

IoT Water Utilities Monitoring Solution



IOT WATER UTILITIES MONITORING SOLUTION

V1.1



1. INTRODUCTION:

Water demand in urban areas worldwide is constantly rising. Companies are in constant search for solutions that provide real-time metered data for billing purposes to help them better exploit the already available water resources and establish an efficient water management process.

2. WATER UTILITY CHALLENGES:

- A constant increase in water demand
- Real-time billing data
- 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)

3. SOLUTION:

Solvera Lynx offers cost-effective and reliable meter data management and monitoring solution for a water utility in order to provide billing data and make the consumption of water resources more efficient and reduce technical and non-technical water losses.

Gather data from multiple devices and systems, analyzing these data and utilize it to improve operational efficiency and customer service.

Our IoT based solution is quick to deploy and easy-to-use. It optimizes your existing infrastructure, integrating with limitless management and automation systems (e.g. SCADA, ERP, GIS, Billing, etc.) or other information systems through an application interface (API).

GemaLogic is flexible to be tailored to your specific requirements.

3. APPLICATIONS

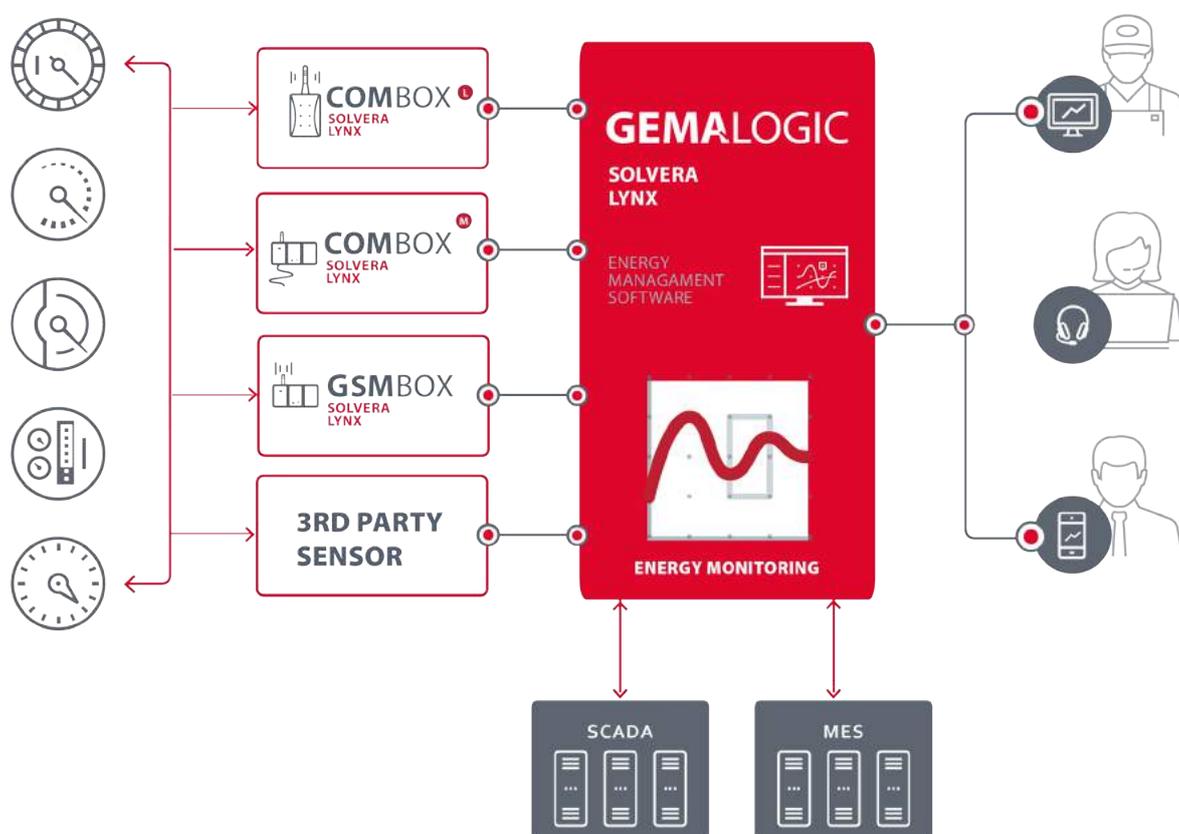
- Water flow monitoring (Monitor your system to identify and reduce technical and non-technical water losses)
- Meter Data Management (Real-time meter data acquisition to provide billing data and meter management)
- Reporting
- Billing integration
- Water quality and safety monitoring (Visualize and analyze your water quality data to discover trends and patterns).
- Leakage monitoring (Know when you have a leak and where it is.)
- Water level monitoring
- Wastewater monitoring

4. FEATURES

- Real-time monitoring for water utilities that gives you transparency on water consumption
- Remote data collection – collect data faster and more efficiently, streamlining the deployment of smarter, more sustainable solutions
- Quick anomalies detection (spills and leaks)
- Automatic alerts - respond faster to emergencies before receiving excessive water bills
- Geolocation overview – provides geographical information of measurement places
- Benchmark analyses – provides analyses overview of selected measurement places in different time intervals
- Analysis, dashboards and custom reporting's
- Responsive design – application works on each computer and mobile devices

5. ARCHITECTURE

We have chosen the best devices, transmission networks and software platform for water utilities:



6. TOOLS

Communication equipment:

- **COMBOX.L** is perfectly suited for smart water metering solutions due to its deep indoor and long-range performance and low power consumption. LoRa-based metering sensors can be deployed into existing infrastructure either outdoors or indoors and offer strong connectivity in dense city settings.
- **COMBOX.M IOT EDGE GATEWAY** is an innovative solution for today's energy management market. It incorporates the energy data concentrator with data logging functionalities used for supervision, and control solutions. IoT Edge Hardware Platform has been designed to comply with global certification requirements for industrial and lightly rugged applications. Its main applications are in Energy management information systems, Smart metering, and Smart grids systems.
- **GSMBOX** is a technologically advanced device for remote capturing, recording and transmission of energy data. It is based on low-cost GPRS communication, and due to its flexible design, is useful in many energy and utility applications.

Other communication equipment could be integrated into the solution.

Software platform:

GEMALOGIC software solution manages, controls and operates with metered and billing data. We can customize the GemaLogic software solution to be designed for modeling processes in the water supply. For example, for consumption estimation, it is possible to develop a model used to provide releases to meet water distribution operation goals.

- Mapping real-time data

Get close to real-time data. Our IoT-based solution integrates the existing systems and tools for monitoring and controlling the water utility. The solution offers the integration of different levels of monitoring and control systems like SCADA, ERP, Billing, and others

- Notifications

Receive real-time notifications from both stationary and non-stationary assets. As events change, you'll know what is happening.

- Operations dashboard

Track and monitor real-time activities in order to respond quickly and proactively to events that affect your system.

- Insights

Quickly integrate your historical operational data with your infrastructure data to discover trends, patterns, and outliers.

6. RESULTS

- Billing data as a basis for accurate further calculation of water consumption of each measurement places.
- Reduce technical and non-technical losses.
- Identification, geolocation and fasten repairment of water leaks in the distribution network.
- Saved water due to improved performance of the distribution network.
- Increase in water network efficiency.
- A reduction in water waste and savings.
- Deeper, minute-by-minute look into how much water was used.
- Quick detection of leaks, breakdowns, and manipulation of the water supply network in real-time, preventing loss of service and costly repairs.

SOLVERA LYNX

