



Informed Operational Decisions Based on Multi-Sourced Information

Save time and effort with standards-based data connections.

Data management directly affects plant operations and productivity. To be used most effectively, data must be shared among control systems, manufacturing execution systems, and enterprise business systems. Too often, data is blocked from those areas due to disparate data types, data security concerns, or the expense of data mapping and data maintenance. Costs of data silos can be invisible, and they can pile up.

“66% of system integration projects were on time. 47% were rated as moderately effective.”

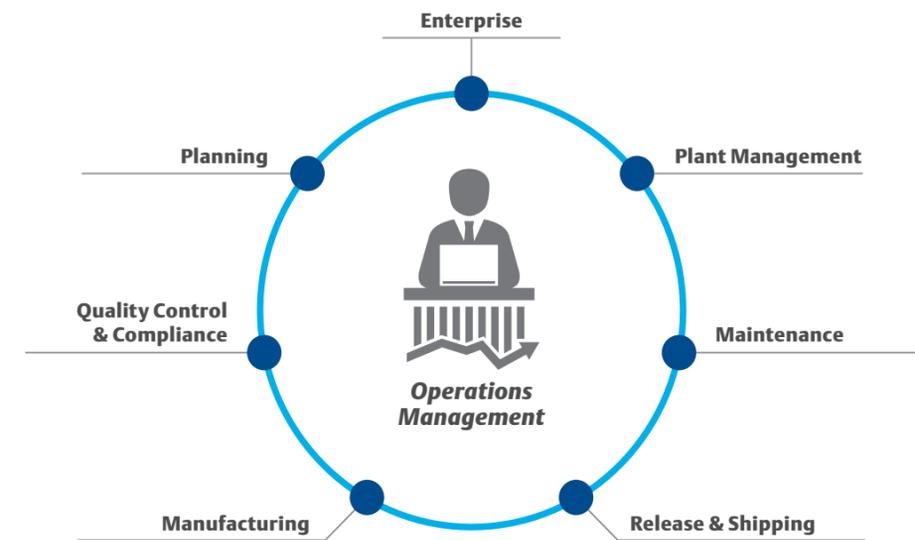
— Control Engineering, CFE Media, 2015 System Integration Study

Overall, operations and consequently plant profitability suffer from these issues:

Not Effectively Using Data because of Disparate Data Types — Field data is valuable when shared throughout the control system for control action, alarming, and operator decisions. Different formats, however, can make the data from various sources unusable to the control system. Engineers must determine the best way to bring the data into the system and present information to the operator. That takes time and research. If data management becomes a manual task, human error is introduced and can impact plant operations and production.

Cannot Easily Share Data between Management Systems and the Control System — Security and format issues sometimes block data between the control system and business systems, thus preventing important analysis. If data is lost or blocked at any step in the data-chain, your plant’s profitability will suffer. Engineers need to configure firewalls and manage different domains. After data is successfully brought into the control system, you still must manage user names, passwords, and data authentication and authorization.

Data is not Readily Used in Operations — After data has been successfully delivered to the control system, you must design the most effective visual methods such as user graphics, alarming strategy, and production reports to inform the operators and guide them to successful actions. You must understand how the data will be used in the process and consider how to present it in a meaningful way. This work can be time consuming filled with trial and error.



Operation Streamlined with Easy Data Sharing

When data flows among systems — from the field to the control system to the management systems and back — you understand the power of information influencing success. The DeltaV™ system was engineered to promote ease of connectivity. Once the data is in, the system treats it as native and streamlines the complete business process. All this is implemented within easy-to-use human-machine interfaces (HMIs).

Data Moving between the Field and the Control System

Using field device data in the DeltaV distributed control system (DCS) is easy. In fact, at the device level, the DeltaV system provides plug-and-play capability for runtime and diagnostics with minimal configuration in a variety of protocols. Connection configuration is accomplished through DeltaV’s easy-to-use engineering tools. Data is physically connected using reliable hardware specifically designed and tested for this task: I/O cards, Ethernet I/O Card (EIOC), and the DeltaV Application Station.

From the start, Emerson’s goal is to make data connections easy, minimizing the need for a customized engineering solution. With these tools, you can eliminate costly custom applications that are hard to maintain and remove errors during start-up and maintenance because data comes directly from the connected equipment.

Find Operational Improvements from a Fully Integrated Enterprise

With the kind of complete data integration and visibility offered in the Emerson solution, people have the information they need to make decisions —reliably, securely, and in real time. In fact, using the standard OPC protocol and robust

Web Services, the DeltaV system connects to any layer of the manufacturing environment. For example updates can be sent from the DeltaV system to enterprise business systems such as Emerson’s Manufacturing Execution System (MES), Syncade™, and other systems on the network. Data integration provides complete visibility into the state of the plant for those who need to know.

No Special Treatment Needed for Shared Data

Once the data is in the DeltaV system, it is considered as native data and is used easily for control logic, alarming, batch logic, displays, monitoring, and histories. This ease minimizes the time required for configuration of screens and reports. It enables the team to make more effective decisions that ultimately improve operations.

Simplifying data integration enables the DeltaV system to treat all multi-sourced data as its own. Because all data is presented in a consistent fashion, operators can make intuitive decisions to run their plant better. Whether reporting alarms to shift supervisors or changing control-loop parameters on a graphic, the system just works regardless of the data connections behind the screen — the DeltaV system does that hard work to make the operator’s job easier.

Contact Emerson for Streamlined Knowledge Sharing

Data Integration with the DeltaV system provides data between the field and business systems with minimal setup time. Decision makers at every plant level — engineering, operations, and production — can get the critical data they need, reliably, securely, and in real time.

Learn more at www.emersonprocess.com/operationsperformance