ARCEP's response to the consultation for the global symposium for regulators 2021 (GSR-21) best practice guidelines on "Regulatory uplift for financing digital infrastructure, access and use".

1 Inducing new, effective and agile financing mechanisms to digital infrastructure, access and use

1.1 Frequency allocation: binding commitments for spectrum licences

The French regulator for telecommunications and the post (*Autorité de régulation des communications électroniques, des postes et de la distribution de la presse*, ARCEP) has leveraged mobile frequency allocations to introduce binding obligations for operators, backed up by ARCEP sanctions in the event of non-compliance.

"New deal mobile"

Mobile coverage and the quality of mobile services are at the heart of ARCEP's priorities and among the key objectives as regards national connectivity. In January 2018 the State and operators announced "New deal mobile"[1], a programme based on ARCEP proposals that makes **regional development a priority in the licensing conditions for operators bidding for mobile spectrum, rather than strictly financial criteria**. Spectrum licences coming up for renewal on a horizon of several years included the 900 MHz, 1 800 MHz and 2.1 GHz bands.

The twofold objective was to improve mobile voice and data services and to use 4G to achieve service improvements for fixed Internet access.

Concretely, the programme includes commitments to improve coverage along transport routes and inside buildings, to bring in 4G on all mobile sites, to progressively improve the quality of service across the mobile networks, and to **target underserved areas**.

Operators signed on to these commitments, and from July 2018 on, the commitments were incorporated in the licensing agreements then being negotiated. Following an invitation-to-tender procedure, ARCEP on 25 October 2018 awarded 10-year spectrum licences in the 900 MHz, 1 800 MHz and 2.1 GHz bands to the four mobile operators active on the continental French market.

All obligations, whether entered into by mobile operators who committed themselves at the outset or enshrined in the new licences, thus have a binding character, backed up by the threat of ARCEP sanctions in the event of non-compliance.

Allocations in the 3.4-3.8 GHz band[2]

The procedure for allocating these frequencies was required to address objectives established by the national government as regards regional development, competition, innovation and services for 'vertical sector' players, and the revenue generated. The selection process was defined by ARCEP, and relied on a mix of criteria, going beyond a purely monetary auction. It took the form of a first round involving **optional commitments in exchange for spectrum**, whereby a single 50 MHz block could be acquired at a fixed price of EUR 350 million. This was followed by a second round of bidding for additional spectrum. The **optional**

---

1 https://www.arcep.fr/uploads/tx_gspublication/description-dispositif-couverture-mobile-220118.pdf (in French)

2 https://www.arcep.fr/fileadmin/cru-1618480032/user_upload/grands_dossiers/5G/dossier-de-presse-5G_28092020.pdf (in French)

commitments[3] were then transferred to the spectrum licensing agreement, becoming **mandatory terms** for the winning bidder.

1.2 The co-investment mechanism on the fibre-optic market

To meet the connectivity objectives established at the national and the European level while ensuring that the markets for high and very high-speed fixed communications remain competitive, France has set up a regulatory framework for optical fibre and adopted a national plan to develop digital coverage, the *Plan France Très Haut Débit* ("very high-speed plan for France").

The regulatory framework for optical fibre has two complementary pillars: an **asymmetrical regulatory scheme that makes it an obligation to grant access to the civil engineering infrastructure of the historical incumbent**, Orange (cost-oriented tariffs), and a **symmetrical regulatory scheme that makes it an obligation to grant access to and co-investment in** the terminal/vertical portion **at a reasonable tariff and under non-discriminatory conditions**. The objective is to create incentives for operators to make passive investments in the deployment of FTTH networks, thus providing for a viable competitive equilibrium with two or more players capable of providing presence at the curb. The framework identifies different types of zones, depending on the intensity of competition. In high-density zones sharing of the terminal segment of the FTTH network begins at the curb, while in low-density zones it begins before the curb and covers more of the terminal portions of the networks. To ensure that this innovative model can succeed, general principles regarding access offers have been established for co-investment in low-density zones. To respect the "ladder of investment" principle in access offers, infrastructure operators must make available access under conditions covering both the long term (co-financing offers) and the short term (passive leasing offers). Co-financing offers allow the different operators who use the shared infrastructure to split the costs and risks associated with the investment. They also protect healthy, effective competition, as investment opportunities remain available throughout the lifetime of the network, comprising both *ab initio* and *ex post* co-financing (tariffs charged to late-joining investors can include a risk premium to reward the initial investor). Such access offers also ensure that the ladder of investment functions well, by making it possible to invest in a limited number of access points in a given investment grid. In practice, co-financing offers today are proposed by slices of five per cent.

2 Prototyping regulatory patterns for the post-COVID-19 digital world: 5G pilot projects

To allow all of the players—operators, manufacturers, start-ups etc.—to prepare for the arrival of 5G, in early 2018 ARCEP rolled out its "5G pilot project" interface, which allows the regulator to issue licences for portions of the spectrum that have been identified for 5G.

For the 26 GHz band, after ARCEP and the government jointly launched a call for proposals in January 2019, ARCEP issued the first licences for operation of open 5G trial platforms to begin. These are trial networks which have received a long-term (up to three years) spectrum use licence. **The participants undertake to allow third parties** (i.e. someone other than the licence-holder) **to use the trial network for purposes of trialling their own 5G use cases.**

Logistics, smart cities, mobility, sports coverage: the call for trial platforms to be created has led to the emergence of 15 projects, for which ARCEP has allocated spectrum. In addition to the traditional telecommunication players (mobile network operators and providers of telecom equipment), several projects are sponsored by 'vertical sector' organizations or consortia from beyond the telecommunication world.

---

[3] Offers of access to "vertical sector" players (industry, communities, etc.), indoors coverage, fixed access offers, network sharing in underserved zones, transparency on technical breakdowns, deployment schedules, openness to mobile virtual network operators.

3 Transformational leadership to unleash the power of emerging technologies and business models: data-driven regulation

As mentioned in the response to the 2019 GSR guidelines consultation[4], ARCEP has implemented collaborative regulation through **data-driven regulation**, combining player accountability, strengthened analytical capacity for the regulator, and the mobilization of users and civil society.

As explained in that document, the principle is to **harness the power of information to steer the market in the right direction**. In practice, this means not only gathering more precise information from the players regulated, but also expanding the data sources, for example by employing crowdsourcing and more refined data processing tools. Data-driven regulation has two major objectives: to amplify the regulator's capacity to act, particularly in a supervisory role; and to inform users' choices, steer the market better, and ensure a return on investment.

In recent years, this new regulatory tool has served to monitor the quality of service and coverage of mobile and fixed telecommunication networks via the Internet sites "monreseaumobile" and "maconnexioninternet", and has been used in the development of a reporting platform called "J'alerte l'Arcep".

This platform allows individual users, businesses and communities to report problems in their interactions with fixed, mobile, Internet and postal operators. In November 2020 the platform was opened to new categories of users: application developers, telecom operators and consumer associations.

The platform gives users a chance to make a contribution by sharing their experience with market regulation, creating an incentive for operators to improve their services and develop their networks. As an outcome, the users are provided with a list of tips appropriate to their situation.

The reports received give ARCEP a real-time window on the difficulties encountered by users, so that problem areas and concentrations can be identified. The objective is for the regulator to improve the targeting and effectiveness of its work with the operators.

_____

4 https://www.itu.int/en/ITU-D/Conferences/GSR/2019/Documents/France_Contribution-GSR-19_E.pdf