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5G: Telefónica's position

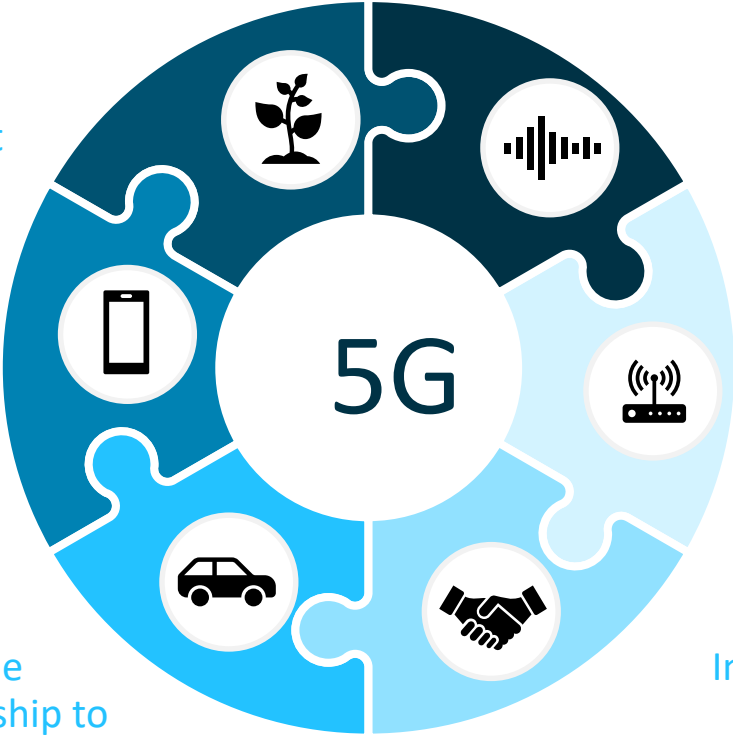
BEREC/IIC Conference, Riga

The 5G new opportunity requires standards, spectrum, pro-investment policies, use cases, devices and a trustworthy approach

6 TRUST & ENVIRONMENT
Setting energy friendly standards and deployments and overcoming health & trust concerns, for a totally networked society

5 DEVICES
Devices availability in the spectrum band used is mandatory before wide and broad 5G commercial launch

4 USE CASES
Industry involvement in promoting the whole ecosystem: innovation, openness & partnership to develop new digital business models and sources of revenues that are essential to make 5G a success



RADIO STANDARDS 1
To scale and be efficient, 5G requires a global standardisation process that is still ongoing. 4G technology will coexist in a dual connectivity 5G-LTE approach

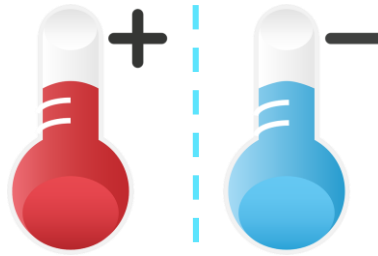
SPECTRUM 2
An essential scarce resource needed at the right time, in fair conditions & price, for more capacity and to wirelessly connect people & devices for a vast number of services

INVEST & DEPLOYMENT POLICIES 3
Investment friendly regulation, fibre “backhaul” availability and a deployment permits responsive approach

Making the right regulatory choices will be critical for 5G

POTENTIAL MEASURES CONDUCIVE TO INVESTMENT

- Facilitating **network sharing agreements**, including for coverage obligations and mobile backhaul
- Easing and promoting **small cells deployment**
- **Fostering fibre deployment** to connect Mobile base stations & small cells
- **Spectrum licenses** duration extention in addition to **pay when available** and reasonable coverage obligations



POTENTIAL MEASURES DETRACTING INVESTMENT

- Inflated **spectrum prices**
- Spectrum fragmentation through **reservations for verticals**
- Artificially promoting competition:
 - **Reduced coverage obligations** for new entrants
 - **Mandatory national roaming** obligations

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