

CAS Hemera Smart Water

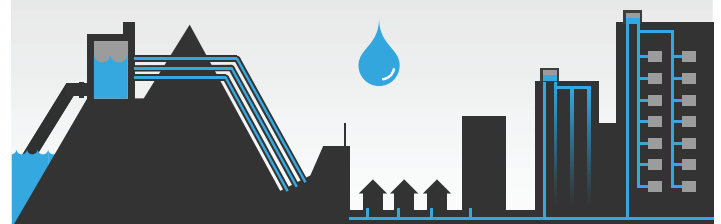


Designed for analysis and smart water management, meeting utilities supply and distribution demands.

SmartWater solution integrates resources in order to promote sustainability and efficiency in all aspects that concerns water system production and distribution. Available controls and collected information support Capex allocation processes. It enables greater return of investment, improving operational efficiency and service quality, while reducing losses.

Smart Water network solutions should:

- Comprehend and manage all water supply processes.
- Monitor and diagnose events remotely and continuously.
- Manage and prioritize maintenance issues.
- Automate, simplify and streamline processes.
- Guide decision-making based on real data.
- Comply transparently and securely to all regulatory demands and to water quality and conservation policies.



Utilities challenges

- Water utilities have insufficient access to information such as consumption profile, leaks, network pressure, pipes conservation status and quality of distributed water, required for a perfect production and distribution management.
- Lack of real time information analysis for decision-making and non-integrated knowledge in the different operational areas.
- No access to automated technologies to streamline the decision-making process that generates real time improvements .
- The necessity to minimize losses and possible environmental damage caused by disruptions, spills or leaks that could contaminate drinking water sources.
- Low funding capacity worsened by theft, fraud, and metering problems, as well as an error-prone billing process.

What can we provide?

■ Automation through smart software

100% electronic billing cycle, secure and integrated with other systems. Simplified, remote, online, fast and accurate meter management process. Automatic metering and alarms data available in time alarms.

■ Revenue protection

Billing process improvement through the previous identification of metering failures, meters without reading access, inconsistent or incorrect readings.

Allows a proactive billing process with early troubleshooting still during the billing cycle. Ensuring greater security and fraud detection in equipment.

■ Operational efficiency

Melhoria da eficiência operacional nos centros de distribuição de água, reduzindo perdas de receita com captação, tratamento, distribuição, submedição e furto de água.

■ Customer Service Improvement

Increases customer satisfaction as it reduces troubleshooting time, makes the billing process more accurate with no estimated bills and provide quick identification of suspected leaks.

Deeper visibility on customer impact, due to water supply maintenance operations such as reducing pressure and water outage among others.

■ Increases reliability in the company

Proactive troubleshooting approach, improving the company brand by reducing network losses and outages, avoiding the troubleshooting process based only on customer complaints.

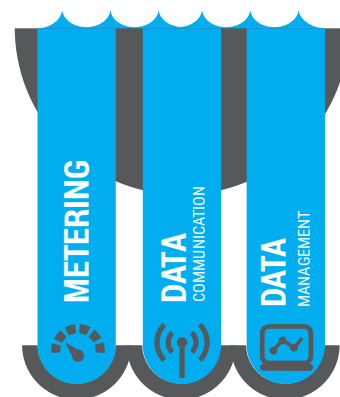


Smart Water solution Pillars

CAS approach is supported by a set of integrated products and systems arranged to meet end-to-end needs. It is a proven solution meeting long-term technology strategies.

SMART WATER NETWORK

SOLUTION FOR ANALYSIS, DECISION MAKING,
TASKS PRIORIZATION, OPERATIONAL
MONITORING AND RESULTS MANAGEMENT.



Metering automation and accuracy on data collection from smart meters and sensors.

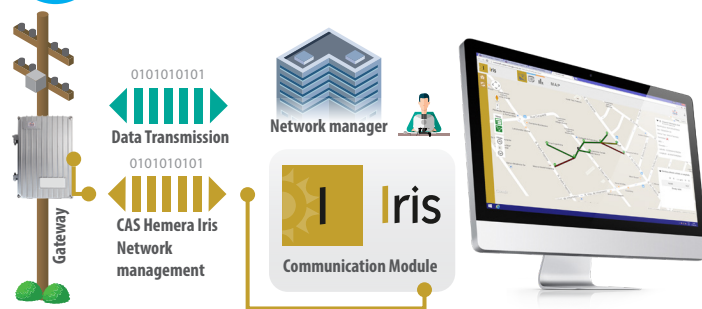
Data Communication.

Continuous and two-way communication, even in big data scenario, focusing on promoting the information availability.

Data management. Centralized and real-time, with flexibility for remote operation and integration with ERP and Billing system.



DATA COMMUNICATION CAS Hemera Iris



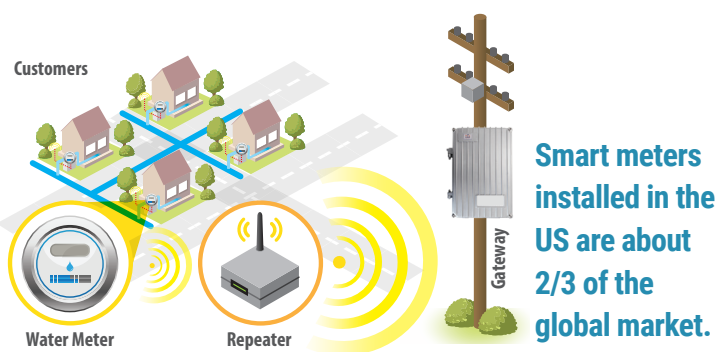
Robust communication technology with various connectivity models to suit different business demands. Ability to communicate to water, gas and electricity meters and sensors integrated to the meter data management platform.

It also offers advanced features for ongoing communication management in favor of data availability and multiple simultaneous communications. Integration with supervisory systems (SCADA).

**Not restricted to new equipment: applicable to all meters.*



METERING Electronic and Smart Metering



- Intelligence regarding water leaks, outage, reverse flow and bypasses.
- Eliminates the possibility of readings error.
- Avoids costs related to problems to meter reading access and reduces the global costs of billing processes.
- Detailed historical information such as readings, alarms, minimum and maximum flows, stored locally with remote access.
- Remote parameterization.



DATAMANAGEMENT CAS Hemera Smart Water

Provides features of a measuring center supporting key utilities processes such as reading, analysis, water supply and billing, focusing on quality of service, losses reduction and revenue assurance.

The Hemera Smart Water is a universal MDM platform capable of integrating meters, sensors and automation tools from different vendors in a single system. It has resources and tools for continuous and real time monitoring of customer and water supply, providing a single and consistent information view across the different utilities' business areas.

From its monitoring intelligence provides the identification of issues related to losses and defects.

Wastewater is about 15% to 40% and may reach 70% in some developing countries.

** World Bank*

Tools

- Complete data readings validation.
- Reports and charts of readings and consumption from the entire network, Metering and Control Areas and single customers.
- Reports and analytic charts configuration to management and decision making support
- Macro-meter integration.
- Water balance analysis to prioritize actions to overcome network losses, allowing the identification, sizing and location of leaks. Long term monitoring in order to identify pattern changes.
- Online charts, alarms, reports in order to detect leaks and anomalies such as reverse flow or empty pipe.
- Individual consumption profile - analytics for inactive or disconnected customer with recurrent consumption
- Customers service with access to updated and accurate consumption data.
- 'Plug & play' and 'Self-healing' data transmission network.
- Accurate and automatic reading of electronic meters, no estimates.
- Reports and charts to assist in meter sizing and life cycle management.
- Robust platform, 'multi-tenancy' and 'multilanguage'.
- Integration API for third party application and system connection.



Smart asset management:

Hemera Smart Water solution performs continuous monitoring of utility's assets, enabling effective management of all meters and efficient decision-making processes on replacement of outdated models.

What meters should be replaced?

- With decreased efficiency over time.
- Not properly sized for the consumption profile.
- To important or critical customers.
- Old meters or meters with high usage.
- Abnormal consumption index/very high consumption.
- Technologies at risk of becoming obsolete.



**Information and devices
Integration connected to this
universal platform.**



Contingência e Performance

High data availability and scalability to meet utilities growing needs considering the increase of smart metering endpoints.



**CAS Tecnologia
In the Water Market**

Focus on generating real results for utilities:

- Efficiency Improvement.
- Investments prioritization.
- Operations optimization.
- Economic Sustainability.

Excellence in water, gas and electricity markets solutions.

Experience	Abilities	Innovation
Experience in the Brazilian water market.	High end technology.	Unique approach in complete and integrated Smart Water solution.
Experience with Smart Grids.	End to end solution.	Solution in accordance with the market regulation.
The metering center benchmark in Brazil.	Agile development.	
Fully operational solutions.	Knowledge of utilities business processes. Global access.	Ready for long-term strategies.