

Guidelines to future fiber based broadband networks

Introduction

The guidelines below are based on experience from Vejen Kommune, Denmark, where almost every enterprise, public institution and private home even in rural areas now has access to fiber networks with speeds up to 100 Mbit/s up and down and with almost unlimited capacity for the future.

In 2011 our 'Midtsoenderjylland Project' was mentioned as an example of best practice by the European Commission in their publication 'Guide to Broadband Investment'. The guide offers important information about broadband investments. You can find a link to this publication in the toolbox.

Our local Danish FTTH project started back in 2002 with analysis followed by decision of a common vision for the region: 'Fiber to everybody'. At that time nobody knew how to fulfill this vision, but we found ways to do it. Of course our ideas and experience can't just be copy-pasted to another region, but hopefully you can get inspired by our case story. Feel free to contact me for further information about Vejen Kommune's FTTH project.

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Guidelines

Make a vision...

Then step by step search for solutions. That's how our project became a success.

The vision helps you always to go in the right direction when you have to choose and make decisions.

Fiber to everybody – why ?

According to Danish law municipalities are not allowed to make fiber connections to enterprises and private households. How can local authorities then stimulate the roll out of fiber and why should they?

- Democracy, - it's a citizen's right to be able to take part in community life on equal conditions even if you live in remote areas
- Introduction/development of new digital (public) services.
- Growth, settling and development can be stimulated...
- Fiber is a broadband technology for the future with almost unlimited capacity up and down independent of distance to customers
- There is no market for deployment of infrastructure such as FTTH in rural areas.

How ? - what have we done ?

- Made a vision – action instead of re-action.
- Ordered the first master plan for a complete fiber network.
- As a start we built two fiber rings - as backbone - and for our own public purposes.
- Coordinated digging projects to create synergy and reduce costs.
- Made agreements with two local co-operative electricity providers who promised to offer fiber to everybody.
- Now our focus in the municipality is on new digital services and utilities.

Some other guidelines:

- One fiber network in the area is enough if it's an open network with access for different content providers in competition.
- One network for everybody at the same time reduces total costs per termination. A master plan is needed for that.
- Coordination of different digging projects according to the master plan creates synergy and minimizes total costs.
- Do not spend too much money on temporary solutions. Go for long term investments.

It's about democracy and development...

That's why fiber networks must be offered to everybody including the citizens and enterprises in rural areas,

- Public authorities are responsible in ensuring inclusion.
- Using open networks for local purposes strengthens the cohesion, gives new and better public services and makes it more attractive to settle and to innovate in rural communities.
- Fast broadband connections to everybody are a basis for better education, future health care activities and cost effective public administration.
- Sustainability and green energy are key items as well (e.g. Smart Grid)
- When we have fiber networks everywhere we can establish a lot of hotspots and become wireless with very large bandwidth.

Finally, for further inspiration you could also have a look at the website from the 'FTTH Council Europe' which is an industry organization whose mission is to accelerate the availability of fiber-based, ultra-high-speed access networks for the benefit of consumers and businesses. They have published different case stories from all over Europe:

www.ftthcouncil.eu