



## SmartCity by Schneider Electric: Water Solutions

Improving the efficiency of water distribution

As populations grow, pollution increases and cities expand ever closer to the seaside, it is essential to provide clean and affordable water for consumption, as well as industrial and irrigation purposes. This means that water distribution needs to be optimized, operational and energy costs reduced, and the whole water cycle made much faster than before.

Water and water infrastructures are assets to be optimized, protected, and secured in order to save costs while complying with public and sanitary requirements. This is why water agencies and utilities worldwide are relying on Schneider Electric's integrated solutions for optimal water and wastewater operations, management and planning.

Similar to Smart Grid deployments in the energy industry, our advanced technology solutions support network operations efficiency and best practices. Components are highly integrated, assuring that data is complete, accurate, and secure, and that related operations are timely.

### Water network management

Schneider Electric's Smart Water Network solution improves the efficiency, longevity and reliability of the utility's network of pipes, pumps, reservoirs and valves, by better measuring, collecting and analyzing data from a wide range of network events and making that information available

in real-time to operators. This reliable information enables automated control and optimization of complex processes and timely decision making regarding areas that can benefit from proactive measures or corrective actions. Incident management tools identify what area of the network needs to be isolated for repair or maintenance and which customers will be affected — they even help manage crews to optimize their time.

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### Water loss management and leak detection

- Active leakage control: solution uses real-time data and network model simulations to more accurately identify the presence and approximate location of leakage.
- Speed and quality of repairs: solution integrates outage management system with the utility's Computerized Maintenance Management System (CMMS) to streamline field communications and operations during event response; as a result, the water authority reduces water outages and improves customer service.

### Energy and process management

Additional tools from Schneider Electric, all scalable for long-term benefits, are used by the smart water authority for:

- Energy optimization: to maximize plant performance and reduce energy costs and CO<sub>2</sub> emissions.
- Demand forecasting: using weather forecasts and consumption trends to balance water production and demand.
- Water quality management: monitoring and controlling chemical dosage and collecting and reporting analysis data, to assure regulatory compliance.

Each interfaces with standard business information systems — such as the utility Geographic Information System (GIS), Customer Information System (CIS), Computerized Maintenance Management System (CMMS) and Laboratory Information Management (LIM) system — to streamline the SmartCity's business processes and enable data-sharing reports and information to support enterprise performance indicators, benchmarking and network planning.

### Stormwater management and urban flooding

As volatile and severe weather events become more frequent, cities and municipalities look for ways to mitigate the damage caused by street flooding, compromised wastewater treatment plant (WWTP) operations and combined sewer overflows (CSOs). Schneider Electric's Stormwater Management Solution enables water utilities and public works departments to adequately prepare for and respond to flooding events — saving time, costs and lives.

This singular solution integrates real-time infrastructure flow and capacity information with simulation tools and weather forecasting tools acknowledged in a third-party survey as the most accurate within the industry. It identifies for the community the exact path of a storm; how much precipitation it will bring; how it will affect the saturation levels of the area; the resulting flooding potential; and the predicted effects on urban drainage systems, city



streets and receiving water bodies. The SmartCity uses this targeted information to respond efficiently and mitigate environmental and property damage and minimize operations costs and potential regulatory fine expenses.

We also deliver short-range precipitation forecasts, as well as long-range outlooks, for water basin management.

### Geographical Information System

Schneider Electric's open-architecture GIS, designed specifically for utilities, provides a unified distribution network geodatabase for a single version of the truth. This system makes up-to-date network asset information available across the enterprise to support decisions involving preventive versus corrective maintenance and simplifies analysis and planning.

### Rely on proven solutions

Schneider Electric solutions are at work worldwide to help optimize water cycle management, energy management and storm water management. Contact us to learn more about a SmartCity Water solution that will serve your current and future water management needs.



**Schneider Electric SmartCity**  
SmartCities for a Sustainable World