

Building public sensor network for Brno

Feature-compatible future

base48.cz

Martin Milata

Richard Marko

Adam Lučanský

Goals

B | **R** | **N** | **O**

- **Build open sensor network of the Brno**



THE THINGS
N E T W O R K

Target: City as a playground
for new technologies

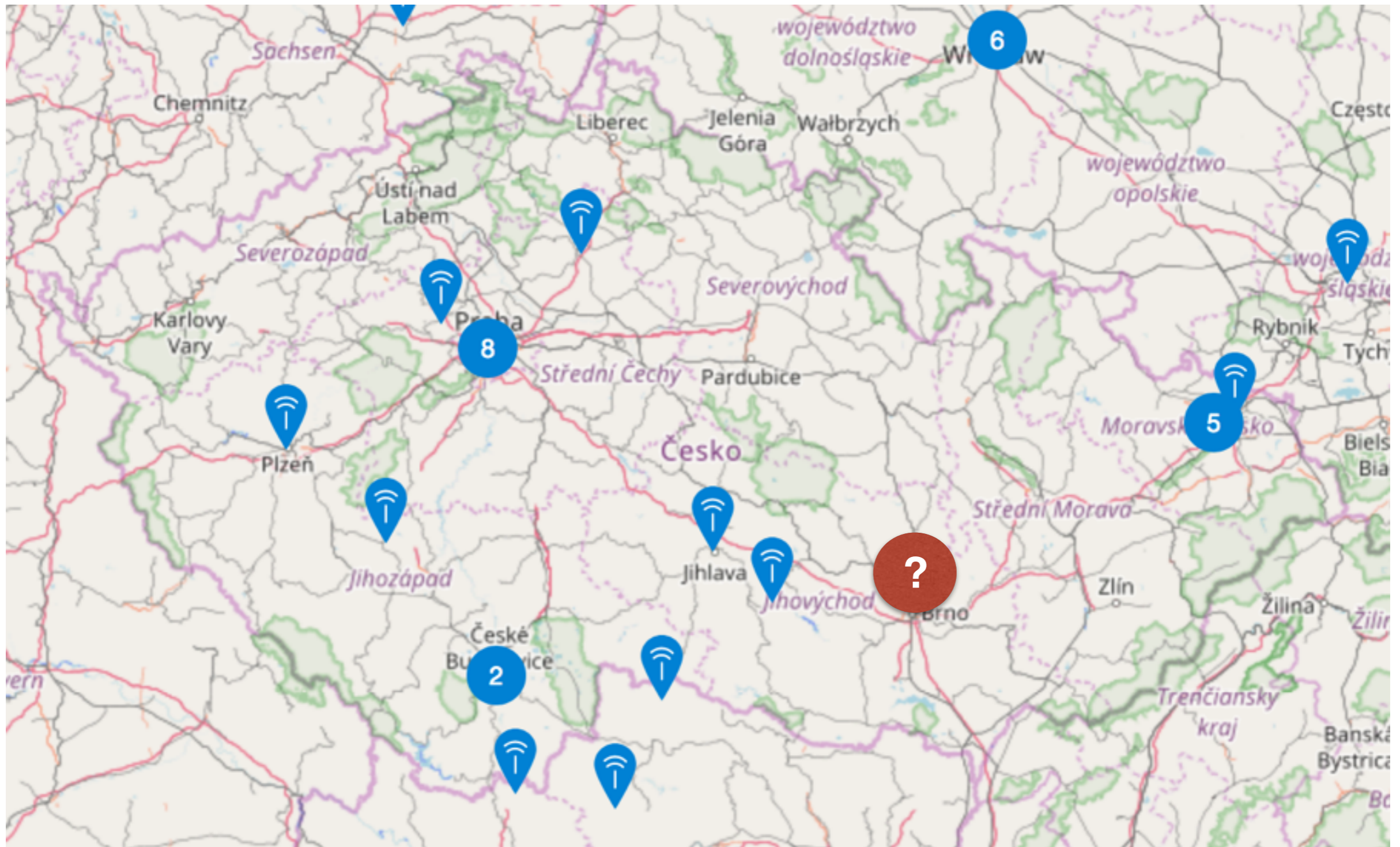
No direct profits from the network

Test of technologies

- Platform for everyone
- Importance of the open network
- Operating on unlicensed frequencies

Our bet: LoRaWAN

Existing infrastructure



Planting seeds

- Assembled gateway
- DIY antenna
- Connected to public network



Deployment site



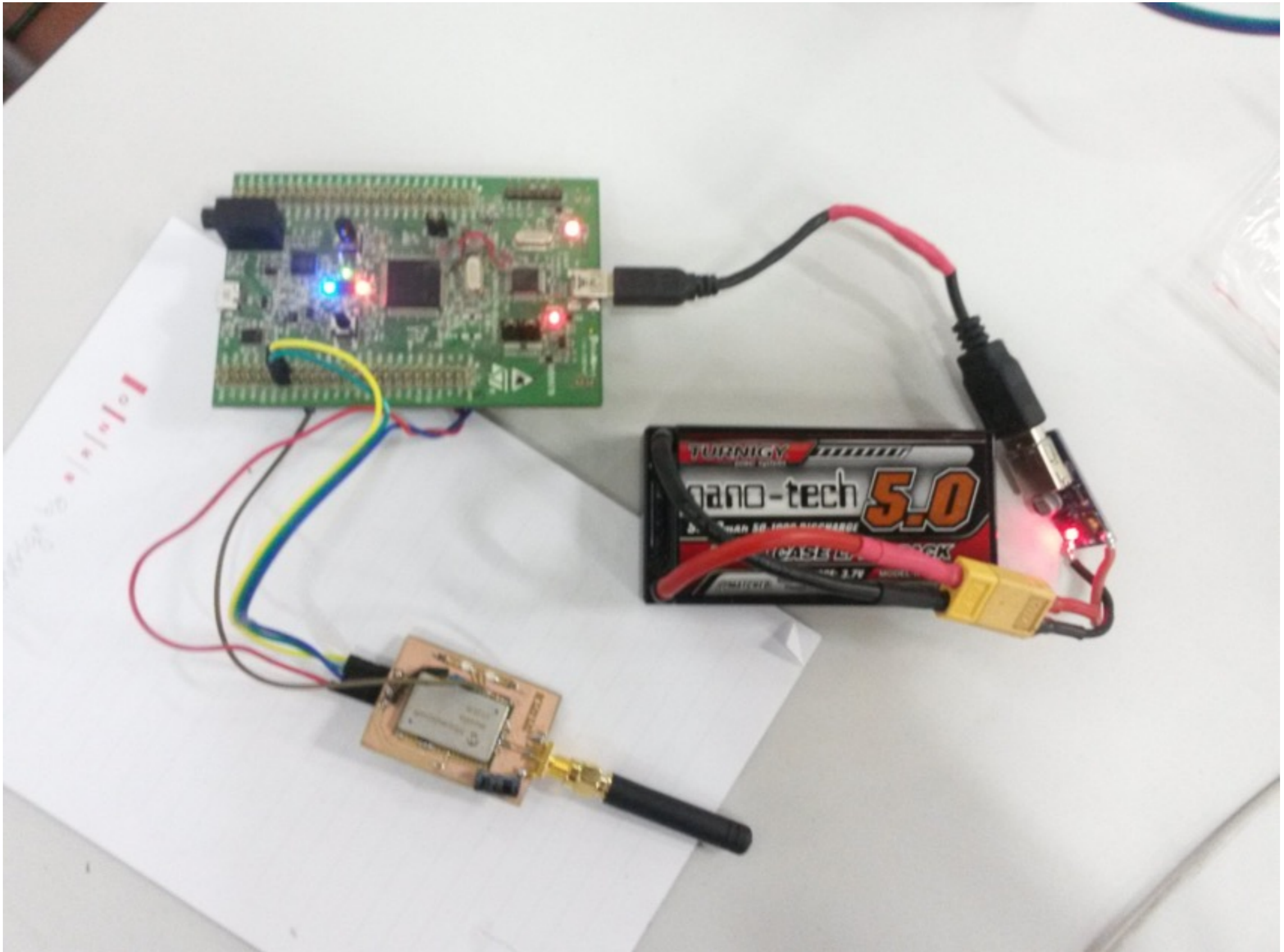
Planting seeds

“The first step is the best step in a journey towards a destination.”

— Captain Obvious



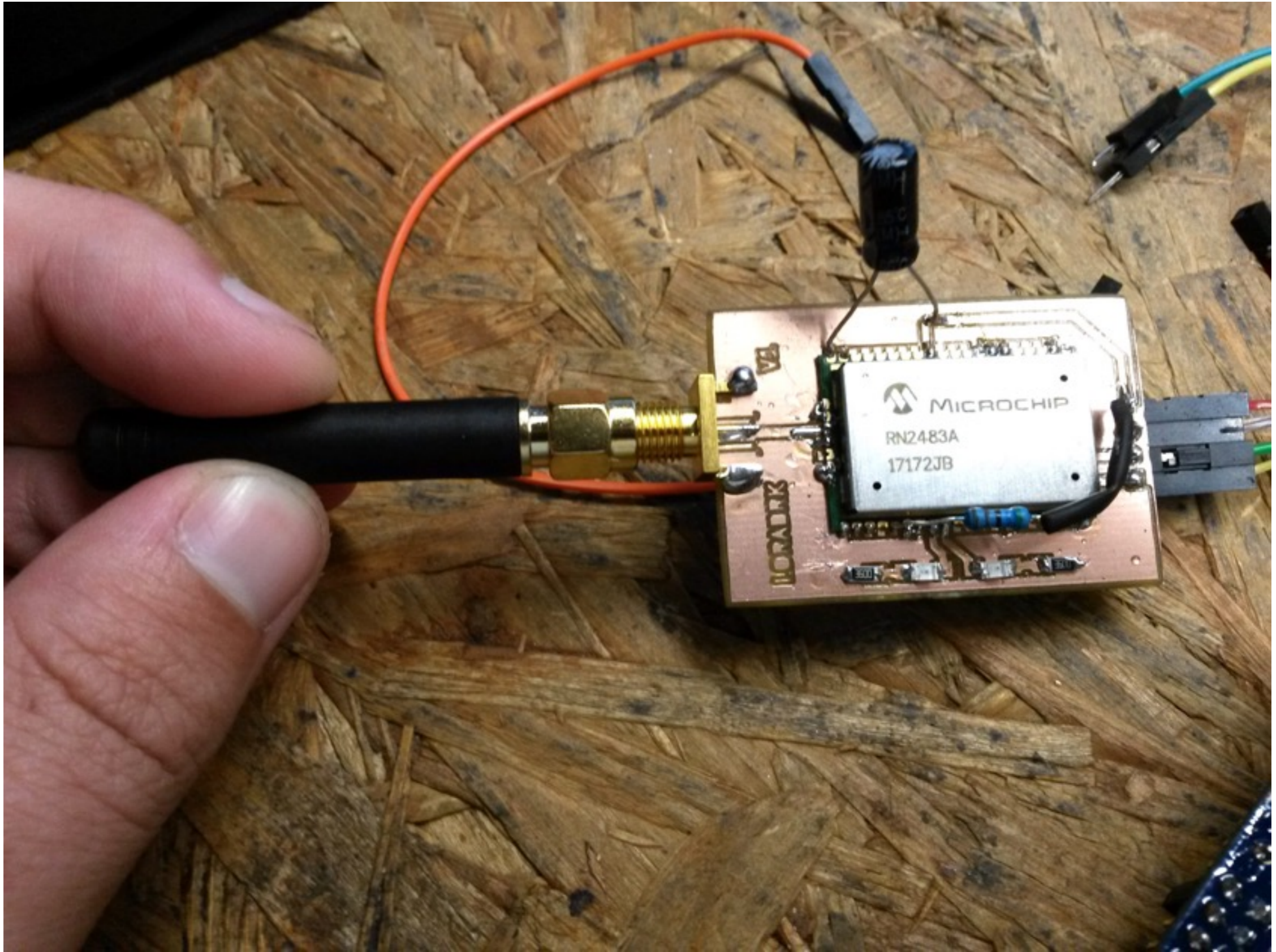
Devices - proof of concept



Devices - proof of concept



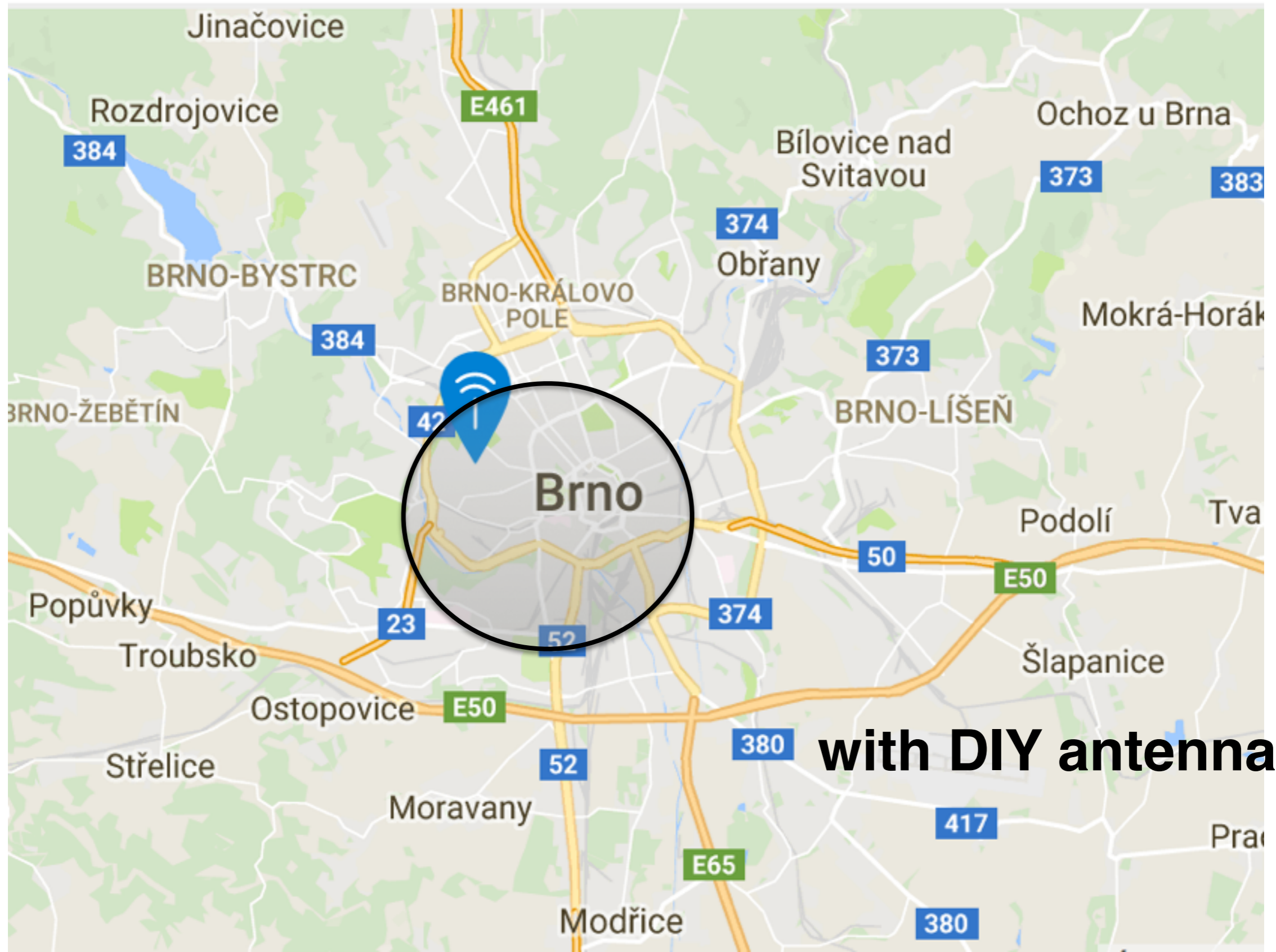
Devices - proof of concept



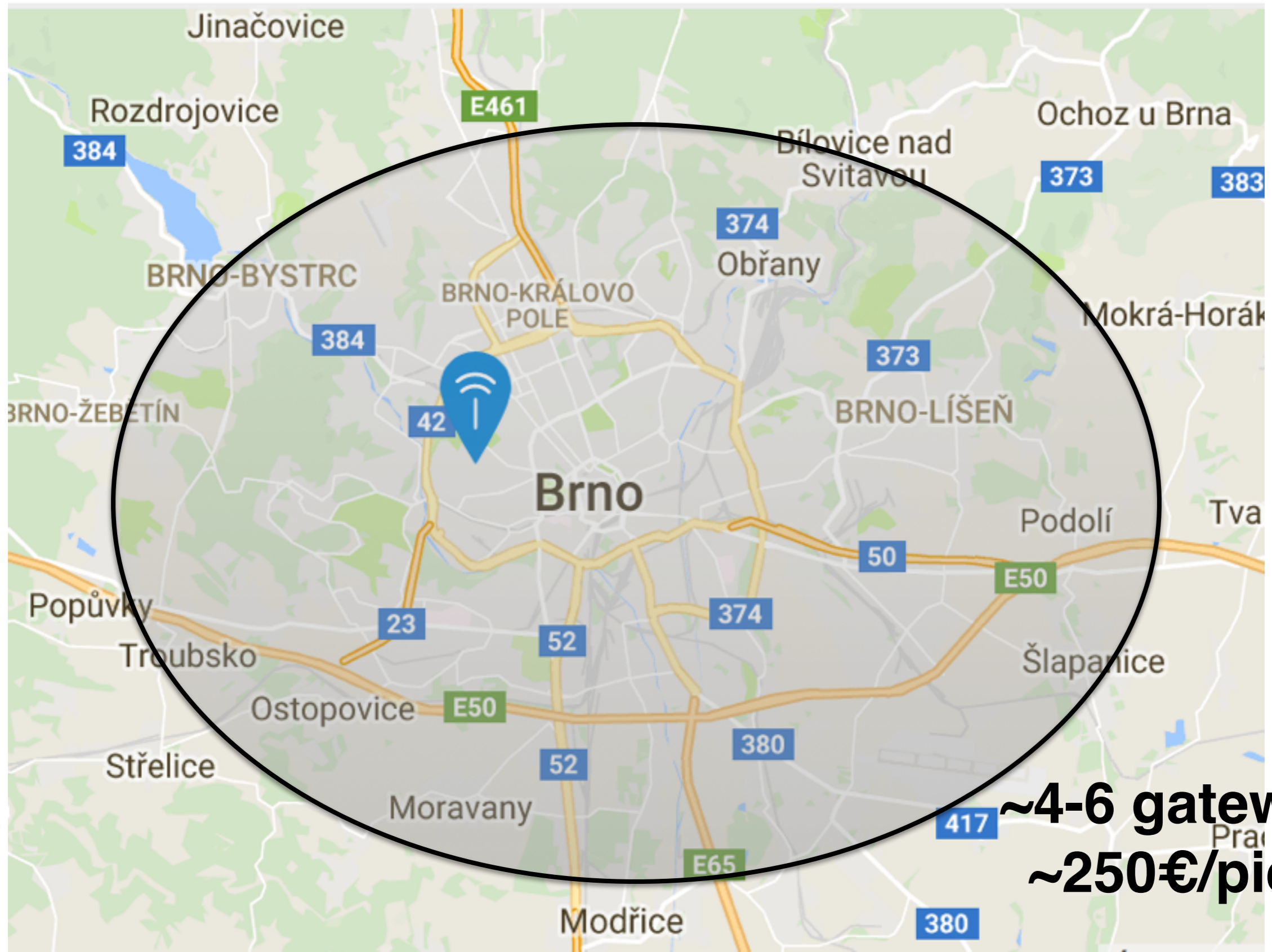
Testing coverage



Current coverage

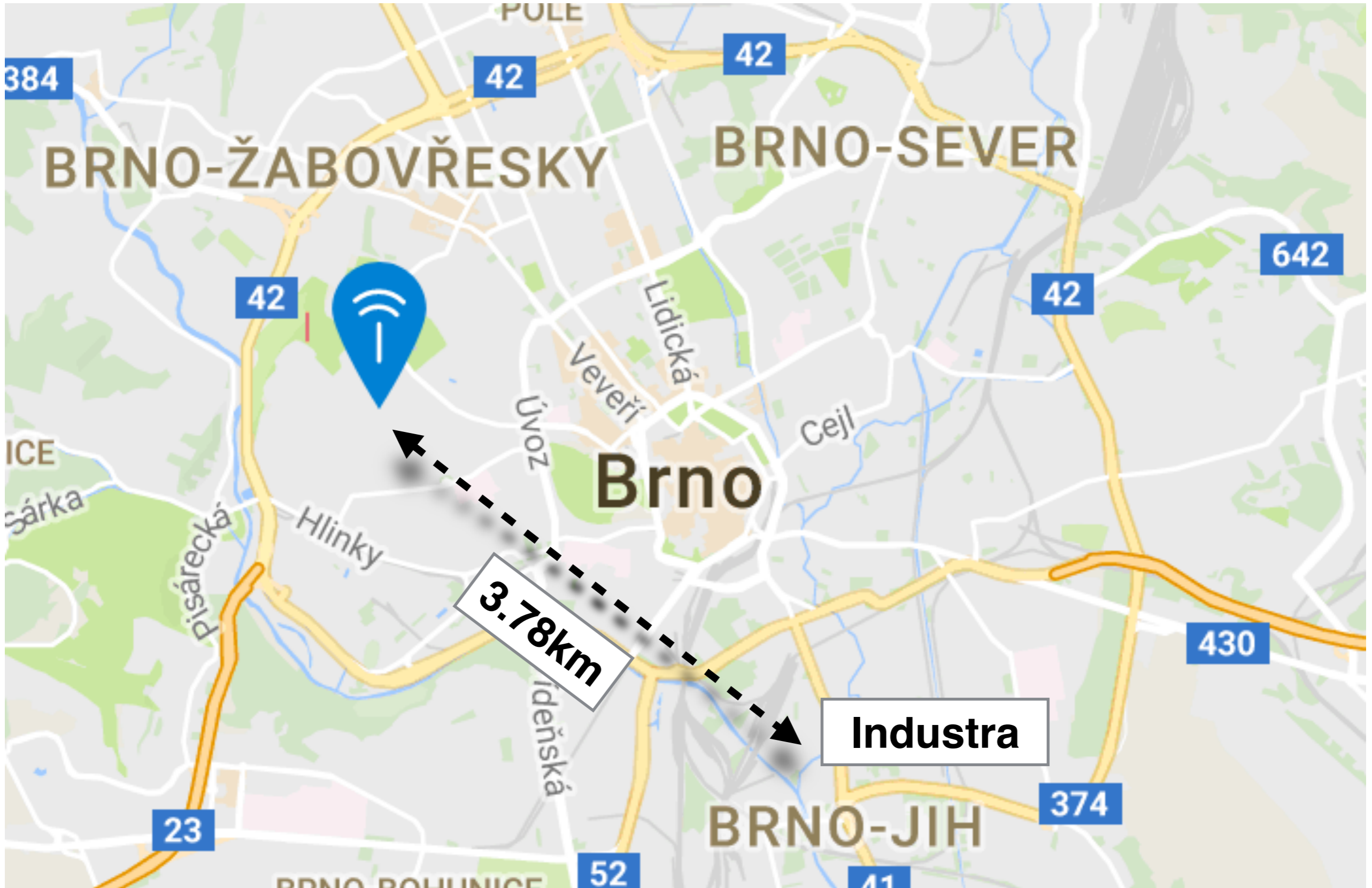


Ideal coverage



**~4-6 gateways
~250€/piece**

Devices - proof of concept



Comparison

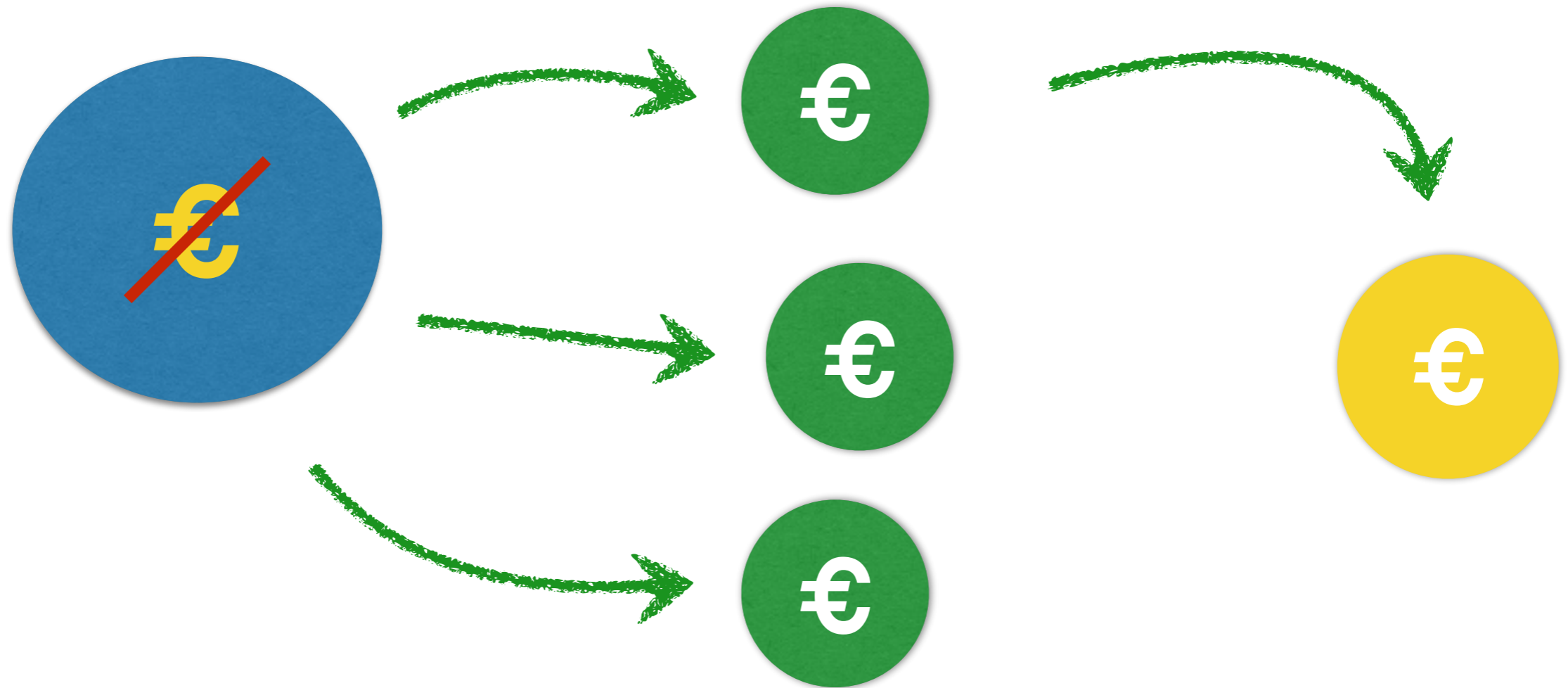
SIGFOX and other closed solution

- Vendor lock-in
- Monthly fees
- Provider in control of the security

LoRaWAN network

- Kick the provider
- Scalable
- No monthly fees

Commercial value



- Broad area of projects
- Immediate effect on the possibilities

Use cases

- soil monitoring
- water level monitoring
- parking space monitoring
- smart flower pots
- full trash bin alerts
- light smog monitoring
- air quality monitoring (cooperation with Ostrava)
- noise pollution monitoring
- sensing **\$your_favourite_physical_unit_here**

Further plans

- Cover the city with signal
- Develop more proof-of-concepts for field testing
- Bring this technology to more hobbyists or schools (Arduino shield)

Recap & needs

- Know-how & Proof of concept
- Software
- 1800€ to cover the rest of the Brno
- Marketing skills in our team

Q/A