Wisconsin Hospital Association QUALITY CENTER
A Resource for Hospitals, Clinics and Healthcare Practitioners

DMAIC – A Model for Improvement

DMAIC is a structured, disciplined approach to process improvement that consists of five phases. Each phase is linked logically to the previous phase, and to the next phase at the same time. The purpose of this methodology is often linked to Six Sigma, but can be used similar to PDCA. Here are the steps in detail and the deliverables from each step in the process.

PHASE ONE - DEFINE
In this phase, the project's purpose and scope are defined. Customer information and background information on the process is collected. The output of this phase is:

1. A clear statement of the intended improvement.
2. A high-level map of the process (a flowchart or SIPOC diagram).
3. A list of what is important to the customer (Get information from the voice of the customer).

PHASE TWO - MEASURE
The goal of the Measure phase is to focus the improvement effort by gathering information on the current situation. The output of Measure is:

1. Baseline data on current process performance.
2. Data that pinpoints problem location or occurrence.
3. A more focused problem statement.

PHASE THREE - ANALYZE
The goal of the Analyze phase is to identify root cause(s) and confirm those with data. The output is a theory that has been tested and confirmed. The verified cause(s) will form the basis for solutions in the next phase.

PHASE FOUR - IMPROVE
The goal of the Improve phase is to do trials and implement solutions that address the identified root cause(s). The output is planned, tested actions that should eliminate or reduce the impact of the identified root cause(s). A plan is also created as to how the results will be evaluated in the next phase.

PHASE FIVE - CONTROL
The goal of the Control phase is to evaluate the solutions and the plan, maintain the gains accomplished by standardizing the process, and outline steps for on-going improvements including opportunities for replication. It is also important to consider if this improvement affects similar lines of production. The output is:

1. Before and after analysis.
2. A monitoring system.
3. Completed documentation of results, learnings and recommendations.

Source: http://thequalityweb.com/sigmaoverview.html