



Networks 2020

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Technology: the next industrial revolution

From



Cities



Drones, smart contact lens...

5G Players – pre-standardisation (examples)



America: 4G Americas: Recommendations on 5G Requirements and Solutions” published on Oct 2014

China: International Mobile Telecommunications IMT-2020 (5G) promotion association established in February 2013.

Europe: European Commission 5G-Public Private Partnership (5G-PPP) established in 2013

Japan: Fifth Generation Mobile Communications Promotion Forum (5GMF), since September 2014 has been participated in by 60 companies as well as a large number of academic experts.

Global: International Telecommunications Union (ITU) and 3rd Generation Partnership Project (3GPP) look to spectrum allocation and technical standardisation of 5G.
Next Generation Mobile Network (NGMN) Alliance released white paper at MWC 2015 Barcelona

Korea: 5G Forum of Korea published “2015 5G White Paper”, including

- 5G New Wave towards Future Societies in the 2020s
- 5G Vision, Requirements, and Enabling Technologies
- 5G Spectrum Issues in Korea



There is a clear need for 5G: to evolve the mobile business & expand into new opportunities

Industry need



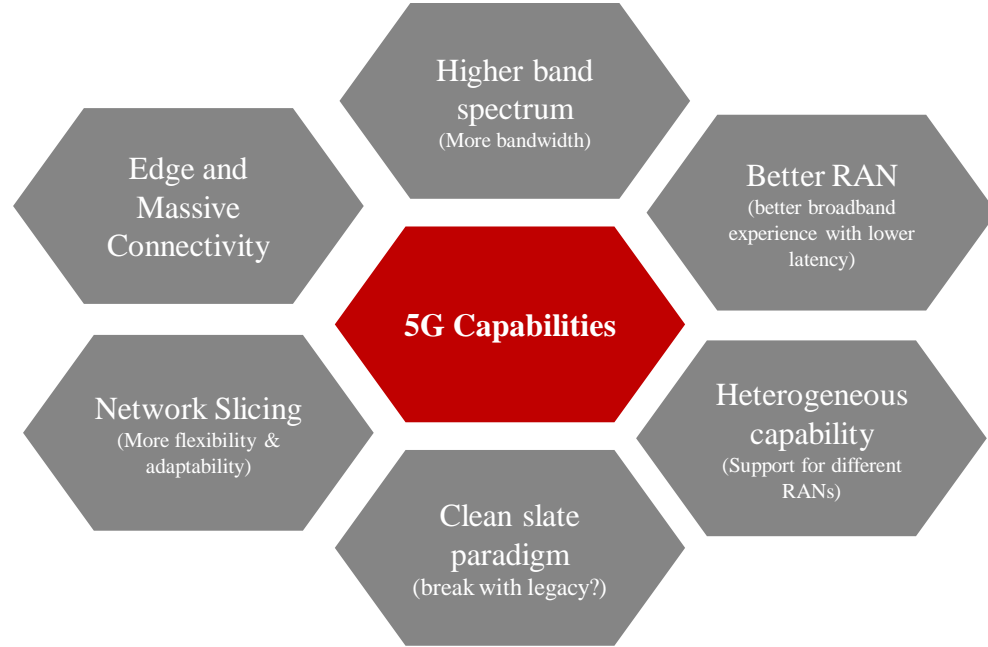
Provide better mobile broadband, profitably



Capture much more value from IoT



Enable next-generation services





On the path to 2020 new standards are emerging to support the Internet of Things (IoT)



based on eGPRS and designed as a high capacity, long range, low energy and low complexity cellular system for IoT communications.



lower device complexity and provides extended coverage, while allowing the reuse of the LTE installed base. modem costs reduced to 20-25%



significantly improves the power consumption of user devices, system capacity and spectrum efficiency, especially in deep coverage.

What will the network evolution in 2020 bring?

Increased data capacity



"It's my new hobby. Do something interesting. This is streaming live on the internet."

Low latency

What is Latency?

Then double it for the response time

Maximum total response time considered acceptable by service providers such as Google

1 second

Mobile Learning Lab

Increased data speeds



"Wow! We've never wasted time as fast as this before."

Ultra low cost M2M



"We have to go out for dinner, the refrigerator isn't speaking to the stove."

Multitude of devices



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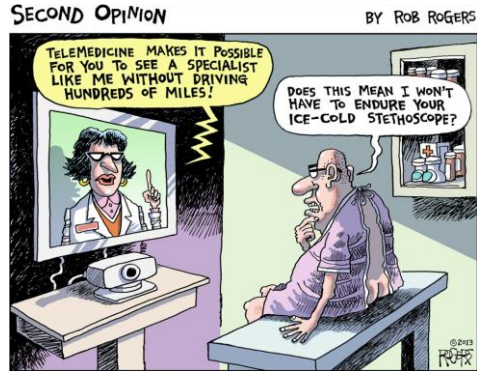
Increased M2M battery life



"You would not believe the battery life on this thing. I've been reading it for weeks!"

Independent living

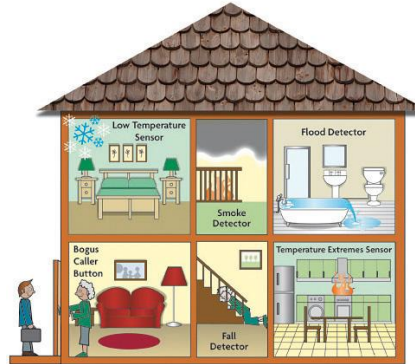
Telemedicine



Shopping & surroundings



Assistive sensors



Navigation and mobility



Medication assistance



Education and jobs



