



Total Quality Process Guidelines

Deming Based

Theoretical Foundation



- Dr. Edwards W. Deming's pioneering work on quality will be used, among others, as a theoretical foundation. It will be established that:
 - a. Both the system's (organization's) aim and everyone's role and interdependencies must be clear.
 - b. Over 90% of undesired results come from process design (that includes methodology, equipment, supervision, hiring, education, training and placement), and less than 10% is caused by careless execution.
 - c. People's behavior is highly influenced by work systems.

Theoretical Foundation



- d. There is no substitute for knowledge in process design or execution.
- e. Most of the process knowledge resides on the people that are working on it, thus their required inclusion. Side effects are pride, joy, and sense of ownership.
- f. Quality is defined by the customers of the process.
- g. High quality processes do not necessarily mean expensive processes.

Theoretical Foundation

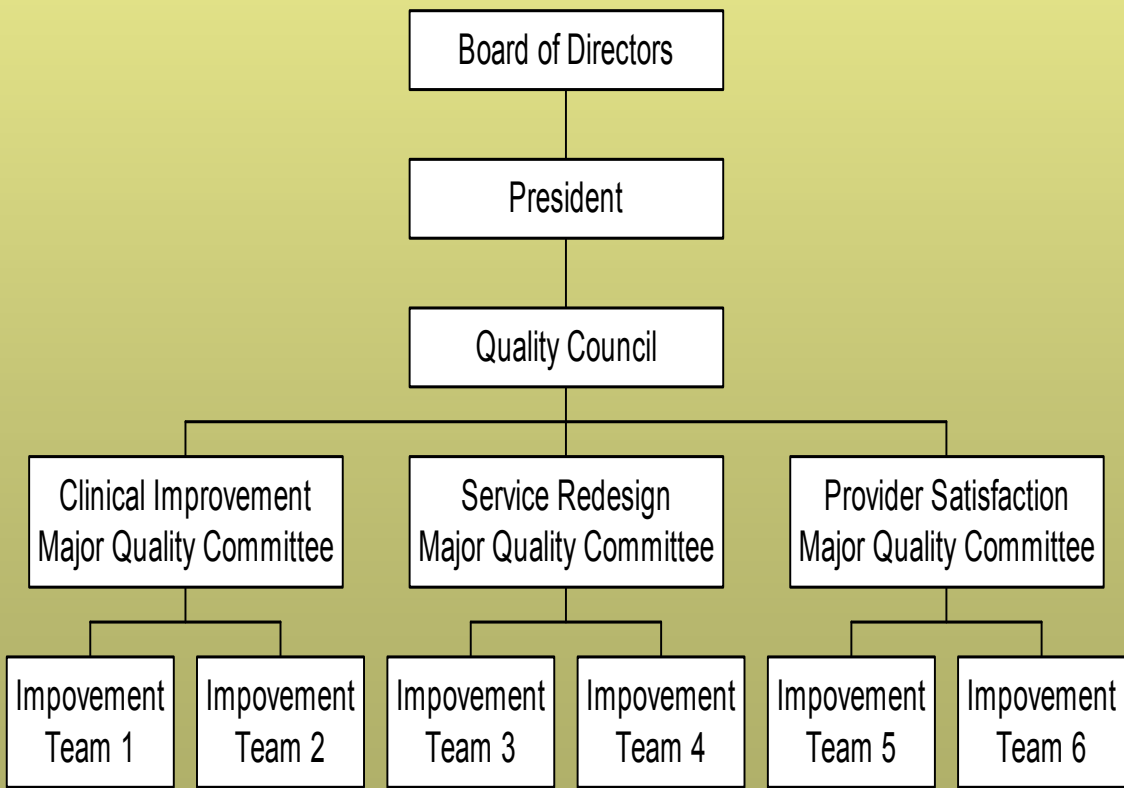


- h. Satisfied customers are a strong predictor of future success.
- i. Trust is required for information and knowledge to flow, and fear kills trust.
- j. Major quality efforts need to be synchronized with Corporate Strategies; and their magnitude and timetables must handshake with operational workload management and sound financial execution.

Quality Process Structure



Quality Process Structure



Major Function
Overview
Approve Strategy
Policy & Guidance
Prioritize, Structure & Mentor
Design & Implement Improvements

Quality Process - Design and Implementation Methodology



- A standardized series of steps, based on the scientific method, whose objective is to drastically improve the effectiveness of a process.
- It is important to consider that the input of other process players is vital and should be included throughout all Phases.

Quality Process - Design and Implementation Methodology

Phase 1: Plan



- **Step 1: Prioritize Opportunities.** Many alternatives will surface, but we will use a Decision Matrix to weight alternatives through predefined criteria to ensure that effort is expended where it will be more effective.
- **Step 2: Define a Project and Assign It To An Individual or Team.** A seed Team Incorporation Sheet will be created, a team leader and team members will be selected based on established criteria. They will be trained as needed before starting their assignment.

*Quality Process - Design and
Implementation Methodology*

Phase 2: Analyze



- **Step 3: Analyze Symptoms.** Data will be gathered to understand the magnitude, timing, frequency and other characteristics of the undesired outputs we are attempting to affect/improve.
- **Step 4: Formulate Hypothesis on Cause(s).** Cause and effect relationships will be established between symptoms and root cause, data will be gathered to understand strength or scope of those possible relationships.

*Quality Process - Design and
Implementation Methodology*

Phase 2: Analyze



- **Step 5: Prove Hypothesis.** If strength of cause and effect relationships cannot be established on Step 4, the team might need to set up small scale experiments to ensure that the strength of the cause and effect relationship is large enough so it increases the odds of a better result by altering/improving the selected root cause(s).

*Quality Process - Design and
Implementation Methodology*

Phase 3: Improve



- **Step 6: Consider Alternative Improvement(s).** Decide on what changes are needed to alter the root causes(s) in such a fashion as to create the desired results. Exercises on creativity and some further experimentation are common on this stage.
- **Step 7: Design Improvement(s) and Control System.** Once we select the changes we want to implement, a detailed map should be created on what, where, when, who, and how of the change. Including how are we going to monitor their impact and minimize/contain any possible downside.

*Quality Process - Design and
Implementation Methodology*

Phase 3: Improve



- **Step 8: Prepare People for Change - Minimize Resistance/Maximize Acceptance.** If improvement process was shared with operating process players, most likely changes are sold by now. Regardless, we will develop and use a Force Field Analysis to maximize the acceptance process.
- **Step 9: Implement Improvement(s) and Establish Control Systems.** Execute the established implementation plan and closely follow up on results to adjust implementation process as needed and to be on the lookout for unforeseen variables.

*Quality Process - Design and
Implementation Methodology*

Phase 4: Maintain



- **Step 10: Verify Performance and Improve Further.** Utilize control system to ensure results where as planned. Meet with users regularly to fine tune changes. If things do not go as planned, learn something from the process and document/share the learning, and go back to Step 4 with your head and spirits high.