IoT SOLUTIONS FOR WATER UTILITIES

Intelligent metering and monitoring of water distribution and consumption

Solution

Soitron IoT water solution offers a wide range of possible applications in a variety of business and operating segments of water companies, with benefits for both the company and water consumers. Our solution replaces manual water consumption metering, enables easier detection any losses and water leaks, as well as unauthorized consumption or possible water contamination and any system pressure drop. The status of sites and equipment is monitored and it provides customers with information and analysis on actual water consumption. Such collected data is more accurate and reliable, which increases operational efficiency and contributes to greater customer satisfaction.

VARIOUS SOURCES AND PARAMETERS

Meter reading of water consumption, flowrate and other operating parameters

- Water pressure
- Temperature
- Level of drinking or and sewage water
- Hazardous gases concentration
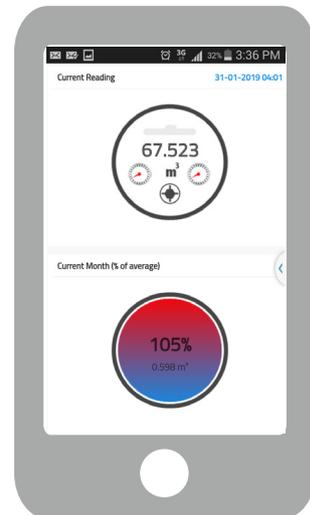- Space flooding
- Basic water quality parameters

Access monitoring

- Door and hatch open/close monitoring
- Sensors for the presence of people
- Emergency assistance

Collection, processing and analysis of data from various water system components using the Internet of Things technology (IoT sensors)

- Billing water meters
- Operating water meters
- Water sources
- Pumping stations and other water management sites and facilities

ACCURATE AND RELIABLE DATA

The Soitron smart water solution continuously collects data from connected meters and devices. The frequency with which the meter readings are transmitted over the course of the day can be configured based on the needs for metered values (consumption, flowrate, temperature, etc.) or the current status of devices, meters or monitored sites. This method of data transmission eliminates potential for human error, which is often present with conventional manual meter reading.

Technology

CERTIFIED EQUIPMENT

Our offer includes:
• Various types of certified IoT devices with a battery life of up to 10 years
• Readers for the most frequently used water meters which do not require replacement of the installed water meters
• Sensors for meter reading of consumption, level, pressure, flowrate, temperature, flooding, fire detection, opening/closing of hatches and doors, presence of people, etc.
Our equipment is able to read both front and back flow of water and is easy and quick to install. In addition, Soitron provides its clients with support and maintenance of the equipment for its entire lifetime.

TRANSMISSION NETWORKS

We provide support for specialised Low Power Wide Area Networks (LP WAN) with high level of security and robustness to interference for IoT systems provided by their operators in Slovakia.

LOTT application software

Our LOTT software solution provides functions necessary for collecting, processing and displaying data from IoT devices connected to selected points and facilities of water companies and industrial water consumers.

LOTT application software
• Developed based on requirements of water companies
• Multi-tenant architecture
• Scalable and flexible infrastructure enabling advanced data analysis
• Provides a modern and responsive web user interface that supports access from computers and mobile devices

The LOTT system comprises 3 basic modules - Device Manager, Operator Portal and Consumer Portal.

DEVICE MANAGER

The module designed to support IoT device management allows to:
• Add, remove, change and configure IoT devices
• Group, filter, and perform bulk operations with all IoT devices in one place
• Support the installation of IoT devices at consumption/metering places using an application Installation Sheet

CONSUMER PORTAL + APPLICATION

The consumer portal is designed for customers of water companies. It is accessible online or through a mobile app. It provides customers with detailed information on their water consumption and allows them to configure water consumption alerts to be sent as an SMS, e-mail, or a message in the mobile app for events such as:
• Non-stop consumption for 48 hours,
• Consumption during „night-time" period possibly indicating water leakage,
• Exceeding a specified daily, weekly or monthly consumption limit,
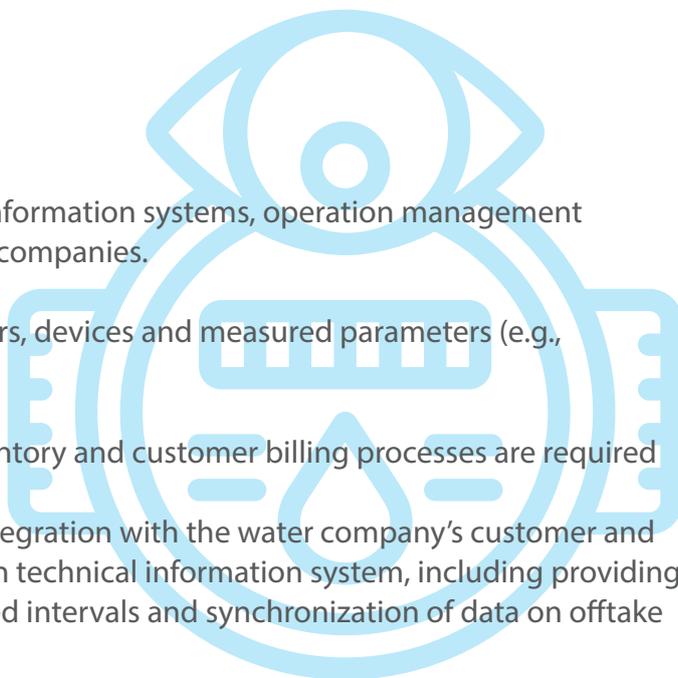• Exceeded consumption over a specified period of time.

OPERATOR PORTAL

A portal designed for personnel of water companies and other entities involved in water production, distribution and consumption. It displays data and information collected from billing household and industrial water meters, operation meters and other sensors which are then processed and provided to users
• Overview of all devices, their current status, location and the last sent value (consumption) or other measured parameters
• Daily development of measured parameters (e.g. water consumption) and daily, weekly and monthly averages at individual offtake and metering points
• Allows grouping of devices to display aggregate summaries and identify unbilled water

INTEGRATION

- Ready to integrate with existing customer information systems, operation management systems and dispatch centres used in water companies.

- Synchronisation of data regarding consumers, devices and measured parameters (e.g., consumption) with existing systems

- No changes to the use of existing asset inventory and customer billing processes are required

- A standard part of the implementation is integration with the water company's customer and billing information system and the operation technical information system, including providing data on current water consumption at agreed intervals and synchronization of data on offtake points, water meters and IoT devices

AVAILABILITY & RELIABILITY

A cloud service running in a certified data centre

Optional on-premise installation within the customer's infrastructure

Compliance with security and privacy standards

Safe management of access to individual modules based on user roles

24/7 monitoring and support

Service Level Agreement (SLA) tailored to the customer

SOITRON*

Founded in 1991, Soitron is a leader in introducing new technologies and innovative solutions. Today Soitron is one of the largest IT service providers in the CEE, with more than 800 employees and facilities in Slovakia, Czech Republic, Romania, Turkey, Bulgaria, Poland and the United Kingdom. Soitron has been helping both regional organisations and multinationals such as HP, AT&T, Vodafone, Orange and E-On to grow their business through the highest-accredited services including system integration for IT infrastructure, unified communications, customer interaction, content management, security and IT services and outsourcing.

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