System for continuous EMF monitoring

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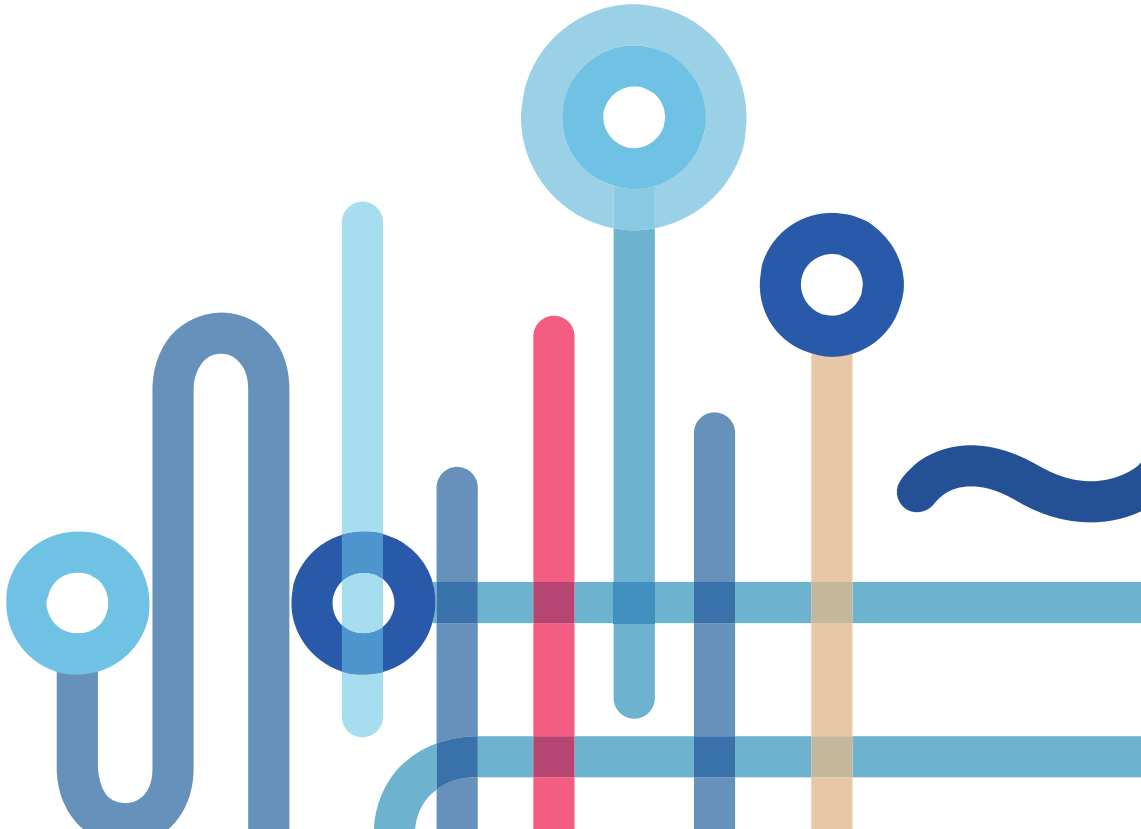

Background

- Rapid development of wireless telecommunications services

- Increasing number of transmitting sources of radiation

- Public fear of electromagnetic radiation affects further development of wireless networks

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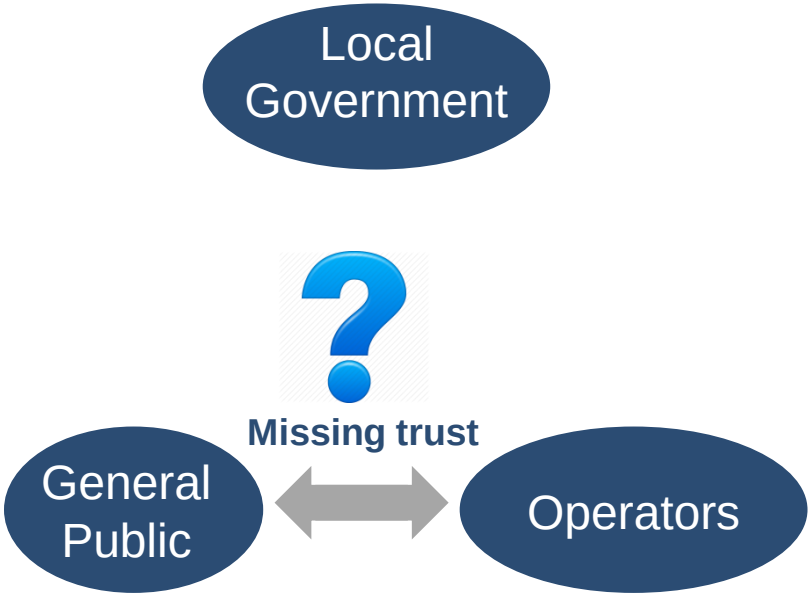
Background

Why EMF monitoring?



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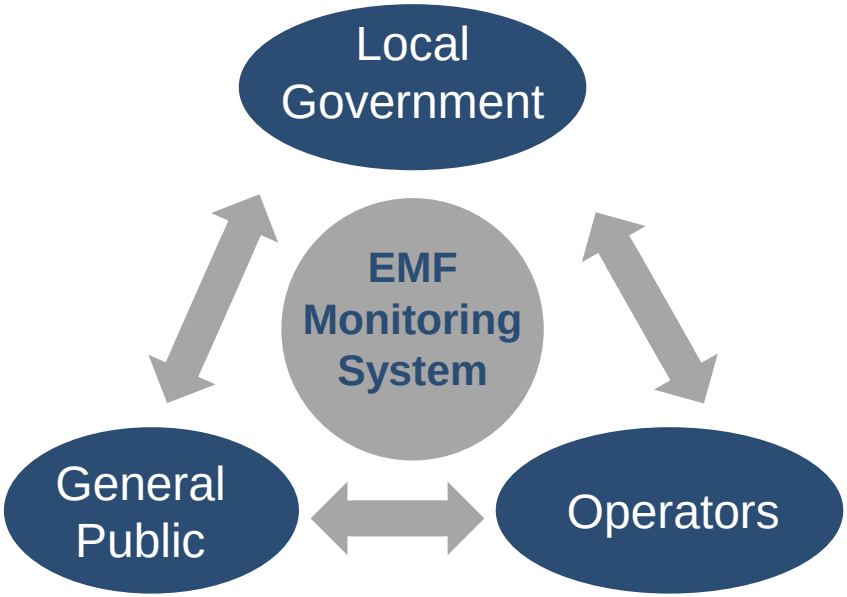

Project Scope

4 phases:

I year (19 + 2)
II year (16 + 2)
III year (26 + 4)
IV year (30 + 0)

100 monitors:

- 92 wide band area monitors
- 8 selective area monitors

Locations criteria:

- Increased sensitivity locations (schools, hospitals, kindergardens)
- Measured EM values

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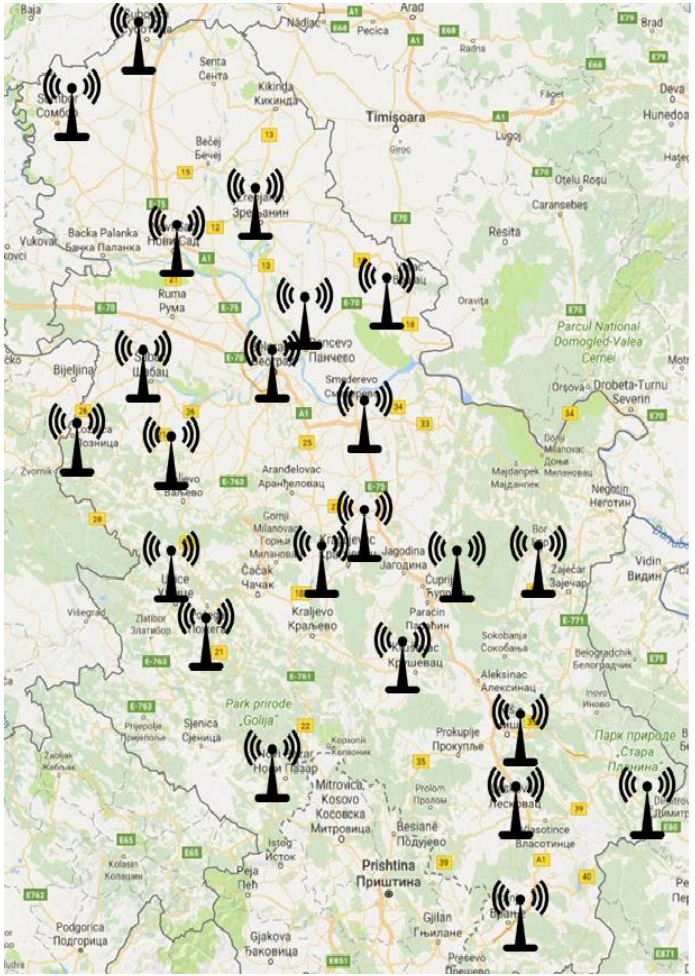
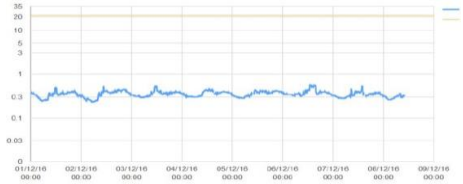


EMF Monitoring System Overview

Sensors
Location of interest

Central server with database and web access

EMF radiation source



Results presented through an intuitive web interface for the public

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Wide Band Area Monitor AMB-8059

- Frequency range: 100 kHz to 7 GHz
- One frequency band
- Solar and AC/DC Power Supply
- Measurement range: 0.2 V/m – 200 V/m
- Measurement resolution: 0.01 V/m
- Communication: 2G, 3G, WiFi, Ethernet

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Band Selective Area Monitor AMS-8061

- Frequency range: 100 kHz to 6 GHz
- Up to 20 frequency bands
- Solar and AC/DC Power Supply
- Measurement range: 0.01 V/m – 200 V/m
- Measurement resolution: 0.01 V/m
- Communication: 2G, 3G, WiFi, Ethernet

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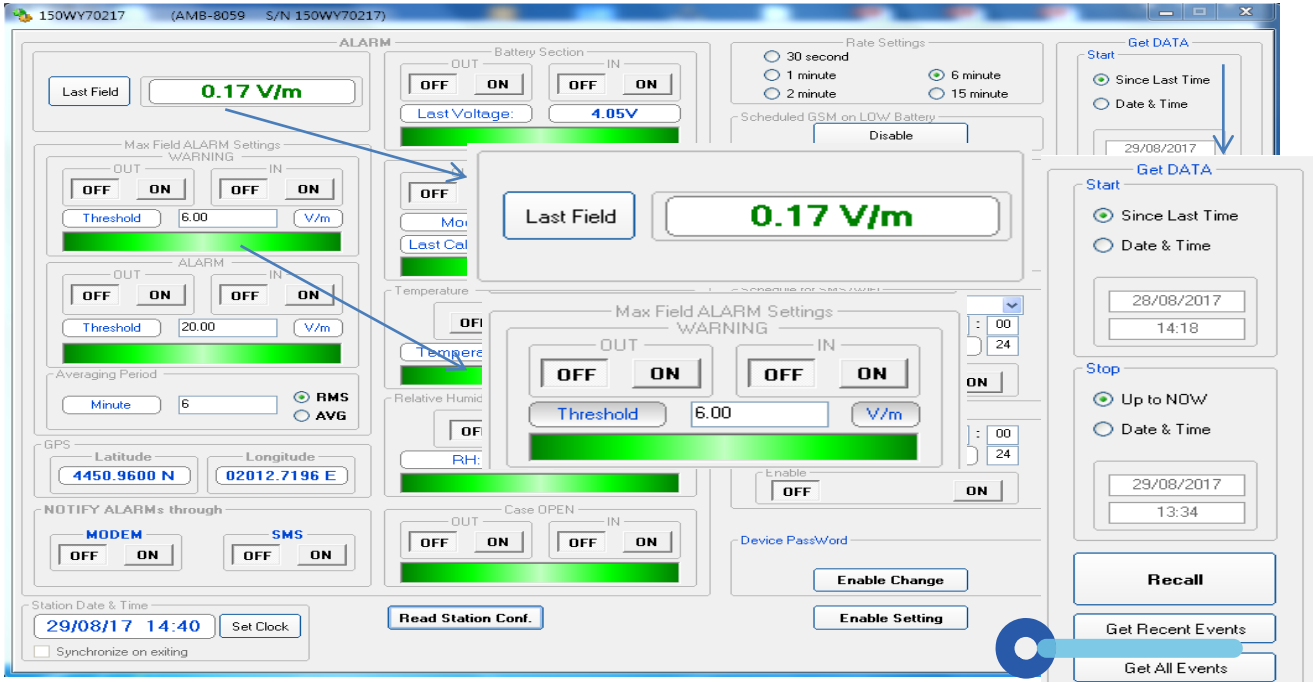
Measurement software



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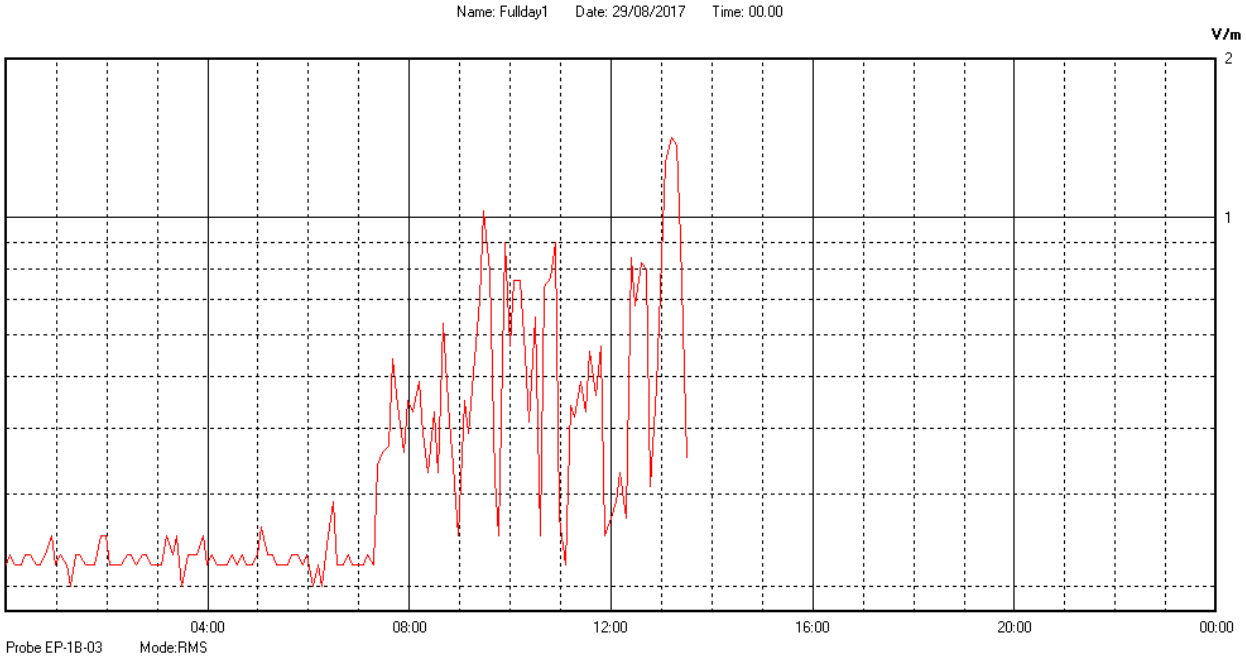
Measurement results



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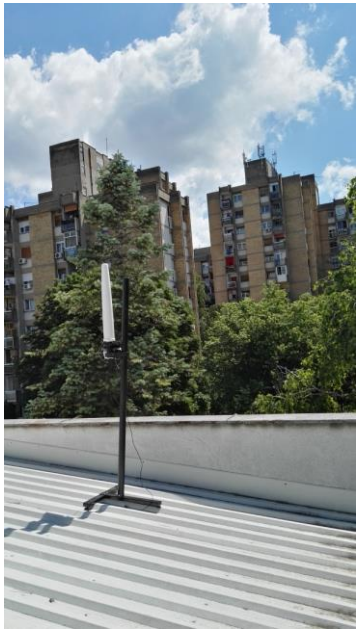
Micro Location 1: Novi Sad



Area Monitor

- City: Novi Sad
- Altitude: 122m
- Values (V/m): 0.9 – 1.7
- AMB-8059
- Probe EP-1B-03

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Micro Location 2: Niš

Area Monitor

- City: Niš
- Altitude: 76m
- Values (V/m): 1.7 – 4.2
- AMB-8059
- Probe EP-1B-03

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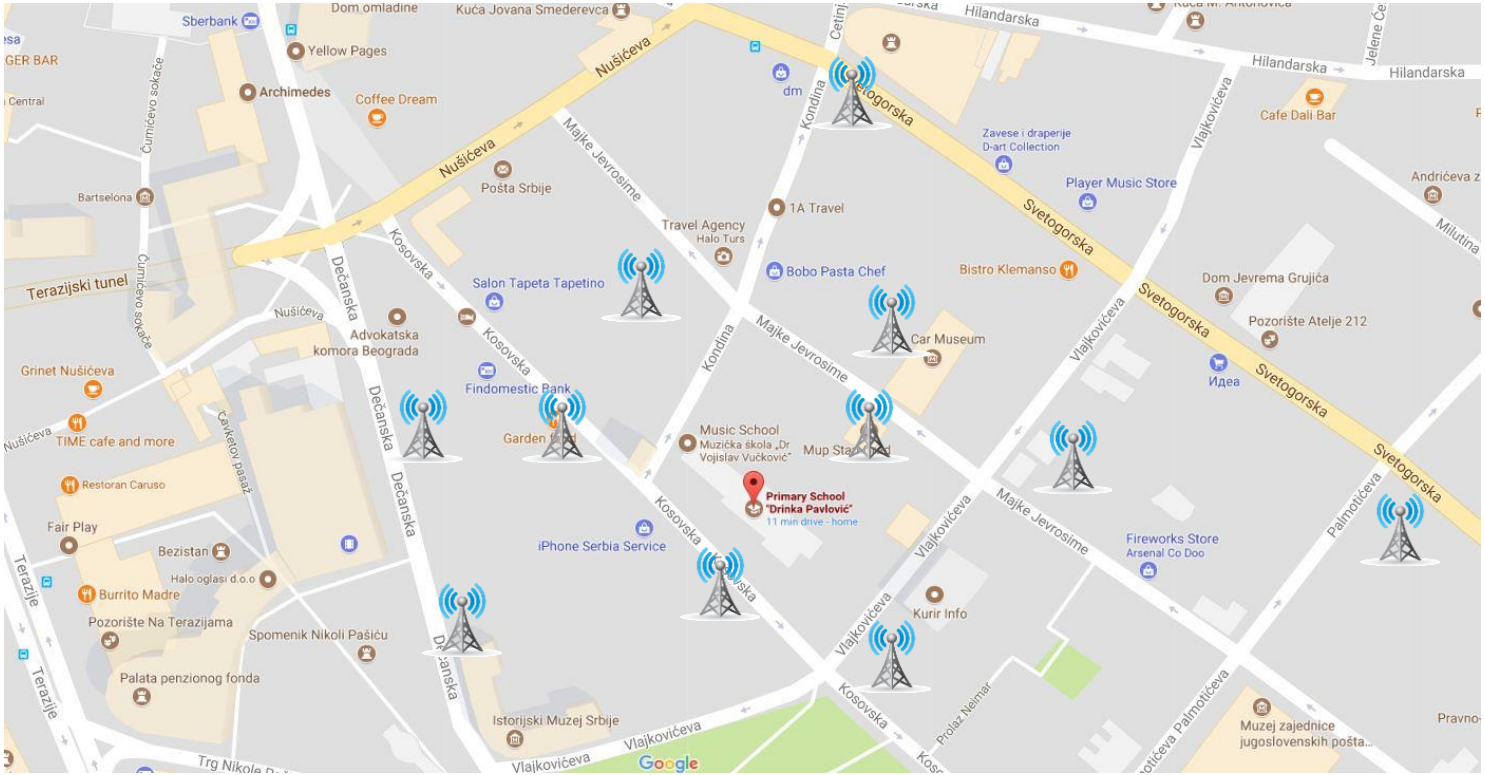
- Value (V/m): 3,4 - 3,8
- 39 Radio systems
- 11 Locations



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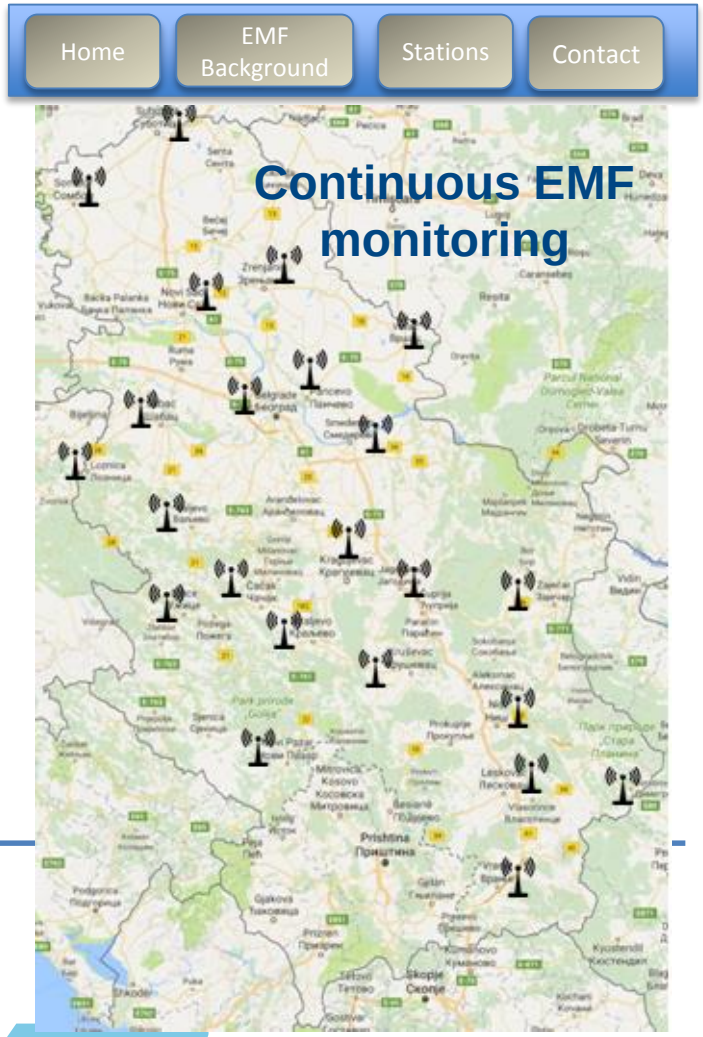
Publishing results

Check www.ratel.rs on December 1st 2017

- Transparent results of EM radiation
- Open to implement new sensors from different institutions



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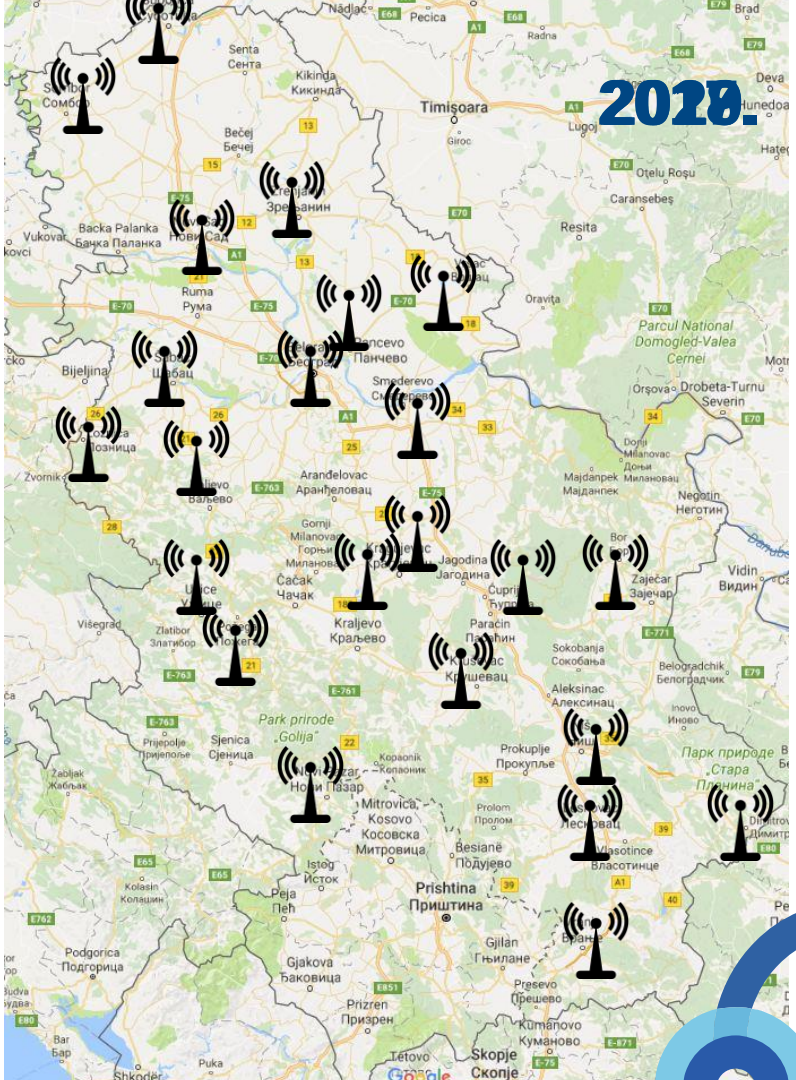
Future plans



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Thank you !

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