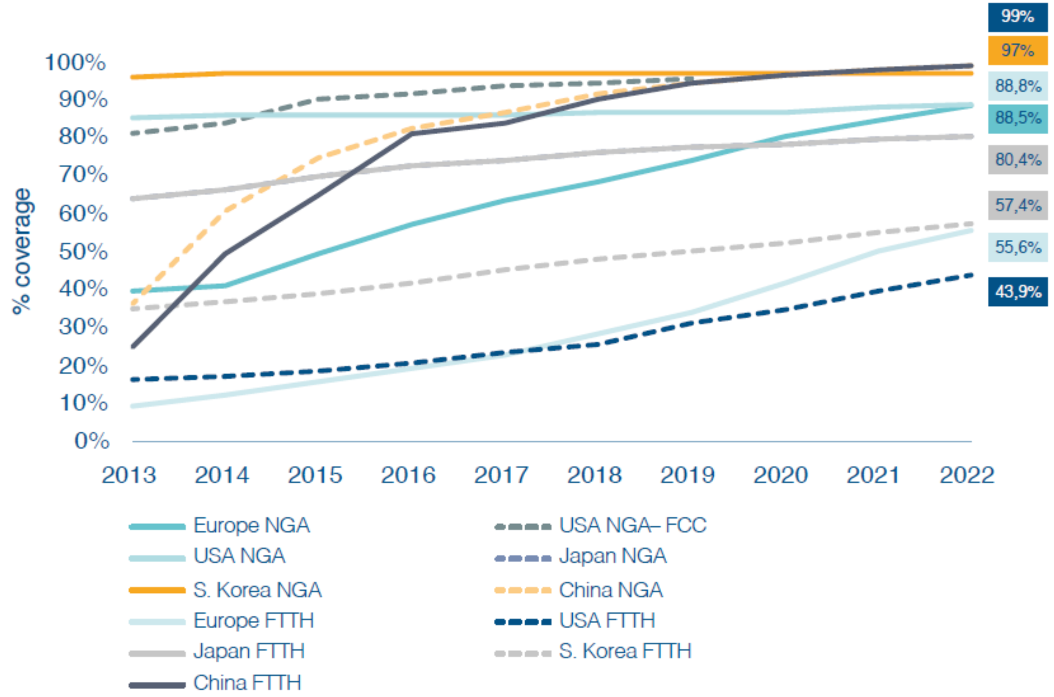
The State of Digital Communications
European telecom perspectives

Alessandro Gropelli – Deputy Director General

@ETNOAssociation **@agropelli**

Good progress on VHCN, but still behind others

FIG 1.3 : ***NGA and FTTH population coverage, China, Europe, Japan, South Korea and the USA, 2013–2022***

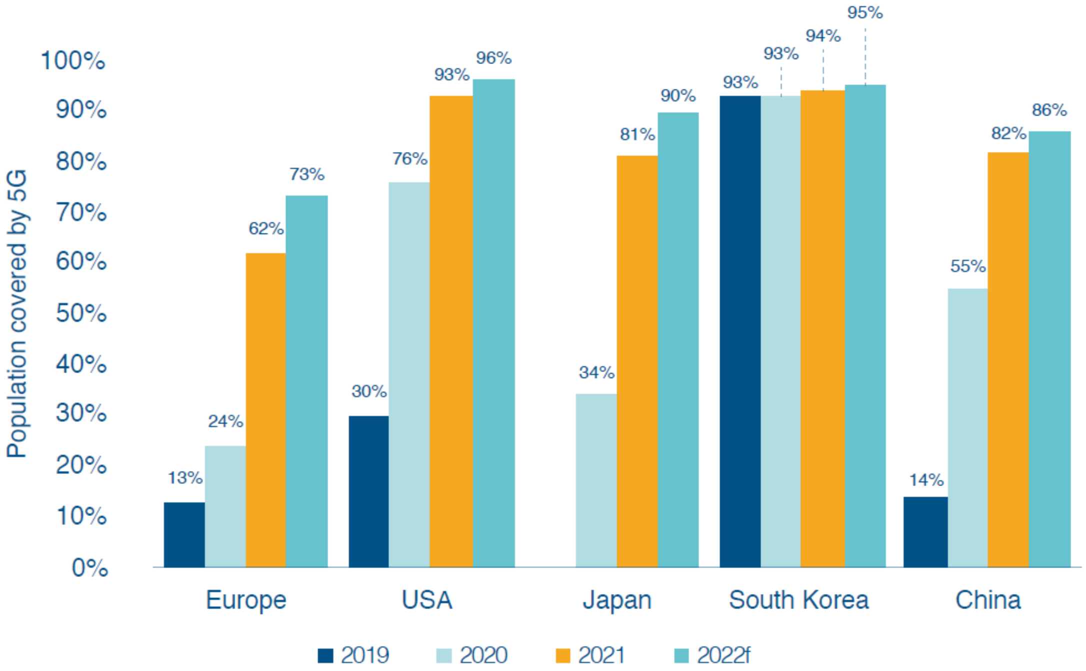


> FTTH is now available to 55.6% of Europeans, up from 50% in 2021.

Source: [Analysys Mason for ETNO](), 2023

Progress on 5G, but behind all global peers

FIG 1.6 : ***Percentage of the population covered by at least one 5G mobile operator, China, Europe, Japan, South Korea and the USA, 2019–2022f***



“73% of the European population are currently covered by 5G networks, up from 62% in 2021.”

Source: [Analysys Mason for ETNO](), 2023

Uptake, usage & spend are lower than elsewhere

FIG 4.5 : ***5G share of all mobile connections, China, Europe, Japan, South Korea and the USA, 1Q 2022***

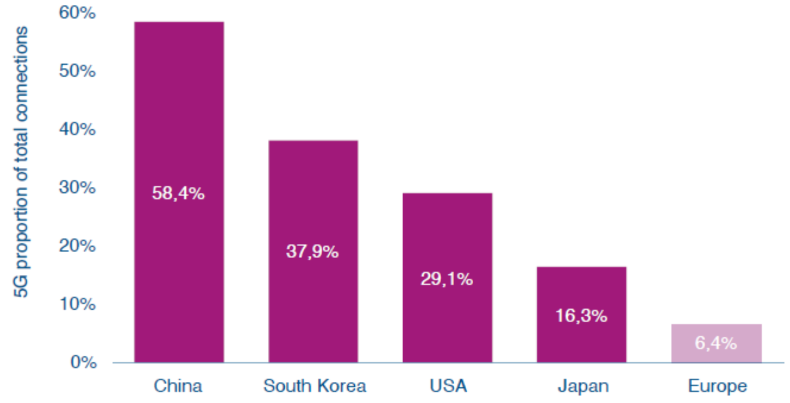
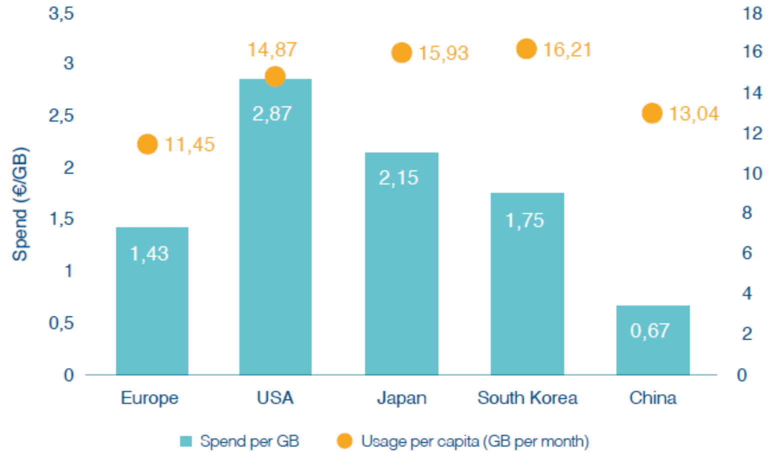


FIG 1.10 : ***Average spend per gigabyte of mobile data used and average mobile data usage per capita, China, Europe, Japan, South Korea and the USA, 2021***



Source: [Analysys Mason for ETNO](), 2023

CapEx at a high, but behind global peers

FIG 3.2 : *ETNO member capex in Europe only (excluding spectrum costs), plus total capex in Europe, 2016–2021*

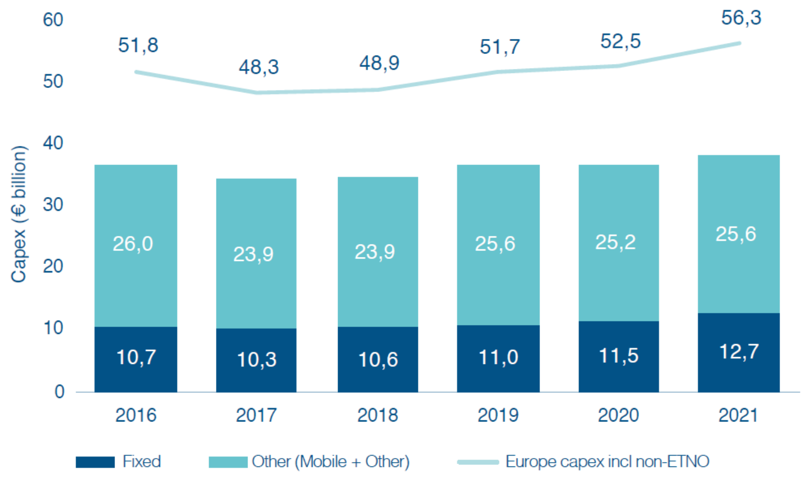
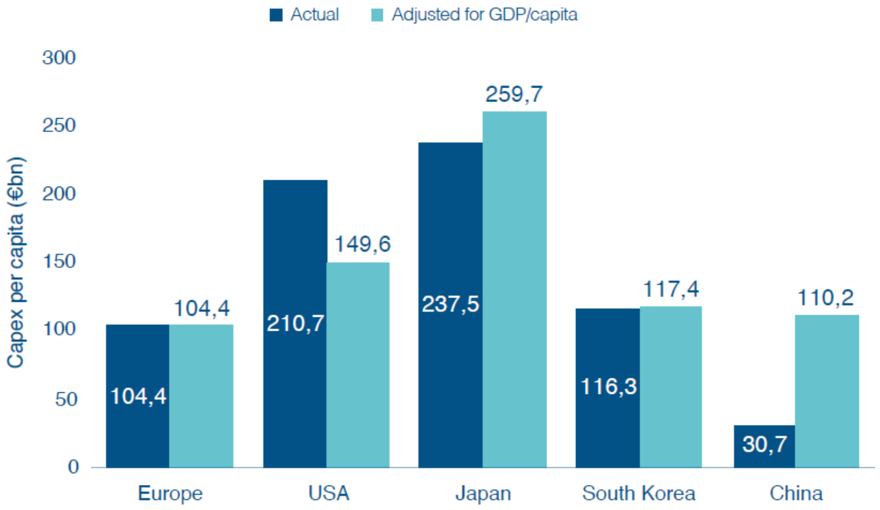


FIG 3.5 : *Capex per capita, China, Europe, Japan, South Korea and the USA, 2021*



Source: Analysys Mason for ETNO, 2023

European telecom markets: lower spend, rather flat revenues

FIG 1.11 : ***Average spend per capita on mainstream telecoms, China, Europe, Japan, South Korea and the USA, 2008, 2015 and 2022f***

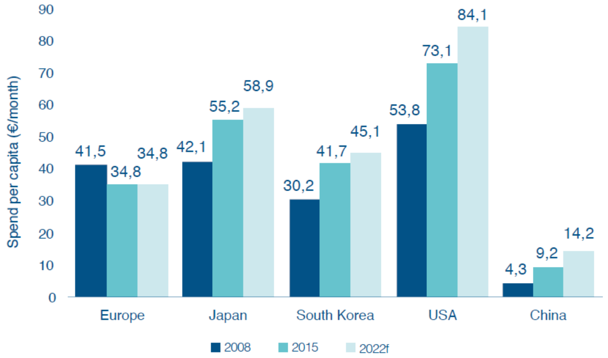


FIG 1.12 : ***Telecoms spend as a proportion of GDP, China, Europe, Japan, South Korea and the USA, 2007–2023f***

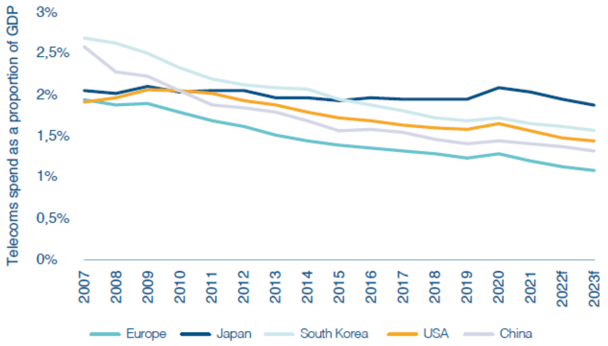


FIG 1.13 : ***Europe Harmonised Index of Consumer Prices (HICP) and Japan, South Korea and USA Consumer Price Index (CPI) for infrastructure-based services, 2015–2Q 2022[5]***

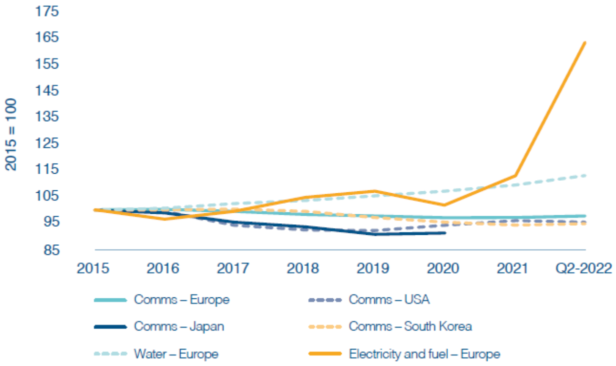
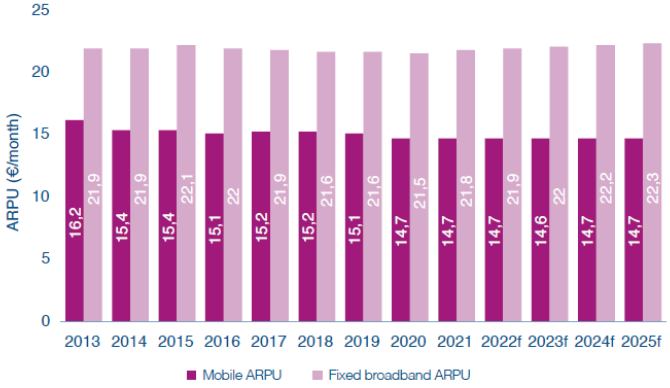


FIG 4.2 : ***ARPU for mobile and fixed broadband services, Europe, 2013–2025f***



etno

Europe: Open RAN, 5G SA, Edge Cloud, Cloud providers

FIG 8.1 : *Open RAN trials and deployments in China, Europe, Japan, South Korea and the USA, 2022*

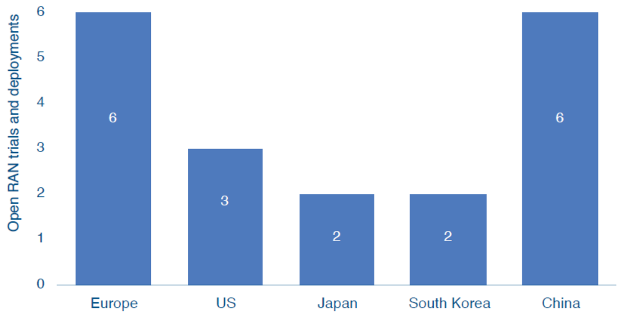


FIG 9.1 : *5G SA commercial networks by geography, 3Q 2022*

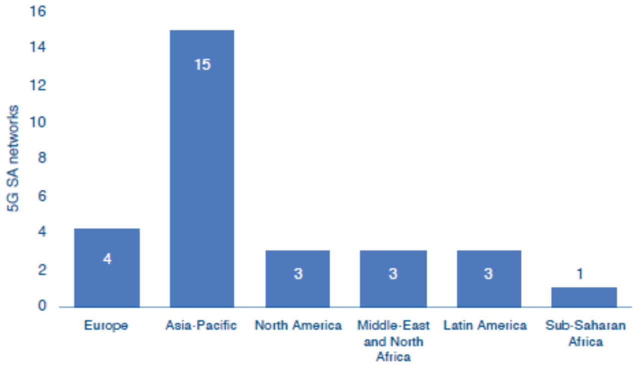


FIG 11.3 : *Announced and commercialised edge cloud offers, by global region, 2022*

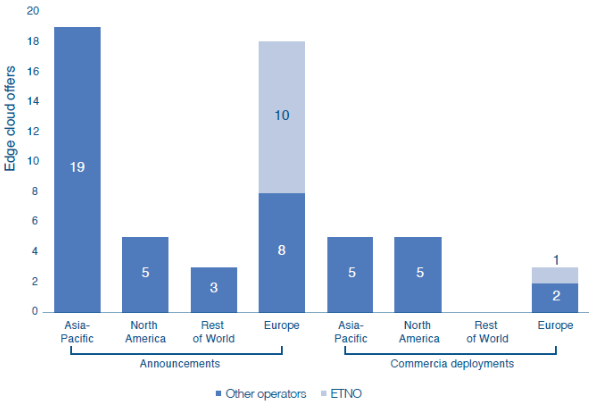
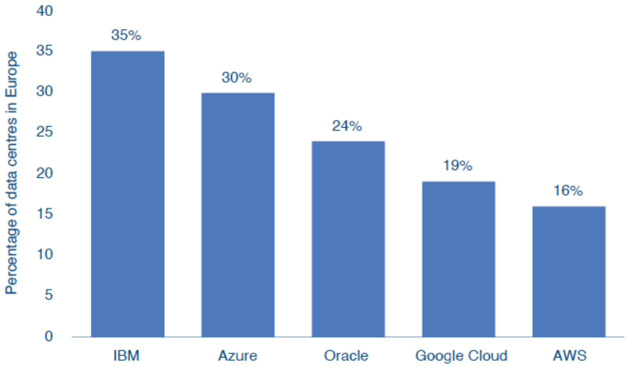


FIG 11.1 : *Percentage of leading public cloud providers' data centres in Europe, 2022*



etno

Future trends: network technology

- 5G standalone core
- FTTH and FTTx
- Open RAN
- NFV & SDN
- Edge computing
- Quantum Encryption
- LEO Sat Connectivity

Source: on-going research, Deloitte for ETNO

Future trends: network usage

Resolution (SD to HD, 4K and 8K)

HD live sports

Metaversification of current use cases

AR/VR

AI-generated content

Source: on-going research for ETNO & GSMA

European Telecommunications
Network Operators' Association

GROPELLI@ETNO.EU

www.etno.eu