# IOWN APN-T 400G Muxponder

Pegatron Corp.

# IOWN APN-T 400G Muxponder
## for Cloud Edge Computing

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5-6 AUGUST, 2025
TAIPEI, TAIWAN

*FROM IDEAS TO IMPACT*
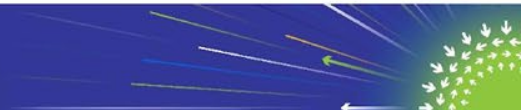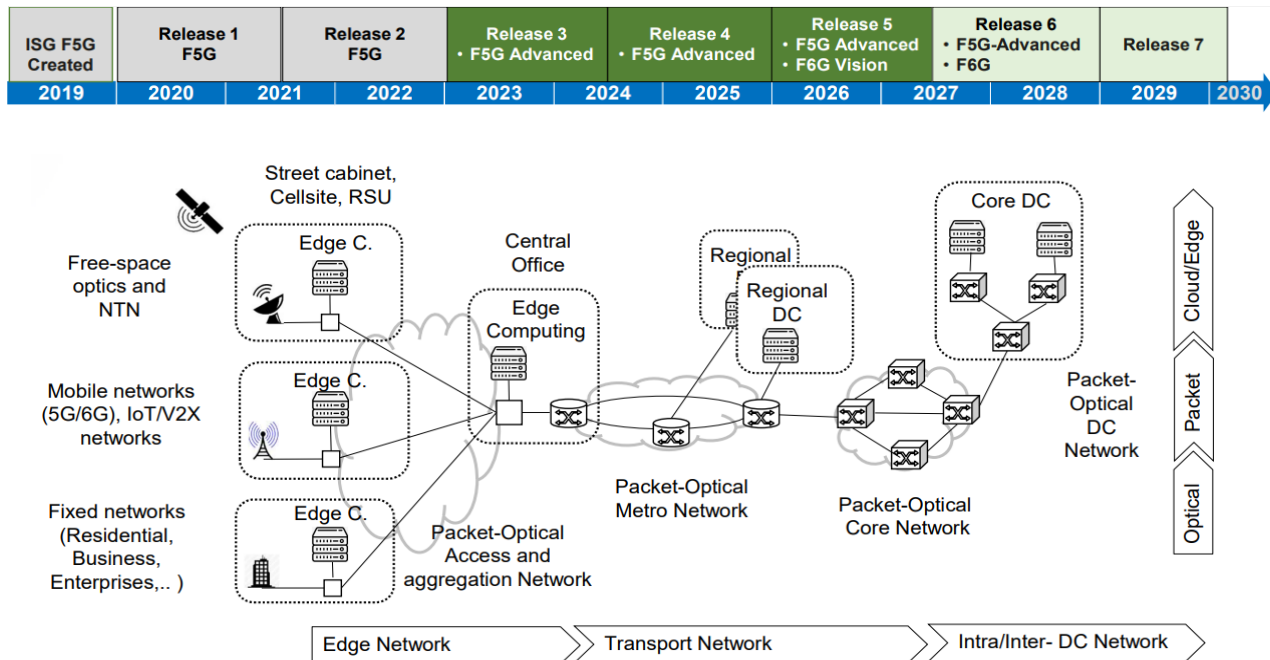
# 2030 Global Optical Network Evolution

- ITU-T 2030 End-To-End Optical Network Spec Release Timing for 6G Network



Courtesy of ETSI

# E2E Optical DWDM Connectivity Toward Metro/ Edge

- AI CSPs with Additional "Inference Data Center" Capacity in Metro Network Closer to Clients
  - Capacity growth for data movement from enterprise data lakes to AI training centers
  - Middle mile upgrades to support AI traffic to interconnect more key enterprise sites optically
  - Growth in private lines with deterministic low latency and a shift to higher capacity solutions



Metro Optical Network Transition
E2E 1ms Latency for DCI & Edge Access
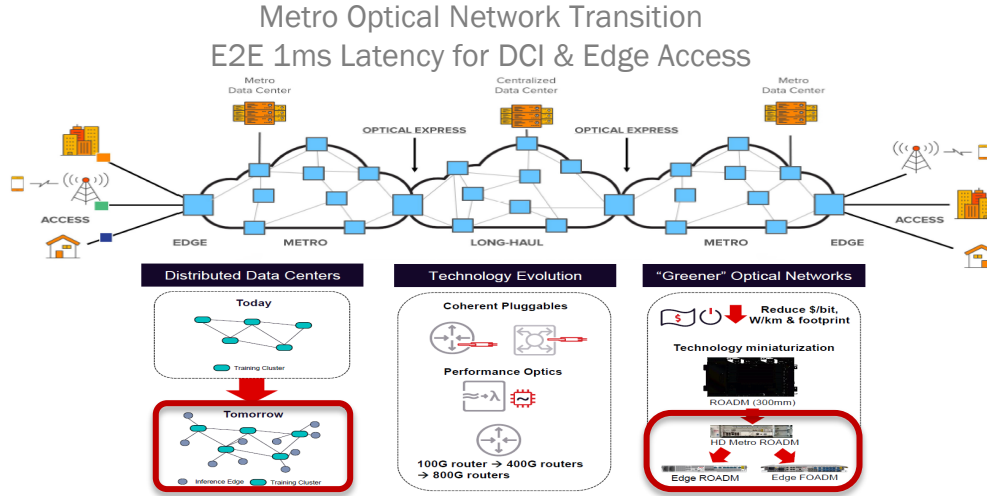
Courtesy of Omdia, Infinera & Ciena
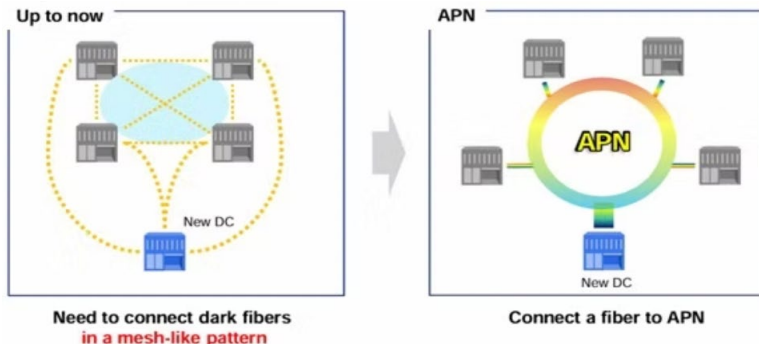
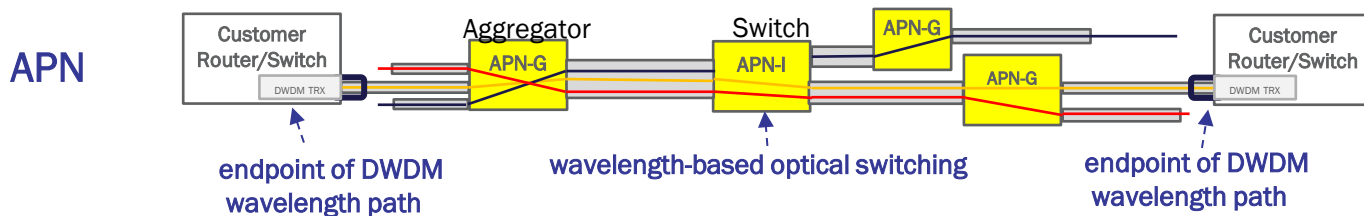# 2030 IOWN Open All-Photonic Network (APN)
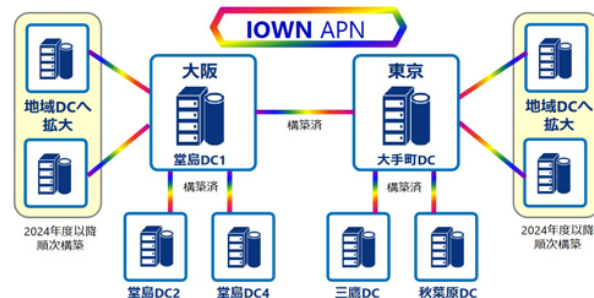
- IOWN APN for F6G Telecom Carrier Network
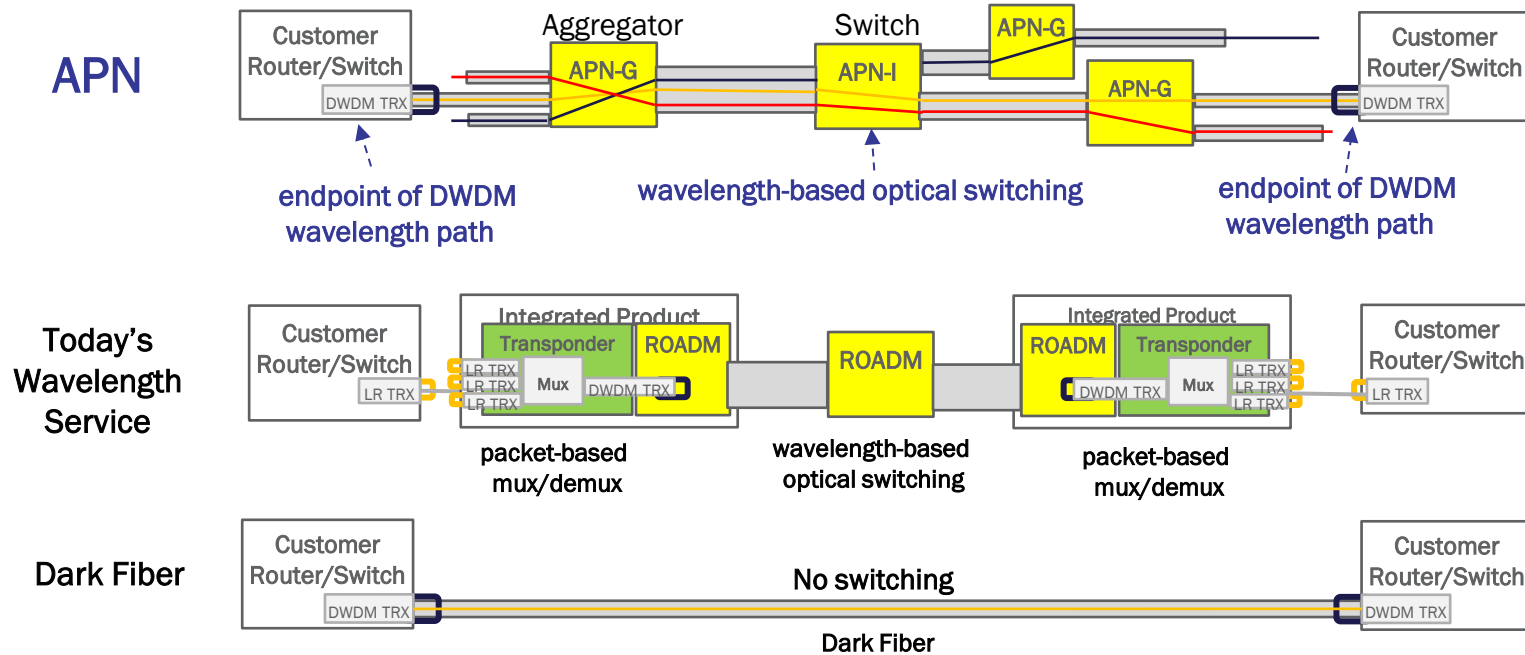


Courtesy of NTT

# 2030 IOWN APN Evolution for DC Interconnection

- AI DCs decentralization using APN for WAN-interconnection
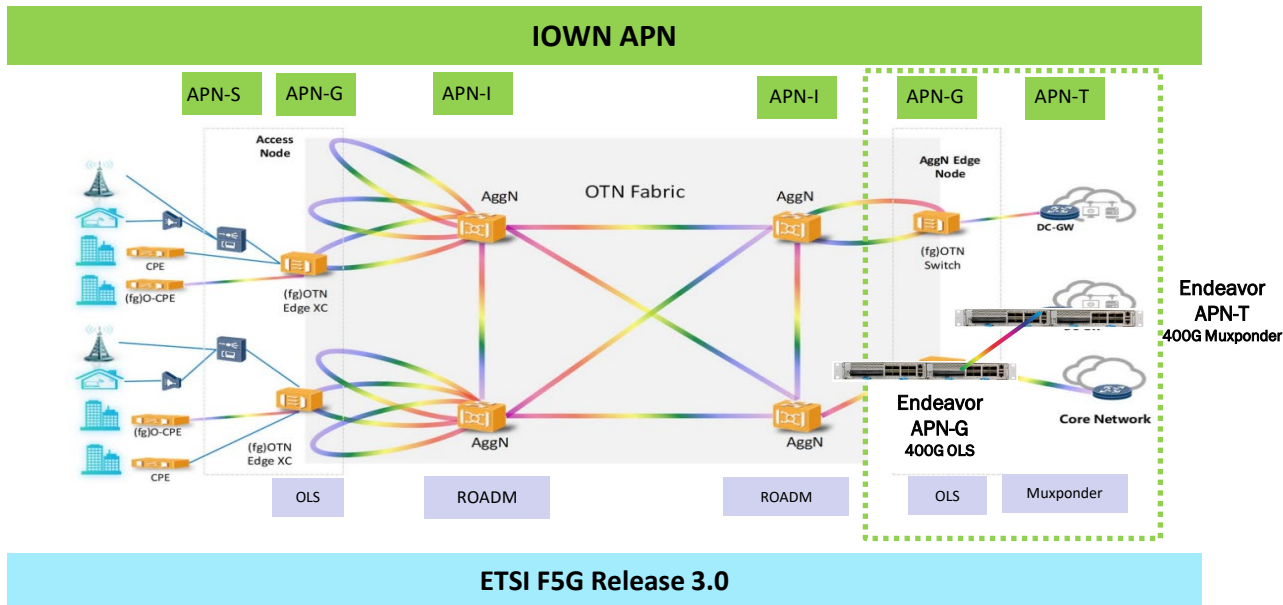  - realizing distributed small- and medium-sized regional center using IOWN APN.



Courtesy of NTT

# 2030 IOWN Evolution Aligned with ETSI

- APN-T, APN-I, APN-G & APN-S Correspondence to ITU F5G Scope
  - ETSI F5G Specification of TS 103.933

# IOWN for DC Interconnection Using APN-T & APN-G

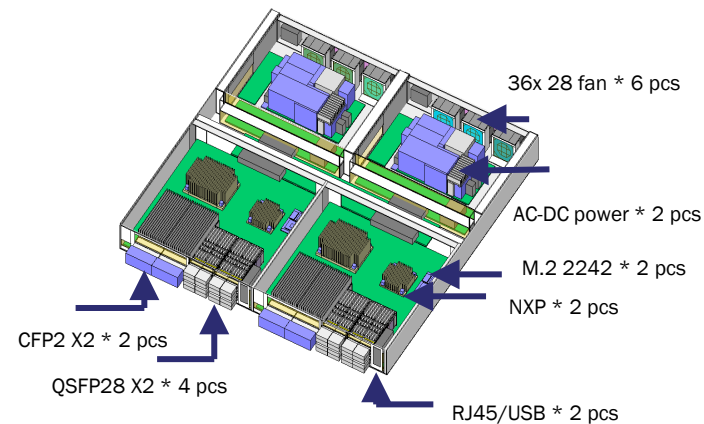- Pegatron Case of for ORAN Edge Data Center Interconnection
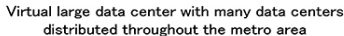
# Pegatron Telecom & DCI 400G Muxponder

- Endeavor, a 1 RU Form factor 400G Optical Muxponder

  Chassis have 2 slots in both front and rear side:
  - Two front access slot to support 1+1 redundancy, as well as various traffic boards
    for different traffic requirements.: 4 x 400G CFP2-DCO + 16 x 100GbE QSFP28 Ports
  - Two rear access slots to support 1+1 redundant hot-swappable PSU-Fan trays,
    each embedded with a three-fan module and one PSU



**ENDEAVOR**
*Open Disaggregated Coherent Platform*
**400G Transponder / Muxponder**

36x 28 fan * 6 pcs

AC-DC power * 2 pcs

M.2 2242 * 2 pcs

NXP * 2 pcs

CFP2 X2 * 2 pcs

QSFP28 X2 * 4 pcs

RJ45/USB * 2 pcs

# Data Center Interconnect Transformation with IOWN APN

- IOWN DCX (Data Center Exchange) Service for Many-to-Many DC Concentration
  - 2025 OFC Demo by NTT, Orange and Telefonica



TIP: Telecom Infra Project
RCA: Remote Control Agent

Courtesy of NTT & NEC

# 2025 OFC IOWN GF Joint Demo
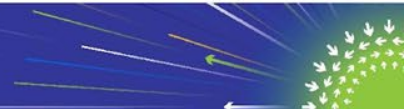


Open ROADM MSA booth
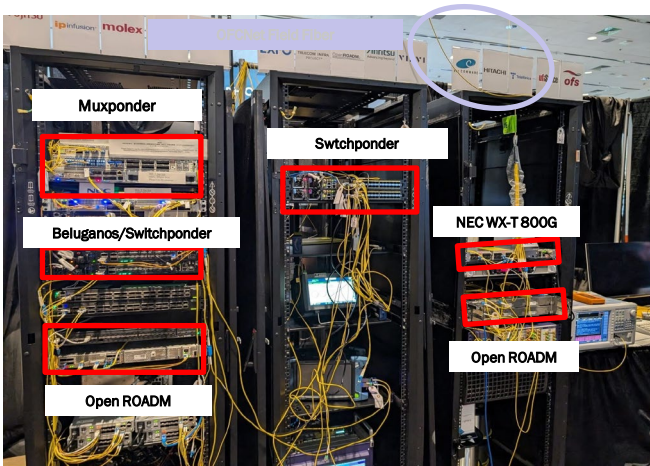




IOWN Networking Hub booth

# A Finalist for Leading Lights Awards 2025 – Innovative Networking

- Light Reading's Leading Lights Awards 2025
    - Cloud-native open optical transponder compliant with TIP standards,
    - Innovative solution is ideal for Datacenter Interconnect (DCI) in rapidly expanding, distributed AI data centers.



Courtesy of NEC

FROM IDEAS TO IMPACT

# Thank You!