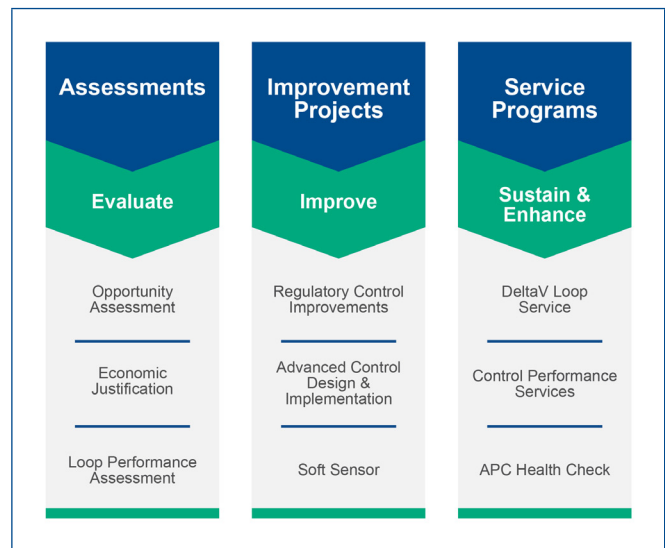


Control Performance Assessments

- Reduce process variability and improve operational performance
- Improve process availability with less operator intervention
- Maximize the benefits of your control strategies
- Justify investments made in advanced control technology



Assess, improve, sustain, and enhance your process control strategies with Emerson's portfolio of Control Performance Solutions.

Introduction

Emerson's Control Performance Services can help optimize the performance of the control loops in the process, which will lead to improving your facility's profitability. The first step is typically an Assessment, where a Control Performance Consultant will assess the opportunity and lay out a path forward which may include future Improvement Projects or Service Programs.

A Control Performance Assessment can be used to troubleshoot an existing, poorly performing process, or to evaluate the suitability of enhanced process control strategies, such as Advanced Process Control (APC).

The key features of this service include an Emerson Consultant analyzing actual process data, to determine the source of process variability. The outcome of the Assessment includes recommended actions that should be taken, including new or improved instrumentation, valve repairs or replacements, and suggested changes to loop tuning parameters.

Benefits

- **Reduce process variability and improve operational performance** – Emerson's Control Performance Consultants can quickly determine the root cause of and solution for loop performance problems such as cycling and slow response. Receive immediate recommendations such as tuning adjustments for coordinated response to load disturbances and set point changes, in addition to identifying longer term remedies such as valve/instrument repair or replacement needs.
- **Improve process availability with less operator intervention** – Emerson's expert Consultants can help you determine the causes of and solutions for process upsets, trips, and operator intervention on key control loops. Emerson can help to reduce unplanned events, thus lowering maintenance costs for your process equipment.

- **Maximize the benefits of your control strategies** – Unless base-level control loops can reject disturbances and respond correctly to set point changes, your process will be under-performing. Emerson’s Control Performance Consultants can quickly diagnose limitations of base-level loops and can identify the control loops that will provide additional profit from advanced control.
- **Justify investments made in advanced control technology** – If you have ideas on where advanced control can improve your operation, but struggle with understanding how much improvement is possible, let us assist you. Emerson can provide project justification to help you get appropriate funding and lay out a reasonable improvement objective before you jump into an advanced control project.

Service Description

Opportunity Assessment

An Opportunity Assessment is a cost-effective option to gain insight and recommendations from an experienced Consultant and can be used to validate the feasibility of a Control Performance improvement idea or project. To begin, an Emerson Control Performance Consultant will conduct interviews with representatives from management, operations, engineering, control systems, and instrumentation staff. The Consultant will then explore areas where automation technology would likely have the most significant benefits in addition to looking for areas of risk exposure. The Consultant will conduct a process review, gather data manually, and provide verbal feedback on opportunities for improvement. This service typically does not include a formal report, although a brief summary of recommended actions and next steps is provided.

Economic Justification

For some APC projects, it is necessary to evaluate the financial return in order to justify the endeavor. For those situations where a benefit assessment is necessary, Emerson can provide a Control Performance Consultant to review historical performance, identify improvement potential, and estimate an annual monetary benefit. To do so, economic data about the process must be provided, including energy costs, finished product values, and relative market conditions that impact profitability. Emerson will produce a final report that includes a roadmap of further projects to consider with a financial justification analysis.

Loop Performance Assessment

When conducting a Loop Performance Assessment, an Emerson Control Performance Consultant will provide an in-depth data analysis to identify process dynamics and nonlinearities, recommend optimized controller tuning, and suggest improvements to control strategy and process design. To begin, the Consultant will gather overall information about the process, which will require interviews with Process Engineers and Operations Management. This will help the Consultant understand what the process objectives are, the keys to successful process performance, the particular limits or constraints of the process, and typical causes of production losses or inefficiencies.

The Consultant will then utilize tools such as DeltaV™ InSight, DeltaV Continuous Historian, and Emerson’s EnTech Toolkit to collect and analyze specific process control data. The Consultant will identify the root cause of underperforming loops, identify sources of excessive process variability, and, whenever possible, improve operational performance by minimizing such variability. Changes to tuning parameters will be applied where appropriate, and control valve repair needs will be identified.

The formal report will document the as-found conditions, summarize any changes to tuning that were made onsite, and recommend actions that need to be taken for further improvement.

Ordering Information

Consult your local Emerson office or Emerson’s Control and Operator Performance Center of Excellence for availability and quotation.

Related Products and Services

- Control Performance Improvement Projects
- Control Performance Service Programs
- EnTech Toolkit
- DeltaV InSight
- DeltaV Predict and PredictPro

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