethernet Switch or Router ports

In-band management allows for local or remote administration and virtualization

Low power and high density solution with support for outside plant deployment

MAC integration into SFP+ allows for significantly better optical performance

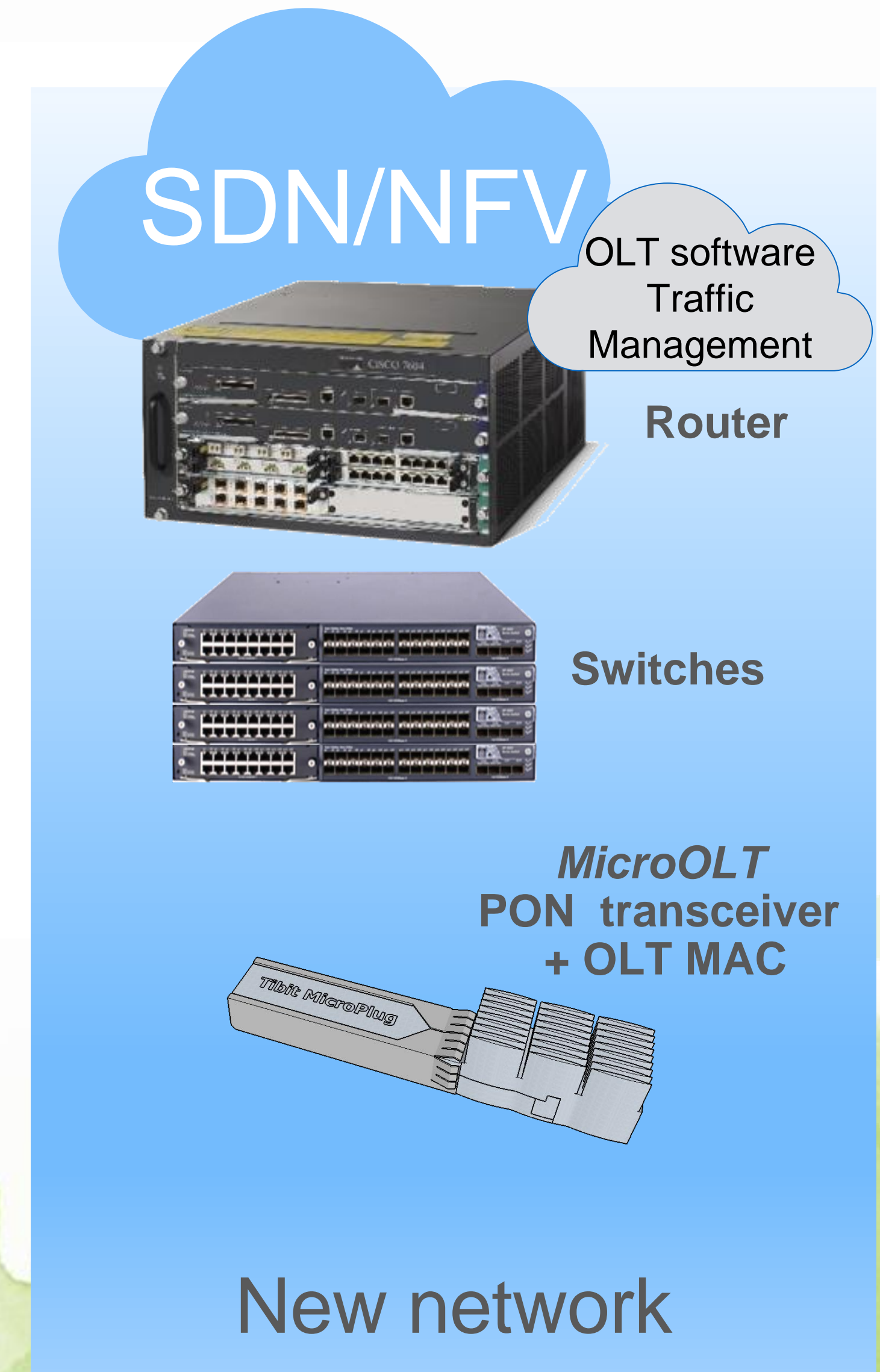
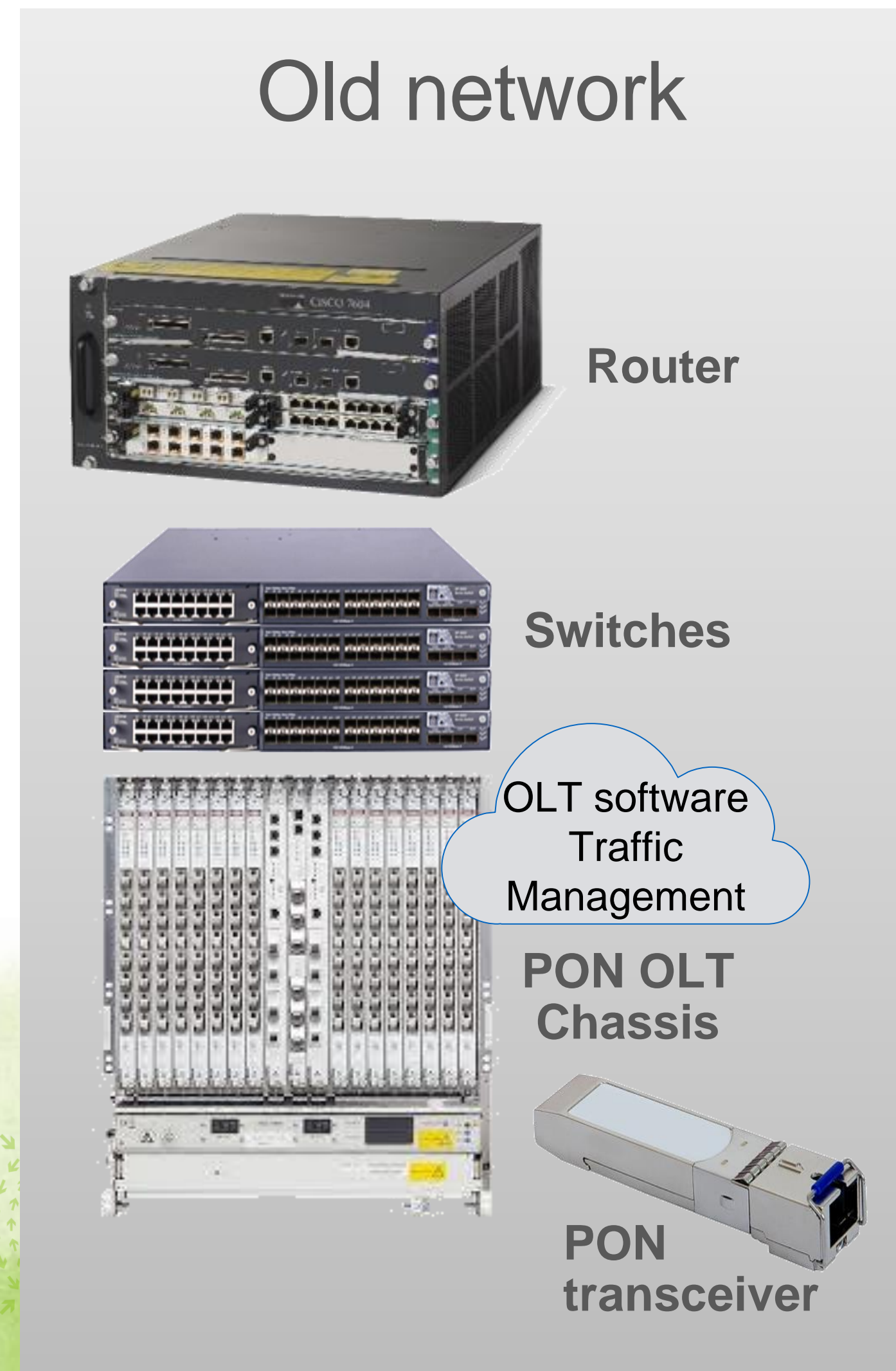
Based on ITU G.9807.1 and G.989



# Innovative approach for the new network - MicroOLT

## Service Provider Virtual OLT (vOLT)

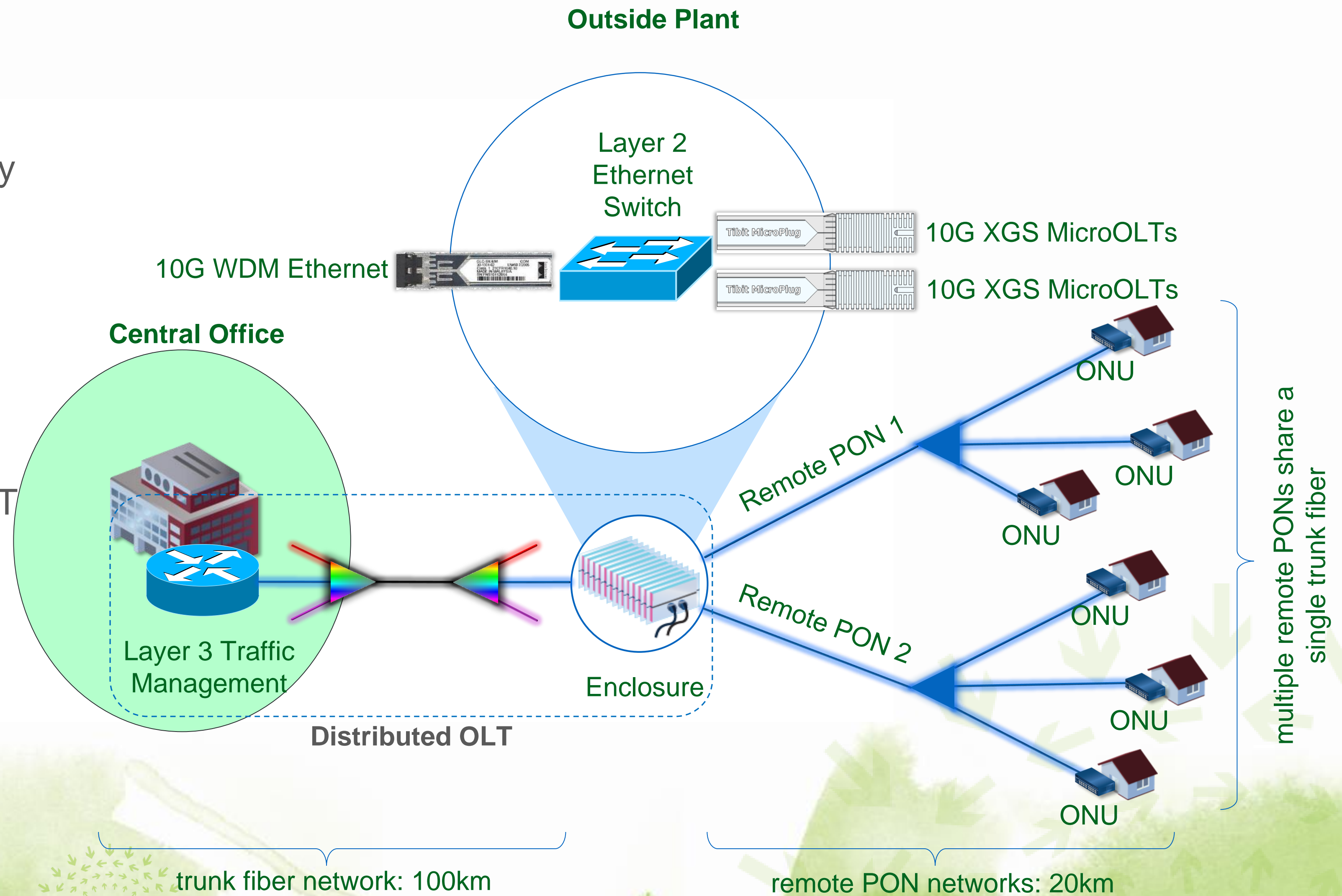
- MicroOLT enables Service Providers to deploy high capacity 10G PON directly from existing Ethernet switches
  - Elimination of PON application-specific hardware and making use of stranded Ethernet hardware lowers the cost of deployment
  - Central Office power and footprint savings
  - It allows for higher density PON access systems and integration with other SDN/NFV solutions
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- MicroOLT dramatically lowers the cost of deployment





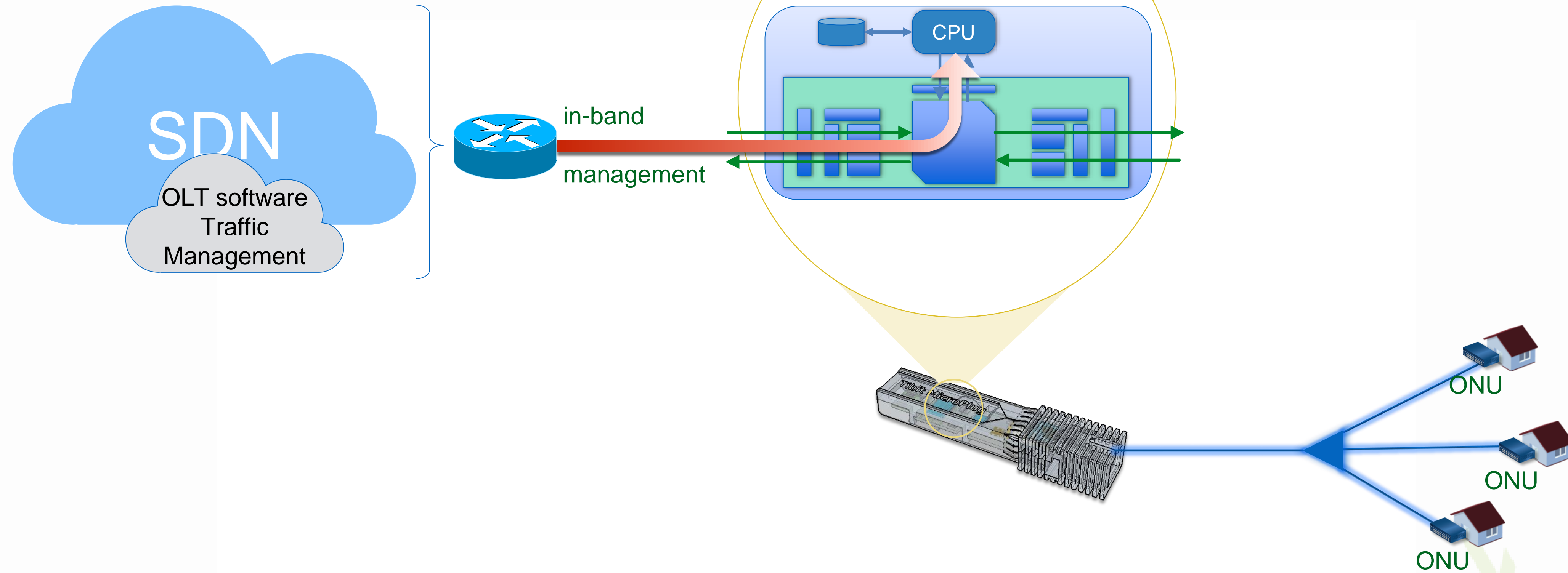
# Use case: distributed OLT

- Splitting the PON MAC and optics from the rest of the OLT functions allows for remotely located PON terminations (remote PONs)
- Remote PONs are required when the customers are beyond the reach or fiber capacity of an OLT in the Head-end
- An SFP+ transceiver with an integrated OLT MAC allows for small, modular, and low power Node solutions



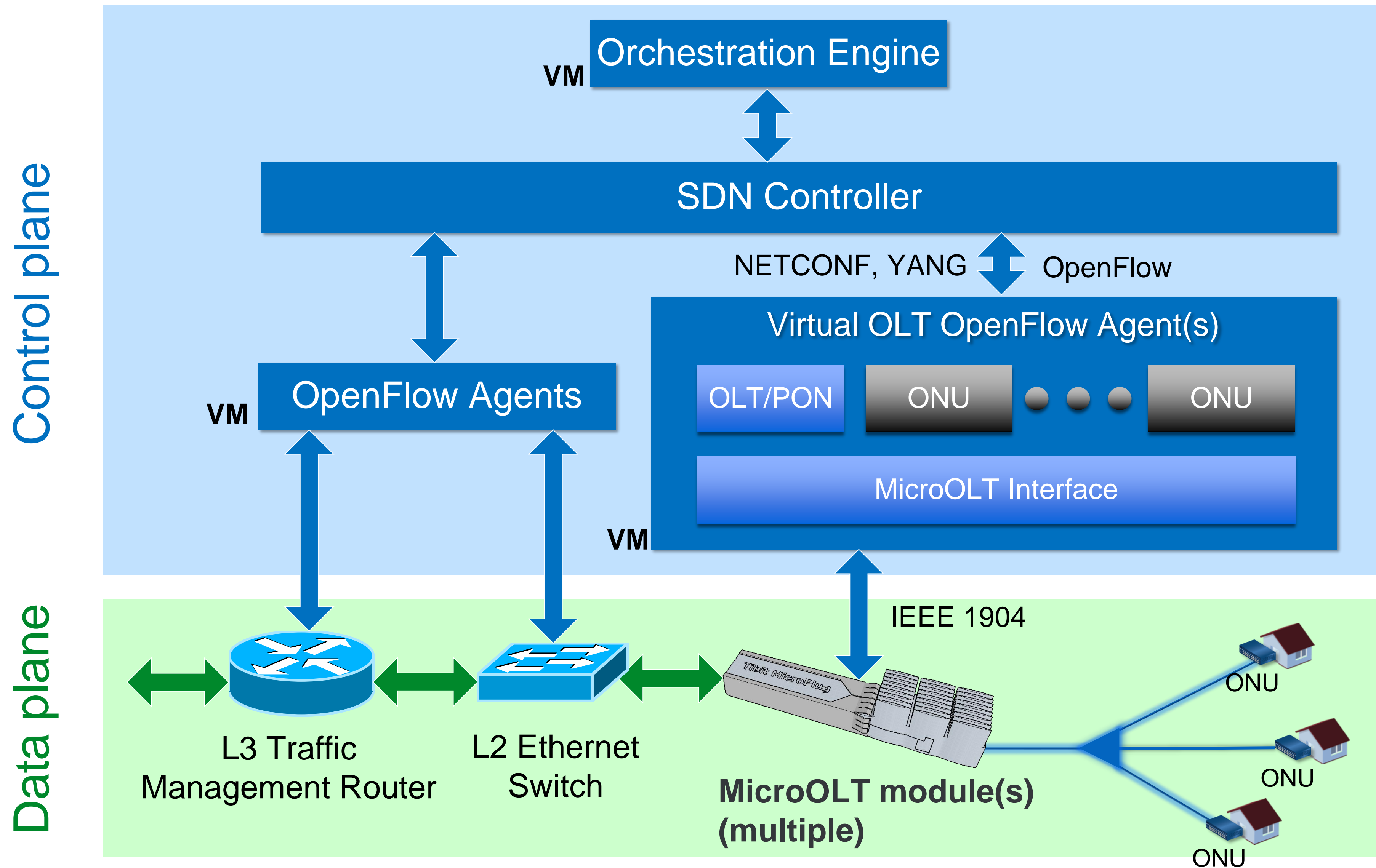


# SDN Managed OLT module



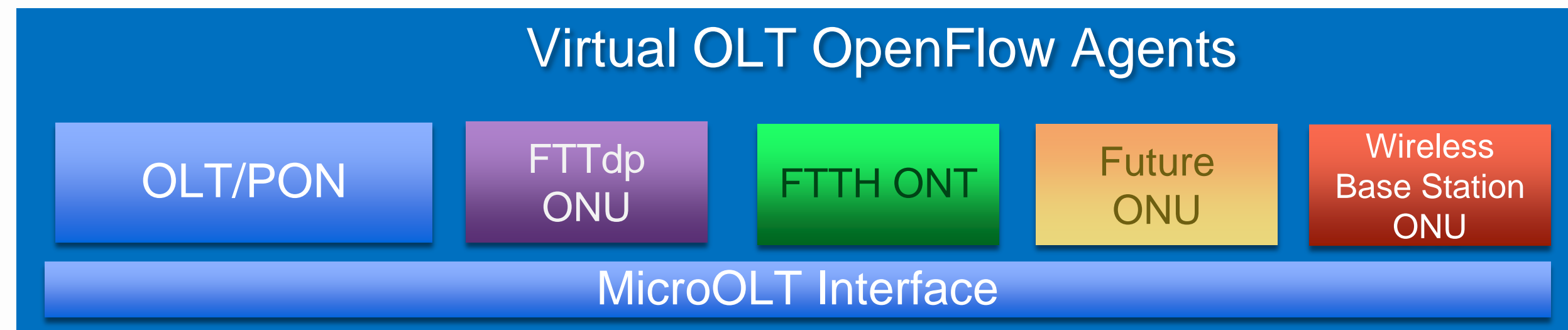
- CPU is embedded inside MicroOLT SFP+ Module.
- Embedded CPU is configured and controlled by communicating with Cloud servers
- SFP+ module can be deployed anywhere in the network
- Provides OLT deployment flexibility and reduces TCO

# SDN OLT management orchestration

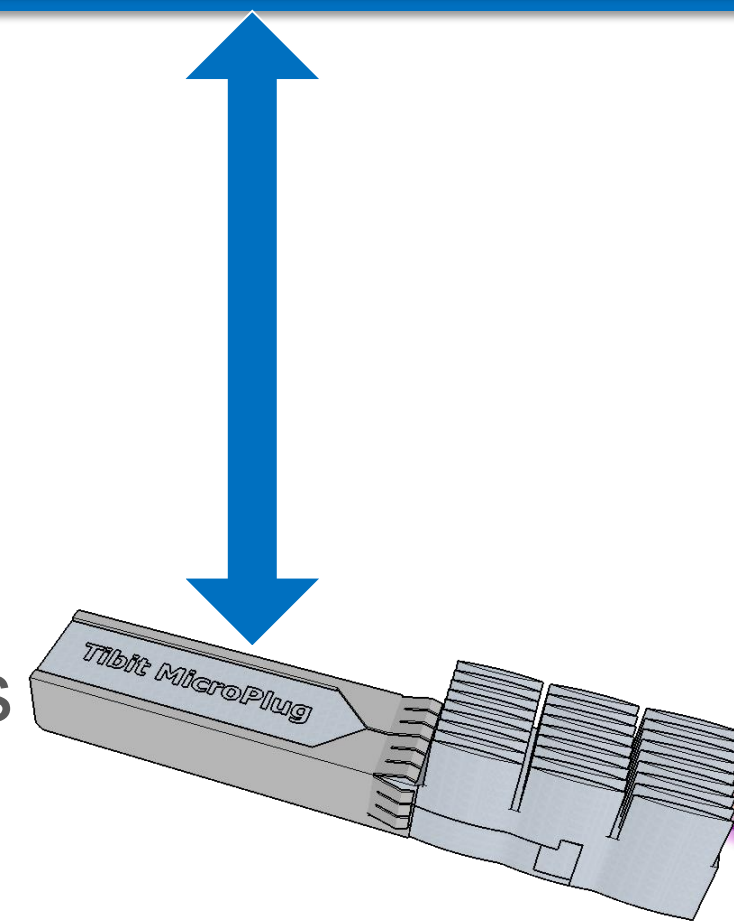




# Open and Interoperable Architecture



- MicroOLT transparently passes OMCI and OAM from Virtual OLT software to any type of ONU or ONT
- Virtual OLT software is a modular architecture containing configuration for the OLT and ONUs
- ONUs suppliers provides the software for both ends to manage and control
- MicroOLT does not restrict or require upgrade to support ONU/ONT types or different vendors



OAM and OMCI Messages

OAM and OMCI Messages

OAM and OMCI Messages

OAM and OMCI Messages

Wireless  
Base Station  
ONU

ONU  
Software

Future ONU

ONU  
Software

ONU  
Software

FTTH ONU

FTTdp ONU

ONU  
Software



# PON connectivity without boundaries....

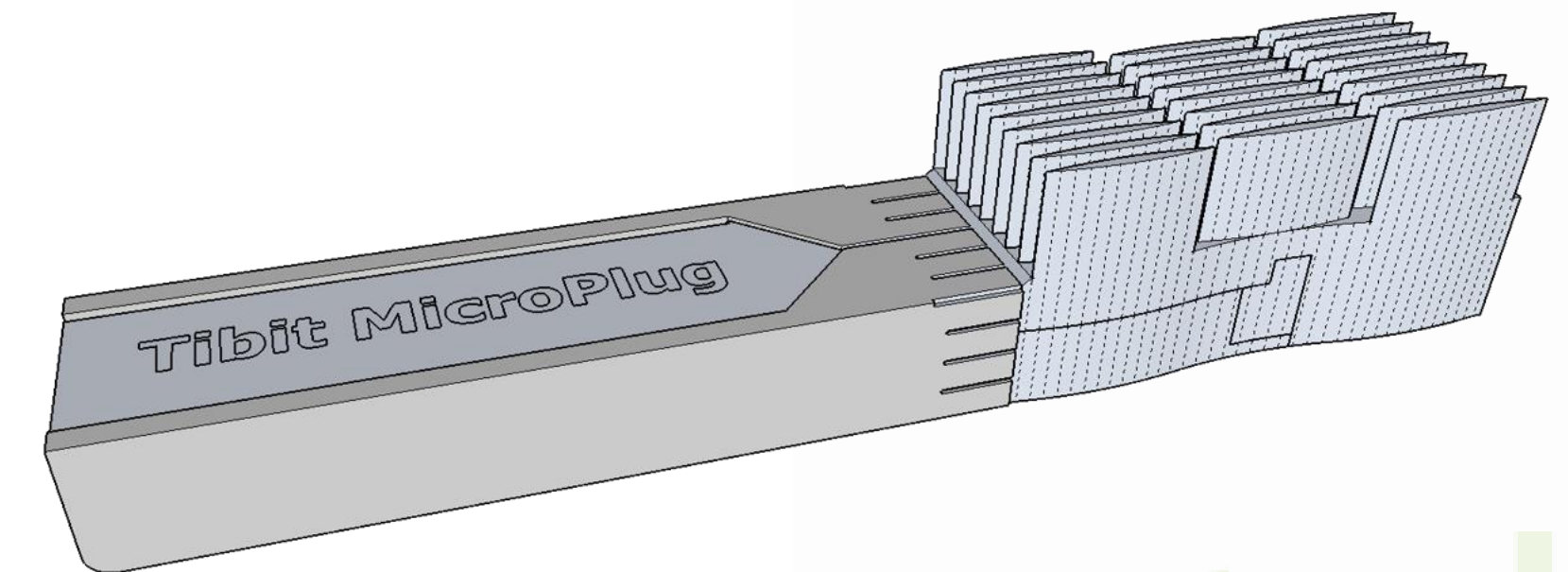
- Operators can use PON from the “best fit” platform
- PON interfaces can originate from a variety of Ethernet interface platform
  - Large Data Center Switches
  - Central Office Hardened Switches
  - Remote Hardened Switches
  - Sample list of OCP compatible switches included in white paper and OCP Web site
- PON can start far away from the data center or central office
  - Minimize the outside plant
  - Consolidated network switching and control
- PON can terminate in a variety of platforms
  - Home Gateways
  - Business Gateways
  - Wireless Base Stations



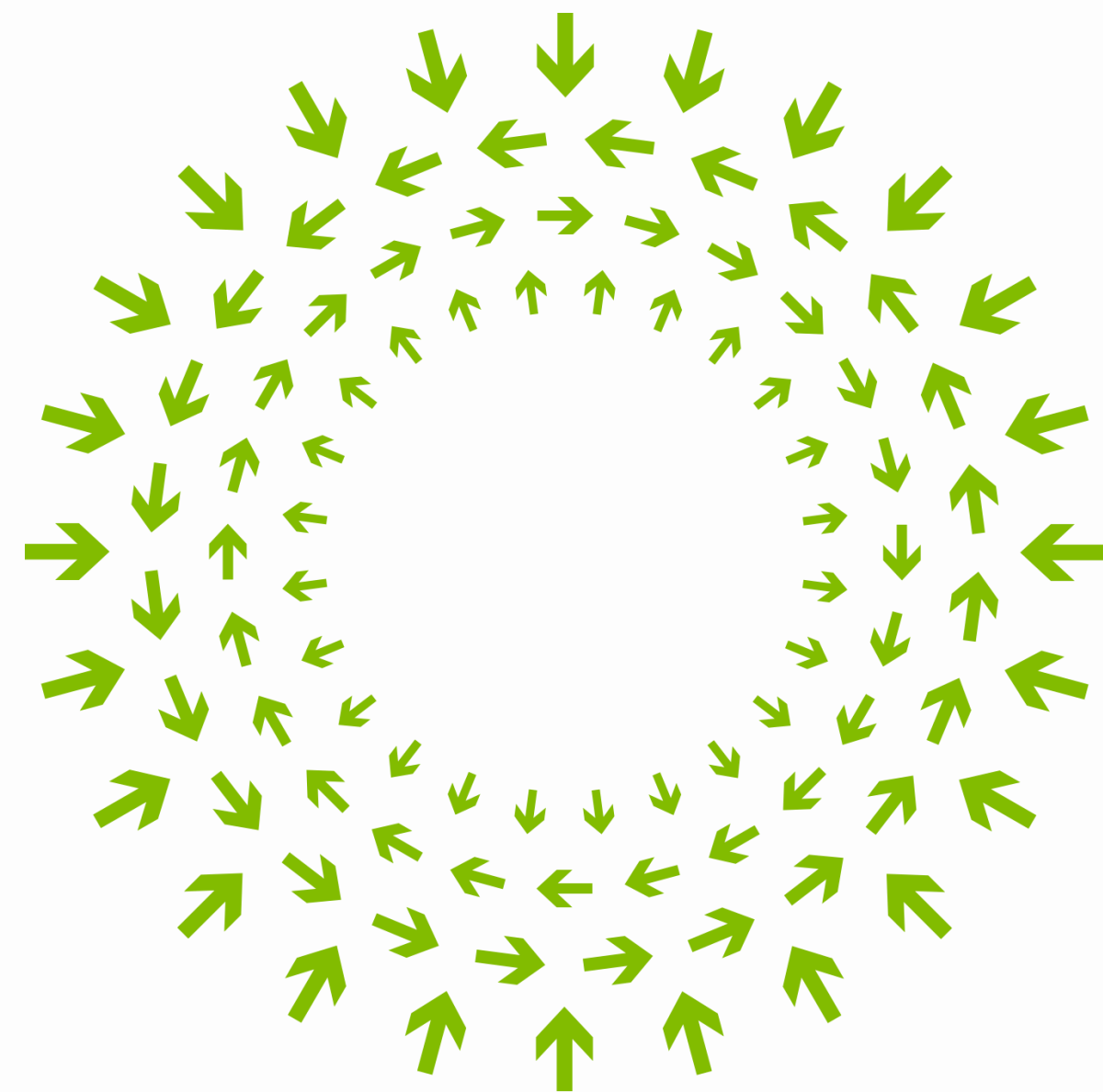


# Summary

- MicroOLTs allow operators to reduce costs by changing from application specific hardware to general purpose hardware (including many Open Compute Platforms)
- MicroOLTs allow for flexible architectures to reduce cost, centralize equipment, reach more subscribers, and easily upgrade to the latest technologies
- MicroOLTs allows for modular interoperability to easily support many vendors and many termination options







# OPEN

Compute Project