

An aerial photograph of a European city, likely Zurich, featuring a prominent clock tower with a dark spire and gold clock face. The city is built on a hillside overlooking a wide river with greenish water. A bridge with tram tracks runs along the riverbank in the foreground. The background shows a dense urban landscape with various buildings and distant hills under a clear sky.

**Itron**

# Connecting Every Drop

Smart Water Solutions | Europe, Middle East and Africa





## INTRODUCTION

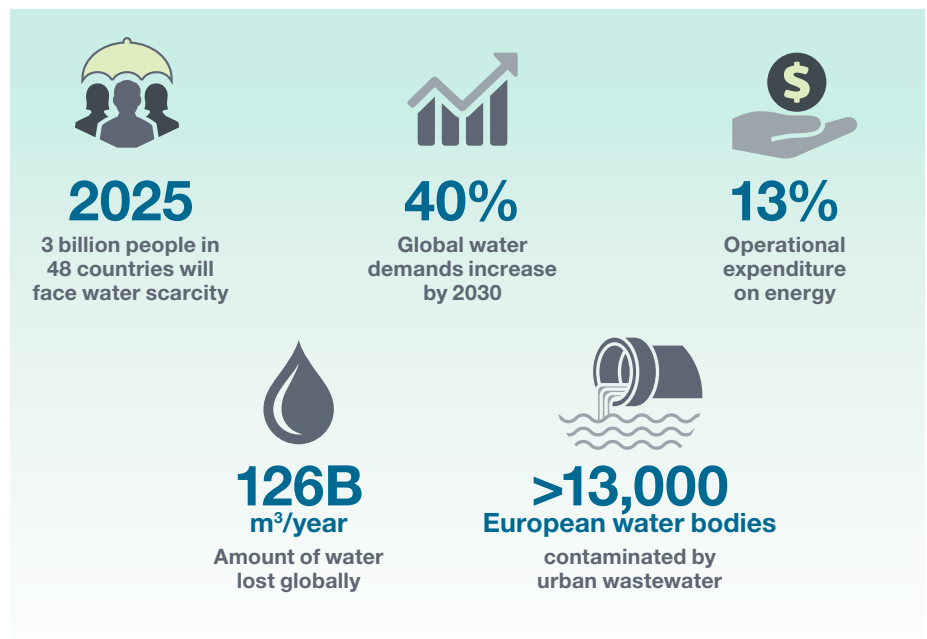
More than ever, utilities are challenged in managing their aging water distribution networks. Everything from reducing costs and implementing conservation programs to dealing with unbilled consumption, physical losses and new regulations—all of which impact the ability to effectively serve consumers. You need a trusted partner to help implement smart water solutions—cost-effective ones that can scale and grow with your requirements today and into the future.

With modern solutions for an industry in transition, we know what you are up against. At Itron, we have the deep industry expertise to help you solve your current problems, with the vision and technological leadership to outfit you to meet the challenges of tomorrow.

### The Itron Advantage

With decades of industry expertise and continuous investments in innovation, we have developed the industry's most comprehensive and proven portfolio of advanced devices, intelligent, foundational networks, and software and services. Together, they deliver the right outcomes

## INDUSTRY CHALLENGES



for utilities and cities as we continue our work with you to create a more resourceful world by **connecting every drop**.

We provide operational excellence. Our smart water solutions deliver measurable results that reduce your water losses and

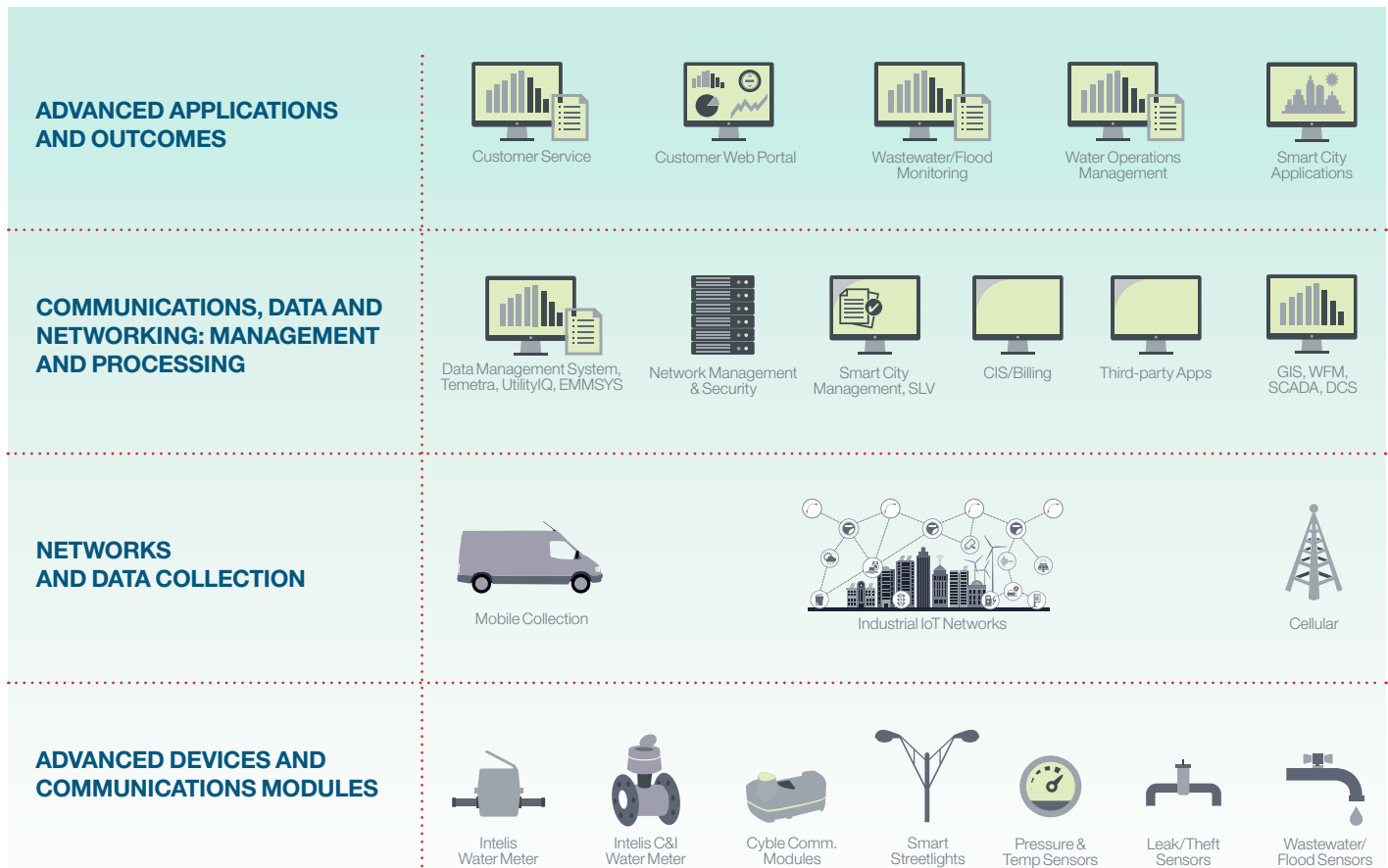
improve operational efficiency. Gain visibility into your water distribution network and/or district metering areas (DMAs) and optimize efficiency using our solutions to run a more resourceful water system—all while improving your consumer experience.

## SMART WATER SOLUTIONS

We have a leading portfolio of smart water solutions that leverage:

- » Expertise to help you optimize your operations, improve consumer satisfaction and manage your business while complying with regulatory mandates.
- » Scalable, comprehensive solutions that pair advanced metering technology with a secure, reliable network and water analytics to drive efficiencies, predict and prevent problems and outages.
- » Experienced consultants who help identify inefficiencies and provide cost-effective solutions—and who take complete responsibility and ownership of the results.
- » An array of deployment and management options, from utility-owned and operated infrastructure to our world-class managed solutions.
- » An open, interoperable platform that provides the ability to deliver multiple applications and services.

## ITRON SOLUTIONS FOR WATER MEASUREMENT AND MANAGEMENT



## Benefits Gained Using Itron Smart Water Solutions



Improve operational visibility and efficiency



Realize data-driven decisions and insights



Respond intelligently to incidents



Reduce non-revenue water (real and apparent losses)



Improve asset management



Improve sustainability and water conservation



Comply with regulatory mandates



Improve consumer engagement

## ADVANCED APPLICATIONS AND OUTCOMES

### Water Operations Management

#### Optimize and efficiently manage water distribution networks

Water distribution systems face several challenges such as aging pipe infrastructure, extreme environmental conditions and inefficient operations. In addition, other challenges include impending regulatory and societal pressure to deliver a constant supply of fresh drinking water to consumers.

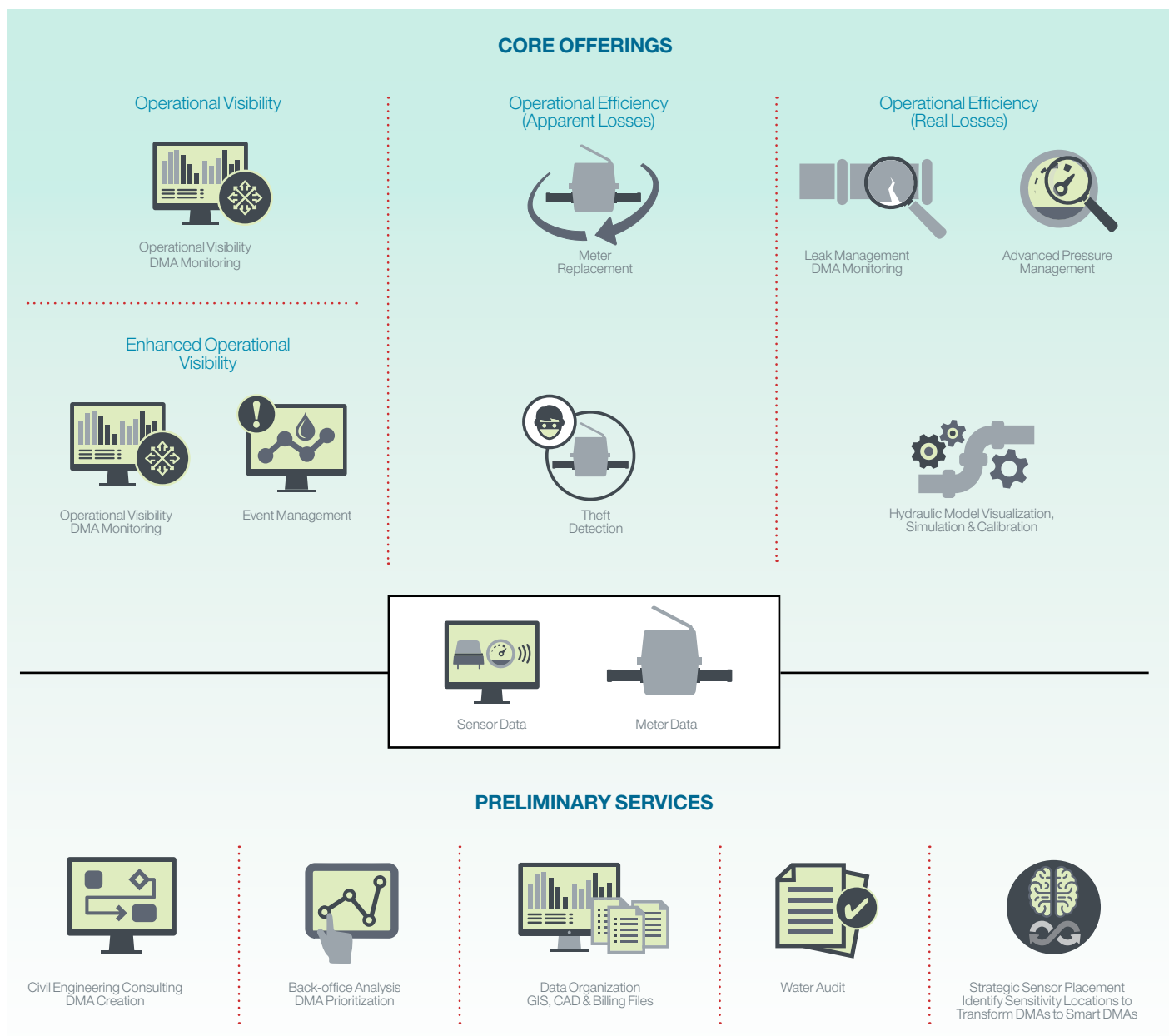
Financially and resource constrained, you straddle a fine line between the need to constantly deliver water, while maintaining the integrity of your pipeline infrastructure.

Our Water Operations Management offering delivers measurable results and value-based outcomes that are focused on gaining

insights into the health of your water distribution system and water losses. Understanding where the water flows and implementing methods to reduce non-revenue water provides you with financial and resource savings.

Our goal is to develop a long-standing working relationship with you. No matter how far down the road you are in terms of managing non-revenue water, we provide sustainable solutions to help meet your needs. Providing pay-for-performance or SaaS-based offerings allows you to engage with us with little-to-no upfront financing.

### WATER OPERATIONS MANAGEMENT OFFERINGS







## SUCCESS STORY

### Delivering Results Around the World

## EUROPE

Improved operational performance with real and apparent loss reduction

### Solution overview:

- » Meter replacement and resizing
- » Deployment of fixed network
- » Implementation of District Metering Analysis and Advanced Pressure Management systems

### System overview:

- » 2,657 water endpoints and connections
- » Six DMAs

### Results:

- » 23% decrease in electricity consumption
- » 42% decrease in water production
- » 11% decrease in CO<sub>2</sub> emissions
- » 39% decrease in chlorine use



## GAIN OPERATIONAL VISIBILITY

Providing system visibility is one of the many outcomes our Water Operations Management offering provides. Through Operational Visibility, you can identify areas where additional assessment and actions are required. Visualization of hourly flow, pressure and tank levels along with up to 24 hours of forecasting provide you with a view of historic and future usage. When integrated with Event Management, Operational Visibility provides you with a unified solution to identify current events such as low pressure, abnormal high flow and other statistical anomalies along with potential future-based events allowing you to take action in a timely manner.

### Enhance Operational Efficiencies by Reducing Real and Apparent Losses

Gaining an understanding of your distribution network allows you to better optimize resources to meet increasing needs. We collect CAD or GIS data and generate a digital twin of your water infrastructure and then use hydraulic modelling to optimize the network, identify leaks and help with seasonal demand fluctuations. Additional functionality allows you to simulate the effects of:

- » Increase and decrease in demand
- » Opening and closing valves
- » Pressure reduction optimization

These simulations are done within the confines of the digital twin before implementation in the real world.

The reduction of water loss, whether real (leaks) or apparent (metering inaccuracies and theft), is another value-based outcome we provide. A meter replacement program can be tailored to identify the most critical meters for replacement. Using Operational Visibility, a baseline is established, and actions taken afterward are monitored to assess the impact.

Leak detection using spatial analysis of flow, consumption and pressure is another outcome. The localization of potential high-leakage areas is visualized and provides you the ability to target defined areas for leak pinpointing on a weekly basis, rather than waiting for the leak to surface or by implementing manually intensive leak surveys.

Pressure management, using advanced pressure-reducing valves (PRV), provides a method to reduce area-wide real losses while maintaining adequate pressure to your consumers. The location of the PRV, settings and impact of pressure management can be constantly monitored through Water Operations Management.

The value of Water Operations Management is greatly enhanced when seamlessly integrated with a cloud-based mobile data collection and management solution that provides you with new ways to optimize your operations and improve customer engagement.

Wherever you are in your journey to reduce non-revenue water, we are here to help.





## COMMUNICATIONS, DATA AND NETWORKING: MANAGEMENT AND PROCESSING

### Delivering Intelligent Connectivity

Communication networks form the fabric that connects all critical infrastructure systems in a unified platform, enabling you to reimagine how your utility or community delivers services to improve efficiencies, achieve sustainability goals, create economic opportunities and enhance quality of life for consumers or citizens.

Itron delivers intelligent connectivity to unlock the value of the Industrial Internet of Things (IIoT). Our flexible platform utilizes a variety of communication technologies such as radio frequency (RF) mesh, cellular and Wi-Fi to balance the stringent and competing demands of ubiquitous coverage, high performance and cost-effectiveness. We map best-in-class technologies to business needs based on performance, security and cost.

With more than 200 million connected devices globally, including more than 50 million meters, streetlights, grid management and partner devices running on our platform, it is the most proven, flexible and value-generating IIoT technology on the market. Our open standards-based platform enables seamless interoperability across a diverse ecosystem of products including meters, leak/theft sensors and wastewater/flood sensors to provide you with the best-in-class solutions to help realize your business objectives.

### Proven Network Technology

#### *Leveraging the power of devices through a network canopy*

Our investments in wireless networking technology have resulted in a network with robust performance—both in terms of resiliency and ability to recover from environmental events as well as providing the bandwidth to support your water network needs today and well into the future. Some of the key benefits of our network include:

- » **Operational Optimization:** High capacity and low latency communications to support the most demanding applications.
- » **Solution Longevity:** Power-optimized communications enable connectivity for battery-powered devices for extended operation of up to 15 years.
- » **Investment Protection:** Our multi-generational platform is backward/forward compatible, enabling you to add new capabilities and applications over time.



***Itron Managed Services is currently overseeing more than 60 million endpoints across 1,000 utilities***



### SUCCESS STORY Delivering Results Around the World

#### ASIA PACIFIC

Improved water conservation efforts and reduced water losses

##### **Solution overview:**

- » Deployment of fixed wireless network with comms modules
- » Implementation of leak management solution

##### **System overview:**

- » 1 million water endpoints

##### **Results:**

- » Attained an overall reduction of water consumption by 10%







## SUCCESS STORY

### Delivering Results Around the World

## EUROPE

Increased revenue and reduced collection costs using cloud-based meter data collection

### Solution overview:

- » Implemented Temetra, cloud-based meter data collection
- » Cost-effective managed services implementation

### System overview:

- » 2.2 million water connections
- » > 15 million customers

### Results:

- » Reduced water reading collection costs with route optimization
- » Increased revenue collections by 5%
- » 60% reduction in customer call-backs
- » 30-40% reduction in planning and scheduling resources



## Cloud-based Meter Data Collection and Management

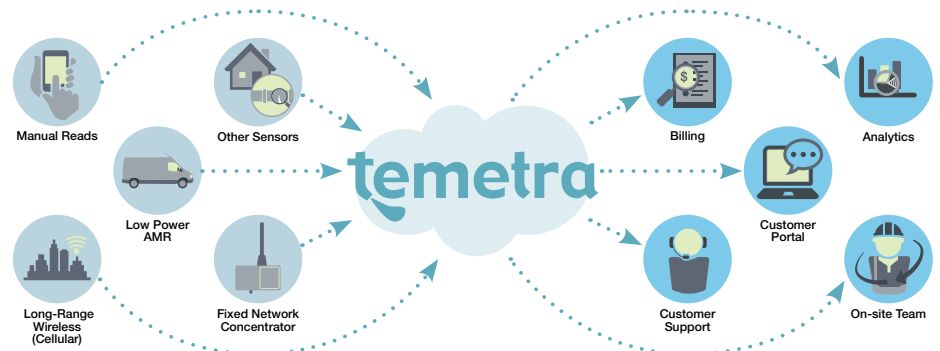
**Temetra** is an innovative solution for cloud-based meter data collection and management. It allows you to efficiently manage data, secure your revenue stream and improve customer service with the simplicity and lower cost of cloud-based services. Designed to help optimize your operations without having to maintain on-premise hardware and software, the cloud-based platform provides you with the latest software enhancements and security features to enable continuous, reliable operation.

**Temetra** offers a seamless interface to existing customer information and billing systems using a powerful set of API interfaces—so you can utilize multiple applications from one cloud platform. With customer satisfaction in mind, you can improve consumption awareness with the optional Customer Web Portal, where you can proactively inform customers of abnormal usage to reduce billing complaints and provide them access to monitor their usage over time.

Establishing a cloud-based mobile data collection and management foundation enables you to gain value-based insights and results, through Water Operations Management, that address the non-revenue water losses within your water distribution system.

### Key Benefits:

- » Secure and convenient data storage and access on the cloud
- » Route optimization for faster and more efficient meter reading
- » Real-time remote data loading and unloading
- » Interfaces seamlessly to billing systems and other third-party applications
- » Device and communications agnostic for easy system integration



EMMSYS Meter Data Management is a core solution for day-to-day operational use by utilities. EMMSYS stores data from various data collection systems and its unified standard interface provides enhanced usability for users within your utility. The platform can manage data from water, heat and cooling applications, and interfaces with utility IT infrastructure including workflows and processes leading to full integration. EMMSYS as part of our solution for non-revenue water (NRW) reduction and is a complete end-to-end solution for your utility.

Through a fully supported managed services model, EMMSYS empowers you to:

- » Conserve resources
- » Increase revenue
- » Manage meter and device assets
- » Standardize data collection and storage

By coupling Temetra for mobile data collection with EMMSYS for meter data management, Water Operations Management can leverage the extracted data, optimize billing cycles, reduce non-revenue water and ensure your value is maximized through seamless integration.



## ADVANCED DEVICES AND COMMUNICATIONS MODULES

### Delivering the Performance You Need

Solutions for today and tomorrow. We invest time and energy into ensuring quality, innovation, reliability and safety in all of our water devices. We deliver what you need today, with mechanical meters and communication modules.

#1

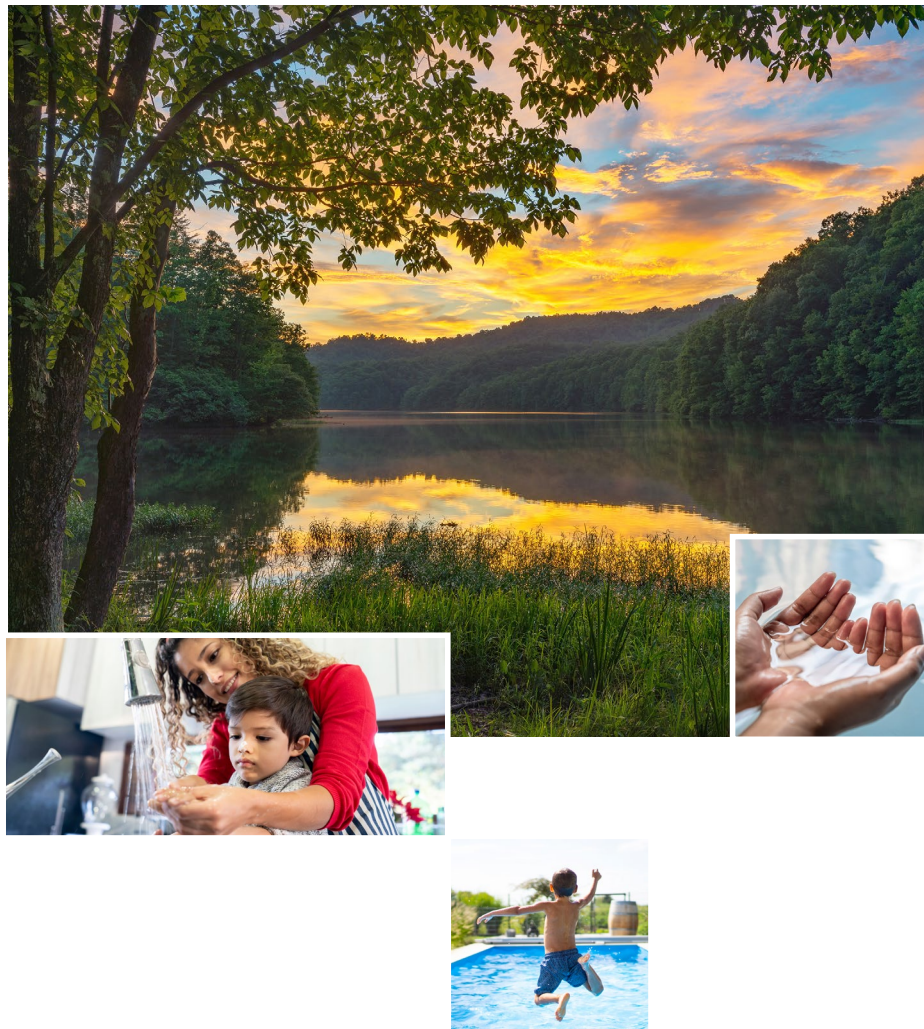
*water meter manufacturer  
in the world*



#### The Right Meters: Measure Every Last Drop

Serving residential and C&I markets, our portfolio of mechanical meters relies on decades of expertise in the water industry and combines high metrological performance with proven robustness and durability.

From the volumetric principle of the Aquadis+ line-up to the extreme precision of the single jet Flodis+ meters, we strive to deliver the right choice of flexible water solutions for utilities seeking endurance and reliability.



### SUCCESS STORY Delivering Results Around the World

## NORTH AMERICA

Real loss reduction using connected devices and leak detection

#### Solution overview:

- » Installed comms modules on meters and leak sensors
- » Fixed wireless network with Optimized Leak Sensor (OLS) and comms modules
- » Implemented District Metering Analysis

#### System overview:

- » 18,000 water endpoints and 9,800 leak sensors
- » 16 DMAs across distribution and transmission system

#### Results:

- » 15% reduction in non-revenue water
- » 1,370 litres/min in discovered and repaired leaks (206 utility leaks, 308 consumer leaks)







## SUCCESS STORY

Delivering Results Around the World

### SOUTH AMERICA

Significantly improved operational visibility and real loss reduction

#### Solution overview:

- » Water Operations Management
- » Operational Visibility
- » Hydraulic Modeling, water balancing and leak detection

#### System overview:

- » 56,461 water connections
- » 34 DMAs
- » Cellular connected pressure loggers

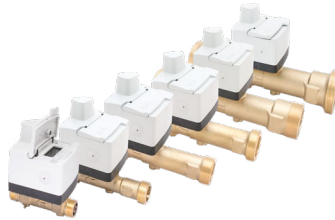
#### Results:

- » 50% fewer customer complaints
- » Significantly reduced consumption per meter (from 460 litres/day/connection to 350 litres/day/connection)
- » >2.6M m<sup>3</sup> of water saved in two years



### Transform Meters into Communication-capable Devices

Designed to transform mechanical meters into data collection points, our communication modules and data loggers enable remote reading and monitoring of on-site activities. These communication modules are flexible for use with our water meters and third-party meters. Cyble modules simplify data collection through walk-by/drive-by (AMR) or fixed networks and support an extensive array of on-site alarms. Beyond residential environments, Watermind modules and the associated software deliver communication and additional intelligence for Commercial and Industrial consumers—helping you better manage resources for your large water customers.



### ANTICIPATING TOMORROW, WITH ULTRASONIC TECHNOLOGY

#### Intelis Water Meters

##### *Integrated communications with no moving parts*

The Intelis Water family delivers the utmost precision and reliability to water metering for residential and C&I markets. Relying on ultrasonic technology, the Intelis

platform maintains a high level of accuracy over its entire lifecycle with low-to-no field maintenance. Integrating radio connectivity (AMR) as well as fixed network capabilities (AMI), Intelis water meters connect to the bigger picture for data collection and help manage water at the meter level.

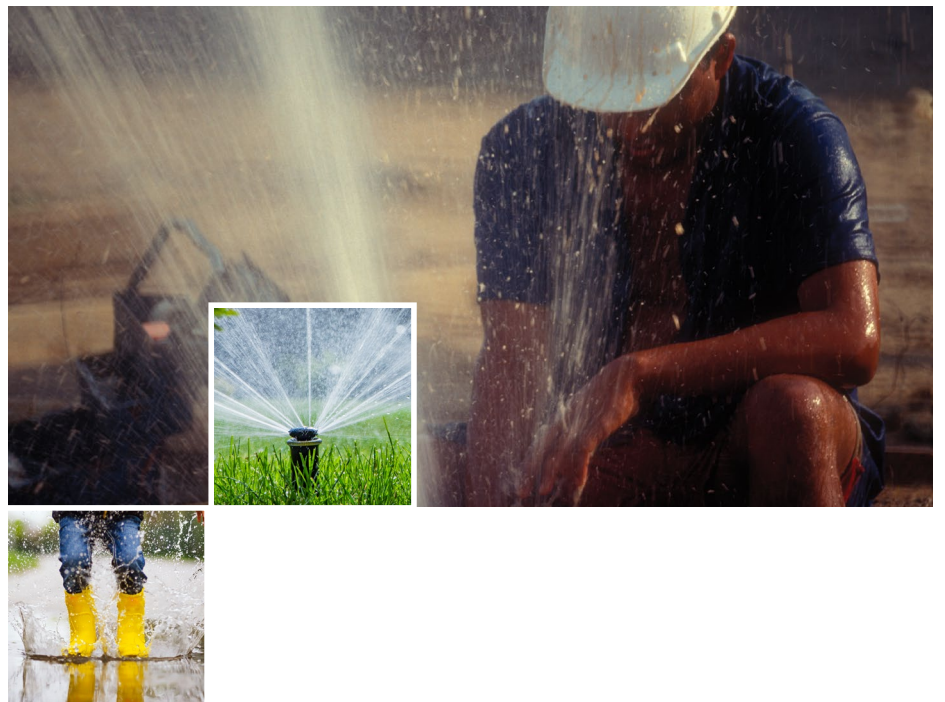
#### Leak Sensors

Itron Leak Sensors are acoustic sensors that listen for leaks in the distribution system of a water network. The leak detection software enables you to identify and repair leaks in the distribution system before they become catastrophic main breaks.



**22**  
MILLION

**AMR/AMI water modules have been deployed by Itron across the world**



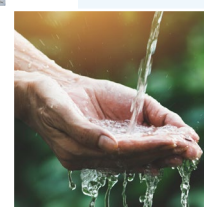
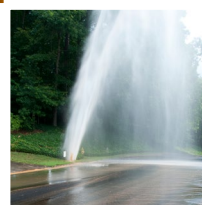
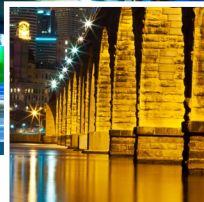
## STREETLIGHT THE WAY TO SMARTER COMMUNITIES

A smart streetlight or electric AMI network canopy can do more than just collect consumption data. Leverage an existing multi-purpose network canopy in your area to collect and manage IoT sensor or water device data. Support new use cases in leak detection, flood sensing, wastewater overflow sensing, environmental sensing and more.

### Smart City Solutions to Connect, Protect and Empower the Community of the Future

Our comprehensive portfolio of smart solutions covers a wide range of essential city services to deliver three-dimensional ROI - returns in economic, quality of life and social benefits.

- » **Resilient & Sustainable Infrastructure:** Maximize the efficient use of water and energy while providing the ability to quickly recover from outages and natural disasters.
- » **Intelligent Transportation Systems:** Keep your city moving by optimizing traffic for real-time conditions.
- » **Public Safety & Security:** Protect the public by detecting hazards before they become major problems.
- » **Digital Services:** Connect, inform and alert the public.



**3**  
MILLION

*smart streetlights deployed under  
Itron IIoT network canopies globally*



## SUCCESS STORY Delivering Results Around the World

### ASIA PACIFIC

Effective monitoring of distribution network and improved water resource management

#### Solution overview:

- » Deployment of AMI network with real-time consumption data, text messaging alerts and particulate management to prevent clogged meters

#### System overview:

- » More than 800,000 customers across 39 DMAs

#### Results:

- » Improved identification of potential areas of unusual consumption and water losses using enhanced leak detection capabilities
- » Realized a reduction of non-revenue water from 41% to 14% across the DMAs







## SUCCESS STORY

Delivering Results Around the World

### AFRICA

Significant improvement in apparent water losses and increase in revenue

#### Solution overview:

- » New and replacement meters, monitored DMA and water analytics software

#### System overview:

- » 55,000 water connections
- » 15 DMAs
- » 250 biggest consumers monitored

#### Results:

- » 13% decrease in non-revenue water
- » 7,000 blocked meters detected and replaced
- » +2,500 connections discovered
- » +34% in billable water achieved
- » +15,000 meters read automatically in three days achieved (>7M m<sup>3</sup> of water volume billed)



### Lay the Foundation with a Streetlight Network Canopy

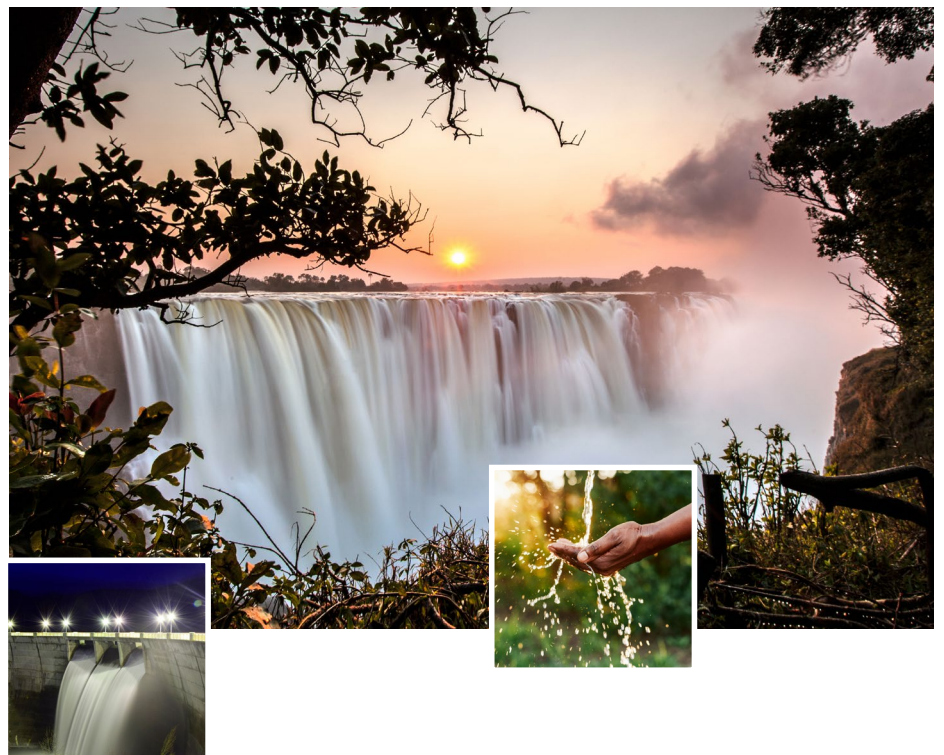
A Smart Streetlight network canopy can be the ideal foundation to support a broad range of advanced applications. It offers a predictable return on investment through lighting control, while serving as a ubiquitous network of continuously-powered IIoT devices that have clear line of sight to connect additional devices like water meters and other sensors. With the foundation in place, you can leverage your platform investment to enable a wide range of innovative services.

### The Itron Partner Ecosystem

Our technology is the foundation for your ability to solve key business challenges, drive revenue and deliver new services to your consumers. Our platform is standards-based at every level to ensure seamless interoperability with third-party devices and applications. The vast Itron Partner Ecosystem brings together a network of companies driven to solve problems and innovate rapidly. In collaboration with our partner ecosystem, you can catalyse innovation and accelerate your digital transformation.

**200**  
MILLION

*devices installed worldwide across electricity, gas and water*



## CONCLUSION

Globally, over a third of water pumped from distribution plants is lost before it ever reaches a consumer. With scarcity and water loss issues, aging infrastructure and a shift toward digitalization, water utilities and municipalities are at a crossroads. Let us help you make the most of this precious resource—by minimizing or eliminating non-revenue water, engaging your consumers and providing actionable insights that improve your operations and allow you to continue to deliver clean, reliable and safe water service.

Itron delivers a comprehensive, outcomes-oriented approach to help you achieve your most pressing business goals. We pair the right metering and sensing technology with secure, reliable networks and software/analytics that drive efficiencies, predict and prevent problems, and alert you to leaks so you can proactively fix them. We deploy our solutions in a variety of ways to suit your needs—everything from utility-owned and operated infrastructure to our turnkey world-class managed services.

We have the deep industry expertise to help you solve your challenges today, and those in the future. From intelligent networks and smart devices to analytics and services, we'll help you manage and **connect every drop!**



15

**R&D and manufacturing centers  
located in region**



## SUCCESS STORY

Delivering Results Around the World

### MIDDLE EAST

Significant improvement in non-revenue water losses

#### Solution overview:

- » Installed 200,000 static water meters
- » AMR network, software as service (SaaS) asset management system, work order management system and analytics software

#### System overview:

- » 650,000 water connections

#### Results:

- » Significant decrease in non-revenue water
- » >1M m<sup>3</sup> of water volume billed from just the replaced meters
- » Removal of estimated bills
- » Established water conservation program
- » Improved customer satisfaction



Join us in creating a more **resourceful world**.  
To learn more visit **itron.com**

While Itron strives to make the content of its marketing materials as timely and accurate as possible, Itron makes no claims, promises, or guarantees about the accuracy, completeness, or adequacy of, and expressly disclaims liability for errors and omissions in, such materials. No warranty of any kind, implied, expressed, or statutory, including but not limited to the warranties of non-infringement of third party rights, title, merchantability, and fitness for a particular purpose, is given with respect to the content of these marketing materials. © Copyright 2021 Itron. All rights reserved. 101809SP-02 04/21

#### CORPORATE HQ

2111 North Molter Road  
Liberty Lake, WA 99019 USA

**Phone:** 1.800.635.5461

**Fax:** 1.509.891.3355