IoT-AMR SOLUTION FOR WATER DISTRIBUTION NETWORK

DATAWATT
AN OVARRO TECHNOLOGY

THE CHALLENGE

Every day, the Dutch Drinking Water Company Vitens supplies 5.6 million Dutch customers with drinking water that meets the highest quality. All drinking water is retrieved from Dutch groundwater. The distribution network is approximately 49,500 kilometers and supplies 352 million cubic meters of drinking water per year.

Monitoring and controlling drinking water distribution
Business customers have a significant share in the turnover of Vitens. The top 1000 largest business customers have a combined consumption of around 26 million m3 of water. For these companies Vitens has launched an AMR (Automatic Meter Reading) tender, that provides real-time information on their water usage and invoicing.

THE SOLUTION

Tender AMR 2.0
The AMR 2.0 solution designed for this tender provides flexible and reliable data; a stable, innovative system for the management of all water meters and data collection. It provides a scalable and flexible solution with a high data resolution and near real-time consumption values. The AMR 2.0 project leads to a higher customer satisfaction and service level.

Total solution
We designed a complete solution, using the IoT-connector and StreamWebscada, the HES (Head-end system), AMR Water meters, Internet of Things data loggers and Data communication. The Ovarro Datawatt AMR 2.0 concept takes care of the automated collection of the meter data and different measurements in the distribution network.

©Ovarro- Datawatt IoT-solutions

WATER
MONITORING & CONTROL
RTU'S

OVARRO
CONNECTING TECHNOLOGIES

TOTAL SOLUTION

The connection to the Head End System (HES) is via the IoT-connector to Osisoft PI, the central system of Vitens. All data is sent to Stream, where different graphs are available for (management) insight and for a complete overview into the water distribution process.

"Together with Vitens we work on security measurements at all levels, from the meter to the central system. Optimal security is not achieved with a single solution or resource. It is a combination of integrated techniques, applications and collaboration at all levels."

Roy Gerding – Datawatt Product Manager

OPERATIONAL BENEFITS

Low communication costs
Using modern NB-IoT communication, a lot of data is gathered while communication costs remain low. In the field, more than 900 AMR water meters with Mbus sensors are linked to a Ovarro Datawatt IoT-datalogger. The IoT-datalogger takes care of logging and sending data. Alarms are monitored and reported to e-mail, SMS or by the App.

Integrated design
The design is integrated in the water distribution process. All laws and regulations are complied with. Different KPIs are set in the new solution, for example the completeness of the data, malfunctions and validation. All designed in co-creation with Vitens.

KEY DELIVERABLES

- Increased situational awareness
- Improved operational efficiency
- Instant access to critical data
- Effective notification of alarms