

# AMBITIOUS Approach to monitoring Urban Floods

## UC2: Smart Water management

SAVONIA and FUNLUS  
CONTRIBUTION TO  
AMBITIOUS project

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**FUNLUS**  
#MAINOSTOIMISTO #TEKEMISEN YTIMESSÄ



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AMBITIOUS Team Members / Savonia



**Aki Happonen**  
Technology  
manager



**Paola Kontro**  
Project manager



**Shahbaz Baig**  
AI expert



**Petri Juntunen**  
RDI Expert



**Rosa Sartiärvi**  
RDI Specialist



**Patryk Wójtowicz**  
Research Manager



**Osman Torunoglu**  
IoT expert



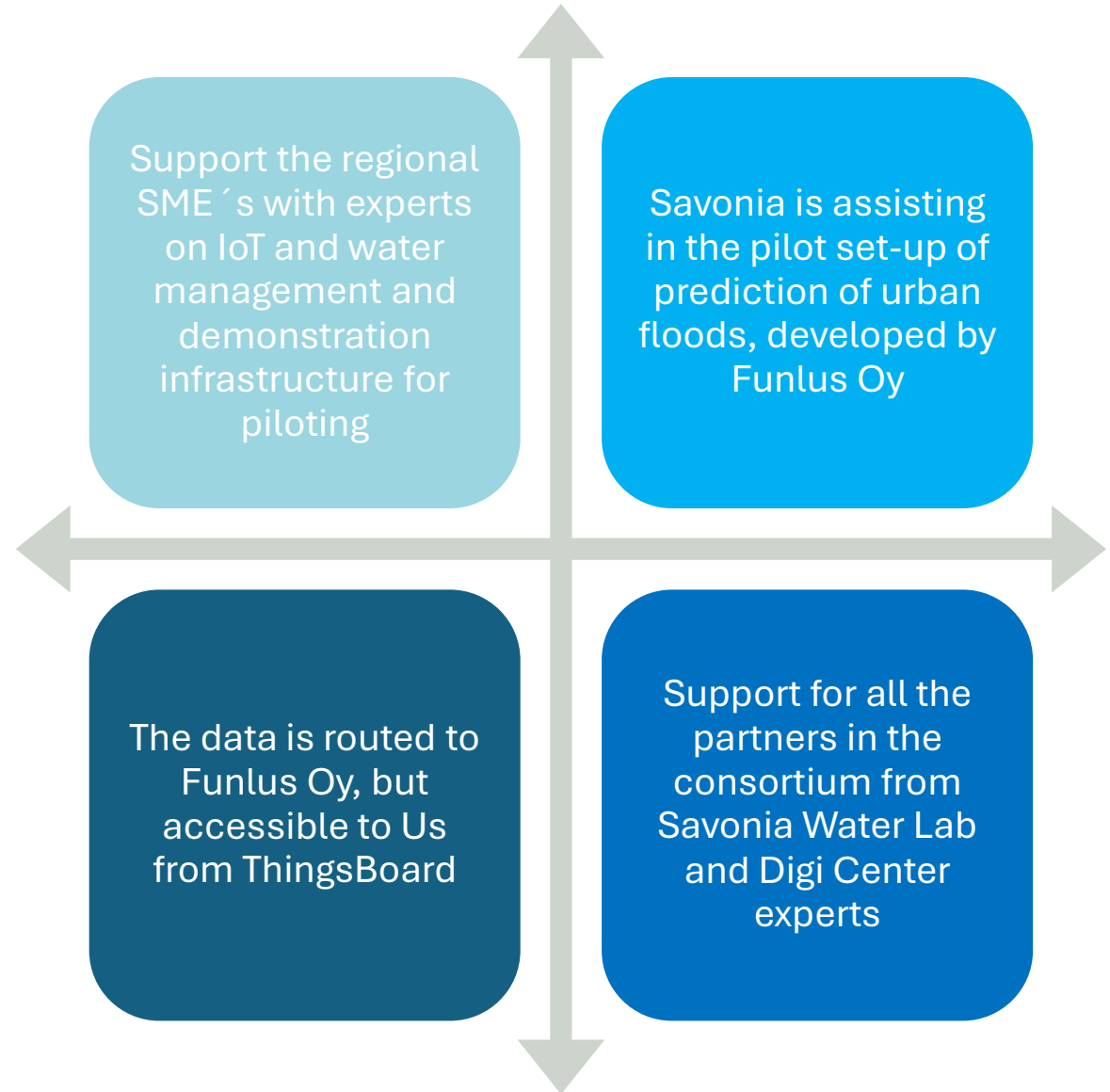
**Anna Ageeva**  
Financial expert

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### Savonia ´s role in AMBITIOUS

Sensors mounted in the Savilahti District Monitoring Area (SuperDMA) and to city of Kuopio's storm water network



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### Piloting schedule

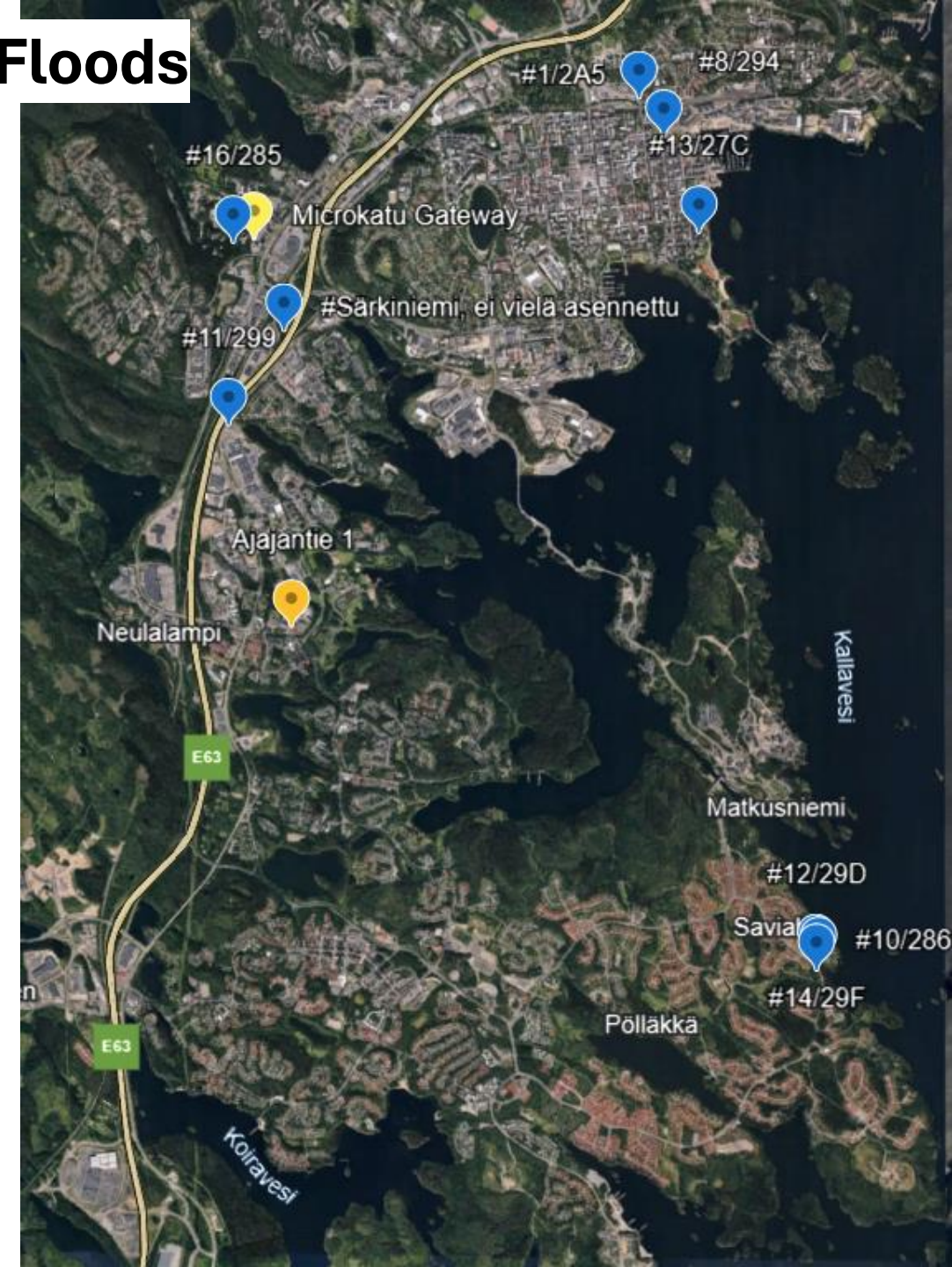
Task	By	Planned time	In process/ Done
Sending Testing Sensor to Savonia: - To be mounted in Savonia's test well (Sarastuskaari)	Markus	April	DONE
Testing the sensor mounting with magnet	Petri, Tero, Jari	April	DONE
Funlus router to Savonia, for sending the data from sensor in Savonia well lid	Markus, Petri	May	DONE
Testing the data transferring through the lid	Markus, Petri	May	DONE
Getting qualified to work in the street area, to mount the sensors	Petri, Rosa, Tero, Jari	April	DONE
Selection of specific well lids to mount the sensors on, based on information from the city	Minna, Päivi, Piia and Rosa	May	DONE
Mounting the sensors on well lids in Kuopio	Petri, Rosa, Piia (City of Kuopio)	May - June	IN PROCESS



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Kuopio storm water monitoring network for AMBITIOUS project



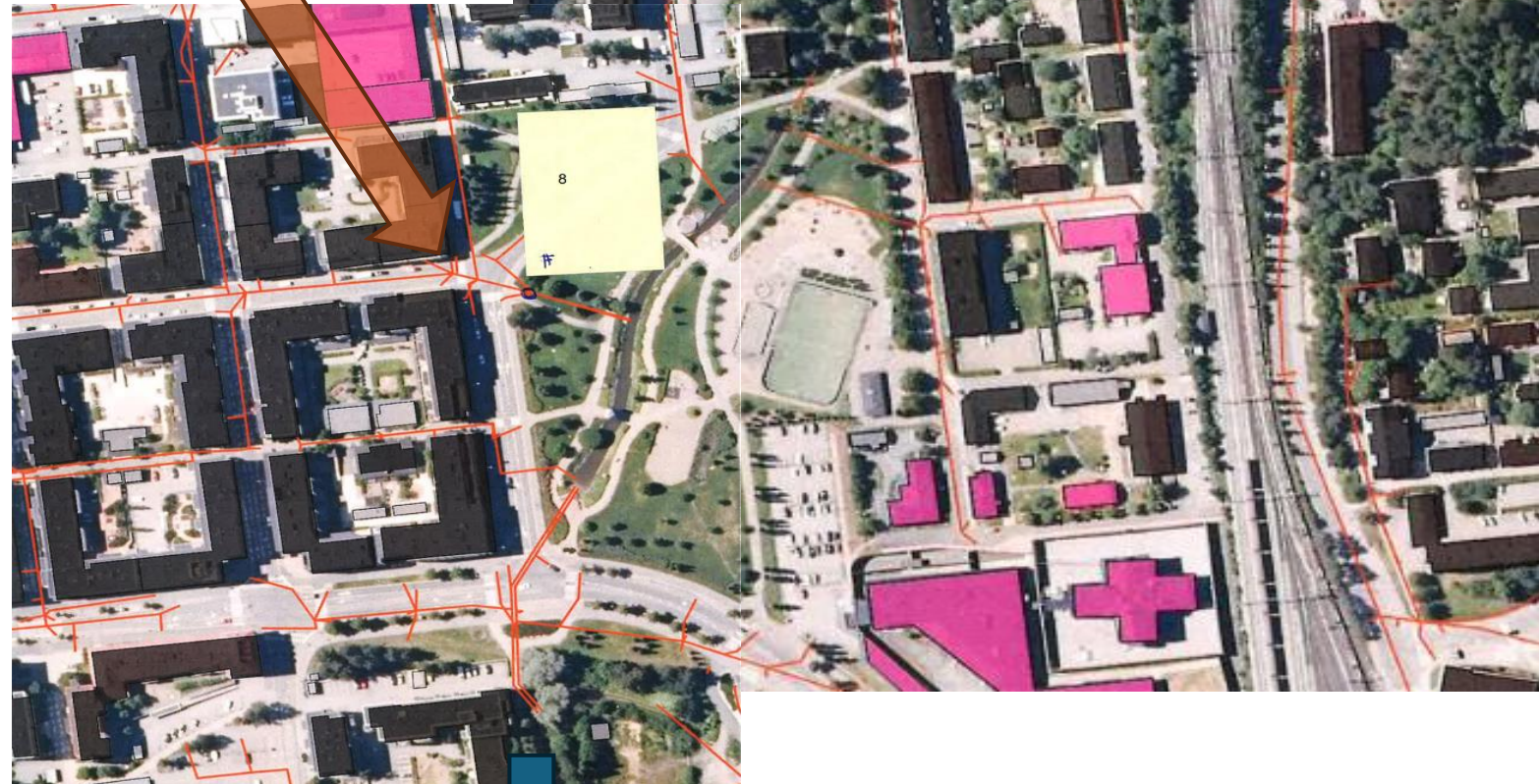
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Sensors mounted in the City of Kuopio

For example, Maljalahti area which is known to flood frequently

Kuopio city downtown area, surface flow paths towards the harbour



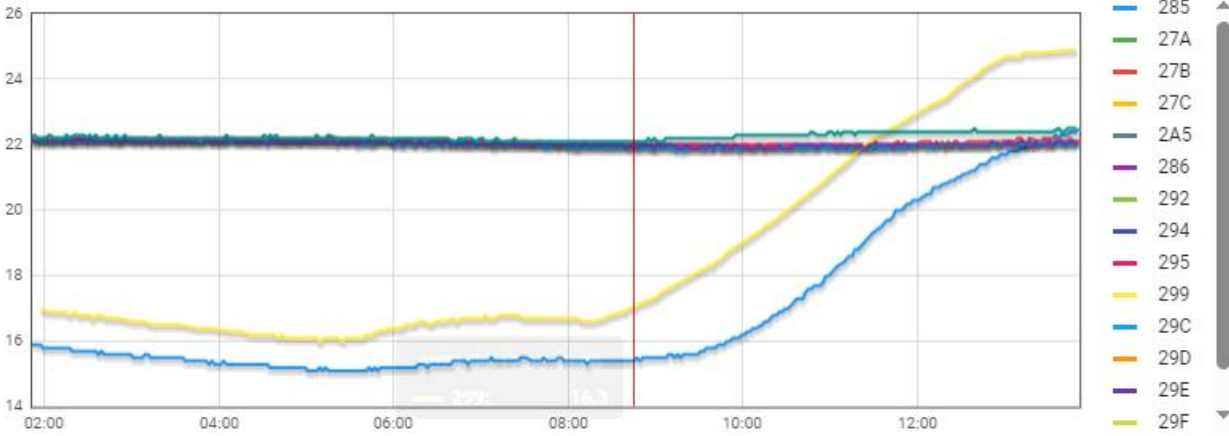
Puijo hill area with a lot of downflow of water

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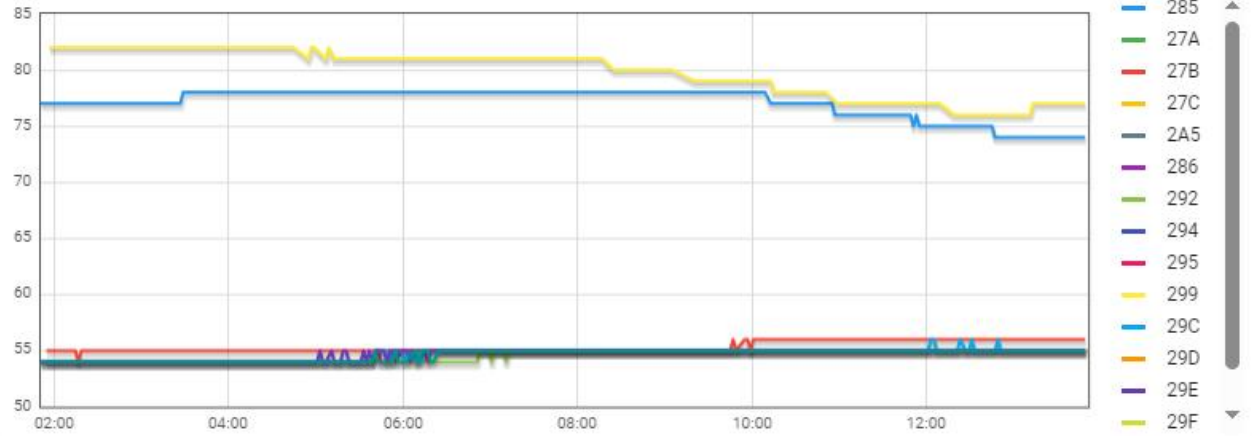
Temperature

🕒 Realtime - last 12 hours



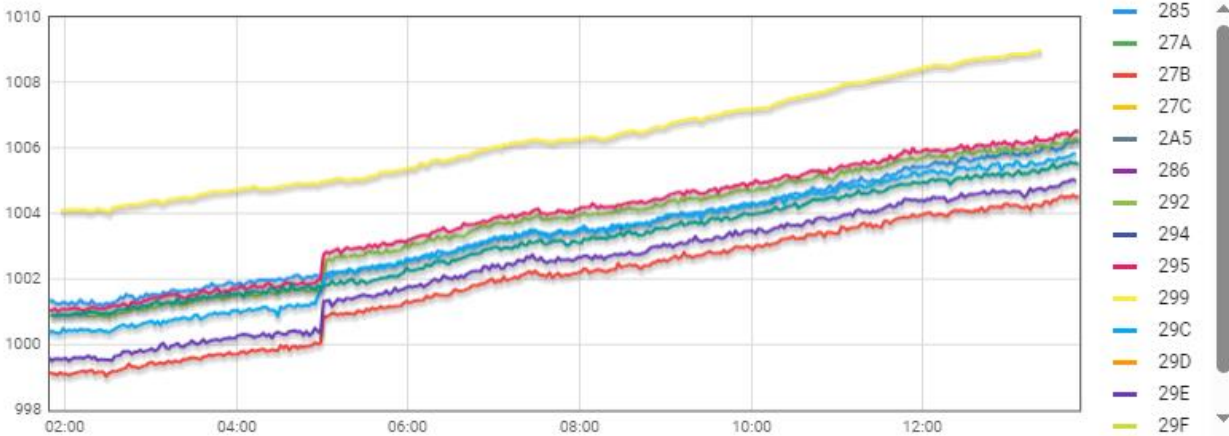
Humidity

🕒 Realtime - last 12 hours



Pressure

🕒 Realtime - last 12 hours



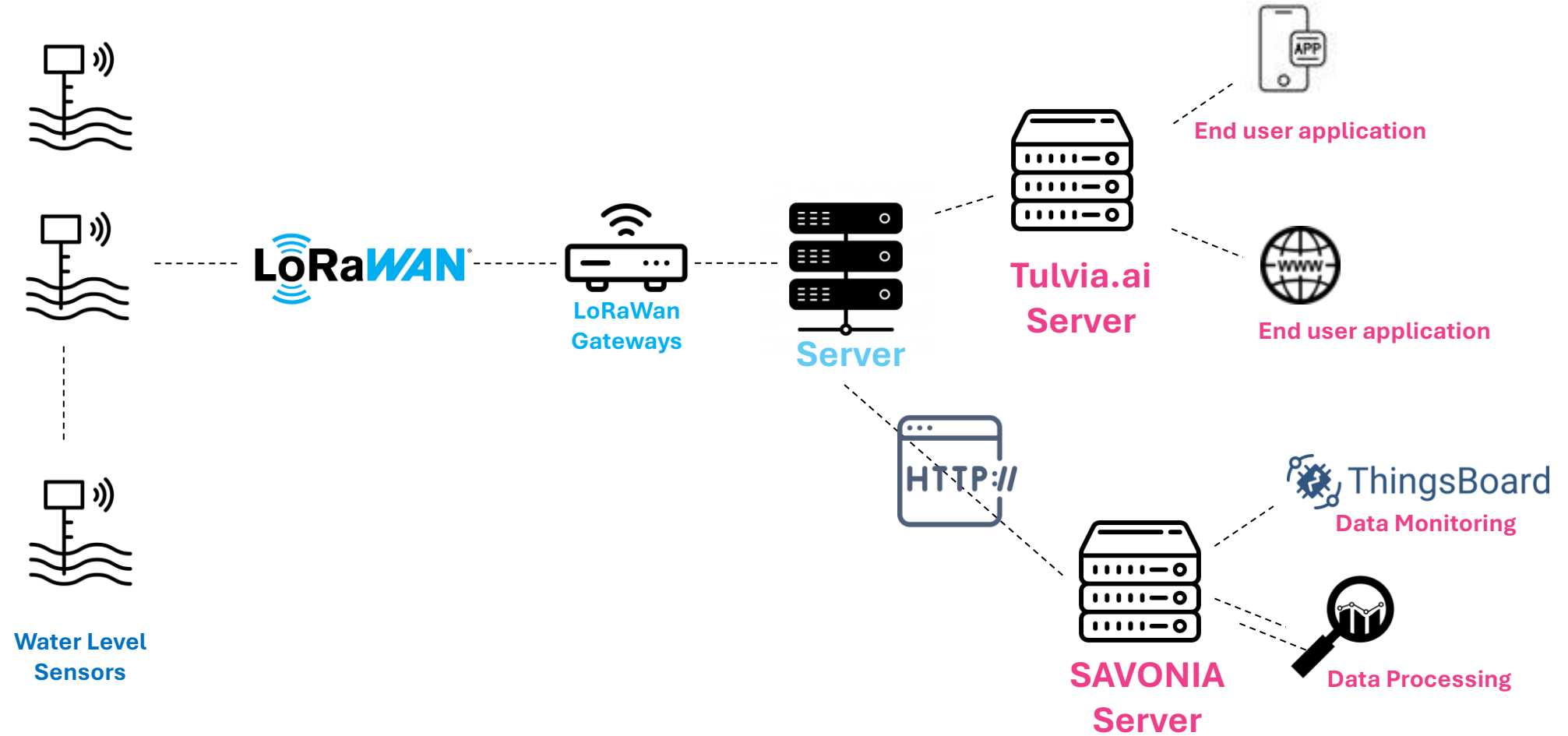
Distance

🕒 Realtime - last 12 hours



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Kerlink  
Gateway (1 test  
device)



RAK7289 V2 WisGate  
Edge Pro Gateway (3  
devices)



Elsys ELT Ultrasonic Industrial  
Distance Sensor (15 devices)

## **AMBITIOUS Approach to monitoring Urban Floods**

### **UC2: Smart Water management**

# TULVIA.AI

## Predicting Urban Floods Protecting Your Future.

TULVIA.AI:  
Technological Urban  
Level Vigilance and  
Analysis Infrastructure

## Welcome to TULVIA.AI

Real-time monitoring, AI-driven flood predictions, and community engagement for a safer tomorrow

### Real-Time Monitoring

Keep track of water levels with data from strategically placed IoT sensors.

Coming soon

### AI-Driven Flood Prediction

Predict flood risks within the next 24 hours with our advanced AI model.

Coming soon

### Community Reporting

Citizens can report flood risks in real time, helping city officials respond quickly.

Coming soon

## Introduction

Welcome to TULVIA.AI, the cutting-edge platform designed to help cities prevent and manage urban floods. Leveraging real-time data from IoT sensors and AI-driven predictive models, TULVIA.AI provides timely insights that enable authorities and citizens to take action before disaster strikes. Join us in building a flood-resilient future through advanced technology and proactive planning.



**AMBITIOUS**  
Digital solutions for the 5G era

Grant Agreement: 101115116

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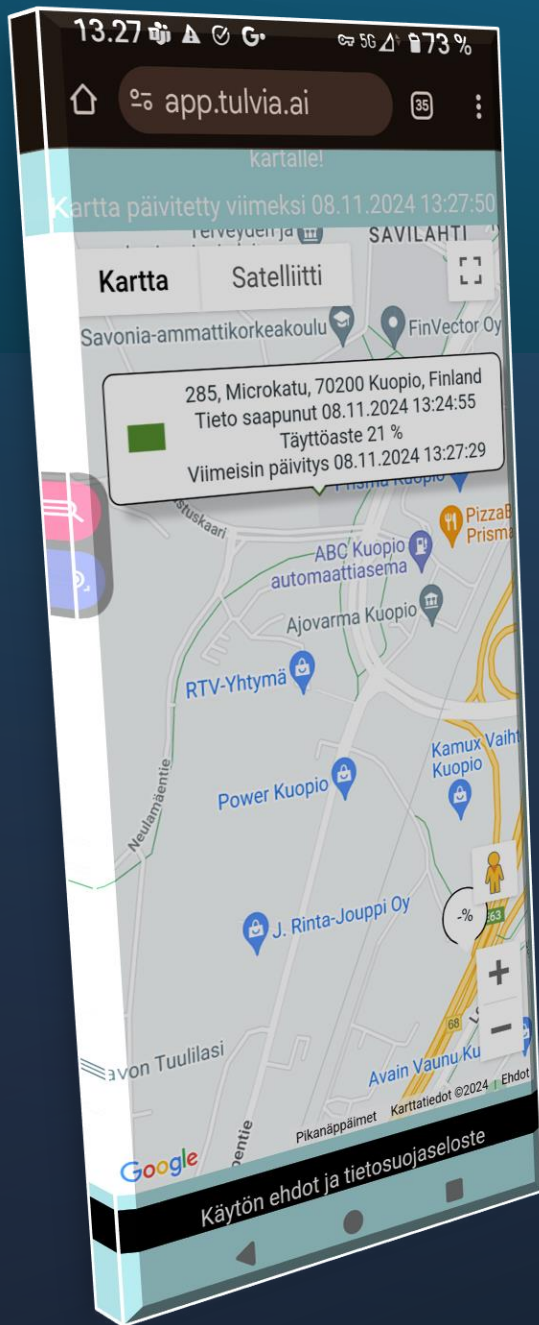
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Co-funded by  
the European Union

The view of the app from a mobile device





Thank you! Kiitos!