



UTILITY SETS THE BAR WITH ADVANCED METERING INFRASTRUCTURE

DETROIT WATER AND SEWERAGE DEPARTMENT (DWSD)

/// CASE STUDY



Confronted with an aging water meter infrastructure, Detroit Water and Sewerage Department looked to EDS, an HP company, for one of the largest, most advanced fixed network Advanced Metering Infrastructure systems in North America. Today, Detroit's is the only water department in the country with two-way communication from the meter to the billing system and an innovative meter data management solution.

CLIENT PROFILE

www.dwsd.org

Detroit Water and Sewerage Department's mission is to exceed customer expectations through the innovative treatment and transmission of water and wastewater, and the provision of services that promote healthy communities and economic growth.

Industry:
Energy

Headquarters: Detroit, Michigan

Employees: 2,300

Business Needs Addressed:
Growth
Productivity

"If EDS couldn't do it, nobody else could."

Theresa Mccuean
Automatic Meter Reading Manager
Detroit Water and Sewerage Department

The water department wanted an automated, integrated meter system

The third-largest water and sewer utility in the United States, Detroit Water and Sewerage Department pumps an average of 640 million gallons of clean drinking water each day through its five water treatment plants. The department provides water service to more than 4 million people across Detroit and southeastern Michigan – almost half the state's population. DWSD also provides wastewater service to 3 million people or 35 percent of the state's population.

Yet, serving this growing customer base had become difficult with an 18-year-old water meter infrastructure. Manual meter reading and work order processes led to costly data entry errors, billing inaccuracies and even fraud. To better allocate resources and ensure customer satisfaction, DWSD wanted to automate meter readings and integrate meter data with its billing system and other applications. The department entrusted the large and complex undertaking to EDS.

EDS delivered the nation's most advanced fixed network meter solution

In the first phase of the project, EDS designed software to extract meter data from DWSD's operations control centers, enabling the continuous, real-time reporting of critical meter data to both the department and its commercial customers. Through the use of an EDS-provided computing device, commercial customers gain greater visibility into water usage and system status. Meanwhile, with complete and current usage data in hand, the department can adapt billing rates to mirror demand. EDS designed mobile computing devices for downloading and synchronizing meter data with the main database.

Phase two involved transforming back-office operations to support the new solution. EDS began by automating the transmission of meter reading data to DWSD's existing Customer Billing and Information System and its new Electronic Water Utility Oriented Customer Information and Billing Service System. Next, EDS implemented an integrated workforce management system that enhances department productivity, as well as field service performance. Today, DWSD staff can automatically book appointments, allocate resources, as well as generate and dispatch work orders to field service representatives (FSRs) via mobile handheld devices.

Services featured

- Applications Development Services
- Applications Modernization Services
- Integration and SOA Services
- Mobile Applications Services

What's more, automated workflows enable FSRs to upload work order completion data across all of DWSD's systems in real time.

In the final phase, EDS designed and deployed an Advanced Metering Infrastructure (AMI) system for DWSD's residential customers. Using a fixed wireless transmitter that is attached to each home, AMI automatically reads customer meters and then transfers consumption data to the department's customer billing system. With the manual system, a technician would have to physically visit each residence and record meter readings on paper, a labor-intensive process where data could only be entered once a month. Now, data is transferred from the wireless units every two hours, creating more complete, rich data that ultimately ensures greater precision when measuring consumption.

A comprehensive meter data management and repository also provides a valuable strategic planning tool for enhancing organizational effectiveness. Department staff can now analyze usage trends and behaviors, generate more accurate and reliable bills, as well as forecast demand to reflect seasonal peaks and adjust rates accordingly.

AMI improves meter accuracy and agencywide productivity

DWSD's pioneering new Advanced Metering Infrastructure now seamlessly integrates operations from the meter to the department's core billing applications within a highly scalable, flexible service-oriented architecture.

Meter accuracy has improved, while metering costs have gone down. More reliable meter data helps the department monitor equipment and system status more closely, which improves overall reliability. When an equipment failure is reported, an automated workflow begins that ensures timely investigation and repair of the issue. In addition, higher quality meter data gives DWSD the ability to anticipate problems before they arise and take steps to prevent similar occurrences, expediting equipment maintenance with less labor.

As a result of streamlined processes and automated capabilities, DWSD has improved billing efficiency and customer service productivity. Today, department staff can instantly access customer meter data from anywhere at any time and resolve issues in just one phone call. Meanwhile, best-in-class reporting and business intelligence have generated planning productivity gains of up to 15 percent. These efficiencies will improve the cash flow collection cycle for DWSD.

Most importantly, customers now have instant access to consumption data and are mostly billed according to usage rather than estimates based on previous usage. This encourages customers to take an active role in responsible water consumption and enhances conservation awareness.

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