

National incumbent in Lithuania leads fibre developments

Lithuania enjoys the highest penetration of fibre access in Europe, thanks in a large measure to the bold initiatives of national telco TEO.

The latest FTTH Council Europe Ranking of countries leading the way in deployment of fibre access shows that Lithuania retains the top European spot, ahead of other pace setters like Sweden, Norway, Slovenia and Slovakia.

General Information

Infrastructure owner:

TEO has 40% of Lithuania's Internet market, and 30% of its pay TV market.

Location:

Nationwide, across Lithuania, although mainly in urban locations.

Network status:

Operational.

One of the leading forces in high speed broadband deployment in the Baltic country is incumbent telco TEO. Lithuania's broadband market is dynamic and competitive, says Darius Didzgalvis, the company's Chief Technology Officer and Deputy General Manager.



"There's a very high level of competition in Lithuania in the market for Internet services, with over 100 ISPs serving 1.2 million households and 3.5 million people," he says. "Historically competitors have used our infrastructure, but many also have their own infrastructure too."

In 2006, TEO decided to move its broadband investment up a gear, embarking on the building of fibre connections directly into as many households as possible. The intention was to reach a large proportion

of the population with FTTH services.

"We chose to deploy FTTH, while other network operators were still depending on copper or FTTB," claims Didzgalvis. "We are now moving from FTTH point to point to GPON. I think we chose right here – with point to point to start with and GPON now that prices are falling."

Before long, TEO's efforts had played their part in a national phenomenon. Within two years of TEO's fibre access deployment, Lithuania enjoyed the highest penetration of fibre in Europe, with 23% of households connected.

Deployment

Size of network:

714,000 households passed (59% of Lithuanian households).

Technology/architecture:

Point to point, moving to GPON.

Deployment method:

Deployment of FTTH started in multi-residential buildings and business centres. Now the network is being spread to single houses where business cases are composed.

"We're still the second highest country in the world for speed of network, upload and download, after South Korea," says Didzgalvis proudly. "And 59% of households are now passed in Lithuania. We have 147,000 active users, following a couple of extremely fast years of growth. There's still room for growth, particularly in single houses, which will take a broad consensus between municipalities, content companies, building managers and others." TEO is now present with FTTH in approximately 120 cities and towns, currently concentrating on the individual houses around the largest cities and spreading the network in some of the smaller ones.

He says that despite its obvious success, TEO faces challenges as it seeks to push its FTTH initiative into new areas: "The technology is simple enough," he maintains. "It now takes just two hours or less to install a new customer, right through to service activation. But it's not just about the fibre. It's about the equipment you install in the customer premises

to make 100Mbps happen, or even 1Gbps. How can this be future-proofed? There's the matter of the backbone network too. Are there wide enough pipes? Is it economically efficient?"

He says that in any case, the biggest FTTH challenge these days is the business case for extending deployment, not simply the technical hurdles. Happily for TEO, the business model behind its deployment helps to create a favourable climate for consumer adoption.

Business Case

Investment:

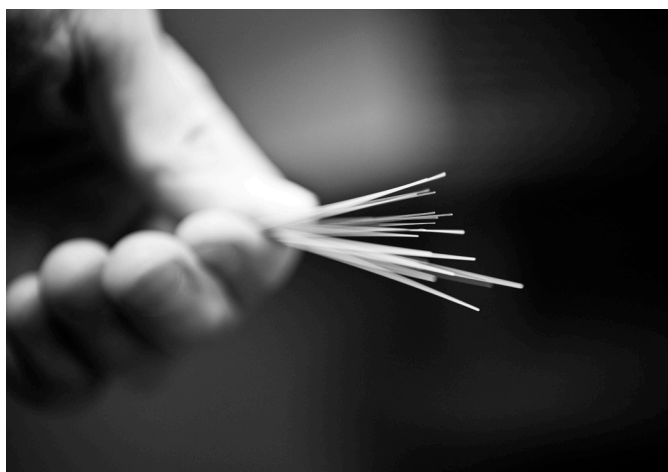
LTL 329 million (EUR 95.3 million) invested between into the development of just the FTTx access network between 2007 and 2011.

Total investments into upgrading of core and extension of access network over last 5 years amounted to LTL 659 million (EUR 190.9 million).

Business model: Price per home passed of 130 Euro.

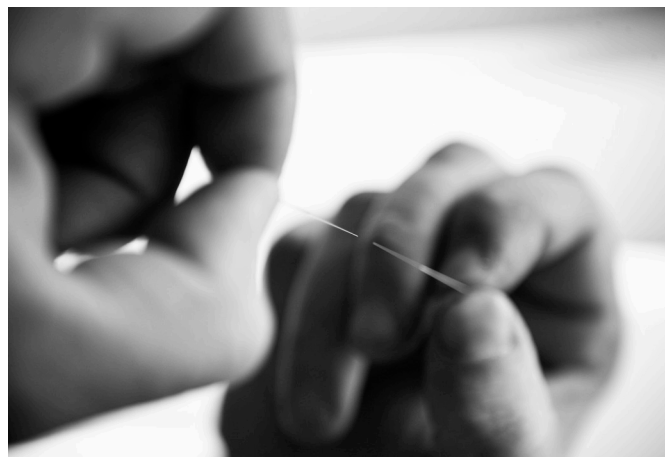
"We're at 714,000 homes passed, at a price per home passed of 130 Euro," he says. "That's relatively low, and helps to make the business case. Our competitors are finding it hard to make the same business case, because of the financial slowdown. We invested at the right time."

The impressive success of fibre access in Lithuania has been enabled by other factors too, says Didzgalvis. "Fibre network operators here are able



to pose a big challenge to mobile operators. There is a generally lower quality of mobile service in Lithuania comparing to FTTH, and we are able to run away from that element of potential competition."

But it is the sheer quality of service enabled by fibre that has really propelled its popularity: "If you are getting 100Mbps or close at home, that's office speed, and means you can use cloud services to



work from home, or anywhere," explains Didzgalvis. "Consumption of data has increased heavily here, with lots of high quality multimedia running over the networks. Fibre is a good enabler for enterprises too, allowing them to attract new business. We are going to be investing in business centres, so that soon 80% will get fibre. Copper is seen as old fashioned now."

End-user Services

Services:

Three basic Internet connection speeds are offered to customers:

up to 50 Mbps for 11.6 Euro

up to 100 Mbps for 14.5 Euro

up to 300 Mbps for 23.1 Euro

He is not happy to rest on past successes though: "It's not the end of the game, with the business case needing to be made to connect to more single houses," he says. "We must develop more services for customers too. Every 18 months, we are going to see traffic doubling. We need more services in all the areas we serve - Internet, TV, VoIP and IT."

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Photos provided by TEO
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