



New Avenues in Spectrum Management and Broadband Measurement Methods and Tools

ITU Regional Seminar for Europe and CIS on Spectrum
Management and Broadcasting
1-2 July 2020

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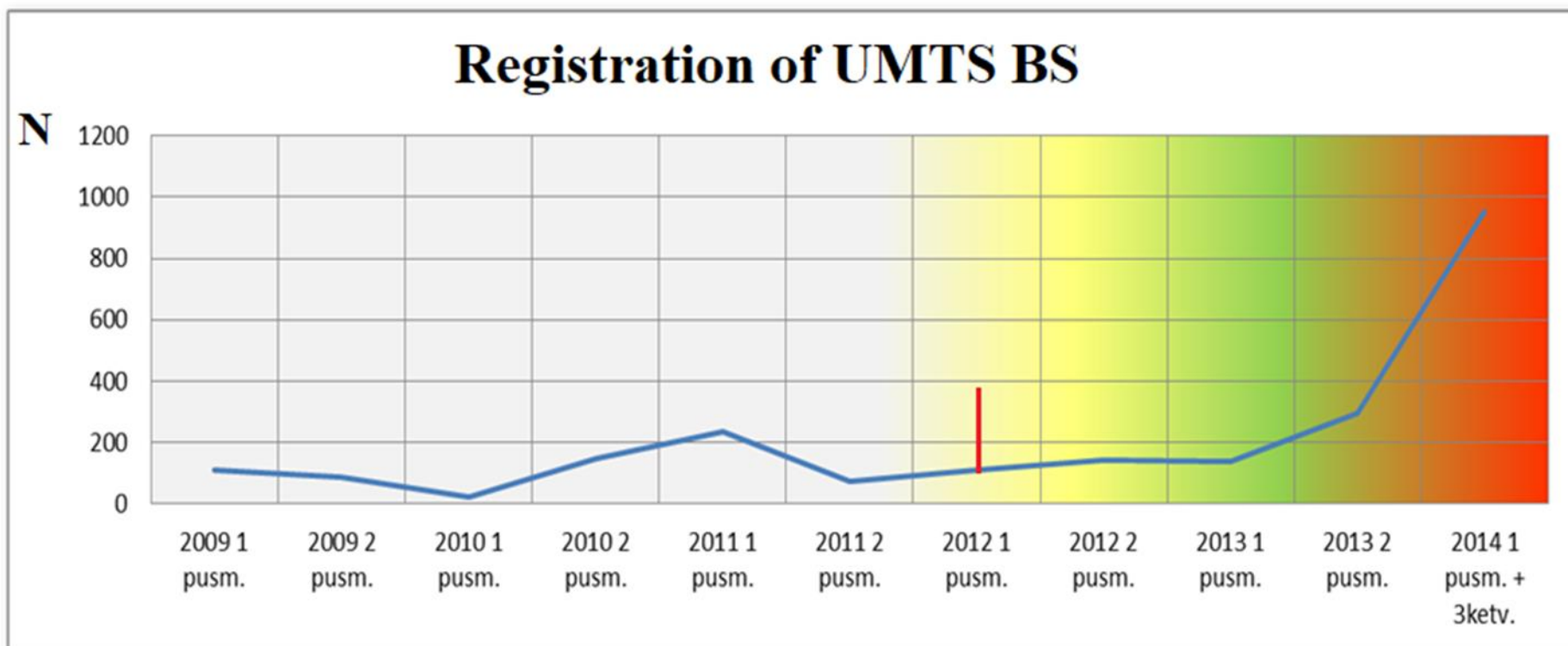


How to speed up competition among MNO



Development of UMTS networks

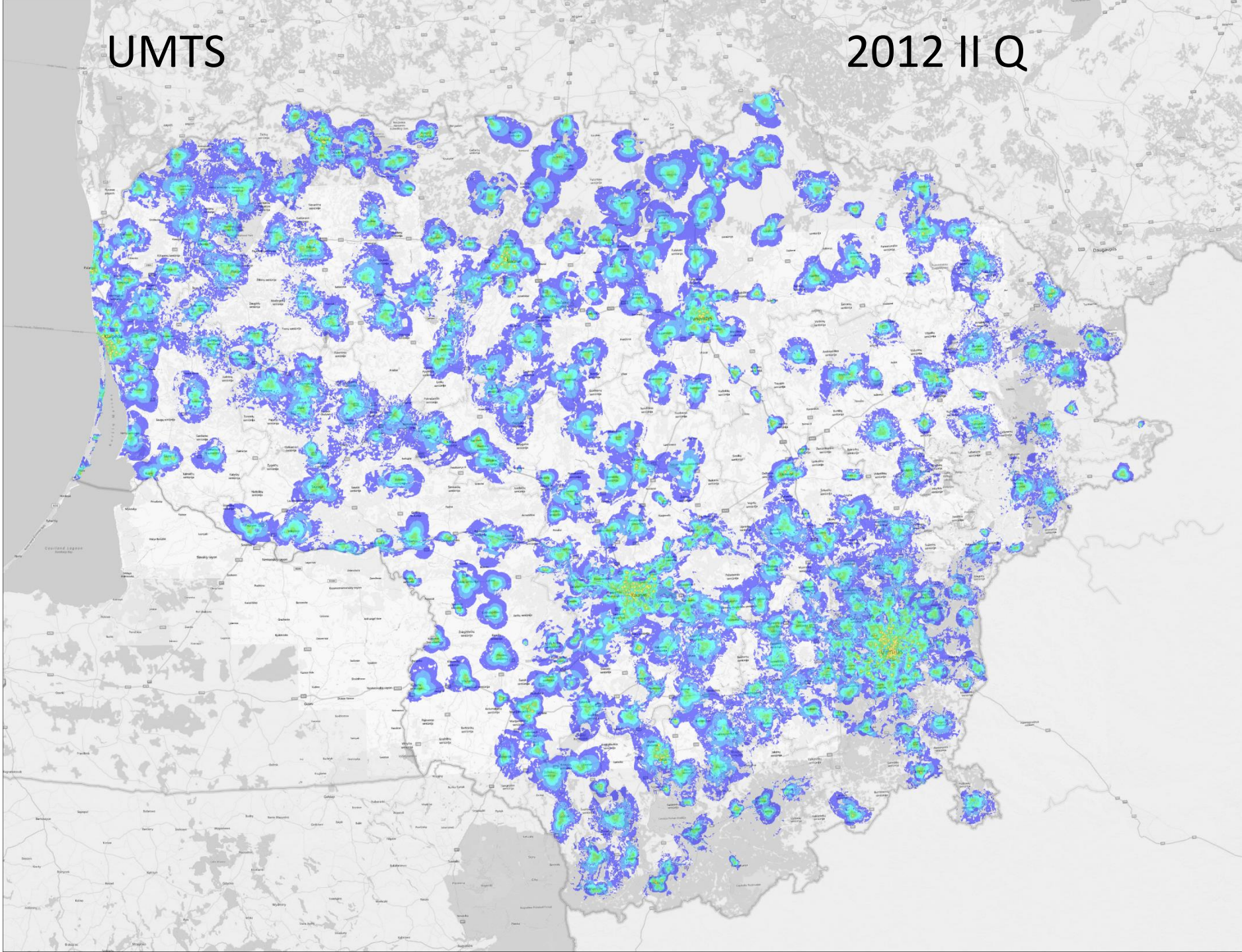
Licenses for UMTS were issued in February 2006 m.



coverages publication

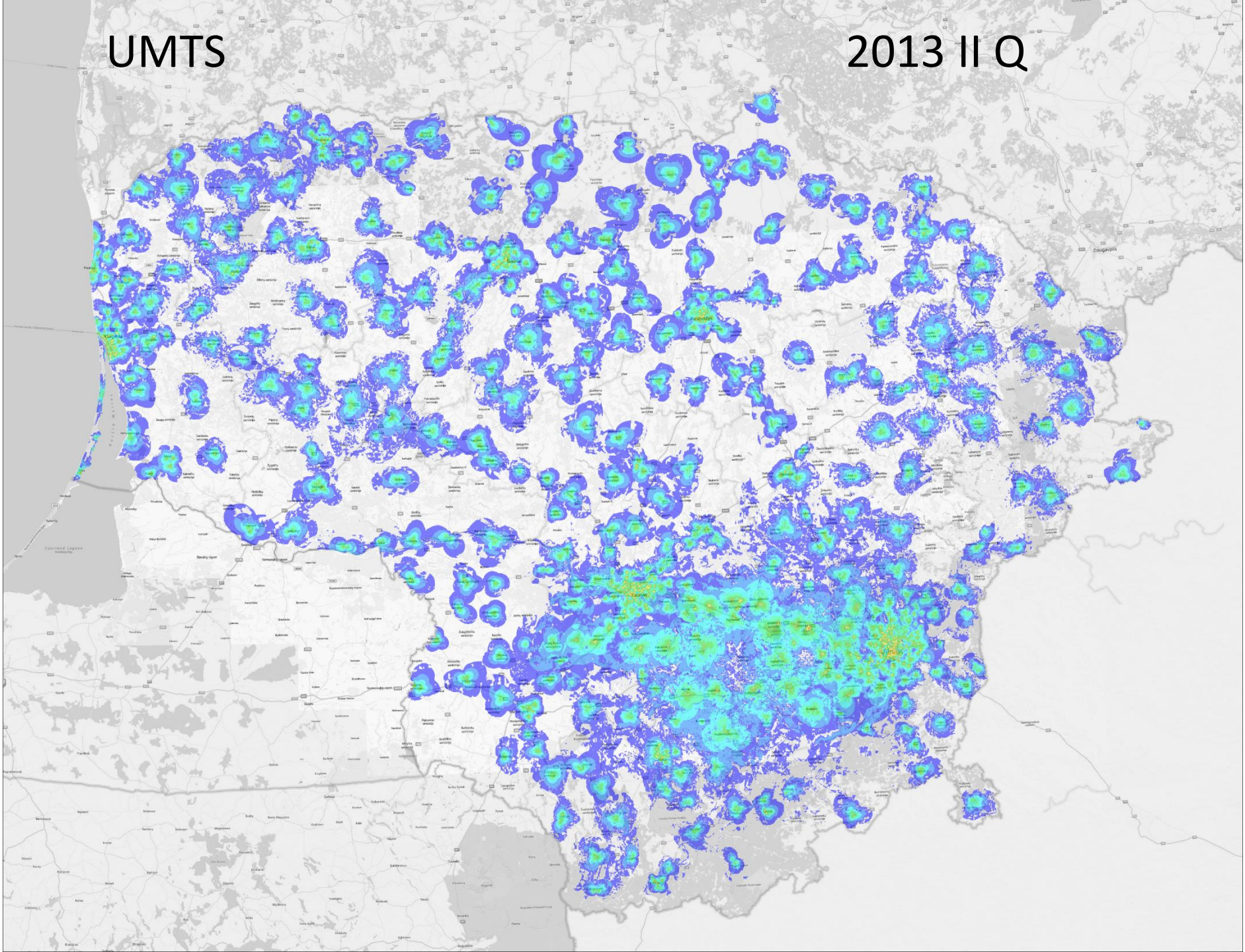
UMTS

2012 II Q



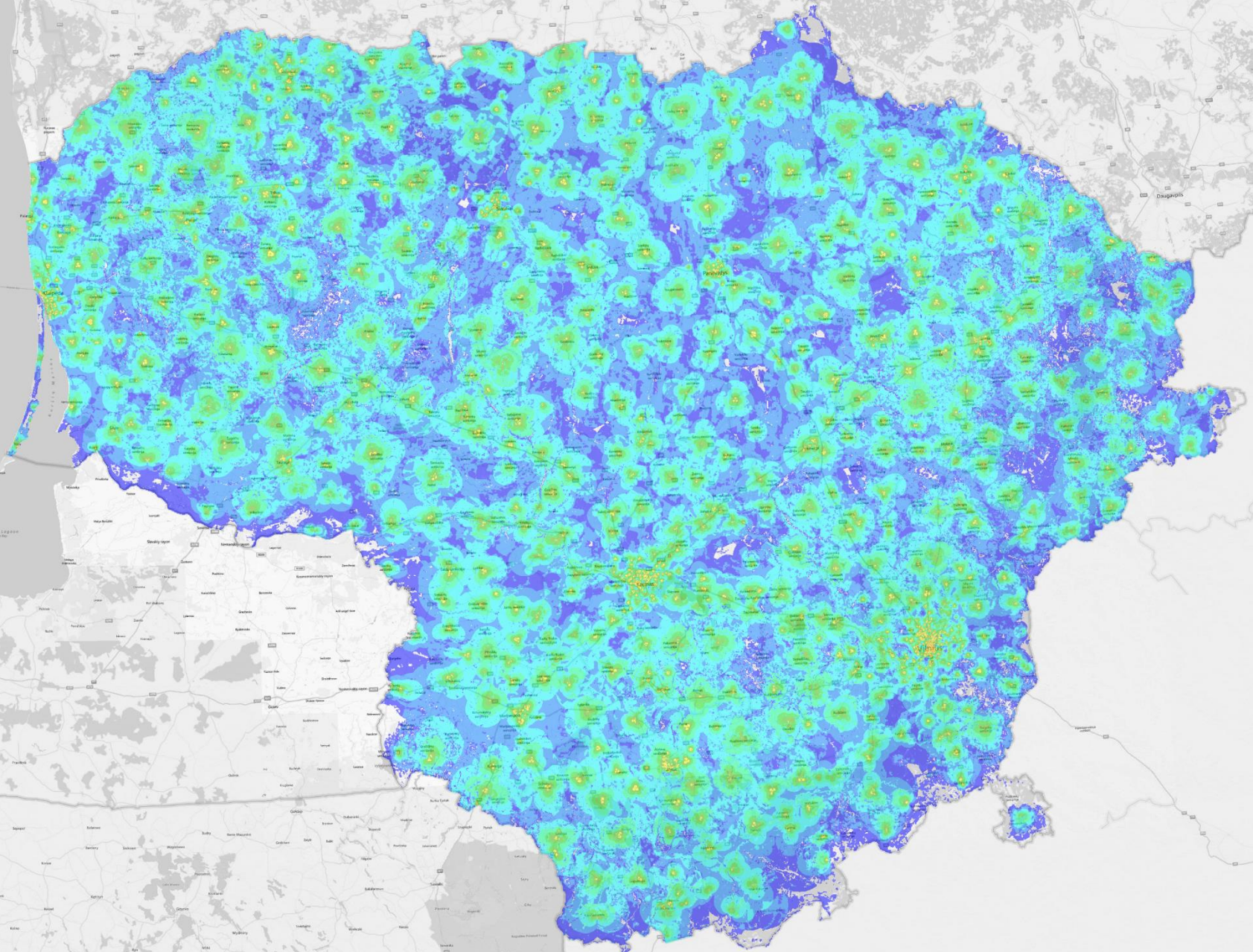
UMTS

2013 II Q



UMTS

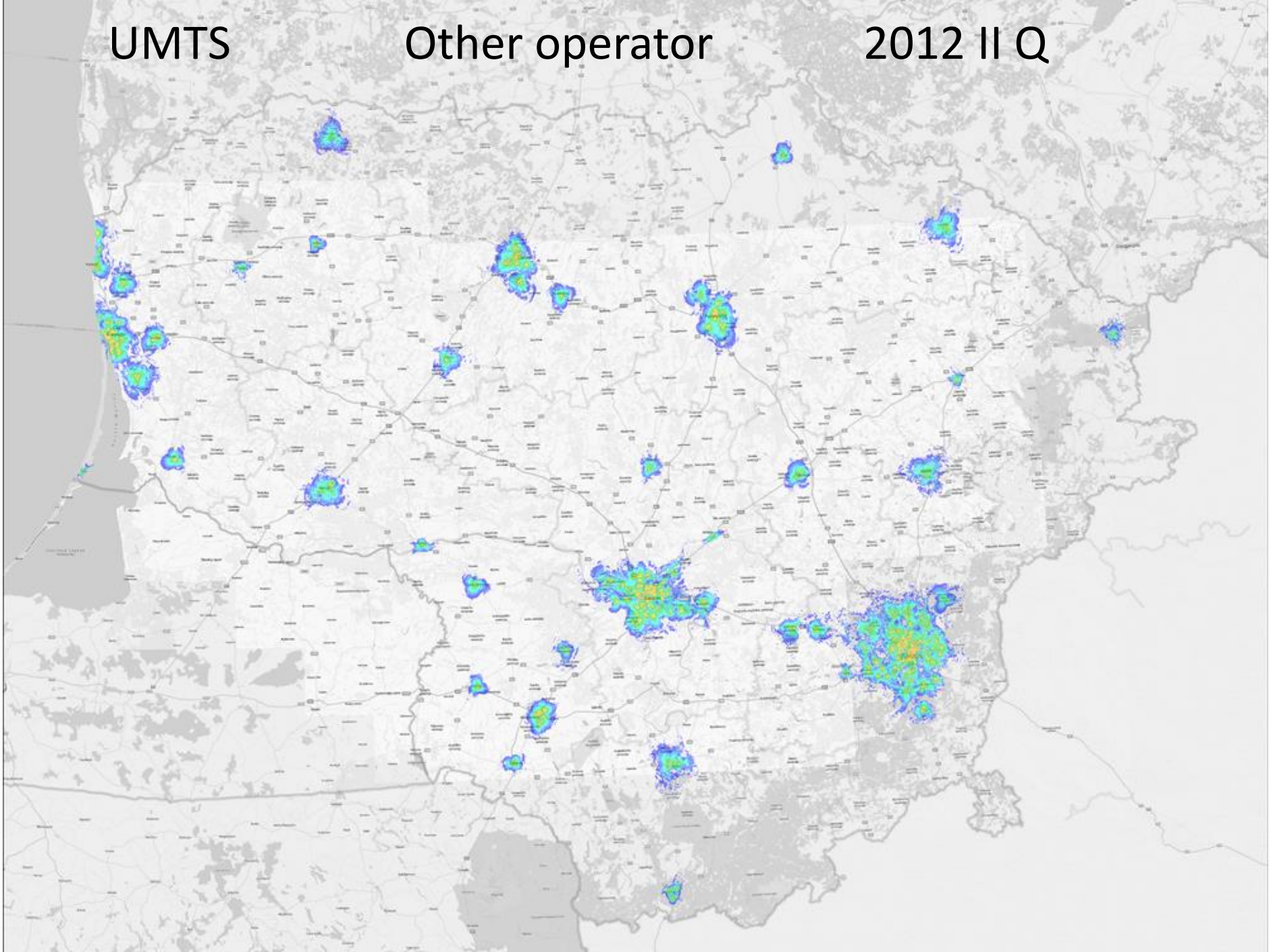
2014 III Q



UMTS

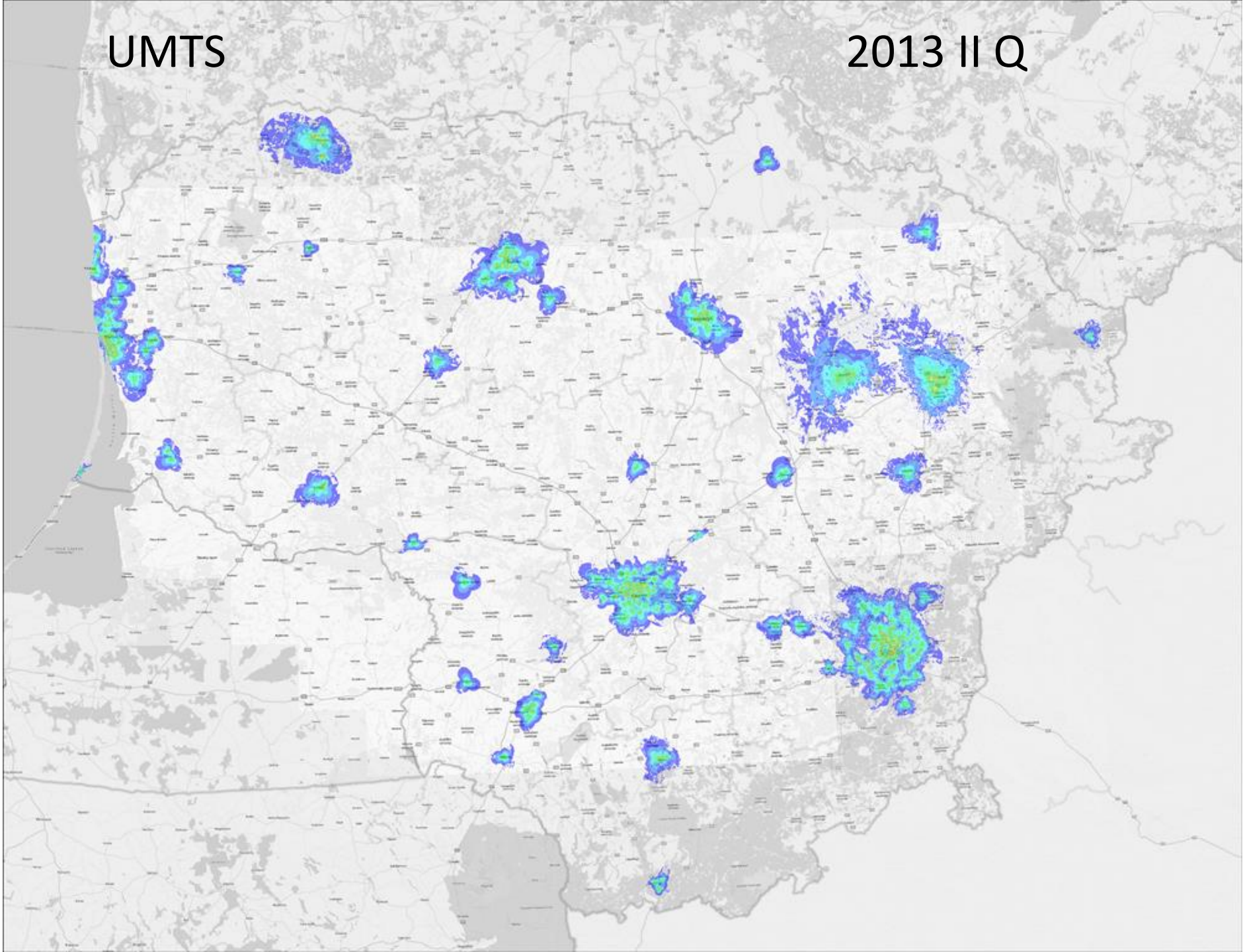
Other operator

2012 II Q



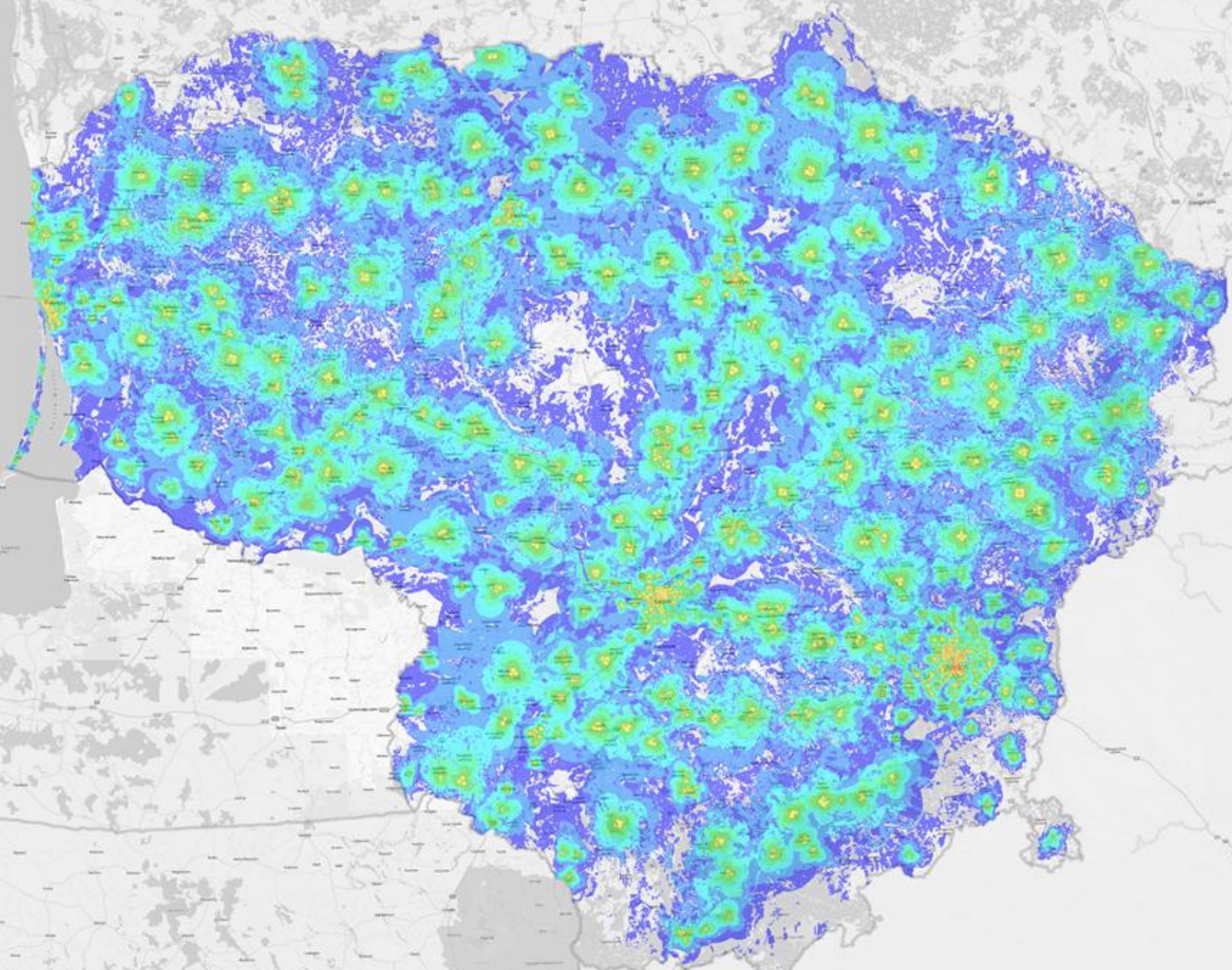
UMTS

2013 II Q

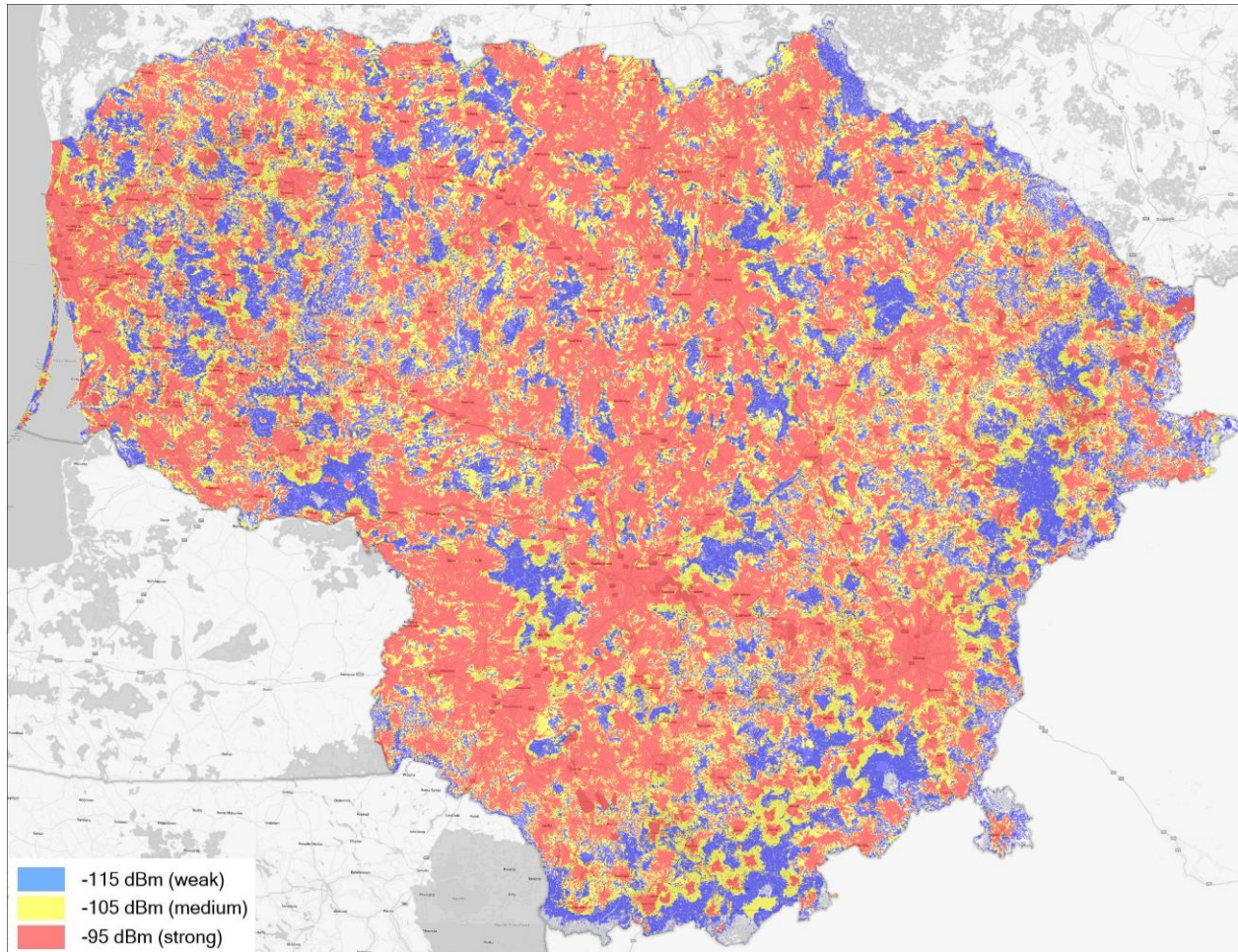


UMTS

2014 III Q

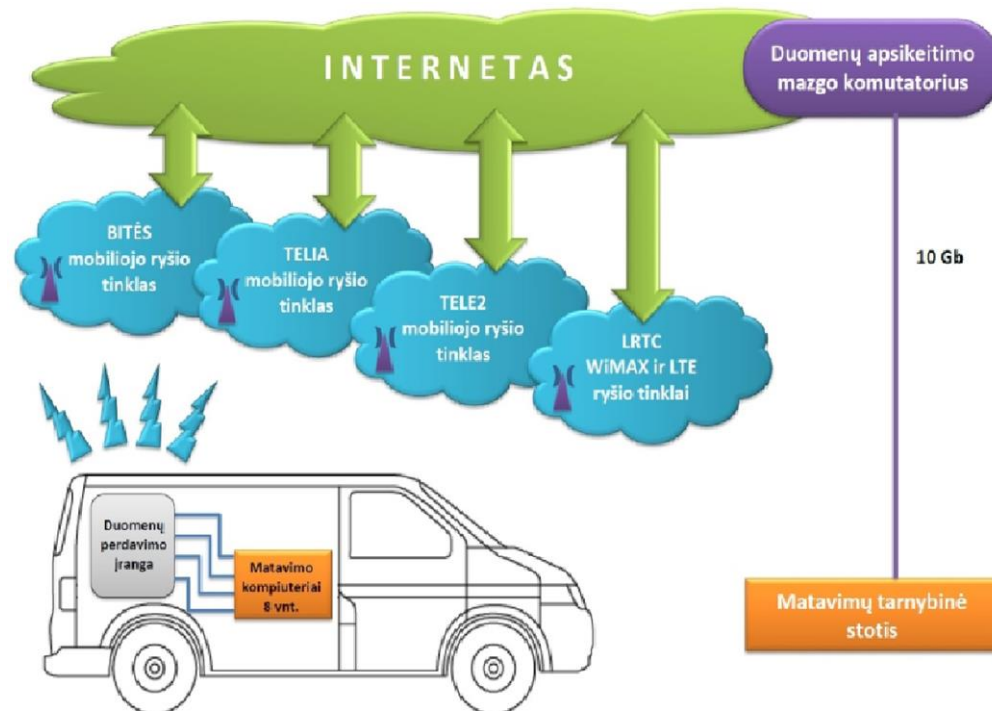


LTE coverage map 2019

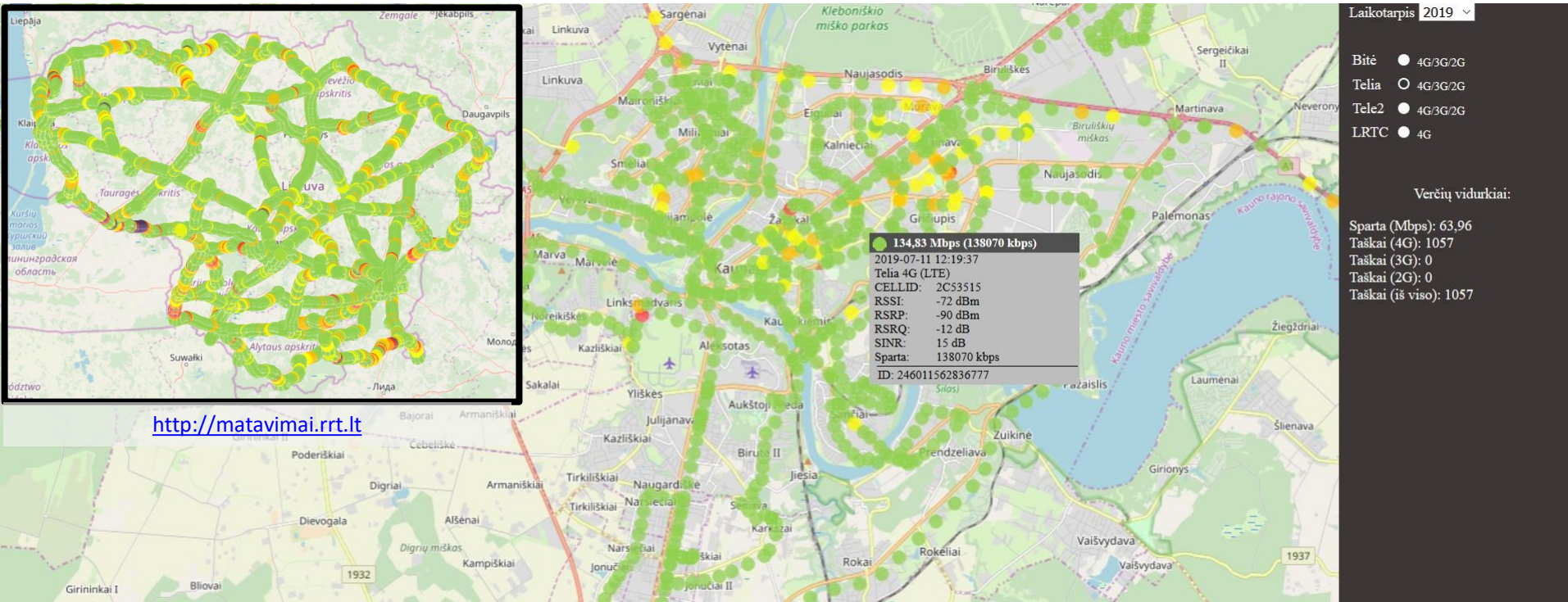


Electronic communications market

Measurements of download speed



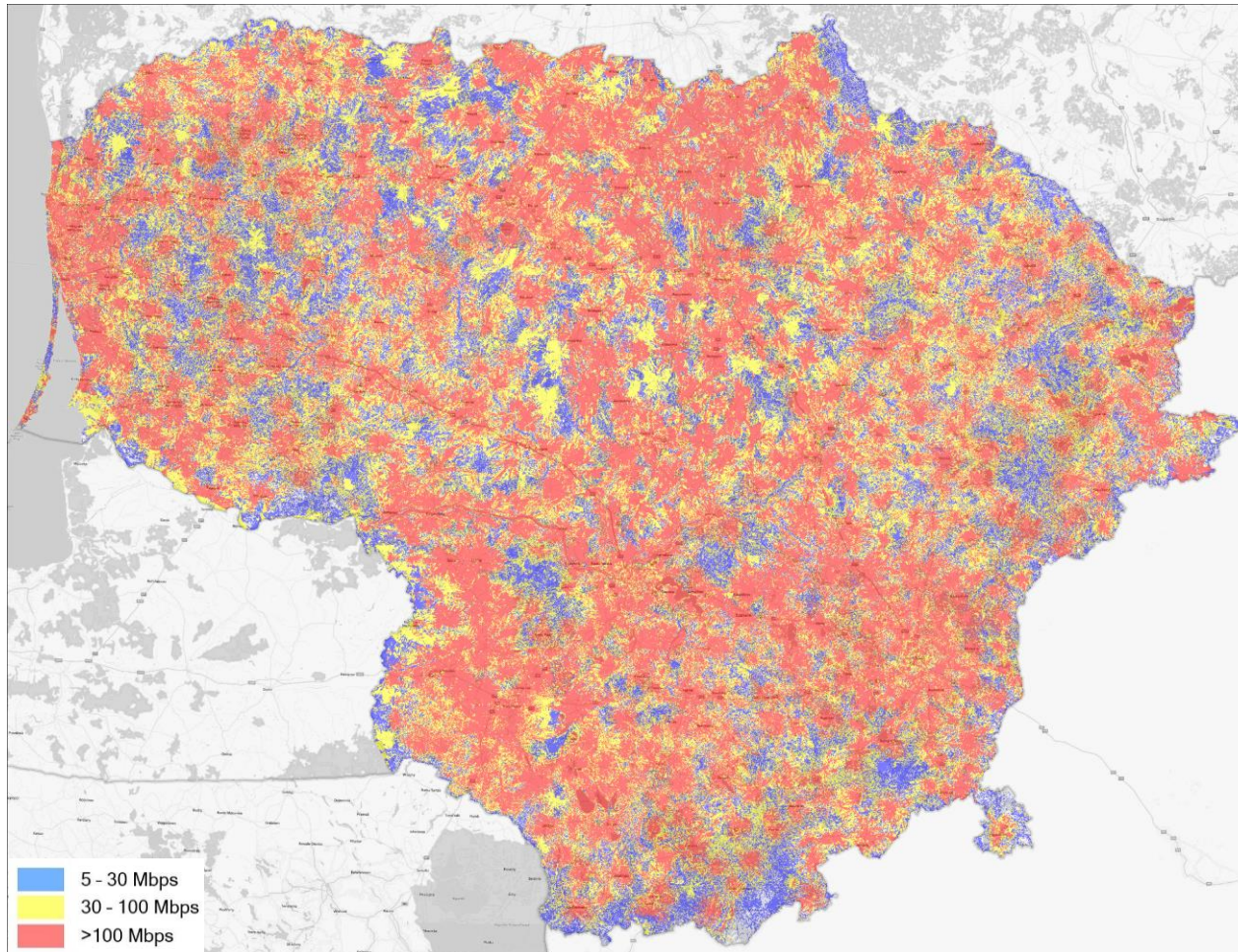
Drive-tests of Mobile Internet Access Service



- Measuring with mobile phones
- All operators at the same time
- Automatic 4G/3G/2G selection
- Cities and major roads
- Railway lines
- Results on a public website matavimai.rrt.lt
- Easy data analysis for users
- Automatic averages with custom zoom

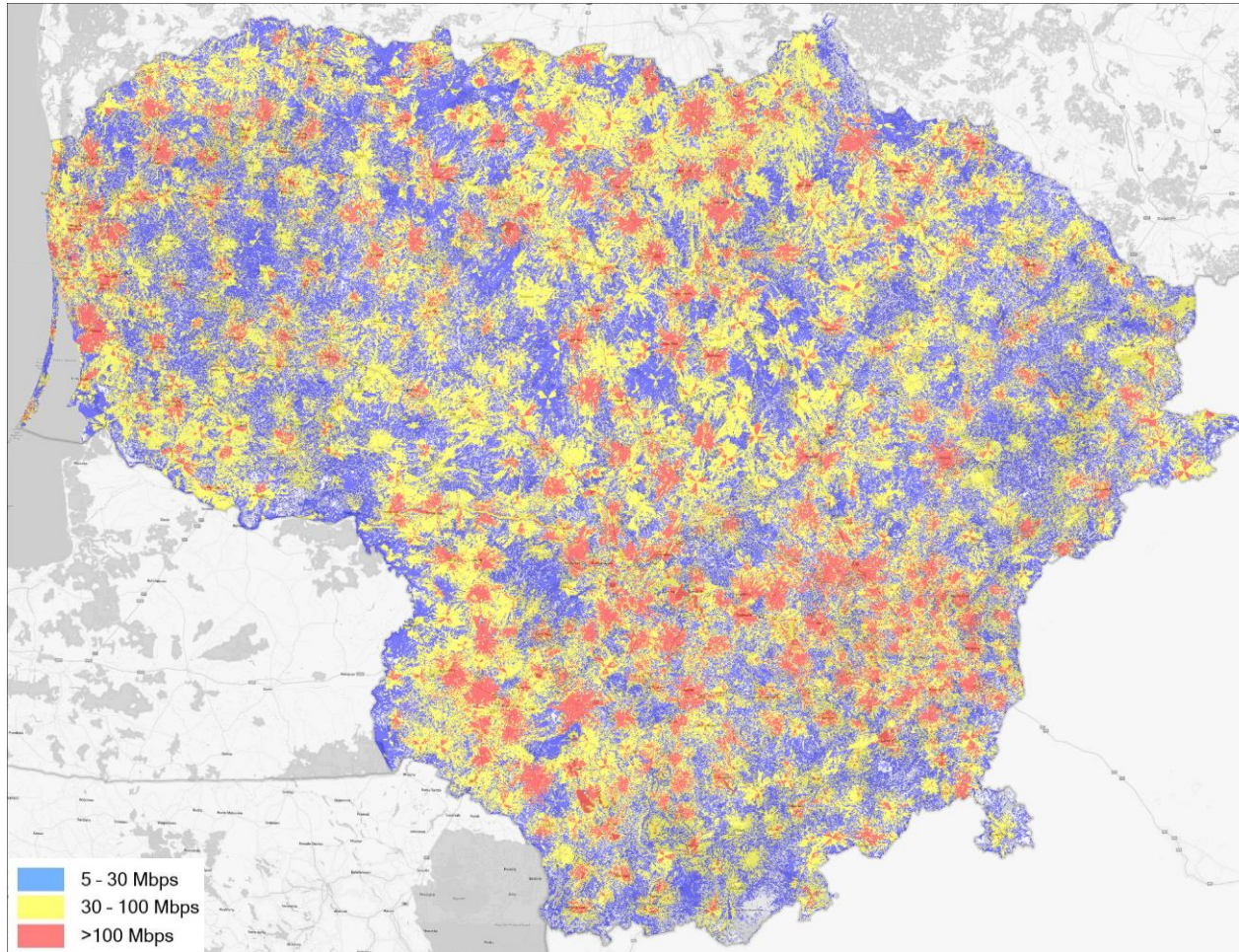


LTE throughput map (network load 10%)



LTE throughput map (network load 50%)

ECC Report 312 “Measuring and evaluating Mobile Internet Service Quality (Mobile IASQ)”





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Thank you