

PRODUCT DEVELOPMENT
A VALUE ADDED DISCIPLINE FACILITATED BY A STRUCTURED METHODOLOGY

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ABSTRACT

This paper discusses the value of using Total Value Management's structured method to develop products and/or services. It discusses a method to prescribe a defined, systematic process for planning, directing, monitoring, adjusting, and controlling a series of interrelated activities. This process and methodology enables the program to achieve a defined objective while faced with constraints of budget, time, resources, and technology.

INTRODUCTION

The emergence of new technologies guarantees a constantly changing technology base. In the past, technology grew at a relatively consistent rate, and business could operate using undocumented, variable processes. Today, the rate of technological change has increased significantly, forcing the reevaluation of business processes.

As many businesses shift into a global market, they will begin to change their products and processes to achieve competitive advantage through value delivery. Value is what customers are buying, and superior value stems from offering lower prices than competitors for equivalent benefits, or providing unique benefits that more than offset a higher price. In addition, providers of products and services must cultivate and maintain the following capabilities: innovative solutions at competitive prices, retention of knowledge base (corporate memory), and management of geographically dispersed projects.

In response to these rapid changes, product and service providers have recognized the need to invest time and money in developing processes. Processes developed and used by a business enterprise must be common, predictable, controllable, and measurable. Ascending the levels in being a truly world class provider of products and services requires adherence to and consistent examination of these business processes.

The Product Management process coupled with the Total Value Management methodology documents and standardizes a business process to align products or services, management practices, and business processes to serve and best match customers as well as business needs.

PRODUCT MANAGEMENT PROCESS AND TOTAL VALUE MANAGEMENT METHODOLOGY

Most business applications can benefit from the Product Management Process and the Total Value Management methodology presented here. The process and the methodology can improve the competitiveness of a company when applied to value delivery, such as products and services, or value enablers such as business processes, manufacturing processes, strategic management, etc.

As described throughout the paper, the methodology includes fundamental Product Management processes designed to work together and build upon each other. This process highlights areas of opportunity and achieves significant improvements of critical performance measures and reduction of cost.

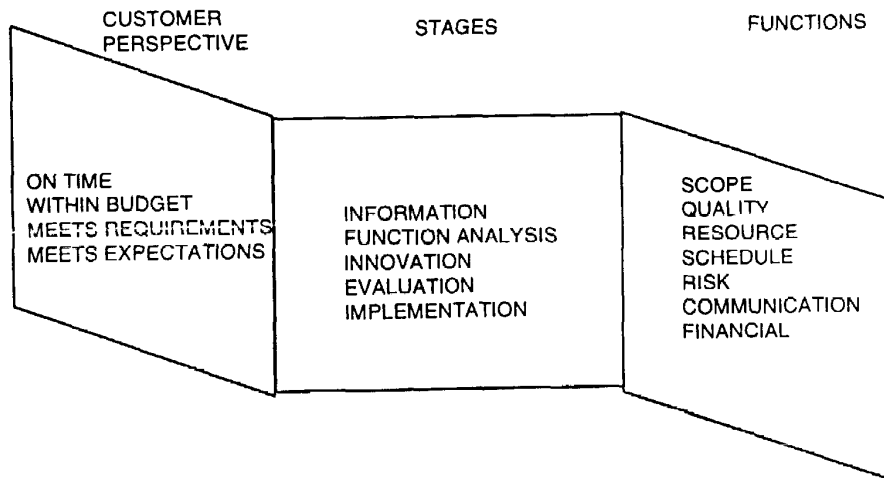


CHART I
PRODUCT MANAGEMENT PROCESS AND TOTAL VALUE METHODOLOGY METHODOLOGY FRAMEWORK

PRODUCT MANAGEMENT PROCESS

The Product Manager is responsible for the eight Product Management processes and the five stages addressed in the methodology (see Chart I Product Management Process and Total Value Management methodology).

The Product Management Processes are:

- Scope Management
- Quality Management
- Resource Management
- Schedule Management
- Risk Management
- Communication Management
- Contract Management
- Financial Management

Scope Management Process

The Product Manager leads the identification of requirements and deliverables, and establishes an understanding and agreements with the customer about the project requirements. The Product Manager subdivides the work into manageable tasks so that the cost and completion date can be forecasted. The value of using the Scope Management Process is that it helps define the scope, and provides the customer and the project team with the baseline for evaluating the impact of potential scope changes on schedule, budget, and performance requirements.

Quality Management Process

The Product Manager works with the customer to define the performance requirements. Together they create a plan to achieve these requirements. All the Product participants are involved to insure that the plans and procedures are followed. Performances against the project requirements, goals, and standards are analyzed to

monitor compliance with the expectations of both the customer and the Product team. The value of using the Quality Management Process is to ensure that the inspection and Product review are scheduled at appropriate points in the project. The customer and the Product team must ensure that progress is consistent with all stakeholder's expectations.

Resource Management Process

The Product Manager creates the strategy and determines the procedures for timely, cost-effective acquisition, use and allocation of resources, human and otherwise, to provide quality products and services to the customer. The value of using the Resource Management Process is to ensure the Product Manager coach, motivates, directs, and provides training for human resources.

Schedule Management Process

The Product Manager creates the project schedule to encompass all deliverables and resources required within the scope of the project. The value of using the Schedule Management Process is to ensure that the Product Manager evaluates the practicality of the schedule, work is accomplished, resources are expended as planned, and the schedule is updated as the project progresses.

Risk Management Process

The Product Manager systematically assesses the risk factors of the project and identifies specific risk items. Risk is managed by taking action to accept, transfer, or mitigate the risk. Contingency plans may be created to reduce related uncertainties and consequences. The value of using the Risk Management Process is to reduce risk and increase the probability of success for the project.

Communication Management Process

The Product Manager determines what kind of messages to send, to whom to send them when to send them for effectiveness, and how to translate them so that all the project participants understand. The value of using the Communication Management Process is to ensure that clear communication is established and maintained. Clear effective communication is critical to the project success.

Contact Management Process

The Product Manager identifies and monitors adherence to logically binding requirements of the customer, the Product team, and the provider of services for fairness and reduction of legal exposure. The value of using

the Contact Management Process is to ensure that the Product Manager established commitments with the subcontractor on the work to be performed, coordinates activities, and tracks and reviews the subcontractor's performance and results.

Financial Management Process

The Product Manager establishes the financial infrastructure to support the estimating, forecasting, budgeting, and tracking of the project's economics. The value of using the Financial Management Process is to ensure that the billing plan procedures for submitting requests for payment are followed.

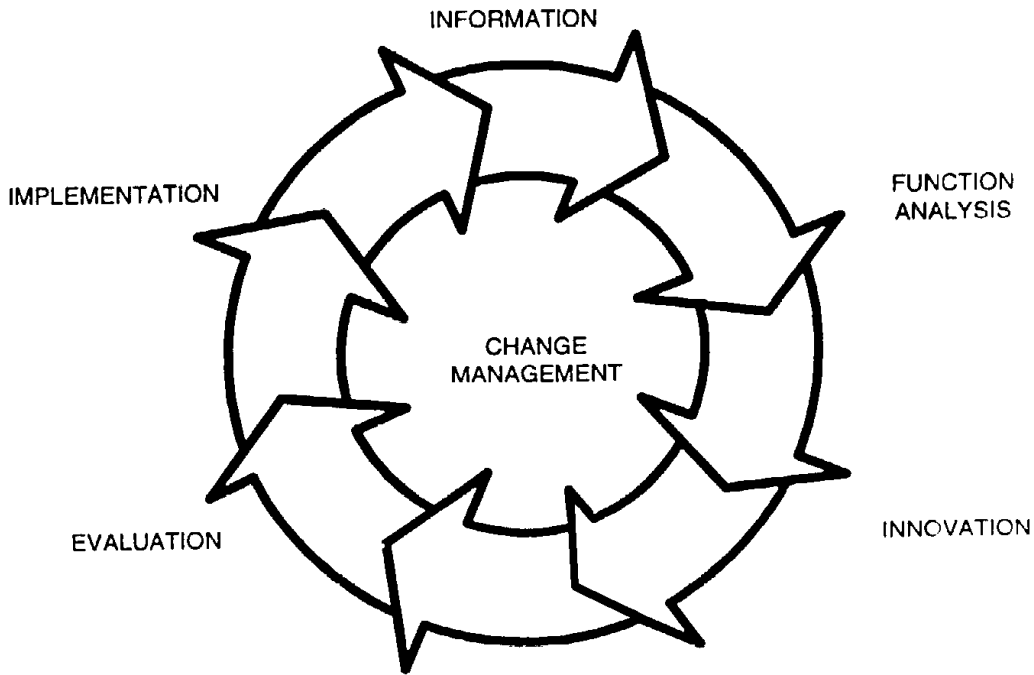


CHART II TOTAL VALUE MANAGEMENT ACTIVITIES

TOTAL VALUE MANAGEMENT STAGES

The eight Product Management processes are interwoven in the Total Value Management methodology. As shown in Chart II Total Value Management Activities are organized into the following five major stages:

- Information
- Function Analysis
- Innovation
- Evaluation
- Implementation

The stages, along with the activities that make up the steps, are not strictly sequential. Though some overall

sequence does exist, the methodology is an iterative process.

Information

During this phase the cross functional team collects the necessary information for a clear understanding of the current business situation and the plan or reasons that led to the initiation of the Total Value Management process. The team analyzes the competitive environment, identifies the enterprise's strategic intent, core competencies and strategic leverage. Given this analysis the group identifies project scope, time frame, and stretch goals for the project.

Function analysis

The team uses Total Value Management techniques to identify the functions the customer wants from the product or service and establishes the relative value of each function and the value gap between present and the desired state. The value gap is a quantitative representation of the plan in terms of measures of performance and cost.

Innovation

During this phase the team generates new ideas that close the value gap. This is done by using Total Value Management techniques designed to break down mental barriers to new ideas and concepts, using existing knowledge, and spurring innovation.

Evaluation

During this phase the team evaluates new ideas, finalizes the vision for the desired state and develops the transformation plan. The evaluation is done against different criteria such as cost, risk and expected benefits, but the final criterion is the elimination of the value gap between the present and the desired states.

Implementation

During this phase the Product Manager executes the plan that was developed in the previous stages of the Total Value Management methodology.

BUSINESS ISSUES

Corporate Value Statement

Implementing the Product Management Process and the Total Value Management Methodology has many advantages that will help any company provide superior products and services:

- Allow effective use of team members' skills and time.
- Provide the means to assess changes and their impact on cost, schedule and resources.
- Increase project successes, maintaining the company's current customer base and generate new business.
- Provide the structured environment necessary to realize the benefit of improved methods and tools.
- Reinforce consistent, repeatable processes, allowing for continual improvement.

Customer Value Statement

A repeatable process coupled with a structured methodology enables consistent and effective engineering and control of projects so that they meet customer requirements. The following advantages can be realized through the application of Product Management Process and Total Value Management Methodology (techniques and practices):

- Improve responsiveness to changing business needs.

Improve communication between the project team and the customer concerning status, issues and decisions.

Promote teamwork between the customer and the project team in managing scope, which enables informed decisions about the project's objectives.

Increases the quality of the delivered product using proven, defined project management processes.

Enable efficient, effective resource management.

Improve the stability of the project's progress using the Risk Management Process.

CONCLUSION

The Product Management Process and the Total Value Management methodology are key to the delicate task of balancing people, customer, and business values. If an organization wishes to be world class, it must become aware of the value in controlling resources, reducing costs, meeting customer expectations, and making money. The Product Management process and the Total Value Management methodology guide Product Managers in addressing volatile facets of the project. It also reduces the learning curve for Product Managers and project team participants by providing them a proven process supported by a repeatable methodology.

The methodology enables Product Managers and their teams to provide value to their customers through consistency, quality, and recognition of the importance of communication. The key to effectively employ the process and methodology is to continually assess the quality of the process itself. The methodology supports the use of metrics to assist in determining where the process can be improved and where the process works well.

Rigorous integration of the methodology produces consistently manageable successful projects. The methodology reduces risk, enhances project communications and improves each Product Manager's ability to chart their Product Management's paths.

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