

Red Asturcón

FTTH CASE STUDY

Regional government scheme to eliminate the digital divide

The Government of the Principality of Asturias took the unusual step of setting up a public operator to provide FTTH to small towns that traditional telecoms providers had ignored.

The Principality of Asturias is an autonomous community situated on the Spanish north coast. In the recent past, many small towns have suffered an industrial decline, as traditional forms of employment based around mines, small farms, fishing and shipbuilding have had to adapt, sometimes quite traumatically, to the global economy.

It has long been recognised that public investment in rural and small towns is a driver of economic and social development. If it is right for other infrastructures (roads, parking, airports), then why not telecommunication infrastructures? This was the logic behind the decision of the Principality of Asturias to improve the communications infrastructure in the mining valleys. The aim was to give the rural population access to the same services as offered in the bigger cities, and eliminate the “digital divide”.



General information

Project promoter:

Government of the Principality of Asturias

Project developer:

GITPA (100% owned by the Government of Asturias)

Location: Principality of Asturias, Spain

Project name: ASTURCÓN Network

Network status: Operational

The new access network would be open to all service providers and managed by a public operator. This business model was chosen because the local authorities wanted to separate the infrastructure from the services: public investment “builds the roads” and private investment can then “add the cars”. This approach is approved by the European Union because it does not distort markets.

One reason for lack of investment by commercial telecoms providers was the mountainous geography of the Asturias region. The settlements of the mining valleys were small and distributed, and many telephone lines were too long to support ADSL technology. Finding a solution to this technological challenge ultimately led to creation of the first FTTH network in Spain.

The initial budget was €18.7M, which included the creation of the public operator, Gestión de Infraestructuras Públicas de Telecomunicación del Principado de Asturias (GITPA). 60% of funding came from the European Regional Development Fund (Fondo Europeo de Desarrollo Regional or FEDER) and 40% came from a national fund for the

regeneration of former mining communities. The original scope of the project was to cover around 31,000 homes in towns of more than 1000 people and with one or no broadband access network. The first phase of deployment to reach 21 communities in the mining valleys of Nalón, Caudal and Narcea took place between 2005 and 2007.

The network has been extended several times as new sources of funding become available. The “Llanes, Paraíso Digital” project, under the National AVANZA Plan extended the network to around 1500 homes in central Llanes in 2007. In 2008, using the Regional ACEBA fund, there was a major expansion to 19 more communities over a period of three years – a total of about 19,000 more dwellings. Taking into account an extension to four villages with between 500 and 1,000 inhabitants completed in March 2011, the ASTURCÓN network now provides services to 45 towns, representing approximately 9.5% of all homes in Asturias.

Deployment & Take Up

Technology/architecture: GPON with 1/32 splitting

Deployment method:

Facade cable and ducts, using public infrastructure such as traffic light or public lighting ducts when possible.

Size of network:

~51,951 premises passed including 15 industrial parks

Take-up: 10,600 customers (end 2011).

Penetration is about 40% in the original project area of the mining valleys. Take-up is lower in the coastal villages where there are many holiday homes.

Has the Principality of Asturias succeeded in its aims? Definitely yes, says Juan Manuel Rodríguez, director general, GITPA. Public investment has eradicated the digital divide in the region, and has created a new and



attractive business model for the operators. "This new model for telecoms based around sharing infrastructure is needed in order to cover demand outside big cities," he explained. "There are real opportunities to operators to deploy new services using this business model, because they will have low investment needs, and it dramatically reduces their time to market."

The network is designed as a single infrastructure operated by GITPA, which offers wholesale services to multiple retail service providers. GITPA offers a common single point of interconnection for the entire network located near the railway infrastructure (commonly used by telecom operators in Spain to expand their network), where it offers also colocation facilities. Service providers buy Layer 2 Ethernet services between the point of interconnection and the optical networking terminal at the customer properties.

Business Case

Total investment: €56.7M

O&M cost (2011): €656,000

Income (2011): €1.9M

To make it easier for new service providers to engage with the public operator, the operator processes were designed to have a similar look and feel to Telefonica's offer of wholesale broadband services based on local loop unbundling. GITPA also developed a high-quality customer support system based on the TeleManagement



Forum e-TOM standard, to provide operations systems and support for customer service and fault management. Operators and GITPA interact via a web portal www.gitpa.es which gives direct access to a range of features, such as network coverage, status request for all services, incident logs and more. Although it has taken some time to build momentum, now there are three service providers on the network, including French incumbent Orange, which launched services in June 2011.

End-user Services

Three operators offer services (December 2011):

Telecable: www.telecable.es

>40 channels RF TV, voice (POTS); and internet: 15, 70, 100 Mbps download and 1.2, 1.5Mbps up

Adamo: www.adamo.es

high-speed internet 100/100Mbps; and VOIP

Orange: www.orange.es

high-speed internet 100/100Mbps; VOIP and TV package including HD channels

The primary objective – to use public funding to boost economic development – has also been achieved, says Rodríguez. The Fundación CTIC of Asturias calculates that the public investment in communications infrastructure has added €189M to the GVA (Gross Value Added) in Asturias, equivalent to 0.9% of the Asturian GVA in 2009. The availability of high-speed internet at up to 100Gbps has attracted a number of large companies to the region including *el corte ingles*.

Written in December 2011
Contact us on info@ftthcouncil.eu