

This project demonstrates how, while the use of existing infrastructure can dramatically reduce the network deployment costs, this approach is not without challenges: project leaders need to obtain permits from the infrastructure owners or public authorities. A high degree of preparation and coordination is necessary in order to succeed with this approach.

Source
Jean-Dimas Malot
+33 386618266
jd.malot@niverlan.fr
www.nievrenumerique.fr

Digital Nièvre France

Nièvre is a rural department in the region of Burgundy-Franche-Comté with approximately 33 inhabitants per square kilometre. Of its eight larger towns, only two reach the figure of 10,000 inhabitants.

In 2006, the General Council of Nièvre County and the Nevers Area created a joint association of local authorities in Bourgogne in charge of public high-speed networks: Nièvre Numérique. It is the delegating authority for public service broadband electronic communications for 2007-2027.

Nièvre Numérique sought to replace the existing wireless network communication technologies with a faster and more reliable fibre optic network. The association decided to make use of existing infrastructure, deploying an overhead fibre backbone using electricity pylons. The aim

was to save up to 90% of the civil engineering cost and guarantee widespread broadband coverage. To achieve this, the association signed a contract with the French company in charge of the electric network (then ERDF, now ENEDIS) and fibre optic cables were wound around 172 km of high-tension electricity cables.

In addition, the association chose to deploy 50% of its network along other existing infrastructure, such as ducts belonging either to local authorities or to the French State. More than 60 km of existing infrastructure was used for the fibre network.

The association had to manage all the rights and access permits across private properties. It also had to manage the connection between the overhead and underground networks.

Good practice in project planning

- ✓ Making the facilities (passive infrastructures) owned by the public sector available at an attractive economic rate





Photo: Nièvre

Leading organisation

Niverlan, now Nièvre Numérique

Financing

€25.6 million in public funds:

- General Council of Nièvre County: €13.4 million
- Sub-prefectures of the Nièvre department: €2.6 million
- Region: €5.6 million
- European funds: €4 million
- State: €0.2 million

Private funds: ETDE / Axione: €16.1 million

Speed / Performance

Up to 100 Mbps (Megabits per second) for professionals

Technology

ADSS¹

The network

Infrastructure:

- 312 municipalities
- WiMAX² radio coverage (wireless network) complementary to the DSL³ coverage
- Over 600 km of optical fibre
- 48 connected business areas, 33 of which are directly fibre optic

Network users:

- 12,871 ADSL⁴ subscribers
 - 62 FTTH⁵ subscribers
 - 1,596 WiMAX subscribers
 - 554 subscriber companies
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1 All Dielectric Self-Supporting cable: a type of optical fibre cable that is strong enough to support itself between structures without using conductive metal elements. It is used by electrical utility companies as a communications medium.

2 Worldwide Interoperability for Microwave Access

3 Digital Subscriber Line

4 Asymmetric Digital Subscriber Line: internet over copper cable, with faster download speeds than upload speeds

5 Fibre-to-the-home: where fibre is laid all the way to the home. Alternatives configurations include:

- FTTP – Fibre-to-the-Premises: fibre laid all the way to the premises
- FTTB – Fibre-to-the-Building: fibre laid all the way to the building
- FTTC – Fibre-to-the-Cabinet: fibre laid to the cabinet, with copper wires completing the connection
- FTTN – Fibre-to-the-Node: fibre laid to the node, with copper wires completing the connection