

## Engineering Solutions

# CONTROL SYSTEMS

### Control Systems

- > Programmable Logic Controllers (PLC)
- > Programmable Automation Controllers (PAC)
- > Remote Terminal Units (RTU)
- > Distributed Control Systems (DCS)
- > VFDs and Servo Drives
- > Fieldbus Networks

### Control Systems Design Service Provider

Alithya has a proven track record of designing and developing nuclear-grade control systems that contain Real-Time Process Control software and comply with the regulatory requirements of the Canadian nuclear industry. We have implemented a wide-range of control systems from Distributed Control Systems (DCSs) and Independent Control Systems (ICSs) to standalone single-loop controllers. In addition, we have experience in PLCs, HMIs, SCADA, data historians (PI) and plant information systems.

### Nuclear Ready Control Systems

We deliver safe, reliable, cyber-secure, nuclear-ready control systems by leveraging our expertise in the following areas: nuclear Engineering Change Control (ECC) process, software engineering standards (category 1, category 2, category 3), software and hardware qualification standards (CSA N290.14), and cyber security standards (CSA N290.7) and extensive domain experience.

### Mission Critical Expertise

- > Heavy Water Management
- > Nuclear Waste Management
- > Reactor Control
- > Motion Control
- > Building Management Systems
- > Inspection & Maintenance Tooling
- > Oil Movement & Storage
- > Safety Shutdown Systems
- > Fuelling Machine Control
- > Vapour Recovery Dryer System

## SCADA & Plant Information Systems

- > Custom HMI Displays
- > Process Depiction
- > Sequence of Events Recorder
- > Data Historian
- > Reporting and Trending
- > Legacy System Replacement OPC

**Trusted Control System and Digital Transformation Partner** For over 35 years, Alithya has developed a distinguished reputation based on its flawless track record of solutions, long-term partnerships with customers, and deep expertise in the energy sector. Alithya has delivered hundreds of projects on-time and on-budget to nuclear power plant customers across Canada and the US.

*Our expertise spans from the control room to the boardroom* – from the design and development of safety-critical shutdown systems and reactor control systems to safety-related monitoring, HMI/SCADA systems, plant data historians, cyber security, and delivering IT solutions, including CASSI™.

As a CSA N299.1-compliant company, our unique mix of control system, software design, and integration experience, along with regulatory and cyber security compliance expertise, sets us apart from other software design service providers. Alithya has a proven history of producing innovative solutions and is well positioned to help customers with modernization/digital transformation using technologies, such as cyber security, big data, Industrial Internet of Things (IIOT), Artificial Intelligence (AI), and Machine Learning.

## Contact Us

**AS A NORTH AMERICAN LEADER IN STRATEGY AND DIGITAL TECHNOLOGY.** Alithya designs and builds innovative and efficient digital solutions for business challenges. Our clients cover a large spectrum of sectors including Banking, Investment and Insurance, Energy, Manufacturing, Retail and Distribution, Telecommunications, Transportation, Professional services, Healthcare and Government. Our 2,000 professionals in Canada, the US, and Europe combine pragmatic understanding and creative thinking to structure and streamline intricate operational ecosystems, help transform their businesses, and drive their growth every single day.

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