

ARCEP response to the Global Symposium for Regulators (GSR-18) best practice guidelines consultation on new regulatory frontiers to achieve digital transformation

The French electronic communications sector has in recent years undergone very rapid evolution marked by the country's digital transformation and the rapid emergence of the Internet of Things (IoT). It is now preparing to implement the fifth generation of mobile communications (5G), which is likely to be a disruptive technology. These developments call for a change in the regulator's approach, in particular **by encouraging operators to invest, giving priority to innovation and developing new modes of intervention.**

The digital transformation of France requires the construction of suitable infrastructure as well as an effort to meet the challenges of modernization of the economy and the ever-increasing demand for connectivity. ARCEP has accordingly sought to place investment in next-generation infrastructure at the focus of its priorities by establishing **pro-investment regulation**. ARCEP also takes the view that the regulator, in carrying out its mandate, must also **promote innovation**, the development of new services, and adaptation of those services to users' needs.

Promoting investment in fixed and mobile networks: Improving connectivity and meeting users' expectations

In the light of the situation of the French telecom market, ARCEP has opened up access to existing infrastructure and defined a stable and legible framework for the deployment of future superfast fixed networks (FTTH network) and mobile networks (4G, with 5G on its way). The regulator still seeks to strike a balance between competition for infrastructure and infrastructure sharing so as to ensure efficient use of resources. That approach has been given concrete expression by measures to support mobile network sharing through guidelines, regulation of the optical fibre market that favours a model of co-investment and of regulated access to civil engineering works, as well as an agreement between the Government and operators to speed up expansion of superfast mobile coverage. The latter was signed at the beginning of 2018, and in return the Government has agreed to auction frequency bands that are due to expire in the near future.

An approach that is flexible and appropriate in order to promote innovation

Innovation is a key lever for achieving long-term growth in a sector. The possibility of decentralized innovation in networks is essential for the development of digital tools and services based on innovative business models. In addition, increased speed of networks gives rise to a virtuous cycle of development of new uses, which in turn encourages further innovations in the networks.

This means, in ARCEP's view, that innovation should not be impeded, and nor is it within the regulator's remit to determine or choose what the future industry should look like. That is why ARCEP, with a view to preparing the way for these future technological revolutions, has preferred to adopt a flexible approach appropriate to these new technologies in their early stages of development. This means above all an effort to promote understanding, openness and clarity. In the interest of promoting innovation, **the regulator's role should be, above all, to enable and facilitate**. The regulator's primary job is not, by its actions, to influence the choice of technologies, which must as far as possible be determined by the market. The regulator's activity must therefore be as neutral as possible and offer the best possible protection for

innovation, and must pay due regard to consumers' interests. Proactive measures and exchanges with all players in the value chain in the sector (start-ups, competition hubs, manufacturers, operators, as well as users) are thus key elements for knowing and understanding the emerging ecosystem. The aim is to ensure that there is no impediment to the latter's effective self-organization, and to identify the potential framework measures that may be needed to enable innovation to develop.

By the same token, when ARCEP, in its role as guarantor of network neutrality, emphasized that terminals enabling users to access and provide content and services on line might be a "weak link" in efforts to open up the Internet, the broad areas of action envisaged to ensure the open nature of the Internet were intended to respect the goal of making government intervention flexible and responsive.

ARCEP accordingly has proposed, first, introducing greater transparency into the sector's practices as regards opening up the Internet. Secondly, it has proposed that virtuous behaviour in bringing about Internet openness should be encouraged, by easing migrations between operating systems. Thirdly, it has proposed direct intervention to remove restrictions though targeted action with the aim of maintaining a vibrant and diverse Internet. Lastly, ARCEP has proposed to establish a rapid-intervention dispute settlement procedure where disputes arise.

Another important lever which the regulator can use to encourage innovation is provided by **rules of access to scarce resources** (frequencies, telephone numbers, IP addresses, and so on). The aim is to prevent moves to preempt the value chain by certain resource holders and to keep sufficient flexibility to set innovation free, so that new uses and new technologies can be conceived, designed, tested and deployed. Access to spectrum resources in particular is essential for proposing effective and innovative communication services. Beyond the question of mobile connectivity, ARCEP should therefore make available to the entire ecosystem enough frequencies to meet all the challenges and define the relevant conditions of use and technical parameters according to specific uses. As regards IP addresses, the success of the Internet, the diversity of usages, and the proliferation of connected objects have resulted in the progressive depletion of IPv4 addresses. It is for this reason that ARCEP wants to help speed up deployments of IPv6 in France, in particular through its observatory.

New tools available to ARCEP: "5G pilot projects" interface, "start-ups and experiments" interface, the "regulatory sandpit" and the "free frequencies" site.

ARCEP has launched a number of ongoing projects such as the "5G pilot projects" interface enabling all players in the 5G value chain to learn about specific cases of use and future challenges of this next generation under real-life conditions, and to allocate frequencies to interested players for the purpose of full-scale deployments and obtain initial feedback to aid reflection and design of future ARCEP allocations; a "start-ups and experiments" interface to support start-ups, enterprises and communities in their experimental initiatives; a regulatory "sandpit" for enterprises wishing to test a given technology or innovative service without being bound by all the regulations that would normally apply; and a "free frequencies" site dedicated to bands subject to general authorization for informing stakeholders and for hosting information provided by IoT stakeholders or for reporting on quality of service issues in these bands.

New means of intervention: Regulation by *data*

In order to ensure the sector's competitiveness through investment-friendly competition, ARCEP has sought to develop its means of action and intervention. In order to carry out its mandate in the current age, ARCEP has to listen to its fixed and mobile Internet users, be able to pick up faint signals, and provide the most detailed and transparent information in order **to make every citizen a micro-regulator**. Regulation by *data* complements the regulator's traditional tools. Its principle is: exploit the power of information to nudge the market in the right director. Two ARCEP projects embody this approach: maps available at the site "monreseaumobile.fr" enable users to compare coverage and quality of service of mobile networks; and the reporting platform "*J'alerte l'Arcep*" enables every user to trace malfunctions in links with operators. ARCEP also runs a "crowdsourcing" ecosystem for measuring Internet quality. These tools need to be further developed. ARCEP is also currently

developing an observatory for mapping territorial coverage of fixed networks and services with a view to providing consumers, businesses and communities with a better overview of current networks and of new ones as they emerge. This innovative regulation can also be applied to the new regulatory frontiers initially by collecting information and monitoring practices of digital stakeholders with regard to users. Soft regulation tools, using scoring and other such means of presenting feedback, could provide a means of disciplining the conduct of the most powerful players.