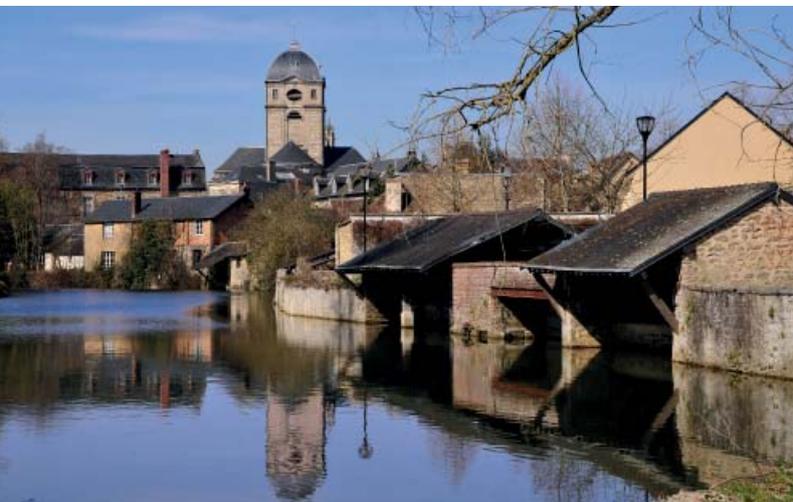


Case study

AROONA serves communities' networks



The customer's issue

To respond to the ever-increasing needs of high bandwidth, the Urban Community of Alençon (CUA) would like to **renovate its LAN**. The renewal of its network core required an **upgrade of the cable infrastructure** in order to support the transmitted bit rates.

The **AROONA** solution

When taking into account the location of the network infrastructure in the city center and the complex and expensive civil engineering that it would require, CUA chose the passive solution AROONA-P2P by CAILabs to **drastically increase the bandwidth of the existing fibers** while also **avoiding the complexity of new fiber deployment**.

The benefits of the solution

76% savings compared to an infrastructure upgrade with new cable deployment

3 hours of installation per link

4 x 10 Gbit/s of bandwidth instead of being limited at 100 Mbit/s

Increasing need for high bandwidth

Located in the heart of the Greater West region in the Orne and Sarthe departments in France, the Urban Community of Alençon (CUA) has come up with a new approach to further **develop and modernize its network infrastructures**.

The IT network of this urban community is comprised of many workstations, which are distributed among the city hall, several administrative services, the academy of music, libraries and many others. These sites are linked by a **cable infrastructure with OM1 multi-mode fibers** which were deployed in 1997.

Grappling with **users' increasing need for higher bandwidth**, the IT management of Alençon has an **intrinsic limitation of bit rate on the main links** of the network. *"For many years, we have been dealing with bottlenecks over several fiber links in our network"*, explains M. Genevoix, CIO of the CUA.

"AROONA-P2P is the ideal solution for our problem of needing a higher bandwidth, it is a real boon for us. The quick installation of the equipment over our production fibers constitutes a real advantage, minimizing the impact of the city's administration services."

Jean-Paul Genevoix, CIO of the CUA

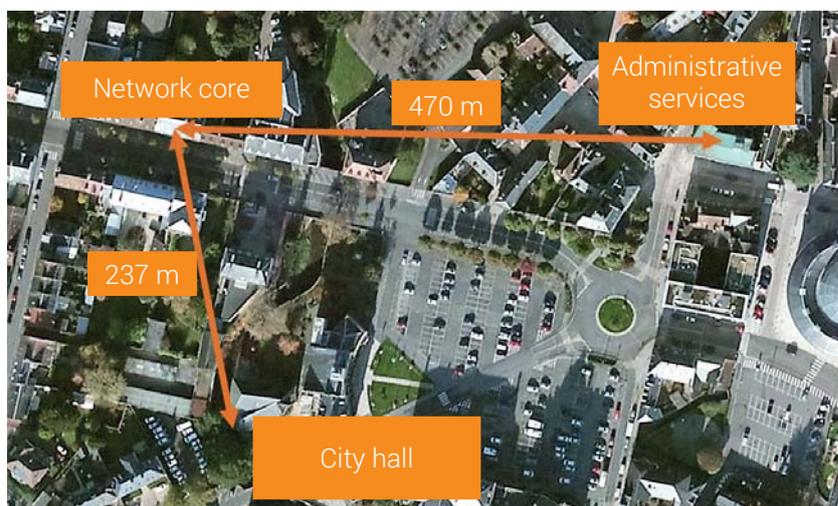
New fiber deployment: overly complex and costly

"In addition to the renewal of the active equipment in the network core, we considered deploying new single-mode fibers to solve the issue of bandwidth limitation, but given the location of the buildings in the city center, the relative costs were prohibitive," said M. Genevoix.

Located in the city center, two main links, limited at 100 Mbit/s rate, connect the city hall and administrative services to the network core. **Being that there weren't any available cable ducts on these links, upgrading them would have entailed civil engineering** through parking, roads and watercourses. Such deployment would have required an **exorbitant investment**.

Alençon's IT management team chose to use the innovative AROONA-P2P solution provided by CAILabs in order to respect the wish of the Alençon community to remain at the cutting edge of technology. This solution allows them to **recycle and upgrade the existing multi-mode fiber infrastructure** so that data can be transported 400 times quicker.

Map of the deployed AROONA-P2P links



A renovation project becomes feasible and affordable

By deploying the passive AROONA-P2P solution, upgrading the limited fiber links took just one day. The investment costs were **reduced by 76% compared to a new fiber deployment**. By drastically reducing the project cost and reducing the installation time to a few hours, the AROONA-P2P solution made the renovation of CUA's network infrastructure possible. Today, each of the upgraded links allows the **4 independent duplex channels to be transported at 10 Gbit/s**.

Harness the full potential of optical fibers

CAILabs is a leading provider of innovative solutions designed to increase the capacity of optical fibers. We develop and manufacture a large range of light shaping components based on our patented, efficient and flexible Multi-Plane Light Conversion (MPLC) technology.

Worldwide telecommunication manufacturers and providers, such as Nokia, Cisco, Huawei and KDDI, trust our products to upgrade today's network infrastructure and create the networks of tomorrow.

At CAILabs, we help you make the most of your optical fibers!