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PFSA Consulting Services

# Panasonic calibration & six sigma

## What is Six Sigma?

Six Sigma is about breakthrough improvement using specific methodology to approach problem-solving and process improvement. The goal of Six Sigma is to allow a company to reach maximum profit by reducing costs and increasing customer satisfaction.

Six Sigma focuses on questions like:  
Where are we now? How good do we need to be?  
What is best-in-class? How can we get there?

The Six Sigma Process can also be referred to as the DMAIC process: Define, Measure, Analyze, Improve, Control.

## How does Panasonic Calibration and Certification support Six Sigma?

Panasonic calibration systems allow the gathering of data needed for a Six Sigma engagement. These calibration systems can be used in all stages of the Six Sigma process:

### Define - What problem are we trying to solve?

This stage defines the problem specifically so it can be solved. It assigns what metrics will be tracked, what the current baseline is, what the goal is, what resources will be used, and what the timeline will be for the project.

Panasonic's calibration solutions can provide data for accurate baselines, allowing the user to make an informed decision on choice of project and project goals.

### Measure - Where are we now?

This stage determines the facts behind the current situation. Research determines the actual process map, cause and effect matrix, and FMEA, which lead the engineer to a clear picture of where they are now. Capability and SPC are key tools used in this stage to determine the current state of the process. Measurement System Analysis (MSA)



determines if the data is reliable. Low hanging fruit can be discovered and fixed.

Panasonic can provide capability studies along with SPC data for most of the placement and process machines in your facility. Panasonic provides all MSA documentation required to prove that the data is accurate and repeatable.

### Analyze - What is the cause?

In this stage data is analyzed to determine the root cause of problems. This data is gathered by testing the process. Many different test can be used including: multivar studies, t-Tests, ANOVA tests, correlation and regression.

Panasonic measurement capability tests can be an excellent tool to determine process test results. The benefits from changes made to the process can be measured and recorded.

### Improve - What needs to be done?

In this stage optimal settings are determined for all the key process inputs. Focusing on the main effects that were determined in the analyze phase, DOE, poka-yoke, and final FMEA are used as tools.

Panasonic calibration can determine the key values for your placement offsets to allow your machines to run at optimal levels.

### Control - How is this sustained?

Gains don't provide results unless they can be sustained. This stage defines procedures that allow the gains to continue after the project is finished. dashboards, control plans, and training are examples of tools used in this stage.

The Panasonic Advanced Metrology System (AMS) allows setting up of SPC charts on your process as a control plan. This allows your maintenance department to move to a predictive, instead of a reactive, maintenance mode.