Water District Case Study

Lincoln Maine Water District Case Study
Legacy National Instruments replacement with scalable SCADA for municipal water distribution across multiple pump stations.
Industry: Water & Wastewater

Quick Facts

Attribute	Value
Customer	Lincoln Water District
Location	Lincoln, Maine
Pump Stations	4 (in separate buildings)
Storage	Twin 500,000-gallon steel standpipe tanks
Reservoir	Underground reservoir
I/O	Sixnet Ethertrak 2 modules
Network	Sixnet Cell Routers
Protocol	Modbus
Legacy System	National Instruments
Integrator	Mobius Automation (Minot, ME)

The Challenge

Challenge: Upgrade legacy National Instruments data collection system with a modern platform to sustain systems for future expansion.

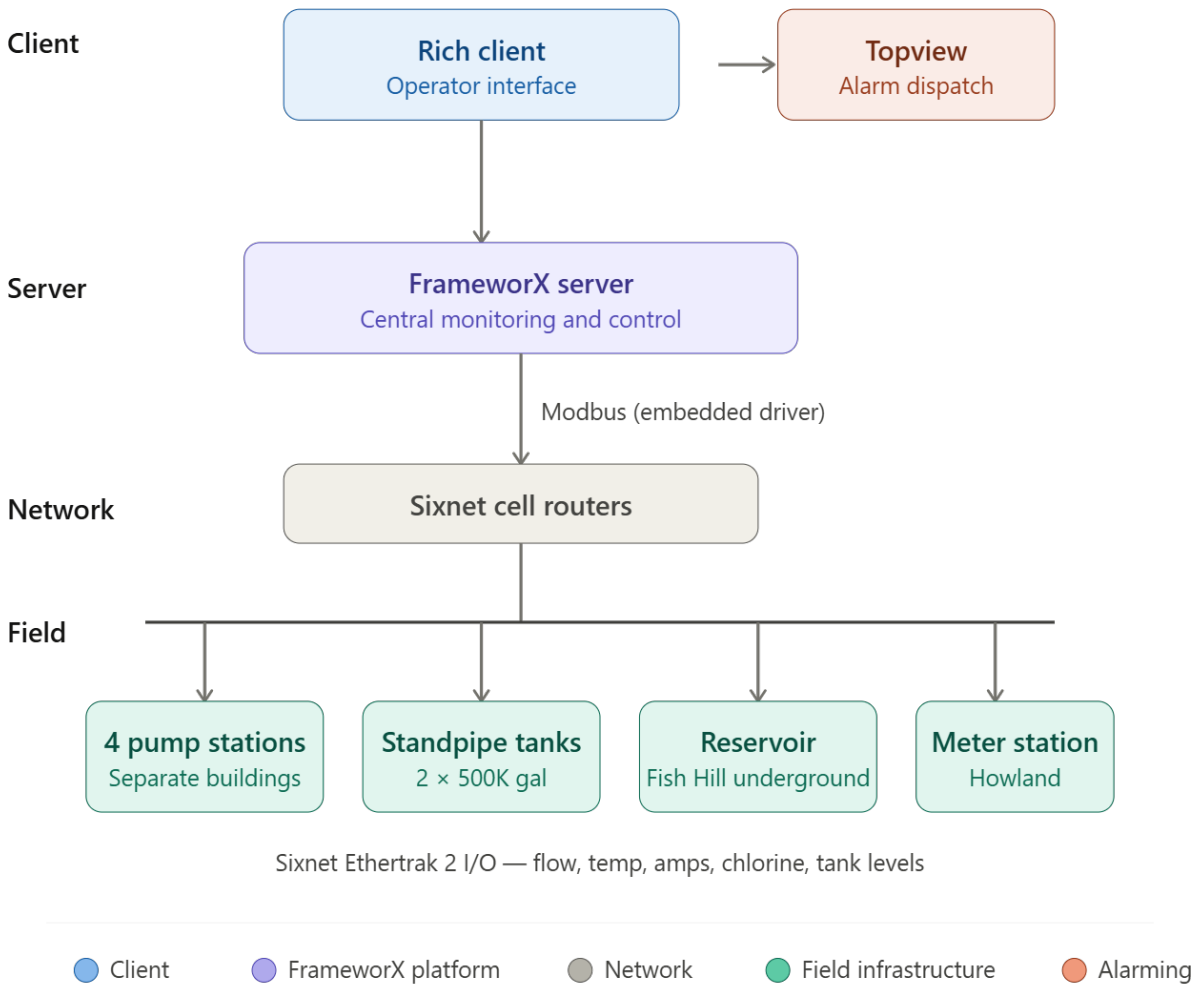
Specific pain points:

- Old system not stable enough for new requirements and expansion
- Legacy National Instruments system needed replacement
- Required monitoring of massive networks of piping, monitors, remote stations, and pumps
- Needed platform scalable for future growth (additional pumping stations and tanks)
- Central control room connectivity to distributed infrastructure

Impact: Without a stable, scalable platform, Lincoln Water District couldn't support planned expansion while maintaining reliable water service.

The Solution

Architecture



Tier	Component	Capabilities
Field	Sixnet Ethertrak 2 I/O Modules	Pump stations, tanks, reservoir
Network	Sixnet Cell Routers	Cellular connectivity to remote sites
Protocol	Modbus (embedded driver)	Device communication
Server	FrameworX Server	Central monitoring and control
Client	Rich Client	Operator interface
Alarming	Topview	Alarm notification dispatch

Infrastructure Monitored

Asset	Details
Pump Stations	4 stations in 4 separate buildings
Standpipe Tanks	Twin 500,000-gallon steel tanks
Underground Reservoir	Fish Hill Underground
Booster Pumps	Additional booster pump stations

Meter Station	Howland Meter Station

Monitored Parameters

- Flow rates
- Temperature
- Amperage
- Chlorine levels
- Tank levels (with overflow, low alarm, high alarm)

Alternatives Evaluated

- Citect SCADA
- FactoryStudio (selected)

Key Enablers

FrameworX capabilities that made this solution possible:

Capability	Application
Embedded Modbus Driver	Direct communication with Sixnet I/O modules
Scalability	Small to enterprise system growth
"Three Clicks to Everything"	Intuitive engineering environment
Unified Interface	All modules have same look and feel
Stability & Reliability	Monitor and control current and expansion devices
Topview Integration	Alarm dispatch to correct personnel and devices
Multi-Platform Runtime	.NET, Web, iOS, Android, Linux, Raspberry Pi

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The Results

- **Future-Proof Platform** — Scalable SCADA to carry district for several decades
- **Expansion Ready** — Easy to add more pumping stations and tanks as district grows
- **Stability & Reliability** — Inherent platform stability for critical water infrastructure
- **Easy Learning Curve** — "Three clicks to everything" engineering environment
- **Intuitive Platform** — Wide range of features and connectivity made selection easy
- **Centralized Control** — Monitor and control equipment across 4 separate buildings
- **Alarm Dispatch** — Topview integration routes alarms to correct personnel

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Customer Testimonial:

> "We found FactoryStudio to be a very easy and intuitive platform. The Scalability from a small to enterprise system, wide range of features and connectivity made FactoryStudio an easy choice."
>
> *— Mike Rioux, Mobius Automation*

Resources

Download case study: CaseStudy_WaterDistrict.pdf

This case demonstrates scalable municipal water SCADA replacing legacy National Instruments with future-proof expansion capability.

In this section...
