5G

The Next Step in Mobile Communications

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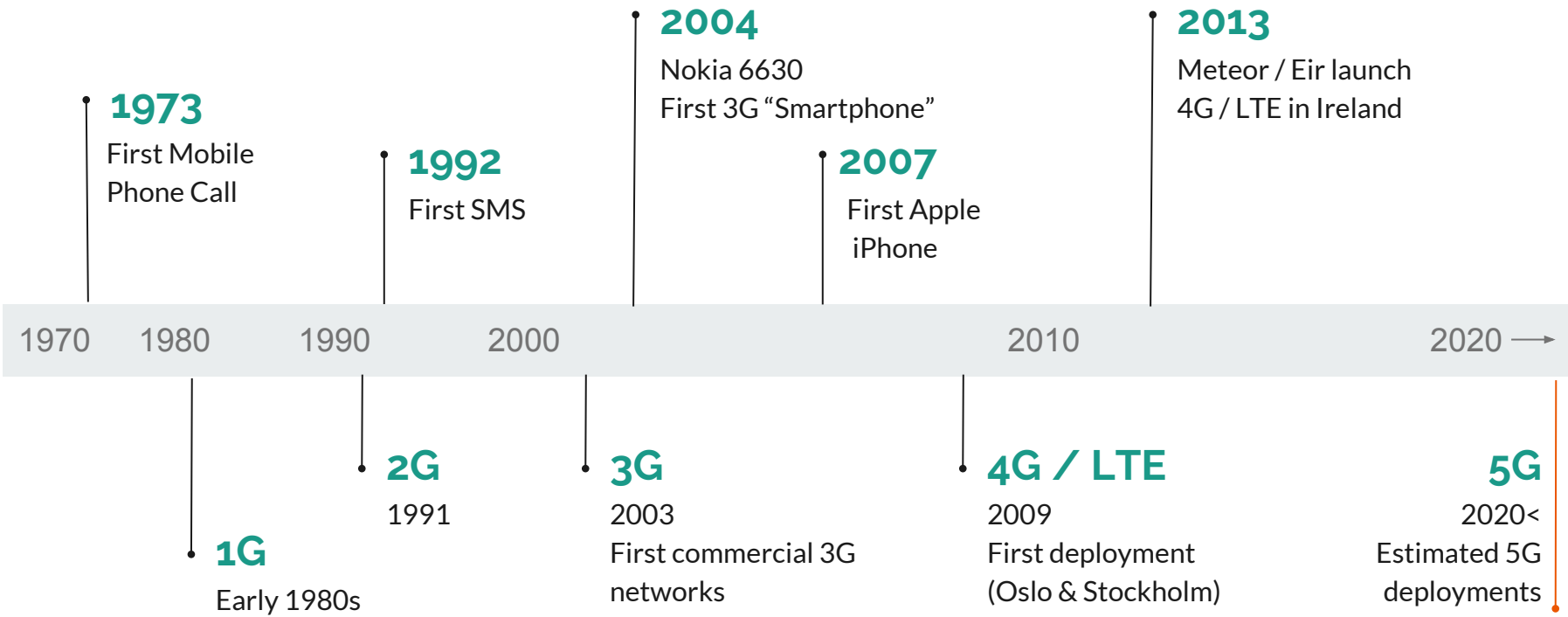
A Brief History



18 Billion
Connected Devices, 2017

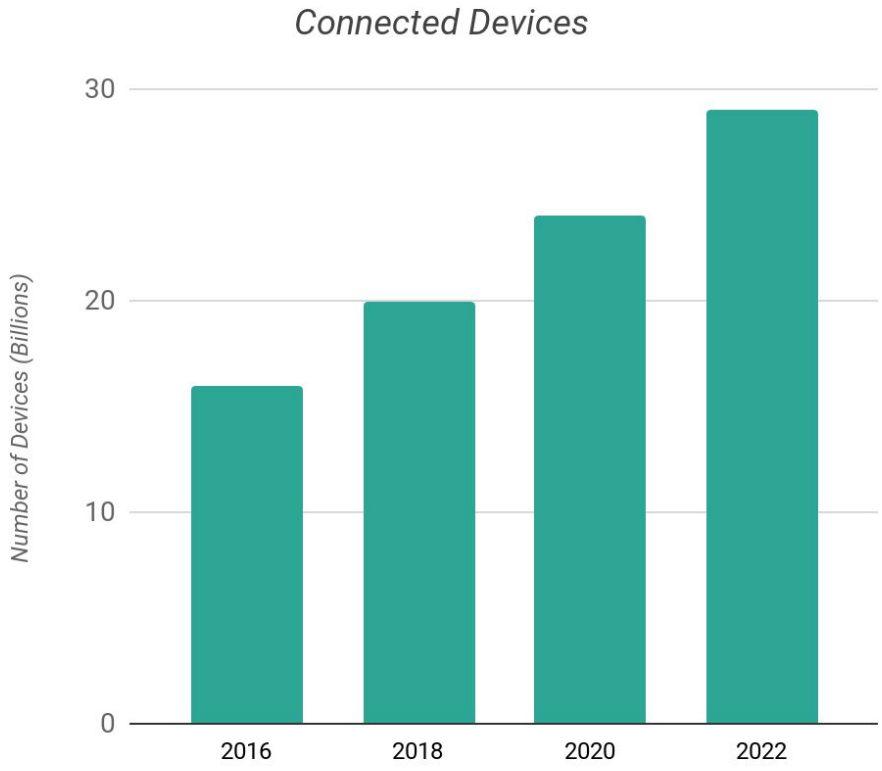
7.5 Billion
People

2.4 Devices Per Person

29 Billion
Estimated Connected Devices, 2022

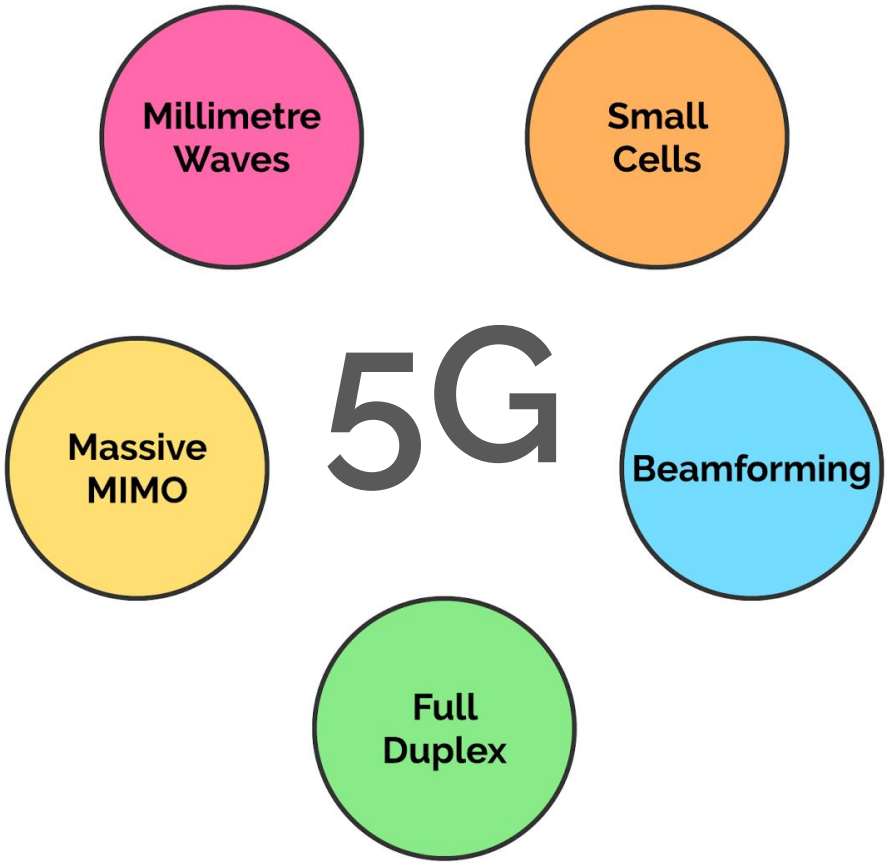
7.7 Billion
People

3.7 Devices Per Person

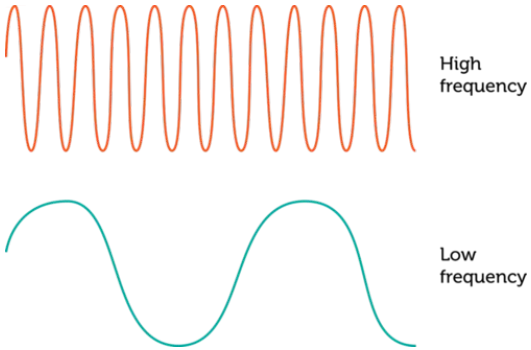


Source: Ericsson IoT Outlook, 2017

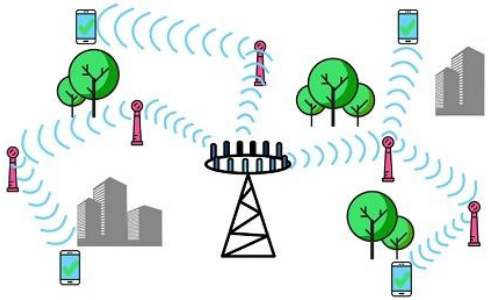
Proposed Technologies



Millimetre Waves



Small Cells



Electromagnetic Spectrum in GHz

Whole New Area of the Spectrum

=

More Bandwidth for Everyone

What about the obstacles?

Portable Miniature Base Stations

=

Stronger Signals

Massive MIMO

Multiple Input Multiple Output

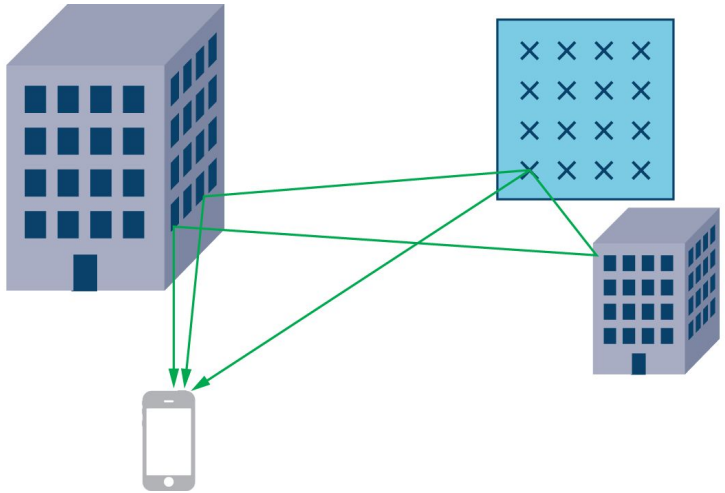
4G Stations > 12 Ports
- > 8 Transmitting
- > 4 Receiving

5G Stations > *100 Ports*

Handling more data at once

More Antennae = More Interference

Beamforming



Identify the most efficient route,
reduce interference

Full Duplex

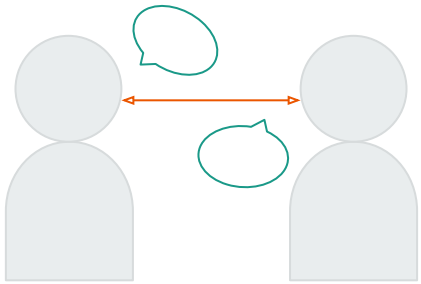
Half Duplex :

Information can flow both ways on the same frequency, but not at once.

Full Duplex :

Send and receive data simultaneously over the same frequency.

→ *Twice as fast*

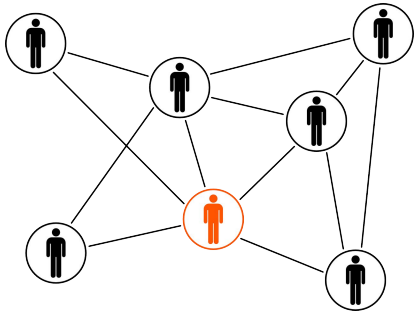


Personal

Streaming

Gaming

Smart Home



Always Connected

The Bigger Picture

Education

Monitoring

Transport

Medical


stable
connected
reliable
5G
The Future of Mobile Communications
Questions Welcome