

Issue: Phase 2: Policy Options for Connecting and Enabling the Next Billion

The Federal Telecommunications Institute (IFT) is an autonomous body, which aims to the efficient development of telecommunications and broadcasting, it is thus, be responsible for regulating, promoting, and supervising the use, enjoyment and exploitation of the radio spectrum, the infrastructure, the networks and the provision of such services.

Also, the Institute is the authority in terms of economic competition in the broadcasting and telecommunications sectors, as well as the authority in terms of technical guidelines related to infrastructure and equipment connected to telecommunications networks, and for the homologation and conformity assessment of such infrastructure and equipment.

In order to accomplish its primary mandate, the IFT bases its actions on 4 objectives: (1) promote and encourage users to have better options of public services at affordable prices, through the promotion of free competition; (2) promote and foster the conditions for universal access to technologies and telecommunications services; (3) ensure that the provision of telecommunications services is consistent with quality levels under international standards; and (4) promote respect for the rights of final users in telecommunications services.

Considering the aforementioned, the Federal Telecommunications Institute presents the following contribution for its consideration in the development of the second phase of the Program **"Policy Options for Connecting and Enabling the Next Billion"**.

## 1. How would you define, or how do you understand, the theme "Connecting and Enabling the Next Billion"?

During the **first phase of "Connecting and Enabling the Next Billion", the IFT defined this issue as** the universal access to information and communication technologies, as well as telecommunications and broadcasting services, included broadband and Internet.

In that first moment, it was also indicated that connectivity shall be provided in terms of competition, quality, plurality, universal coverage, interoperability, convergence, continuity, free access, without arbitrary interference and affordable for all social sectors, and it shall be accompanied of capacities building through obtaining the necessary abilities to generate, process and/or share information that foster the economic and social development.

Finally, it was mentioned that this issue required the deployment of robust infrastructure, the promotion of inclusive and sustainable industrialization and the innovation and they must be considered as essential elements to increase significantly the access to ICTs, including the universal and affordable Internet access, for this reason, issues as the deployment and expansion of telecommunications infrastructure, equitable development of skills to operate this kind of technologies and technical, organizational and governance capacities should be considered as well as the necessity to share information and transactions between the different technologies.

In conclusion, this issue can be understood in a better way as the implementation of enabling an environment that facilitates the access and connectivity to the information and communication technologies as well as the telecommunications and broadcasting services, including the



broadband and Internet so it can be guaranteed the integration of the people to the information society.

As it was previously mentioned in the first phase; in Mexico, this definition is clear in the Constitution of the United Mexican States, which in its article 6, stipulates the following:

- Everyone has the right to get free access to a timely information and get it from multiple sources, and to seek, receive and impart information and all types of ideas by any means of expression.
- The Mexican State has the obligation of guarantee the right of access to ICT, as well as broadcasting and telecommunications services, including broadband and the Internet. Also, the State shall establish conditions for effective competition in providing such services.
- The State shall guarantee to the citizens, their integration into the information and knowledge society.

Meanwhile, Article 7 of the same instrument stipulates that the freedom to disseminate opinions, information and ideas through any means cannot be transgressed, whereby this right cannot be restricted through direct means such as the abuse of official or private controls of paper for newspapers, on radio broadcasting frequencies or equipment used in the dissemination of information or by any other means of information and communication technologies.

In order to guarantee the fulfillment of the previously mentioned, the Constitution establishes in its Article 28, the creation of the Federal Telecommunications Institute as an autonomous body, with legal personality and own resources, that aims for the efficient development of the broadcasting and telecommunications, and is also the authority in economic competition in the mentioned sectors.

For its part, the Institute establishes a series of institutional objectives and strategies that will allow the compliance with the constitutional mandate, and, also, will allow the promotion of the connectivity:

- Objective: Promote and encourage users to have better options of public services at affordable prices through the promotion of free competition. This is reached by removing barriers to competition, by encouraging the entry of new competitors and managing and fostering the efficient use of radio spectrum;
- Objective: promote and foster the conditions for universal access to technologies and telecommunications services through the boost of the coverage of telecommunication services and the promotion of the development and efficient use of infrastructure;
- Objective: ensure that the provision of telecommunications services is consistent with the quality levels under international standards through ensuring the compliance of the quality levels defined in order to improve the experience of the users in the quality services;
- Objective: promote respect for the rights of final users in telecommunications services through promoting the protection of users and empowering them with information and education about their rights.



In June 2016, the Federal Telecommunications Institute published the statistical analysis **"Telecommunications** in Mexico three years after the Constitutional Reform. Evolution of the **regulated sectors"**<sup>1</sup>, that shows the advances in connectivity considering the conditions mentioned before.

- From June 2013 to December 2015, the telecommunication prices fell down by 23.2%;
- The pay-TV services in Mexico have grown more than 30%, consequently, nearly 60% of households and companies have pay-TV services.
- From 2013, household Internet services experienced a growth of 12.5%, thanks to which, in March 2016, it was reached a penetration of 47 subscriptions per 100 households;
- Early 2015, 85% of households had an internet speed between 2 to 9.9 Mbps, and by late 2015, more than 75% household had Internet services with speed from 10 to 99.9 Mbps.
- In 2011, only 7% of the population had access to mobile Internet, by March 2016, 54% of the population already had mobile Internet services.
- It is expected that the amount of spectrum allocated for mobile telecommunications will grow to 604 Mhz, this is more than the 40% that was assigned before 2013
- 2. The first phase of *Connecting and Enabling the Next Billion (2015)* identified a set of policy options aimed at the creation of enabling environments, including deploying infrastructure, increasing usability, enabling users, and ensuring affordability. What are the factors to consider when adopting these policy options at local levels (e.g. the state of a country's market development, the available infrastructure, level of capacity-building, etc.?

Nowadays, it is undeniable that the connectivity that provides access to information and communication technologies, telecommunications services, including the Internet, is a detonator for the growth and development of societies in various aspects of life such as the economic, cultural, educational, financial, etc.

As it was mentioned in the first phase of the program *Connecting the Next Billion*, factors such as the infrastructure deployment, capacities building and affordability are very important for the establishment of an enabling environment for connectivity. However, it is important to point out that each country has its own peculiarities so it is necessary to take consider various aspects that allow a better implementation of policy options to promote connectivity.

In this regard, the report *Broadband Policies for Latin America and the Caribbean. A digital Economy Toolkit* done by the Inter-American Development Bank (IDB) and the Organization for Economic Cooperation and Development (OECD)<sup>2</sup> was taken as a reference. This report outlines some factors that must be considered for the implementation of national digital and broadband programs.

From the mentioned report, we can rescue the following recommendations:

- Encourage investment by setting a solid policy and regulatory incentives;
- Reduce deployment costs and stimulate infrastructure investment;
- Expand networks and supply of broadband services by private investors, complemented by the public sector when necessary

<sup>&</sup>lt;sup>1</sup> The publication cab be consulted in the following link: <u>http://goo.gl/nlX0UV</u>

<sup>&</sup>lt;sup>2</sup> The publication cab be consulted in the following link: <u>http://goo.gl/CrIOYr</u>



- Expand broadband access to disadvantaged groups located in rural and remote areas.
- Consider the convergence of networks and services
- Increase in business, the adoption of ICTs and foster the digital entrepreneurship
- Strengthen confidence in digital services
- Design digital strategies and national broadband plans

As it was previously mentioned, each country has its own peculiarities, complexities and challenges, which have to be considered in the moment of implementing strategies or recommendations as the established by the OECD. In the case of Mexico, it is highlighted that the country has carried out various actions and efforts to promote national connectivity, which can be analyzed under some of the recommendations stipulated in the OECD report.

<u>Encourage investment by setting a solid policy and regulatory incentives</u>. In 2013, it took place a constitutional reform in telecommunications in Mexico, which among others, established that telecommunications and broadcasting are public services of general interest and that the State shall guarantee the right of access to information and communication technologies, as well as telecommunications and broadcasting services, including broadband and internet.

The Reform also allowed the foreign direct investment up to 100 percent in telecommunications and satellite communications, as well as foreign direct investment up to a maximum of forty nine percent in broadcasting. In the case of broadcasting, the maximum foreign investment shall include the reciprocity that exists in the investor's or the country of the operator that ultimately exercises direct or indirect control over the operator.

This Reform was carried out due to the situation of the telecommunications in Mexico, which was characterized by a high monopolistic concentration that caused services with low coverage, poor quality and high prices, which in turn, limited the exercise of freedom of expression and the right to information of the Mexicans, as well as the economic, social and cultural development.

Thus, the Reform allowed a structural change in the telecommunications and broadcasting sectors thanks to the creation of an enabling environment for the establishment of a solid and reliable regulatory policy through the creation of the Federal Telecommunications Institute.

The results of this initiative are observed in the statistical analysis **Telecommunications in Mexico three years after the Constitutional Reform. Evolution of the regulated sectors**<sup>3</sup>, this analysis shows that foreign direct investment in Mexico had a growth from 1% before the reform to 10% in 2015. Furthermore, private investment grew 34.8% during 2015.

Some examples of concrete actions that have helped to the investment in the sector were:

- The "Public bidding for concession the commercial use, enjoyment and exploitation of 80 MHz of radio spectrum available in the frequency band 1710 1780 MHz / 2110 2180 MHz" (Band AWS), its objective was concession 80 MHz of radio spectrum for the provision of mobile wireless access by reorganizing the spectrum so the Economic Interest Groups could have the largest number of contiguous blocks.
- Public bidding for concession the commercial use, enjoyment and exploitation of transmission channels for the provision of public service of digital broadcasting television

<sup>&</sup>lt;sup>3</sup> The publication cab be consulted in the following link: <u>http://goo.gl/nIX0UV</u>



that will allow the creation of a new television network which aims to make a more efficient use of radio spectrum and achieve more coverage in order to promote more competition and pluralism in the broadcasting sector for the benefit of audiences as well as promote the dissemination and diversity of content in national, regional and local markets.

**Reduce deployment costs and stimulate investment in infrastructure**: In order to increase the penetration of telecommunication services, particularly the Internet access, it is important to establish regulatory policies in terms of infrastructure. However, to achieve this deployment, it is essential to know all the technical, regulatory and economic aspects related to the prevailing conditions to carry out investment projects more productive.

To achieve this, the Reform established an asymmetric regulation for Economic Preponderant Agents (AEP, for its acronym in Spanish), especially in terms related to tariffs and network infrastructure. This occurs following the obligation that the Reform gave to the Institute to determinate the existence of AEP in the areas of broadcasting and telecommunications and impose the necessary measures to prevent that free competition is affected.

Thus, in March 2014, the Federal Telecommunications Institute determined the AEPs in these sectors and imposed measures related to the supply and quality of services, exclusive agreements, limitations on the use of terminal equipment between networks, asymmetric regulation on tariffs and network infrastructure, including the unbundling of its essential elements and, if necessary, separate accounting, functional or structural elements for such agents.

On the other hand, the Institute created the "Infrastructure Deployment Microsite" in order to compile and disseminate information related to the regulations at different levels to promote the development of local digital projects.

## Expand networks and supply of broadband services by private investors, complemented by the public sector when necessary and expand broadband access to disadvantaged groups in rural and remote areas

In order to achieve the deployment and supply of broadband services, it is important to know the current state of connectivity in the country, as well as the geographical conditions and economic and social development. In the same way, it is necessary to implement a coordination with all the stakeholders, with clear, short and long goals.

At this point, it is highlighted the Mexican project of installing a shared network in order to increase the coverage of telecommunications services, promote competitive prices and improve the quality of services. Its development contemplates that a company or a private consortium participate in the design, financing, deployment, operation and marketing of their services.

Moreover, he Reform contemplated the growth of the network backbone through a public, private or mixed investment, thanks to the Federal Electricity Commission that will give its concession to install, operate and use a public telecommunications network and transfer all the resources and equipment needed to operate and exploit the concession, except fiber optics, rights of way, towers, posts, buildings and facilities, and also will be responsible for ensuring the effective and shared access to the infrastructure.



The foregoing has the purpose of achieving that, at least 70% of all households and 85% of all micro, small and medium-sized businesses nationwide, have access to real speed for downloading information in accordance with the average for countries that are members of the OECD.

3. Are you aware of any specificities around connectivity at local or regional level? (In other words, do you know of factors that impact connectivity in, for instance, rural areas but less so at urban level? Or factors that affect connectivity at regional or larger scale, but not as noticeably at local or smaller scale?)

It has been made a big progress to promote the access and to increase the connectivity; however, estimations made by the Organization for Economic Cooperation and Development (OECD) shows that in Latin America, there are 300 millions of people without access to Internet. The main challenges that have been found to promote connectivity in its territory are lack of incentives for the infrastructure deployment, lack of economic competition, the lack of national and regional backbones and the affordability of broadband services.

In order to promote connectivity, especially on rural areas, the Federal Telecommunications and Broadcasting Law established the concept of concession for social use, which grants the right to provide telecommunications and broadcasting services with cultural, scientific, educational or community purposes, with not profit purposes. Within this category are included the community and indigenous concessions.

Concessions for community social use are granted to civil society organizations that do not pursue or operate for-profit purposes and that are constituted under the principles of direct citizen participation, social coexistence, equity, gender equality and plurality.

Concessions for indigenous social use are granted to indigenous people and communities of the country and its purpose shall be the promotion, development and preservation of their languages, cultures and knowledge respecting gender equality.

In this regard, the IFT issued the Guidelines related to the grant of concessions, which stipulates the terms and conditions to grant the concessions for community and indigenous social use, and for commercial, public and private use.

Due to the above, on July 5, 2016, the Federal Telecommunications Institute authorized the first concession license to use and exploit frequency bands of the radio spectrum, as well as a sole concession, both for indigenous social use, with duration of 15 and 30 years respectively, to **Telecommunicaciones Indígenas Communitarias, A.C.** 

4. Data shows that the growth of Internet adoption is slowing down in some areas, especially as broadband services extend to more remote, less densely populated areas (facing challenges beyond affordability and availability). What are some of the barriers or limitations preventing people who do have Internet access from being enabled or empowered through such connectivity?

Despite what has been achieved in terms of connectivity, it is important to consider that there are still challenges to be faced up. The adoption and use of technologies are growing largely on



societies, however, more work needs to be done so that the adoption and use of information and communications technologies maximize their social, economic and politic impact.

At this point, it is important to take into account the digitalization concept, which can be **understood as "the ability of a country and its population to use d**igital technologies that allow to generate, process and share information; also, it relates with the concept that describes social, economic and political **transformations associated with the mass adoption of ICT"**<sup>4</sup>.

Following the previous idea, one of the main barriers that exists for the people can be able use the connectivity on their reach is the lack of skills and competences that allow them to use and enjoy the information and communication technologies, telecommunications services, Internet and Broadband, and turn them into catalyst elements for development.

Therefore, it should be noticed that the establishment of broadband policies that encourage the infrastructure deployment must be accompanied by digital strategies that coordinate the public and private participation in the programs and projects of broadband access in order to increase their use by both, people and companies.

Mexico has worked not only in promoting the connectivity to telecommunications, broadband and Internet services on remote and rural zones through the infrastructure deployment, but also in establishing a Digital Strategy that looks for expanding the capacity of the country and its people to use digital technologies.

The main goal of the National Digital Strategy that was established by the Mexican Government is that the adoption and use of ICTs maximize their economic, social and political impact, in **benefit of the people's quality of life, for which 5** enablers were defined:

- Connectivity: networks development and a major deployment of a better infrastructure, expansion of existing networks and development of competition to encourage lower prices;
- Inclusion and digital skills: equitable development of skills to operate technological and digital services, contemplating social coverage and gender skills development;
- Interoperability: technical, organizational, governance and semantic capacities, necessary to sharing information and transactions in a consistent manner;
- Legal framework: harmonization in order to foster a certainly and reliability environment; and
- Open data: availability of governmental information into useful and reusable formats for the general population.

Thus, the National Digital Strategy is also defined as the action plan to five years of the Mexican Government to encourage the adoption and development of ICTs, which establishes the following

<sup>&</sup>lt;sup>4</sup> National Digital Strategy. Mexico, 2013. The document can be found at the following link: <u>http://goo.gl/c9xGn6</u>



objectives: the governmental transformation, digital economy, quality education, universal and effective health; and public safety.

## 5. What does meaningful access mean?

In Mexico, the definition of meaningful access can be rescued from various documents, such as the National Development Plan 2013-20185, which aims to guide government policies and programs by defining clear public policy objectives, specific actions and indicators.

In this program, it is recognized that telecommunications are a strategic input for any society, so the "access" to such services should be done at a competitive price and with quality. Therefore, it was defined as one of the **Plan's** objectives to "democratize the <u>access</u> to telecommunications services".

The <u>access to telecommunications services</u> can only be achieved through technological innovation and development of telecommunications in order to expand coverage and accessibility, improve services and promote competition to reduce costs and improve efficiency of communications.

Also, it is possible to relate the concept of meaningful access with the concept of "universal coverage", established in the Federal Telecommunications and Broadcasting Law, which is defined as "general public access to telecommunication services under availability, affordability and accessibility conditions."

Finally, regarding the issue of access, the Federal Telecommunications Institute defined as one of its institutional objectives the following "promote and foster conditions for universal access to technologies and telecommunications and broadcasting services in order to maximize the social welfare ". To achieve this, the IFT will boost the service coverage and will encourage the development and efficient use of infrastructure.

Considering the aforementioned, it can be concluded that access refers to the universal coverage of all information and communication technologies, telecommunication services, broadband and Internet in terms of availability, affordability and accessibility through the infrastructure development and technological innovation.

## 6. How can connectivity contribute to reaching the new SDGs?

Connectivity has great potential to accelerate the human progress, reduce the digital divide and develop knowledge societies. Information and communications technologies (ICT) have become an essential part of social and economic development in the long term, but progress will depend on reliable, robust, available, safe and trustworthy infrastructure and communications services.

The World Development Report: Digital Dividens<sup>6</sup> of the World Bank indicates that digital technologies have expanded the information base, reduced costs and created information assets,

<sup>&</sup>lt;sup>5</sup> The document can be found at the following link: <u>http://goo.gl/oq094H</u>

<sup>&</sup>lt;sup>6</sup> The document can be found at the following link: <u>http://goo.gl/0YrFyO</u>



which influence directly the business operation, job search, interaction between citizens and governments, inclusion of women and persons with disabilities.

Also, the Report shows how digital technologies promote the trade, improve the capital utilization and generate greater competition. For example, the contribution of ICT capital to GDP growth in developing countries has had a 15 per cent of growth, but it is expected that this figure will increase with a better adoption of technologies.

In relation to the trade, the report shows that, by using digital technologies, the number of products traded between two countries increase by 0.4 percent. On the other hand, with regard to the best use of capital, it concludes that technologies reduce costs and increase the efficiency and productivity in all sectors of the economy.

Furthermore, the report indicates that digital technologies, especially Internet, can promote job creation and worker productivity. At this point, it appears that, despite technologies create few direct jobs, the number of jobs that enable may be important. Also, reducing the transaction costs increase the opportunities for people to find a job and promote the inclusion of women, people with disabilities and those who live in isolated areas.

Finally, the report indicates that the Internet allows governments to provide better services by creating tools that offer more information and promote greater participation.

On the other hand, the Broadband Commission for Sustainable Development said, in its declaration **Ensuring That No One is Left Behind**<sup>7</sup>, that broadband promotes economic growth as well as its prosperity and sustainability, thanks to the creation of new jobs in new products and services, the improvement of agricultural productivity and energy efficiency.

Similarly, the Commission states that the broadband helps to reduce poverty by coping with the food, health, and education needs. On the other hand, broadband allows to monitor the climate change and planetary processes.

In accordance with the **OECD Digital Economy Outlook 2015**<sup>8</sup>", the ICT and the Internet are essential to the economy and society in general, because they have an impact in diverse sectors as banking, commerce, energy, transportation, education, publishing, media and health. In recent years, the expansion of digital technology has operated as an engine for economic growth and for the transformation of the society as a whole, which contributes directly to the fulfillment of the SDGs.

For example, the proliferation of smartphones and the intensification of its use in society, the rise of social networks and the production of new data encourage the emergence of new business models in the digital economy and continue transforming the consolidated economic sectors such as transport, energy, media and banking.

<sup>&</sup>lt;sup>7</sup> This document can be found at the following link: <u>http://goo.gl/DHESwQ</u> <sup>8</sup> This document can be found at the following link: <u>http://goo.gl/DHESwQ</u>

<sup>&</sup>lt;sup>8</sup> This document can be found at the following link: <u>http://goo.gl/5J08vK</u>



Likewise, the report "Harnessing the Internet of Things for Global Development"<sup>9</sup> from the International Telecommunications Union and Cisco Systems, offers an overview on how connectivity can be harnessed for development and fulfillment of the Development Goals like providing basic health and education, energy services, natural resource management, water and sanitation, climate change, etc.

Thus, the report shows how the access to telecommunications services plays a transformative role in economic sectors and society, so it has become in a digital tool that enables the interaction between people, businesses and governments.

The specific case of Mexico can be observed in **The Global Information Technology Report 2016**<sup>10</sup> from the World Economic Forum, where the conditions and the role of information and communication technologies (ICT) are evaluated worldwide. This evaluation shows that, by 2015, the individual use of ICT had increased, particularly, the subscriptions for mobile broadband are becoming more popular for private use, which also has a major use by businesses and government.

Similarly, the report indicates that Mexico has improved in terms of the government's vision on ICT, because it has been made a good use of them in order to interact with the population, ranking 35th in the index of government services.

7. Do you know examples where using ICTs to support development has not worked, and why?

No comments.

8. Can you think of ways in which ICTs or Internet connectivity could be used to help reach the SDGs?

The Sustainable Development Goals that make a reference to the importance of ICT for sustainable development are:

- Objective 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities.
  - Target 4.b. By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programs, in developed countries and other developing countries
  - Objective 5. Achieve gender equality and empower all women and girls.

<sup>9</sup> This document can be found at the following link: <u>http://goo.gl/99ZQQH</u>
<sup>10</sup> The document can be found at the following link: <u>http://goo.gl/4FdBVa</u>



- Target 5.b. Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women.
- Objective 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
  - Target 9.c. Significantly increase access to information and communication technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.
- Objective 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development.
  - Target 17.6. Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism.
  - Target 17.7. Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favorable terms, including on concessional and preferential terms, as mutually agreed.
  - Target 17.8. Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology.

Therefore, it is important to take into account the work of the International Telecommunications Union to comply with the SDGs since the ITU is the specialized UN agency for ICT, therefor it is highlighted the report "Information and Communication Technology in the 2030 Agenda for Sustainable Development - Implications for the ITU"<sup>11</sup> from the Secretary-General of the ITU during the last Council meeting 2016.

This report concludes that the ITU should provide effective support to governments, the UN system and sectorial partnerships at national, regional and global levels, and should improve inter-sectorial coordination in the ITU in order to fulfill its role as sectorial facilitator.

Mexico is working to achieve the consolidation of the SDG through the development of telecommunication and broadcasting services, broadband and internet. After a reform in telecommunications and broadcasting sectors, it has been achieved a progress in the implementation and inclusion of these services in society, which, as was already mentioned, will influence in the accomplishment of the SDGs. As can be viewed in the statistical analysis **"Telecommunications** in Mexico. Three years after the Constitutional Reform", it has been achieved the following advances:

<sup>&</sup>lt;sup>11</sup> The document can be found at the following link: <u>http://goo.gl/Lpaxy7</u>



- From June 2013 to December 2015, telecommunications prices fell by 23.2% allowing more affordable services,
- Pay-TV services in Mexico have grown more than 30%, accomplishing that nearly 60% of the households and business have pay-TV service promoting the access to information.
- From 2013, household internet services experienced a growth of 12.5%; and by March 2016, the fixed broadband penetration had climbed to 47 subscriptions per 100 households.
- In 2011, only 7% of the population had mobile internet access, while in March 2016, 54% of the population had mobile internet services.
- Digital terrestrial television, which will allows audiences watch up to 676 digital television channels, compared to the 311 digital channels that they had before.
- The average revenue of the telecommunications sector before the reform was \$ 366 billion MXN, and by December 2015 after the reform the production was MXN \$427 billion.
- Investment during 2015 grew by 34.8% on 2014, while telecommunications GDP increased by 11% over the same period.
- 9. Do you know examples of success stories that can illustrate how Internet access can help to address real-world problems (in either developed or developing countries)? For example, do you have stories or experiences to share regarding some or all of the SDGs?
- On July 5, 2016, the Federal Telecommunications Institute authorized the first concession license to use and exploit frequency bands of the radio spectrum as well as a single concession, both for indigenous and social use, with 15 and 30 years of term, respectively.

This was the first concession for indigenous social use that was granted by the IFT to Telecomunicaciones Indígenas Comunitarias, A.C, which will allow it to provide telecommunications services. It is expected that the concessionaire will install a mobile network to provide voice and data services in various locations in the states of Oaxaca, Chiapas, Veracruz, Guerrero and Puebla (356 municipalities).

Telecomunicaciones Indígenas Comunitarias will have the opportunity to exploit 4 MHz of spectrum in the 850 MHz band and therefore, it has the legal opportunity to offer services that are technically feasible and possible from those frequencies.

This will allow the development of the indigenous communities through the promotion, development and preservation of their languages, culture, knowledge, promoting their traditions, internal rules and principles that respect gender equality and allow the integration of indigenous women.



- Implementation of a "Comparator of Telecommunications Services"<sup>12</sup>: a tool that allows users to consult the characteristics of current supply and additional options for the different types of contracts of fixed and mobile telephony including the offer of the Mobile Virtual Network Operators, elements that help the user to make a better decision on the procurement of services
- Mexico X<sup>13</sup> Platform: an open platform of free online courses of the Ministry of Education, in coordination with the Mexico's National Digital Strategy. This platform aims the creation of fundamental technical skills, teachers training, promotion of specialized training and dissemination of culture, science and knowledge. By March 2016, this tool had 600,958 registered users, had issued 68,663 certificates, offered 58 courses, 105 hours of training and had 23 partner institutions.
- México Conectado: this is a project of the Government of Mexico, which helps to guarantee the right of access to broadband service through the deployment of telecommunications networks in areas and public spaces such as schools, health centers, libraries, community centers or parks. This program has connected more than 100 thousand public spaces and has created 32 centers of Digital Inclusion.

<sup>12</sup> The document can be found at the following link: <u>http://comparador.ift.org.mx/</u>
<sup>13</sup> The document can be found at the following link: <u>http://goo.gl/ZwRsqr</u>