

The Itron logo is located in the top left corner. It consists of the word "Itron" in a white, sans-serif font, with a small yellow lightning bolt icon above the letter 'i'. The logo is set against a red rectangular background.

**Itron**

The background of the entire page is a photograph of a city skyline at night. The skyline features several tall, modern skyscrapers with illuminated windows, reflecting in the water in the foreground. The sky is a deep blue with some light clouds. The water in the foreground is dark and shows ripples, with the city lights creating a distorted reflection.

# Connecting Every Drop

Smart Water Solutions | **Asia-Pacific**





## INTRODUCTION

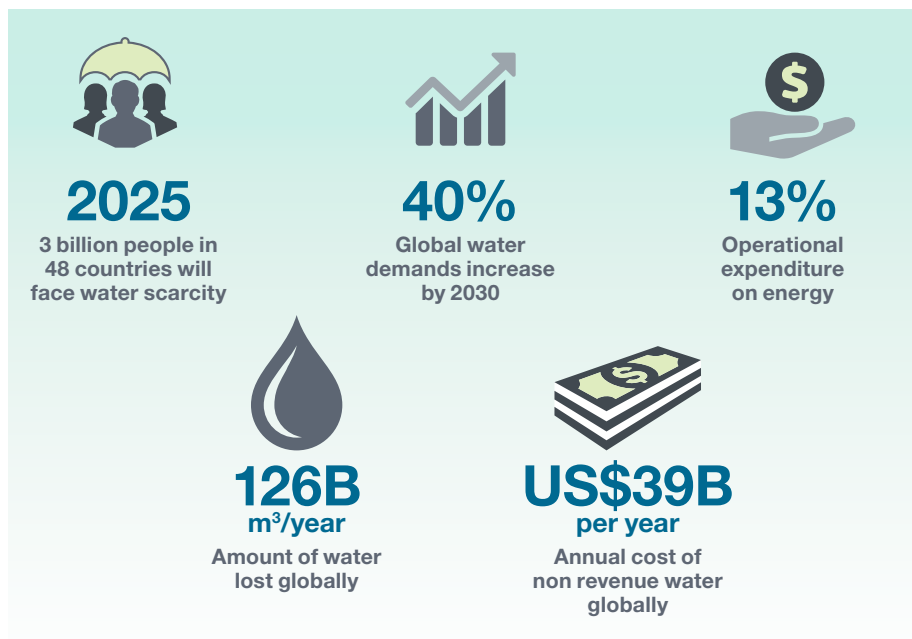
More than ever, utilities are challenged in managing their aging water distribution networks. Everything from reducing costs and implementing conservation programs to dealing with unbilled consumption, physical losses and new regulations—all of which impact the ability to effectively serve consumers.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

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

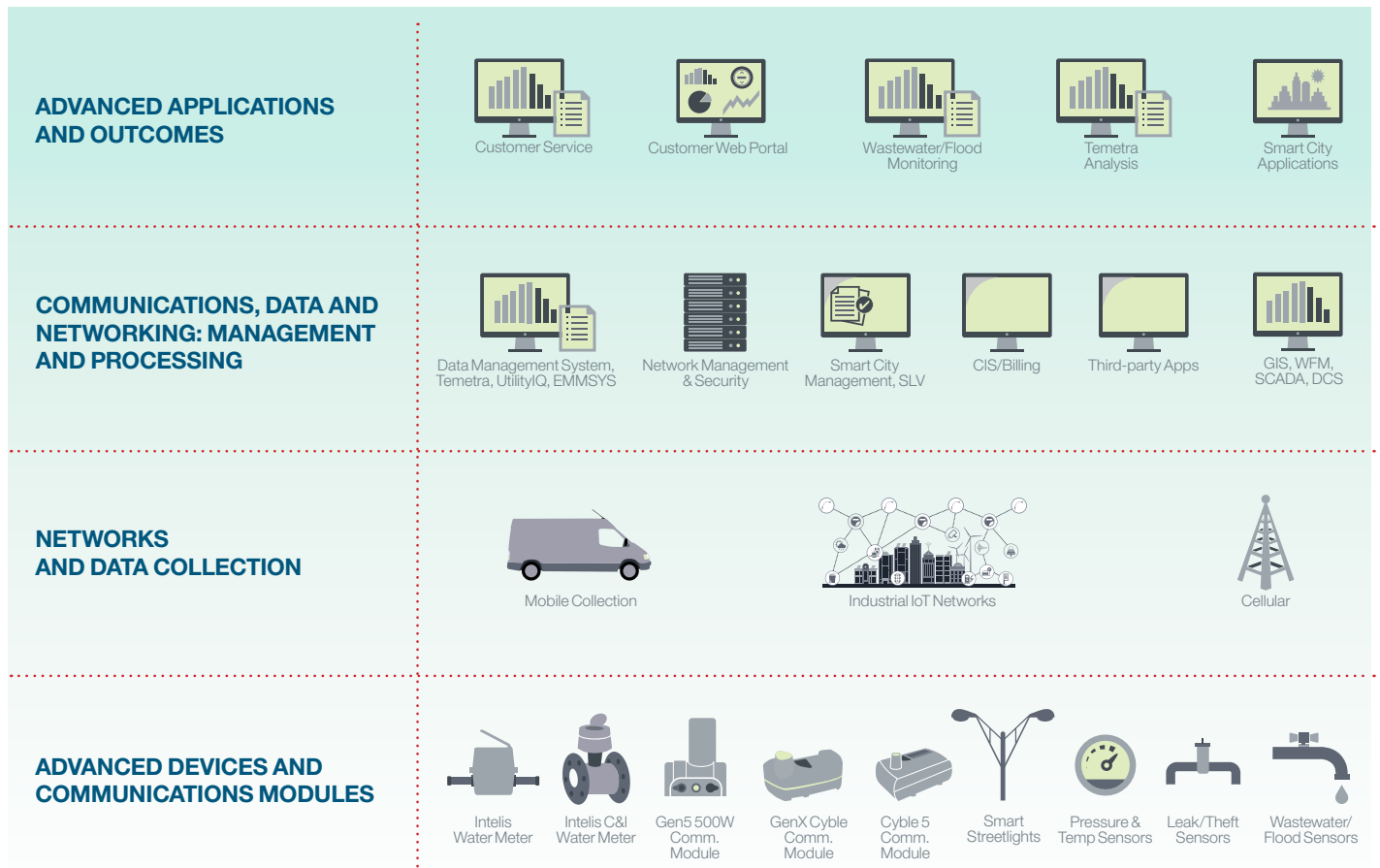
improve operational efficiency. Gain visibility into your water distribution network and/or district metering areas (DMAs) and optimize efficiency using our solutions to run a more resourceful water system—all while improving your consumer experience.

## 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



Improve asset management



Realize data-driven decisions and insights



Improve sustainability and water conservation



Respond intelligently to incidents



Comply with regulatory mandates



Reduce non-revenue water (real and apparent losses)



Improve consumer engagement

## ADVANCED APPLICATIONS AND OUTCOMES

### Temetra Analysis

#### 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 Temetra Analysis offering delivers measurable results that address non-revenue water losses in your water distribution system. It can extend the full potential of AMI solutions by providing innovative data analysis to help cities and utilities achieve their business and operations goals.

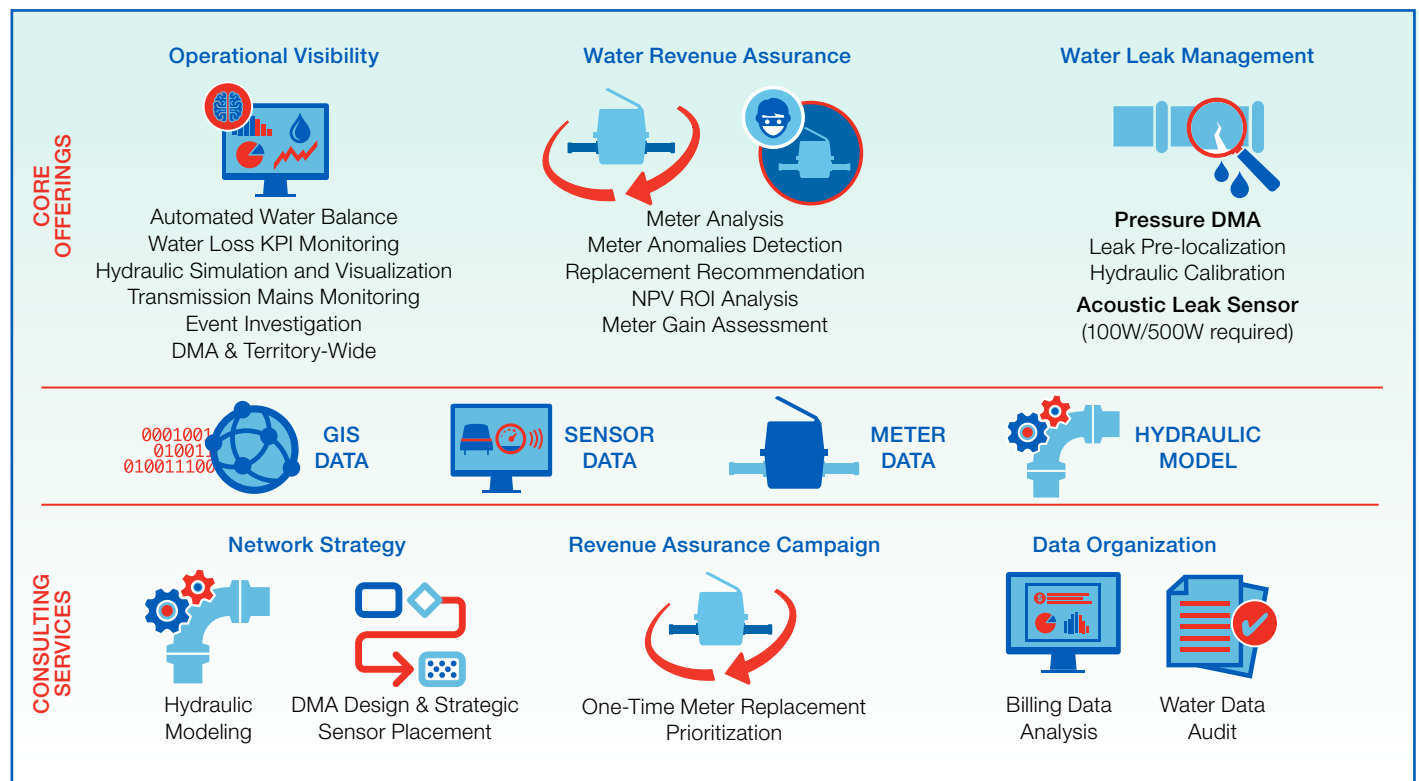
As an end-to-end solution provider, Itron integrates data from many sources, such as network metering endpoints, SCADA, GIS,

hydraulic modeling and CIS systems. This provides water utilities with a centralized holistic view of their water distribution network. Temetra Analysis provides scalable, high-performance analytical tools that turn your data into actionable insights.

Event investigation helps you prioritize and focus your resources on specific areas where your water distribution network performance is in need of action. It works seamlessly with other Itron solutions to help transform your water distribution network into a smart water network.

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.

### TEMETRA ANALYSIS OFFERINGS







## SUCCESS STORY

Delivering Results Around the World

### NORTH AMERICA

Wastewater flow monitoring  
– mitigating sanitary sewer  
overflows

#### Solution overview:

- » Integration of wastewater data with AMI network for regulatory compliance helping identify utility's actual inflow and infiltration

#### System overview:

- » Added wastewater sensors to existing water AMI network
- » Implemented integrated data and reporting solution

#### Results:

- » Simplified management of regulatory compliance data
- » Reduced truck rolls by 60%
- » Established permanent maintenance monitoring solution for gravity sewer system



## REDUCE REAL AND APPARENT LOSSES

Reducing water loss—whether real or apparent—is another outcome Itron provides. Itron helps you tackle these challenges several different ways, including Water Revenue Assurance and Water Leak Management.

### Water Revenue Assurance

Water Revenue Assurance is a program that aims to increase your utility's revenue by performing a detailed multi-criteria analysis of your deployed meter base and your current and historical consumption data. It assesses your meter population by accounting for historical consumption for each connection and publishes results that show historical losses and current monthly recurring losses (financial and physical) for individual connections. This gives you a full picture of potential apparent losses within your deployed meter population.

### Water Leak Management

Water Leak Management is a critical component of any water distribution network management program that detects and tracks pipe leaks and bursts within your utility distribution network, allowing you to reduce water loss, minimize damage to infrastructure and improve customer satisfaction.

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 industrial IoT technology on the market. Our open standards-based platform enables seamless interoperability across a diverse range of products including meters, leak/theft sensors and wastewater/flood sensors to provide you with the best-in-class solutions that will realize your business objectives.

### Moving from AMR to AMI

Thinking about how you can turn your automated meter reading (AMR) to an AMI network? Now you can easily transform your water AMR to an AMI network by connecting to a neighboring Itron Smart Streetlight or electric AMI canopy through a shared network model.

Not ready to upgrade to an AMI network? Consider Temetra for cloud-based meter data collection or an Itron Mobile package as an incremental step toward AMI. These solutions enable walk-by and drive-by meter reading using the latest smartphone and tablet technology to streamline meter data collection. AMR is a very economical solution for reducing operational costs and increasing meter reading safety and accuracy.



*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

### 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 liters/min in discovered and repaired leaks (206 utility leaks, 308 consumer leaks)



## Cloud-based Meter Data Collection and Management

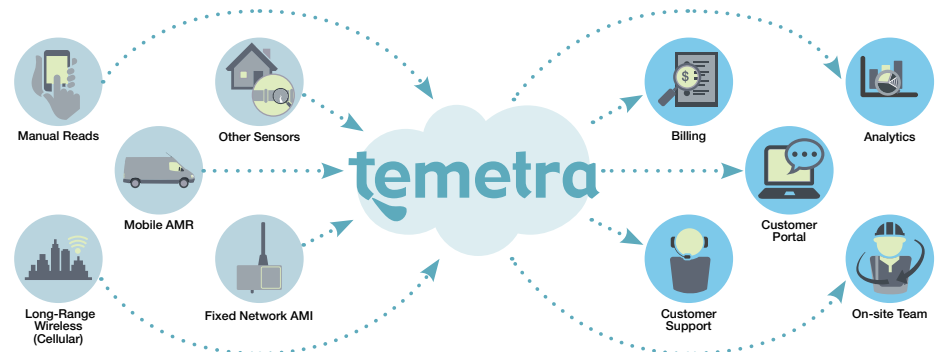
Temetra is an innovative solution for cloud-based meter data collection and management. It allows you to efficiently manage data, secure your revenue stream and improve customer service with the simplicity and lower cost of cloud-based services. Designed to help optimize your operations without having to maintain on-premise hardware and software, the cost-effective 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.

#### Key Benefits:

- » Secure and convenient data storage and access on the cloud
- » GIS-based 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

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



## Flexible and Cost-Effective Network Options

Foundational to smart water systems are smarter, data-driven services where connected devices provide real-time visibility to monitor usage, proactively identify leaks to reduce waste, engage consumers in conservation programs and accelerate progress toward sustainability goals. Connected communities realize the benefits and value of these programs. Being connected allows communities to leverage data collected from a broad range of devices and sensors to deliver actionable insights that enable you to achieve valuable business outcomes. To help you stay focused on your operations, we offer options for delivering your communication network beyond the traditional own and operate model. With Itron's Software as a Service (SaaS) and Network as a Service (NaaS), water utilities can realize all of the benefits of AMI, without the headache of owning and operating a network and systems that go with it.

A fully supported managed services model (NaaS, SaaS or cloud-based) allows your resources to focus on the critical issues that drive business while Itron manages the rest.



**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 is 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, Temetra Analysis 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. Delivering what you need today, with mechanical meters and communication modules.



#### 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 velocity principle of Multimag multijet meters for cold-water environments to the district metering capabilities of Woltex C&I meters, we strive to deliver the right choice of flexible water solutions for utilities seeking endurance and reliability.



**water meter manufacturer in  
the world with more than 200  
million Itron devices installed**



## 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







## SUCCESS STORY

### Delivering Results Around the World

## SOUTH AMERICA

Significantly improved operational visibility and real loss reduction

### Solution overview:

- » Temetra Analysis
- » Operational Visibility
- » Hydraulic Modeling, water balancing and leak detection

### System overview:

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

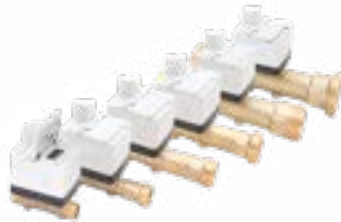
### Results:

- » 50% fewer customer complaints
- » Significantly reduced consumption per meter (from 460 liters/day/connection to 350 liters/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

#### No moving parts and integrated communications

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.

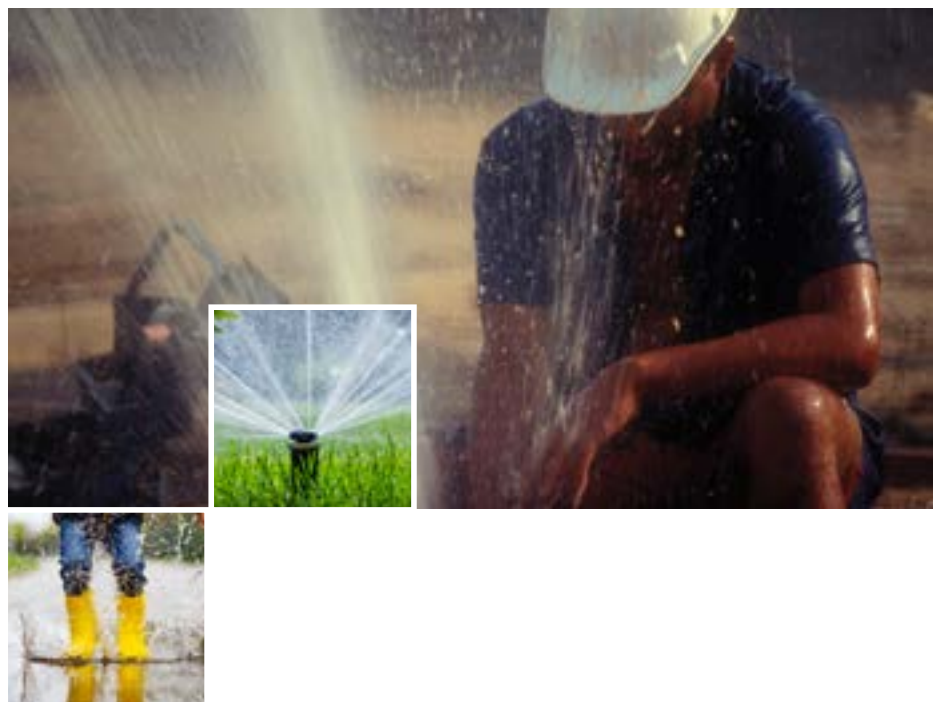
### Leak Sensors

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**



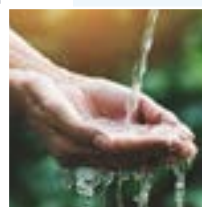
## STREETLIGHT THE WAY TO SMARTER COMMUNITIES

A smart streetlight or electric AMI network canopy can do more than just collect consumption data. Leverage a multi-purpose network to deliver multiple applications and 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. Whether your goal is to reduce carbon emissions, conserve resources or improve safety, we deliver outcomes to meet your needs.

- » Resilient & Sustainable Infrastructure: Maximize the efficient use of energy and water 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.



## 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:

- » 50,000 water connections
- » One DMA

#### Results:

- » 12% decrease in non-revenue water
- » 7,000 blocked meters detected and replaced
- » +2,500 connections discovered
- » +53% in billable water achieved (>7M m<sup>3</sup> of water volume billed)

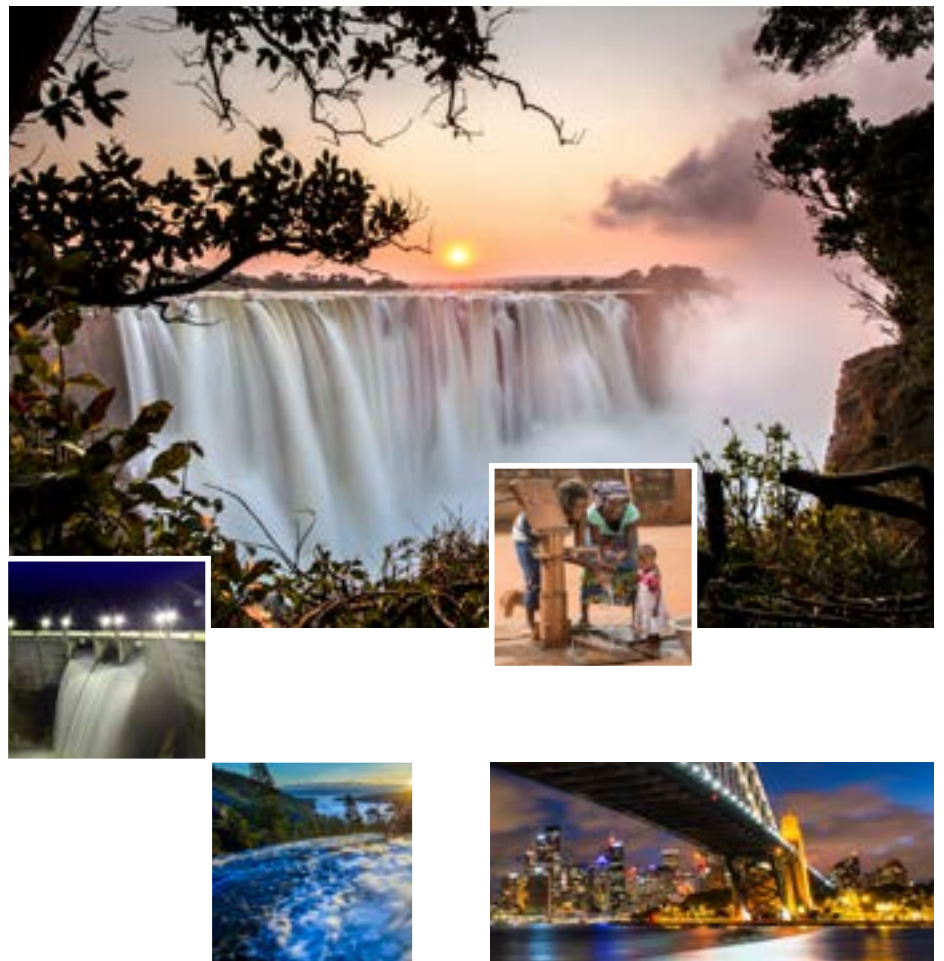


### Lay the Foundation with a Streetlight Network Canopy

A Smart Streetlight Network Canopy is the ideal foundation because it offers a predictable return on investment and creates a ubiquitous network of continuously powered critical infrastructure devices that have clear line of sight to connect additional devices like water meters and other IIoT 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 are able to catalyze innovation and accelerate your digital transformation.



## 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!**



## 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**

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