



CITY OF CONROE

Transformation at full stream ahead

America's fastest-growing city scales its operations with EcoStruxure™ Automation Expert to keep water flowing reliably to 115,000 residents and counting.



City of Conroe, Texas

se.com

Schneider
Electric



A population boom left the City of Conroe with a critical challenge: meeting demand without disrupting water service. EcoStruxure™ Automation Expert delivered scalable, intelligent infrastructure to keep taps flowing.

Growth that demands innovation

Over the past two decades, the City of Conroe, Texas has experienced explosive growth. It went from a modest population of 30,000 to more than 115,000 residents. This transformation has made Conroe one of the fastest-growing cities in the United States.

With such expansion came opportunity, but also pressure on critical infrastructure. The city's water system, originally designed to support a smaller community, had to evolve quickly.

Where Conroe once built a single water plant every five years, it now constructs four annually to meet rising demand. Each new subdivision and commercial development adds strain to the system. The city needed a solution that could scale rapidly, adapt to future needs, and ensure uninterrupted service for every home and business.

Ready for modern solutions

Like many municipalities, Conroe relied on proprietary SCADA systems for years. These systems were functional but increasingly inflexible. As technologies aged and vendors moved on, finding support became difficult. Repairs took longer, and updates were harder to implement.

Manual operations filled the gap, but at a cost. Operators visited each facility daily, recording data by hand. "We had to write everything down with a pencil and a clipboard," Roberts recalls. "The amount of time we were spending gathering data from all the water plants was four to five hours for one or two operators a day," he explains. That level of dedication kept

Goal

Scale water infrastructure to serve tripling population while improving operational efficiency and ensuring continuous service delivery.

Story

Conroe, one of America's fastest-growing cities, needed to expand from 4 to 19 water plants while upgrading from manual, proprietary systems to automated, scalable infrastructure. EcoStruxure Automation Expert provided the foundation for confident, rapid growth.

Solutions

- EcoStruxure Automation Expert
- Modicon M262 Logic & Motion Controllers
- EcoStruxure™ SCADA Expert
- Remote monitoring and control capabilities
- Automated data collection and reporting

Results

- 80% faster recovery time after system faults
- 70% improved engineering efficiency
- Cut manual data collection by over 50 hours per week
- Scaled from 4 to 19 plants with standardized automation
- Proactive alerts before customers experience service interruptions
- Enhanced regulatory compliance through automated reporting



Daniel Roberts, City of Conroe with Jacob Thompson, Schneider Electric

water flowing, but it also meant less time for proactive maintenance, optimization, and strategic planning—tasks that would become increasingly important as the city continued to grow.

Partnership built on trust

When Conroe decided to modernize its water infrastructure, it turned to a familiar partner. Roberts notes that “The City of Conroe and Schneider have a long relationship.” Schneider Electric had supplied electrical equipment and support for years, earning the city’s trust through consistent performance and responsive service.

That trust was put to the test during Hurricane Harvey. Flooding overwhelmed Conroe’s wastewater treatment plant, threatening essential services. “When Hurricane Harvey came through, Schneider was here to help us. We were one of the first wastewater systems back up and running,” Roberts recalls.

The city saw firsthand how Schneider Electric responded in a crisis—quickly, effectively, and with a deep understanding of the community’s needs. That experience reinforced the value of the partnership and made Schneider Electric the clear choice for Conroe’s next phase of infrastructure development.

Automation designed to scale

Conroe needed a solution that could grow with the city. EcoStruxure Automation Expert offered exactly that: an open, software-defined architecture designed for flexibility, scalability, and long-term success.

When the city began seeing the benefits EcoStruxure Automation Expert brought, it was clear they’d found the right solution. “We started with four water plant sites installing Automation Expert and now have it at all 19 of our City of Conroe water plants,” Roberts reports.

This rapid expansion was possible because the solution simplified deployment. Modicon M262 controllers, standardized across all facilities, meant engineers could develop programming once and replicate it across plants. When equipment failed, identical replacement units sat ready on shelves—enabling rapid restoration and keeping water flowing reliably.

Remote monitoring changed daily operations dramatically. Instead of driving to each facility with a pencil and clipboard, operators now access real-time data from iPads and desktop computers. “Now we can log in with our iPads,” Roberts emphasizes. “That information is sitting there waiting for us in the morning.”

“When legacy systems were out of commission, we were just relying on the customer to be our warning system.”

— Daniel Roberts,
Water and Sewer
Superintendent,
City of Conroe, Texas

80%

faster recovery after
system failures



Daniel Roberts, City of Conroe with Jacob Thompson, Schneider Electric

What once took hours now happens automatically overnight. Operators arrive ready to analyze and act on complete reports, rather than spending half their day gathering raw numbers. This saves over 50 hours of work per week, freeing operators to do other critical tasks.

From good service to great service

EcoStruxure Automation Expert doesn't just collect data; it helps Conroe stay ahead of potential issues. The system monitors water quality continuously and alerts operators when readings go outside acceptable ranges. "Automation Expert will call us, alarm us, giving us time to go in and address the issue before the customer's impacted," Roberts illustrates. This shift from reactive to proactive operations has elevated service quality.

Regulatory compliance also improved. State agencies require detailed reporting on water production, storage levels, and system pressures. While manual processes were meeting these requirements, automation ensures even greater accuracy and completeness.

Roberts reports, "EcoStruxure Automation Expert is helping us stay within compliance for regulatory rules and regulations. It will

notify us when there's issues that can be addressed before we drop below those requirements." Proactive alerts give the team time to make adjustments which help maintain compliance to protect public health.

Impressive performance gains

The numbers validate Conroe's investment in modern automation. "We have seen Automation Expert reduce recovery time up to 80%," Roberts details, enabling faster restoration when unexpected situations occur. Engineering efficiency is expected to yield similar gains. Roberts says "it should improve engineering efficiency up to 70%," as standardized systems and automated data collection free technical staff to focus on strategic initiatives rather than routine data gathering.

Daily operations became more efficient. Previously, gathering data from all the water plants took four to five hours for one or two operators each day. Now, that information is ready and waiting every morning. This efficiency gain compounds across every operator, every day—creating capacity to manage expansion.

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Deployment speed accelerated remarkably. Where older systems required weeks or months to configure and commission, standardized EcoStruxure Automation Expert implementations bring new plants online in days. This rapid deployment capability matches Conroe’s ambitious construction pace—four plants annually demand streamlined, repeatable processes.

Water flowing reliably to every tap

Behind all the technology and metrics lies a straightforward goal: reliable water service for every resident. For Roberts, this drives everything. “I think the biggest win is having the capability to correct issues before the customer’s impacted,” he says.

This represents a great transformation from systems that worked well but relied on customer feedback to identify emerging issues. Now, 115,000 Conroe residents simply turn on their taps with confidence that water will flow. They don’t need to think about the 19 plants, 1,200 miles of pipe, or sophisticated monitoring systems working behind the scenes. That kind of invisible reliability is the hallmark of great infrastructure. EcoStruxure Automation Expert helps the City of Conroe deliver it every day.

24/7

Reliable water

50+

hours of manual data work saved weekly

City of Conroe at a glance:

- Population growth from 30,000 to 115,000 residents
- Infrastructure expansion from 8 to 19 water plants
- 1,200 miles of water and sewer pipe to be monitored
- Deployment timeline of 4 to 19 plants in approximately 2 years



EcoStruxure™

Innovation At Every Level

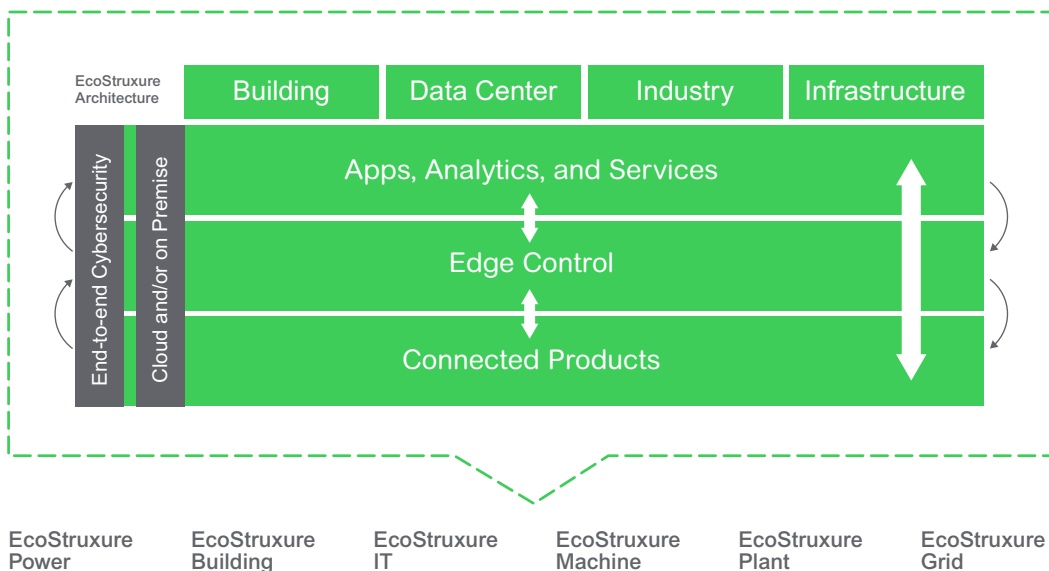
IoT-enabled solutions that drive operational and energy efficiency

EcoStruxure is Schneider Electric’s open, interoperable, IoT-enabled system architecture and platform.

EcoStruxure delivers enhanced value around safety, reliability, efficiency, sustainability, and connectivity for our customers.

EcoStruxure leverages advancements in IoT, mobility, sensing, cloud, analytics, and cybersecurity to deliver Innovation at Every Level including Connected Products, Edge Control, and Apps, Analytics, and Services. EcoStruxure has been deployed in 480,000+ sites, with the support of 45,000+ system integrators and developers, connecting over 1.6 million assets under management through 40+ digital services.

One EcoStruxure architecture, serving four end markets with six domains of expertise



Connected Products

The Internet of Things starts with the best things. Our IoT-enabled best-in-class connected products include breakers, drives, UPSs, relays, sensors, and more. Devices with embedded intelligence drive better decision making throughout operations.

Edge Control

Mission-critical scenarios can be unpredictable, so control of devices at the edge of the IoT network is a must. This essential capability provides real-time solutions that enable local control at the edge, protecting safety and uptime.

Software, Apps, Analytics & Services

Interoperability is imperative to supporting the diverse hardware and systems in building, data center, industry, and grid environments. EcoStruxure enables a breadth of agnostic Applications, Analytics, and Services for seamless enterprise integration.

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EcoStruxure Modular Data Center



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