

SPECTRUM

THE FUNDAMENTAL ELEMENT OF MOBILE

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CEPT





Introduction



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SPECTRUM

THE FUNDAMENTAL ELEMENT OF MOBILE



Welcome

Brett Tarnutzer

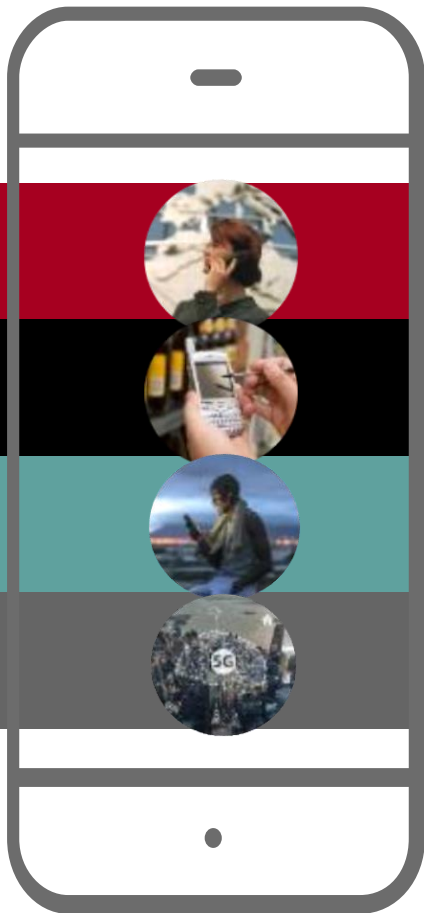


2G

3G

4G

5G



All about calls and texts

The start of mobile data

The arrival of mobile broadband services and applications

The network adapts to the application

Ultra high speed
Ultra low latency
New applications

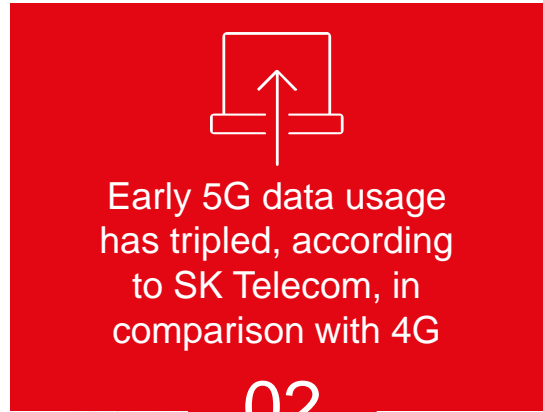


5G Ramps Up



01

O2 commercial 5G gives music fans intimate access to gigs and musicians through cutting edge Virtual Reality



02



03

5G IN EUROPE
17 live networks
43 trials

26 GHz auctions planned for 2020/21



5G connections
forecast has
increased by

12.5%

It now stands at



1.6 BILLION

by 2025



5G adoption forecast
has increased to



18%

by 2025



37

COMMERCIAL 5G NETWORKS

launched across

19

MARKETS



with

75

further
launches



across

50

markets
soon



ROUTERS



DRONES



129

5G DEVICES

TVs



ROBOTS



HOTSPOTS



2018

Mobile operators will invest

\$480BN
WORLDWIDE

2020

in mobile capex



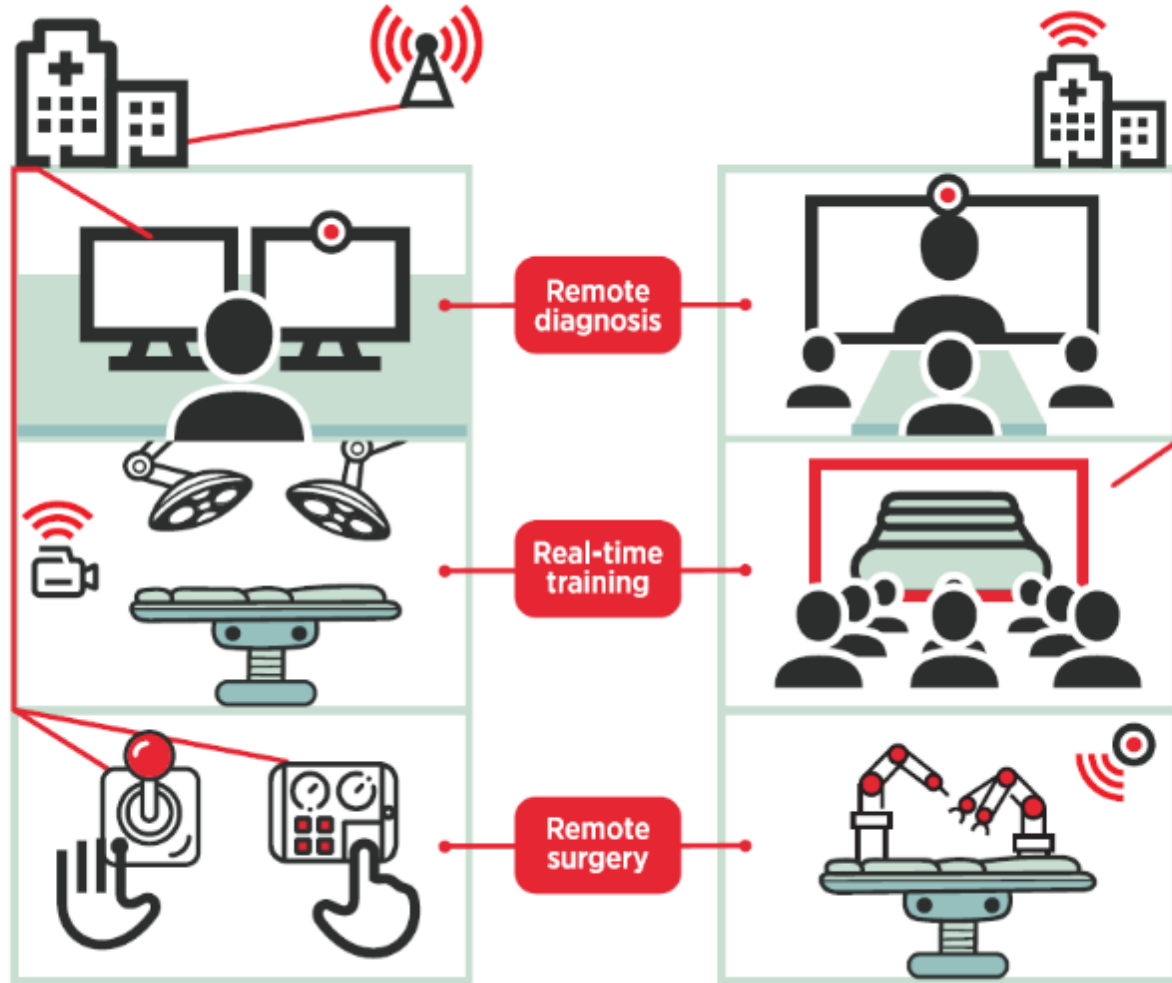


Use Case

5G

CAN
MAKE IT
HAPPEN

Healthcare





The socio-economic benefits of mmWave 5G (2020-2034)

Europe Edition

GDP impact of mmWave spectrum by 2034

 **\$135 billion**

TAX
\$55bn

2.9%

GDP growth

15%
2025

34%
2034

The share of 5G services using mmWaves