The **rural network** business equation – lessons from Finland.

elisa AUTOMATE

Polystar an Elisa company

Finland is a big country with a small population. In square miles it is slightly smaller than Montana. Most of the people are living in cities, so there are large sparsely populated areas. Taken as a whole, 95% of Finland can be described as rural. The challenge of delivering coverage to these remote regions has been a well-known problem for Elisa, a Finnish Telco.

At the same time, the mobile subscription prices are among the lowest in Europe. Elisa's average monthly ARPU for a post-paid subscription is 21.9$ (1Q 2020) with average monthly mobile data usage of more than 20 gigabytes. This is mostly because Elisa launched uncapped speed tier based mobile data subscriptions in 2007 as the first mobile operator in the world to speed up the transition from voice centric business model to data driven one.

This transition has been good for the business. We have seen a healthy development in mobile service revenue due to customers upgrading their subscriptions from slower speed tiers to faster with a couple of dollars raise in monthly billing. Together with heavy automation of operations, this has resulted in a very good stock price development from 35$ to 62$ in 5 years.

To do all this, we had to change a lot of things in our network management. The key to achieving all of this was to automate our networks using both rules based and machine learning algorithms. Automating key processes has reduced costs and liberated resources from manual and routine tasks. Today, we run a highly automated network. The automation saves costs and enables us to offer high-quality services to all of our customers across the rural parts of Finland. These investments have resulted in three clear benefits.

> "Automation has been the key enabler that allows us to offer universal services, cost effectively and profitably."

1 First, we can plan our networks more efficiently. We use the machine learning tools to predict where we should deploy our base stations and deliver upgrades, based on traffic and service consumption. This means we can match rollout to demand and provide the right investments, at the right time – reducing our overall investments.

2 Second, we've been able to implement new power saving plans that reduce our energy costs by 14%. This matters, because, according to the GSMA, power consumption typically constitutes between 20% and 40% of network OPEX: all operators must tackle this problem.

Our solution is based on the principle that each site differs and needs to be considered individually. We use the data from each cell to define a highly specific power management programme, which is improved with the machine learning, so that we can tune power consumption to the real demand. Not only does this reduce costs, it has also a significant positive impact on TCO, making rural coverage more affordable in the long run.

3 Third, we've completely automated our Network Operations Centre. As a result, we're able to predict 90% of incidents and resolve them before they have any impact on customers. This reduces the need for site visits and manual interventions, as well as time spent on routine monitoring, enabling our staff to focus on building a better network. In addition, customer experience gets significantly improved.

Automation has been the key enabler that allows us to offer universal services, cost effectively and profitably. It has allowed us to plan network investments more efficiently, reduce key operational costs, and eliminate manual tasks. As a result, we can deliver high-quality rural networks and do good business with them.

For more information visit:
elisaautomate.com

Or just send me an email:
anssi.okkonen@elisa.com

Anssi Okkonen,
CEO of Polystar