

Modernizing 55+ water systems for safer, more reliable operations

How Cyient enabled a leading North American water infrastructure provider's automation and intelligence division to deliver faster, standardized control system upgrades

Business challenge

The customer needed to execute automation projects across a large and growing portfolio of water and wastewater treatment facilities, with most work centered on brownfield upgrades and the rest on new or expansion projects. For upgrade projects, the biggest challenge was to study the existing control-system install base, interpret it accurately, and develop a bespoke migration strategy that would remain reliable and scalable for years. The migrated solution also had to be ready before the planned shutdown window, leaving little room for delays or rework.

What had to be solved:

- Scale engineering capacity across proposal engineering, panel design, PLC/SCADA programming, HMI configuration, control narratives, and remote testing support
- Standardize engineering processes across multiple acquired businesses and varied control platforms
- Develop bespoke migration strategies based on the existing control-system install base, with long-term reliability and shutdown-window readiness built in
- Support brownfield upgrades and greenfield deployments across water and wastewater treatment environments

The client needed more than engineering bandwidth. It needed a partner that could bring consistency, automation domain expertise, and scalable execution to complex water and wastewater control-system programs.

Overview

A leading North American water infrastructure services company focused on the operation and maintenance of water and wastewater systems and we need to bring the impact snapshot that was shared in the draft. Managing facilities capable of treating over a billion gallons of drinking water and wastewater daily, the customer required scalable engineering support for automation projects across brownfield upgrades and greenfield deployments.

Cyient partnered with the customer's Automation & Intelligence division to deliver end-to-end control system engineering across estimating, panel engineering, control narratives, PLC and SCADA software, testing, and remote FAT/SAT support.

The Cyient solution

Cyient provided complete automation engineering support across the full control system value chain, from site survey, historical data analysis, basic and detailed design to implementation, verification, validation, integration, and remote commissioning support.

Supported estimating and proposal engineering for automation projects

Delivered panel engineering and drafting, network architecture, control philosophy, and control narratives

Developed PLC logic and configured HMI/SCADA systems and graphics

Provided remote FAT/SAT and commissioning support to the customer field service engineers

Supported platform migration and modernization use cases, including GE iFix to Ignition and Rockwell FactoryTalk to VTScada migrations

Enabled improved HMI interface, reliability, visualization, cybersecurity, and cost-effective licensing for midsize applications

The results

Cyient helped the North American water infrastructure services company strengthen automation delivery across water and wastewater infrastructure programs, combining domain engineering, control system expertise, and scalable execution to support modernization at speed.

01

Executed **55+** water and wastewater automation projects over **2.5** years

02

Scaled delivery through a **20+** FTE engineering team through the CoE model for round-the-clock support

03

Supported approximately **65%** water treatment and **35%** wastewater treatment project mix

04

Delivered across **70%** brownfield upgrades and **30%** greenfield/ new deployment work

05

Delivered approximately **\$3.6** million in savings across industrial automation, digital, and technology solutions

Modernizing control systems under tight shutdown windows?

Talk to our automation engineering experts today!

Cyient is a global lifecycle engineering services company powering mission-critical industries from design to aftermarket across products, plants, and networks. With 300+ customers and 15,000+ associates across 30+ countries, we combine human expertise, deep domain knowledge, and AI to deliver intelligent engineering for every lifecycle across Aerospace and Rail, Automotive and Mobility, Connectivity, Energy, Healthcare, Mining, Utilities, and beyond.

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