

The quick, simplified path to an intelligent water system

How to modernize your utility without large capital outlays

verizon✓

Modernizing water systems is critical. At a time when many cities are facing droughts, tight budgets or both, every drop counts. Water utilities need ways to drive efficiency throughout the system, but often don't have the capital budget to make full-scale changes.

With Verizon Grid Wide Intelligent Water solutions, improving usage accuracy and getting better water conservation is simpler than you might think. It's making a big difference for a small city in the southeastern U.S.

The challenge

Like many municipalities across the country, the city was having problems with its outdated metering system. Metering inaccuracies were causing billing issues, which meant customer service workers had to spend time resolving disputes. Leaks were going undetected, which made it hard for the city to conserve water.

The city was planning a utility upgrade project that would require a major capital investment, but the project was still two years away. Rather than put off upgrades until then, the city decided to pilot Verizon Grid Wide Intelligent Water solutions. It's a platform-as-a-service solution for intelligent water systems that uses Internet of Things (IoT) technology to track water use.

The solution

The city moved from its current meter-reading system to a true smart metering system using a

Water utilities lose as much as 30% of their treated and pumped water to leaks.¹

cloud-based platform. The city was able to do this without investing in data centers and communication networks and equipment, and without putting in place complex advanced metering software. Instead of a major capital outlay, the city pays a monthly fee for the service it uses and can scale up as needed.

This is how the solution works: Using the Grid Wide platform, the city can remotely deploy, integrate, provision, configure, monitor, manage and control its water meter sensors. The solution gives utility staff operational information and billing information in near real time.

It combines a smart metering application, connected utility distribution network devices and IoT gateways with point-to-multipoint Verizon 4G LTE, 900 MHz radio frequency (RF) communication, and the Verizon Private IP network. This gives the city secure, two-way communication to Verizon Cloud for intelligent water management.

The Intelligent Water solution includes preconfigured data and analytics dashboards to help the utility quickly pinpoint leaks, backflow, tampering and abnormal usage patterns—and quickly respond.

Results

The Intelligent Water solution has helped the city:

- Improve efficiency. By automating meter reading, the city was able to reduce labor costs and move employees to other tasks.
- Reduce wear and tear on city vehicles with fewer truck runs needed to read meters and check on systems.
- Conserve water by reducing leaks and giving customers greater insight into their water use.
- Better manage revenues and predict changes.
- Improve reliability and supply quality. With near real-time, system-wide information, the city can do maintenance work proactively rather than waiting until something breaks.

Globally, utilities lose an estimated \$14 billion a year in non-revenue water.²

- Provide better customer service. With greater visibility into leaks, high usage and system performance, it's easier to resolve billing disputes.
- Enhance safety. Remote monitoring limits the number of times workers have to visit distant or hazardous locations.
- Better manage water infrastructure, assets and operations, and plan for future growth.

This has all been accomplished without the city having to invest in data centers and communication networks, deploy complex advanced metering software, connect and manage thousands of endpoints, or hire and train new staff to work with advanced technologies.

And because Grid Wide is powered by the Verizon 4G LTE network, the city can count on the reliability, coverage and support it needs to keep operations running and water flowing.

Utilities don't have to go swap out the entire meter population. They can start to solve problem areas right now, on a per-month, per-meter cost basis.

1 Angela Godwin, "Advanced metering infrastructure: Drivers and benefits in the water industry," WaterWorld, <http://www.waterworld.com/articles/print/volume-27/issue-8/editorial-features/special-section-advanced-metering-infrastructure/drivers-and-benefits-in-the-water-industry.html>

2 Heather Clancy, "Could smart meters stem \$14 billion in annual water losses?" GreenBiz, August 15, 2013, <https://www.greenbiz.com/blog/2013/08/15/could-smart-meters-stem-14-billion-annual-water-losses>

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