CANTO 34th Annual General Meeting

Prysmian Group

Jan Schindler

3rd- 5th February 2018
Trinidad

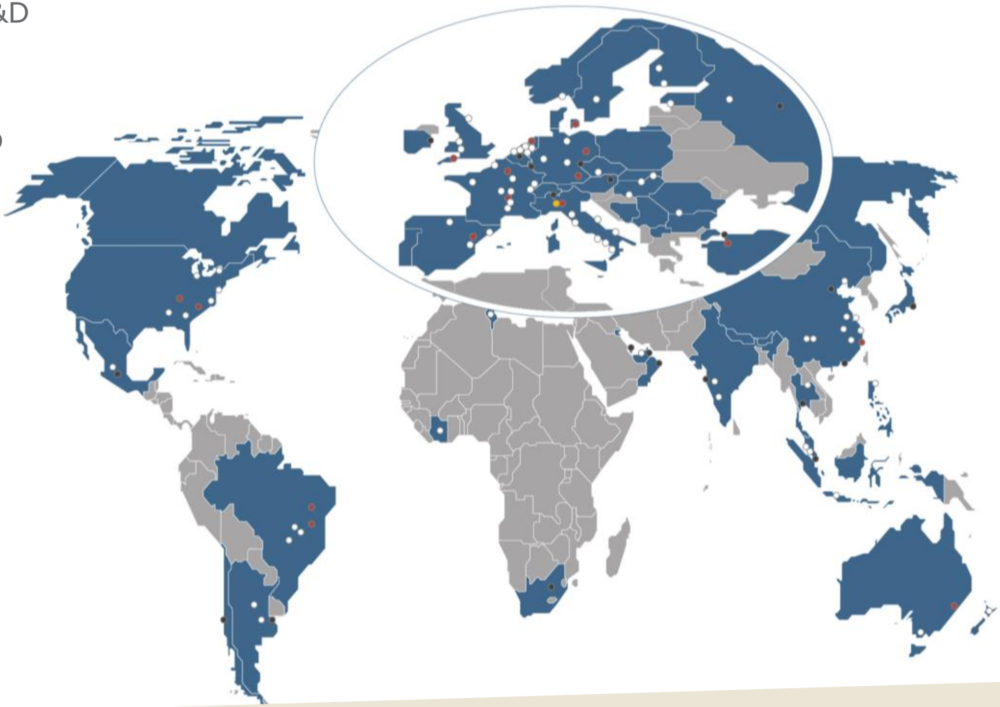
Global trends in the Telecom market

Who we are

February 2018

Prysmian Snapshot

- HQ + HQ R&D
- Plant
- Plant + R&D
- Office



140 years of history

50 countries

82 plants

17 R&D centres

21,000 employees

7,6 billion sales in 2016

Telecom Business

FIBRE

A wide range of **optical fibres** designed and made to cater to the broadest possible spectrum of customer applications, including single-mode, multimode and specialty fibres.

The Group also has at its disposal every currently available **technology** for the manufacture of optical fibre, allowing it to achieve optimal solutions for different applications.

TELECOM SOLUTIONS

Solutions and connectivity products used for telecommunication networks.

Wide range of STANDARD **optical cables (from 1 to 1,700 fibres)** or designed for challenging environments.
Passive **connectivity** solutions
to ensure efficient management of optical fibre within networks.
Copper cables for underground and overhead cabling solutions.

MULTIMEDIA SOLUTIONS

Cablecommunication needs in **infrastructure, industry and transport**, for a diverse range of applications: cables for solutions serving television and film studios, cables for rail networks, light-signalling cables and cables for track switching devices, as well as cables for mobile telecommunications antennae and for communication networks.

Global trends in the Telecom market

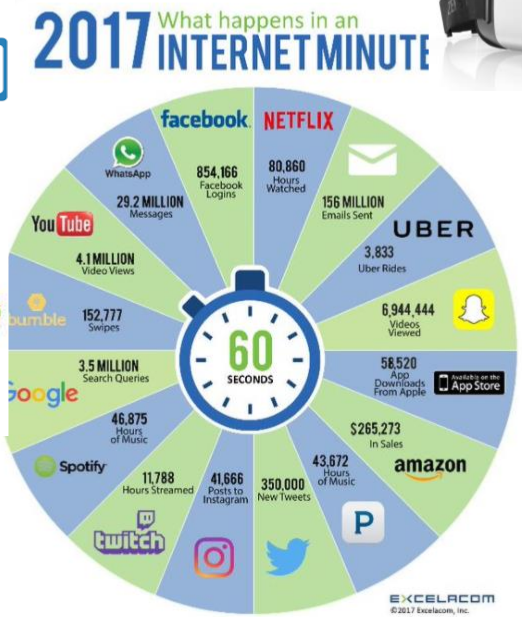
Prysmian Group

Digital Service Revolution is under way

Connected people *(WW population of 7,4bln): from 9bln up to 10,5bln in 2021*

Connected machines *(IoT will surpass mobile phones as largest category in 2018): from 4,6bln up to 15,7bln in 2021*

Video streaming *vs broadcasting (killer application for bandwidth): crossover in 2015*



Hyper connectivity
(connected anytime-anywhere-any-device)

Increase of ***new services and apps*** *(Virtual Reality, connected/driverless cars, etc.) that will require more bandwidth and lower latency*

New video technologies *like 4k UHD and future 8K that requires more bandwidth (25Mbps)*

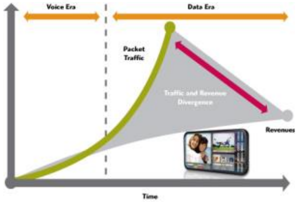
Increase of ***screen devices per home****: from 6,5 up to 20 in 2020*

Digitalization of our life

Change of habits *of personal and business communication (social media, apps, digitalization of everything): BB creates dependence*

Millennials & Generation Z *to drive demand for more fibre as a direct result of their lifestyles and spending trends (multitasking – multiscreen)*

Cloud of Things *"we're moving to the point where we will have a parallel digital world that mirrors the analogue world" (world of avatars)*



Voice is dead: ***Long life to the Data****. Towards a totally asynchronous communication*

Smart Cities

Smart homes

Smart factories

(Industry 4.0)

Digitalization of our life*: towards the Digital Society, Network Society, Gigabit Society*

Hungriness for data*: data traffic will grow 10 folds till 2021*

Global Telecom Trends

- Fiber closer to users
- Compact Solutions
- Optimization duct space

FTTX coverage
Deep fiber

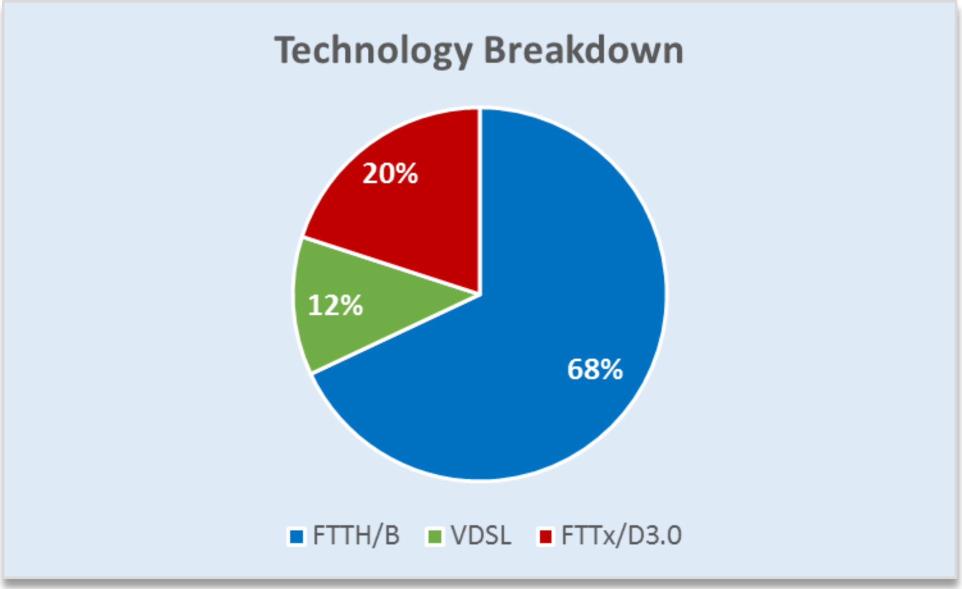
- Hybrid Solutions

Mobile
4G to 5G
Fiber
densification

DataCenter
Cloud Computing

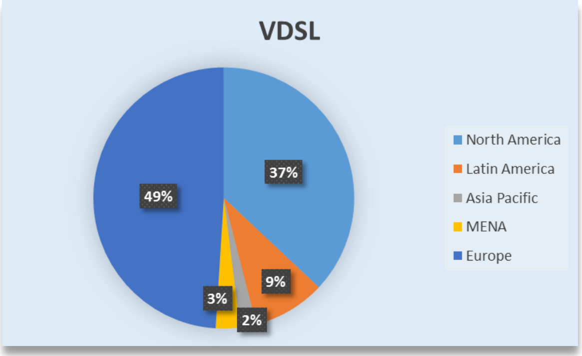
- Hyperscale DC
- Proximity Dc

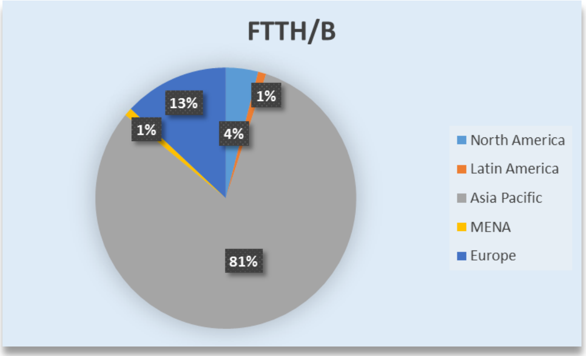
Breakdown of Broadband technologies

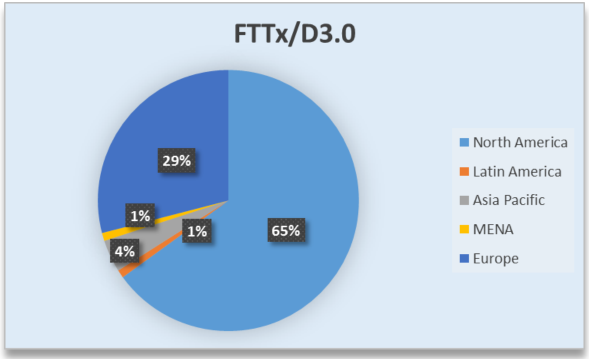


- **585.9 million** FTTx subscribers Worldwide June 2017
- FTTH/B is the leading broadband solution, far ahead of FTTx/D3.0,followed by VDSL
- FTTH/B represented 68% of FTTx subscriptions.
- FTTx/D3.0 represented 20% of FTTx subscriptions
- VDSL lags behind (12%) but growth continues

Breakdown of Broadband technologies



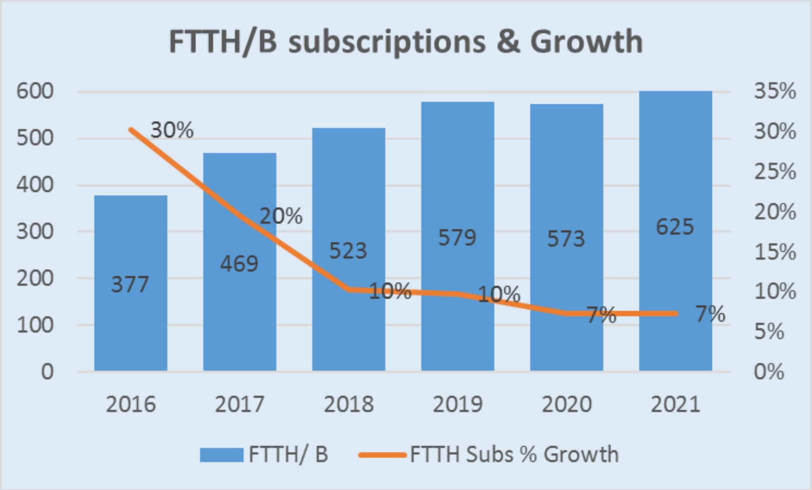


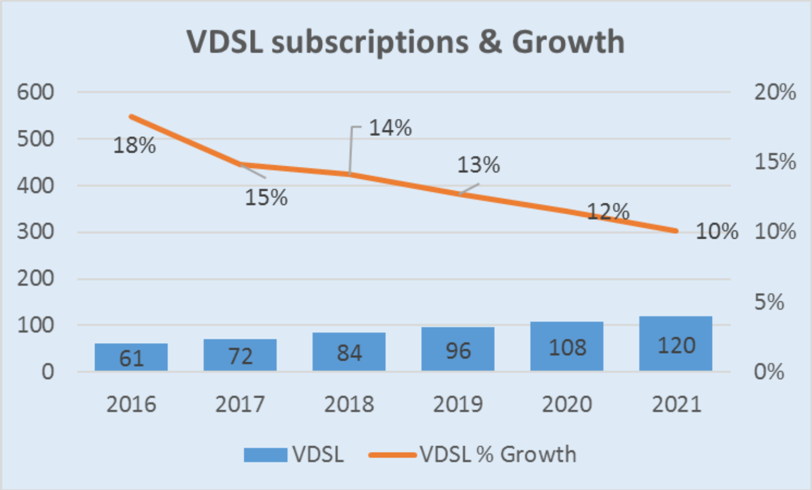


Regional differences

- APAC: predominance of FTTH/B.
- FTTH/B is also the most widely deployed technology in MENA and LATAM but competition from VDSL technologies is growing in the region (especially Brazil).
- FTTx/D3.0 is still dominant in North America and is by and large growing more rapidly than other technologies.
- There is considerable room for VDSL(and other copper based technologies such as G.Fast) to grow in Europe where incumbents are still working to optimize their copper networks.

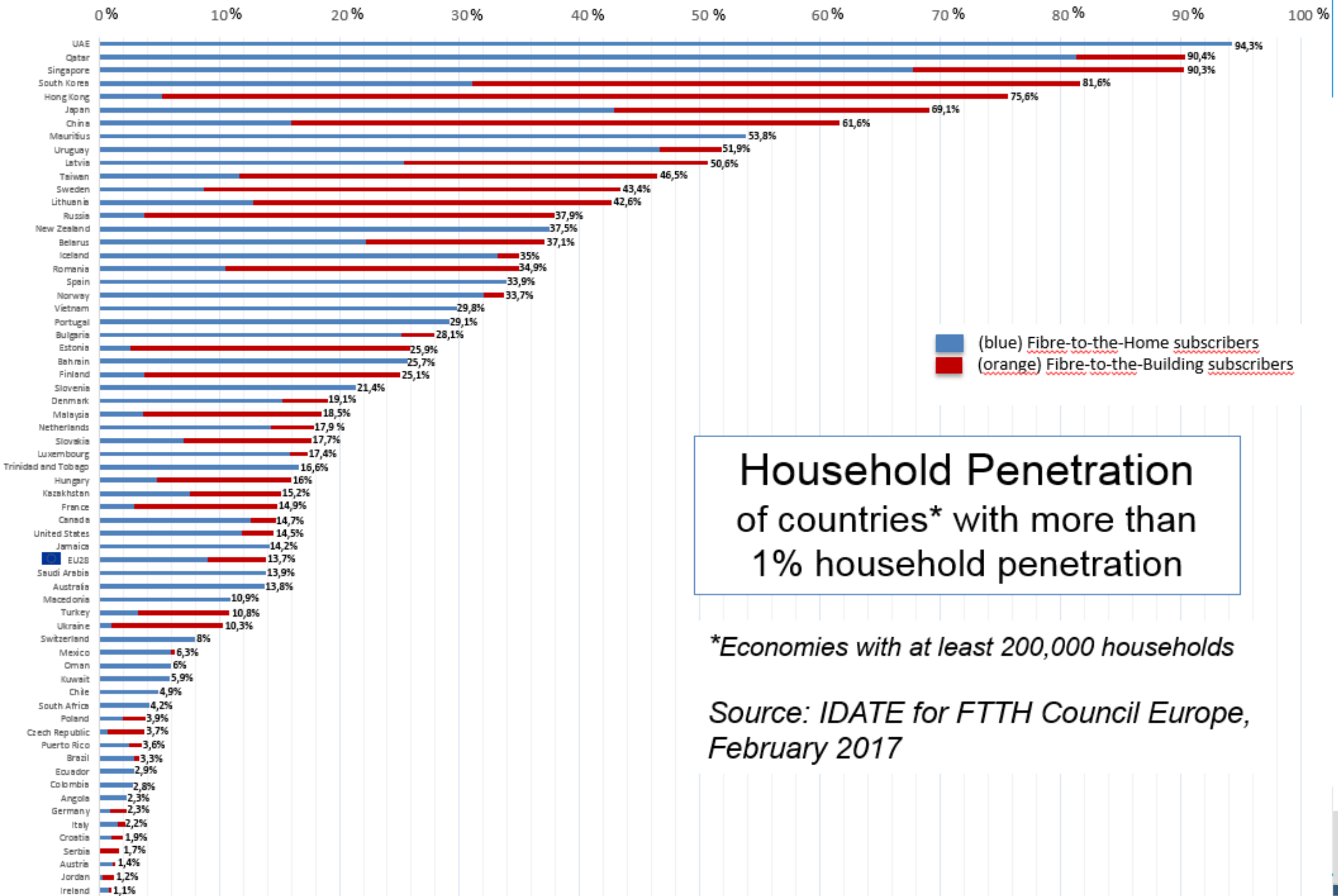
Breakdown of Broadband technologies





➢Growth of FTTH/B subscriptions will continue until 2021, albeit not at the same pace year on year, and will naturally decrease as the markets mature.

FTTH/B Global Ranking – Sep 2017

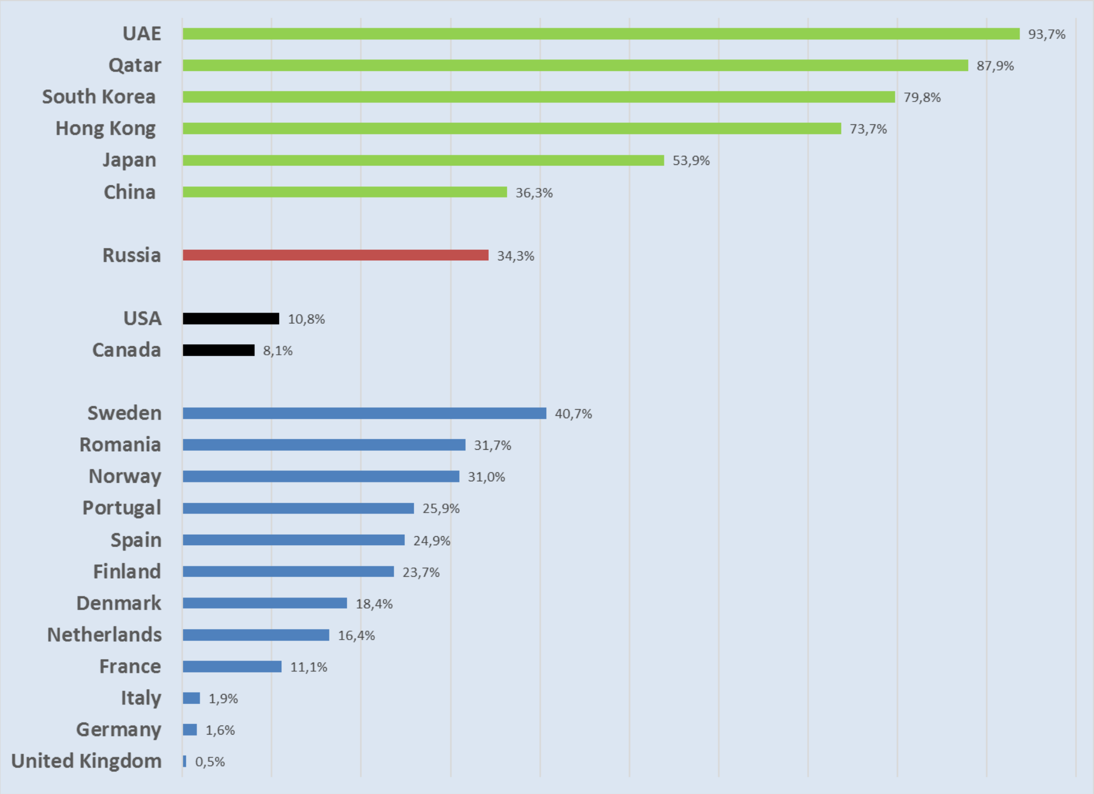


Household Penetration
of countries* with more than 1% household penetration

**Economies with at least 200,000 households*

Source: IDATE for FTTH Council Europe, February 2017

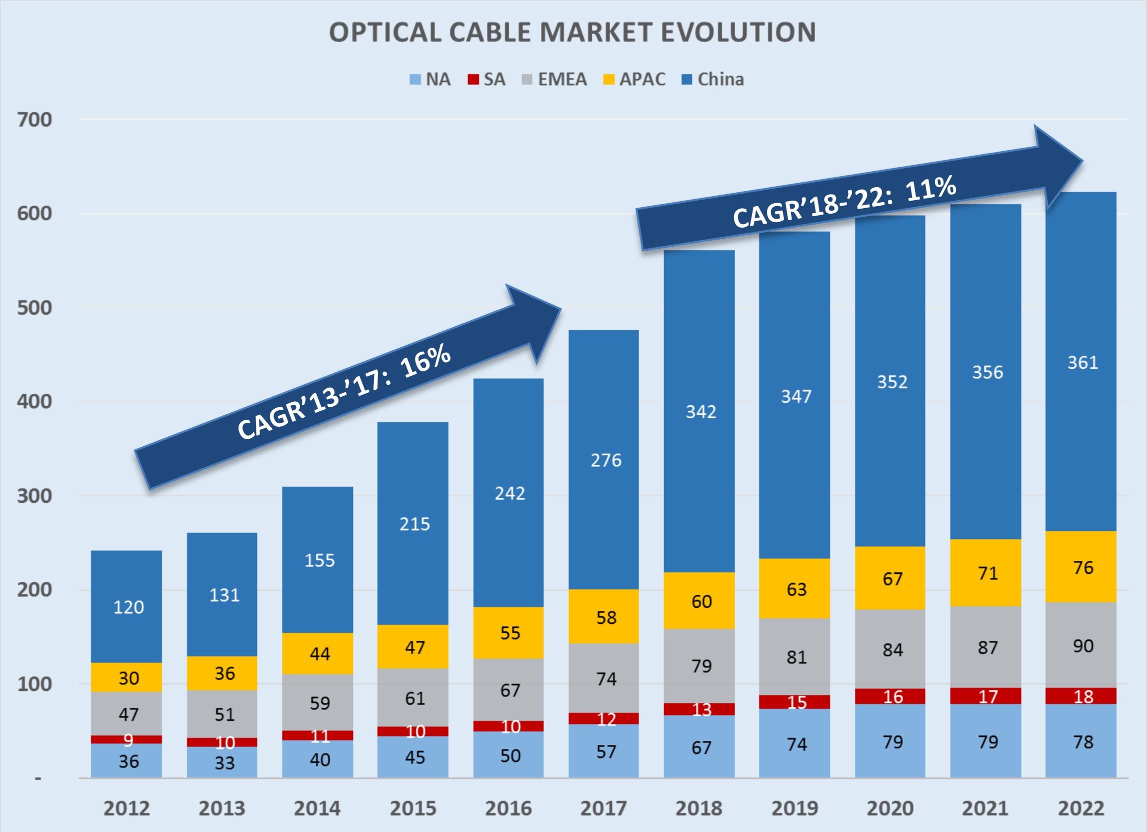
FTTH/ B Penetration by country



Fiber will be essential for 5G as it is desirable for backhauling of small cells.
Therefore, those countries where FTTH is quite advanced will be in a better position to deploy 5G.

Source: *Idate for FTTH Council Europe, December 2016*

Optical Cable market Evolution



Source: CRU International December 2017

Compound annual growth rate '18-'22

EMEA	4% (10%)
NA	4% (15%)
SA	7% (4%)
APAC	6% (12%)
China	1% (20%)

- Global optical cable deployment has reached 561 million in 2018 (11% y-o-y)
- 58 % global demand from China

Conclusions

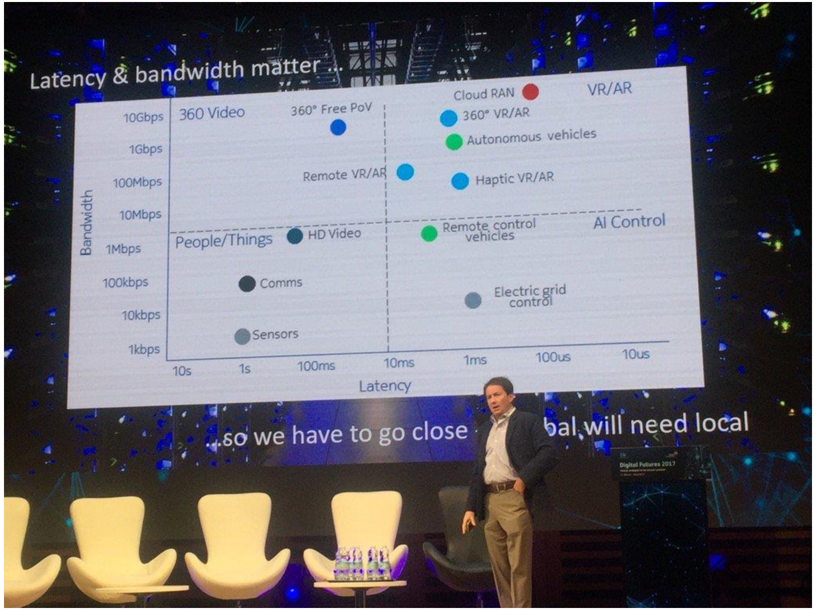
1 Network transformation

2 CAPEX

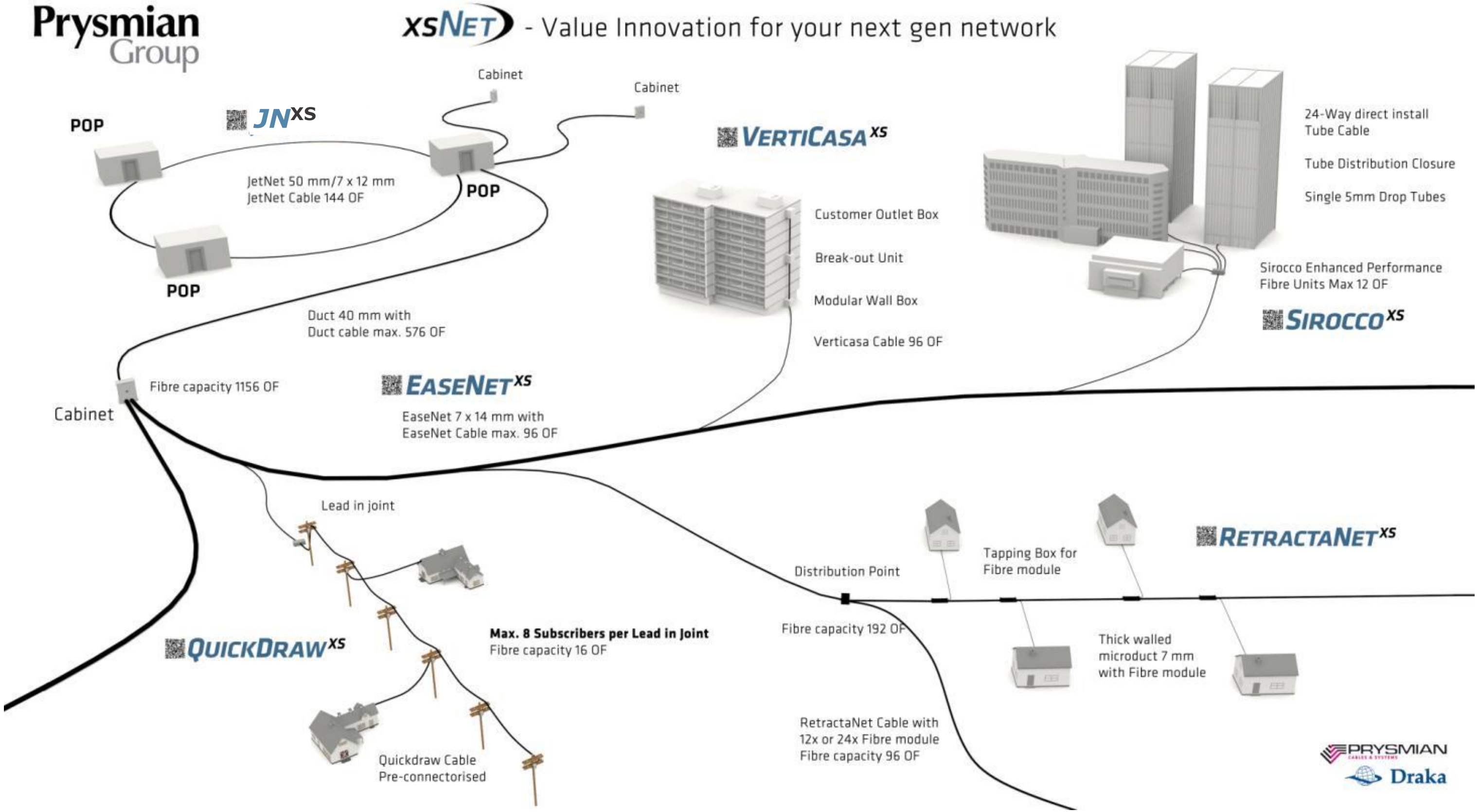
3 Digital Agenda 2025

4 Fiber/Cable manufacturers: TCO

5 Digital Revolution



Solutions



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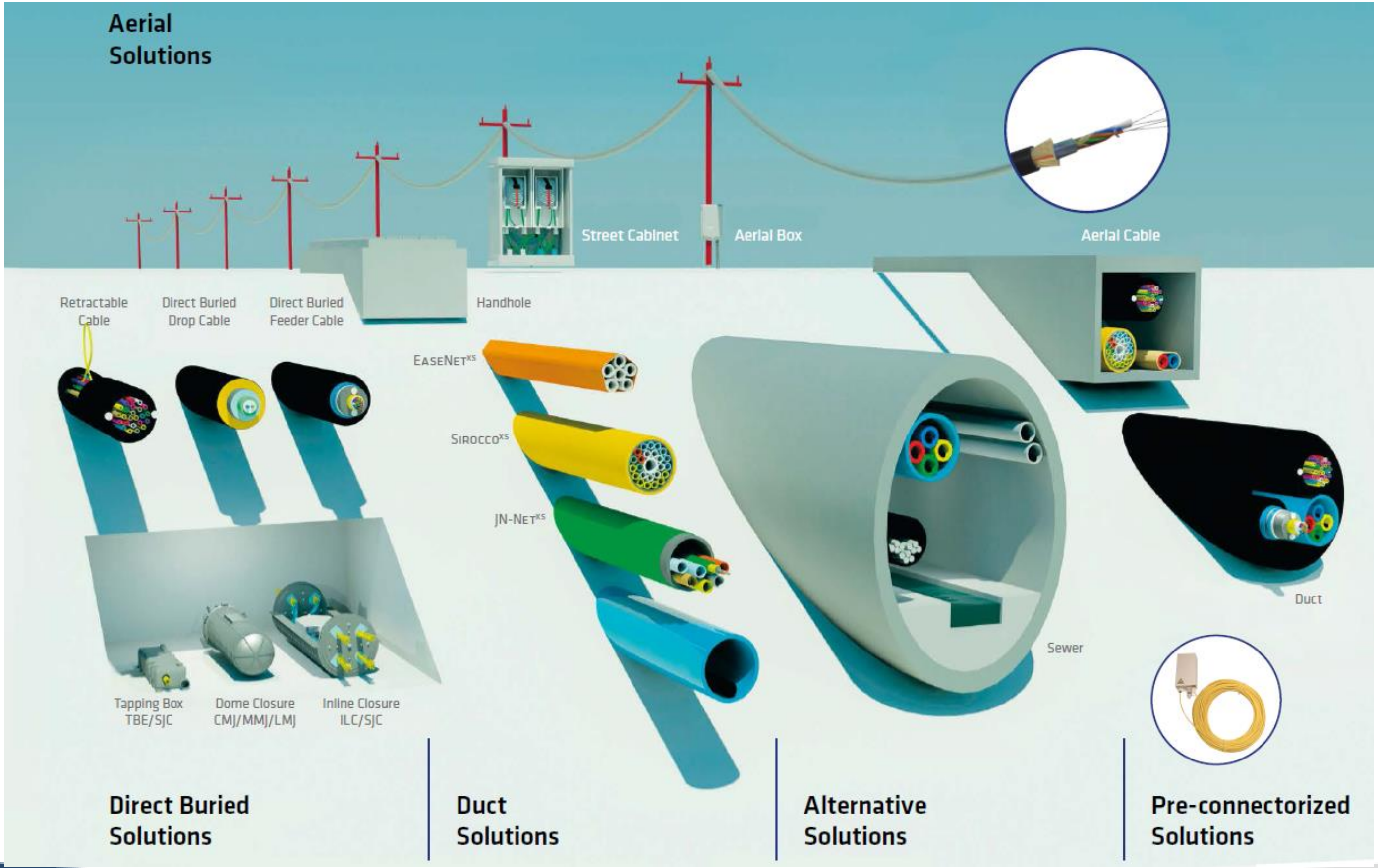
xsNET - Value Innovation for your next gen network
Cabinet
Cabinet
POP
JNXS
JetNet 50 mm/7 x 12 mm
JetNet Cable 144 OF
POP
POP
Duct 40 mm with
Duct cable max. 576 OF
Cabinet
Fibre capacity 1156 OF
EASENETXS
EaseNet 7 x 14 mm with
EaseNet Cable max. 96 OF
VERTICASAXS
Customer Outlet Box
Break-out Unit
Modular Wall Box
Verticasa Cable 96 OF
24-Way direct install
Tube Cable
Tube Distribution Closure
Single 5mm Drop Tubes
Sirocco Enhanced Performance
Fibre Units Max 12 OF
SIROCCOXS
Lead in joint
QUICKDRAWXS
Max. 8 Subscribers per Lead in Joint
Fibre capacity 16 OF
Quickdraw Cable
Pre-connectorised
Distribution Point
Fibre capacity 192 OF
Tapping Box for
Fibre module
RETRACTANETXS
Thick walled
microduct 7 mm
with Fibre module
RetractaNet Cable with
12x or 24x Fibre module
Fibre capacity 96 OF
PRYSMIAN
Draka

Complete Solution Portfolio



Thank You!

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