

Engineering Solutions DESIGNED FOR NUCLEAR

Engineering Services

- > Preliminary Engineering
- > System Architecture
- > Software/Hardware Design and Implementation
- > System Integration
- > Verification and Validation Testing
- > User Acceptance Testing Support
- > Installation and Commissioning
- > Training
- > Support

Your Software Design Provider of Choice

We are a software design service provider catering to engineering projects in the Canadian nuclear industry. We offer software design engineering change packages, along with all relevant software documents, for multiple control system and software design modifications. We have extensive expertise and domain knowledge in nuclear and can provide services and guidance in area such as 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)

In conjunction with Alithya's hardware and software services, we provide a suite of services tailored to enhance the overall cyber security of our clients.

Process Control Systems

Industrial Control Systems employ specific technologies where traditional cyber security strategies may not always be suitable. Alithya has substantial experience with these systems and understands the importance of securing your digital assets without having to affect critical system functions. Learning and adopting these niche cyber security strategies will help you stay ahead of potential risks and help you deliver your products with confidence.

Planning and Management Support

- > Software Design Service Provider activities
- > Requirements Analysis and Specification
- > Strategic and Project Planning
- > Procurement
- > Project Management

Specialized Services

- > Reverse Engineering
- > Legacy System Replacement
- > Safety Systems Expertise
- > Third-Party Product Software Assessment
- > Critical Design Reviews

Quality Assured

Alithya's Nuclear Quality Management System (NQMS) complies with CSA N299.1, CSA Z299.1, CSA N286-12, CSA N286-05, CSA N286.7-16, CAN/CSA Q396.1.1, Category II/III Software Engineering.

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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