

New regulatory frontiers to achieve Digital Transformation
Federal Institute of Telecommunications – México

The Federal Institute of Telecommunications (IFT, by its acronym in Spanish), in its capacity as regulator and competition authority in the telecommunications and broadcasting sectors in Mexico, presents this contribution with a great interest to participate in the international collaboration and study to identify the practices and tools that facilitate the materialization of the benefits of Digital Transformation. The emphasis is on the regulatory frameworks for digital transformation.

Digital Transformation

This term refers to a multidimensional and global event that can be defined in many ways. Therefore, without being exhaustive and for purposes of this contribution, Digital Transformation is understood as the process through which digital technologies are integrated and transform our activities and, even, our culture. This process transforms the productive chains and distribution of value, the business models and the relations between economic agents and people at accelerated rates.

In this process, regulators are called to facilitate the process of Digital Transformation in conditions that allow taking advantage of the benefits and reducing the risks' incidence.

It is worth to point out that some of the main challenges that the governments need to face, and are currently facing regarding the digital transformation, are listed in the document "OECD Digital Economy Outlook 2017: Setting the Foundations for Digital Transformation". Currently, governments should contribute with each other and share their best practices on the awareness, implementation and enforcement of the digital transformation as well as working on the skills, training and education of their citizens. It is very important to be coordinated and foment the participation among the governments to improve:

- Policy design measures
- Laws or regulation
- Technical, including standards and interoperability
- ICT adoption, business digitalization, innovation
- Policy investment or funding
- Private investment or access to finance
- Trust, including privacy, security and consumer protection.
- Laws and regulation

In addition, the report explain the priorities that the governments should have and coherence with their objectives. OCDE, list the main digital policy objectives as follows:

- Strengthening e-government services
- Further developing telecommunication infrastructure
- Promoting ICT-related skills and competences
- Strengthen security
- Enhancing access to data, including PSI and OGD
- Encouraging the adoption of ICT by businesses and SMEs in particular
- Encouraging ICT adoption in specific sectors e.g. healthcare, education
- Strengthening privacy
- Strengthening digital identities
- Promoting ICT sector, including internationalization
- Promoting e-commerce across the economy
- Tackling global challenges as internet governance, climate change

- Strengthening consumer protection
- Advancing e-inclusion
- Preserving Internet Openness

By other hand, according with to the “2017, Internet Society Global Internet Report” We are on the verge of a transformation technology and that will cause the disruption of economic structures and will oblige all companies to think and act like companies technologies, as billions of devices and sensors connect to the network. The resulting hyperconnected Internet economy. All of us, will see the transformation of traditional industries, the flourishing of emerging economies and new market leaders driving innovation and entrepreneurship around the world.

The report shows that the economic transformation driven by automation and data to large scale (big data) will generate new challenges around the displacement of jobs and economic inequality. However, in the history there is a history of transformations of economic activities at a similar scale called "The Fourth Industrial Revolution". And although it does not exist consensus on the speed with which the change, there is widespread agreement, and even anxiety, about the fact that on the horizon important changes are foreseen that will have consequences for the whole society.

In this sense, the IFT considers that the main challenge for the regulation in the Digital Transformation process, is doing enough to reduce the risks of negative impacts on society, without imposing unnecessary restrictions.

The approach adopted by the IFT on Regulation and Digital Transformation, consists mainly of: (i) removing barriers to entry and expansion; (ii) impose ex ante and/or ex post regulations to the extent that is determined necessary and opportune to prevent or reduce the risks to society; (iii) promote dialogue and participation of other authorities and agents in the review and regulatory design; and (iv) adopt the principles of competition, net neutrality, convergence, competitive neutrality and administrative simplification.

Regulatory frameworks for digital transformation

Digital Transformation is closely linked and depends on the development of ICT and technological convergence. Under this premise, the Mexican Government began a large-scale structural reform in 2013 with the purpose of creating a favorable converging legal and institutional framework for the development of ICT networks and services, whose recent results include:

- a) Reduction in barriers to entry and expansion. The statutory restrictions on foreign investment were eliminated and a participation of up to 49% in broadcasting and 100% in telecommunications is allowed.

Also, given the accelerated growth in demand for radio spectrum mainly for IMT, the Institute has increased the availability of this resource from 222 MHz in 2013 to 449 MHz through public tenders. In addition, actions are taken to reorder some bands and enable others, which has positioned Mexico as one of the countries that has identified the most IMT spectrum. Taking into consideration the proximity in the massive adoption of digital technologies - IoT, 5G, IA and M2M among others - it is seen as a necessary practice to work in each jurisdiction and between jurisdictions to enable the radio spectrum in high bands, in order to be able to face the estimated demands.

- b) A review of the regulatory framework with a convergent and dynamic vision. In 2014, for the first time, a law applicable to the telecommunications and broadcasting sectors was issued, recognizing their convergence. Based on this new legal framework, the Institute has conducted revisions of the existing regulatory framework to, when deemed necessary, modify it or issue new provisions that avoid unjustified regulatory asymmetries between actors under equal conditions - before the Digital Transformation process, it is possible that the identification of agents under equal conditions becomes an increasingly complex task.

Among the topics currently under analysis there are standouts like net neutrality and the traffic management protocols. Likewise, the process of migration from the IPv4 protocol to the IPv6 is promoted, allowing the growth of the Internet, especially given the proximity in the mass adoption of IoT, AI and M2M that will boost the demand of IP addresses for each machine and device connected to the network. In addition, the assessment of the regulatory inventory applicable to traditional infrastructures, products and services that are increasingly facing competitive pressures from innovative digital products, services and platforms. Collaboration —national and supranational— is maintained with other authorities in the field of cybersecurity and the protection of privacy and personal data, regarding the worldwide array of digital platforms.

- c) Transversal application of the policy and principles of competition, with a dynamic and prospective vision. As of 2013, the Institute was established as the convergent authority on economic and regulatory competition in the telecommunications and broadcasting sectors, providing it with a vast set of ex ante and ex post application tools.

In its regulatory practice, the IFT has implemented the principles and policy of competition transversally in the telecommunications and broadcasting sectors, thus simplifying the design and implementation of the regulations, being able to select the most effective ex ante or ex post measure, to address a specific risk and, thereby, preventing very early or late participations that may inhibit the dynamism of Digital Transformation.

Likewise, the economic competition analysis or evaluation takes into consideration that the borders between traditional markets are blurring and new services and business models emerge, generating competitive pressures to traditional services. This prospective approach allows incorporating the effects in the competition dynamics of the emergence of new alternatives that can modify the conclusions of the analysis and regulatory design.

- d) Control of market power, through the imposition of asymmetric regulation on the dominant economic agents in a market or preponderant in a sector, as well as before the existence of essential inputs. The Constitution and the sectoral and competition laws jointly provide for the possibility of declaring the existence of an economic agent with substantial power in a market and of essential inputs, but also those who hold a preponderant position in a sector.

The preponderance figure in a sector is unique in the world and has allowed the Institute to be more effective in imposing asymmetric measures to the same economic agent that holds a position of power in various markets. These measures can be maintained, modified or suppressed, subject to a biennial review in which their impact on the competition conditions of the regulated activities is evaluated. These comprehensive assessments of multiple markets allow us to evaluate the interrelations to identify where and in what manner regulatory intervention is necessary. In a nutshell, the imposed measures include mandatory Access to wholesale services and sharing of the passive infrastructure (i.e. poles, sites and towers).

In 2018, as part of the measures imposed to the preponderant economic agent in telecommunications, the Institute ordered a functional separation (legal) in the fixed services to separate the provision of wholesale access services to the local network, local leased lines and to the associated passive infrastructure, in order to guarantee the provision of these access services under non-discriminatory conditions. Likewise, technical and economic replicability obligations were established to guarantee the equivalence of inputs.

Prospectively, it will be necessary to identify viable alternatives for network sharing taking into consideration existent and new generation networks and platforms, as well as market drivers and conditions.

- e) The State's participation in the development of infrastructure, subject to the Competitive Neutrality principle guaranteeing the other participants power to compete under equal conditions.

In this regard, the *Red Compartida* (a wholesale network) is a project promoted by the Mexican Government with the purpose of reducing the digital gap, improving the accessibility and availability of ICTs and constituting a provider of wholesale services that promotes competition in the sector. It is developed based on a public-private partnership agreement (APP, by its acronym in Spanish). The State contributed 90 MHz of radio spectrum and the possibility of using dark fiber, while a private consortium provides the necessary investment for the deployment of the network, subject to compliance with coverage goals of 92.2% and the use of technology 4.5 G- LTE or higher. The purpose of this project is to increase access to high-speed, high-capacity services and to encourage the implementation of digital inclusion strategies, nationwide. The Institute and the Ministry of Telecommunications and Transportation participated in its design; and the APP contract was assigned through a public and open tender process, subject to a broad public consultation process and attending the doubts of the interested parties. This project obtained in 2017 the ICT Excellence Award granted by the World Information Technology & Services Alliance (WITSA) "as it reflects a commitment on behalf of the Mexican government and the private sector to embrace the Digital Age for all its citizens".¹

- f) The constitution of the Telecommunications Information Bank (BIT, by its acronym in Spanish),² which is an open access interactive portal that allows consulting, analyzing, exploring and downloading disaggregated data on telecommunications provided by operators in standardized and comparable forms, at the request of the IFT. This bank provides reliable quantitative information to facilitate the decision-making of the different agents that participate in the sector and to strengthen the design of public policies. This project received in 2017 the Good Practices prize, granted by the National Evaluation Council of Social Development Policy of México.
- g) Empowerment of users. The IFT has enabled various resources to promote ICT literacy, which includes the Mobile Unit project,³ equipped to promote the rights of audiences and users. Probably this aspect is one where coordination is significantly required among the authorities, to ensure the effective protection of users' privacy and security in a digital environment, while optimizing the possibilities of benefiting from this transformation.
- h) Participation in the regulatory process. The Digital Transformation is a multidimensional event whose development requires consistent, harmonious, complete and integrated policies and regulations to generate the levels of reliability that provide predictability and legal certainty. Under this premise, the IFT generally submits its regulatory projects to public consultation processes that, from 2013 to date, total more than 90.

¹ Information available in: <https://witsa.org/press-releases/witsas-chairman-presents-ict-excellence-award-to-mexico-government-for-its-project-red-compartida/>.

² Information available in Spanish in: <https://bit.ift.org.mx/BitWebApp/>.

³ Information available in Spanish in: <http://www.ift.org.mx/comunicacion-y-medios/unidad-movil-ift>.