

ARCEP response to the consultation for the 2023 Global Symposium for Regulators (GSR-23) best practice guidelines, “Regulatory and economic incentives for an inclusive sustainable digital future”

1 Regulatory and economic incentives to stimulate the deployment of digital infrastructure, especially in rural and isolated areas

Narrowing the digital divide is an important challenge for territorial cohesion policy. To accelerate the digital transformation, it will be essential to make access to high-quality fixed and mobile Internet available to all, everywhere - including rural and isolated areas. In addition, network resiliency will have to be improved, particularly with an eye to climate issues. In the pursuit of this goal, the universal service mechanism is not the only mechanism, nor indeed the most important one; it is a safety net, but other public policy tools, such as digital territorial planning are at least equally important.

1.1 Fixed: call for expressions of intention to invest in optical fibre

To meet the connectivity goals that have been established at the national and European level while preserving vigorous competition in the high-speed and very-high-speed fixed markets, France has put in place a regulatory framework for optical fibre and a plan for digital territorial development across the entire country, the *Plan France Très Haut Débit*. The fibre-optic regulatory framework, designed to prevent duplication of the infrastructure outside high-density zones while ensuring network completeness, rests on two complementary pillars: **asymmetric regulation** mandating access to the civil engineering infrastructure of the incumbent operator, Orange (cost-oriented tariffs); and **symmetric regulation** mandating accessibility and **co-investment** on the terminal/vertical part at a reasonable tariff and with non-discriminatory conditions.

The modalities and obligations for the deployment of optical fibre depend partly on the **geographic zone**, particularly as regards the network architecture; this is to take into account differences among the zones, particularly the population density.

In the interests of an **efficient organization of deployment** in the various geographical zones and to **avoid duplication**, since 2011 private operators have been indicating their intentions regarding the deployment of FTTH networks and in some cases have commenced deployment to portions of the less-dense parts of the country; these territories constitute the category of less-dense zone earmarked for private-sector development. It was initially defined following a Government **call for expressions of intention by private investors** (*appel à manifestation d'intention d'investissement* or AMII) that aimed to **identify projects for the deployment of fibre-optic networks outside the high-density areas that would be operator-funded**. **The expressions of intention by the operators led to commitments** for deployment within defined, **legally binding** municipal regions. ARCEP is there to monitor fulfilment of those obligations, backed up by sanctions for non-compliance.

Finally, outside the high-density zones, for private and public-sector-funded investments alike, the regulatory framework imposes the **obligation to ensure complete deployment** for end-to-end fibre-optic networks at the local level down to the point of interconnection. This obligation is a **central element of the regulatory framework for FTTH networks** that addresses territorial development objectives by guaranteeing the availability of such a connection to all.

1.2 Mobile: the targeted coverage mechanism

Operator authorizations generally include an obligation to cover a certain percentage of the population. Such an obligation is not always enough to meet actual user requests and needs. For this reason the **paradigm of operator obligations** was modified so as to **optimize targeted deployment** and meet expectations in the most appropriate manner possible.

In January 2018, as the spectrum arrangements were being renewed, ARCEP and the Government announced commitments undertaken by operators to ramp up mobile coverage across the continental territory of the country. In exchange, the State dispensed with auctions and promised stable fees for spectrum use by mobile operators. This was dubbed the “mobile New Deal” in France. These commitments were incorporated in the current licences to make them legally enforceable. Among the operators’ new obligations is a “**targeted coverage mechanism**” to significantly improve local coverage in zones for which **local or other government has identified** unmet needs in terms of digital territorial development.

This mechanism is intended to provide a targeted and appropriate response to the collective expectations of inhabitants and local government regarding mobile connectivity. **There is one major change in method:** after the local governments have identified their needs, the national minister responsible for electronic communication establishes the list of zones to be covered. The targeted coverage mechanism is implemented under the guidance of the *Mission France Mobile*. In this way, every operator is made responsible for providing coverage to 5 000 new zones with new sites, **some of which are shared**. More than one operator can be assigned to a single zone, in which case those sites are made available for passive sharing, as a minimum.

For each listed zone, the designated operators must provide “good coverage”¹ for voice and SMS services and very-high-speed mobile access, i.e. at least 4G; and they must cover all costs arising from the provision of the services.²

2 Incentives to ensure the introduction of emerging ICT technologies and business models

2.1 5G test beds

To give the various players from the worlds of innovation, industry and ‘verticals’ an opportunity to master 5G-related technologies and the new use cases they allow, and to allow them to capitalize on each other’s experiences, ARCEP opened two test beds (*guichets d’expérimentation*), one in the 3.8-4.0 GHz band and the other in the 26 GHz band. These allow future candidates to file spectrum licence applications to ARCEP **in a streamlined framework, on a temporary basis and subject to availability**.

In the 3.8-4.0 GHz band, candidates can apply for a maximum of **100 MHz in the form of a local licence to use frequencies on a trial basis for up to three years**. In the 26 GHz band, long-term licences have been granted to experimental 5G networks in exchange for a commitment to allow ‘third parties’ (non-licence-holders) to use the experimental network to test their own 5G use cases.

2.1 Allocation of 5G core band (3.4-3.8 GHz)

The licence requirements that ARCEP submitted to the Government for allocations in the 3.5 GHz band included a number of obligations that apply to all licensees, in particular the following:

- milestones for the number of sites to be deployed within two, four and five years, with at least 25% of the latter two being in a zone that includes low-density and industrial land outside the major urban areas;
- activation of slicing or differentiated services by the end of 2023.

¹ i.e. allowing for communication to take place outdoors, and in some cases indoors

² As of 30 September 2022, 3 795 zones were listed by the ministry, and mobile operators had covered 1 787 of them with 3G or 4G sites. Most of those sites (1 651) are shared between the four operators.

3 Digital sustainability for a sustainable and inclusive digital future

More and more regulators are treating sustainability and inclusiveness as a top priority for the digital future. For its part, ARCEP is engaged in up-skilling and mainstreaming environmental considerations in the telecom regulation process. The objective is to bring about an evolution in usage behaviours combined with a reduction of the environmental footprint of digital. This focus is shared within the Body of European Regulators for Electronic Communications (BEREC) through its published reports and ongoing projects.

Without wishing to underestimate the contribution already made by the digital world in terms of innovations in the fight against global warming, the fact is that the industry will need to make efforts to reduce its environmental footprint, as the size of its impact continues to grow exponentially.

This will be a progressive and collaborative process aimed at acquiring new types of expertise. Regulators need to be able to measure the impact that digital has on the environment to identify what options area available, strengthening the reliability of the data available and harmonizing methodology. They also need to be able to act as neutral experts, contributing to discussions and action in the public domain and increasing awareness among the stakeholders through technical analysis and through the collection and sharing of data.

It is therefore essential that regulators be empowered to collect data from all over the digital sector for the purposes of lifecycle analyses and that they support market players in mastering and using **the most relevant measurement and methodology baselines, particularly ITU standards**.

Examples of such expertise include a three-part joint ARCEP-ADEME report evaluating the current impact of digital on the environment overall, with forecasts to 2030 and 2050, and the March 2023 publication of the first report from the technical expert committee led by ARCEP and ADEME, "Understanding the methodological differences in measurement of the environmental impact of digital", concerning a shared approach to such measurements so as to improve modelling of the impact.
