

Rosemount[™] Analytical Systems & Integration Services Precision analysis for process gas and liquid applications.



Rosemount[™] Analytical Systems

Emerson offers the most comprehensive range of analytical systems solutions and third-party integration services for liquid and process gas analysis applications in the industry. From standalone panels and cabinets to three-sided shelters and environmentally controlled walk-in enclosures, our complete range of capabilities is backed by over 60 years of analytical expertize across thousands of process installations throughout the world.

Analytical systems projects are managed through Emerson's Rosemount Project Management Office (PMO), a team of highly trained and certified experts who partner with our customers through every step of the project, simplifying the complexities from even the most challenging applications to ensure successful completion and delivery is met on-time and on-budget.

From Front End Engineering Design (FEED) and consulting services to manufacturing, integration and testing, to commissioning services and on-going lifecycle support, Emerson leverages its entire portfolio of process automation and safety monitoring instruments to provide complete turnkey solutions for our customers. With seven fullscope analytical systems and integration centers strategically located across the world, Emerson has the global resources and analytical expertise to provide localized support.

Visit our website to learn more: www.Emerson.com/RosemountAnalyticalSystems

Industries:

- Offshore / Onshore Production
- Gas Processing
- LNG Liquefaction and Regasification
- Gas Pipeline Networks
- Power and Energy Production
- Petrochemical / Chemical
- Refining
- Water & Wastewater
- Environmental Monitoring / Emissions

Liquid Analysis Systems

- Analyzers, Sensors and Transmitters
- Sample Systems
- Steam & Water Analysis Systems (SWAS)
- Water Quality Systems (WQS)
- Liquid Panels and Racks for continuous online measurement of:

• Conducitivity

- ORP
- Chlorine • Turbidity

Gas Analysis Systems

- Analyzers with Sample Systems
- Gas Chromatographs
- Continuous Gas Analyzers
- Combustion Analyzers
- Flame, Gas, and Toxic Detectors
- Probes. Fast Loop and Sample Returns
- Auxiliary Instrumentation
- Free Standing Panels and Racks
- Three-Sided Shelters and Open Enclosures
- New Application Development

Large Scale Projects

- Fully integrated environmentally controlled shelters with HVAC
- Project management and logistics
- Integration of Emerson and third party products and solutions
- New application development and customized applications







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Analytical Systems & Integration Capabilities

Complete Turn-Key Services:

- Project management execution
- System design, manufacturing and integration
- New application development
- Procurement
- Certifications and Documentation
- Factory Acceptance Test (FAT)
- Global logistics
- Site Acceptance Test (SAT)
- Start-up and Commissioning
- Training on-site or at customer location
- Lifecycle services support







Integration



Planning & Design

Fabrication \rightarrow









Testing



Project Execution Best Practices

- Integrated project management execution through Emerson's global PMO process
- Dedicated project manager serves as a single point-ofcontact throughout the entire project
- Standardization and optimization of systems for faster turnaround time and reduced customization
- Project management portal with secure access
- Advanced document management system
- Customer Satisfaction Surveys

Global Services & Support

- Seven major Analytical Systems and Integration facilities providing complete turn-key services for small and large scale projects world wide
- Sixteen additional regional support facilities
- ISO 9001 certified facilities for quality assurance
- NEC and IEC compliance capabilities for hazardous area applications
- Global network of certified trainers and technicians offering educational services and lifecycle support

-> Documentation & Logistics ------> Lifecycle Services and Support

Project Management Office (PMO)

Partner with the Analytical Experts

Analytical systems and integration projects are often complex, costly and have multiple stakeholders involved throughout the completion process prior to commissioning. With so many factors to consider and tight deadlines to meet, any minor delay can cause a major set back and place your bottom line at risk. Partnering with a strong project management team you can trust to lead these high-value projects and minimize your risk is critical.

Emerson has been engineering standardized analytical systems and customized solutions of all sizes and scopes for process customers for decades. With hundreds of installations world wide, there is hardly an application we have encountered which we have not already developed a solution for or have the capabilities to resolve at any of our global systems integration facilities.

Through Emerson's Rosemount Project Management Office (PMO) program, customers benefit greatly from partnering with a dedicated team of knowledgeable analytical experts working on your behalf to manage your project. Whatever geographic logistics you face, Emerson provides the collaborative resources you need, where you need them. Our proven, standardized approachused consistently around the world-helps manage multiple stakeholders, keep projects within scope, remain on schedule and on budget.

Dedicated Project Managers

Emerson's Rosemount PMO program assigns a specific project manager based on the customer's individual needs and requirements for each project. Every PMO is aligned with PMI's methodology, standards and guidelines per the PMBOK, and serves as the customer's main point of contact throughout the entire project.

The project manager coordinates the various functional teams within Emerson and develops a formal communication plan to keep stakeholders informed of the progress at various stages of completion.

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organizations report that managing multiple stakeholders is a defining characteristic of complexity in projects.

PMI Pulse of the Profession[™] In-Depth Report: Navigating Complexity 2013.



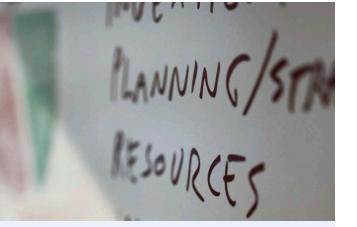


Stay On-Schedule and On-Budget

Early assessment of your project scope, schedule and budget can be the crucial difference to ensuring your project's success. The PMO will schedule a kickoff meeting to establish clear alignment and understanding from all stakeholders and develop an action plan which will be updated frequently throughout the course of the project.

- Simplify the complexities of your project scope. Your designated project manager engages early to understand project requirements and align with your team to manage and control scope.
- Avert risks and stay on schedule. The PMO collaborates with your team to identify opportunities for efficiency and risks, implement mitigation plans to prevent possible schedule pitfalls.
- Stay on task and on budget.

It is the PMO's responsibility to manage the budget and update the customer throughout the project, accounting for possible risks, changes in scope, and other possible situations which may impact the budget.



Good front-end planning leads to as much as 20% **20%**cost COST SAVINGS SCHEDULE REDUCTION savings and **39%** schedule reduction for total project design and construction.

Construction Industry Institute: Adding Value Through Front End Planning, CII Special Publication 268-3.

Analytical Systems Integration Centers





A Worldwide Organization **Committed to Your Success**

Emerson's Rosemount PMO has a well-established global organization. Drawing from thousands of resources, our organization can deploy a projectdedicated team comprised of the people you need, where you need them. Through years of experience and ongoing employee training programs, we have built a knowledgeable and experienced team of professionals who are dedicated to your projects... and committed to your success.

All of Emerson's Rosemount PMO locations follow the same standardized processes, tools and analytics used to provide organizational structure and transparency at every step of the project.



One Team. One Leader

Whether your project is large or small, brand new or an upgrade, Emerson's Rosemount PMO can work with you from project conception through implementation and ongoing support.

In forming a project team, the project manager carefully defines roles and responsibilities and matches capabilities with project task requirements. Emerson's Rosemount PMO will assign a team based on project requirements and it may consist of the following:

- **Project Manager** serves as your main point of contact and provides overall project management and team leadership.
- **Project Engineer** provides technical expertise throughout the project.

- Project Administrator oversees project administration and leads factory collaboration.
- **Documentation Controller** manages and facilitates docmentation deliverables.
- Manufacturing Coordinator manages factory communication and project execution.



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Rosemount™ Analytical Systems PMO Phase-Gate Process

Partner with the Analytical Experts

Emerson's phase-gate process ensures alignment between all parties during various stages of the project until successful completion. This proven method makes it easier to manage complex projects and provides the foundational structure for effective communication among the various stakeholders during each phase of the project.

Before proceeding through each gate, the project manager schedules a review process with the stakeholders and goes through each required deliverable to ensure successful completion and assess any potential risks before moving agreeing to move forward to the next gate. The process is repeated thoroughly up until the point of completion as specified by the customer.

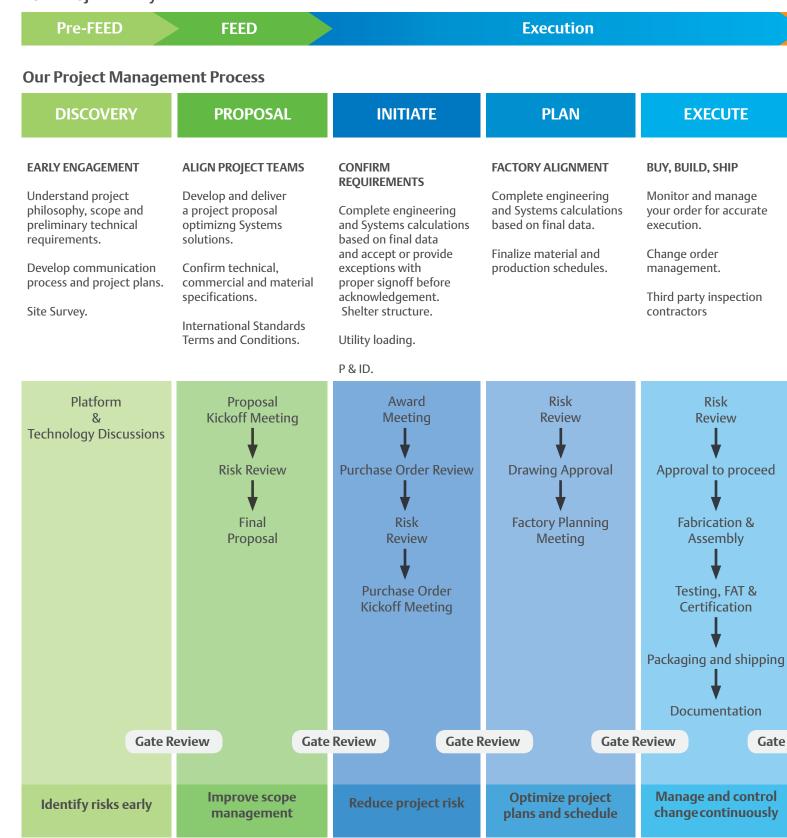
The PMO is designed to engage with customer as early as FEED to better understand project requirements and provide consultative services throughout project execution. Augmenting your team with our analytical experts can ultimately reduce engineering revisions, change orders and documentation revisions later in the project.

Documentation Management

Project documentation is among the most challenging - and important-project deliverable. Our documentation management saves time and removes some of the pressure from your own documentation resources. As part of Emerson's PMO process, customers will receive the full, professional attention of a project manager or documentation controller throughout the project.

We support your systems and protocols for transmittals and uploads, and manage review and approval cycles. We are in constant coordination with your team through every step of the way all the way, including final printing, collating, binding and electronic publishing. And, with a quality management system embedded in our process, we ensure documentation delivery is aligned with the customers requirements and schedule

Your Project Lifecycle



Operate

Support

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CLOSEOUT

Deliver Rosemount[™]

documentation

Analytical Systems and

Deliver drawings package

Vendor data request

Review project and

Customer Satisfaction

lessons learned

Survey

EVALUATION

Gate Review

Seamless transition to the next phase

SERVICES

SAT

Start-up and Commissioning.

In-house site training.

Spare parts.

Lifecycle services.

Educational services.

Lessons

Handover to Rosemount™ **Lifecycle Services**

Learned

Lifecycle Services Education Services

Complete analytical systems & integration solutions for process gas and liquid applications.



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