

SATEL case story | SCADA | water | HS-Vesi

# EFFICIENCY AND RELIABILITY IN CLEAN AND WASTEWATER TREATMENT



**HS-Vesi is a water treatment company that serves three different municipalities in Finland; Akaa, Hattula and Hämeenlinna. The company takes care of the clean water supply and wastewater sewage systems and their efficient treatment.**

HS-Vesi maintains over 1000 kilometres of clean water pipes and delivers approximately 6 million cubic metres of clean water. It also takes care of 1000 sewers and about 400 kilometres of storm drain system, which handles all of the 8 million cubic meters of wastewater in that area.

The company has trusted in SATEL radio technology for years in their water treatment systems, and have installed more than 200 SATELLINE serial communication radio modems. In 2015 they acquired smart SATELLAR IP radio routers, which are the core of the SATEL XPRS solution. The SATEL XPRS

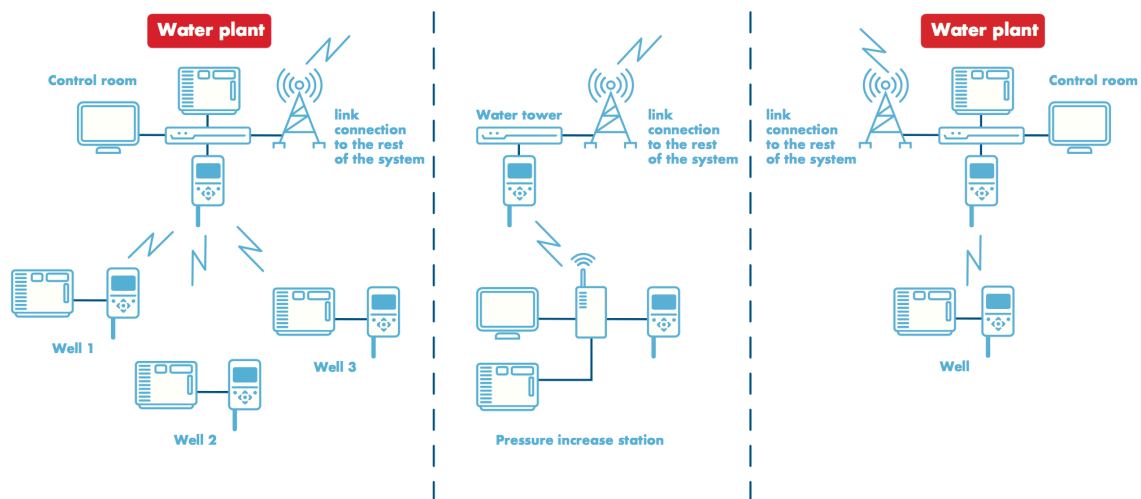
solution handles the data transfer between treatments plants and the storage tank. The automations system is controlled by Omron logic and InTouch control room system.

### Three networks with SATELLAR IP radio routers

1. The connection between three wells to the main logic of the water treatment plant
2. The connection from the storage tank to the water tower and the rest of the system
3. The connection between one of the wells in the water treatment plant and the main logic and the rest of the system

### Reliability equals productivity

SATEL radio technology is an excellent solution for controlling the water treatment system. The system collects information for example about water flow in pumping station and water level in storage tank. The productivity of the water treatment plant improves, because the reliable communications ensure that every step of the process is monitored. This information can be used to adjust the rotational speed of the pumps in overflow situations. This has a direct effect on maintenance costs.



The control centre has a master radio modem router that delivers the messages to the sub stations. SATEL XPRS solution supports IP data transfer so no polling is needed. Management interface can be accessed with Internet browser. SATELLAR IP radio routers support many remote control protocols and are easy to combine to several direct control systems.

### Private radio network is a smart choice

One of the main reasons to use radio technology network is reliability. The radio data network operates independently of public operators' network, which means that it is not affected by any interruption in them. Radio technology can be equipped with battery backups – the devices remain functional several days in case of a power cut.

The running costs of radio technology network are economical. The data network does not have unexpected monthly fees nor does the amount of transferred data affect the costs.

### **The advantages of SATEL XPRS solution**

- No need for the line of sight
- Reliable data transfer, either with IP protocol or serial connection
- Many different options for remote control
- Low costs of operation
- Advanced fault-tolerance features (redundancy, re-routing etc.)
- Network security
- Easiness of combining traditional and IP systems
- Existing antennas from serial data communications can be utilised
- Highly tolerant to power cuts

### **Service when you need it**

SATEL develops and manufactures radio technology for mission-critical data transfer applications where continuous operation is vital. Our radio solutions are used in automation systems for example in gas and energy distribution and clean and wastewater treatment. HS-Vesi is one of the several hundreds of water treatment plant customers. Insta Oy, the integrator in this project, has been extremely happy with the co-operation, SATEL's service and the reliability of the data network.

Our network design service, technical support and comprehensive training services help customers run their networks and handle any unexpected situations.

# **SATEL**

**Mission-Critical Connectivity**