



CSI

Driving Industrial Innovation through Open Process Automation



Don Bartusiak,
President

CSI is leading a tangible shift in industrial control systems. It specializes in open standards-based architecture built on the Open Process Automation Standard (O-PASTM) that replaces closed, vendor-specific platforms. By participating in the Coalition for Open Process Automation (COPA), CSI brings COPA Control System, the first commercially available O-PAS based control system that offers modularity, interoperability and cybersecurity. The COPA Control System integrates OT and IT components and is tailored to each site's specific needs.

By removing vendor lock-in, lowering the total cost of ownership and strengthening cybersecurity, CSI enables the adoption of technologies such as fast-cycle-time Model Predictive Control and artificial intelligence. In addition, CSI supports clients with a full range of services, including consulting and training, specialized engineering services and process control software that help organizations design, deploy and scale O-PAS systems effectively.

"The significance lies in reducing the risk of new technology adoption. Customers can be confident they are not engaging with untested or experimental solutions, as the products involved are already proven and supported by established suppliers," says Don Bartusiak, President.

WHY OPEN SYSTEMS MATTER

In 2009, ExxonMobil faced an estimated \$5 billion undertaking to upgrade its refining and chemical control systems; these were basically non-return projects. After discussions with major suppliers, the team concluded it did not matter which vendor the company purchased from, since the proprietary systems were not interoperable.

The O-PAS Standard defines an open architecture that treats control functions as plug-and-play components. This enables targeted upgrades rather than costly full-system replacements and allows operators to select the most effective solution for each need. CSI and its partners are putting this approach into practice by integrating field-proven hardware and software with the open architecture, verifying conformance and interoperability through independent testing and delivering site-specific systems that evolve without vendor lock-in.

TURNING COMPLEXITY INTO COMPETITIVE ADVANTAGE

CSI's work spans two lines of business. One focuses on systems integration technology and services based on O-PAS, and the other delivers advanced control software products and application services. The leadership team combines deep process control expertise with

advanced IT and technical knowledge to bridge OT and IT requirements, apply proven technologies and build new capabilities for future needs. CSI built the COPA with a network of technology suppliers, systems integrators, and partners. The coalition gives the scale and credibility needed to engage large, conservative operating companies.

This approach has demonstrated clear results numerous times. A project with Cargill, a global leader in agriculture and food, commissioned CSI and partners to test the O-PAS-based approach by designing and costing a control system for a complex edible oil refinery with 14,000 input-output points. Cargill and its engineering contractor then compared that design with three commercially available distributed control systems.

The findings were decisive. Hardware and software for the O-PAS-based system cost about half of a traditional distributed control system. When engineering was included, the initial project cost was about 10 percent lower. Over a 25-year lifecycle, Cargill calculated nearly 70 percent lower total cost of ownership. Savings stemmed from replacing modular components instead of entire systems and from modular software updates that reduce downtime.

CSI has moved from starter kits and training systems to projects that put O-PAS systems into production service. With several confidential projects underway, CSI is ready to take on tomorrow's challenges, today. This is no longer a concept or slideware. It is delivering projects that put systems into production. 

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