

# Making the 5G Action Plan a reality

## 5G Techritory

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European 5G Observatory

# European 5G Observatory

- *Announced by Commissioner Gabriel at Mobile World Congress 2018*
- *Today, online platform is **live** on <http://5gobservatory.eu/>*
- *The first Quarterly Report published*
- *The scope: to monitor, in the context of the 5G Action Plan:*
  - Main 5G market developments in the EU and internationally;
  - 5G pre-commercial trials and commercial 5G launches;
  - National strategies and roadmaps by the EU MS;
  - Spectrum assignments by public authorities

# Main findings

- *Pre-commercial 5G trials:*
  - 114 trials and pilots reported in EU28 by mid-September;
  - 20 Trial Cities identified in 11 EU MS;
  - 10 digital cross-border corridors identified for Connected and Automated Mobility
- *National strategies and plans:*
  - Acceleration with additional national 5G roadmaps in 2018 (now 8)
- *Spectrum assignments:*
  - 5G spectrum assignments starting in 2018, but a lot of work ahead

The logo features the text '5G' in a stylized blue font. The '5' is larger and partially overlaps the 'G'. To the right of the text is a blue telescope icon pointing upwards and to the right, with several yellow stars of varying sizes scattered around it.

European 5G Observatory



European  
Commission

# **Annex: 5G Observatory Scoreboards** **(source: IDATE, <http://5gobservatory.eu/>)**

## 5G trials

- More than 110 pre-commercial 5G trials and pilots launched in Europe as part of the industry's 5G trial roadmap
- 20 Trial Cities appointed: Amsterdam, Aveiro, Barcelona, Bari, Berlin, Bristol, Espoo, Ghent, L'Aquila, London, Madrid, Malaga, Matera, Milan, Oulu, Patras, Prato, Stockholm, Tallinn and Turin
- 10 "digital cross-border corridors" established inter alia accommodating live tests of 5G for Cooperative Connected and Automated Mobility

## 5G spectrum plans

- 5G pioneer bands identified in Europe (700 MHz, 3.6 GHz and 26 GHz)
- Common roadmap for the availability of spectrum adopted by Member States
- Consultations on spectrum assignments launched by Member States (Denmark-700 MHz & 900 MHz & 2300 MHz, Germany-2 & 3.6 GHz, France-3.5 GHz & 26 GHz, Lithuania-3.5 GHz, Luxembourg-700 MHz & 26 GHz, Malta-700 MHz, Poland-700 MHz & 3.5 GHz & 26 GHz, Portugal-700 MHz, Romania-700 MHz, Slovakia-26 GHz, Slovenia, Sweden-26 GHz, UK-26 GHz)
- 3.5 GHz spectrum already assigned in 7 MSs (Czech Rep., Hungary, Ireland, Latvia, Slovakia, Spain, UK)
- 3.5 GHz auctions scheduled for Q4 2018 in 4 MSs (Austria, Finland, Italy, Sweden)
- 700 MHz spectrum already assigned in Finland, France, Germany and Sweden

## 5G coverage, roadmaps and national plans

- 8 Member States have already published specific national 5G roadmaps (Austria, France, Germany, Luxembourg, Netherlands, Spain, Sweden, and the UK), and several others are in the process:
- National calendars for key milestones set by the government
- Measures to stimulate investments in 5G infrastructures such as: reducing the cost of deploying small cells; wide-ranging support to 5G trials
- Promoting partnerships between the telecom sector and vertical industries
- Foster public services as a lead user for early 5G deployment

*More information is available on the [European 5G Observatory \(http://5gobservatory.eu/\)](http://5gobservatory.eu/), which has been set up by the Commission to provide qualitative and quantitative information on:*

- *Actual and expected market developments*
- *Initiatives and preparatory actions taken by private and public actors in the area of 5G*

## Scoreboard – International markets [DRAFT]

### 5G trials and timelines

#### USA:

- Verizon 5G Home launches on Oct. 1st 2018
- AT&T 5G expected late 2018/early 2019
- Sprint and T-Mobile H1 2019

#### China:

- 2019 for pre-commercial, 2020 for true commercial launch
- China Mobile ahead

#### Japan:

- Planned in August 2020 for the Olympic Games

#### South Korea:

- March 2019

#### Brazil:

- After 2020

#### Saudi Arabia:

- licenses issued in May 2018, H2 2019

#### Qatar:

- Ooredoo's 5G network launched in May 2018

#### UAE:

- Limited 5G service H2 2018

#### India:

- 2022?

### 5G spectrum plans

#### USA:

- Spectrum plans disclosed in 2016: November'18 auctions for the 28 and 24 GHz bands, Options considered for 3.7-4.2 GHz
- Commercial launch planned by Verizon: 28 & 39 GHz, T-Mobile in the 600 MHz band, AT&T: 39 GHz

#### China:

- Launch: 3.3-3.6 GHz and 4.8-5 GHz

#### Japan:

- NTT DoCoMo 28 GHz & 4.5 GHz, KDDI 4.5 GHz

#### South Korea:

- 3.4-3.7 GHz & 28 GHz

#### Saudi Arabia:

- 700 MHz & 3.6-3.8 GHz

#### Brazil:

- 15 GHz & ?, After 2020

#### India:

- Initial discussions on spectrum

**More info:** <http://5gobservatory.eu/>