Control loop performance is a key factor in maximising production quality and efficiency as well as ensuring the smooth operation of a process, minimising downtime and maximising profit. Increasingly, there are fewer personnel devoting their time and effort to maintaining plant automation systems to the level needed for continuous, optimal, performance.

A sub-optimally tuned control system can result in:

- Decreased product yield and quality
- Increased unplanned shutdowns / maintenance demand (higher costs to the business)
- Lower process flexibility and control
- Increased process variability, leading to inefficiencies and losses

Irrelevant of past automation investments, when left to run without intervention, a control system will naturally degrade over time (half-life of a loop is only six months) leading to control issues, which can remain undetected negatively effecting plant performance and reducing plant profitability.

However, a regular regime of control loop tuning delivered via a well-planned, advanced service program by qualified process control engineers will ensure a plants automatic control is tightly tuned.

ABB’s loop performance fingerprint is non-invasive software that can be coupled to any manufacturing process, applying industrially proven tools and methodologies to diagnose control performance.

What we offer
ABB can provide a loop performance fingerprint service, typically assessing the process and control performance of >200 control loops. The loop performance fingerprint uses proven mathematical techniques to analyse process control data against a series of Key Performance Indicators (KPIs) divided into three areas:

- Control
- Process
- Signal conditioning

A fingerprint report is able to deliver:

- A comprehensive insight into the health and robustness of your control system
- In depth performance analysis against more than 20 actionable KPIs
- Root Cause Analysis to identify the likely sources of process disturbances to address the event rather than simply the symptomatic result
- A detailed optimisation plan
Benefits

Control loop performance fingerprinting will pave the way to operational improvement by highlighting control loops requiring attention and identifying a core improvement plan. Plant profitability can be increased through reduced downtime, improved efficiency, lower maintenance costs and increased throughput. Some of the issues that a loop performance fingerprint will highlight are:

- Controllers operated in manual
- Valve sizing issues
- Process disturbances
- Oscillations
- Over / slow control
- Excessive noise
- Signal problems

Upon identification of issues, ABB will produce an optimisation guide, with recommendations based on return on investment and process benefits. By diagnosing the status of control loop performance and helping develop an implementation plan, the first steps toward performance optimisation are achieved.

Why ABB?

Working with ABB as your control loop partner, ABB can provide a service which can diagnose, implement and sustain your process control asset. Our approach will be tailored to fit your specific needs and to make the best use of your internal resources. ABB offer clear value by ensuring that ultimately, beyond a fingerprint, a focussed implementation plan which will provide financial gains to your business.