

Press release

## 5G

### **Launch of 5G commercial offers and Arcep's first publication of the 5G deployment Observatory**

Paris, 16 December 2020

In November 2020, mobile operators were awarded licences to use 3.4 – 3.8 GHz band frequencies. These awards were carried out by Arcep based on financial objectives and conditions (including the reserve price) set by the Government. In the wake of these licence awards, operators began to launch their first commercial services, opening their 5G networks to the public between late November and mid-December 2020.

#### **An Observatory of 5G and 4G+ commercial deployments, to keep local authorities and citizens apprised of the arrival of 5G in their area**

To keep track of the progress being made on 5G rollouts, and efforts to upgrade network connection speeds, the Government and Arcep wanted to create a dedicated Observatory, produced by Arcep. Today, it is publishing the first edition of this Observatory of 5G and 4G+ commercial rollouts, which will be updated every three months during the initial phase of 5G deployment. This Observatory is a way for elected officials and citizens to stay informed about the arrival of 5G in their area. It is designed to provide a clear national and regional view of the locations where operators<sup>1</sup> have opened their sites commercially to the public, and are providing users with actual 5G services. Additional information can also be obtained on the administrative authorisations obtained prior to a mobile service's commercial launch, issued by the National Frequency Agency (ANFR).

The Observatory contains a series of indicators:

- The number of 5G cell sites that each operator has activated, and the frequency bands they use (3.5 GHz bands, low-range bands, mid-range bands);
- A regional mapping of commercially available 5G cell site deployments, by operator;
- The number and percentage of 4G cell sites in operators' network that are providing increased throughput and equipped with a theoretical capacity to supply speeds of 240 Mbit/s (4G+)<sup>2</sup>;
- A regional mapping of all of operators' cell sites, and distinguishing those that are outfitted for 4G+.

Thanks to this set of indicators, users will be able to compare operators' 5G commercial rollouts. Consumers and elected officials will thus be able to view operators' different strategies, and stay informed about the arrival of 5G in their area.

The Observatory will be updated every three months over the next half year and, in 2021, it will be expanded to include information on operators' rollout forecasts.

#### **Operators' different strategies depending on the frequency bands used and the location of their cell towers**

The Observatory being published today also highlights operators' different strategies with respect to the frequency bands they use: if all four operators have deployed cell sites using the 3.5 GHz band, they are also employing lower frequencies to supplement that band. Bouygues Telecom, Orange and SFR are making use of the 2.1 GHz band, and Free Mobile stands out for its use of the 700 MHz band. Lower frequency bands provide better indoor coverage but at speeds that cannot rival those delivered by higher frequency bands like 3.5 GHz. These different frequency bands each have their own set of assets, which are summarised in the following tables.

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<sup>1</sup> "Commercial launch" may not be the same thing as "activation" notably when a cell site is not open to the public (e.g. when being used for trials).

<sup>2</sup> Starting in 2022, at least 75% of cell sites must be equipped to each deliver speeds equal to a minimum 240 Mbit/s: operators can provide this level of performance either in 5G or 4G+. This obligation will gradually be extended to include all cell sites by 2030, at which point every one must be supplying a 5G service.

Fréquences	Pénétration à l'intérieur	Portée	Débit	Attribution aux opérateurs	Beamforming
700 MHz Déjà attribuée aux opérateurs depuis 2015, elle est pleinement disponible depuis mi-2019	★★★★	★★★★	★	✓	✗
3-5 GHz Elle offre un bon ratio couverture/débit et est souvent identifiée comme la bande "cœur 5G"	★★	★★★	★★★	✓	✓
26 GHz Jusqu'à présent utilisée pour les liaisons satellitaires ou d'infrastructures, elle permettra des débits très importants dans les cellules de petite taille	★	★	★★★★	✗	✓

Fréquences	Date	Pénétration à l'intérieur	Portée	Débit maximum
600 MHz	Attribuée dès 2012	★★★★	★★★★	★
900 MHz	Attribuée dès 1986	★★★★	★★★★	★
1,8 GHz	Attribuée dès 1994	★★★	★★★	★★
2,1 GHz	Attribuée dès 2001	★★★	★★★	★★
2,6 GHz	Attribuée en 2012	★★	★★	★★

Operators' strategies also differ when it comes to the location of their cell sites, notably 3.5 GHz ones: operators do not all necessarily cover the same cities. Orange and SFR are concentrating their sites in a few major cities, but in a highly dense fashion, while Free, and Bouygues Telecom to a lesser extent, are opting to spread themselves out over a larger number of cities.

Lastly, the consultations held with the local population in several cities, including Bordeaux, Lille, Nantes and Paris are also highlighted in the Observatory. Thus far, operators have taken these consultations into account, and have not yet opened any 5G sites commercially in those cities.

**Additional resources to keep users informed: Arcep recommendations on 5G coverage maps and the "Let's talk 5G" (*Parlons 5G*) dedicated web page**

In addition to the information published in this Observatory, the Government and Arcep encourage consumers to consult operators' coverage maps to find out the exact location where a service will actually be available, and the level of service provided in each of these locations. To this end, Arcep issued a series of recommendations<sup>3</sup> in October, in concert with the Directorate-General for Enterprise and the Directorate-General for Competition, Consumer Affairs and Fraud Prevention.

In their first maps, operators have followed one of the key recommendations, namely to represent different levels of service – which they have done by distinguishing the different frequency bands used to supply 5G services. The Government is encouraging operators to make these maps more visible, to help consumers in their decision-making process for 5G mobile plans and devices. Arcep also invites operators to provide more detailed and finely tuned information, first on the different levels of service provided, e.g. by indicating the maximum speeds achievable with each frequency band, whose publication warrants being more systematic and clearer. Regarding rollout forecasts, especially in those cities where a public consultation is underway, it must be made clear to consumers that 5G coverage is not available there and that the official launch timetable has not yet been set. This information must be presented in a different way from the information provided for areas where services have already been launched, or scheduled to be under a definitive timetable. Finally, Arcep will be working in the coming months on implementing a legally binding framework to define the content and verification procedures for 5G coverage maps.

To make it easier for everyone to understand available offers, and to appropriate this new technology, Arcep is also making a range of educational resources available on its website, notably on its FAQ "Parlons 5G"<sup>4</sup> (Let's talk 5G) FAQ page

**In early 2021, the Observatory will be expanded to include information on each operators' planned deployments**

The licences to use 3.5 GHz band frequencies that were awarded in November carry unprecedented deployment transparency obligations for mobile operators (5G rollouts in the 3.5 GHz band, but also on all bands and for all technologies). This is a new item in the specifications adopted by Government, to provide the regions with greater clarity and predictability going forward.

As a result, in early 2021 the Observatory will include information on the location of the sites where operators are planning a service launch in the next three months, and the available technology.

<sup>3</sup> [https://en.arcep.fr/fileadmin/user\\_upload/grands\\_dossiers/5G/lancement-5G-recommandations-arcep\\_ENG\\_oct2020.pdf](https://en.arcep.fr/fileadmin/user_upload/grands_dossiers/5G/lancement-5G-recommandations-arcep_ENG_oct2020.pdf)

<sup>4</sup> <https://www.arcep.fr/nos-sujets/parlons-5g-toutes-vos-questions-sur-la-5g.html>

According to Cédric O, the Secretary of State for the Digital Transition and Electronic Communications: “*The Government wanted a 5G launch that was both ambitious and that respects demands for transparency and dialogue. We are committed to meeting these demands, and operators are fully on board. More than 7,500 sites are now open across the country, including outside the major cities. The Government remains vigilant about keeping local authorities fully informed on 5G deployments.*”

Arcep Chair, Sébastien Soriano, added: “*There is reason to celebrate the rivalry between operators over this launch, a sign of healthy competition that will benefit users. Operators have committed to a real dialogue with local authorities and to ensuring transparency through their first maps. Arcep will continue to support the sector through the next stages of 5G.*”

## **Associated documents**

- [Arcep Observatory](#)
- [Parlons 5G/Let's talk 5G](#)
- [Arcep recommendations on 5G coverage maps](#)
- **Operators coverage maps:**
  - [Bouygues Telecom](#)
  - [Free Mobile](#)
  - [Orange](#)
  - [SFR](#)
- [ANFR Observatory](#)

## **Arcep at a glance**






The Regulatory Authority for Electronic Communications, Postal Affairs and Print Media Distribution (Arcep), a neutral and expert arbitrator with the status of independent administrative authority (IAA), is the architect and guardian of internet, fixed and mobile telecoms and postal networks in France.

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