The Deming and Goldratt Approaches To Problem Solving: A Contrast

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This paper examines the approaches to solving normally associated with (1) Total Quality Management and the followers of Deming and (2) Theory of Constraints championed by Goldratt. These two methods will be compared and contrasted.

The quality movement’s original problem-solving model was the Plan-Do-Check-Act model of Shewhart and popularized by Deming. Whether called the problem-solving process (Xerox), the Quality Improvement Cycle (AT&T), or the quality-Improvement story (Florida Power & Light), these more recent models are basically variations of the scientific method and the Plan-Do-Check-Act (PDCA) cycle. They offer a systematic approach, a standardization to the problem-solving process. This paper emphasizes the seven step method, a structured approach to problem solving and process improvement. It leads a team through a logical sequence of steps that force a thorough analysis of the problem, its potential causes, and possible solutions. George Box has defined TQM as “the democratization of the scientific method.” His definition implies the organizational-wide use of tools for the identification of problems, the collection and analysis of relevant data, and decisions based on the data. Although what defines the basic set of quality tools varies somewhat from place to place, a very popular collection is referred to as Ishikawa’s Seven Tools (or the seven basic QC tools).

The Theory of Constraints (TOC) can trace its existence to work Eli Goldratt did in the early 1970’s. From that beginning, it first evolved into a software program called Optimized Production Technique (OPT). While this product was successful, Goldratt began to realize that the true need of business was a process for identifying and solving problems. He refers to this as thoughtware. Since then, through the Avraham Y. Goldratt Institute, TOC has focused on the development and dissemination of logic-based processes and applications. To date, these tools have been successfully used to address and resolve a broad spectrum of organizational problems from logistical flows and conflict resolution to the development of long range strategic plans.

The theory itself states that “the output of any real system is limited by that system’s constraint.” In addition, TOC defines a problem as being the result of an unresolved conflict. Therefore, in a system that has what could be described as a performance or quality problem, the solution can be found by identifying and resolving the conflict that is causing the problem or keeping it from taking the appropriate action to resolve the problem. TOC has produced what is termed the
Thinking Processes which offer a systematic approach to enable people to create and implement changes for improvement. There are five tools used in this process.

REFERENCES


FRENCH RÉSUMÉ

Ce papier examine des approches aux solutions des problèmes qui on associe normalement avec (1) la Direction de Qualité Totale (Total Quality Management, TQM) et les suivants de Deming et aussi (2) la Théorie de Contraintes qui a été préconisée par Goldratt. On va comparer et contraster ces deux méthodes.