

Levikom

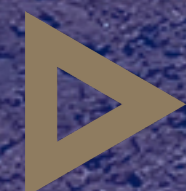
NORAnet
LoRaWAN™ network

NORAX

IOT in peatlands: sensing CO and temperature using smart sensors

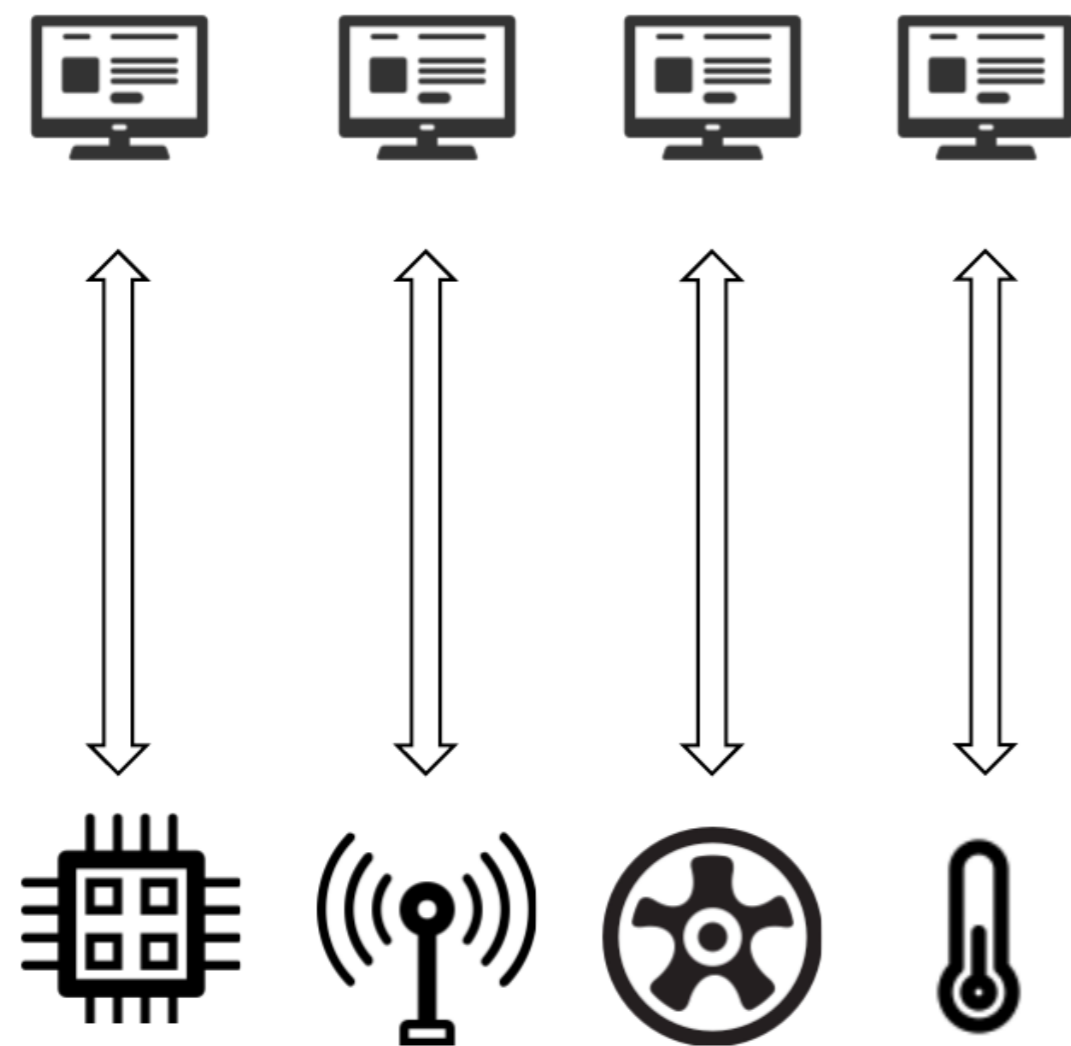
Ove Tüksammel

Head of IoT



Internet of Things

▶ M2M



▶ IoT



Small IoT devices



3-10km



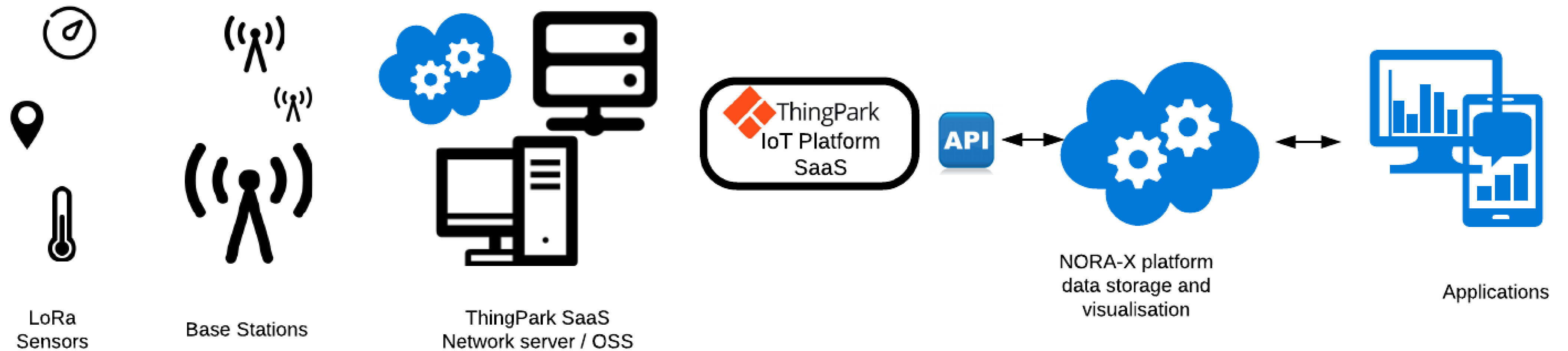
10 a



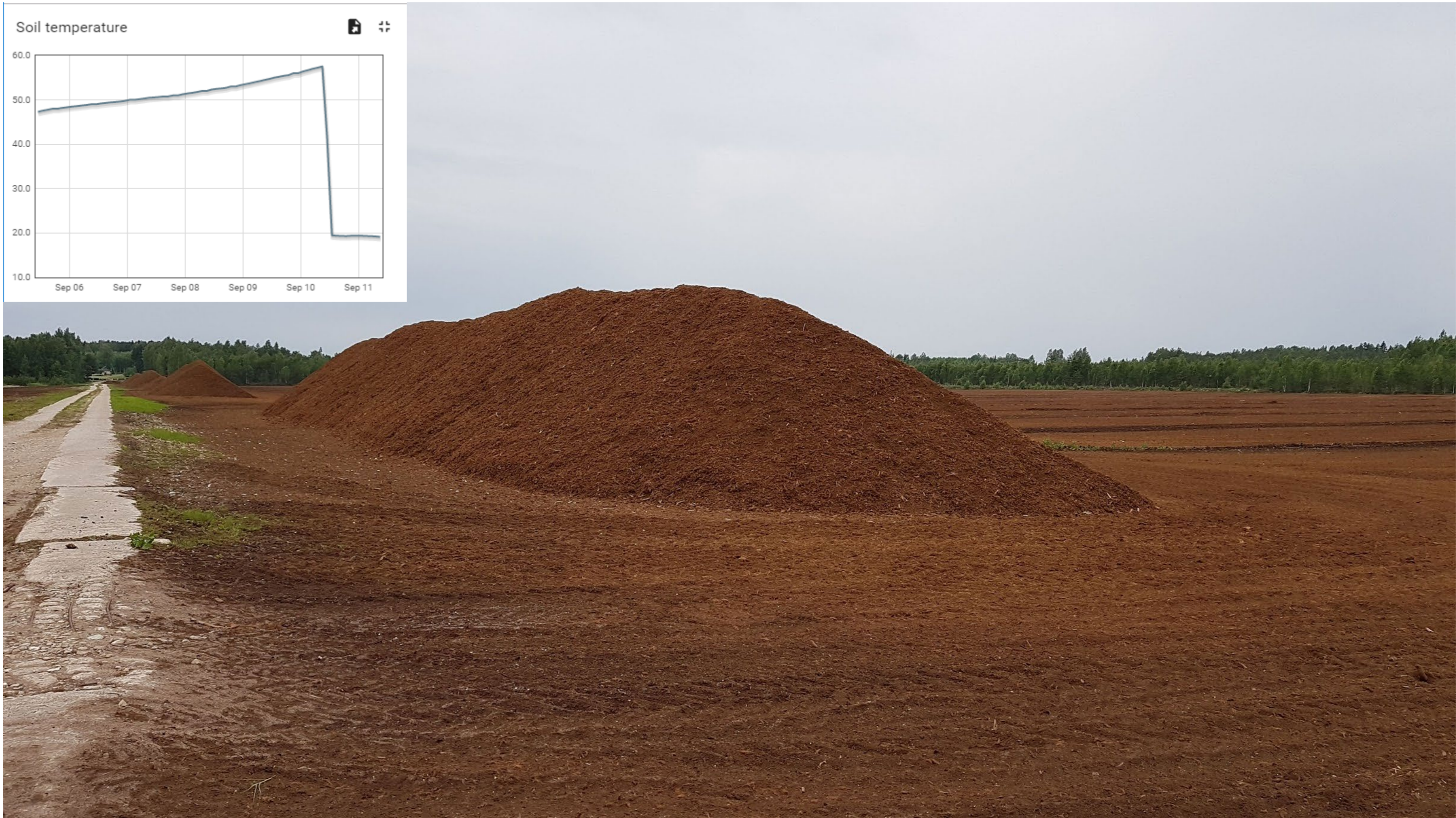
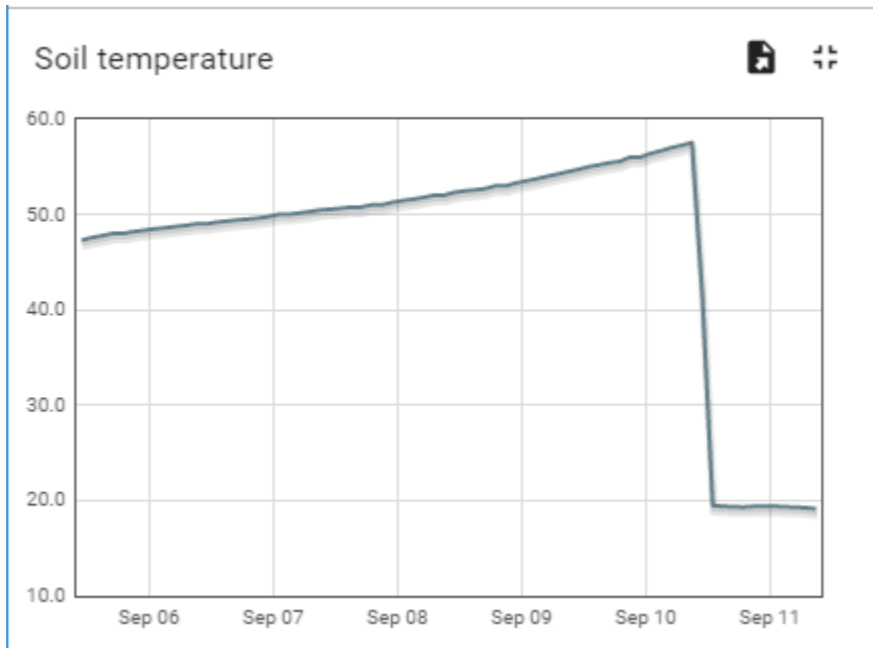
AES 128

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{  
  "temperature": 226,  
  "humidity": 41  
}
```

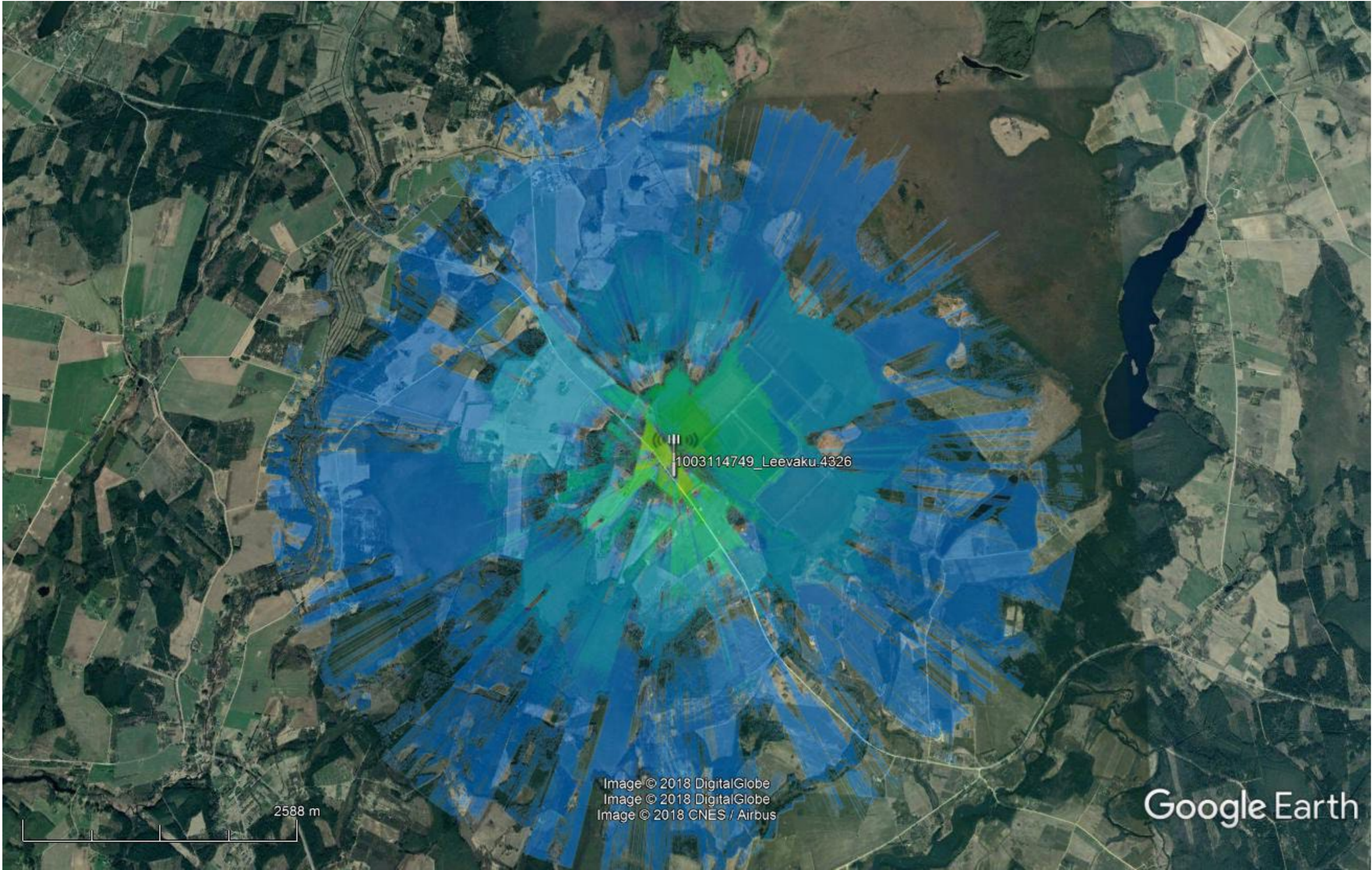
NORAnet network



Peatland use cases



Connectivity



Sensor nodes

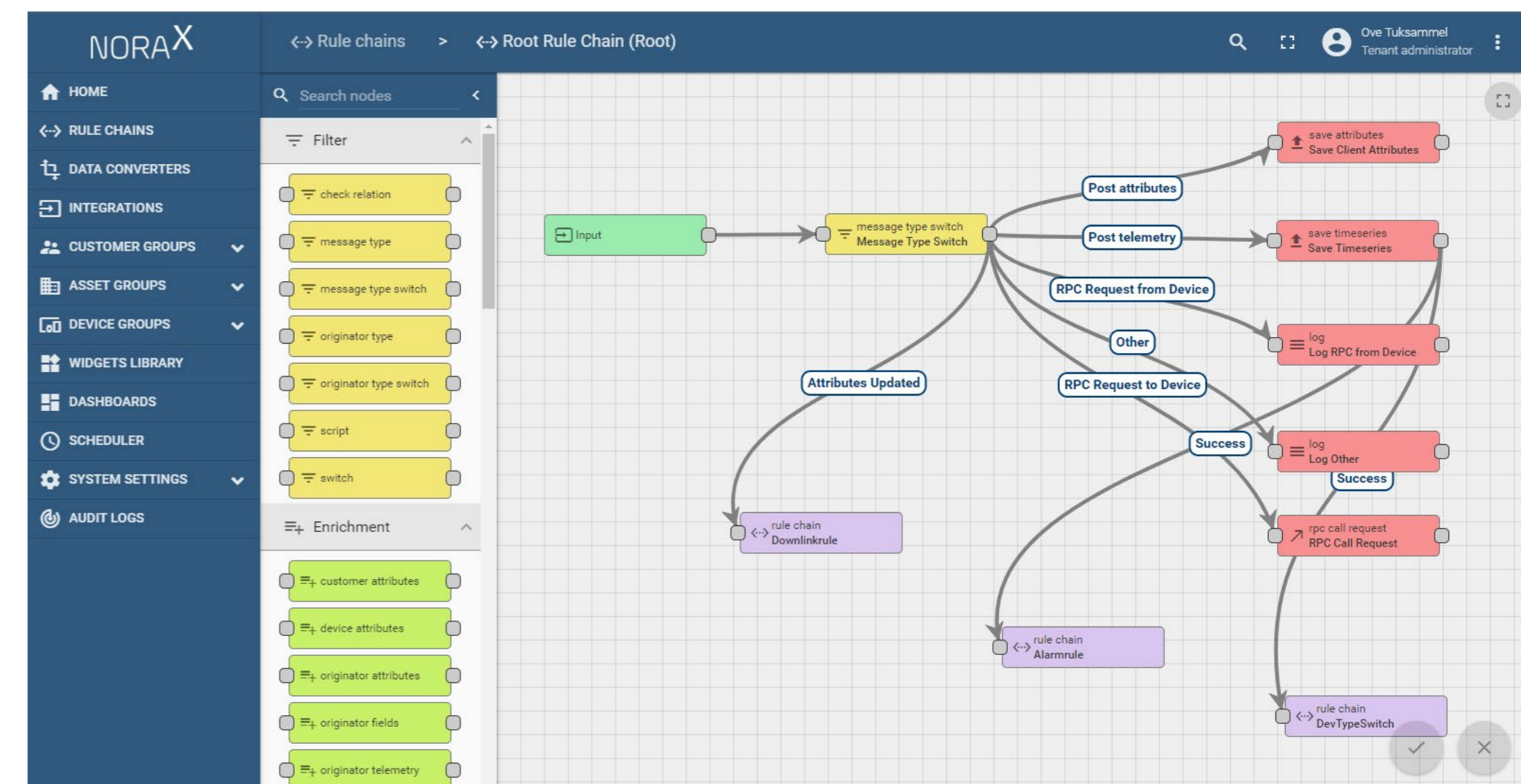
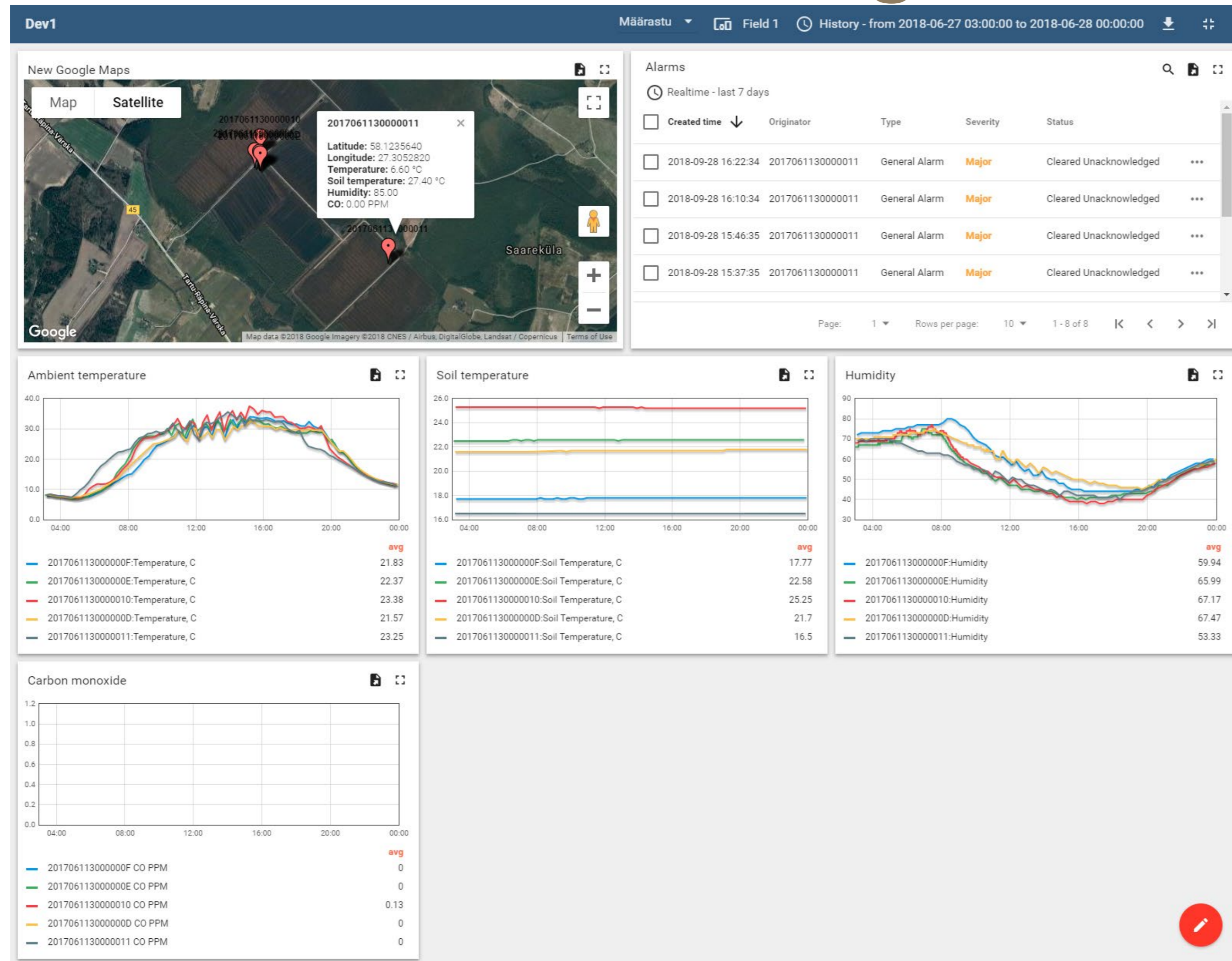


Node placement



- ▶ Works well with all wind directions
- ▶ 50m to 100m node spacing, at strategic locations
- ▶ Flexible node placement topology
- ▶ The nodes can be flexibly placed at different locations as needed

NORA-X for data storage and visualisation



Location data



Related other use cases

Metering – heating, water, gas



Waste management / asset tracking

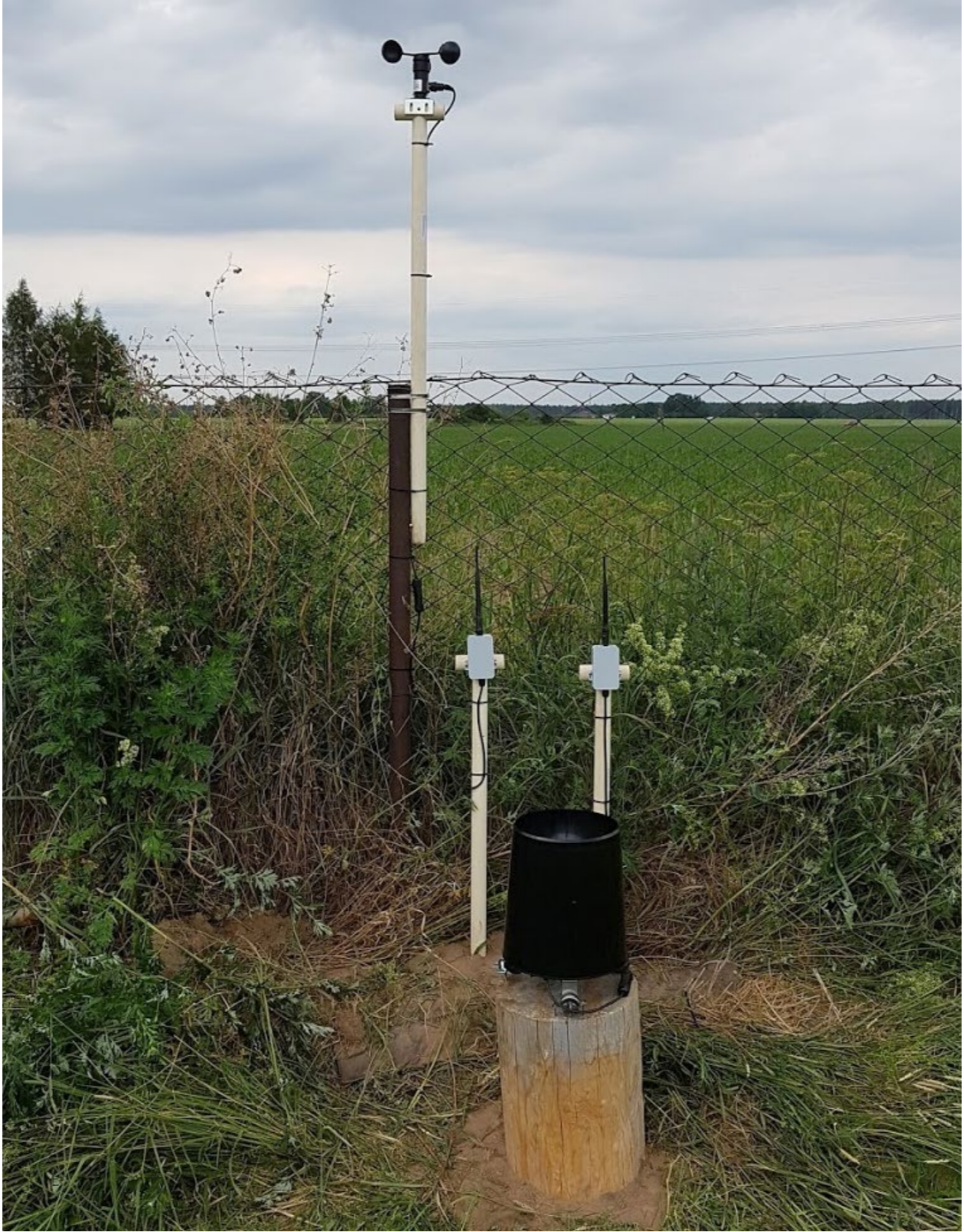
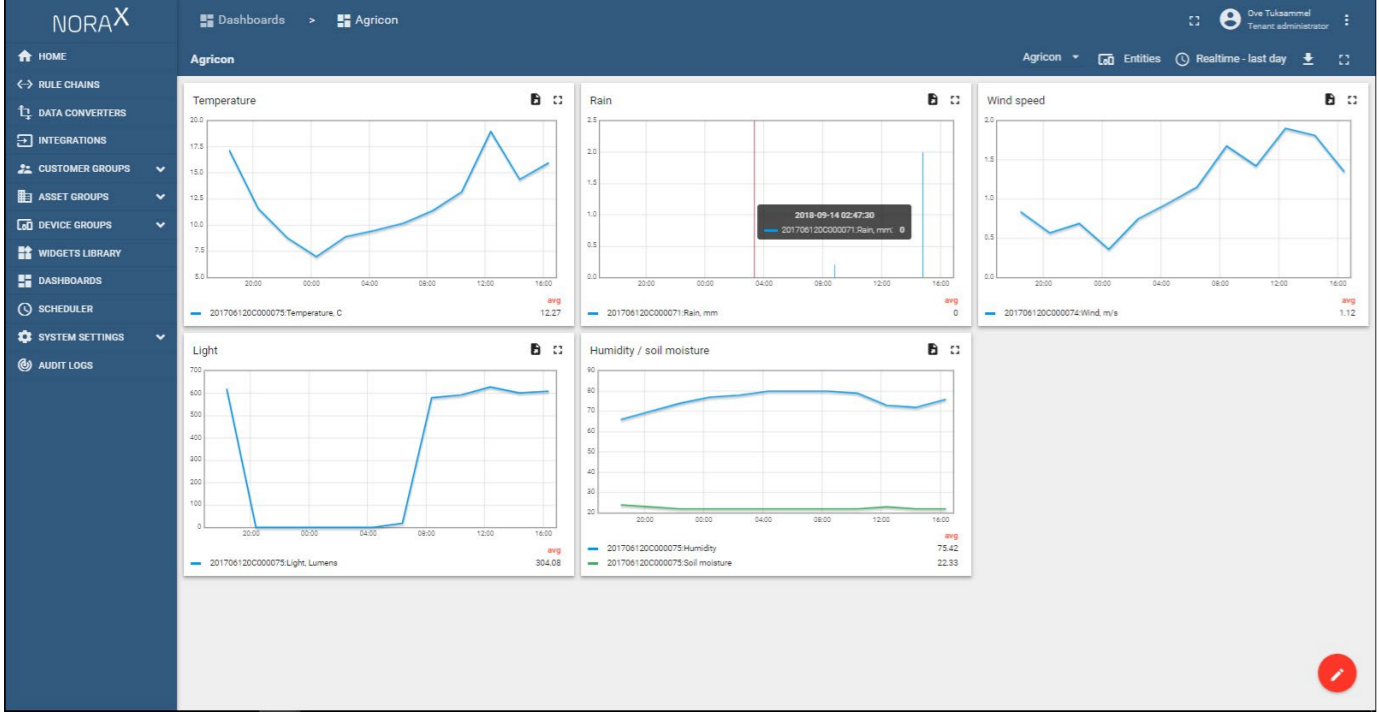


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Weather stations



Precision agriculture



IoT project phases



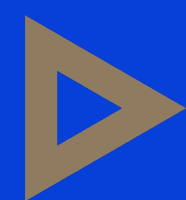
- Stakeholders
- Endpoints
- Usecases
- Feasibility

- Devices
- Applications
- Connectivity
- Security
- Interoperability
- Suppliers

- Key assumptions
- Technology fit

- Application development/
purchase
- Integration

- Systems deployment
- Device installation
- Training
- Operations



Thanks!

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