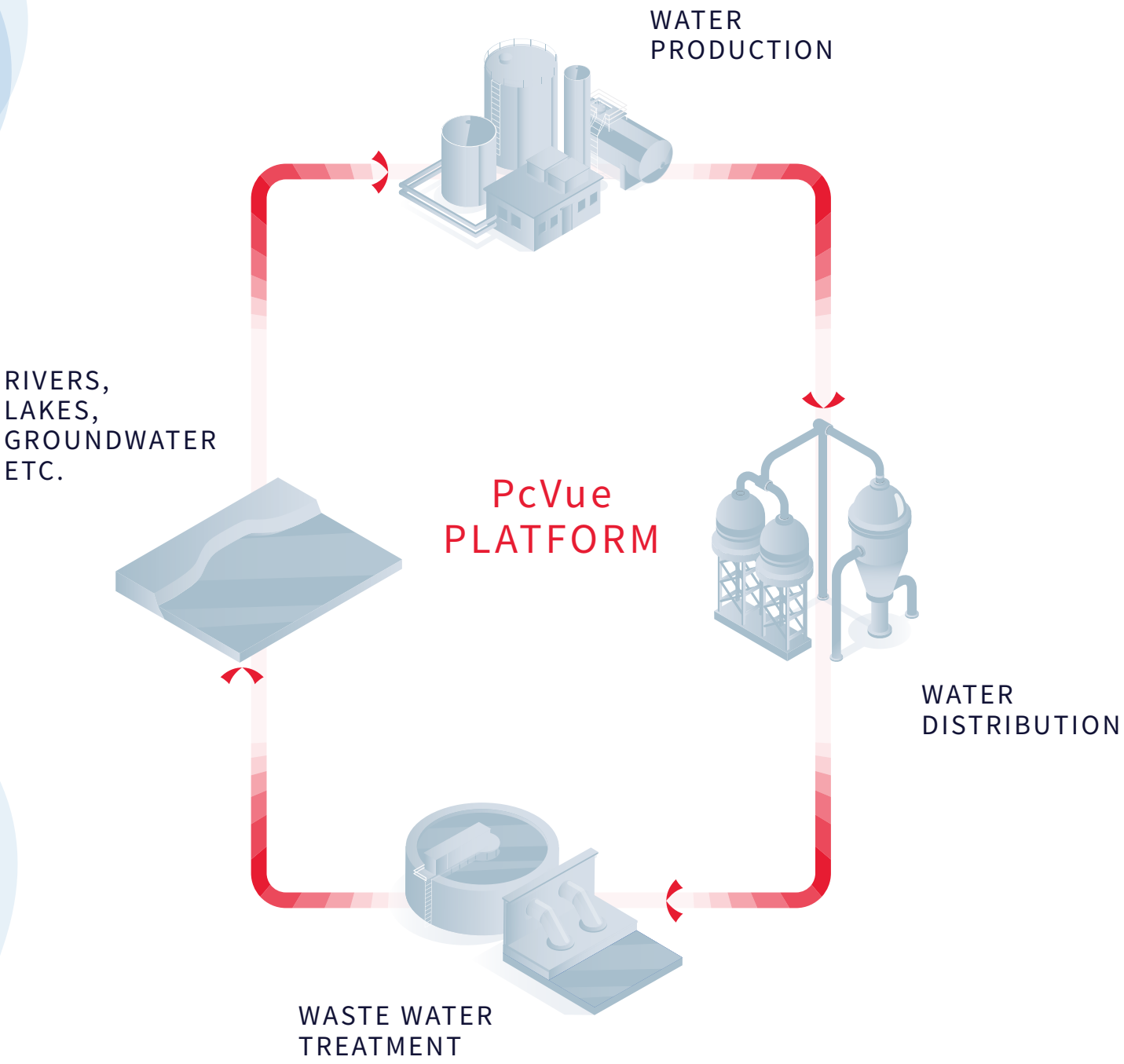
PcVue LET'S ENGINEER

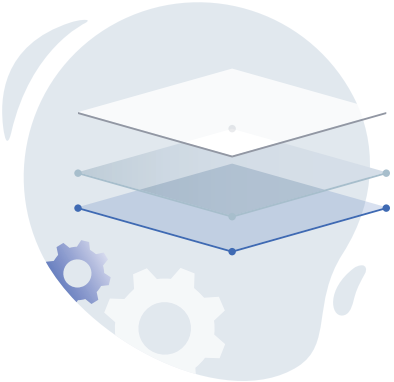
OPEN CONNECTIVITY SCADA SOFTWARE PLATFORM

SOLUTIONS FOR WATER

Water Production & Distribution
Wastewater Treatment


WATER
PRODUCTION
RIVERS,
LAKES,
GROUNDWATER
ETC.
PcVue
PLATFORM
WATER
DISTRIBUTION
WASTE WATER
TREATMENT

A platform that allows monitoring and controlling efficiently your water system, while making the design and the deployment easy, scalable and secure.



FEATURES

- Platform adapted to all kind of water systems
- Dedicated object libraries for Water
- Events and alarms treatment
- Powerful trends capabilities
- On-call and mobiles solutions
- Data processing and reporting tools
- High availability architectures

An offer designed for all water systems needs that meets the operations and regulation requirements

BENEFITS

- Monitor and control all kind of water systems
- Enables return on investment by reducing engineering time maintenance and energy costs
- Improve operationnal effectiveness to increase both productivity and quality of service

WHY CHOOSE PCVUE?

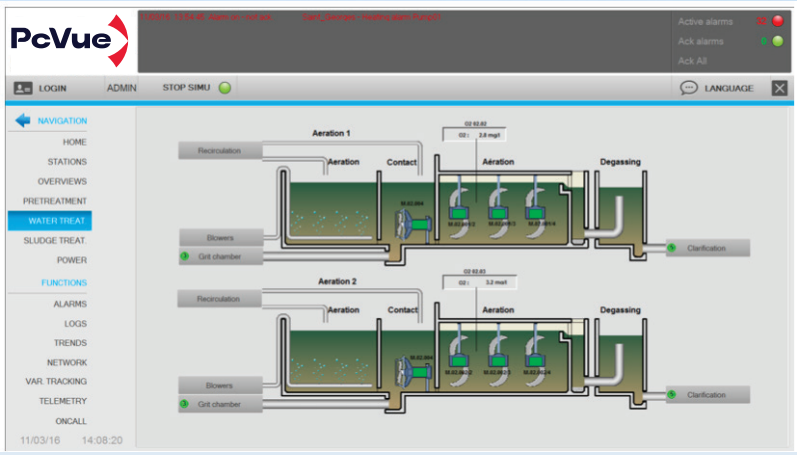
PcVue is a monitoring platform that provides the connectivity, functionality, and security required in water production, distribution, or treatment processes

Improve operational effectiveness to increase both productivity and quality of service.

The quality of water production or treatment imposes reliable systems capable of reacting quickly to potential defects.

The PcVue platform ensures a high availability of the system with redundancy mechanisms and security features.

The ergonomics and processing tools of PcVue are designed to allow operators to easily access important information and make the right decision very quickly. PcVue also offers on-call features and innovative mobiles solutions for remote operators.


PcVue
Active alarms
Ack alarms
Ack All
LOGIN
ADMIN
STOP SIMU
LANGUAGE
NAVIGATION
HOME
STATIONS
OVERVIEWS
PRETREATMENT
WATER TREAT.
SLUDGE TREAT.
POWER
FUNCTIONS
ALARMS
LOGS
TRENDS
NETWORK
VAR. TRACKING
TELEMETRY
ONCALL
11/03/16
14:08:20
Aeration 1
Recirculation
Aeration
Contact
Aération
Degassing
Blowers
Grit chamber
Clarification
Aeration 2
Recirculation
Aeration
Contact
Aeration
Degassing
Blowers
Grit chamber
Clarification

A SINGLE PLATFORM TO MONITOR AND CONTROL ANY KIND OF WATER PROCESSES

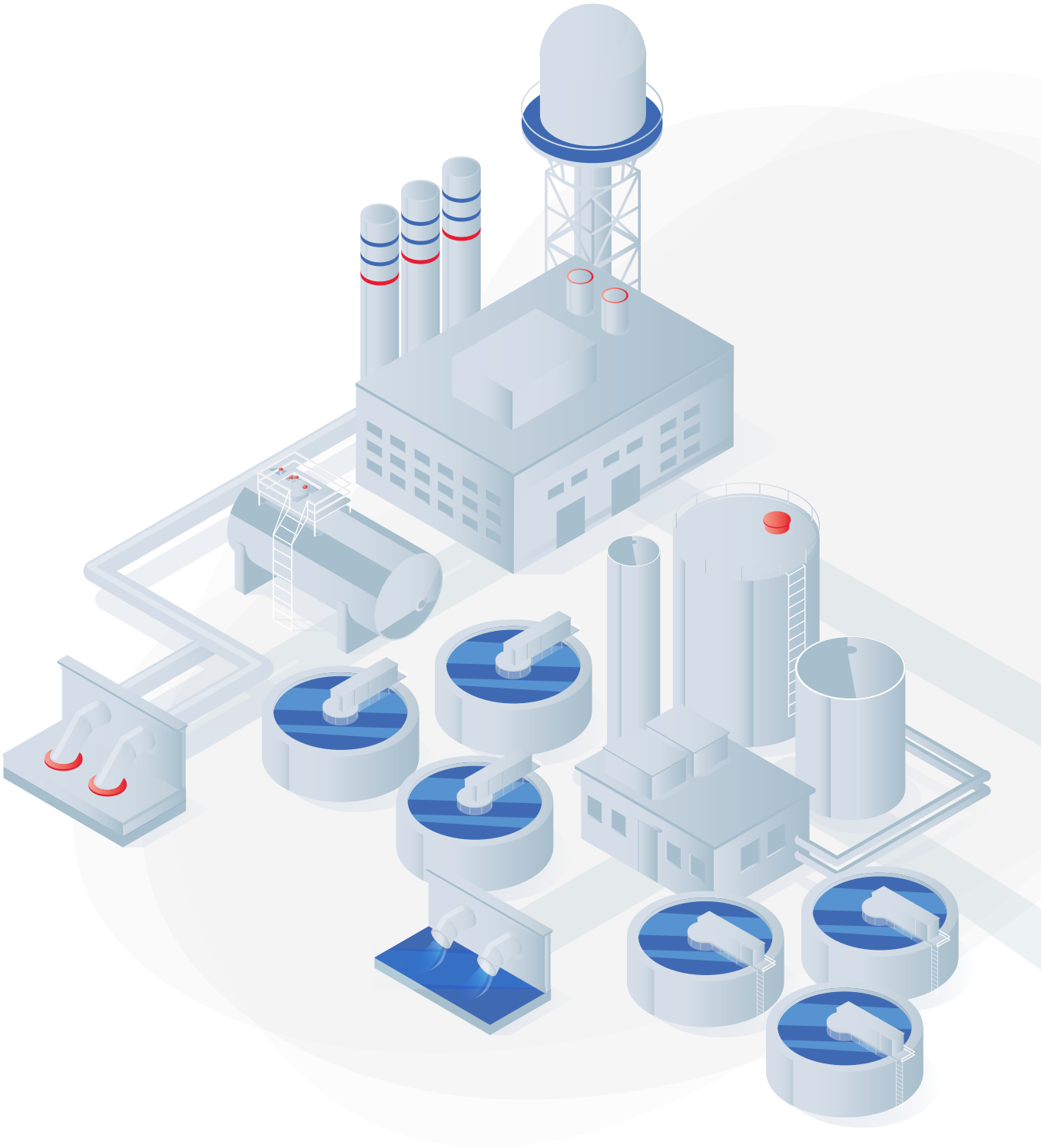
The PcVue platform makes it possible to connect to all the equipment and systems needed for the production, distribution and treatment of water, thus guaranteeing uniqueness of data and treatments.

Enables return on investment by reducing engineering and maintenance time.

Based on an object-oriented approach, PcVue's configuration environment minimizes the risks of error, to reduce the development costs and to simplificate the applicative maintenance.

Help to meet the requirements for compliance and regulatory reporting

PcVue offers a set of solutions (archiving, processing, ...) to analyze data and provide regulator with reports of quality indicators.



SUPERVISE YOUR INSTALLATIONS EFFICIENTLY

VISUALIZATION AND COMMANDS

- Customizable, modern and intuitive graphical interface
- Objects libraries dedicated to Water
- Real-time visualization of the installation' status
- Sending commands to the devices

MOBILE SOLUTIONS

- Remote control on smartphone or tablet
- Mobile app for alarms & events notifications
- Mobile app for automatic display of geo-contextual info depending on the location and user role

ENSURE THE RELIABILITY AND THE AVAILABILITY OF THE SYSTEM

ALARMS & EVENTS MANAGEMENT

- Data display by zone, equipment, use...
- Real time and historical data trends
- Comparative trends
- Threshold display
- Data trend export to Excel

MONITORING AND ANALYSIS OF ENERGY PERFORMANCE

- Customizable Dashboard
- KPI – Key Performance Indicators
- Consumption balance sheets by period
- Archiving data in a local database or in the cloud (Amazon, Microsoft® Azure,...)

A SINGLE PLATFORM TO OPERATE THE WATER SYSTEMS

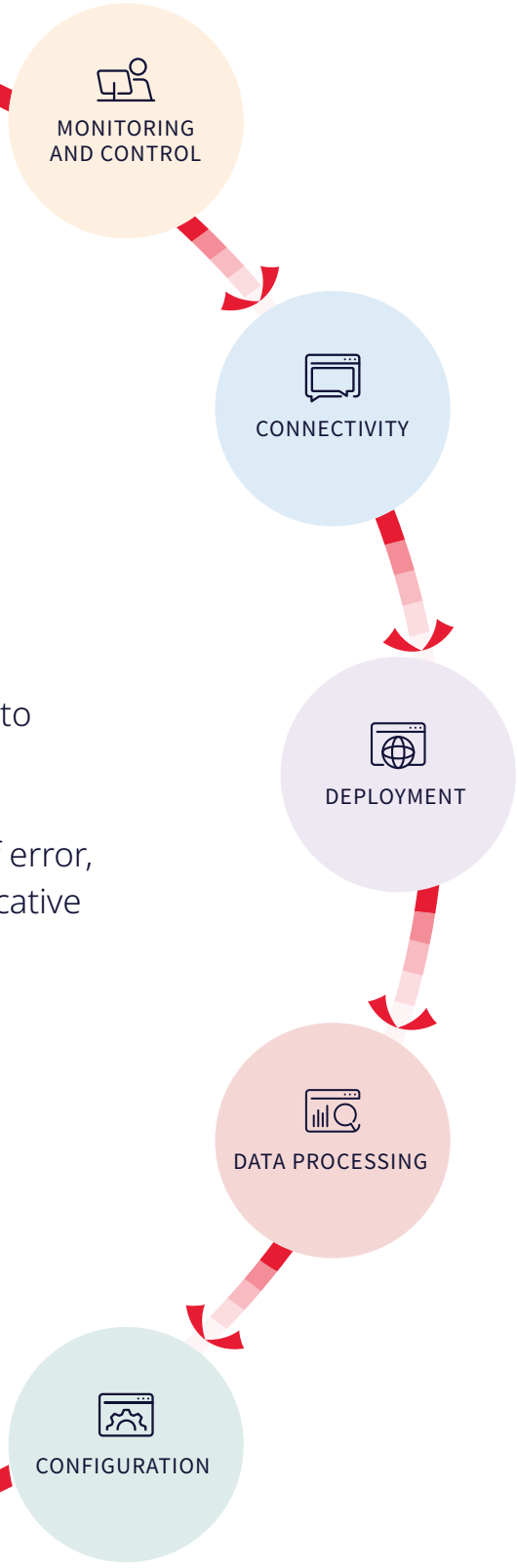
OPTIMIZE RETURN ON INVESTMENT (ROI) WHILE ENSURING REGULATORY COMPLIANCE

Control of performance, operating costs, and regulatory compliance

OPERATING DATA PROCESSING

- Built-in SQL recording system
- Editing of dynamic reports (consumption balance sheets, ...) from archived data
- Data statistics export to Excel
- Trends comparison
- Built-in Email & SMS features to broadcast message on demand from PcVue (ie triggered on alarm)
- Web Interface to generate and visualize reports on demand

ENGINEERING & INTEGRATION



Create, maintain and update the project

Optimizing development costs with a platform, easy to implement and maintain.

An object-oriented approach to minimize the risks of error, to reduce development costs and to simplify the applicative maintenance.

Scalable deployment, from the local station to the multi-site architecture.

Interoperability, from the production to the several information systems of the company.

MONITORING AND CONTROL

Graphical Interface
- Intuitive
- 2D/3D object library
- +60 predefined animations
- Multi-lingual HMI Platform

Advanced alarm and event management
Configurable event/alarm windows
Sorting filter by status, priority and/or attribute - modifiable online
Contextual alarm management
Alarm counter

CONNECTIVITY

Extended drivers range
OPC server SOFREL - S50, S500 ,
Sofbus-PC , Sofbus-PL, Lac- bus-RTU,
SMS for S500, LS,
Box, S50
DEV I/O server
PERAX - P200, P400, P16,
Perax time stamped

WIT - TRS II
Modbus IP
S7 IP
Ethernet/IP
Rockwell IP
+100 industrial protocols

Interoperability
- OPC (DA/UA)
- Web services (RESTful)
- SDK
- UDC - Connection to any data sources

DEPLOYMENT

Versatile architectures
- Single station
- Client/Servers
- Distributed

Mobiles solutions
- Smart mobiles app
- HTML5 web client
- Remote access

Safety & security
- Windows Active Directory
- Secure connexions using HTTPS

Central version management

DATA PROCESSING

Archiving
Built-in SQLServer archiving, centralized or local Configurable historic depth Maintenance plan (export, purge...)

Universal data connector :
SQL bridge to connect any ADO.net providers - ERP - MES - CMMS - ...

Recipe management
- Embedded system of recipe management
- Development tool for the management of batches

Traceability, performance monitoring
- Productivity indicators (TRS, TPM...)
- Design and generation of dynamic production reports, in several format and available online
- Connection with IT, ERP, CMMS, Quality...

CONFIGURATION

Smart Generators
Mass import configuration from third-party softwares or from external configuration platforms (PLC's platforms, CAD softwares, proprietary softwares, SCADA...)

Schneider Unity®, Siemens® TIA portal, FactoryLink, XML....

Application Explorer
Configuration tool "all-in-one" for the settings and the diagnosis

Application Architect
Modeling and generating projects

SUCCESS STORY

NORTHERN ROCKIES REGIONAL MUNICIPALITY WATER AND WASTEWATER TREATMENT

PcVue enables operations team to improve their productivity

The Northern Rockies Region of northeastern British Columbia is blessed with a significant wealth and diversity of natural resources, heritage and cultural attributes. Over the last four decades, the region has experienced up and down cycles due to the growth and decline of numerous resources and development activities. There have been interesting development proposals such as the Horn River Shale Gas Development, a working partnership that would link the Northern Rockies Regional Municipality, Fort Nelson, and First Nation communities with the oil and gas industry and provincial government agencies.

Configuration of the water treatment system.

The Northern Rockies Regional Municipality water and wastewater treatment facilities - comprising of a network of pump houses and other facilities - produces the treated water needed to run operations for the oil & gas patch and forest & mining activities, in addition to serving its population of about 5,000 residents. They have a bulk water station that furnishes water for those who are not on municipal water and to the trucks that transport water to operations in the oil/gas patch,
such as for fracking.

"Fort Nelson has a fully automated bulk water station, which delivers an average of 400 m3 (14,000 ft3) of treated water for residential and industrial usage daily. This station is fully integrated into the municipalities' SCADA system, which facilitates monitoring of flow totalization, alarming of heat trace and boiler systems, as well as trending chlorine residual levels in the water being dispensed, etc.," said Michael Ferguson, Electrical and Automation Specialist for the Northern Rockies Regional Municipality.

According to Ferguson, the municipality recently moved from FactoryLink, to PcVue for use with their SCADA system. Fort Nelson's SCADA system includes 22 Motorola ACE RTUs at various pump and lift stations, which communicate over a 900 MHz IP Radio network.

"We have two Motorola IP Gateways (of the ACE3600 platform), which are primary and redundantly configured.

The IP Gateways are the interposing link between the network of field RTUs and the managing Servers (also redundantly configured). Our servers are located at the Municipalities Water Treatment Plant."

Through the help of their value-added reseller (VAR), CTH Systems, they chose the hardware independent PcVue SCADA Solution that integrates seamlessly with CTH Systems'

IM-SCADATM, an advanced multiprotocol measurement and communication software. "CTH Systems provided the key component (the IM-SCADATM Driver Software) that allowed for a quick transition to PcVue," said Ferguson.

CTH Systems used PcVue's SCADA application builder tool, called Smart Generator, to port Northern Rockies applications to a more secure and robust SCADA architecture. PcVue and CTH's IM-SCADATM software sit on these servers as well as the historical databases.

First and only resource municipality.

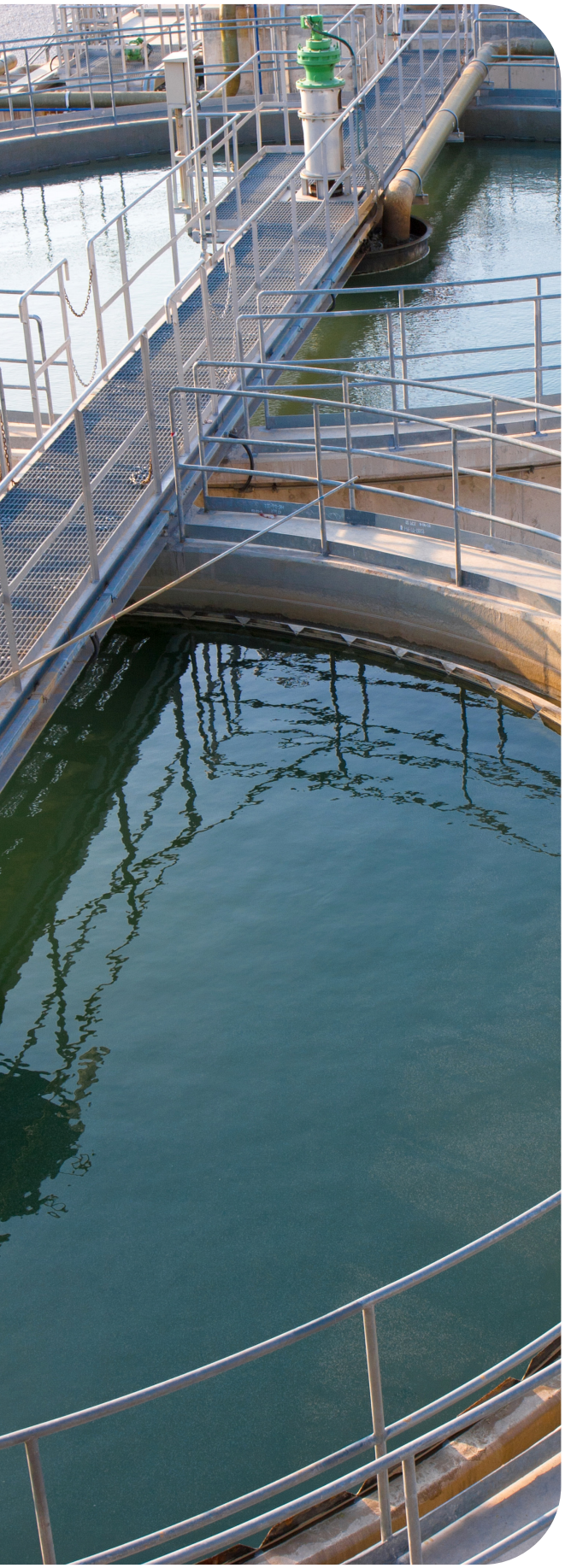
The Fort Nelson facility also happens to be British Columbia's first and only "Resource Municipality" to service the industry, local residents, and businesses. It covers more than 10% of the Province and includes the majority of the vast Horn River Shale Gas Development. Ferguson manages the electrical systems, process control, automation and communication component of the municipalities' water and wastewater infrastructure.

Currently Fort Nelson's SCADA system manages about 8,000 tags. With ongoing capital projects such as a new UV disinfection station to treat wastewater effluent, the system is poised for growth.

Fort Nelson's water treatment process begins by drawing raw water from the Muskwa River, downstream of the Alaska Highway bridge crossing. There are several critical processes involved in filling the municipalities' raw water reservoirs. The initial pumping of the raw water from the Muskwa River requires multi-stage pumping with PID control to overcome tremendous head pressure and control the variable flow rates.

"The process of treating water is not a static process for us. Process variables such as turbidity, color, and organics are influenced from things such as weather events. For instance, we once experienced a mudslide where the river we pump raw water from was impacted," said Ferguson.

Report and trend generation for preventative maintenance.



CTH has provided engineering support to allow the municipality to export data in the form of text files (CSV format) to a report and trend generation service called 'FlowWorks.' FlowWorks conditions incoming data with various algorithms such as time-weighted averaging, allowing for the municipalities' non-operations personnel to view trends and generate reports. Additionally CTH has provided real-time and historical trending as an inherent feature of the IM-SCADATM driver. This feature presents the data needed to make decisions on how to best optimize operations.

As Ferguson further works to develop the potential of Fort Nelson's water and wastewater SCADA system, he plans to integrate PcVue with other management applications such as their work order system.

"The goal of our responsible management and preventative maintenance philosophy is to 'bundle' systems like SCADA, PDAs, and work order application software together. To responsibly operate and maintain a productive multi-million dollar infrastructure such as ours, it requires that we combine the use of technologies, the efforts of personnel, and a forward thinking approach," says Ferguson.

Currently Ferguson is working to have automatically generated work orders based on pump run-times and pressure changes that indicate wearing seals, etc. In addition, he would like to have the ability to view system data such as alarms, pressure, and levels from a mobile device such as an iPhone, which is now possible with the use of the latest version of the IM- SCADATM driver.

"Having the freedom to access real-time system data from a mobile phone is a welcomed feature, which will get a lot of use from operators at NRRM," adds Ferguson.

PcVue is configured to have one mimic per site along with configured pop-up windows so that if additional details are needed on a pump house or certain critical values, an operator can just simply click on the icon to open a pop up window to give the information needed. "We have multiple mimics built in PcVue that facilitate the various exchanges between the operator and host. Graphically the mimics are the same as what would have been in FactoryLink," continued Ferguson.

PcVue contributes to Fort Nelson's effort to reduce reactionary repairs, and unexpected equipment replacement. This is achievable by tailoring alarm and reporting functionality to expose issues at their incipient stage. The use of a fully automated SCADA system is essential in downtime prevention in water and wastewater services provided by this growing municipality.

BUSINESS CHALLENGES

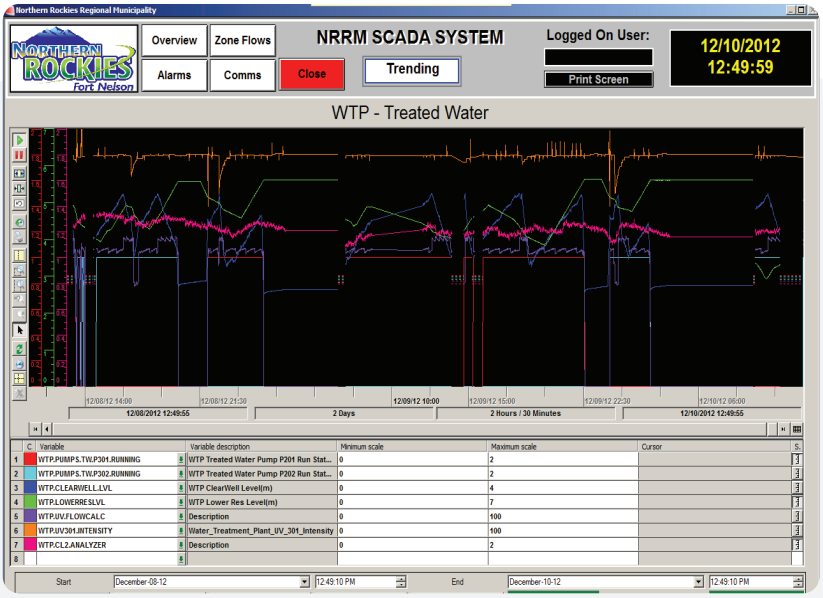
- Automate and reduce repetitive tasks and improve staff productivity

SUCCESS KEYS

- Tight integration between the Remote Terminal Units and the SCADA host for quick resolution of issues

RESULTS

- Solution with PcVue allows operations to be more efficient in their work



CUSTOMER
Northern Rockies

CANADA

SYSTEM INTEGRATOR
CTH Systems

REFERENCES

SOME OF OUR REFERENCES

PUBLIACQUA DRINKING WATER PLANT / Anconella - Florence, Italy
Monitor and control of the Anconella drinking water plant

DESCRIPTION
- Managing the purification processes (240,000m3 per day) and electricity consumption.
- Historical data are transferred via ODBC to a central archive for access on the company's intranet.

SUPER RIMIEZ WATERWORKS / Nice - France
Central control of the station's water treatment and telecontrol for the upstream and downstream network

DESCRIPTION
- One of the most modern drinking water production plant in Europe, with an output of 150,000m3 per day.
- The supervisory system controls the station's processes (sifting, coagulation, flocculation, decantation, filtration and ozonization)
- Remote monitoring of the upstream canal & alarm stations
- Downstream monitoring of distribution network for the city of Nice, with extensions as far as Italy and occasionally to Monaco.

GRENOBLE WATER COMPANY / Grenoble - France
Monitor and control of water distribution for Grenoble

DESCRIPTION
- 220 km of pipes
- 16 million m3 of water distributed annually
- 163,000 residents supplied

TAIPEI CITY RAIN WATER PUMPING STATIONS / Taipei - Taiwan

Monitor and control the rain-water pumping station

DESCRIPTION

The rain-water pumping station is one of the most important part of the city flooding preventing system.

This system is split in 4 Operational Areas and one Central Management Area.

COLLECTION AND TRANSPORT OF WATER SIAAP (SYNDICAT INTERDÉPARTEMENTAL DE AGGLOMÉRATION PARISIENNE) / Paris - France

SCORE (System for Control, Organization and Regulation of Emission) for Paris and suburbs

DESCRIPTION

SIAAP manages a network of 440 km of collectors and outfalls to transport all sewage collected in the sewers.

To ensure the safety of the transport of wastewater and the one of urban equipment, the SIAAP must regularly inspect, maintain and clean the network.

Supplier for majors water companies world wide

- VEOLIA EAU
- SAUR
- Lyonnaise des Eaux
- Many Water companies

OPEN CONNECTIVITY SCADA SOFTWARE PLATFORM

In business for over 40 years, ARC Informatique is a forward-thinking industrial software editor with **16 offices worldwide**. Using the latest technologies, ARC Informatique develops PcVue, a reliable, secure, and robust SCADA platform, dedicated to monitoring and control applications.

To answer the needs of operational efficiency, productivity and quality of service, PcVue delivers an efficient platform to monitor and control Water/Wastewater systems, crucial services to the community. Through PcVue's real-time supervision, alarms management, data processing and reporting capabilities, water/wastewater utilities can ensure service availability, reliability and compliance to regulation requirements.

With **160+ dynamic team members**, we are both physically very close and culturally compatible with our user base, thereby facilitating responsive customer care. Our **ISO 9001, 14001 and 27001** certifications ensure quality, sustainability, and security in our development processes from design to delivery.

A CUSTOMER-ORIENTED APPROACH

- Listen to and answer our customers
- Develop and adapt our solutions via R&D
- Responsive technical support.

GLOBAL PLAYER
LOCAL APPROACH

16
STRATEGIC BASES

50+
VAR WORLDWIDE

200+
LOCAL SI PARTNERS

CONTINUOUS QUALITY IMPROVEMENT

Microsoft CERTIFIED Partner

swiss safety center ISO 9001 ISO 14001 ISO 27001 certified system

ARC Informatique is ISO 9001, ISO 14001 and 27001 certified

OPC FOUNDATION MEMBER

Solutions for
#Water

Water Production
& Distribution
Wastewater
Treatment

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