

Case Study: IoT Water monitoring solution



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CASE STUDY: WATER MONITORING SOLUTION

KOMUNALNO PODJETJE KAMNIK (KAMNIK PUBLIC UTILITY) KEY FIGURES



Consumption of resources:
Wastewater, drinking water



Measuring points (MP):
248 of all measuring points: 90 MP on wastewater and
158 MP drinkable water

GENERAL COMPANY DESCRIPTION

Kamnik public utility company has been providing communal services to the inhabitants of the municipality of Kamnik since 1962.

The company carries out the following activities: drinking water supply, drainage, and treatment of municipal wastewater and rainwater, road maintenance, cemeteries maintenance, and public lighting.

Wastewater treatment:

The public utility company Kamnik manages more than 100 km of public sewerage network in the municipality of Kamnik. With a view to collecting and draining waste water through a well-planned and regularly maintained public sewerage network until final distribution to the Kamnik-Domžale Central Wastewater Treatment Plant, they care for raising the quality of life and maintaining a clean environment.

Drinking water supply:

The public utility company Kamnik manages more than 160 km of primary and secondary public water supply network in the municipality of Kamnik. By regularly maintaining the network, facilities, and appliances, they ensure that clean drinking water is delivered to into homes of thousands of people. For quality and up-to-date maintenance, it is important that regular monitoring of each plumbing system is carried out. The control system allows constant monitoring of the events on the water supply network as well as the earliest possible repairs in case of failures.

CHALLENGES

- A constant increase in water demand
- High water leaks in piping infrastructure
- High operational costs – water leakages and meter reading (Meters are often located in dense urban environments, indoors or even underground, which can be difficult or impossible to reach)

GEMALOGIC SOFTWARE PLATFORM

Solvera Lynx has offered cost-effective and reliable water monitoring and telemetering solution in order to make the consumption of water resources more efficiently and reduce water loss.

- Water flow monitoring (identification and reduction of water loss)
- Water quality monitoring (visualization and analyses of water quality data to discover trends and patterns).
- Leakage monitoring (identification of leakages and its location)
- Water level monitoring



CASE STUDY: WATER MONITORING SOLUTION

Wastewater monitoring and telemetering in Municipality of Kamnik (25 locations, 55 measuring points) and Municipality of Komenda (14 locations; 35 measuring points)

Telemetering solutions:

- Monitoring of hourly operation of pumps with different data capture intervals (on hourly and second bases - depending on the type of pumps - (inflow water pumps, water outlet pumps and mud pump))

Drinkable water monitoring – 65 locations, water lifting plants

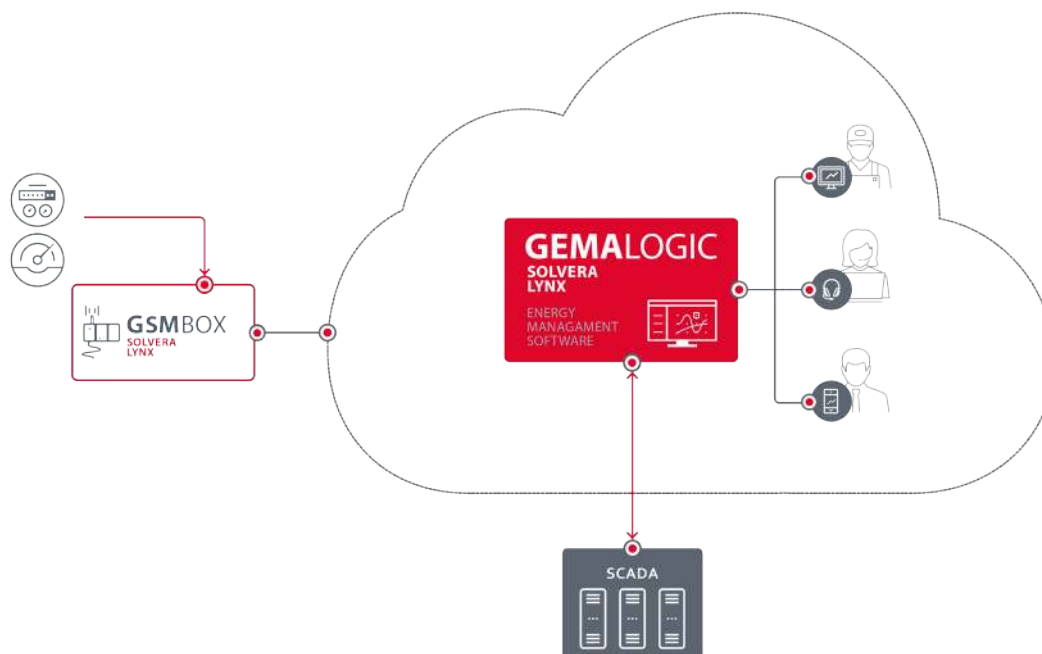
- Monitoring of water lifting plants and water storage reservoirs
- Monitoring of hourly operation of pumps, water inflow, and hydrophores
- Monitoring of water inflow, water outlet, and water consumption

We have gathered data from multiple devices and systems. It has optimized existing infrastructure, integrating data from sensors and management and automation systems (e.g. SCADA). Our IoT based solution was quick to deploy and easy-to-use.

SYSTEM ARCHTECTURE

Communication equipment: 30 GsmBoxes.

GemaLogic platform integrating, analyzing and visualizing data.



PROJECT RESULTS AND BENEFITS

- Real-time monitoring that gave transparency on water consumption and deeper, minute-by-minute look into water use
- Quick anomalies detection (spills and leaks) and automatic alerts that guarantee faster response to emergencies, it's quick identification and geolocation, preventing loss of service and costly repairs
- Benchmarking - comparison of different locations
- Centralized control and monitoring- management from one place at any moment
- A reduction in water waste and savings in water bills
- Increase of water network efficiency

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