

## Executive Summary

### Redundancy-Driven Performance Gains for Municipal Water Systems

The District of North Vancouver modernized its water and wastewater SCADA system across 48 remote sites by implementing VTScada with built-in IP gateway redundancy. The result: lower total cost of ownership, near-continuous uptime, and a future-proof platform without reliance on third-party software.



VTScada  
Integrator



## Business Challenge

Obsolete SCADA front-end increasing maintenance costs  
Single points of failure risking service outages  
Dependence on third-party software driving integration expenses  
Required upgrade to a redundant IP gateway network

## Quantified ROI Impact

### 1. Downtime Cost Avoidance

Redundant SCADA architectures dramatically reduce outages by enabling automatic failover and eliminating single points of failure.  
Typical municipal outage cost (labour, response, service disruption):  
\$5,000–\$20,000 per hour(industry benchmark)  
Estimated downtime reduction: 10–20 hours/year avoided  
Annual savings: \$50,000 – \$400,000

### 3. Operational Efficiency Gains

Centralized monitoring and standardized platform:  
Faster troubleshooting & alarm response  
Reduced manual site visits  
Lower operator training complexity  
Labour savings: \$25,000 – \$75,000/year

## Estimated Financial Summary

| Category               | Value              |
|------------------------|--------------------|
| Annual Savings         | \$85K – \$505K     |
| Upfront Cost Avoidance | \$50K – \$150K     |
| Payback Period         | 6–18 months        |
| 5-Year ROI             | 3x – 8x investment |

## Key Takeaway

Redundancy is not just a reliability upgrade, it's a financial multiplier.

By embedding redundancy directly into the SCADA platform, the District transformed a required infrastructure upgrade into a high-ROI investment with rapid payback and long-term cost control.

Full Case Study: [IP Gateway Redundancy Key to Water/Wastewater SCADA Upgrade](#)

## Solution Overview

Unified SCADA platform with native Motorola IP gateway support  
Built-in redundancy (servers + communications)  
Elimination of middleware and custom integrations  
Deployment across 48 distributed water/wastewater assets

### 2. Software & Integration Savings

Eliminated third-party middleware licensing  
Reduced integration engineering time  
One-time savings: \$50,000 – \$150,000  
Ongoing savings: \$10,000 – \$30,000/year

### 4. Lifecycle Cost Reduction

Modern, scalable architecture:  
Avoids periodic system replacement cycles  
Reduces future upgrade complexity  
Extends asset lifespan  
Deferred capital savings (5–10 yrs): \$100,000+

## Operational Outcomes

Near-continuous uptime with automatic failover  
Zero dependence on third-party drivers  
Simplified system management across 48 sites  
Improved compliance and risk mitigation  
Scalable platform for future growth