

# Innovation stories



Halifax Water

# Pioneering the innovation frontier

Halifax Water has been spearheading digitally enabled innovation for nearly two decades. In 1999, they became first North American utility to adopt the International Water Association water loss control methodology, applying district metering to their distribution system and using SCADA monitoring to track waterflows and consumption.

According to General Manager Carl Yates, embracing the power of this data created monumental change. An early adoption of a data historian was the transformative catalyst that allowed the organization to aggressively pursue leakage reduction.

“Our key metrics are the infrastructure leakage index and real losses measured in liters per service connection per day. We started at a 9 in 1998, and we got it down to a 2.5 by 2008,” Yates noted. “We’ve recovered over 40 million liters per day in leakage, and we save about \$650,000 each year at that level. We’re pretty close to what we call our economic level of leakage.”

Looking ahead, advancements will center on evolving customer expectations. Yates stressed that customers “want quick responses, and they also want to understand more about their water bill and their water use.”

To meet the higher standards, the utility will be combining their Advanced Metering Infrastructure, computerized maintenance management, geographic information, and customer relationship management systems. “These systems equip customer service representatives to quickly and thoroughly address most customer inquiries,” Yates said.

Customer-centric data isn’t just a relationship-building tool, it can empower the customer as well. One case in particular highlights how innovation efforts can create unanticipated benefits for utilities and users alike.

“The Port of Halifax receives a lot of cruise ships throughout the year, which take on huge amounts of water when they come to port. During one visit, an unannounced ship showed up to avoid a hurricane, and by looking at our data we thought there was a major leak.

“This inspired us to work with the Port to monitor leaks in their system downstream of the billing meter in real-time, because we both could benefit. We developed a web portal application where they could track their usage, and we showed that discovering only one leak each year would ensure the application paid for itself. It was serendipitous—we basically stumbled into it,” Yates said.

The customer-focused innovations are strengthening, not replacing, their workforce. While some areas such as the meter division might end up with less staff, job losses will be managed through attrition and retraining. Yates predicts there will be no layoffs. In fact, new positions might be created as ways of working evolve.

Halifax’s culture of learning means people across the organization can become champions of change. Regardless of age demographics, the organization is looking for workers with the aptitude and attitude to innovate.

“People volunteer [to lead digitally enabled innovation initiatives] because they know the projects will make their lives and jobs better. They’re working with the IT [information technology] and OT [operational technology] folks to ensure they’re building something worthwhile together.”

Halifax Water’s multi-pronged approach to cultivating innovation and digital transformation makes them a true pioneer among North American utilities. Yates’ advice to other organizations on a similar path was to encourage planning, continuous collaboration and coaching. “You have to understand what your staff is ready for and keep working until everyone is comfortable,” he said. “Some early adopters will be super users, but you also have to support the stragglers.”

