



**Orange Belgium**

**Creating fair competition in fixed access with a Fiber Open Model**

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## **Fiber is a very long term story...**

**Requires context favorable to investment**

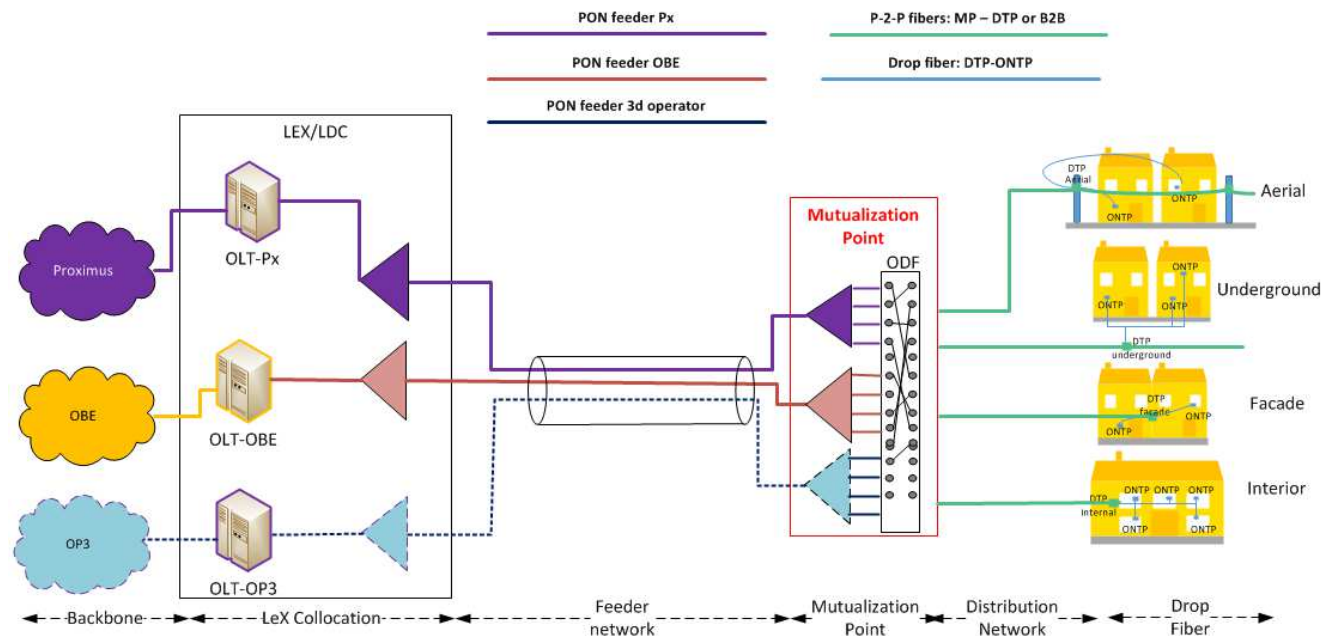
- with possibilities to share between players**
- and a structural possibility for fair and full competition**

**that has to stand over time...**

**=> Should we restrict the Belgian market to ever using all the same active equipments ?**

# Fiber Open Model: a “Flexibility Point” introduction compatible with all services for multiple operator

- Each operator uses its active equipment in LEX/LDC
- Feeder network LEX ↔ MP PON tree should be offered by MP owner (E-2-E PON)
- Unique shared distribution network between MP and DTP for 100% Living Units is deployed « once for all »
- Mutualization Point to connect any OLT to any Living Unit (patch cord between optical feeder and optical distribution after last splitter in FTTH infrastructure)
- MP enhances fiber network capillarity by offering Flexibility Point for current and future services over fiber (B2C, B2B, MBH,...)



## Mutualization Point approach brings many benefits for operators and the market

- **Multi operators architecture**
- **Each operator manages its own active infrastructure & CPE's, among:**
  - OLT
  - End-to-end QoS
  - ONT gateway, TV decoder...
- **Enable real services differentiation: speed, volume, TV channels quality & offer,...**
- **Each operator can deploy future PON standards independently**
- **Simplified installation: unique drop fiber installation, single technician visit**
- **Enables supplementary services: B2B, backhauling offer, bitstream wholesale offer...**
- **OLT flexibility (“activate as you grow”)**
- **Easiest fiber troubleshooting (OTDR @ MP)**

## **Orange Belgium has performed 2 independent FTTH designs on the same areas and based on common assumptions**

### **FTTH design objectives :**

**Compare deployment costs and field 'feasibility' between "Closed Model" and "Model with Mutualisation Point"**

### **Common assumptions :**

- Design realized based on site survey**
- Fix Central Office location and use the same drop configuration for comparison**
- Feeder network uses only underground cables**
- Distribution network uses mix of façade or underground cables**

### **Sources**

- Top tier vendor, that provided quotation for different design options**
- Orange Belgium, using Comsof FiberPlanit Designer**

**Both simulations confirm low relative impact of Mutualization Point on deployment costs to enable Belgium with a more ambitious fiber infrastructure roll-out thanks pro-investment & pro-competition framework**

	<b>Closed scenario</b>	<b>Mutualization Point</b>
Active infrastructure	No differentiation possible	Full independence
Deployment costs		<b>Additional 8 - 16%</b>
Trenching length		Additional 7 - 10%
Façade Cable length	Similar	Similar
Façade Fibers length		Additional ~600%
LeX	Identical	Identical
Extra revenues B2B, Mobile backhauling	Difficult	Easy

BIPT refers to estimation of less than 10% (under certain circumstances & assumptions) in its market consultation in s § 939 (Study on The impact of different fibre access network technologies on cost, competition and welfare, Telecommunications Policy, 36, issue 2, P 96-112)

# Benefits

## Open model Layer 1 architecture is flexible encouraging both investment and competition

- Open to co-investors requiring full control/flexibility by long term assets purchase: PON, OLT, TV backend, ...
- Can accommodate wholesale Bitstream if market demand exists (for entrants not willing to (co-)invest).
- “Point to Point” B2B & Mobile Backhaul (5G...) enabled. ...allowing full flexibility in term of commercial differentiation in B2B & Mobile

## Fiber Open Model allows full commercial differentiation and innovation

- Disruptive broadband offers: no limit on speed & volume whatever offers already on the market
- Flexibility on TV offers: TV bouquet composition, signal quality, fast zapping, nPVR, # of multi HD streams...

## Fiber Open Model allows full independent control over Operational & Technical aspects (SLA, quality)...

- Optimal installation/repair experience: single installers, quick repair, flexible capacity mgt, re-use internal coax cabling...
- Efficient troubleshooting: no ping-pong, full visibility on passive/active network/tools/operations...
- Own Intensive user management rules and no imposed aggregated traffic limitations, proper volume measure
- Full control over the E2E QoS allowing service differentiation including backhaul & aggregation
- Optimize the re-use of Fixed legacy ordering/provisioning IT channel & enable real time tools
- (Re-)use own selected CPEs (ONT/Gateway, STB/CAS/DRM) with own testing criteria's and full control over supply chain

## Fiber Open Model offers a predictable long term costs for each stakeholder.

- Costs defined in the long run, independent on retail market evolution,
- Transparence in activation/installation/repair costs with no unverifiable situation to be (pre-)identified
- No side/hidden costs: repair, no show, reasonable requests, accessories...