

This project demonstrates how it is possible for a local authority to play the role of service provider and how this can be very beneficial for the affordability of the service provided to citizens.

A precise mapping of user demand at an early stage helps the local authority to tailor the services to the demand, increasing the likelihood of high subscription rates and return on investment.

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## Bóly Hungary

Bóly, with its population of approximately 4,000 inhabitants, is located in Hungary's Southern Baranya County. It is the centre of a 'micro region' that includes 14 towns and a total population of 12,000.

In the 1990s, Bóly city council launched a broadband initiative with citizens' help, creating, according to Mayor Josef Hárs, "one of Hungary's first complete cross-town infrastructures" and making Bóly's citizens the first Hungarians with Internet access through a cable TV network.

The Bóly local government worked extensively to gather information on demand, resulting in a high rate of subscription. The local government also acted as service provider, taking care of billing and customer service, as well as keeping the cost of the services affordable, in particular for senior citizens. By 2005, almost half of Bóly's citizens had Internet access. As demand grew, the outdated, slower network was replaced with state-of-the-art FTTH<sup>1</sup> technology.

"With more and more essential information and services available over the internet, fast and reliable access is quintessential in all walks of life, for businesses and homes alike," states Mayor Hárs. "In the early 90's, a substructure network was laid down in most parts of Bóly with the citizens' help. This already housed the fibre-optic trunk line, which means streets didn't have to be excavated later. The contractor designed an FTTH network that adapted to the existing network, in order to provide fast and cost-efficient implementation."

Network end points were implemented based on the local government's early research on subscriber demand. Optical Network Terminator and Set-Top-Boxes were provided and the network was installed free of charge in 99% of the properties in Bóly. Since 2007, the price of building plots sold by the local government has included the cost of network installation.

At present, the local government provides three types of affordable, high-quality services:

- an IPTV (Internet Protocol Television) solution where customers can choose from five subscription packages which include 55 TV channels in Hungarian, German and English, some of which are available in HD
- Internet access
- analogue and ISDN landlines

An important point in the business case was to price the significantly faster new services at the level of those already available in the region.

The project has had a positive effect on the city's social and economic health: the high-tech infrastructure keeps young people in the city and attracts new high-tech companies. It also connects the elderly, who are offered dedicated training.

Recently, several companies switched to the Application Service Provider (ASP) services made available for their enterprise resource planning and bookkeeping processes. A closed-circuit television system linked to the FTTH network was set up in the city's industrial park, which also meets the demand for remote monitoring and control of technological workflows.

The local government is also leveraging the network to improve the city's administration as well as energy services, and is already planning the next connectivity upgrade. Mayor Josef Hárs explained: "We are swiftly developing e-government and e-administration solutions, including up-to-date news and information, contact options, downloadable forms and support for local administrative processes. The network is also used for referendums and city management has implemented an Executive Information System as part of the ASP service. We still have many plans. We want to connect remote control of the geothermal utilities that provide heating to public institutions to the Fibre Network for faster, safer and more reliable operation. Also, we plan to upgrade the head end soon, and start replacing the 100 megabit end-user optical equipment with 1 gigabit optical equipment."

<sup>1</sup> 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



### Good practices in project planning

- ✓ Taking into account the take-up rate (or penetration rate: the percentage of households having a broadband subscription compared to the total number of households)

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#### Leading organisation

Bóly city council

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#### Financing

- €1 million invested by the Bóly city council:
- 20% own funds
  - 80% bank loan (five-year payback)
  - no subsidies
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#### Speed / Performance

Up to 1 Gbps (Gigabits per second)

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#### Technology

Based on optical fibre (Fibre-to-the-Home (FTTH))

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#### Average price of standard service for households

- Home package: approximately €19/month  
Download: 10 Mbps (Megabits per second)/ Upload: 10 Mbps  
FTP storage 100 MB (Megabytes)/ Web storage: 50 MB  
Five e-mail accounts  
Dynamic IP address
  - Business package: approximately €37/month  
Download: 20 Mbps / Upload: 20 Mbps  
FTP storage 200 MB / Web storage: 100 MB  
Ten e-mail accounts  
Static IP address
  - Senior citizen package: approximately €11/month  
Download: 2 Mbps / Upload: 2 Mbps  
FTP storage 50 MB / Web storage: 50 MB  
Two e-mail accounts  
Dynamic IP address
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#### The network

1,458 institutions and companies connected: 99,5% of all premises  
1,286 subscribers: 87,8% of all homes  
1,122 IPTV (Internet Protocol Television) subscriptions and 622 Internet subscriptions

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