

## CONTRIBUTION FOR THE GLOBAL SYMPOSIUM FOR REGULATORS (GSR-19)

The Supervisory Agency for Private Investment in Telecommunications (OSIPTEL) of Peru submits the following contribution on the theme of "Fast forward digital connectivity for all".

### 1. **Principles for collaborative regulation**

Based on the premise that State-established regulatory frameworks cannot usually keep pace with technological progress and innovation, it is important that regulators consider shifting from a rigid, vertical form of regulation to one based on constant adaptation to the rate of industrial and technological development; and this adaptation can be optimized through collaboration founded on the following principles:

- *Coordination, cooperation and leadership:* The starting point for collaborative regulation must be unprecedented coordination whereby all sectors in which digital services are provided cooperate proactively in an environment which inspires leadership, characterized by a clear unity of purpose, where the actors involved are all moving in the same direction, namely towards achieving cross-cutting goals (in terms of quantity and time-frame) sanctioned by the central government, within an institutionally robust framework (with very solid legal bases). For example, an advisory board could be established, comprising various departments of the national government, the private sector, academia and civil society, for the development of instructions and strategic guidelines, together with a committee to ensure implementation of those strategies. The board and committee must have the necessary mandates to drive coordinated, coherent and efficient implementation of strategies across different areas and sectors.
- *Dialogue, inclusiveness and balance:* Collaborative regulatory frameworks must be built on dialogue that not only takes on board the views of the main players and experts in

digital transformation, but must also be inclusive of the most vulnerable layers of society, in a context where innovation and the creation of new business and service models does not impinge on the fundamental principles of consumer protection.

- *Holistic approach:* The approach to all aspects of regulation must be based on the premise that the promotion of digital connectivity cannot be reduced to one single factor, such as lack of infrastructure, or restricted solely to the confines of the telecommunication/ICT sector. Rather, regulation of the digital transformation must be addressed holistically, not just in its component parts, and in liaison with other sectors. In other words, it has to adopt a broad view of digital development which must be responsive to the different sectors, taking into account the different visions and specific needs (local and regional goals and strategies) and ensuring that basic concerns are addressed and prioritized, without any disconnect between local needs and national digitization strategies and goals (establishment of national and regional strategies and goals).
- *Rules:* Collaborative regulation requires that a country have a set of rules at the institutional level, starting with a State structure geared to the digital future. These rules should avoid duplication of effort among entities and rule out any actions and policies that are not aligned with the national digitization goals and strategies. Furthermore, they should also provide for amendments to, derogations from or repeals of laws or standards which overlap or which restrict or slow down the process of digital transformation.
- *Dynamism, agility and flexibility:* The basic premise of collaborative regulation should be an unflinching willingness to adapt regulation to new technological trends, keeping pace with the demands of society or the market, and an understanding that this adaptation is dynamic, not static.
- *Efficiency and incentivization:* The regulatory framework born of collaboration should not

lead to ambiguous or excessive regulation that impedes the progress of digital technology. On the contrary, collaborative regulation should incentivize innovation and the emergence of new development proposals which ultimately exploit to the full the boundless potential of digital connectivity for achieving sustainable development for all. Collaborative regulation shows the actors and stakeholders involved that their opinions and contributions are taken seriously and that their efforts are not in vain.

- *Sustainability*: Collaborative regulation must jettison short-term ad-hoc contributions and favour an active approach and the creation of sustainable and long-lasting connections.
- *Transparency*: Collaborative regulation must be transparent and, therefore, provide for mechanisms of accountability and sanction, derived from an efficient justice system.

## **2. Benchmarks for digital infrastructure regulation**

The development of digital infrastructure is a prerequisite for digital transformation and the consequent improvements in the productivity and competitiveness of a country or region. Therefore, it is important to create the conditions for the deployment of such infrastructure, one of which being evidence-based regulation of good regulatory standards and market performance.

In this connection, Katz et al. (2014)<sup>1</sup> and ITU (2018)<sup>2</sup> show the importance of the institutional and regulatory framework in the development of the digital ecosystem. As well noted by Cambini and Jiang (2009),<sup>3</sup> however, a review of theoretical and empirical evidence in respect of the effectiveness and efficiency of different regulatory measures in this regard is mixed, which implies, as also concluded by Feijoo et al. (2018),<sup>4</sup> an

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<sup>1</sup> Katz, R., Koutroumpis, P. and Martin Callorda, F. (2014). *Using a digitization index to measure the economic and social impact of digital agendas*. Info, 16(1), 32-44

<sup>2</sup> ITU (2018). *The economic contribution of broadband, digitization and ICT regulation*.

<sup>3</sup> Cambini, C. and Jiang, Y. (2009). *Broadband investment and regulation: A literature review*.

<sup>4</sup> Feijoo, C., et al., *A study on the deployment of high-speed broadband networks in NUTS3 regions within the*

appropriate combination of policy strategies according to the particular profile of each country or region, where there will be a certain level of experimentation that all actors must take on board as part of this ever-changing reality.

In this context, it is essential to develop a system of monitoring tools for assessing the effectiveness and efficiency of specific aspects of regulation, a task for which traditional indicators of digital connectivity (e.g. Internet use or access rates, coverage) are inadequate as they are not a direct means of quantifying how a regulatory framework has changed or improved and do not help to establish a direct link measuring the impact of regulatory changes or improvements on the market.

As a result, regulatory monitoring mechanisms are required that enable us to study how regulation is adapting to the process of digital transformation. In this regard, it is important to underline the work of international organizations such as ITU, which publishes the ICT Regulatory Tracker index precisely in order to measure the degree of collaboration in the ICT regulatory framework,<sup>5</sup> or institutions such as OECD which have supported various governments in their attempts to achieve digital transformation, taking as a reference framework the Recommendation of the OECD Council on Digital Government Strategies, adopted in 2014.

The establishment of regulatory monitoring tools obviously requires the creation and population of a database which depicts the regulatory framework in quantifiable variables. To this end, there is a clear need for commitment to cross-sector cooperation in order to develop suitable information and for incentives to act consistently on the basis of this

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*framework of digital agenda for Europe. Telecommunications Policy (2017).*

<sup>5</sup> The index ranges from 0 to 100, where higher values reflect integrated or collaborative regulation, driven by economic and social policy objectives, while lower values imply a command and control approach. Data source: ITU World Telecommunication/ICT Regulatory Survey and desk research.

information. Thus, cross-sector communication between institutions or organizations must be enshrined in specific modalities of official cooperation, where the extent to which each actor is bound strongly incentivizes cooperation.

Following on from the above, it may be considered that the range of benchmarks that could form the basis for digital infrastructure regulation should encompass:

- Establishment of, on the one hand, an institution responsible for defining a clear digital connectivity strategy, with priorities; and, on the other, a lead institution responsible for implementing these strategies, focusing on promotion, efficiency and effective dissemination of digitization.
- Implementation and timely adaptation of national digital transformation plans.
- Incentivization of effective and potential competition in the provision of digital services in order to facilitate innovation and the reduction of service costs and prices.
  - ✓ Promoting of the entry of new operators.
  - ✓ Agreements on roaming, spectrum leasing, collocation and sharing of infrastructure (passive and active), not limited in scope to the national level.
  - ✓ Avoiding of discriminatory or exclusive price-fixing agreements in order to encourage the setting of affordable tariffs.
  - ✓ Wholesale access to dominant operators' infrastructure.
  - ✓ Oversight and sanction mechanisms for conduct not compliant with free-market principles.
- Transparent, flexible, simplified and innovative regulation for spectrum allocation, channelling, assignment and sharing, giving priority to broadband services.
  - ✓ Application of market mechanisms, without neglecting issues related to the warehousing of this scarce resource by types of band, companies or economic groupings.

- ✓ Implementation of tools which measure efficiency or metrics on effective spectrum use, and the related legal framework allowing inefficient use to be sanctioned, based on usage targets.
- ✓ Application of efficiency criteria for the fixing of spectrum use fees or tariffs.
- ✓ Regulation should be such that it allows spectrum leasing, refarming and the trialling of new business models which fill specific niches, with the option of recourse to short-term assignments or flexible licences.
- Reforms aimed at promoting of digital infrastructure not only nationally and regionally, but also at international and cross-border levels and throughout the digital services value chain.
  - ✓ Consider not only optical fibre infrastructure (submarine cables, backbone networks), but also terrestrial and satellite infrastructure or any new technology which enhances coverage at a lower cost.
  - ✓ Promote of Internet exchange points and content distribution networks, as well as the installation of base stations.
  - ✓ Deploy and license State-driven national and regional networks on flexible conditions, allowing licensing conditions to be adapted to market evolution.
  - ✓ Establish universal service plans or financing mechanisms and incentives for sparsely populated or geographically hard-to-reach areas.
  - ✓ Organize information campaigns educating the population on the zero risk to human health of digital infrastructure.

### **3. Tools and approaches for enabling digital experimentation**

The search for new means of expression and research using digital technologies is the seed for the fourth industrial revolution. In this context of trial and error, it is difficult to anticipate

which technologies will prove important and how they will interact for the benefit of society. Accordingly, the development-centric regulation of digital experimentation must adopt a practical, flexible, unhurried and transparent approach which advances with a certain degree of caution, while remaining neutral and forward-looking, and may be reflected in the following actions:

- Allow for a trial or observation period during which new digital services or technologies can be established before taking action on or applying the regulatory status quo.
- Establish concrete physical and digital channels for participation, consultation and cooperation (feedback) with academic and research institutions and other interested parties.
- Ensure regulators have qualified IT personnel, so as to be able to analyse and assess the regulatory challenges of digital innovations. These personnel must enjoy competitive salaries and a suitable incentive package rewarding their contributions and achievements, in particular in the public sector.
- Promote digital competencies and skills among the population in order to enhance feedback from civil society with the development of digital services.
- Promote content and applications at the local level through support for pilot projects or digital experimentation in spaces for innovation.
- Reform public budget structure and mechanisms to support digital transformation projects through a larger budget or budget redistribution.
- Establish a public IT/ICT procurement strategy and central coordination thereof.
- Implement a broad promotional campaign which highlights milestones achieved by digital experimentation in enhancing the productivity and competitiveness of cross-cutting services, such as government, commerce, labour and health services, while

assuaging fears that digital transformation is a threat to job security.<sup>6</sup>

- These milestones should be the focus of a tailored communication strategy, using channels preferred by the population (e.g. social networks).
- Raise awareness of government leaders and managers at national, regional, district and local levels, demonstrating how digital transformation represents the future and enhances various aspects of well-being, while also allowing other policies to be reinforced.
- Create an environment conducive to measures for network security, privacy protocols and data confidence, as well as threat (cyberattack) response mechanisms.
- Strengthen guidelines for the management of information and use of open data, harmonizing efforts towards a national data policy, which should provide for the adoption of open data principles (openness and access by default) and, in the case of sensitive information, with clear responsibilities and penalties.
- Establish requirements and standards for the interoperability of data systems and other IT tools.
- Promote and incentivize the use of an open data portal and digital data centres dedicated to governmental or national information, so that stakeholders can use this information to improve or create services within a framework based on a policy of open, reliable and interoperable data.
- Consult potential users of open data to identify the type of data that they need and would like to use.
- Encourage an analytical approach to data management, use and reuse in order to tackle real problems and generate value for the population (e.g. organization of

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<sup>6</sup> The technological change of the last four decades has had a positive impact on employment. For more information see: Autor, D. and Salomons, A. (2018). *"Is Automation Labor-Displacing? Productivity Growth, Employment, and the Labor Share"*. NBER Working Paper No. 24871.



hackathons, data journalism awards).

- Encourage demand for use of the network not only for Internet browsing, but also for digital technology for production, rethinking processes and creating value.
  - Provide tools which allow consumers to take better decisions regarding the digital services or products to subscribe to (e.g. releasing rankings or tools to compare price-quality ratio, reputation, complaints).
  - Strengthen mechanisms which help to reduce the cost of switching providers for the consumer (e.g. facilitating number portability in fixed and mobile networks or establishing compensation mechanisms for the consumer in respect of digital services).
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