

Production control is singularly defined as the activity of monitoring and controlling. Historically, there were two different production control technologies: Distributed Control Systems (DCS) primarily for the process industries and Programmable Logic Controllers (PLC) used in discrete control. However, we are at the next inflection point in control technology and with our social, business, and technology models changing, it is time to redefine a modern control system.

The Value of an Integrated Automation Architecture

Three macro trends are driving the inflection point. First, after building new capacity for decades, process manufacturers are investing more in optimizing and modernizing existing facilities to get more out of what they have. Secondly, a growing number of process and hybrid manufacturers employ both discrete and process control in their production.

Control systems of the future need an automation architecture that fulfills the needs of traditional and hybrid process control applications.

They want an integrated control architecture for ease of integration and maintenance, and from a cybersecurity standpoint. And third, the convergence of Operational Technologies (OT) and Information Technologies (IT), i.e. cloud computing, digital twins, mobility, IIoT, analytics, AI, etc., will create better insight and change the

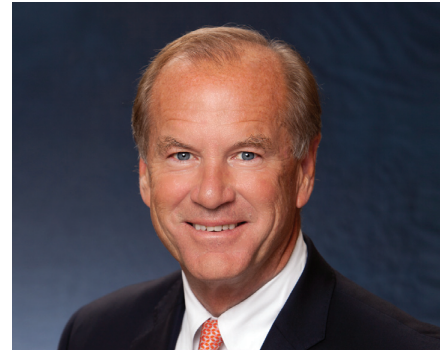
way plants are built and operated. The investment and ROI equations will change dramatically.

This will have dramatic implications on future products, services, architectures, and business models in the control industry. As an early example of that, Emerson has developed a new paradigm in control technology – a multi-functionality controller that is both a powerful standalone controller that works in many traditional PLC applications, yet easily integrates into a full DCS for total plant control.

It also has an OPC UA server capability that provides a powerful edge controller functionality to connect to the Industrial Internet of Things (IIoT). It lays the foundation for a truly integrated plant data environment that is essential to capturing the full benefits of the IIoT, both today and with technologies of the future.

Control systems of the future need an automation architecture that fulfills the needs of traditional and hybrid process control applications, and lays the foundation of IIoT strategies.

The full benefit of this integrated architecture is the ease and efficiency that comes when process and hybrid



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manufacturers can rely on a single solutions provider—with the industry and technological expertise—to collaborate, innovate, and create a secure production control foundation so production facilities can operate safely, reliably, and profitability even in the new digital age.



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