

ANACOM's answer to the ITU public consultation on "Building an enabling environment for access to the Internet"

1. What are the elements of an enabling environment to promote Internet connectivity?

In general, access to passive infrastructures (e.g. ducts, manholes, poles) able to accommodate electronic communications networks facilitates the provision of Internet connectivity to the end users. With such a possibility, network operators can invest in their own broadband Internet access networks and therefore build an enabling environment for access to the Internet.

Autoridade Nacional de Comunicações (ANACOM), the national regulatory authority (NRA) for communications in Portugal, recognized that access to ducts or poles of the Significant Market Power (SMP) operator (MEO) would allow alternative operators to deploy their own broadband access networks, based on fiber or cable (e.g. FTTH, HFC DOCSIS) and imposed that obligation. In this context, in Portugal, passive access by other operators to duct and pole infrastructures of MEO has been, so far, sufficient to ensure effective competition at the retail level.

The Portuguese Government considered that investing in Next Generation (access) Networks (NGA) was of primordial importance and in that context established (in the Decree-Law 123/2009 of 21th May, amended by the Law nº. 47/2013, of 10th July - DL123), the right of access to ducts and poles owned by other entities, including municipalities, utilities, road and railway operators (**symmetrical regulation**), and also , the right of access to infrastructures held or managed by electronic communications operators themselves (Law nº. 32/2009 of 9th July), in addition to the above mentioned access to the physical infrastructures belonging to MEO (**asymmetric regulation**).

Additionally, the Portuguese Government decided to grant concessions for the operation of NGA networks in rural areas. Thus, 5 public tenders were launched in 2009 for the deployment of State aided NGA networks in those areas, as part of a plan aiming to maximize the available coverage across the relevant municipalities (former 'white areas'), with a minimum coverage of 50% of the population in each area. These State aided concessions where awarded in 2011, the rollout of FTTH-GPON networks took two years and their installation was finalized between 2013 and 2014.

The tenders for the deployment of "High-Speed Networks in Rural Areas", involved 139 municipalities, an investment of 156 M€ and covered more than 1 million people. ANACOM

played an active role in setting up these public tenders and in monitoring the execution of the contracts established between the state and the contractors.

Thus, the combination of regulatory measures and government initiatives undertaken in this timeframe have driven operator investments, whereby, in the 1st quarter of 2016, the number of households cabled with high-speed access exceeds four million homes, corresponding to 71% coverage on DOCSIS 3.0 and 74% coverage on FTTH-GPON.

2. What are the elements of an enabling environment to promote an affordable Internet?

As stated above, implementing measures to facilitate access to the passive infrastructures, both public and private, contribute to the promotion of an affordable Internet by lowering network development costs for network operators. Additionally, it also promotes infrastructure competition.

Housing development or rehabilitation projects should have clear requirements to deliver high quality broadband (as well as voice and digital HDTV) to households. This should also be applicable to purpose-built office buildings and tourist resorts. These requirements should focus on standards to eliminate interconnectivity issues as any building would then be open to any network operator.

Creation of a certified communications network installer program. Installers would act as 'enforcers' of the technical and service standards that are incorporated in the building's architecture and construction process. The installers can be certified by the NRA or by other accreditation body. With the buildings cabled according to international standards, each household or company is then able to choose their network provider. Thus, commercial offerings would be competitive, contributing to lower prices for the consumers as well as lowering switching costs and diminishing barriers to entry for new operators.

3. What are the elements of an enabling environment to promote the quality of access to the Internet?

The national regulatory authorities should promote internal conditions, including real investment, human resources and strategy to endorse the upcoming duties related with the Telecommunications Single Market (TSM) law, specifically upholding the net neutrality principle.

In the Portuguese case, the active role of ANACOM in the preparation of active public policies concerning the development and social inclusion, specifically in advising the government was, and is, fundamental to improve access to the Internet. One example of how this can be done is the multiband auction held in 2011 which established coverage obligations applicable to those operators who acquired rights of use in the 800 MHz band, and the other example mentioned before are the tenders launched for promotion of broadband in rural areas.

Implement a common set of quality of access indicators to measure quality across different countries and across different Internet access providers. The ITU has already developed the ICT development index that can be used in this area.

Indicators to measure quality of access will also provide useful information when analyzing the status of the actions aimed at eliminating the digital divide between urban and rural areas (linked with question nº 1).

Develop a system for the interchange of best practices to continuously improve on quality of access.

4. What are the elements of an enabling environment to build confidence and security in the use of the Internet?

All the Internet fields of action should be endorsed in order to improve the user's confidence in Internet usage, including: TSM net neutrality, e-commerce law, security, privacy and data protection. Computer Incident Response Teams (CIRTs) and Computer Security Incident Response Team (CSIRTs) could work closely with the NRA's, in order to help in identifying suspects related with legal infringements and/or scam/fraudulent activities performed via the Internet.

In addition, digital security risk management and the protection of privacy to strengthen trust are also key areas which are critical for building an enabling environment.

5. What is the role of Governments in building an enabling environment?

Governments and Regulatory Agencies can and should play an important role in building an enabling environment via a combination of incentives and public policies. Based on the Portuguese experience, governments and/or regulatory agencies can:

- i. Create and enforce legislation to open up to all network operators the public and private passive infrastructures considered apt to support electronic communications networks.
- ii. Impose minimum coverage obligations on mobile operators, applicable to both territory and population in areas where new generation networks do not exist or are in short supply.
 - i. Determine specific timeframes for the coverage obligations to be achieved on mobile networks, which are included on both traditional licensing processes and spectrum auctions.
 - ii. Create an online tool to map all infrastructure networks capable of carrying electronic communications, including but not limited to, water, gas, electricity, roads and railways. This online tool should be of mandatory participation by operators to insert and update their network data, but open to consultation by the civil society.
- iii. Bestow direct state-aid.

- iv. Implement legal measures to facilitate the establishment of e-commerce operations.
- v. Create a nationwide digital initiative involving state institutions, academia, network operators and the civil society to:
 - a. promote innovation in ICT,
 - b. increase digital literacy by provisioning elementary and secondary schools with computers and broadband connectivity solutions,
 - c. increment e-commerce opportunities and exports based on the knowledge economy,
 - d. accelerate broadband development and rollout. In the Portuguese case this is in progress and we highlight the following objectives: i) promote the development of broadband infrastructures in order to allow all citizens access to broadband speeds equal to or greater than 30 Mbps by 2020 and ii) promote the development of broadband infrastructures to allow that 50% of households have access to broadband Internet speeds equal to or greater than 100 Mbps by 2020,
 - e. online availability of public services to facilitate the relationship with the citizen,
 - f. all Internet service providers shall make available specific provisions to ensure that users with disabilities have the same level of access, including affordable commercial offerings of specific equipment for them.
- vi. Promote digital security risk management and the protection of privacy to strengthen trust, and develop to this effect collaborative strategies that recognize these issues as critical for building an enabling environment, support implementation of coherent digital security and privacy risk management practices,
- vii. Cooperate and coordinate public policies with other stakeholders such as competition authorities and media regulators.

The NRA's in particular could also conduct a transformation process on their internal operations and organization to adapt to the Internet fast pace and complexity, namely because of the fast rise of OTT services, IoT, and technological paradigms created with the availability of VoLTE, LTE-A Pro and 5G.

The radio electric spectrum as well as fiber technologies should be considered at the infrastructure access level. Available services, mainly over the Internet, would be overseen by a new organizational model, including regular technical training, faster decision-making processes and real time supervision, improving or creating end users communications channels and promoting consumer awareness.

Regulation should include novel approaches to improve Internet access and competition, for example, considering unbundling fiber and municipal fiber access networks acting together with public and private investment funds under innovative business models.