

Pau Pyrenees

Pioneering fibre deployment in South West France

The municipal authority of Pau-Pyrenees is looking forward to a new generation of high bandwidth services for its citizens and businesses.

On the northern edge of the Pyrenees is the town of Pau, capital of the *Pyrénées-Atlantiques* department of France. Along with 13 other neighbouring municipalities, it forms the *communauté d'agglomération* of Pau-Pyrénées.

In 2001, the municipal authority of Pau-Pyrenees decided to radically transform the local economy, as well as improve the lives of citizens, by deploying a pioneering optical fibre network running directly into homes and businesses.

General Information

Location:

Pau and surrounding area, South West France.

Population:

Total population of the area is approximately 140,000.

Network owner:

Agglomération of Pau-Pyrenees

In those days, fibre to the home (FTTH) was in its earliest infancy, with little in the way of other projects to use as a template. Not only were there no clear standards for project planners to follow, there was little understanding at subscriber level of what high speed broadband technology could deliver. The 'dotcom' crash was a recent memory, and people's faith in the power of the Internet to transform lives at a low point.

Undaunted, the Pau-Pyrenees authorities began work in 2003, and the network was launched two years later in 2005, based on Active Ethernet running over fibre. By 2007,

42,000 homes had been passed – although only 5,000 active subscribers were signed up.

The perception started to grow that a major investment had been made in a network that only a minority of people really wanted, much less needed. Services envisaged by network planners like video on demand, video surveillance, high definition TV, online backup of data, green data centres, grid computing as well as the idea that applications could be hosted remotely were all but unknown, and people were not ready for them.

Deployment

Size of network:

51,000 homes passed, 9,000 homes connected (as of summer 2010).

Technology/architecture: Active Ethernet running over fibre

Time to deploy:

Pre-planning 2001, project started 2003, finished and launched 2005.

Efforts to communicate the ways in which the network could be of benefit, and explain how FTTH technology differs radically from broadband alternatives, made slow progress. A lack of competition at service provider level, and consequent lack of spend on marketing and the development of new services, did not help matters. The pioneering Pau-Pyrenees project started to develop a bad image, and its credibility was in doubt.



A change in fortune

Three years later, the fortunes of the Pau-Pyrenees FTTH deployment have undergone a dramatic improvement. The original objective of 55,000 out of a possible 70,000 homes passed has, at 51,000, been nearly reached. Subscriptions have been taken up by over 9,000 of those homes, as well as 350 locally based businesses, and interest is clearly rising.

Business Case

Investment:

Project cost of €14.8M (split €6M Pau-Pyrénées agglomération, €7.7M FEDER, €1.1M Aquitaine Region). Average cost per home passed of under €300.

Owner: Pau-Pyrenees owns the network.

Operator:

Axione operates the network, responsible for design, engineering, installation, operation, and maintenance, with services sold through ISPs like SFR-Cegetel and Heliantis. Now open to competing telcos, in line with ARCEP (French telecom regulatory authority), to assist future network development in less densely populated, rural areas.

The impact on the local economy and on quality of lives is now no longer in doubt. Since 2005, over 800 new jobs have been created through the economic uplift delivered by FTTH. The region has become highly attractive for businesses to settle in and build new offices, or establish data centres. In particular, *Pau Cité Multimédia* is being created to attract companies with an ICT focus.



"It is difficult to measure the real impact of the network, but we expect ultimately that about 1,600 new jobs will be created on these sites," says Martine Lignières-Cassou, President of the *Communauté d'Agglomération* of Pau-Pyrénées.

The University of Pau has developed digital streams for the benefit of students, 1,450 of whom will soon be

directly connected to the Internet over fibre broadband links. The prestigious Ecole Internationale des Sciences du Traitement de l'Information (EISTI) now has a campus in Pau, drawn by the boon of high-speed connectivity.

Those residents that subscribe to FTTH are enthusiastically enjoying highspeed access to services like VoIP, IPTV, VOD and online photo development. Such services have started to filter into the consumer mainstream, and now appear far less cutting edge than back in 2005 when the deployment was launched.

Businesses meanwhile are benefiting from a better quality of connectivity than they would enjoy even in a major city, enabling them to decentralise and move jobs



into the region. Small companies are able to achieve a more global reach with their goods and services. The future now looks bright with a whole new generation of services soon to become a reality – online gaming and virtual worlds, telemedicine, teletraining, virtual world-based e-commerce.

"Ours remains a pioneer project, and many other communities have since sought to take account of our experience," says Lignières-Cassou. "They want to avoid problems and learn about techniques, such as deployment in urban areas and the combining of several municipalities. Pau was not only a technological challenge, but above all a social challenge and an economic one."

End-user Services

Cost:

A 70 Mbps connection with triple-play services costs €34.9 per month.

A number of businesses also benefit from high upload and download speeds, as well as public sector services, for example medical imaging uploaded on a joint network shared by several hospitals and surgeries.

She says the organisation is currently at work on defining a services offer for the passive network: "We are also developing the active side to maximize the potential of fibre, using our competitive advantage with the deployment of innovative services," she adds. "Our responsibility now is to consolidate the network, and strengthen the ICT pipeline, and also to share our experience with local authorities and public sector partners wishing to take advantage of very high speed broadband."

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Photos provided by Pau Pyrenees

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