

American Water counts on AT&T IoT expertise to Help Keep Life Flowing[®]

- **Business needs** - Enhanced operational efficiency to better serve its customers
- **Networking solution** - AT&T IoT connectivity assists American Water in operating reliably and efficiently
- **Business value** - Optimized operations, superior sustainability
- **Industry focus** - Water and wastewater utility
- **Size** - 14 million customers

About American Water

American Water is the largest regulated water and wastewater utility company in the United States. With a history dating back to 1886, the company lives up to its motto, We Keep Life Flowing[®], by providing safe, clean, reliable, and affordable drinking water and wastewater services to more than 14 million people across 14 regulated jurisdictions and 18 military installations.

The situation

As a water industry leader in research and development, American Water strives to find better ways to provide high-quality, reliable service to its customers. The company is always working to reduce water waste and enhance efficiency and dependability.

Solution

American Water embraces technology and innovations that help it achieve its goals and make a difference for its customers, communities, and the environment. It chose a smart meter provider that uses the AT&T LTE-M network to deliver data to and from its smart meters, helping to decrease water waste, increase efficiency, and assure long-term reliability for its customers.



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American Water Senior Vice President and Chief Information Officer

Conserving a vital, precious natural resource

American Water has a national network of water and wastewater facilities, innovation centers, sales offices, and distribution centers. Through these it offers

smart water solutions for a wide range of customer applications. With more than a century of innovation and strong, stable growth, the company works to optimize use and minimize waste of one of the world’s most precious resources.

Ruben Rodriguez, American Water Senior Director, External Communications, said the firm is the largest regulated water and wastewater company in the nation, serving customers from New Jersey to California. “That includes 18 military installations across the United States,” he said. “We have over 6,500 dedicated workers that are committed to providing safe, reliable, clean, affordable water to customers.”

Using natural resources wisely is extremely important to American Water. “Sustainability is a huge value because there’s an energy-water nexus,” Rodriguez said. “It takes power to get water out to people. But we also have environmental goals, including greenhouse gas reduction goals. Sustainability is not just being green. Sustainability is the strength of the company and its ability to provide environmentally responsible solutions for the communities we serve.”

Employee safety is also vital. “It’s paramount,” Rodriguez said. “If you don’t go home in the same shape or better than when you left the house, we’re not doing something right. These values are core to the way we perform everything we do.”

Exploring smart meters

David Hill, American Water Senior Director, Asset Management and Operational Systems, said American Water began using smart meters about eight years ago. “The meters used fixed

base networks that sent meter readings via radio frequency signals to a local collector box, which delivered the data to the cloud,” Hill said.

Nicholas W. Santillo Jr., American Water Senior Vice President and Chief Information Officer, said the meters demanded a lot from the American Water IT team. “For all intents and purposes, we were the network provider,” he said. “We had to maintain and replace the equipment, patch for security vulnerabilities, and do everything that a network provider would have to do, as well as handling all the costs associated with it.”

As technology advanced, forward-thinking American Water began exploring the possibilities of cellular-enabled smart meters. “More recently, the company has made some strategic decisions to take those early adopter lessons that we learned in 2015 and 2016 and start rolling out a broader smart meter strategy to our territories,” Hill said.

A commitment to security

While cellular technology was initially not cost-effective, as the prices decreased, American Water and its meter supplier began exploring the benefits of wireless connectivity for their smart meters.

Santillo Jr. said security was topmost in American Water leadership’s minds as they began their research. “As a water utility, we provide a vital resource,” he said. “We have to protect our critical infrastructure, and meters are just another piece of technology that we have to secure. Any technology we deploy at American Water needs to meet high security standards. We share that responsibility with our providers. We do our part and expect that the meter network security is maintained at a high level.”



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The company from which American Water procures its smart meters uses AT&T LTE-M to connect its radio endpoints, delivering data from its smart meters with a highly secure, cost-effective, reliable Internet of Things (IoT) network.

“We can take advantage of the security that AT&T Business puts into its network, so that’s the driver,” Santillo Jr. said.

In addition, replacing fixed base networks with cellular connectivity makes it easier and more cost-effective for American Water to expand into remote areas without worrying about building out infrastructure. “AT&T has already brought connectivity to those remote areas,” Santillo Jr. said. “That allows us to focus on what’s core to us.”

High standards of reliability

American Water and its meter contractor were among the nation's first to deploy the cutting-edge AT&T LTE-M network to power its smart meters. The low-power wide-area (LPWA) network is designed and optimized for IoT deployments. It powers a host of IoT applications with lower costs, compact modules, and longer battery life.

The solution meets American Water's high standards. "Reliability and recoverability are critical to us, whether it's in a meter, a phone, or a vehicle hotspot," Santillo Jr. said. "For us, communication, in general, is paramount. We put a lot of trust and confidence in AT&T Business to give us the most reliable, dependable network that we can have."

A host of benefits for customers

Hill said the smart meters help save water by letting the company know if water is being consumed at a location that doesn't have a customer associated with it. "Smart meters can identify those things quicker, which will waste less water," he said.

Meter sensor technology can also help avoid pressure inconsistencies in the distribution system. "Over the long term, we hope to take in all of those aspects to design better systems that are more environmentally positive," Hill added.

Investments in technology demonstrate American Water's commitment to putting customers at the center of every decision it makes. It works to provide

a superior customer experience and be the trusted leader in water quality, water management, system resiliency, and environmental stewardship.

Rodriguez says American Water pursues solutions like the AT&T-enabled smart meters that directly benefit customers. "Communities are better because we're there. That's the kind of company we are."

The company's commitment to showing customers and communities that it cares about them has resulted in a growing customer base and positive customer experience.



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