

FTTH Forum 15. Mai im Trafo Baden

Marktsituation von Glasfaser-Breitband in Europa

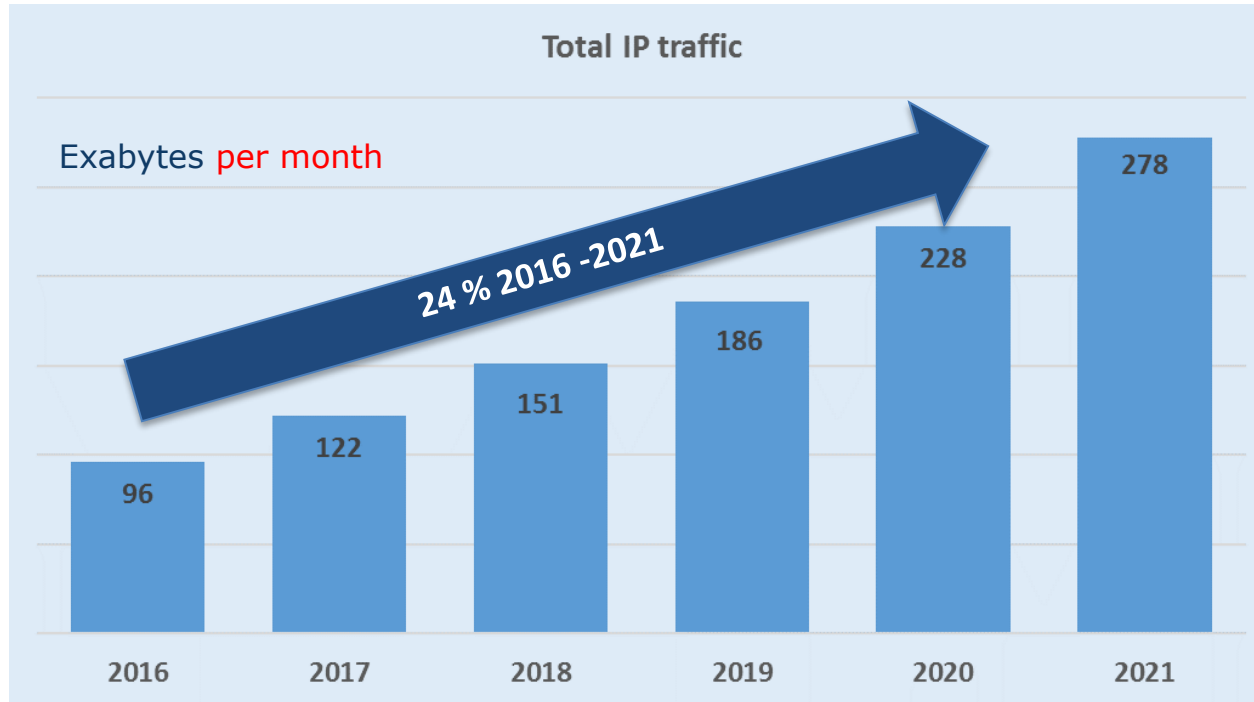


Prysmian
Group

Jan Schindler
15. Mai 2018
Baden

Telco's Market outlook: data traffic demand is exploding

Data Traffic demand will explode in the next decade



- **Annual** global IP traffic will reach 3.3 ZB per year by 2021
- Global IP traffic will increase nearly threefold over the next 5 years
- Traffic from wireless and mobile devices will account for more than 63 percent of total IP traffic by 2021
- ... and is growing, growing, growing ...

Source: Cisco Visual Networking Index , September, 2017

Digital Service Revolution is under way

Connected people

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

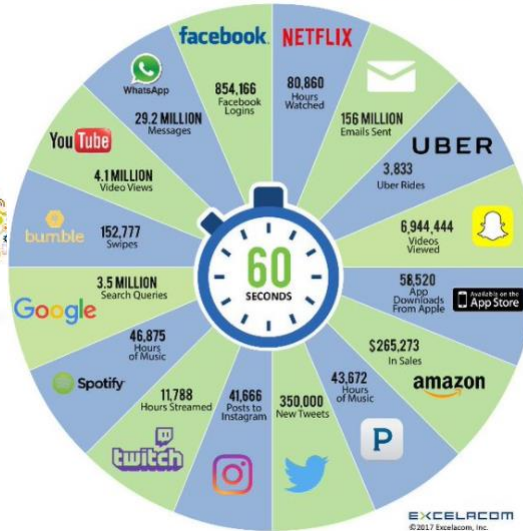


Connected machines

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



2017 What happens in an INTERNET MINUTE?



Increase of **new services and apps** (Virtual Reality, connected/autonomous driving 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

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



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

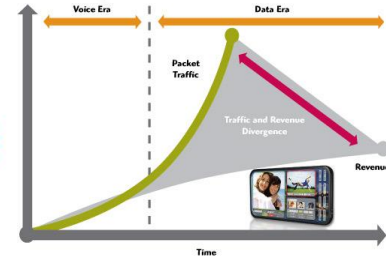
Digitalization of our life

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)

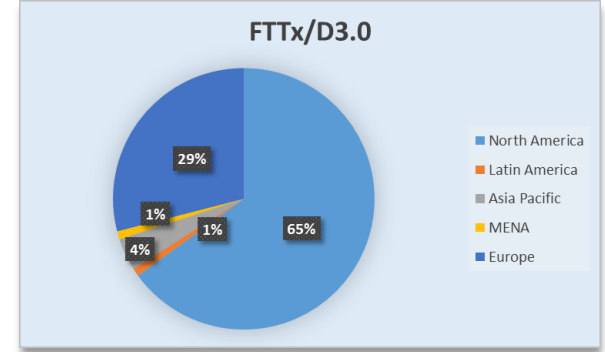
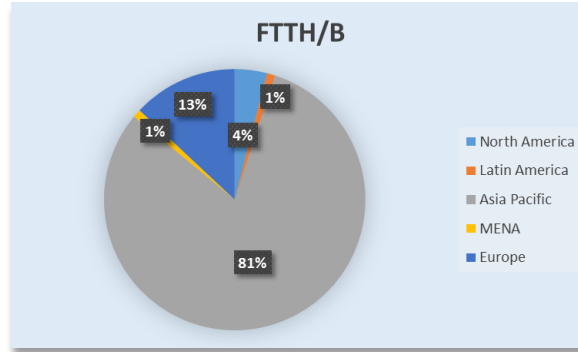
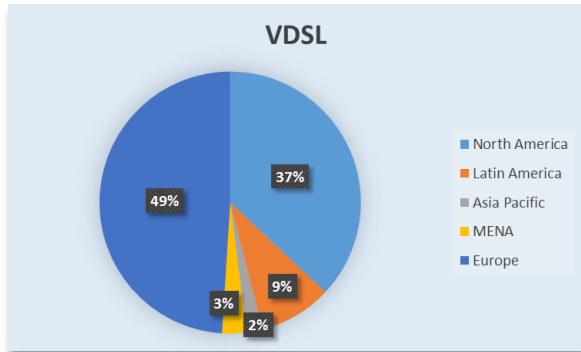


Digitalization of our life: towards the Digital Society, Network Society, Gigabit Society



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

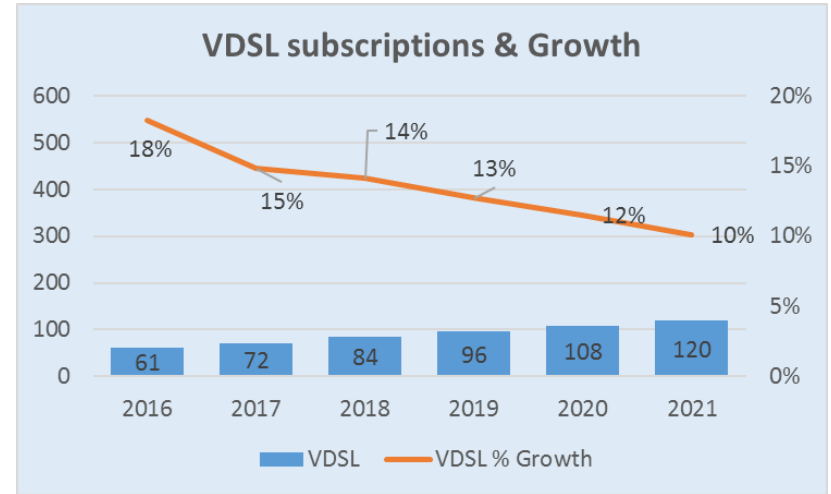
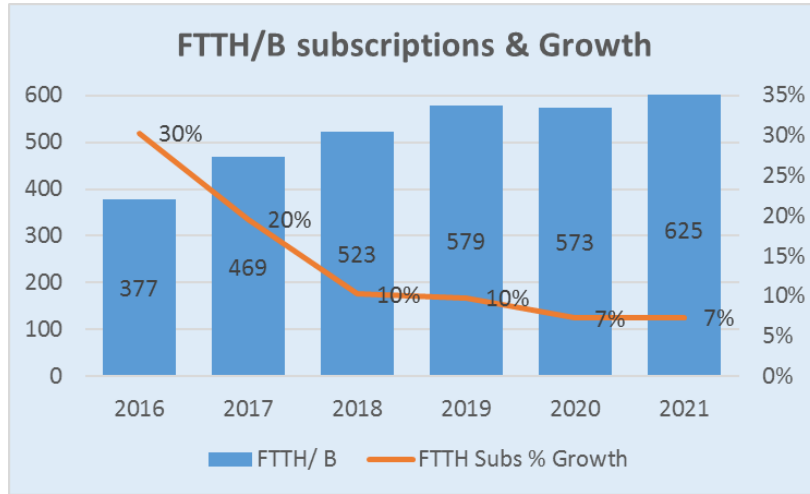
Breakdown of Broadband technologies



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

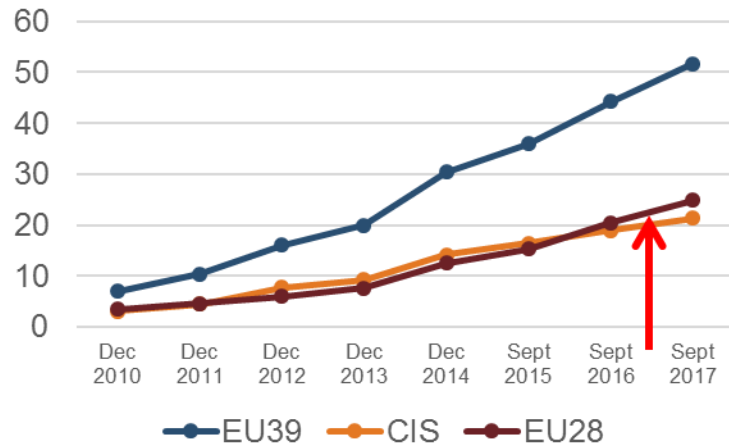


- Growth of FTTH/B subscriptions will continue until 2021, albeit not at the same pace year on year, and will naturally decrease as the markets mature.

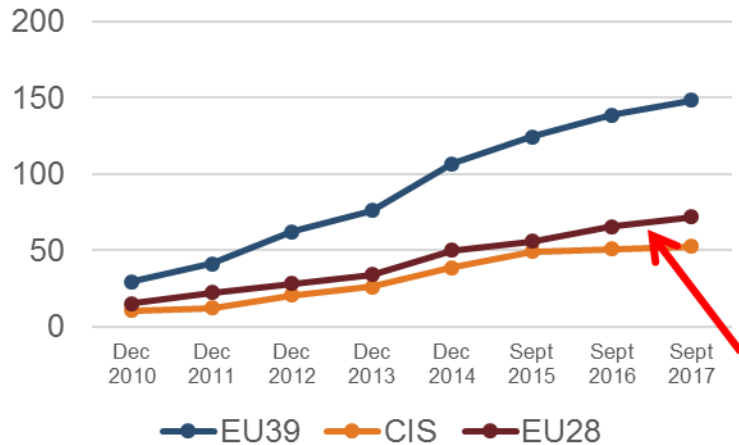
FTTH/B figures at September 2017

- Interesting dynamism of the European Union since 2013
- CIS countries : higher growth rates for subs since 2015 ; flat growth for HP between September 2016 and 2017
- EU 28 dynamism : an increase of the growth rate for subs. since 2015 and same dynamism for Homes Passed!

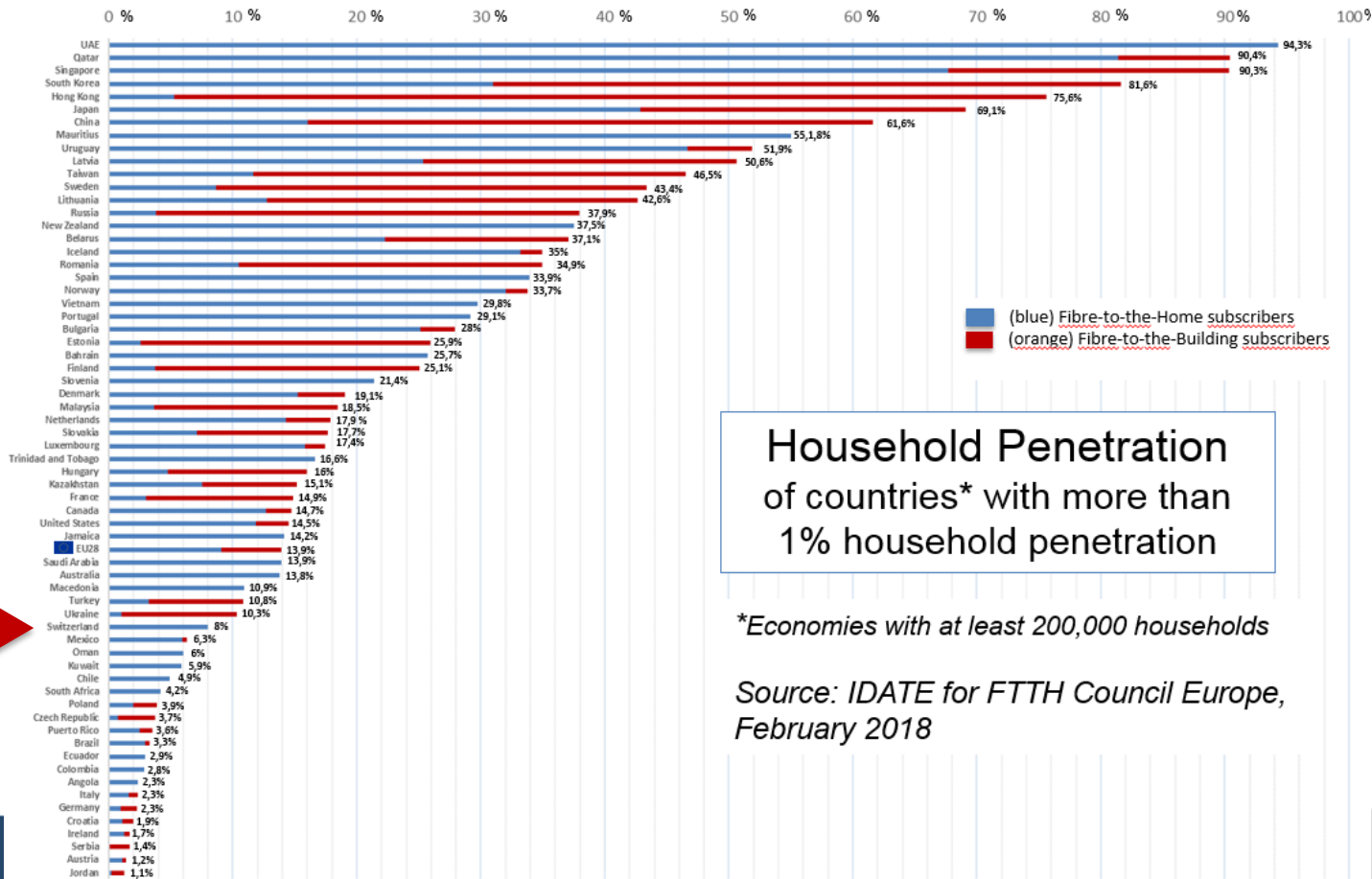
Growth of FTTH/B subscribers
(million)



Growth of FTTH/B Homes Passed
(million)



FTTH/B Global Ranking – Sep 2017

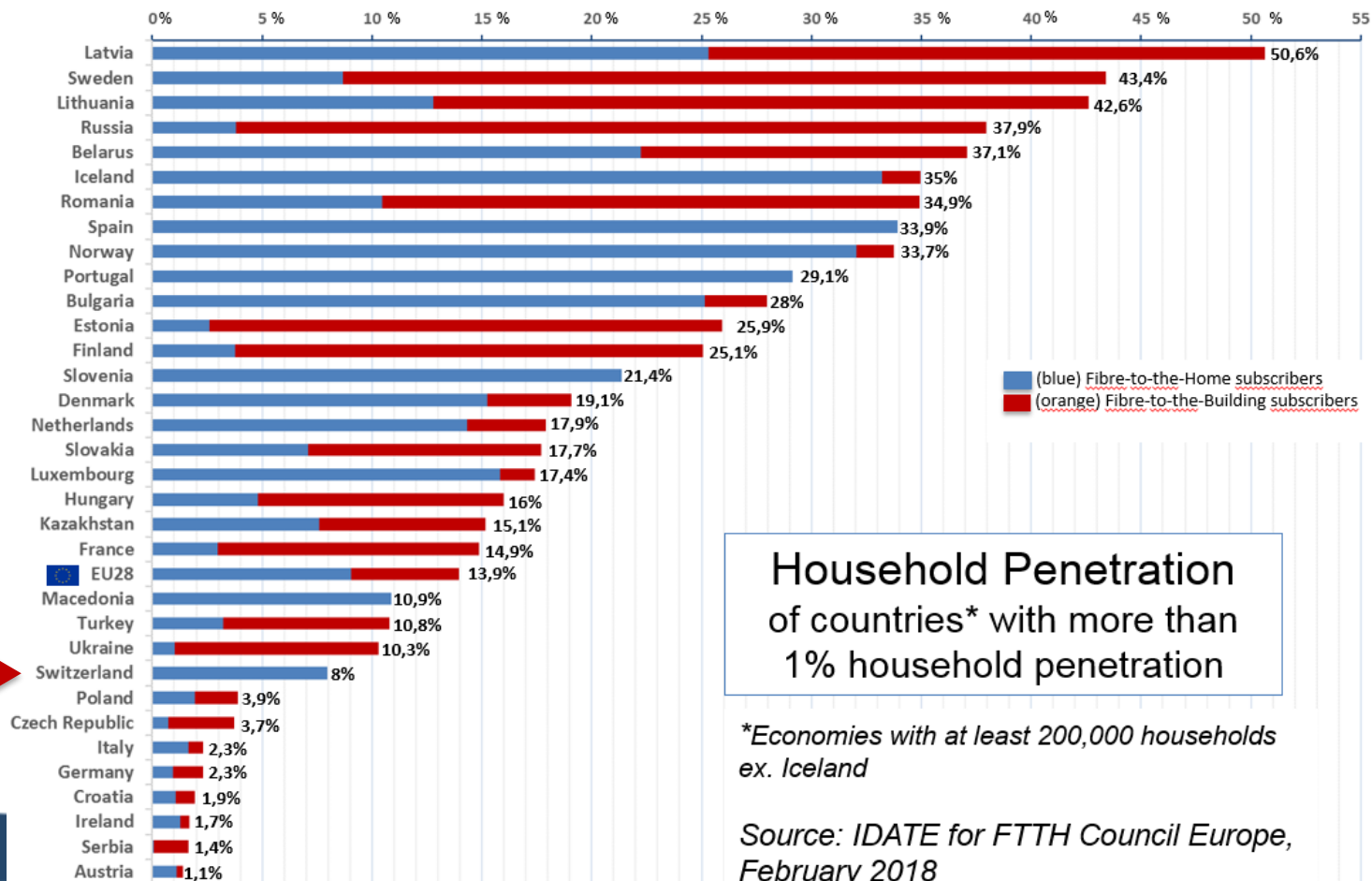


Household Penetration of countries* with more than 1% household penetration

*Economies with at least 200,000 households

Source: IDATE for FTTH Council Europe, February 2018

FTTH/B European Ranking – Sep 2017



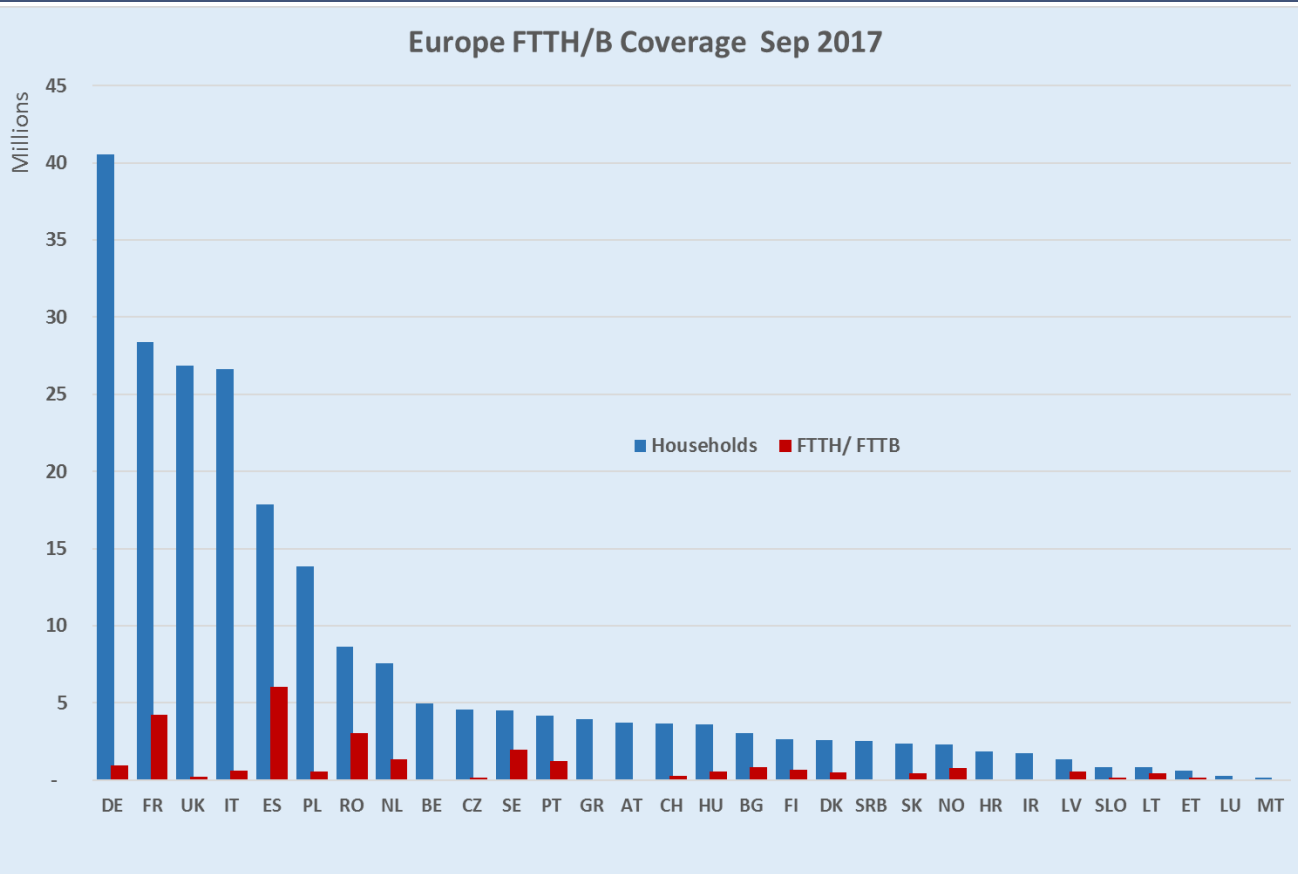
Household Penetration of countries* with more than 1% household penetration

*Economies with at least 200,000 households ex. Iceland

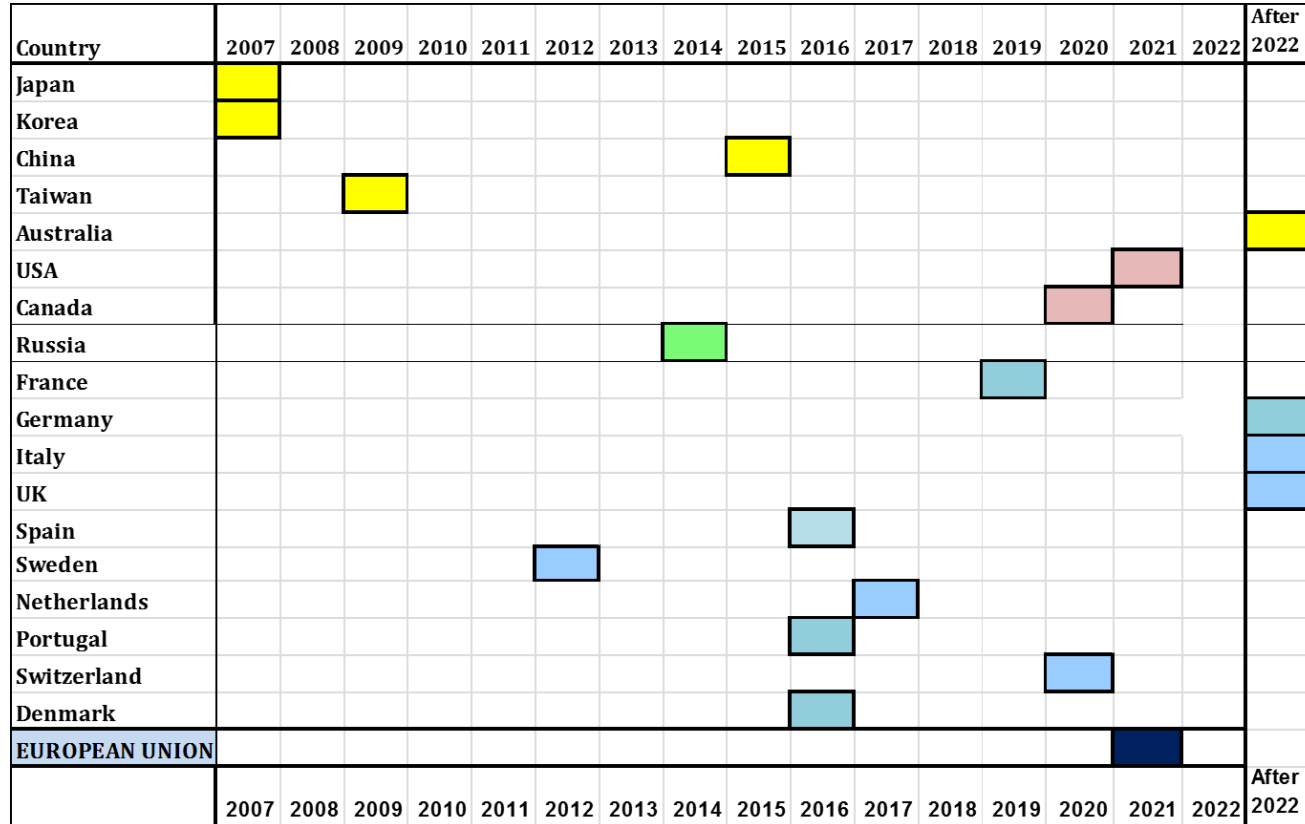
Source: IDATE for FTTH Council Europe, February 2018



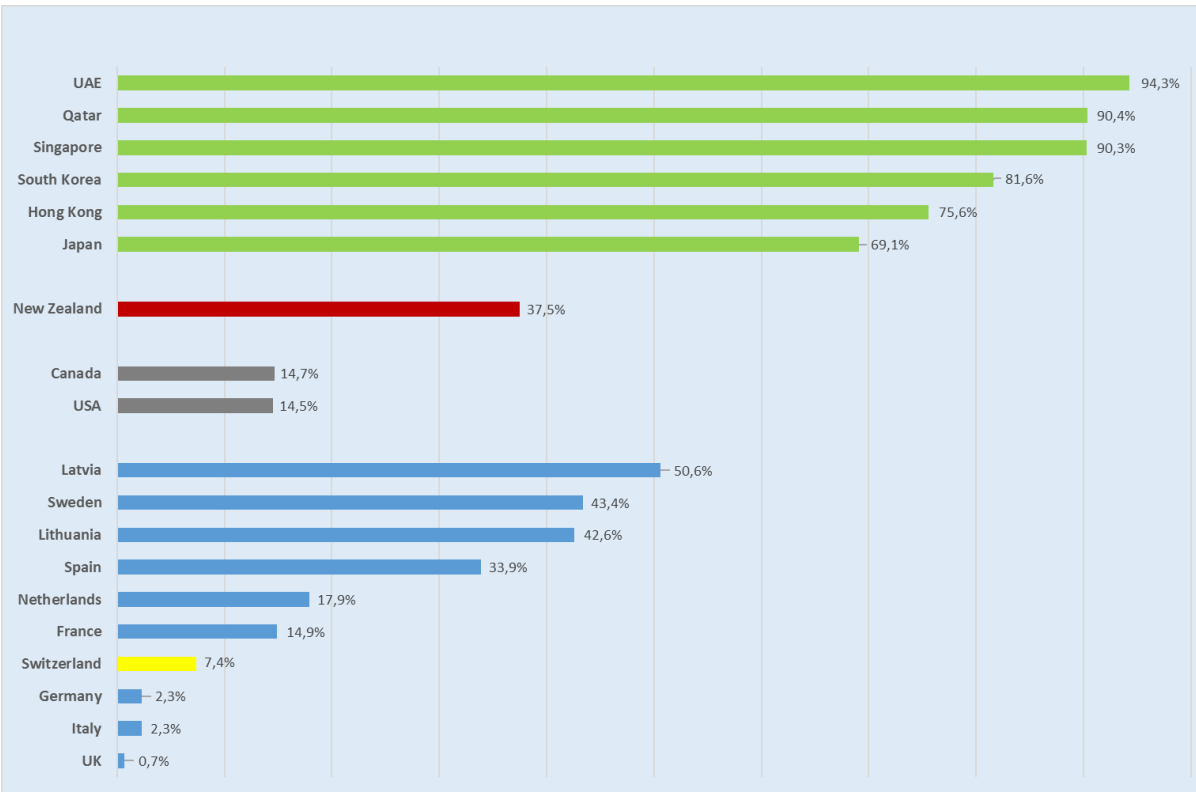
Europe FTTH/B Coverage - Sep 2017



The Race to “FTTH Maturity”*



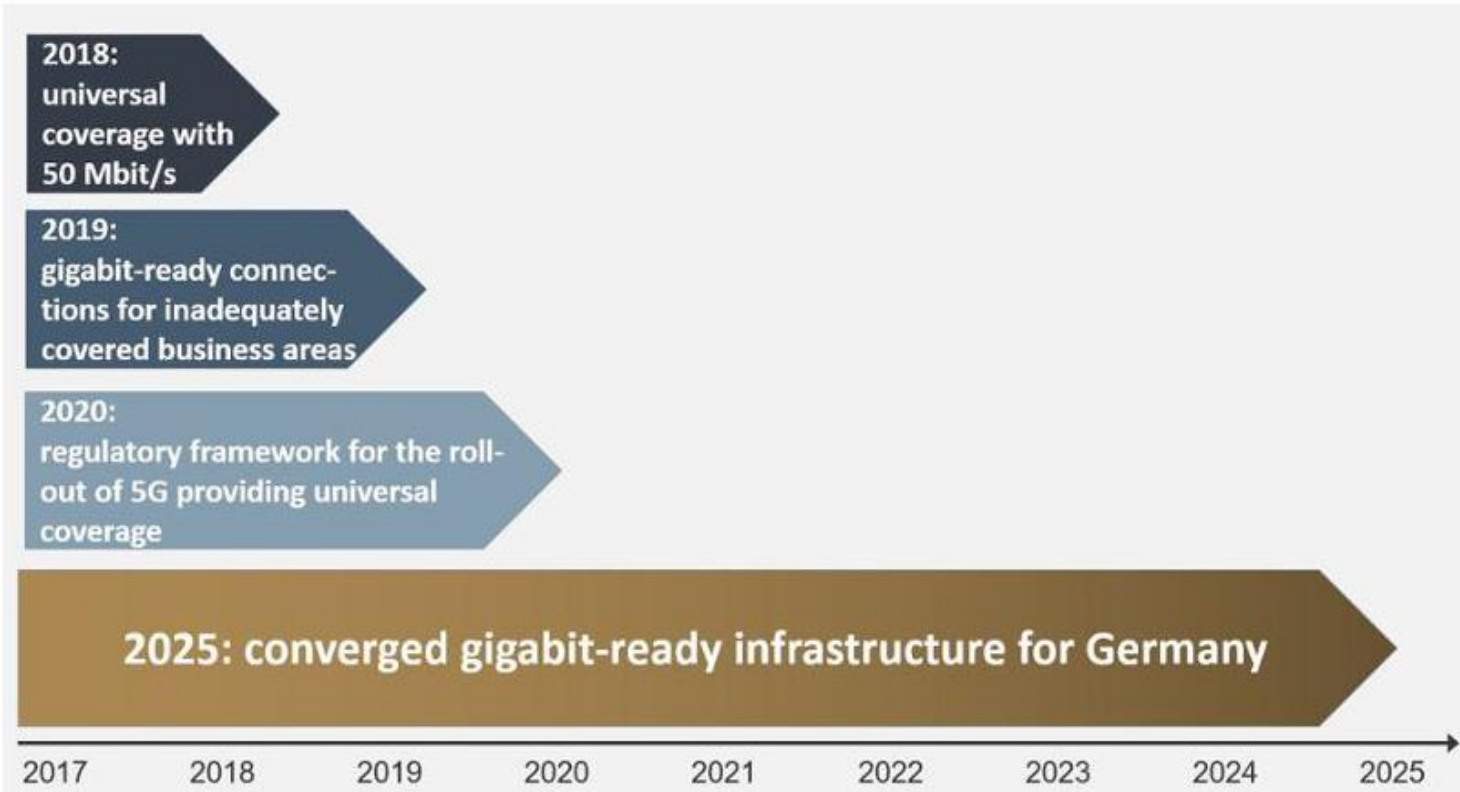
FTTH/ B Penetration by country



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.

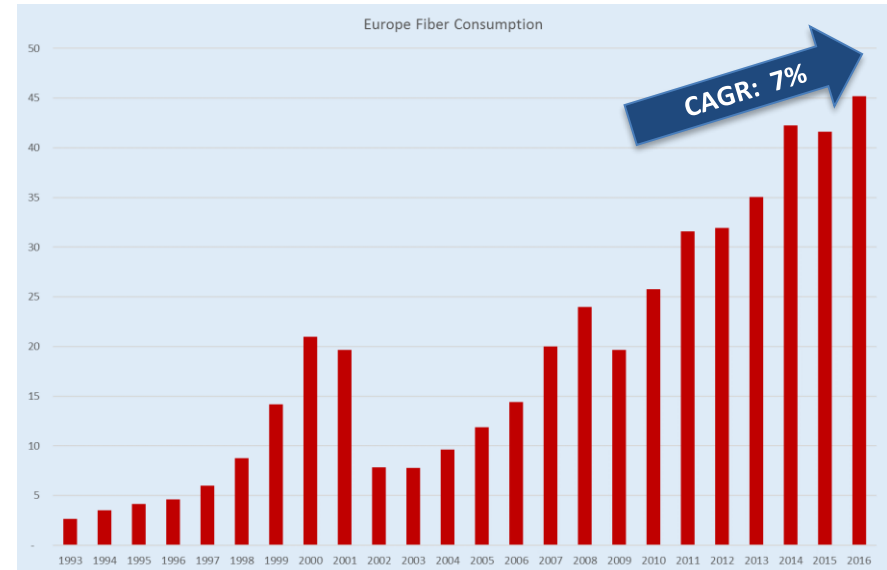
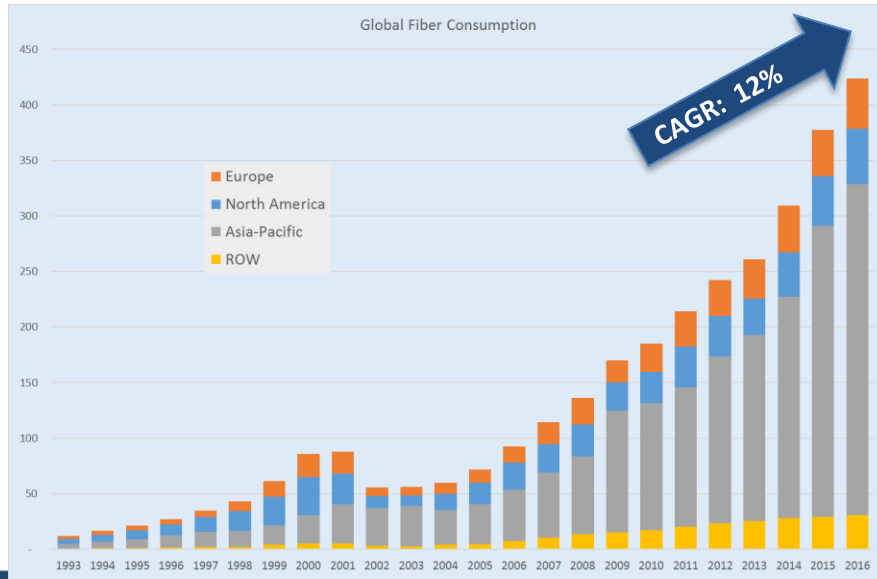
Gigabit Society: Germany



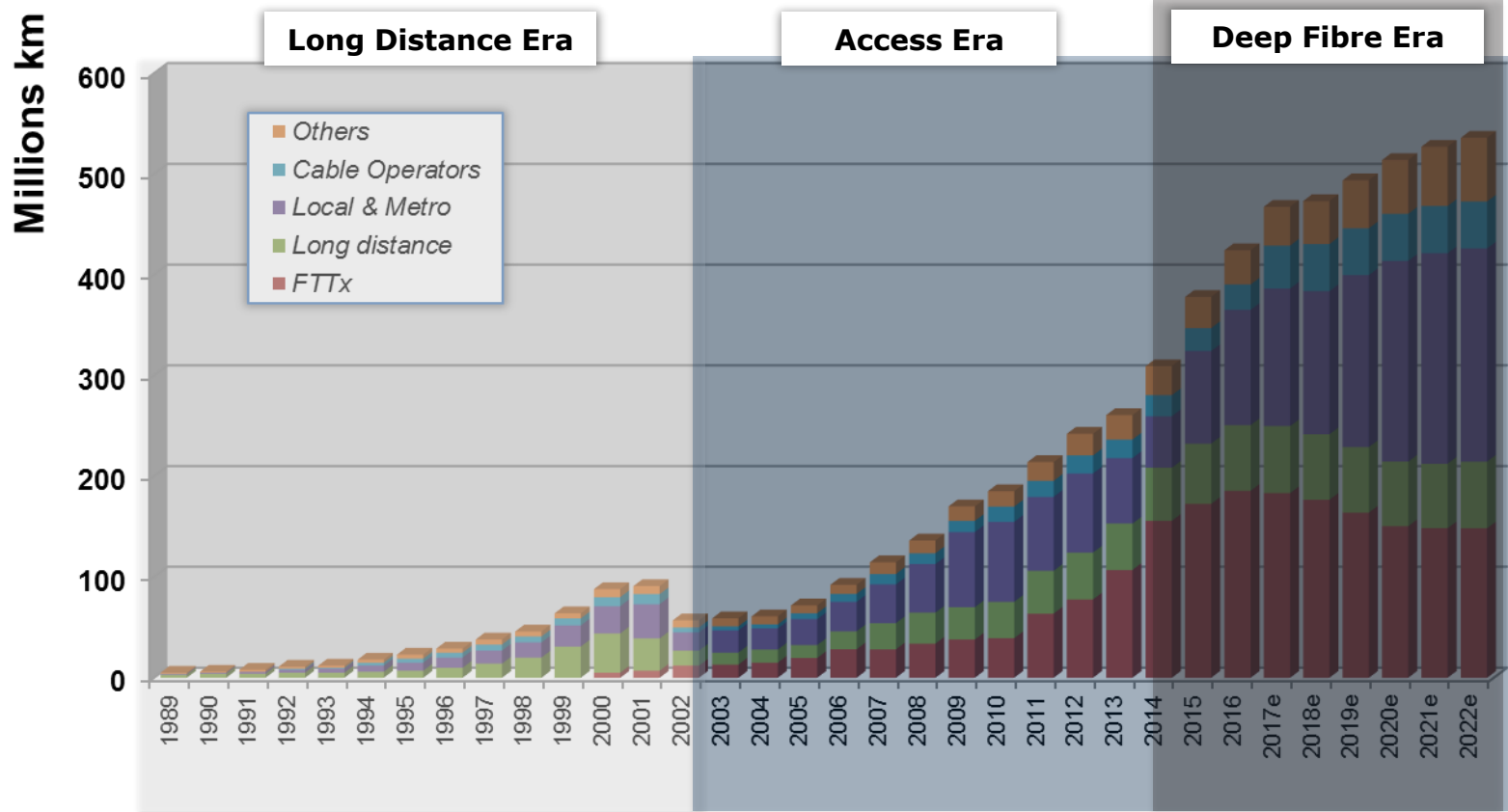
The Fiber in the Cable Today

World Cabled Fiber Market Trend

- Demand > 450 M-km in 2016
- China = 60% of global demand (FTTH and 4G)
- CAGR World 2014-2016: 17%
- CAGR Europe 2014-2016: 3%



Fibre Demand Worldwide Drivers

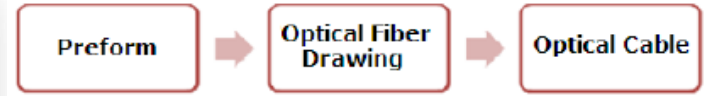
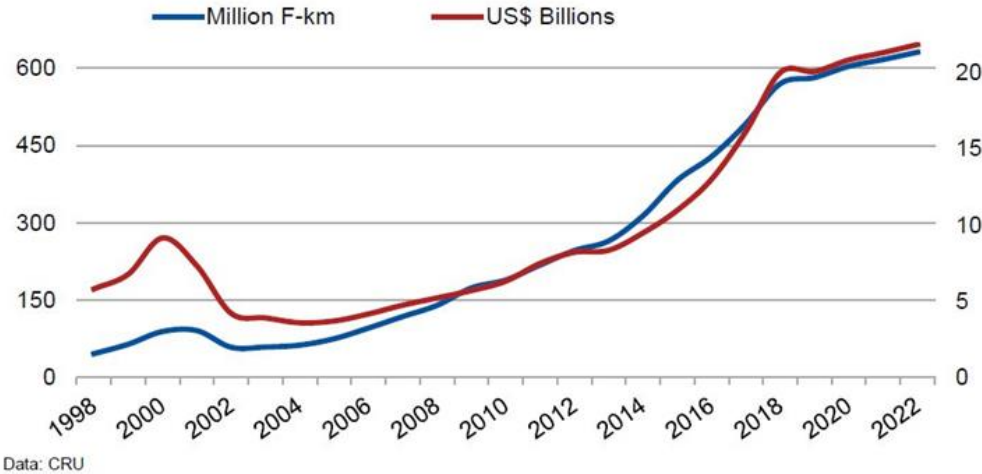


Source: CRU International Sep 2017

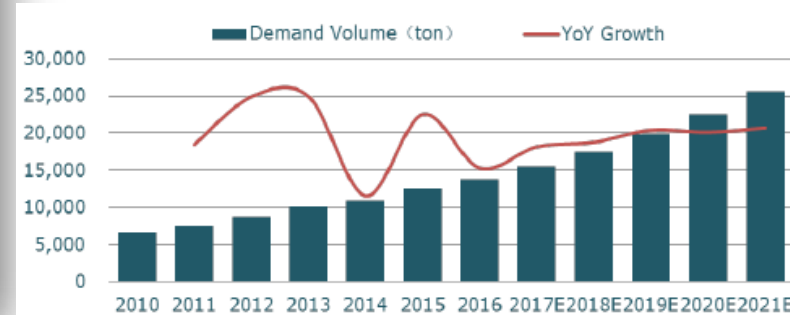
Optical Cable market Evolution & Preform

Source: CRU International March 2018

World optical cable market: above 600 M F-km and US\$20 B in 2022
Annual consumption of optical cable, world totals in Million F-km and US\$ Billions



Global Demand for Optical Fiber Preform



Global Telecom Solutions

- Hybrid Solutions

**Mobile
4G to 5G
Fiber
densification**

**FTTx coverage
Deep fiber**

**DataCenter
Cloud Computing**

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

- Hyperscale DC
- Proximity Dc

Conclusions

1

Network transformation

2

CAPEX

3

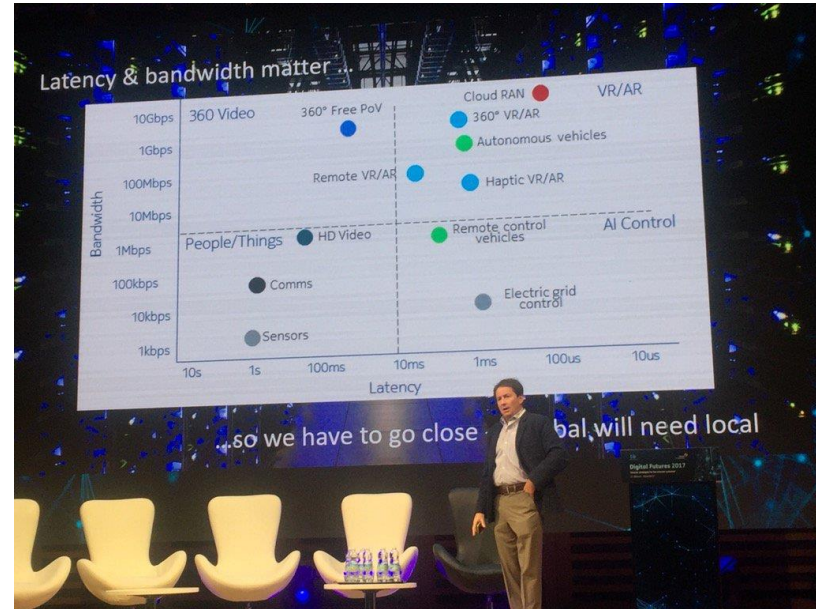
Digital Agenda 2025

4

Fiber/Cable manufacturers: TCO

5

Digital Revolution



Thank You!

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