



An eBook for water utilities and distributors

# **Smart water management: Adding value to end-customer by smart water meters**



## Introduction

In today's rapidly evolving water industry, utilities and distributors face a range of complex challenges, from aging infrastructure to inaccurate billing and limited data collection. To stay ahead, embracing smart water management solutions is crucial. This eBook explores the latest industry trends, highlights key water management challenges, and introduces the Iskrasonic IW.1 smart water meter—a cutting-edge technology designed to optimize water distribution, improve billing accuracy, and enhance operational efficiency. Dive in to learn how your utility can overcome these challenges and lead the way in smarter water management.

1

Trends

**Customer satisfaction related to water services**

2

Challenges

**Top 4 water management challenges and how the Iskrasonic IW.1 smart meter solves them**

3

Products and solutions

**The new smart water meter Iskrasonic IW.1**



## Customer satisfaction related to water services

The customer experience landscape in the water utility industry is undergoing a dramatic transformation. Since the emergence of smart meters, artificial intelligence and digital twins, water utilities have had a significant opportunity to approach their customers in new ways. The new technology allows them to offer better service, transparency of billing and pricing, support services for inquiries, complaints and requests, promote water conservation, inform customers about planned maintenance disruptions, and engage communities.

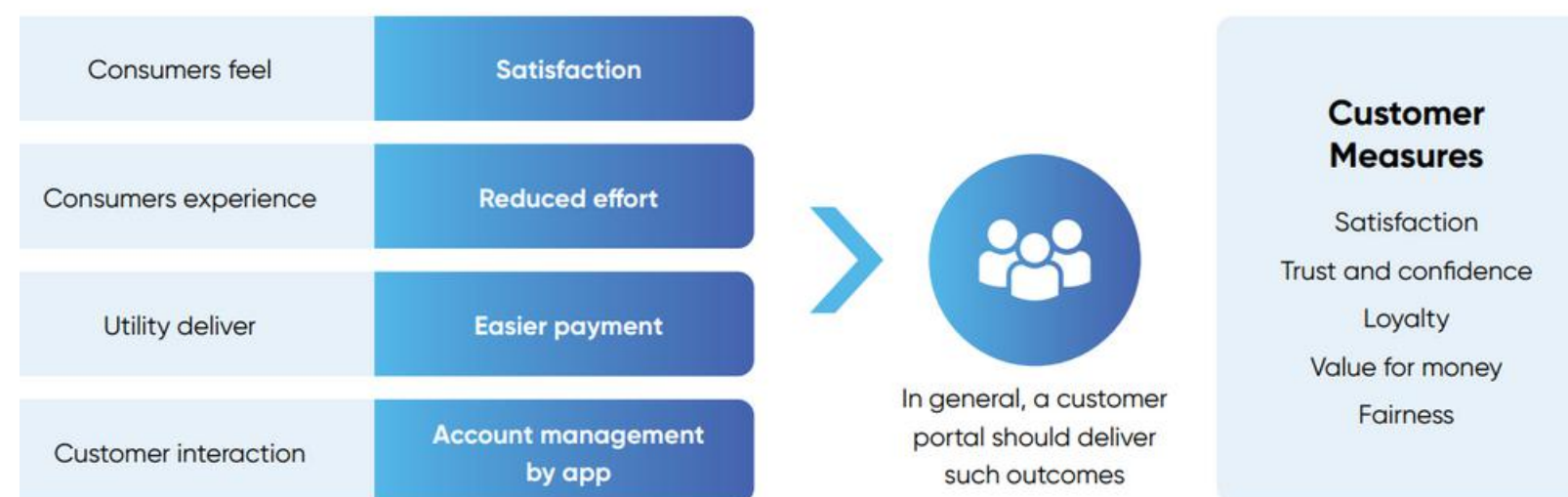
Water utilities can benefit greatly from developing a stronger relationship with their customers. They can improve the process of setting prices that reflect the true cost of service and achieve positive results in demand management. Strong relationships are also beneficial after service failures. Customers with a positive image of the utility are more likely to be understanding of unavoidable emergencies. Traditionally, water utilities operated under a model that prioritized water supply and infrastructure, with less focus on the customer experience. However, a recent Harvard Business Review Analytic Services Survey<sup>1</sup> (2020), revealed a significant shift in priorities. A survey that included 73 utility executives identified improving customer experience (CX) as the top business priority for the coming year.

This newfound focus aligns perfectly with the priorities listed by water utility customers interviewed by ERSAR, the Water Regulation Agency of Portugal. The respondents emphasized the importance of their satisfaction in several key aspects, including water quality, water pressure, the number of interruptions, problem resolution time, service and product quality for the price paid, value for money in comparison with other essential services (electricity, electronic communication, post) and transparent billing of drinking water services.

These KPIs encompass a wide range of factors, including water quality, water continuity and bursts, water pressure, sewage system performance, and most importantly, customer complaint handling and communication. In addition, indicators that monitor how operators communicate with their customers and the process of treating, analyzing and answering customer complaints complete the list of indicators in this category. Around 23% of all indicators have been associated with service quality. By leveraging the power of data, utilities can unlock a customer-centric future, ensure long-term success, and meet the evolving needs of a more empowered and environmentally conscious customer base. Customer experience therefore depends heavily on data. The proliferation of smart metering systems gives utilities extremely granular information about usage patterns, which the companies connect to customer-preference data, third-party customer-behavioral data, internet of things (IoT) data, and other emerging information sources.

### Customer engagement theory

Hierarchy of outcomes - Customer service





## List of countries that are in the process of creating KPIs for customer satisfaction

|  |   |   |  |
|--|---|---|--|
| <b>Brussels</b><br>Satisfaction level of customers about drinking water work-sites | <b>Brussels</b><br>Waiting time to reach the operator by phone call | <b>Kosovo</b><br>Customer complaints/site inspections                           | <b>Albania, Hungary, Kosovo</b><br>Customer complaints                             |
| <b>Azores</b><br>Reply to written complaints and suggestions                       | <b>Bulgaria</b><br>Customer complaints answers                      | <b>Flanders</b><br>Number of first-line complaints per year per 1,000 customers | <b>Flanders</b><br>Satisfaction level of customers about drinking water work-sites |
| <b>Ireland</b><br>Ease of telephone contact: speed of response                     | <b>Italy</b><br>Managing contractual relations and service access   | <b>Montenegro</b><br>Number of complaints per 1,000 consumers                   | <b>Portugal</b><br>Response to complaints and information requests                 |

By combining our industry-leading smart water meter solutions and the powerful data management platform Symbiot, Iskraemeco empowers water utilities to achieve success: exceptional customer experiences, operational efficiency, and sustainability. We are committed to helping water utilities navigate the changing landscape and secure a brighter future for themselves and their customers.





# New smart water meter **Iskrasonic IW.1**

The Iskrasonic IW.1 water meter represents a significant leap forward in water management. By addressing the challenges of inaccurate billing, non-revenue water, limited data collection, and infrastructure integration, the IW.1 empowers utilities to operate more efficiently, conserve resources, and promote sustainability.



**Click here to explore our website and:**

- Discover in-depth insights about the Iskrasonic IW.1 smart water meter
- Connect with our experts for personalized advice and solutions tailored to your needs



## Top 3 water management challenges and how the Iskrasonic IW.1 smart meter solves them

Water management is becoming increasingly complex as utilities grapple with a range of challenges that affect operational efficiency, customer satisfaction, and financial sustainability. Issues such as outdated infrastructure, inaccurate billing, limited data collection, and difficulties in integrating new technologies are some of the primary hurdles that hinder effective water distribution and conservation efforts. These challenges not only lead to revenue losses for utilities but also reduce service reliability and customer trust.

In this exploration, we will dive into four of the most pressing water management challenges. Each one highlights the need for modernization, and we'll demonstrate how the Iskrasonic IW.1 smart water meter provides innovative solutions to tackle these issues head-on. From precise metering to seamless integration with existing infrastructure, Iskrasonic helps utilities transform their water management systems for greater efficiency and sustainability.

### 1 Inaccurate billing

Inaccurate billing is a widespread challenge in the water industry, affecting both utilities and customers. This issue often arises from mechanical meter wear, where aging meters lose precision, and environmental factors such as extreme temperatures or water pressure variations that impact meter functionality. Air pockets in the pipes further complicate the situation by causing false readings, making customers pay for water they didn't use. As a result, utilities frequently rely on estimated billing, which leads to discrepancies between actual usage and charges, causing customer frustration and financial strain.

For utilities, inaccurate billing translates to lost revenue, especially when meters underreport usage, and increased costs from managing customer complaints and disputes. Over time, this can erode customer trust and complicate efforts to maintain a positive public image. Additionally, the lack of real-time monitoring means issues often go undetected, leading to prolonged periods of inaccurate billing.

Addressing this challenge requires a multifaceted approach, including the adoption of smart metering technology, which provides real-time data and more precise readings. Investing in Advanced Metering Infrastructure (AMI) can help reduce human error, detect leaks early, and prevent air pockets from skewing data. Regular meter maintenance and upgrades are also crucial for improving billing accuracy, ensuring that utilities can provide transparent, reliable service while enhancing customer satisfaction and minimizing revenue losses.

The Iskrasonic IW.1 smart water meter revolutionizes billing accuracy by utilizing advanced ultrasonic technology to deliver precise water usage data, even in difficult environmental conditions.

This eliminates the need for estimated billing and reduces errors caused by mechanical wear or air pockets. With accurate readings, utilities can ensure fair and transparent billing, minimizing disputes and fostering greater trust and satisfaction among customers.



## 2 Limited data collection

Limited data collection is a key challenge in the water industry due to traditional water meters that rely on manual readings. These meters collect data infrequently, often only once a month, making the process time-consuming and prone to human error. This delay hampers utilities' ability to monitor consumption patterns in real-time, detect issues like leaks, and respond quickly to operational challenges. As a result, water loss and inefficiencies go undetected, limiting the potential for timely interventions and system optimization.

The lack of real-time data also affects customer engagement, as utilities cannot provide timely feedback on usage or alert customers to problems like excessive consumption or leaks. This leads to missed opportunities for both resource conservation and cost savings. Transitioning to smart meters and advanced metering infrastructure (AMI) can solve this issue by providing continuous data, enabling faster decision-making, better system performance, and more effective water management.

The Iskrasonic IW.1 smart water meter transforms data collection with its seamless, real-time data transmission capabilities. Utilizing both mobile reading and fixed network technologies, it allows utilities to access precise water usage data instantly, eliminating the delays and inaccuracies of manual meter readings. This immediate access to detailed consumption data empowers utilities to make informed, data-driven decisions, optimizing water distribution, detecting leaks early, and improving overall water management efficiency. By providing real-time insights, the Iskrasonic IW.1 enhances operational effectiveness and promotes proactive maintenance, benefiting both utilities and consumers.

## 3 Infrastructure integration challenges

Infrastructure integration challenges in the water industry stem from the need to modernize aging systems while incorporating new technologies, such as smart meters, sensors, and data management platforms. Many water utilities operate with legacy infrastructure that wasn't designed to accommodate advanced technologies, making it difficult to integrate new solutions seamlessly. The incompatibility between old and new systems often leads to operational inefficiencies, delays in data sharing, and increased maintenance costs.

These challenges are further compounded by the lack of standardization across different technologies and platforms, which can create difficulties in communication between various components of the water network. As a result, utilities may struggle to gain a holistic view of their operations, preventing them from fully optimizing water distribution, monitoring infrastructure health, or responding quickly to system issues. Successful integration requires significant investments in technology upgrades, workforce training, and sometimes a complete overhaul of outdated systems to ensure compatibility and long-term efficiency.








The Iskrasonic IW.1 smart water meter provides a solution to infrastructure integration challenges by offering seamless compatibility with both legacy systems and modern networks. Its flexible communication options allow it to easily integrate with mobile reading and fixed network infrastructures, ensuring utilities can adopt smart water management without significant overhauls. This adaptability simplifies the implementation process, reducing both costs and complexity, while enabling utilities to efficiently upgrade their systems for real-time monitoring, improved water distribution, and enhanced operational efficiency.



## Transforming water management with new Iskrasonic IW.1 smart water meter

The Iskrasonic IW.1 smart water meter is more than just a meter; it's a gateway to a data-driven future of water management. By implementing the IW.1, utilities can achieve enhanced decision-making, improved customer satisfaction, sustainability promotion, and global applicability.

Utilizing advanced dynamic ultrasonic technology, the IW.1 delivers accuracy even in challenging environments affected by air pockets or sediment build-up. The meter ensures consistently fair and transparent billing, offering unparalleled flexibility with its cutting-edge communication module, allowing data transmission through various methods, including mobile reading and fixed networks.

|   |                                |  |                          |
|---|--------------------------------|--|--------------------------|
|   | Unmatched accuracy             |   | Long-term sustainability |
|  | Advanced leak detection        |  | Data security            |
|  | Flexible communication options |  | Advanced data logging    |
|  | Industry leading data storage  |  |                          |

The Iskrasonic IW.1 is more than just a meter; it's a gateway to a data-driven future of water management.

By implementing the IW.1, utilities can achieve:

- Enhanced decision-making: Accurate and timely water usage data empowers utilities to optimize distribution networks, prioritize maintenance needs, and manage resources effectively.
- Improved customer satisfaction: Elimination of estimated bills and transparent water usage data fosters trust and satisfaction among consumers.
- Sustainability promotion: Reduced water loss and leak detection contribute significantly to water conservation efforts, promoting environmental responsibility.
- Global applicability: The IW.1's adaptability and diverse communication options make it suitable for implementation in various regions and environments, fostering a standardized approach to water management.

**Click here to get more information about the new Iskrasonic IW.1**





# About Iskraemeco

Iskraemeco is a globally recognized brand whose solutions can be found in over 80 countries worldwide. For more than seven decades, Iskraemeco has been delivering quality products, solutions, and services that make efficient energy use a reality. Since 2007 we are part of Elsewedy Electric Group with whom we share a common vision of smart, digital, and green future.

We develop intelligent digital solutions and services for the energy and water sector by combining our extensive experience and industry expertise with cutting-edge IoT and AI technologies. By understanding the power of data, we help our customers embrace their digital transformation, the grid management and optimization opportunities it presents.

Together with utilities and cities we create sustainable networks that are a key enabler of the green transition.

Innovating for **Life.**

