ITUWebinars

Joint ITU-T SG15, ETSI ISG F5G, CCSA TC6 and BBF Workshop on:

Fibre-to-The-Room (FTTR)

14 June 2021
14:00 – 18:00 CEST

https://itu.int/go/FTTR

Co-organized by:

broadband forum   CCSA   ETSI   ITU

FTTR : Fiber To The Room
Fiber inside the customer premises
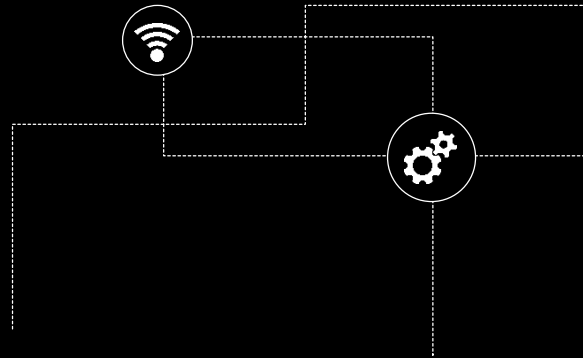
Philippe Chanclou, Olivier Bouffant

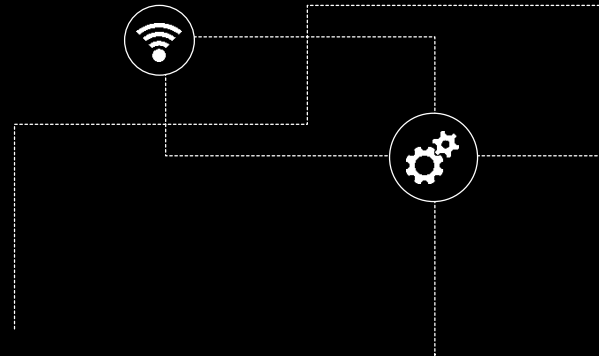Orange Innovations

orange™
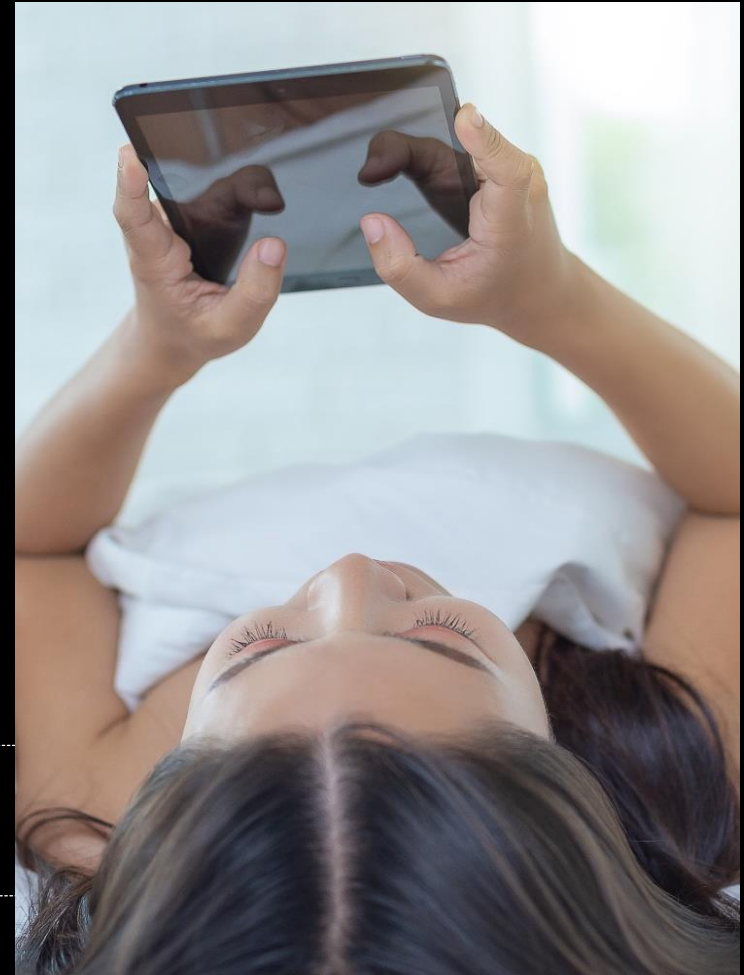
Our Home Connectivity Purpose

« Build the **multiservice hub** of today and tomorrow, to support each Orange countries to become Reference Operators of connected home and office »
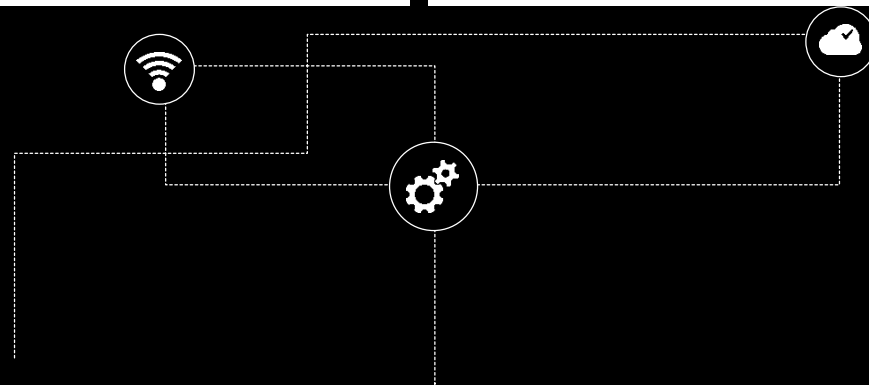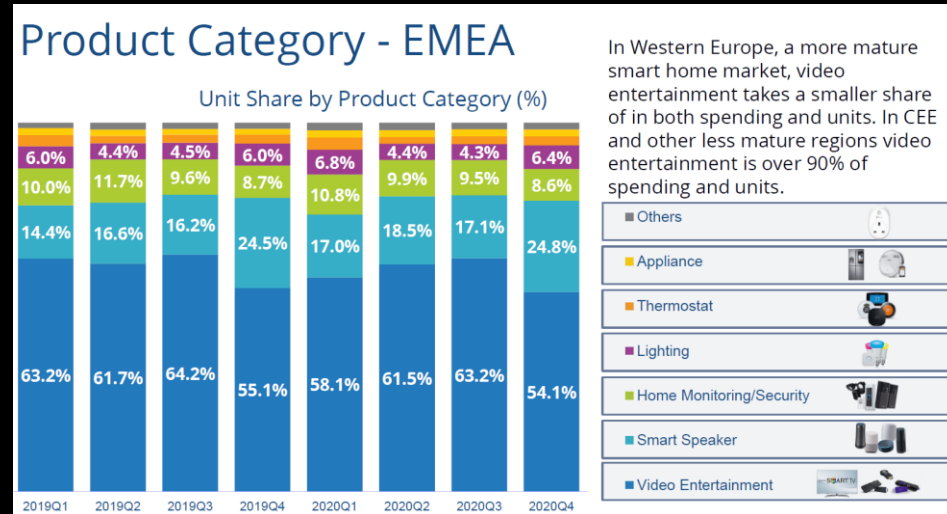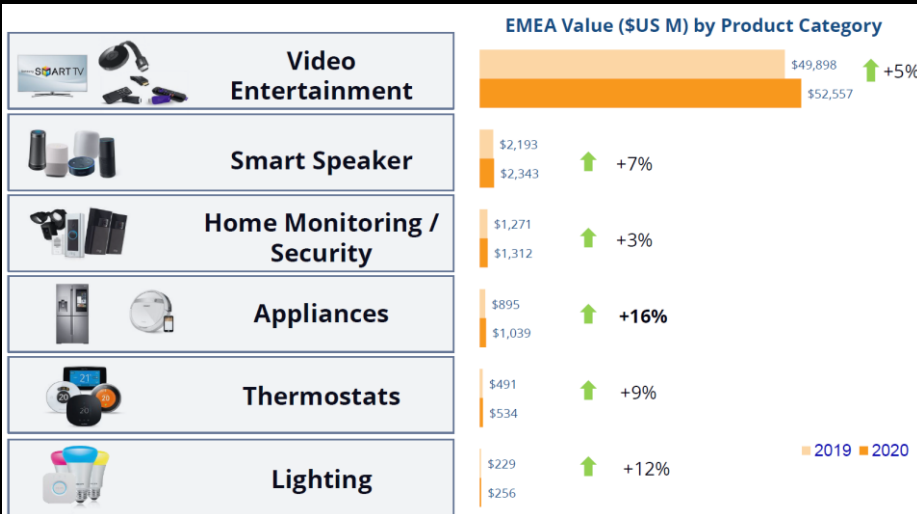
Our ambitions

1. Guarantee **Best In Class solution** to create a **connected services enabler**

2. Strengthen loyalty and Orange brand through an outstanding **User digital experience**

3. Boost Homelan **data collection** to reinforce technical **efficiency**
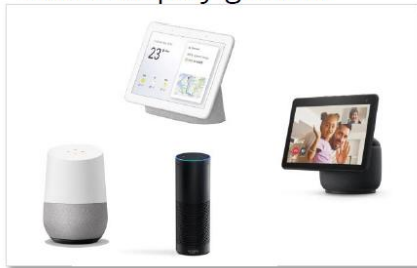
Smart Home Devices EMEA

EMEA Value ($US M) by Product Category

Product Category	2019	2020	Change
Video Entertainment	$49,898	$52,557	+5%
Smart Speaker	$2,193	$2,343	+7%
Home Monitoring / Security	$1,271	$1,312	+3%
Appliances	$895	$1,039	**+16%**
Thermostats	$491	$534	+9%
Lighting	$229	$256	+12%

2019 2020

Product Category - EMEA

Unit Share by Product Category (%)

	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4
Others	6.0%	4.4%	4.5%	6.0%	6.8%	4.4%	4.3%	6.4%
	10.0%	11.7%	9.6%	8.7%	10.8%	9.9%	9.5%	8.6%
	14.4%	16.6%	16.2%	24.5%	17.0%	18.5%	17.1%	24.8%
Video Entertainment	63.2%	61.7%	64.2%	55.1%	58.1%	61.5%	63.2%	54.1%

Legend:
- Others
- Appliance
- Thermostat
- Lighting
- Home Monitoring/Security
- Smart Speaker
- Video Entertainment

In Western Europe, a more mature smart home market, video entertainment takes a smaller share of in both spending and units. In CEE and other less mature regions video entertainment is over 90% of spending and units.

Source: IDC, Worldwide Quarterly Smart Home Device Tracker, March 2021
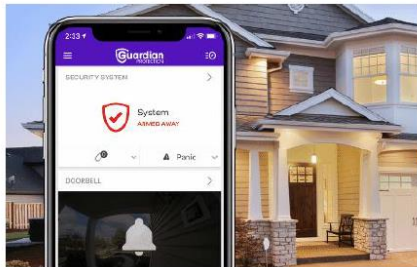
Six trends for Smart Home in 2021

Smart display growth

Connectivity improvements

Online commerce as dominant channel
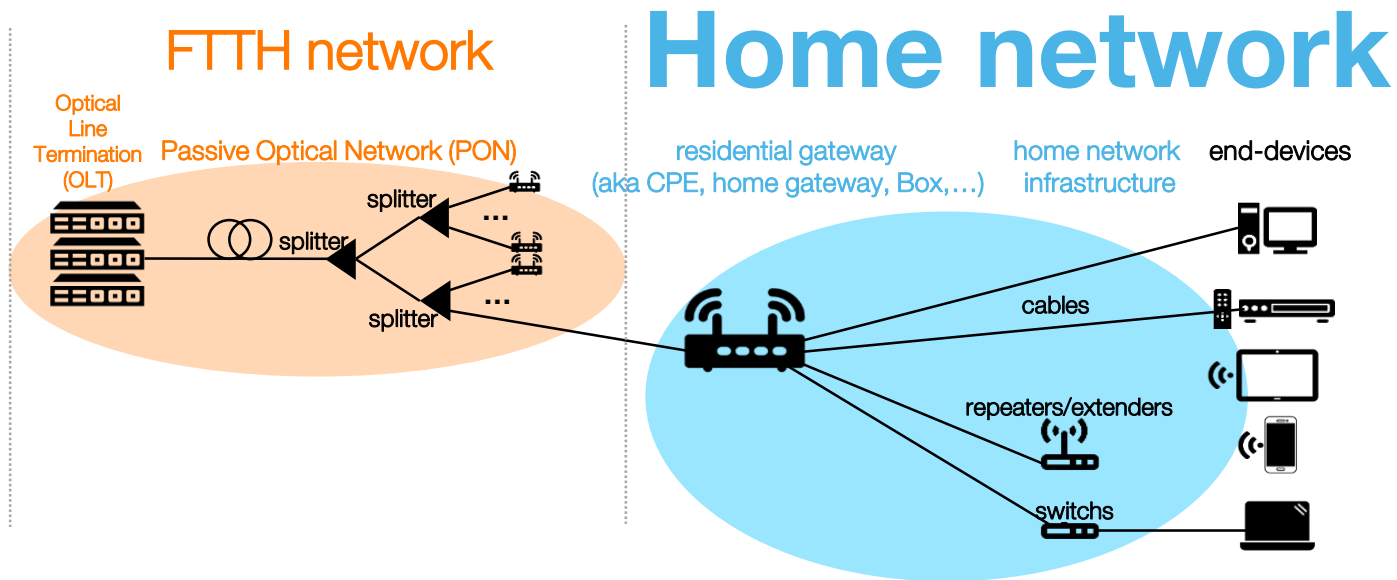
Home security growth to mirror US

Smart lighting growth, with smart effects

More integration, smarter operation with predictive analytics

Source: IDC, Worldwide Quarterly Smart Home Device Tracker, March 2021

What role does the smart home have in telco strategy 1/2

FTTH network

Home network

Optical Line Termination (OLT)

Passive Optical Network (PON)

splitter

splitter

splitter

residential gateway (aka CPE, home gateway, Box,…)

home network infrastructure

end-devices

cables

repeaters/extenders

switchs

Access network and **Smart Home** is a unified business segment :

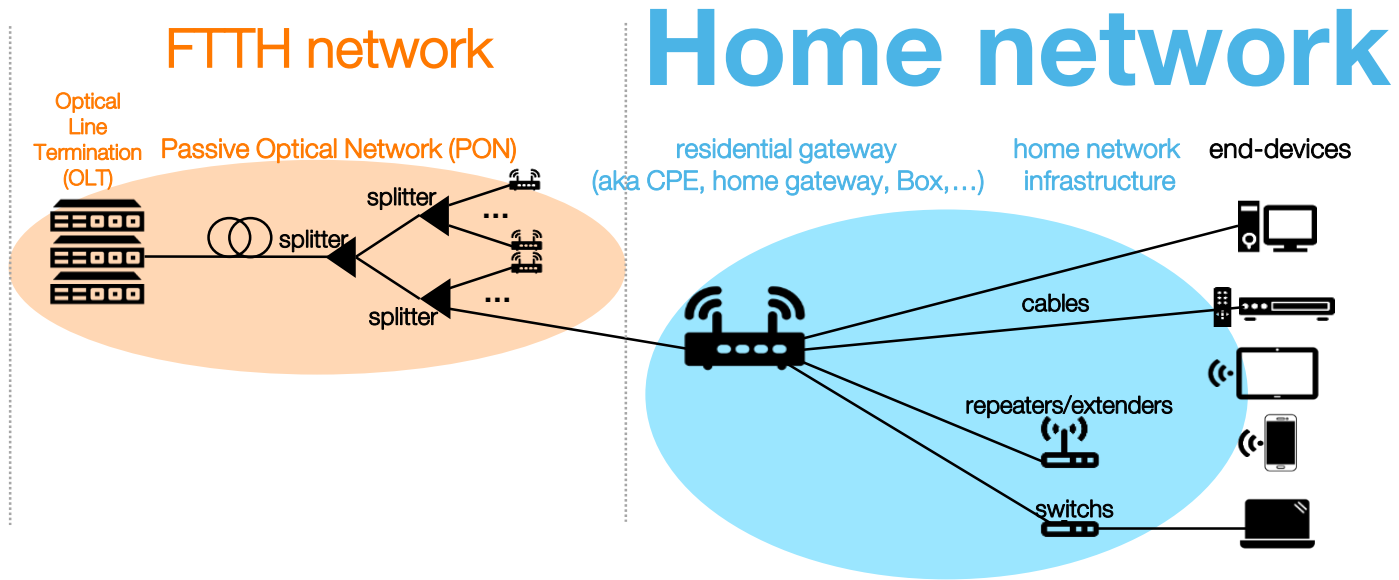- commercial offers include the bundle "Box and access technology"

Customer experience :

- for migration ADSL to G-PON : customer are keen on the change of medium (Copper to Fiber)

- for migration G-PON to XGS-PON : user experience are strongly linked to Home LAN performances (Wi-Fi, other…)

What role does the **smart home** have in telco strategy 2/2

FTTH network

Optical Line Termination (OLT)

Passive Optical Network (PON)

splitter

splitter

splitter

...

...

Home network

residential gateway (aka CPE, home gateway, Box,…)

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Connectivity is essential, but undervalued and commoditized

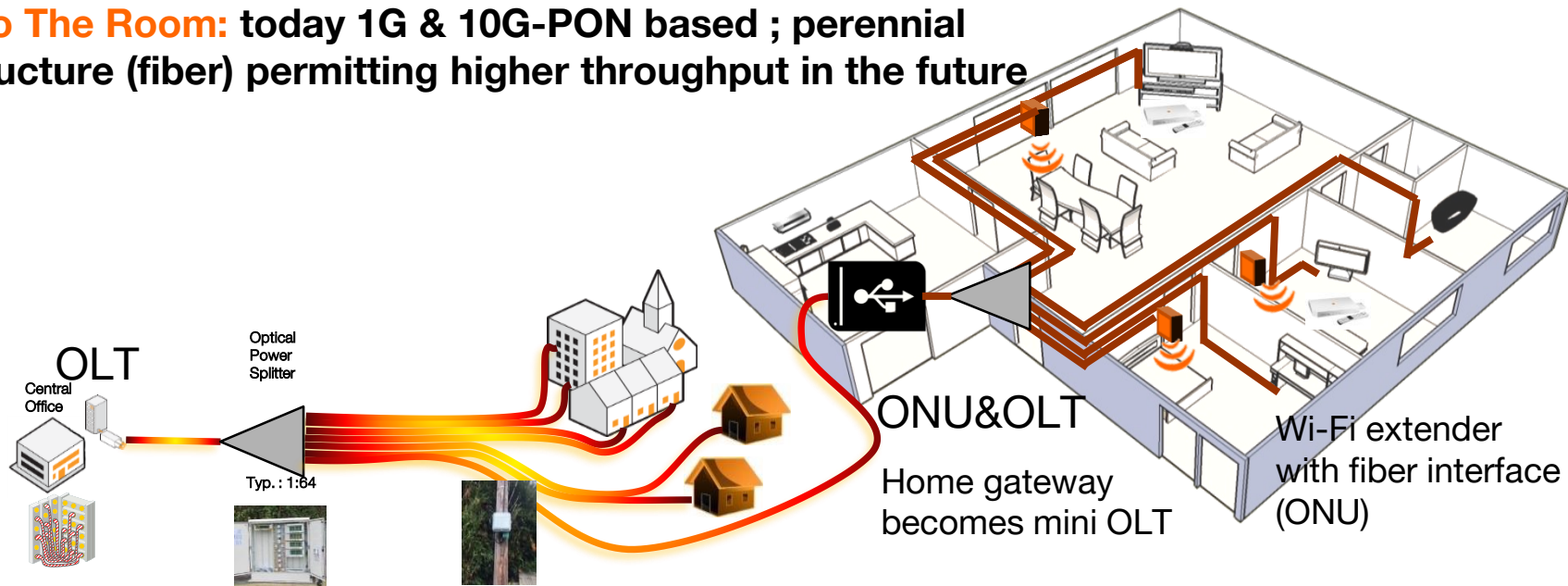Telcos need to make themselves a part of customers digital lives, **provide value**

Best in class fiber access includes **best in class Home LAN**
Gateway / Wi-Fi extender / Device Management & Data

Fiber for smart Home: FTTRoom

- **Deeper fiber to connect everything at Home: Fiber to the Room**

- **A cost effective, Home network infrastructure associating optical fiber and radio for a wireless end connectivity to the very high bit rate services everywhere in the home**

- **Skills opportunity: A pool technicians (network operation) with the FTTH skills in time for FTTRoom**

- **Fiber To The Room: today 1G & 10G-PON based ; perennial infrastructure (fiber) permitting higher throughput in the future**

OLT

Central Office

Optical Power Splitter

Typ. : 1:64

ONU&OLT

Home gateway becomes mini OLT

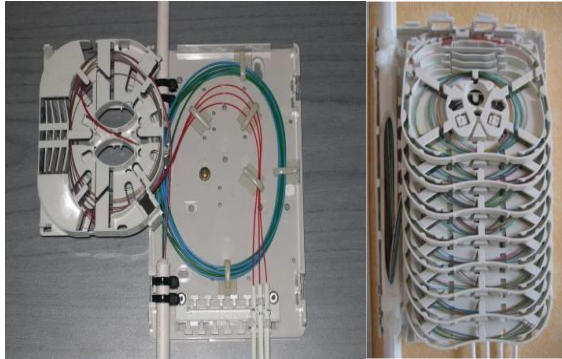Wi-Fi extender with fiber interface (ONU)

Building and in-home optical cabling

- Solutions to reduce the implementation time and improve the acceptance of the wiring by the customers
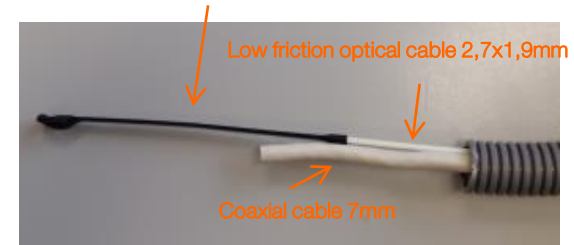

Standard cable   Easy mid-span cable

Easy mid-span access riser cables used in the common parts of the building

Optical cable connectorized to an outlet with a cable unroller

Flexible flat head (patented by Orange) to pass corners and avoid the twist of the optical cable around the existing cable

Low friction optical cable 2,7x1,9mm

Coaxial cable 7mm

Small low friction cables for installation by 1 technician into conduits (free or already occupied by a cable)

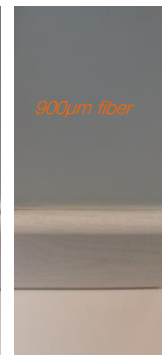*Optical ENTI with a design optimized for installation in a home distributor*

RJ 45 COPPER OUTLET
PRISE CUIVRE RJ45

COPPER OPTICAL OUTLET
REUSING THE EXISTING FACEPLATE
PRISE OPTIQUE CUIVRE

COPPER OPTICAL OUTLET
PRISE OPTIQUE CUIVRE

Mixed copper & optical outlet to replace an existing copper outlet

Standard cable 3 mm

900µm fiber

Plug & Play kit with 30m of invisible fiber for in-home wiring
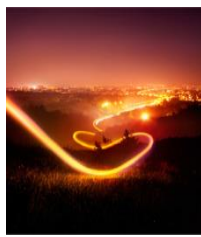
Building and in-home optical cabling

Apparent installation on the wall

Refusal from some customers because of aesthetic reasons

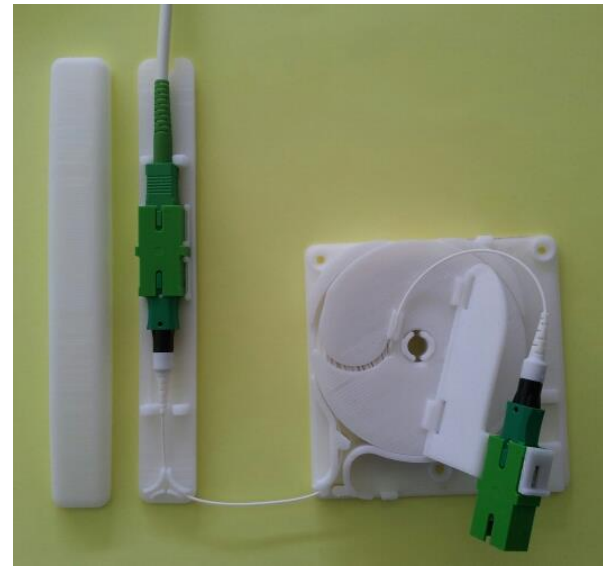➔ **New solution for a more aesthetic cabling**

- **900µm cable connectorized at both sides**
- **Optical outlet with a wiring system to manage the overlength of cable**
- **Accessories to ensure a minimum bending radius in the corners and accessories to pass through the walls**
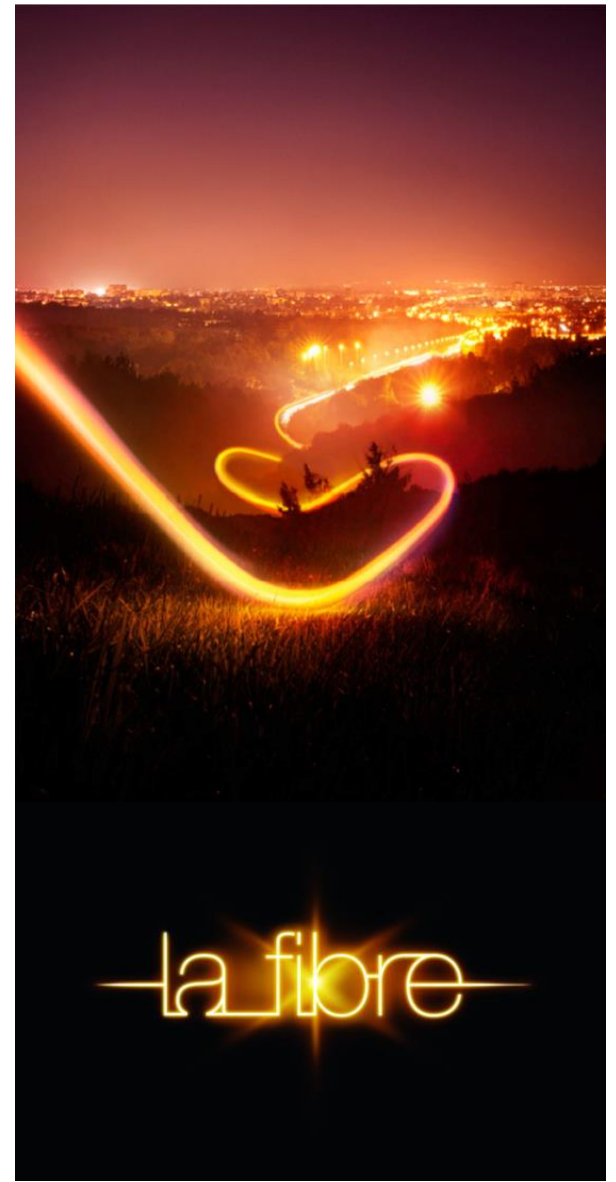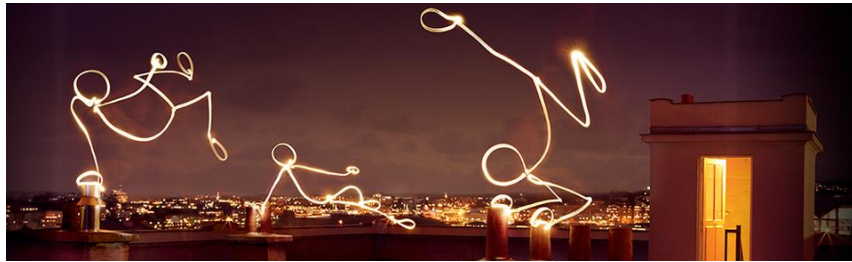

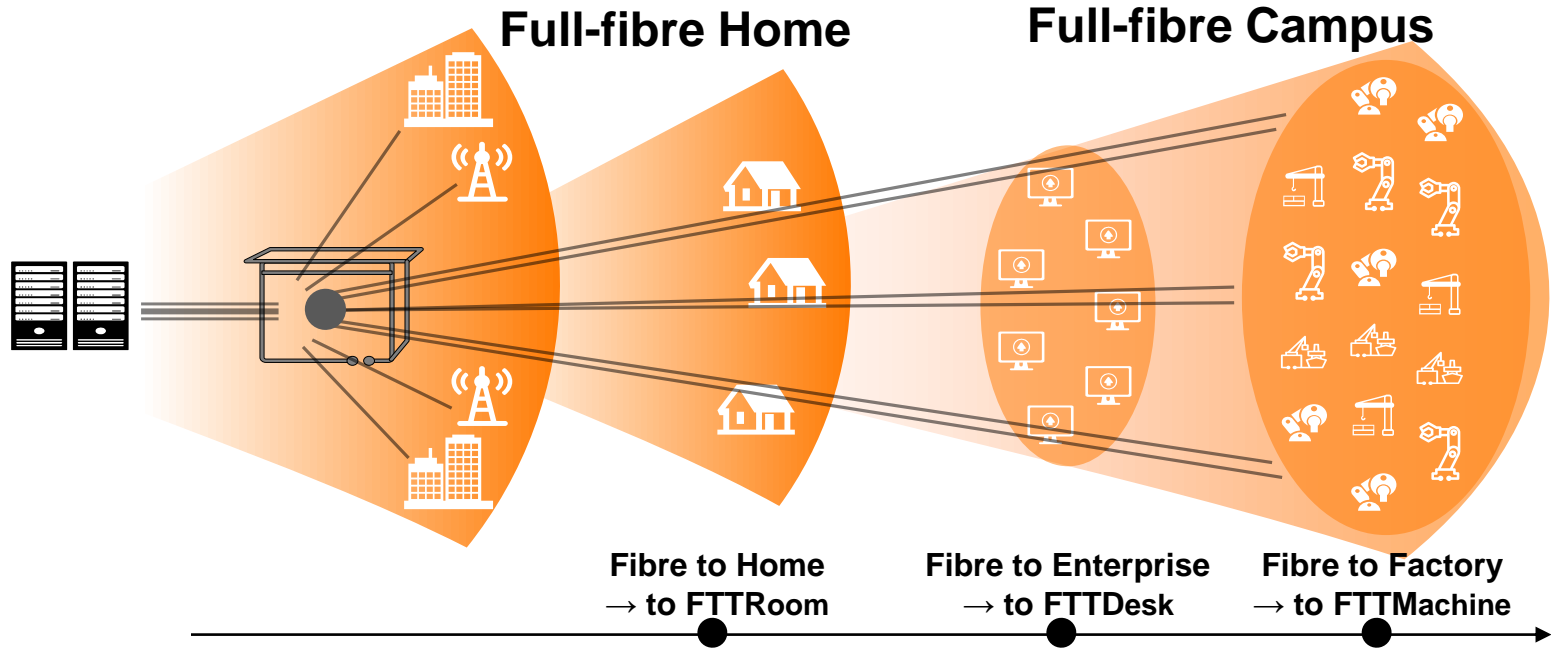**Standard cable**   **900µm cable**

Conclusion

4 key points

1 Be and remain the « fiber » operator

2 Best in class fiber access & Home LAN

3 Push perennial infrastructure to boost performances

4 Keep control of the Home LAN Wi-Fi performances

Thank You.

Fibre to Everywhere for an Unlimited Future

Full-fibre Home

Full-fibre Campus

Fibre to Home
→ to FTTRoom

Fibre to Enterprise
→ to FTTDesk

Fibre to Factory
→ to FTTMachine

Fiber to Everywhere to make fixed access future proof
- ➤ **Extending to more end-user :** Home, Room, Business, Mobile, Device, Machine, etc.
- ➤ **Reducing everywhere the fibre-to-end user distance:** Km → 100m → 10m → 1m
- ➤ **Number of connections expanding:** X3 (Room), X10 (Desk), X30 (Machine), X100 (Smart city)

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