

MälarEnergi Stadsnät

FTTH CASE STUDY

Pioneer open network in Sweden

The municipality of Västerås was the first in Sweden, and probably in Europe, to build an open access fibre network. The concept has been documented and sold to other cities in Sweden.

Sweden was the first country in Europe to develop a broadband policy, so it is perhaps not surprising that it is also leading the way in FTTH. In 1999 the Swedish city of Västerås decided to build its own municipal fibre-optic network. The motivation was simple: the local authorities wanted to develop a communications infrastructure for their own use, and to attract new businesses to the city. Back then it was cheaper to dig your own fibre than to rent dark fibre capacity from existing operators.

General Information

Country: Sweden

City: Västerås, population 136,000

Project name: MälarEnergi Stadsnät

Thus in July 2000 Mälarenergi Stadsnät was created, which was 40% owned by industrial firm ABB and 60% owned by utility company Mälarenergi, which in turn is owned by the people of Västerås. (Today the company is a fully-owned subsidiary of Mälarenergi, which bought out ABB's share in the business three years later).

The concept of open access was new, but made good sense, according to Per Norrthon, CEO of Mälarenergi Stadsnät. "The investment was large, and the only way to accommodate this was to find many users and many services," he explained. "We decided to merge the needs from business and private sectors, and create an active infrastructure with very high performance, to be used by everyone and for every need; data communication, TV distribution, telephony and also future services whatever they might be."

Mälarenergi understood early on that good marketing was

vital to success. The first marketing campaigns targeted commercial properties by focusing on a single area and getting as many businesses as possible to sign up. As well as promoting the benefits of fibre, the campaign noted that it would cost more to connect to the network at a later stage. The strategy was highly successful, with over 95% of businesses registering for connections. They all agreed to pay their connection fee in advance, which kept the company cash flow positive in the first year.

Deployment

Size of network in Västerås, including Hallstahammar and Eskilstuna:

- 2,200 connected businesses
- 8,300 connections for public services (municipalities' administration, schools, elderly care etc.)
- 47,000 residential homes passed and 22,000 subscribers
- 250 WiMAX clients

Technology/architecture: Ethernet. Access switches are connected in loops. The links in the transport network are 1 Gbps; customer connections are nominally 100 Mbps; actual bit rate depends on service selected.

Deployment method: duct and fibre laid at the same time; more fibre blown in later if needed.

Time to deploy: deployment started in 2000 and now reaches 60% of the city.



In 2003, new campaigns were launched to target residential properties. The first connected customer was the municipal-owned real estate company, Mimer; the second was the municipality administration itself. These major agreements made it possible to spread out the network across different areas of the city, and from that position sell connections to private home owners.



“A lot of effort was made to promote our offer to the market,” said Norrthon. “We created different groups of customers; business users, real-estate owners, consumers, and so on, and we invited them to seminars and meetings to explain the advantages of our product. We also used ambassadors; people in the customer area, who understood the advantages of our solution and would recommend it to colleagues and neighbours.”

Mälarenergi realised that it could not recover the investment in a reasonable time frame just from wholesale fees, unless these were set at an unrealistically high level. Instead a business model was set up whereby the property owner pays the city network for the physical installation of the fibre, and when the customer buys a service from any of the service providers on the network, the city network also gets a part of the fee paid by the customer from the service provider.

Business Case

Cost: €40 million over the past 10 years

Number of years to ROI: 10

Business model: active sharing.

Mälarenergi Stadsnät owns the network and operates the active equipment, and offers wholesale capacity to service providers.

Historically, a home-owner has paid SEK 30,000 (about €3,200) to connect to the city network. Mälarenergi Stadsnät has arrangements with several banks to offer a loan using the house as security. “Our colleagues in other countries think it is remarkable that we can sell these connections, but we do,” commented Norrthon.



Despite the relatively high upfront cost, subscribers are attracted by the fact that they are adding value to their property, and gaining lifetime access to a wide range of services at lower prices than those on other networks.

Today there are more than 35 service providers on the network, including major operators like Telia and Tele2, and more than 185 different services to choose from. The menu of services goes beyond basic telephony and internet and now includes IPTV, alarms and monitoring services, local booking systems for laundry or garage places, and community services such as healthcare and communication for the elderly. Plans to launch a broadband TV service are also well advanced, which will provide end-users with up to 250 channels without needing a new set-top box.

End-user Services

Services: 1 – 1000 Mbps

Service providers: > 35

Services: > 185

Service selection wizard:

www.malarenergi.se/sv/privat/stadsnat/valj-tjanster/

More than €40 million has been invested in the city network over the past 10 years, but thanks to its novel business model, Mälarenergi Stadsnät has had several profitable years since 2004. “It should be possible to get a return on investment in 10 years, but of course it costs to keep on building,” said Norrthon. In 2008 Mälarenergi Stadsnät took over the operation of the network in the neighbouring town of Hallstahammar, and in 2009 it reached an agreement to build out the fibre network in the nearby city of Eskilstuna. Further investment is also being made in Västerås: as part of an upgrade program, customers are now being asked to register if they are interested in receiving 1 Gbps connections.

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