5G

Technology and Customer Innovation

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5G is NOT a technology in search of use cases

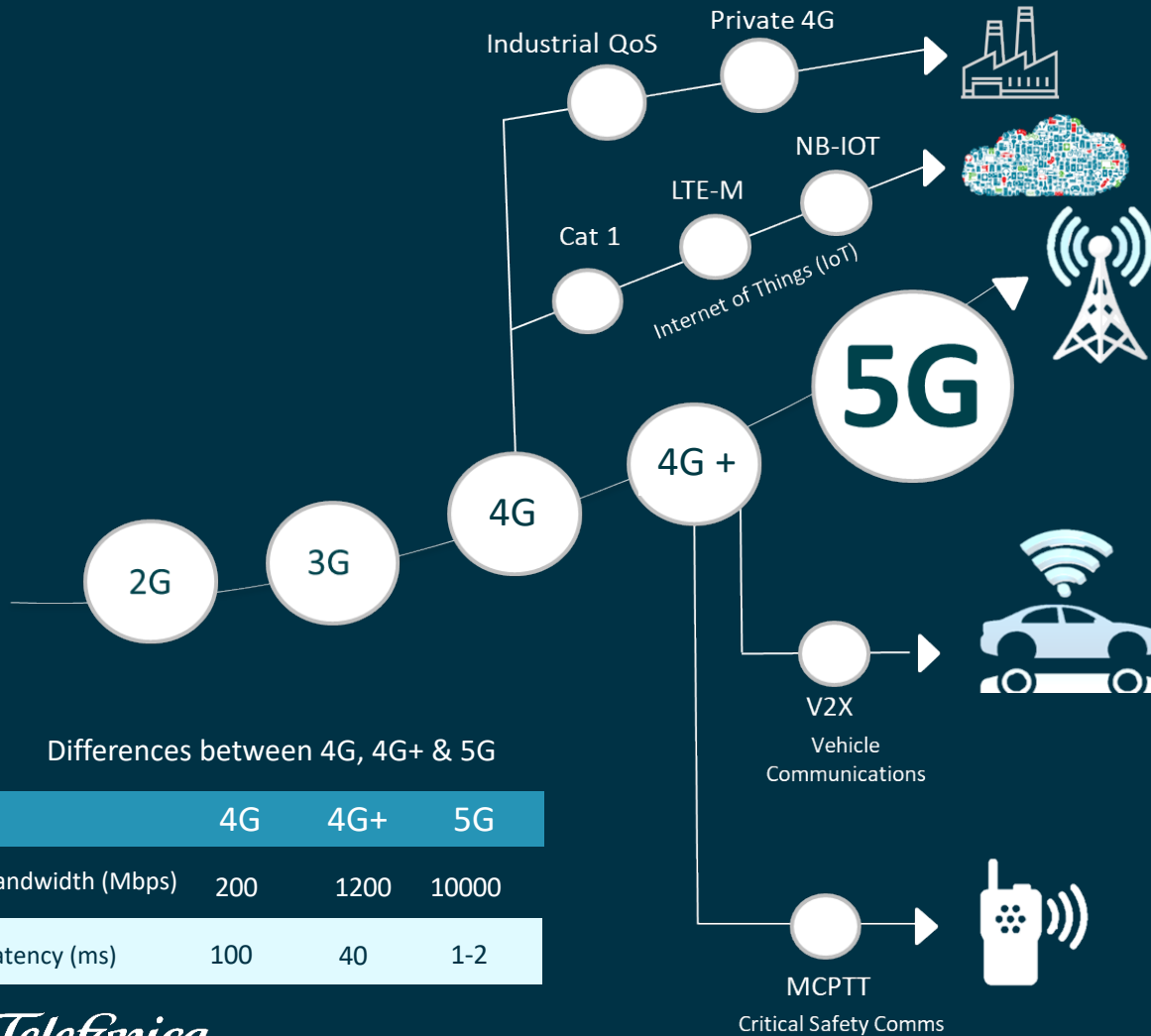## It is the other way around !

5G is the answer to several year old necessities of the industry that we, telcos, were not able to satisfy with previous technologies.

From being able to guarantee the Quality of Service or dedicate capacity to specific services, to offer a professional / specialized mobile connectivity to enterprises, these (among others) are requests that have been hammering our sales representatives for years.

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5G is not a simple evolution from 4G

The real industry trends pushing for 5G

Industrial QoS

Private 4G

NB-IOT

LTE-M

Cat 1

Internet of Things (IoT)

2G

3G

4G

4G +

5G

V2X
Vehicle Communications

MCPTT
Critical Safety Comms

Differences between 4G, 4G+ & 5G

	4G	4G+	5G
Bandwidth (Mbps)	200	1200	10000
Latency (ms)	100	40	1-2

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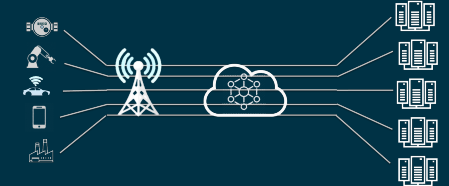## What most people know about 5G

High Bandwidth
(10 Gbps DL, 1 Gbps UL)
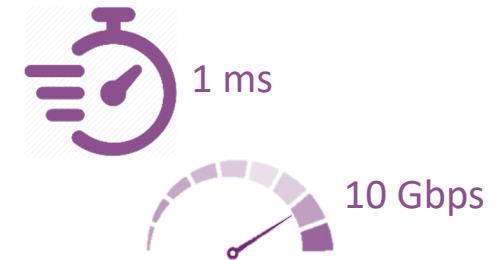
Low Latency
(1 msec)
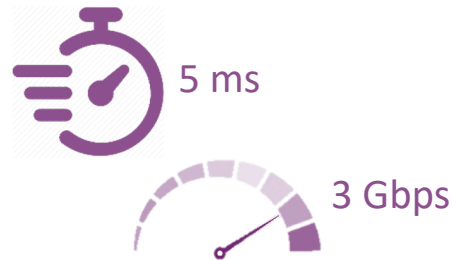
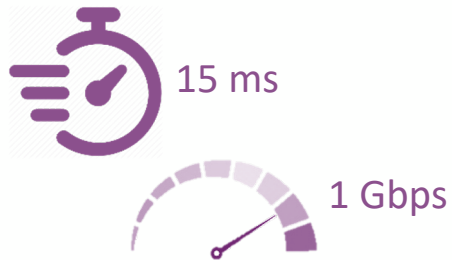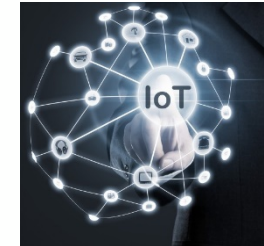**High Density**
(1 M devices/Km2)

QoS

**Guaranteed Quality
Of Service**

Network Slicing
Several Virtual Networks in one

However, 5G is still years to mature, and too much mass market oriented

15 ms

1 Gbps

5 ms

3 Gbps

1 ms

10 Gbps

TECHNOLOGY DEVELOPMENT

However the time to act is now

Adapting to the new technology requires transformation

In 2021 most developed countries will fully launch 5G, with a very developed ecosystem around 2022.

By then, only companies who have tested 5G, studied transformation ROI and redesigned their business processes will be able to fully benefit from the new technology. This evolutions take 1-2 years at least.

Current trials and PoCs are the foundation for remaining competitive when 5G is fully available.

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The most active industry segments in 5G

V2X

On the road
- Automakers
- V2X on OTT
- Platooning

Industry
- AGVs
- Straddle carriers / industrial vehicles
- Drone traffic

Industry 4.0 & Logistics

- Digital Twins
- Cloud Robotics
- Logistic robots
- Critical Coms PLC-Scada
- Optimization
- Quality control
- Edge Video Analytics: Supervision, quality control, asset tracking, fase recognition, tag IDs, etc...

TV, Media & Events

- 360º stream in sports/spectacles
- Life / News
- Automatic production
- Corporate events broadcast

Tourism & Entertainment

- AR, VR & 360º video for tourism and entertainment
- Mobile gaming
- eSports over 5G
- Cloud Gaming (Virtual Console)
- VR for virtual visits and service try&buy
- Spectacles in 360º , Movistar+
- Fixed Wireless Access
- Simultaneous translation

- Smart Cities, utilities, eHealth, education… they are all interested in 5G as well, but they have a longer way to go in digitalization, and hence, still slow in introducing 5G in their models (4G might be a necessary middle step).

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ELIGE TODO

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