

## Modernization Consulting Studies



Emerson can help you develop a business case and multi-year plan for modernizing your process automation assets.

- Defines sources and magnitude of measurable plant improvements that can be expected.
- Provides a detailed roadmap and flexible implementation plans.
- Incorporates the best digital technologies to improve plant performance and competitiveness.
- Provides a sound business case and financial return-on-investment analysis for project justification and prioritization.
- Incorporates years of proven experience from our industry, process, and automation technology experts.

### Introduction

Emerson Process Management is pleased to offer Modernization Consulting Studies services. A Modernization Consulting Study is a methodology used to define the economic justification and implementation plans for modernizing legacy automation assets. The study incorporates a plant's

business direction, objectives, and issues to create a modernization plan that meets your short- and long-term business and process automation needs. Emerson works with you and others in your company to evaluate current automation status, develop future vision states, estimate benefits, and prepare economically justified project plans.

Though each modernization study is customized to specific needs and situations, scope generally falls into one of the following study types:

**Automation Modernization Study:** Develop the business case and plan for modernizing legacy automation (including field devices, control systems, and advance automation) to a PlantWeb® smart digital plant.

**System Modernization Study:** Develop the business case and plan for modernizing legacy process control systems (DCS focus) to the latest DeltaV™ system technologies.

**Master Plan Study:** Establish a comprehensive future business technology vision and investment plan for overall plant automation, advance automation, and production management/MES.

## Benefits

**Analyze current automation performance to ensure compatibility with business needs.** The modernization study process involves defining current and future business objectives and matching automation performance and functionality to meet those objectives.

Examples of current business objectives are:

- availability
- production and quality requirements
- conversion costs.

Future business expectations are things such as:

- known process changes
- known expansion plans
- performance improvement potential, and
- market changes.

**Determine the potential plant performance improvements expected from modernizing automation assets.** Process areas will be evaluated and process data will be analyzed to define and quantify the sources and magnitude of economic benefits that can be expected.

**Develop flexible plans that will have the greatest impact on process performance, while preserving automation assets that have not outlived their useful life.** The functionality, performance, and reliability status of automation and control equipment will be assessed to develop phased multi-year options for automation performance, maintenance, and/or expansion plans. A modernization study can include non-Emerson automation equipment as well. For example, the approach used would be the same—whether you have RS3, PROVOX, or other control system.

**Define the business case and financial return on investment for modernization.** The benefits and project costs of modernization alternatives are defined and used in a financial return on investment analysis. The return on investment analysis provides a sound basis for modernization project justification and prioritization. Financial measurements to be used can be net present value or the specific return on investment measure used in your organization.

## Service Description and Specification

The team performing the study will consist of representatives from your company and Emerson experts. The team would typically cover four functional areas:

- Management/financial perspective: a person from your company
- Process analyst/automation expert: a person from your company, such as a corporate process improvement specialist
- Local process and system knowledge: a person who is a local process automation specialist
- Automation expert/quotations: an Emerson Process Management consultant.

In addition to the efforts of the core team, the study may require input and from others in your organization. For example, engineering, operations and management may need to be interviewed in order to determine business and/or process requirements.

The time required to conduct a modernization study will vary depending on the scope and complexity. For example, a typical automation modernization study can take one to three weeks onsite, two months for final report. A study solely focused on control system modernization can take three to five days onsite, one month for final report.

## Service Application

The modernization study includes trips to the customer site for a facility walk-down and interviews with operations, maintenance and engineering personnel. An Emerson Process Management consultant will facilitate the modernization study process. Core study deliverables include:

- Onsite consulting and formal assessment by a senior consultant
- Detailed report documenting results, analyses, plans, recommendations.
- Management presentation or meeting to review and discuss results and recommendations.

## Ordering Information

Description	Model Number
Modernization Consulting Studies	VE9132

**PRE-SALE QUALIFICATION:** This service is delivered as a “micro-project” and as such it requires a written project scope of work, deliverables, timing and budget. The service request must be received, reviewed and a written proposal issued by Emerson Process Management prior to order acceptance. This is a safeguard for the customer to ensure the necessary Emerson Process Management resources are available within the expected timing and to define the scope of service along with a budgetary estimate for the work required. Emerson Process Management reserves the right not to quote a particular project at any time.

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