

## SEH PI METHODOLOGY

### PLAN - DO - STUDY - ACT

The *Plan-Do-Study-Cycle* is a well-established process for improvement that is based on the scientific method. This process is ascribed to Walter Shewhart, a quality improvement pioneer with Bell Laboratories in the 1920s and 1930s. The process is also widely associated with W. Edwards Deming, a student and later a colleague of Shewhart. Deming made the **Plan-Do-Study-Act** cycle central to his influential teachings about quality. The cycle is compelling in its logic, simplicity, and continuous nature. A brief explanation of this process should help readers not already familiar with the **Plan-Do-Study-Act** to understand and use the cycle.

**Plan** In this context “**Plan**” means to create an operational plan for studying the chosen improvement project. Planning involves determining who will be involved in the project, what they need to know to participate in the project, the timetables, how the project will be implemented, why the idea is being studied, what the success factors are, and how the process and outcomes of the project will be measured and assessed. The list of proposed improvement indicators should be narrowed to a number that can be reasonably studied - perhaps between one and four.

**Do** “**Do**” means to implement the project and collect actual performance data.

**Study** “**Study**” means to analyze the data collected during the project. This analysis seeks to answer these questions: “What do we need to do so that we improve?” and “Was the improvement action entirely successful, partially successful, or not successful in achieving the desired outcome(s)?” To determine the degree of success, compare actual performance to desired performance targets and/or baseline results achieved.

**Act** The next step of the process is to “**act**” upon the results. Develop a concise Action Plan. If the results are not successful, the cycle repeats. Once actions have been shown to be successful, they are made part of standard operating procedure. The process does not stop here. The effectiveness of the action continues to be measured and assessed to be sure improvement is maintained.

