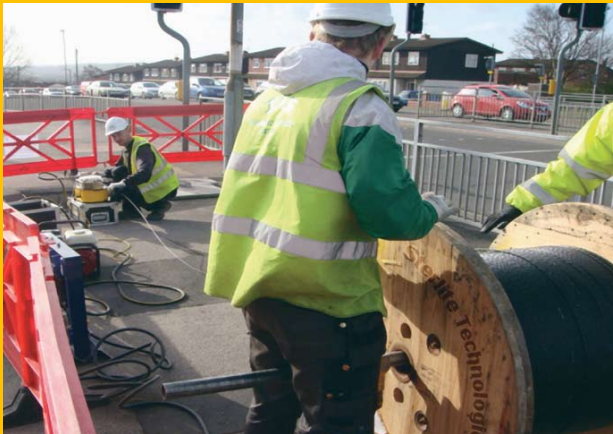


Case study

Sterlite helps Dutch CATV operator cut the cost of FTTH deployment



Oss in The Netherlands – A Fiber-To-The Home deployment



Background

Oss is a sophisticated city in the North Brabant province of The Netherlands. It is a mix of residential and industrial areas between 's Hertogenbosch and Nijmegen and, like most cities in The Netherlands, residents receive their television service via cable. Until just over a year ago, this service was delivered over coaxial cable. In early 2009 a decision was made by the municipality to move this and other services over to FTTH.

This decision to move to FTTH was made because it was deemed necessary to have faster connection speeds for both upstream and downstream services and additionally new services such as interactive TV, IP TV and video surveillance could be extended to the community. These would not be available over copper cable due to its inherent bandwidth limitations.

The local cable service provider Cable Media Brabant Gelderland (KBG) provides over 12,000 subscribers with CATV, TV and radio services, Internet and VOIP services. KBG made the decision to replace all its coaxial cables with optical fiber over a five-year period. In addition, all of the Company's new infrastructure in the area is already being designed to operate over fiber from the outset.

Project Aims

KBG needed to source its optical cable and passive components from a partner that would help them with the design of the network to ensure both technical and commercial success. It needed to buy a large volume of Micro-duct fiber and ensure that it could terminate a large number of connections at one point in serviceable "hand-holes" to avoid the need for street cabinets.

KBG also had the following aims:

- Ensure the delivery of CATV, TV and Radio, Internet and VOIP services to both existing and new customers into the future with higher speeds both upstream and downstream.
- Enable the potential of future advanced services, such as Interactive TV, home and business security services and high speed internet wireless services.

- Build an access infrastructure that would last for a minimum of 30 years.
- Find a supplier that was willing and able to help design the network.

The Solution

KBG's team headed by network manager Henk Seepers decided, after a tendering process, to work with the local Benelux-based team from Sterlite Technologies. "We needed a turn-key solution and wanted to work with a team that could act as an extension to our own team to conceptualise and build the solution to meet our business objectives as well as a supplier who could meet and exceed our expectations on reliability, delivery, service and of course meet our technical specifications and price." said Seepers.

Installation

The plan for FTTH in Oss is coming to fruition but it will take five years for all of the coaxial cables to be replaced by optical fiber. Currently all CAI main distribution boards at KBG are already connected by fiber optic connections. Within five years existing customers will be upgraded to fiber but all new customers will have fiber deployed to their homes straight away.

With all FTTH deployments the density of connections at termination points is a major issue and this would normally require street cabinets above ground. As street cabinets are unsightly and vulnerable to being vandalised or damaged by car accidents, KBG specified that that at the end of the project all connections should be underground. KBG also wanted to avoid the cost of multiple civil works as individual premises were added.

Sterlite's solution was to develop a specific enclosure for the purpose (see photo below). The hand-holes are modular and have the specific benefit of being accessible from street level during installation which makes adding and removing connections as simple as possible.

New concept for hand-holes

Henk Seepers explained the features and benefits of Sterlite's hand-hole approach to the fiber installation KBG is making: "Conventional solutions use either a cabinet or a buried hand-hole for connecting fiber during installation, and storing the fiber closure when all customers are connected. By understanding our needs and installation practices Sterlite offered us a solution that has the advantages of a street cabinet, street level hand-hole and buried hand-hole at different stages of the network build."



"In the roll-out phase, our installers can use the hand-hole as a cabinet or as a street-level box allowing customers to be easily connected to the feeder cable. Not all homes at a defined distribution point can be spliced and connected on the same day, and so existing buried hand-holes have to be buried and dug-up using civil works each day, which for KBG would be expensive and time-consuming. With the modular handhold at street level it is easy to open and close the handhold until all 48 homes are spliced and connected to the feeder cable."

"After completion of all our customer connections the street-level or cabinet hand-hole has the modular top unit removed to convert to a fully protected underground box: no unsightly or vulnerable cabinet is left above ground. The modular design means installation time and cost is minimised during roll-out, and upon completion the fiber closure is completely buried for minimal disruption and maximum security."

The first phase of the FTTH deployment in Oss has been made in the autumn of 2009 and has posed no problems on either existing buried fiber or where new cable had to be air blown into existing ducts. The cable

recommended by Sterlite and chosen by KBG is a 96-fiber Micro-duct design with a small diameter of only 6.8mm (now further reduced to 6.5mm).

This cable maximizes duct utilization and enabled simple installation. However it was the ability to re-use the "hand-holes" which meant KBG could significantly reduce its installation costs and were able to have a modular and flexible approach during each stage of the deployment. By reducing installation time and the number of hand-holes needed on the project, KBG were able to save significant costs. Having unfettered access to the hand-holes above ground during installation made it easier to add additional customers.

Partnership

The cooperative working relationship between KBG and Sterlite was key to the project as many of the challenges were overcome by careful forward planning in advance of deployment. One of KBG's key management issues was, and continues to be, keeping down the costs of the installation. That they have been able to do so, has meant that to date KBG has financed the project out of its own pocket.

Fiber is the future – the only sensible choice

KBG's thinking on this type of network is that fiber is the future. "To start a new network based on coax would be a waste", said Seepers. All new connections on KBG's network will be fiber.

For the business community, KBG are able to offer fiber connections to the business customers in their service area, and allows them to select and shop for the services that best suit their individual requirements. These services are offered over an open network using the NDIX network. "In part, our strategy in building out an FTTH network is to increase the value of a major asset on which other larger service providers can sell their services gaining us additional revenues from the network," he said.

Conclusion

The benefits of a close working relationship between KBG and Sterlite became evident through the project. Sterlite's helping to minimise the cost of installation, cooperating on the design of the network and working to a common set of goals has meant no delays in deployment, no loss of performance and simple on-site integration.

"Working with Sterlite Technologies for the delivery of the passive optical network infrastructure, has ensured that we can provide the residents of Oss, Berghem and Heumen with a reliable solution for now and into the future," said Henk Seepers.

"Solving problems for our customers by working in partnership with them means that Sterlite can help them deliver the best possible solution. We are able to not only deliver cable for FTTH projects but advise and supply cost effective components for such deployments," commented Sterlite's Ashwin Laddhaa Head Europe (Telecom Business).

"Having a comprehensive one-stop shop approach in this and similar projects enables network operators to significantly reduce the cost of both network build and operation. It also means a fast deployment timeframe and therefore quicker returns. The market requirement for increased bandwidth across the globe will lead to more and more FTTH projects."

About Sterlite Technologies Limited

Sterlite Technologies Limited ("Sterlite") [BSE: 532374, NSE: STRTECH], is a leading global provider of transmission solutions for the telecom and power industries. It is amongst the largest global manufacturers of optical fibers and is the largest manufacturer of power conductors, globally. For more details, please visit www.sterlitetechnologies.com

