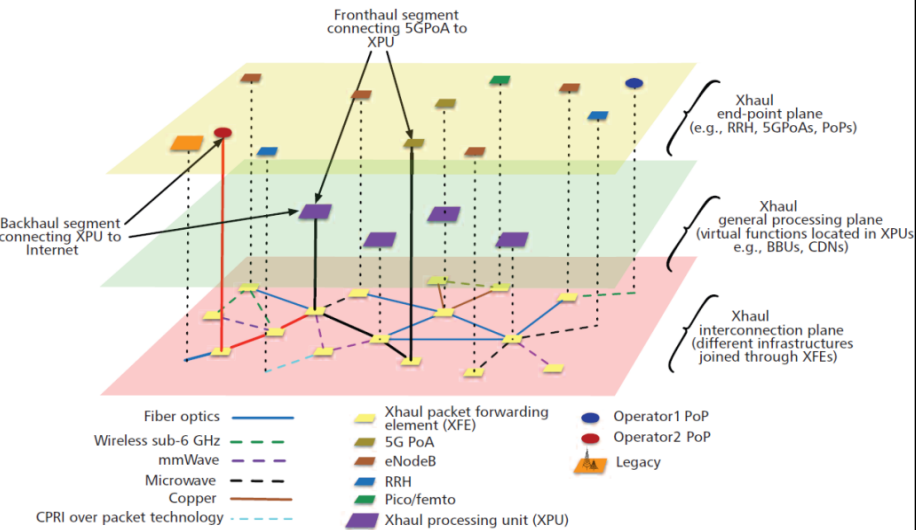


# 5G X Crosshaul

the integrated fronthaul/backhaul

[5G-Crosshaul \[Abstract\]](#)

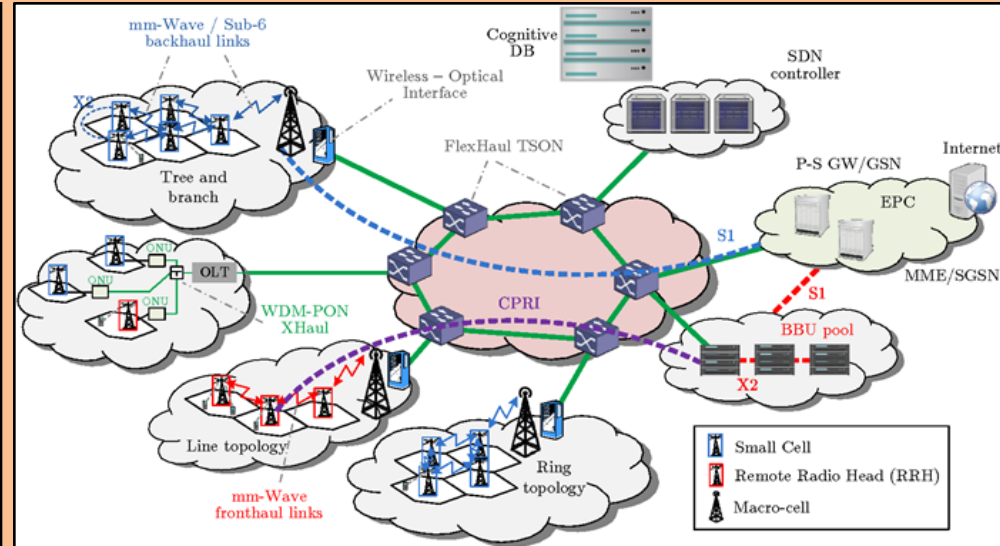
The 5G Integrated Fronthaul/Backhaul Transport Network



# 5G-XHaul

[5G-Xhaul \[Abstract\]](#)

Dynamically Reconfigurable Optical-Wireless Backhaul/Fronthaul with Cognitive Control Plane for Small Cells and Cloud-RANs



## 5G-Crosshaul Focus areas

- Unified control plane for fronthaul/backhaul SDN/NFV-based (XCI)
- Unified data plane for fronthaul/backhaul technologies (XCF, XFE)
- 5G-enabling transm. techs, e.g., mmWave, uWave, optical and copper
- UCs: Dense Urban Society, Multi-Tenancy, Media Distr, MEC, Vehicular
- 5G demonstration testbeds in Berlin, Madrid, Barcelona, Taiwan

## 5G-Crosshaul Consortium

**Operators** – Orange, Telefonica, Telecom Italia

**Vendors** – ATOS, Ericsson, Interdigital, NEC, Nokia

**Broadcaster/ Tech. Provider** – Visiona, Telnet

**SMEs** – Eblink, Nextworks, CND,

**R&D Centers** – Create-net, CTTC, Fraunhofer HHI, ITRI

**Universities** – Univ. Carlos III, Univ. Lund, Pol.Univ. Torino

**PM** – Arturo Azcorra (UC3M)

**TM** – Xavier Costa (NEC)

## 5G-XHaul Focus areas

- Converged Wireless-Optical, Fronthaul-Backhaul Network Architecture
  - Multi-technology wireless and optical programmable data plane
    - Flexible wireless (60 GHz / Sub-6) transport
  - Hybrid WDM optical transport: active/elastic TSON and PON
    - Dense Urban Society (xMBB) use case
    - 5G-XHaul Demonstrator in Bristol BIO

## 5G-Xhaul Consortium

**Operators** – Cosmote, Telefonica

**Vendors** – Adva, Bluwireless, Huawei, IHP

**SMEs** – Airrays, TES Electronic Solutions

**R&D Center** – i2cat

**Universities** – TU Dresden, Univ. Bristol, Univ. Thessaly

**PM** – Eckhard Grass (IHP)

**TM** – Daniel Camps (i2cat)