

# Portugal Telecom

## Incumbent gains competitive advantage with FTTH

Portugal has become one of the most active FTTH markets in Europe and the incumbent operator Portugal Telecom (PT) is at the centre of the action.

With each household having nearly three TV sets on average, the pay TV market in Portugal is extremely important for both cable and telecoms operators. PT had already launched IPTV services in 2007 over its upgraded DSL networks, but with cable operators starting to offer high-speed broadband and voice services in addition to TV, a more aggressive strategy was called for.



The answer was fibre-to-the-home. The high capacity and high reliability of optical fibre enable PT to deliver a robust TV offering with a wide range of TV channels and on-demand, personalised video services across multiple platforms (PC, TV and mobile). More choice and a better customer experience are obvious benefits. Although perhaps less obvious, the widespread availability of optical fibre in urban areas will make it easier and cheaper to roll out next-generation mobile networks using LTE, which require fibre connectivity to base stations.

## Deployment

### Size of network:

1.6 million homes passed at the end of 2011, equivalent to 40% of primary households in Portugal (1.600.000/3.997.378) and to 27% of total households in Portugal (1.600.000/5.877.991).

### Technology/architecture:

GPON with RF overlay for analogue TV services.

### Deployment method:

Fibre deployment targeted mainly at areas where ducts are available and high take rates are expected.

### Time to deploy:

Deployment started in 2008 and finished one year later; extension of the network is being evaluated.

PT's decision to invest in FTTH was assisted by the early adoption of next-generation access (NGA) regulation. The national regulator, ANACOM, has adopted a segmented model: in urban areas where there is plenty of competition for broadband and telephone services, there is only light regulation, which means that PT is not forced to provide wholesale services to competitors.



Deployment of FTTH in urban areas started in 2008. "Fibre is not new to us, we have been doing fibre for more than ten years," said Luis Alveirinho, director of network planning and implementation at PT. "But we are moving from thousands of connections with fibre to millions of connections – this is a totally new paradigm."

Over a period of roughly 12 months PT has passed 1 million homes with FTTH – the operator only considers a home to be "passed" when fibre is available outside the customer's door, not merely outside the building. Having identified a commercially attractive area for the deployment, PT first carries out a detailed site survey, which informs the technical design and optimisation of the network.



Some technical decisions, like the selection of GPON, were straightforward according to Alveirinho. The use of passive optical network technology relaxes the requirements for space in the central office, space in ducts, lowers energy requirements and reduces technical complexity, he says.

PT knew from the beginning that it would need to present signals to multiple TV sets in the same household in a cost effective way. This can be done using the broadcast

capabilities of a GPON system, by carrying the analogue TV signals on a third wavelength in the system. The analogue TV signal is then distributed around the home using the existing coaxial cabling, avoiding the need to supply multiple set-top boxes.

## Business Case

### Investment:

PT claims the cost per home passed “is very good compared with available international benchmarking values”. Use of existing ducts and very competitive labour rates in Portugal help to keep costs down.

### Number of years to ROI:

“The better service experience we are providing to our customers and the service uptake is very promising in terms of the business case for FTTH,” says PT. The operator views FTTH as a long-term, transformational investment.

### Business model:

Vertically integrated – PT builds, operates and sells services on the network

Other decisions were more complex. A major topic of discussion was where to site the next-generation POPs. Central offices in urban areas usually serve homes no further than 2–3 km away, but fibre can easily reach 10 km, giving the operator the opportunity to reduce, in the medium term, the number of central offices from a few thousand down to several hundred.

The vertical cabling – getting fibre distributed to individual homes inside apartment blocks – was also challenging, often because the cable TV operators had got there first and the service ducts in the buildings were already occupied. In other cases, in older homes, there were no ducts available at all and so PT needed to use facade cable, running it along the outside of the building.



PT paid special attention to the design rules for in-building cabling and the network test/acceptance procedures, so that technicians could install cabling quickly and efficiently, and with minimum disruption to the customer. “You cannot say to the customer, I’m here to install your fibre and by the way you need to provide



breakfast, lunch and dinner,” Alveirinho quipped.

By optimising its processes and all support systems over a period of 15 weeks, the average installation time was reduced from 5–6 hours down to about 4 hours. The use of bend-insensitive fibre, strong technician training and strict technical procedures for installation were all critical to achieving fast, high-quality installation both inside the building and inside the customer’s apartment.

With strong competition from cable companies in the areas where PT is deploying fibre, good customer service is vital. In terms of attracting and retaining customers, Alveirinho believes an operator has two main choices: it can offer premium packages or offer unique services and content. PT says it is doing all of these things.

## End-user Services

### Services:

Wide range of packages from €30.99 to €179.99, including quadruple play packages with TV (from 15 to 130 channels), Fixed Broadband service (from 6Mbps/1Mbps to 400Mbps/40Mbps), Mobile Broadband service (100MB free) and fixed voice service - from €32.49/month to €179.99/month.

For MEO packages info go to: [www.meo.pt/ADERIR/FIBRA/PACOTES/Pages/tvnetvoz.aspx](http://www.meo.pt/ADERIR/FIBRA/PACOTES/Pages/tvnetvoz.aspx)

The “Meo” brand IPTV services come packaged with unlimited internet, unlimited voice and 100MB of free mobile broadband. PT is also trying out innovative new products – for example, a mobile app allows customers to access the electronic programme guide from their mobile phones, so they can set the set-top box to record a program when they are out of the house.

The strategy seems to be working. “Since the launch of the service in April 2008 we have collected 28.7% of the pay TV market and earlier this year we made the first event available in 3D in Portugal,” Alveirinho said. The operator is currently evaluating where and when to extend the coverage, and developing new IPTV products that will help to strengthen its position in the market.

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