

TOTAL QUALITY MANAGEMENT, POLICY DEPLOYMENT AND FAST

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ABSTRACT

This paper reviews the concepts of Total Quality Management (TQM), Policy Deployment and the Value Analysis (VA) tool, Function Analysis System Technique (FAST) to show how FAST adds significant value to TQM and Policy Deployment.

TOTAL QUALITY MANAGEMENT

TQM, as I see it, is a state of mind or a philosophy, rather than a specific set of procedures or methodology. This is not to suggest that there are not certain "tools" which are associated with TQM. To name just a few, there are Statistical Process Control (SPC), Relations Diagrams, Quality Function Deployment and Policy Deployment. The thrusts of TQM are:

- Continuous Improvement. Every activity is part of a process supporting Management policy, and all processes must be continuously improved. This includes the manufacturing processes, the way products are designed, and even the way managers make decisions.

- Customer focused. The focus of our endeavors must be the understanding and satisfying of customer needs. The customer's needs are recognized as having the highest priority.

- To think in terms of customer, supplier relationships. Each of us has customers who receive the results of our efforts and we also have suppliers who provide us the tools, materials, information, etc. needed to satisfy our customers' needs.

- To think in terms of process (check points) instead of only results (control points). It is claimed that approximately ninety percent of all variation (from intended results) is caused by the process (selected by Management) and only ten percent is the fault of the worker. Statistical tools are used to analyze data so that variation can be minimized, and processes improved.

- Employees are a valuable resource. They are to be respected, trained, involved in making decisions which affect their jobs and their personal growth must be encouraged.

POLICY DEPLOYMENT

One of the most powerful tools advocated by TQM practitioners is Policy Deployment. This provides the means of deploying management policy down through all levels of the organization (see Figure I). The statement of management policy would be in general terms such as, "Increase customer satisfaction." They are then restated by each direct report in measurable terms as actions which are under the control of the manager stating them. The Vice President of Manufacturing might restate the policy for his/her organization as "Put in place standards, procedures, organization, resources, etc. which will result in improved product quality so that there will be 15% fewer customer complaints each year for the next five years." The Manager of Manufacturing might then restate the policy as "Put in place standards, procedures, organization, resources, etc. which will result in the shipment of product which more fully conforms to specification as evidenced by a Cp of 1.33 (a measure of variance from specification limits. The higher the Cp, the smaller the variance. A Cp of 1.0 would indicate that 99.7% of product would be within required tolerance.) by the end of the year, increasing to a Cp of two at the end of five years;" and so on. Each descending level of management becomes more concrete in its restatement of the policy in terms relating to its

area of responsibility and also indicates the means (check points) to be used to attain these goals (control points). The check point for one level of management becomes a control point for the next lower level of management. More specific statements could be: "constantly monitor customer expectations, complaints and satisfaction," and "constantly rank root causes and work on the top ranking ones so as to reduce variation from intended results."

Each level of management not only restates the goal in terms which he/she can deal with in his/her area of responsibility, but the goals (control points) of each subordinate and means of achievement (check points) of each are reviewed and approved. In this manner, not only does everyone in the organization understand management's policies, but they also understand what specific actions and results are planned to support each policy.

FUNCTION ANALYSIS SYSTEM TECHNIQUE

FAST was developed by Charles W. Bytheway in 1963 to clearly and logically display and analyze customer required functions and the means of attaining those functions. While originally developed to improve manufactured products, FAST has been found to be just as effective in improving services. As a matter of fact, I believe few would argue with the definition of "product" as "the result of organized effort, by an individual or by an organization." This would then encompass manufacturing, services, health care, construction, planning, etc.

ENDS/MEANS CHART FOR POLICY DEPLOYMENT

WHY?

Top Management - Increase customer satisfaction

Vice-President Manufacturing - Reduce customer complaints 15% each year for next five years

Manager of Manufacturing - Attain a Cp of 1.33 at the end of the first year, and 2.0 by the end of the fifth year

Lower levels

- Constantly monitor customer satisfaction, complaints and suggestions

- Constantly rank root causes and work on the highest ranking ones to reduce variation from expected performance

HOW?

This is an example of how one policy could be deployed. There are of course many more organizations involved in deploying this one policy, and even the organizations shown would have many more means and ends depicted. Note too that the policy, "Increase customer satisfaction," is accepted as an end (the Why) by the Vice-President of Manufacturing who identifies the means (the How) of attaining this (within his/her area of responsibility), "Reduce customer complaints 15% each year for each of the next five years. The manager of Manufacturing then accepts as an end the reduction of customer complaints, and identifies as a means the reduction of variation (CP).

The FAST diagram permits all of the customer required functions, and the means and costs of their attainment to be displayed (see Figure II).

XYZ CORPORATION - FAST DIAGRAM (INCOMPLETE)

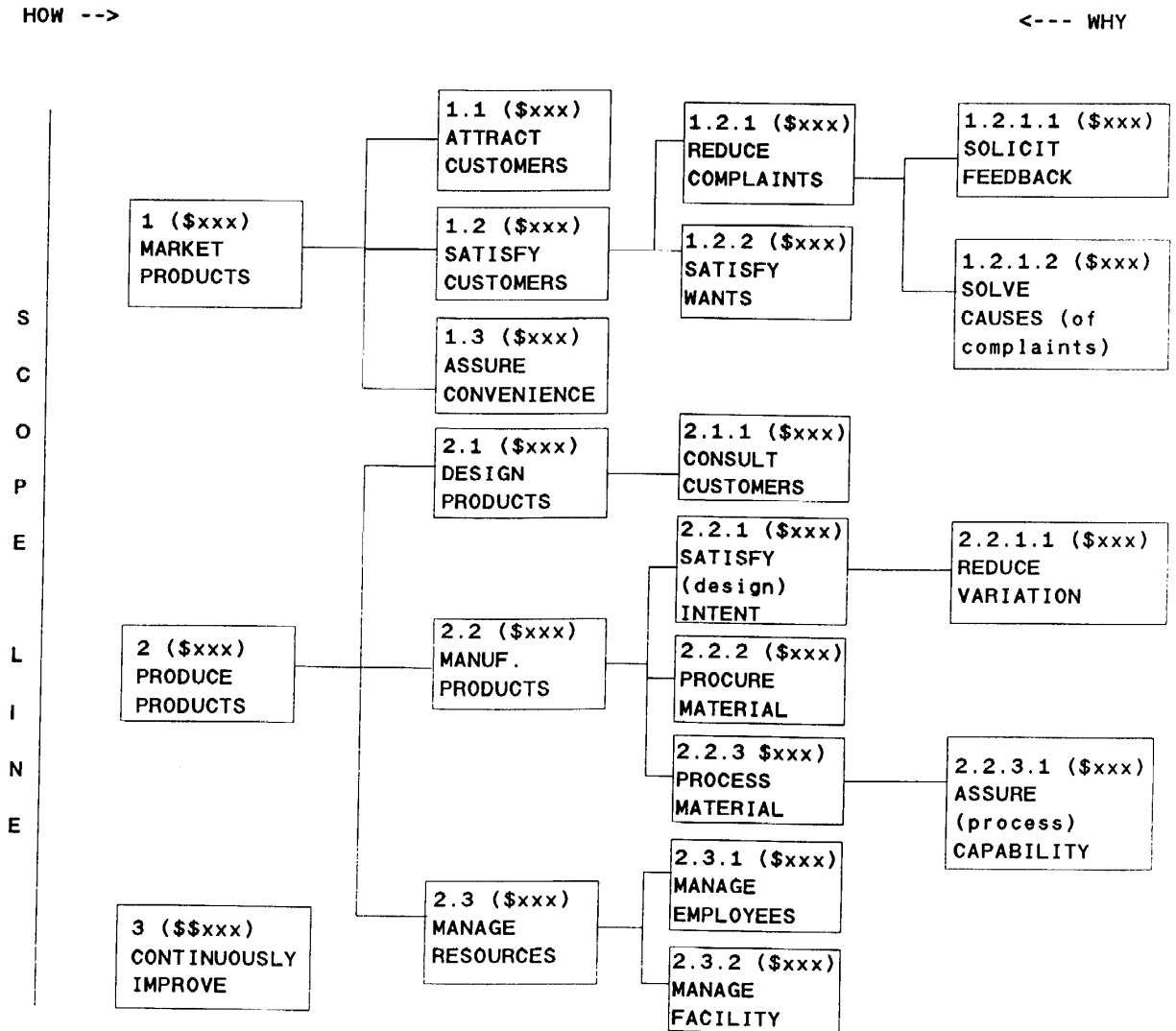


FIGURE II

This offers the advantage of allowing an analysis of all of the functions and their relationship to the overall organizational goals. The identification of activities which are at cross purposes, as well as activities which are mutually supportive are also facilitated. This is very important since, in many complex organizations, activities which support one management policy are often damaging to another management policy. Many organizations also have policies which are in conflict with each other. An organization would be more successful if all of its activities were supportive of all of its goals, and all of its policies were mutually supportive of each other and of the overall organizational goals.

CONCLUSION

At this point it should seem obvious that Policy Deployment and FAST share similar objectives and similar methods. By using the VE/VA disciplines of function definition, function analysis and FAST, Policy Deployment can be made more effective. It is unfair to our customers (internal or external) for us to argue that our way is best and should be used exclusively. The greater service would be for us to understand all of the available tools, and select the best combination of these to meet our customers' needs.

Function based thinking is always superior and will give the value specialist a competitive edge as long as he/she is able to use the appropriate tools in correct combination to serve our clients' needs.

What I find exciting about this argument is the conclusion that we are never done in our learning process. We must forever be seeking new approaches for helping our clients improve products, markets, organizations, services, etc.; and we must spend our energies not on proving why our approach is best, but by best adapting our approach to continually satisfy the needs of our customers using function based thinking.

I believe that the cultural climate encouraged by TQM will promote and cause this type of challenging activity to flourish.

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