Broadband – why and how?

Lessons from Estonia

Mait Heidelberg

Ministry of Economic Affairs and Communications, Estonia

Estonia - some figures

Area: 45.000 km^2

Population: 1,3 mln

Population density: 29/km^2

Capital: Tallinn

Broadband coverage:

100Mbit/s – 50% of population

3,5G coverage – 100%

4G coverage – 95%

Part I
Story of Broadband

90s – after telecom privatisation market was liberalized. Market started to develop, competition brought better services with better prices.

But, …

Soon government realized that it is it's possibility and duty to do more (and spend also some public money for that).

Connecting schools to Internet is investment to the future

but, …
Connection is not enough, it’s just the beginning. Teachers skills and usable applications should follow.

Public sector can work better when it is interconnected

But,…
Connection is not enough. E-government applications should follow.

People (all) should have the possibility to access information in the net

but,…
You have to make information available and teach people how to reach it.

E-Estonia: what you can do in 3 minutes, 24/7, anywhere

- Declare your taxes
- Sign a document with 10+ participants, all located in different cities
- Vote in general elections
- Get a digital prescription
- Name a baby and apply for maternity pay while on leave
- Establish a company
- Apply for an agricultural subsidy
- Buy a forest in an auction
- …

E-Estonia: the Sun is Not Always Shining

- Paper documents look suspicious
- E-School make kids life too easy
- Tourists have tough time parking their car
- We depend heavily on e-services
- Internal market demand inhibited exports
- E-Government rocks, but E-Commerce lags
- Everything has to be redesigned for mobile

Part II
Story of Next Generation Broadband

2009 discussion

100 mbps for everybody. Is it needed and how to do it?

WHY IS BROADBAND IMPORTANT?

THE IMPORTANCE OF BROADBAND TO THE ECONOMY AND COUNTRY'S COMPETITIVENESS

Conclusion: The next-generation broadband is the most important factor influencing the growth of the country's productivity and contributes to the growth of the country's GDP. It is important for enhancing the country's competitiveness at the international level as well.

WHY IS BROADBAND IMPORTANT?

IMPORTANCE OF BROADBAND IN EXITING THE ECONOMIC RECESSION

Conclusion: The investments in next-generation broadband networks contribute to the economic recovery and ensure the more efficient functioning of the economy in the longer run.

WHY IS BROADBAND IMPORTANT?

OPPORTUNITIES FOR ORDINARY CONSUMERS CREATED BY BROADBAND

Conclusion: Examples of using broadband can be found in almost every area of activity. Broadband has become as usual as the electricity in people's lives and actually we do not even notice its presence anymore.

WHY IS BROADBAND IMPORTANT?

IMPORTANCE OF BROADBAND IN REDUCING ENERGY COSTS AND CARBON EMISSIONS

Conclusion: The wider use of broadband helps to reduce CO2 emissions, to save energy and cut transport costs.

WHY IS BROADBAND IMPORTANT?

IMPORTANCE OF THE DEVELOPMENT OF BROADBAND IN RURAL AREAS

Conclusion: The need for broadband in rural areas is urgent due to their geographical remoteness. In rural areas next-generation broadband also contributes to business development and the improvement of people's quality of life.

WHY IS BROADBAND IMPORTANT?

IMPACT OF BROADBAND ON EMPLOYMENT

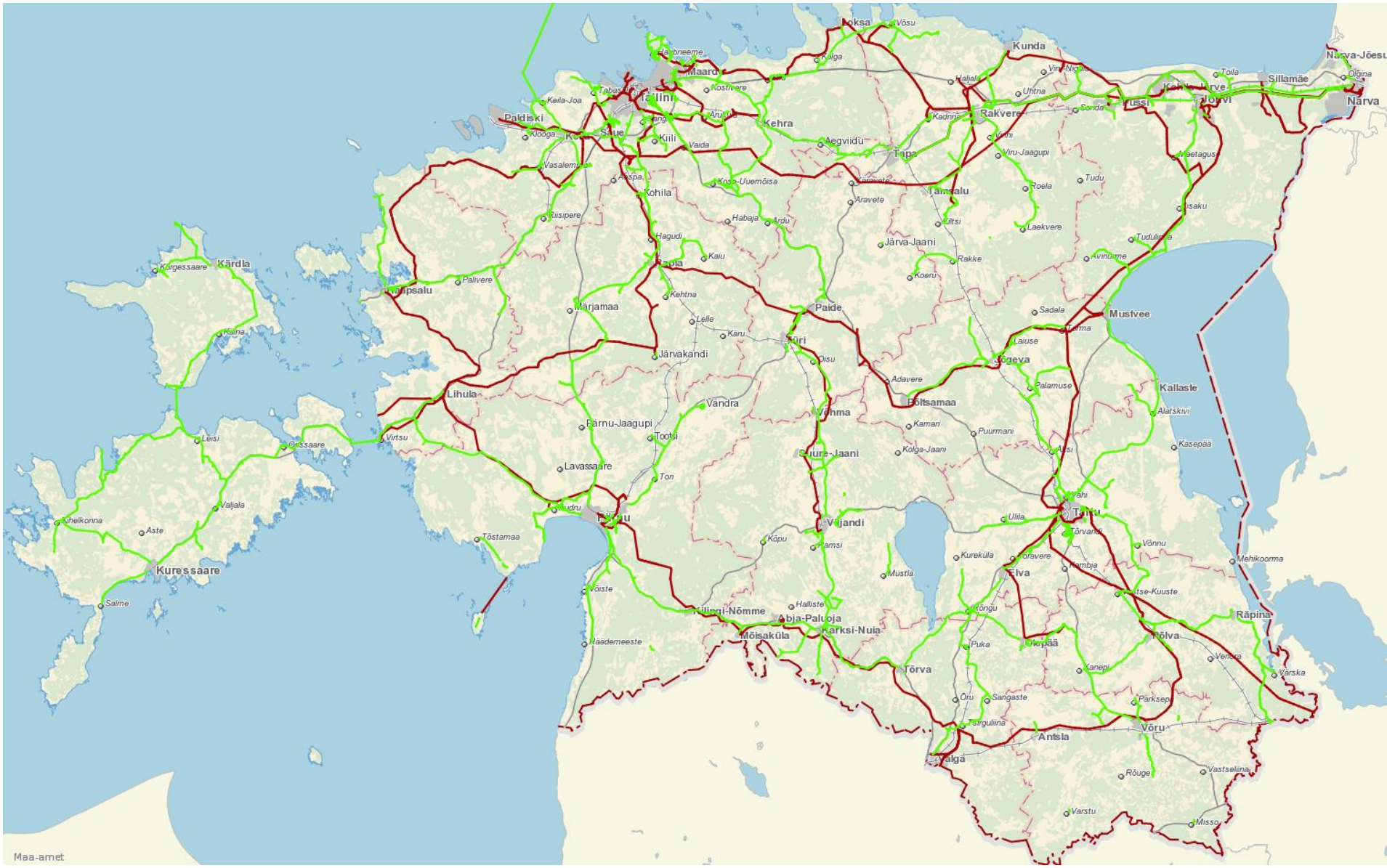
Conclusion: The development of broadband provides work during the construction of the network and creates jobs upon its completion.

The EstWin project

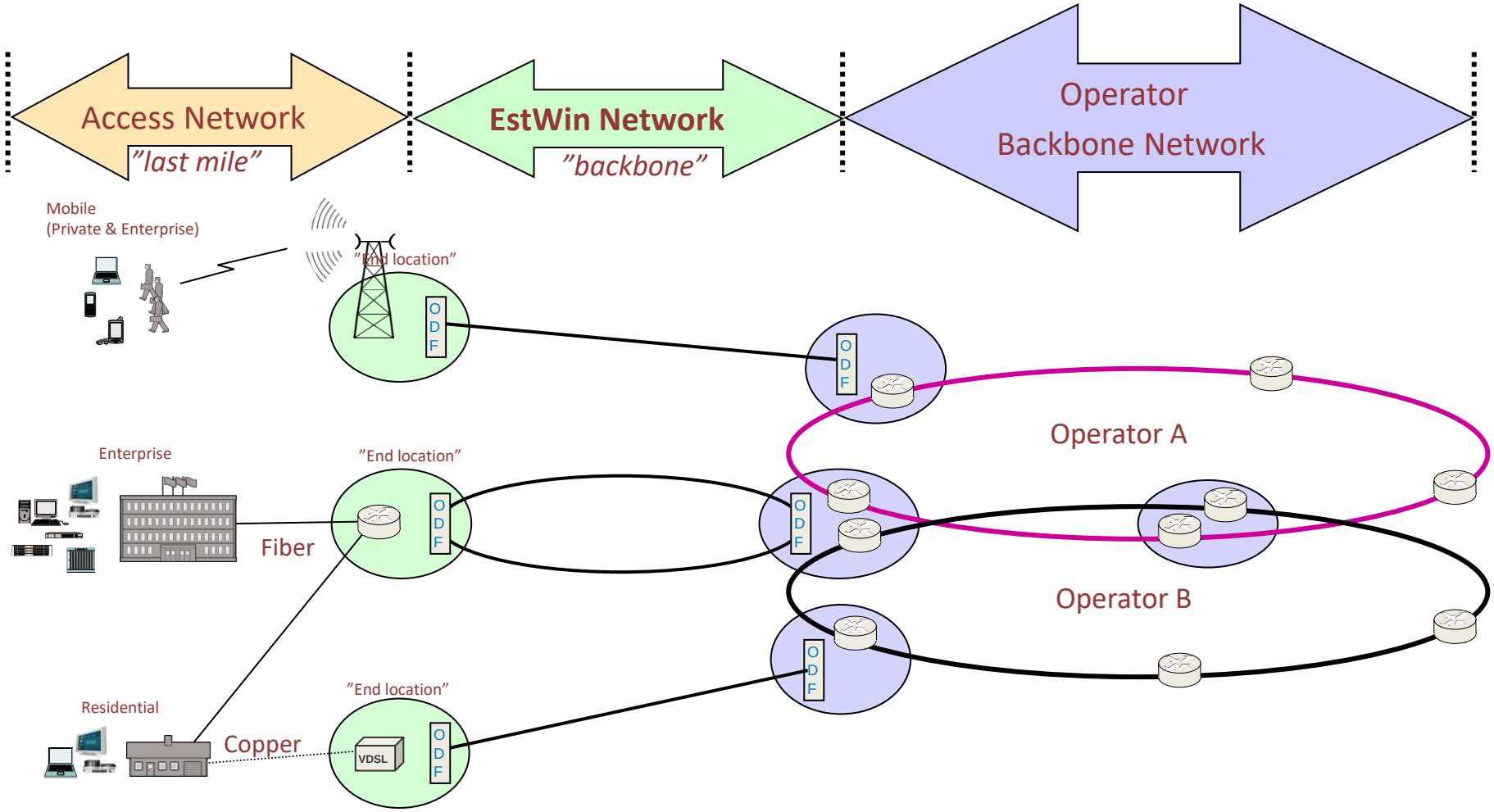
- Design and construction of fiber optical network
  - Fiber optical cabels: 6.000km
  - ”End Locations” sites: 1400
- Cities with more than 10.000 inhabitants are excluded
- Coverage to 98% of territory of Estonia
- Distance end-location to end user <1,5km
- “Middle mile” transport network
- “Dark fiber”
- Cost 100 M€

The main goal of the project EstWin is to help to eliminate digital divide between cities and rural areas, to increase social cohesion and contribute to economic growth by achieving these goals.

Fiber Optical Backbone Network in Estonia



Network design overview



EstWin Network when completed

The key principles

- “Dark fibre” only;
- Backhaul transport network only;
- Open access - network available for all service providers;
- Technological neutrality;
- The infrastructure is constructed only in areas where it doesn’t exist;
- The supply of transport capacity outside the EstWin network will be handled by the existing fiber transport network owners

Estonian Broadband Development Foundation

Estonian Broadband Development Foundation (ELA) was founded by 8 major Estonian telecommunications companies 4 years ago for EstWin project.

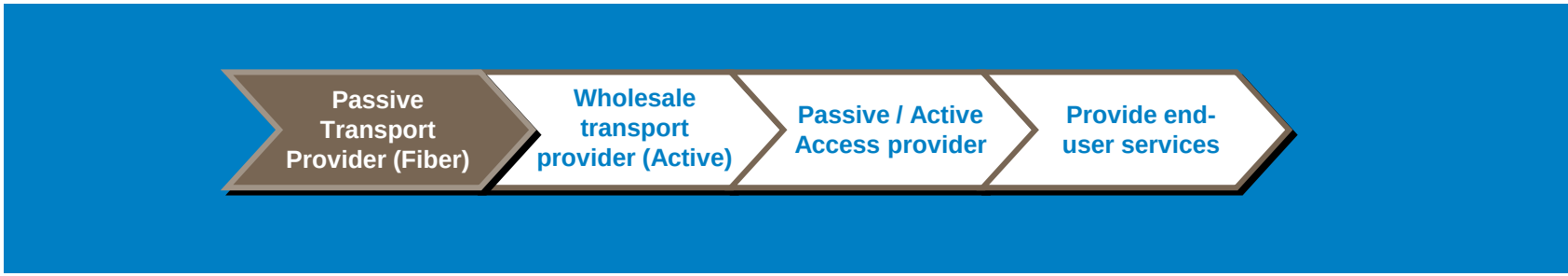
ELA is non-profit organization, the financials of ELA are public information

ELA is open for new operators entering the market

ELA will ensure equal availability of its network to all operators, at equal price

All EstWin fiber optical networks belong to ELA;

ELA does not provide any end-user services




700m
wifi ee
Area of wireless Internet
Traadita Interneti leviala

Thank You!