

SOURCE: Supervisory Authority for Private Investment in Telecommunications (OSIPTEL),
Peru

In recent years, Peru has been analysing the situation of telecommunication services, in particular access to broadband. Supreme Decree No. 063-2010-PCM of 3 March 2010 recognized the important role played by broadband in stimulating the country's competitiveness, helping it penetrate the globalized economy and driving economic and social growth. Accordingly, it established the Provisional Multisector Committee, which is made up of OSIPTEL and other sector institutions and is in charge of drawing up the National Plan for Broadband Development in Peru. The Plan analyses the broadband situation in Peru and sets out proposals and policy recommendations on a series of topics relating to its development. The best practices described below are coherent and in line with the Committee's analysis and recommendations.

1. Funding mechanisms for driving public and private investment in broadband

The drive to develop broadband is contingent on a series of policy measures that foster private initiative and State participation in areas that are of social interest. These measures include: the establishment of a favourable general investment framework and the development of mechanisms to promote measures that reduce cost overruns and limit restrictions on private investment; simultaneous measures to promote investment in services and public infrastructure works; and measures that seek to consolidate competition and expand telecommunication services. Peru has made substantial progress on measures to achieve those ends. As a result, the past few years have seen significant achievement in network growth in both the private and the public sectors. The latter has been concentrated in rural areas, with projects being channelled through the Telecommunication Investment Fund (FITEL) via mechanisms for public-private partnerships.

Public-private partnerships for broadband deployment. When projects to deploy backbone are carried out in markets that do not offer sufficient returns for private investment, public funds play an important role in that they make it viable to develop such projects. In this context, best international practice suggests that projects to deploy telecommunication infrastructure can be developed by means of public-private partnerships (PPP). In such cases, part of the investment required is financed by the public purse, providing private agents with the incentive to develop business operations.

In particular, according to the World Bank (2010), when combined with a regulatory policy that eliminates barriers to new operators entering the market, market-based schemes are the most effective way to promote network deployment. When such mechanisms are supplemented with the provision of access to the infrastructure of other industries - electricity, hydrocarbon and transportation - the costs associated with infrastructure deployment can be reduced, generating greater incentives for private investment.¹

There are basically three forms of PPP. In the first, the State forms a partnership with a private operator under which the latter constructs and operates the network infrastructure, allowing it to provide end-user services along the entire length of the network. Here, a **vertically integrated operator** is in charge of

¹ In the case of Peru, the rules governing PPPs are set out specifically in Legislative Decree No. 1012 and its implementing legislation, approved in Supreme Decree No. 146-2008-EF, which is already being applied to transportation and sanitation infrastructure projects.

providing both carrier infrastructure and end-user services. In the second case, the State forms a partnership with an operator in charge of operating and maintaining the carrier infrastructure in a **carrier-of-carriers** model. The new operator is thus prohibited from entering the retail segment of the market, considerably reducing anti-competitive practices. There is also the **consortium model**, in which the State forms a partnership with a group of operators instead of just one, on the condition that various telecommunication operators have guaranteed rapid access to the network infrastructure.

While on the Committee, OSIPTEL conducted a preliminary assessment of these models and determined that the carrier-of-carriers model would be the most beneficial in terms of rates, competition and expansion in the medium and long term.

However, as mentioned earlier, these PPP models are to be implemented in cases in which no infrastructure is available. In cases in which infrastructure exists (such as the electricity grid and hydrocarbon pipelines), it should be made available within an appropriate framework for access and shared use that takes account of the infrastructure of sectors other than telecommunications (energy, roads, rail, etc.). In this sense, the deployment of infrastructure should include synergies with all sector agents.

2. Stimulating innovation and the development of applications and services

A series of mechanisms and measures can be used.

- Apply a regime of tax deductions for those directing resources at research and development of applications and digital content. In this way, taxpayer resources used to research and develop different applications can be deducted from taxable revenues. In the same way, intangible assets such as process improvements, patents and licences, if they are of limited duration, can be considered deductible expenses.
- Recommend that science and technology institutes play a more active part in the coordination of private-sector research and development initiatives with national and individual universities and technology institutes and with any entity potentially interested in applications and digital content (public and private), in order to promote the software industry by forming and consolidating the market for the development, marketing and technical support of applications and digital content.
- An example of an activity in line with this recommendation is the organization by universities, research centres, the private sector or others of national and international technology fairs to promote local applications and digital content. Likewise, the State should be encouraged to grant subsidies for the development of demo applications with a view to promoting their subsequent market launch.
- Boost alliances between the State and the business sector and non-governmental organizations for the development of digital applications and content.

3. Increasing the general public's knowledge of the digital world

- The State should establish a policy guaranteeing that every citizen is literate in terms of ICT knowledge and their use/acceptance. In other words, "digital literacy" should be part of traditional literacy. This implies that the State has to take responsibility for educating and/or coordinating digital literacy initiatives and that the public entities involved in education (from the central, regional and local government) use part of their budget for that purpose.
- A strategic national digital training plan should be drawn up that, as a first measure, should identify the real extent of digital illiteracy in the country, at all levels of education and among all

population groups, using standard expert methods nationwide. This would result in an adequate diagnostic not only of the existing level of digital illiteracy, but above all of its root causes.²

² See K. Feroz et al., "E-government Skills Identification and Development: Toward a Staged-Based User-Centric Approach for Developing Countries", *Asia-Pacific Journal of Information Systems*, Vol. 20, No. 1, March 2010, which lists the skills needed by citizens and public servants for the demand-side development of e-government in an underdeveloped country.