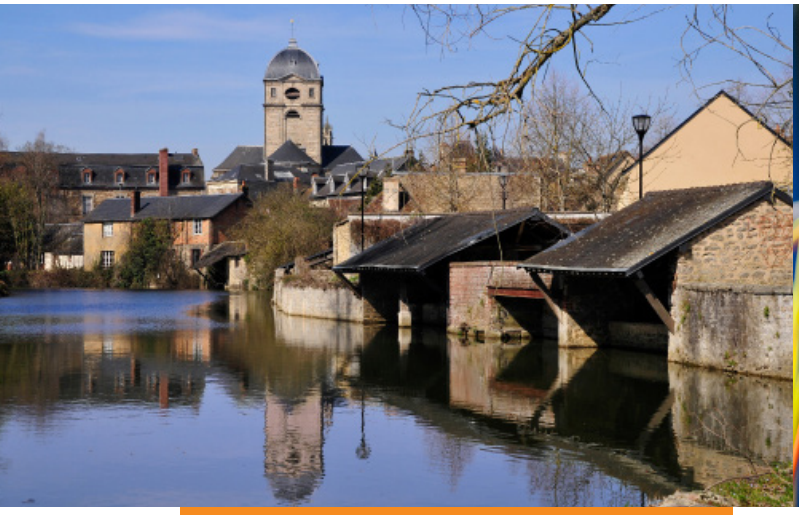
Case study

AROONA serves communities' networks



The customer's issue

To answer to the increasing needs of high bandwidth, the Urban Community of Alençon (CUA) desired **to renovate its LAN**. The renewal of its network core required an **upgrade of the cable infrastructure to support the transmitted bit rates**.

The **AROONA** solution

Considering the location of the network infrastructure in the city center that would have required complex and expensive civil engineering, CUA chose the passive solution Aroona by CAILabs **to drastically increase the bandwidth of the existing fibers** while **avoiding the complexity of new fibers deployment**.

The benefits of the solution

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

3 hours of installation per link

4 x 10 Gbit/s of bandwidth instead of a limit at 100 Mbit/s

Increasing need for high bandwidth

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

The IT network of this urban community is comprised of many workstations, distributed between the city hall, several administrative services, academy of music, libraries and many more. 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 deals with an **intrinsic limitation of bit rate on the main links** of the network. « *We have been confronted for many years with bottlenecks over several fiber links in our network* », explains M. Genevoix, CIO of the CUA.

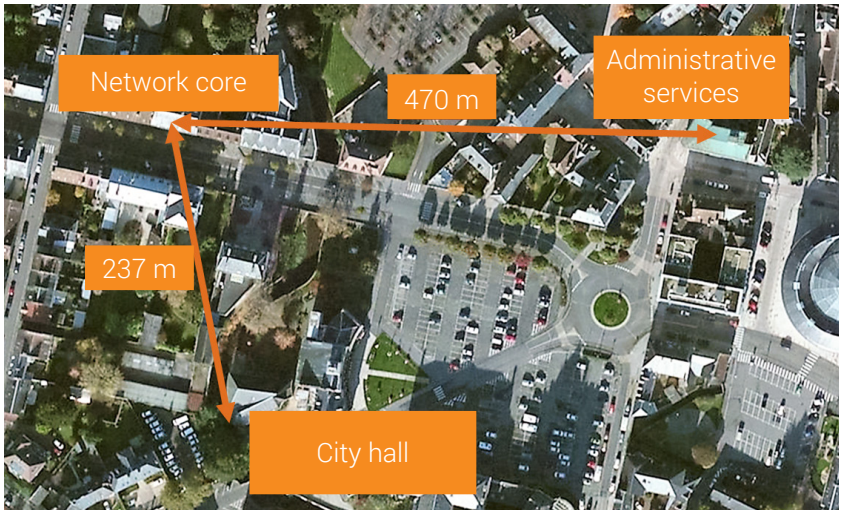
« Aroona is the ideal solution for our problem of increasing need for high bandwidth, it is a real boon for us. The fast installation of the equipments over our production fibers is a real advantage, it minimizes the impact over city's administration services.»

Jean-Paul Genevoix, CIO of the CUA

A new fiber deployment: too complex and costly

« *Besides the renewal of the active equipment in the network core, we considered deploying new single-mode fibers to solve the problem of bandwidth limitation, but given the location of 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. **Given the fact that there were no more available cable ducts on these links, upgrading them would have meant civil engineering** through parking, roads and watercourses. Such deployment would have required an **exorbitant investment**.
The IT management team of Alençon chose to use the innovative solution Aroona provided by CAILabs in order to respect the wish of Alençon community to remain at the cutting edge of technology. This solution permits them to **recycle and upgrade the existing multi-mode fiber infrastructure** to transport data 400 times faster.

Map of the deployed AROONA links



A renovation project becomes feasible and affordable

By deploying the Aroona passive solution, upgrading of the limited fiber links took no more than one day. The investment costs were **reduced by 76% compared to a new fiber deployment**. Drastically reducing the cost of project and minimizing the disruption to a few hours, the Aroona solution made the renovation of CUA's network infrastructure possible. Today, each of the **upgraded links** allows the transport of **4 independent duplex channels at 10 Gbit/s**.

Harness the full potential of optical fibers

CAILabs is a leading provider of innovative solutions 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 technology of Multi-Plane Light Conversion (MPLC).
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!

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