Tele2 4G upgrade: 41 percent lower emissions than conventional roll outs

Pioneering project makes Tele2 one of the world’s first operators to provide 4G over 3G frequencies
“Tele2 is the first operator in Europe to re-farm WCDMA to LTE. With new Nokia software, we now have the world’s fastest and most energy efficient LTE in the 2.1 GHz band.”

Ervins Kampans
CTIO of Tele2 Estonia
With demand for mobile broadband surging in the Baltic states of Estonia, Latvia and Lithuania, Tele2 announced at the end of 2014 a strategy to provide LTE network coverage for 90 percent of the region’s population by 2015. Tele2 is one of Europe’s major operators, providing mobile services to some 16 million customers in nine countries, from Netherlands to Kazakhstan.

As part of this group strategy and having initially launched LTE services on the 2.6 GHz band in 2012, the operator’s Estonian affiliate was looking to expand its existing LTE coverage substantially. Yet Tele2 Estonia faced some unique challenges.

As it looked to fill gaps in its LTE network it found it increasingly difficult to cost-effectively acquire the new base station sites it needed to widen coverage. In addition, the use of the 800MHz band was restricted in some parts of the country.

**Challenges**

- Rapid and cost-effective expansion of 4G coverage was needed
- The existing LTE coverage at 2.6 GHz was patchy and 800MHz could not be used in some areas of the country
- Tele2 experienced difficulties in securing new base station sites, threatening its plans for a rapid, cost-effective 4G expansion

**Solution**

- Repurposing existing 2.1 GHz spectrum used for 3G to support 4G
- Nokia provided new LTE/WCDMA RF-sharing software to upgrade existing 3G base stations
- Tele2 Estonia actively worked together with leading phone manufacturers to promote mainstream adoption of LTE 2100 support in devices sold across Europe

**Benefits**

- 41 percent reduction in energy consumption and carbon emissions compared to a 2.6 GHz LTE roll out
- Total cost savings amounting to several million euros
- Faster LTE roll-out
- Tele2 Estonia became one of the world’s first operators to use a traditional 3G band for 4G

Overall, Tele2 Estonia has estimated that the upgrade has resulted in an approximately 41 percent reduction in carbon emissions compared to a conventional network at the higher frequency.

Tele2 is confident that offering a high quality 4G network combined with wide coverage will ensure customers remain loyal, as well as contribute to a growth in revenue from data services.