

ADVANCED SERVICES

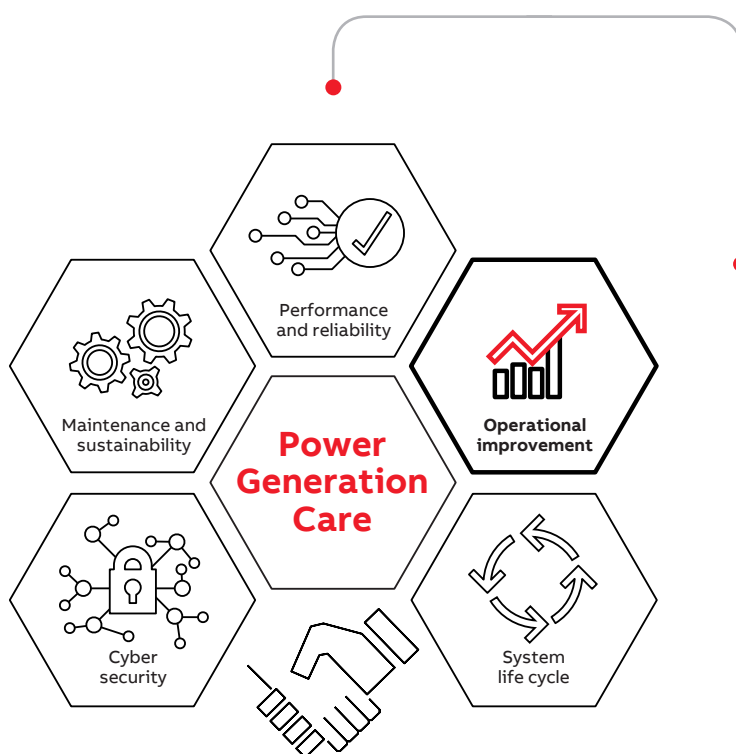
Power Generation Care

Loop Performance Service



Improve and sustain control process performance

ABB Loop Performance Service identifies, classifies and prioritizes control loop improvement opportunities. Using non-stop data collection and analysis to transform raw data into actionable information, ABB Loop Performance Service quickly pinpoints troublesome loops, leading to reduced process variability, increased availability and improved product quality.



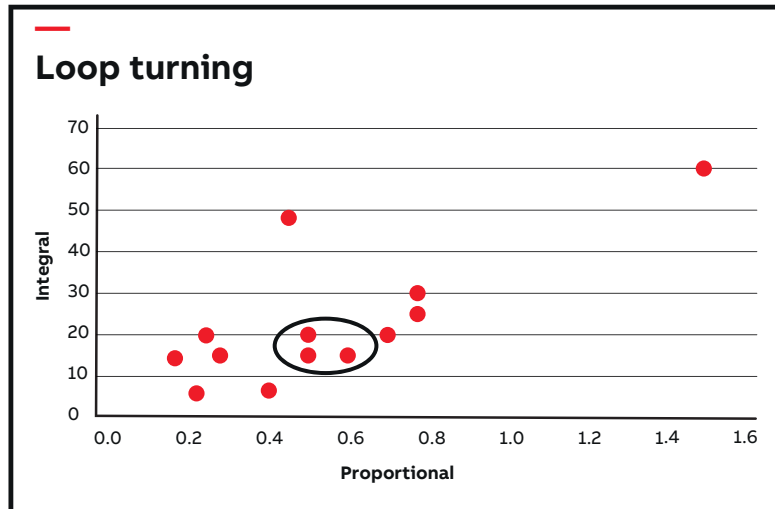
Life cycle service solutions for power plants

Benefits

- Accelerates problem solving through 24/7 visualization and analysis of control loops
- Increases availability and utilization through reduced process variability
- Lowers maintenance, raw material and energy costs with quick identification of process errors or trends
- Reduces response time and travel expenses by providing remote access to ABB experts for troubleshooting
- Establishes a solid foundation for continuous improvement, including higher availability, increased production and improved quality

Reduce process variability

Continuous monitoring and analysis of KPIs

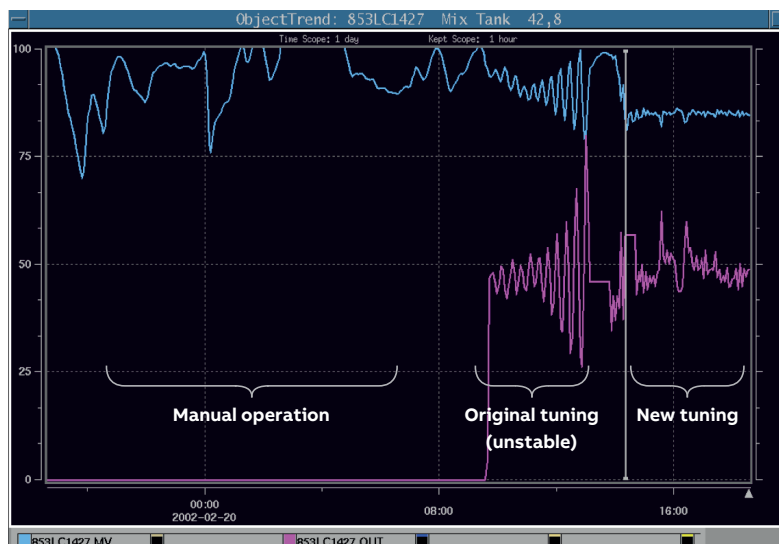


01 Your loop tuning parameters are compared with tuning standards, based on process type. Outliers are identified first.

Scheduled monitoring and analysis to quickly identify performance issues

ABB Loop Performance Service is a service delivery platform conveniently deployed on any control system at your location. You can view data gathered through a web-based window (channel) that is easily accessible by customer or ABB personnel.

With ABB Loop Performance Service, you get the advantage of constant data analysis to greatly reduce the time and effort needed to identify loop volatility. Data is classified based on your specific KPIs to provide a list of problematic items that are then prioritized based on severity, process area, criticality and/or financial impact. Problem areas are isolated and disturbance sources, such as dead time, inverse response and outliers, are identified (Figure 1). This analysis helps find the root cause of the problem and trend performance history more accurately, which leads to actionable information that will reduce process variability.



02 ABB Loop Performance Service helps process industries get the most value from their automation assets by finding and applying the best tuning parameters.

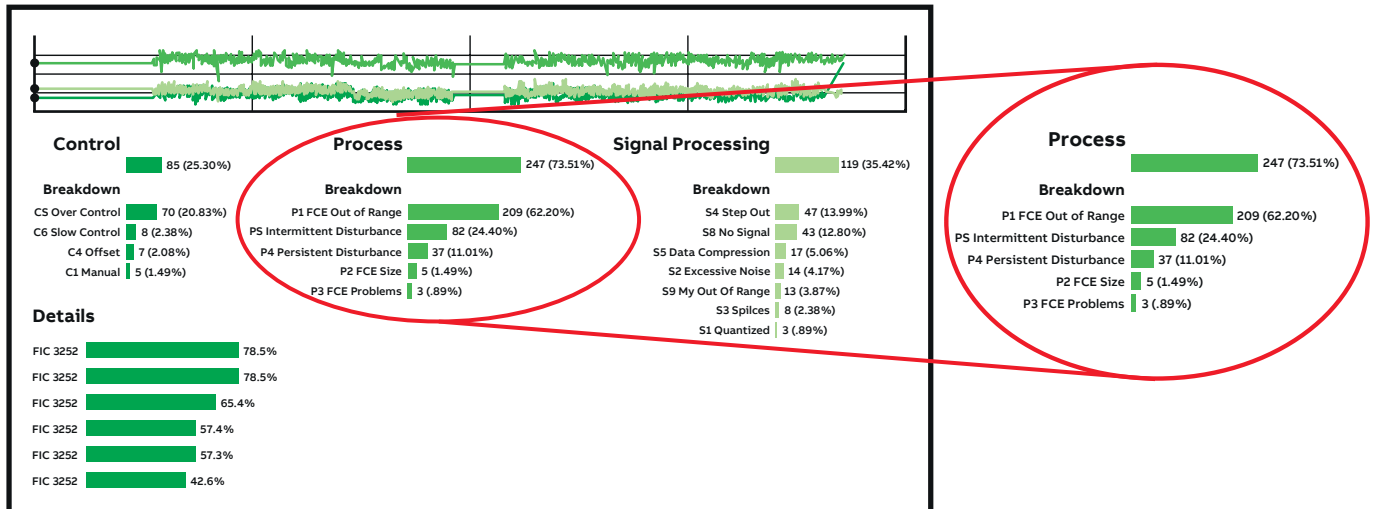
More accurate troubleshooting with configurable KPIs

With ABB Loop Performance Service, find and apply the best tuning parameters by monitoring KPIs (Figure 2) for the following categories:

- **Control:** To keep the error at or near zero, the output of the controller is analyzed to find the source of out-of-sync measurements, such as incorrect tuning parameters.
- **Process:** Confirms the valve or final control element (FCE) to the process is correct for that process type, and is repeatable and predictable. Disturbances that could affect this relationship, such as process nature changes or FCE failure, are analyzed.
- **Signal processing:** Ensures the measurement to the controller is as pure as possible by monitoring factors, such as outliers or calibration, that would create an implausible measurement.

View, analyze or receive alerts on control process performance

Loop Performance Service components



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03 You can access three different views for each of your KPIs. The above example shows the KPI analysis view for the process. The display only shows the KPIs that are outside thresholds and prioritizes them the bigger the bar, the greater the need to address the KPI.

04 Included in your service agreement are periodic performance reports, which point to actions that will help prevent potential problems.

Simplified view of data and analysis

Access to and visualization of KPI data is provided through the KPI dashboard. This easy-to-use interface provides three separate views of the data:

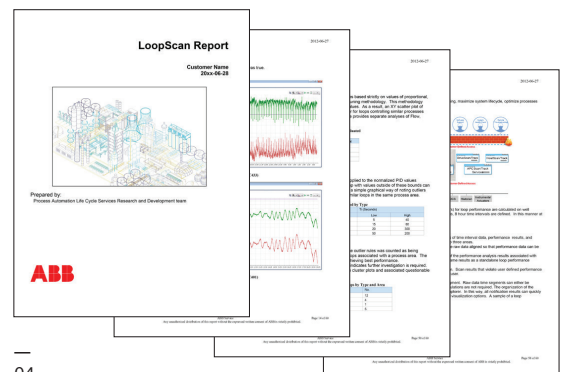
- **Raw data** allows you and ABB service experts to view data associated with control, process or signal processing.
- **KPI analysis** presents a summary of KPIs, ranked by severity, that are outside set limits (Figure 3).
- **KPI monitoring** empowers you to specify your own set of rules for KPIs and displays each occurrence that falls outside a threshold.

Expert analysis helps detect potential problems

To ensure optimal control loop performance, ABB provides periodic performance analyses. ABB experts evaluate control loop response, determine the statistical accuracy of the KPIs and find trends that predict possible irregularities. The resulting performance report points to actions that will prevent potential problems and improve process availability and production asset utilization (Figure 4).

Critical notification when it matters most

To help prioritize issues that require immediate action, sitespecific rules are applied to targeted KPIs. Any KPI that tracks outside of pre-determined parameters triggers an instant alert by email or SMS. This quickly notifies you about issues that can compromise system availability, so you can address them as soon as they are detected.



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