

# On Schedule and On Budget with Consistent Execution and Deliverables

Experience has shown you that although automation projects around the globe differ in their details, they all bring on the same three significant headaches: project costs overrun the budget enough to jeopardize financial backing, the schedule slips in a major way and puts success at risk, and project inputs, and therefore results, can be inconsistent...

Emerson Process Management knows that a consistent project delivered on time and on budget is possible — even with multiple Engineering, Procurement, and Construction (EPC) contractors, a global project team, and changing requirements. With Emerson as your Main Automation Contractor (MAC), your project will...

### ... Avoid PROJECT COST OVERRUNS

All suppliers in your project will continuously work toward your organizational, financial, and process goals right from the beginning — and smoothly adjust their work even if those goals shift.

### ... Side Step SCHEDULE SLIPPAGE

All stakeholders and team members will know what they needed to do and when, so that your schedule is not sacrificed.

### ... Reduce PROJECT INCONSISTENCIES

Your project will have and maintain a common methodology for the duration so that you are more confident about consistent deliverables, quality, and on-budget performance.

You know the risks. Emerson, as your MAC, can help you avoid them.

*“The Main Automation Contractor (MAC) approach can result in project cost savings of up to 30%.”*

ARC Strategies: Main Automation Contractor Trends,  
ARC Advisory Group



## TECHNIQUES AND TECHNOLOGY THAT PROVIDE A MORE SOLID BUDGET

**Early risk detection.** Avoid expensive rework by bringing Emerson to the project early in or prior to the Front End Engineering Design (FEED) stage. Emerson understands inherent risks to projects of all sizes and delivers early risk detection to develop the automation project scope definition, a Class III estimate (+/-5-10%) for the Final Investment Decision (FID), and a Project Execution Plan (PEP).

**The right automation solution fit.** Align costs to business objectives with products chosen specifically for your solution and a design backed by automation and industry expertise spanning instrumentation and final control elements, control and safety systems, plant asset management, and operations management. Emerson’s domain knowledge includes automation strategy, process operations, reliability, energy management, workforce enablement, and HSSE (Health, Safety, Security, & Environmental).

**Quality project management and execution.** Our project teams are supported by an Emerson Project Management Office (PMO), which is a group of project management experts dedicated to making project execution better by continually developing and improving global project processes, standards, and tools aligned to the Project Management Institute’s (PMI) Project Management Body of Knowledge (PMBOK).

**Consistency in work breakdown.** Coordinated roles and responsibilities assist in working toward gaining full-value integrated solutions rather than generic deliverables determined only by the minimum set of tasks required. You have a more complete work breakdown structure (WBS) definition to provide a better estimate and more visibility to the full solution.

**Proven record of success.** Working on projects of all sizes, Emerson understands what works and has — through successes across the process industries — proven its budgeting techniques and rigorous project controls to manage cost and schedule. Benefit from our methods for project governance — including policies, functions, and decision rights — to stay within your budget goals.

**Flexible technologies.** Emerson technologies, such as the DeltaV Distributed Control System (DCS) electronic marshaling and virtualization, provide flexibility to accommodate late design decisions without costly change orders. You can configure and engineer the solution before the design is complete, and you can delay the design freeze date.



*“Proper governance and control processes are essential for spotting problems early and getting projects back on track quickly. The more time and effort companies put in at the outset, the greater the chance they will keep projects in check throughout the construction cycle.”*

Price Waterhouse Cooper

## KNOWLEDGE AND COMMUNICATION HELP AVOID SCHEDULE ISSUES

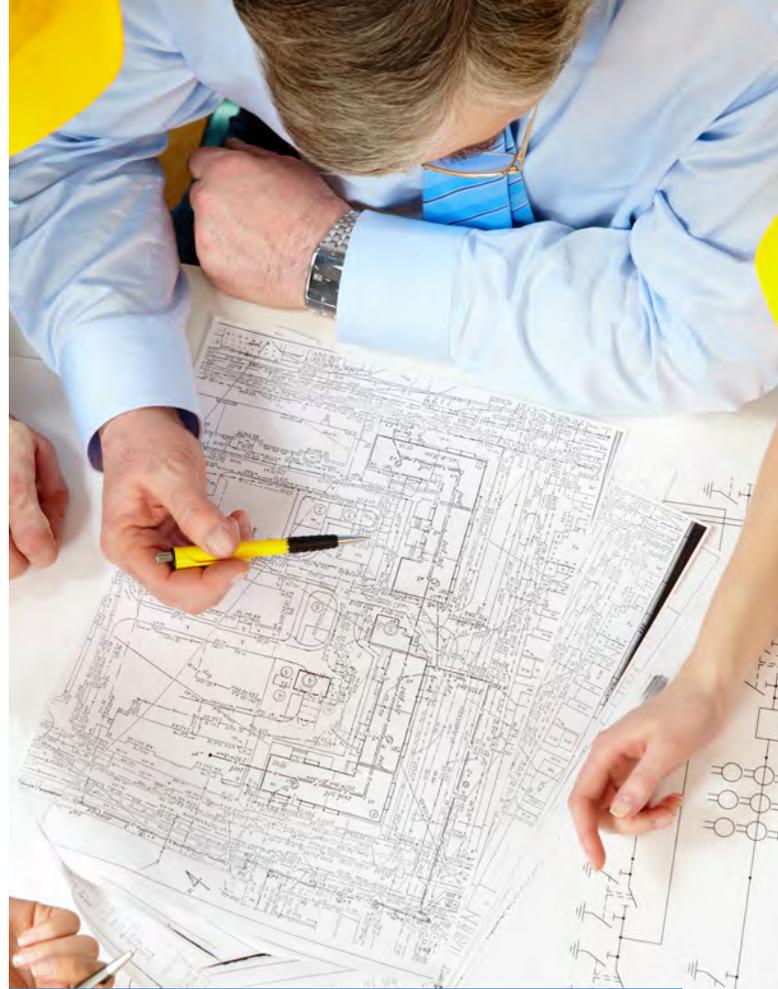
**Staffed around the globe.** Emerson has offices around the world staffed by thousands of experienced automation personnel and hundreds of project management and project controls experts — people who understand local site strengths and limitations. This local insight safeguards matters such as delivery commitments and plans the related actions to maintain the schedule.

**Secure global collaboration.** Emerson's Remote Virtual Office (RVO) is a secure environment for distributed engineering. It enables project team members worldwide — including the client, Emerson personnel, EPCs, and third-party suppliers — to contribute without overwriting each other's work. In addition, cost and time for travel are reduced or eliminated.

**Single contact.** By being able to supply directly up to 90% of process automation products and services, Emerson can act as your single point of management and engineering contact. Your schedule issues can be resolved more easily, and communication is simpler when you know who to talk with.

**Electronic document management.** Emerson delivers secure project-information control including standard reports, workflows, tools, and backups of all project documents. Global project teams, clients, and approved third-party suppliers may be granted secure access to specific project-management and technical documents. Submissions, approvals, comments, revisions, and documents are traceable and may be delivered through secure electronic means or by hard copy to keep automation off the critical path and avoid schedule delays.

**Well-planned, focused training.** Emerson can provide consulting services, skills assessments, and the right training solutions at the right time throughout the project life cycle. A comprehensive training plan for operators, engineers, technicians, and maintenance personnel can prepare them to be ready to safely and consistently operate your plant right from the start. The training plan can include any of the following: e-Learning, instructor-led virtual learning, traditional classroom, on-site training, or simulated Operator Training Solutions (OTS).



*"Emerson's Remote Virtual Office allowed us to collaborate with experts and resources from multiple sites to conduct our Factory Acceptance Test (FAT). The result was less travel and site disturbance to our operations. Also, more operators could participate remotely which improved the new automation system adoption."*

**François Davin**  
Instrumentation, Electrical and Automation Manager  
– Engineering Service  
Sanofi

## A SINGLE EXPERIENCED SOURCE DELIVERS OVERSIGHT AND CONSISTENCY

**Complete vision.** As your MAC, Emerson sees the entirety of your asset. We continuously direct the project toward implementing your business objectives. And we achieve smooth collaborative agreement with you and the wide range of EPCs and suppliers. You have better control over the project outcome.

**Industry and regulatory expertise.** Emerson owns the manufacturing automation intellectual property and can provide expert industry know-how to keep suppliers on the same page and aligned — starting with a detailed design to drive consistency among EPCs. Project suppliers have fewer misunderstandings and consistently understand the common look and feel of specs, drawings, and deliverables.

**DCS and Safety Instrumented System (SIS) engineering.** Emerson Process Management offers the total solutions to provide the certified hardware, software, and in-house engineering services needed to meet the requirements of the system lifecycle — helping you to analyze the risk associated with each loop or Safety Instrumented Function (SIF).

**Source for full automation.** Emerson Process Management has the depth of expertise and breadth of technologies to bring predictable success in tough challenges. For example, systems and tools provide the decision integrity to run your operation at its full potential, measurement and analytical technologies bring process clarity and insight, and predictive maintenance technology helps reduce costs, enhance asset performance, and minimize downtime.

**A comprehensive project execution toolbox.** Have confidence that Emerson has the automation project well in hand and that your project will not consist of many contractors and suppliers going their own way and returning with maybe what you need. Acting as your overseeing entity, we use our complete management tool box — including a comprehensive roles-and-responsibilities matrix, process-project reviews, quality audits, a risk register, executive sponsorship, stage gates, a performance dashboard, engineering centers, and industry work cells.

## CONTACT EMERSON FOR A SUCCESSFUL PROJECT

We look forward to working with you to ensure your project is on budget and on time with consistently high-quality results. Please contact your local Emerson representative to begin.

### Emerson Process Management

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