

# VALUE MANAGEMENT AS AN EFFECTIVE TOOL FOR ORGANISATIONS IN MAKING STRATEGIC DECISIONS

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## INTRODUCTION

Value Management at present is currently widely used in many developed countries and attracting considerable attention in certain developing countries.

New South Wales, Department of Public Works and Services (1992) described Value Management as a structured, analytical process for developing innovative, holistic solutions to complex problems. It involves representatives of key stakeholders in facilitated workshop.

Strategic management on the other hand is the management of the process of strategic decision making. It is concerned with deciding on strategy and planning how, that strategy is to be put into effect. Johnson & Scholes (1988) divided strategic management into three main elements such as strategic analysis, strategic choice and strategic implementation.

Strategic analysis in which the strategist seeks to understand the strategic position of the organization. Strategic choice is the stage which is to do with the formulation of possible courses of action, their evaluation and the choice between them. Strategic implementation is the stage which is concerned with planning how the choice of strategy can be put into effect.

This paper presents the concept of Value Management process, the characteristics of the strategic makings, general perspective of the strategic management process and how Value Management assist organisations in making strategic decisions.

## THE DEFINITION & CONCEPT OF VALUE MANAGEMENT

Value Management is a rigorous, systematic effort to improve the value and optimize the cost of project, facilities and system. Value Management generates these cost improvements without sacrificing the needed performance levels. It is a creative way of working together in achieving client and stakeholder's requirements. Miles in the original context of Value Management then called Value Analysis defined as "philosophy implemented by the used of the specific of techniques, a body of knowledge, and a group of learned skills". Dell `Isola (1982) later simplified the definition as "the creative organized approach whose objective is to optimize and/or performance of a facility or system."

Value Management has been defined in other number of ways such as:

- Kelly and Male (1991) define Value Management as an oriented effort to attain optimum value in product, system or services by providing the necessary functions at the lowest cost.
- Australia's Department of Defence, reference book DRB 37 defines Value Management as "the systematic effort directed at identifying the functions of systems, equipments, facilities, procedures and supplies for the purpose of achieving the essential functions at the lowest cost consistent with the needed purpose, performance, reliability and maintainability."

Kelly and Male (1991) characterised Value Management by being:

- Systems oriented-uses a formal job plan and remove unnecessary costs.
- A multi-disciplinary team approach – teams of experienced designers, estimators and Value Management Consultants.
- Life cycle oriented-examines the total costs of owning and operating a facility
- A proven management technique
- Function orientated – relates functions required to the value received.

Che Mat, M.M (2004) defines Value Management as a rigorous, systematic and innovative methodology with multi disciplinary approach to achieve better value and cost optimisation for projects, products, facilities, systems and services without sacrificing the required performance levels.

The relationship between Value, Function (worth), Quality and Cost can be symbolised as follows :

According to Carlos Fallon:

$$\text{Value} = \frac{\text{Worth}}{\text{Cost}}$$

Where:

Worth = The least cost of providing the needed function and the required performance and is found by means of comparison of costs of units which are functionally equivalent.

Cost = The life cycle cost of the product/project.

Another relationship by Dell 'Isola:

$$\text{Value} = \frac{\text{Function} + \text{Quality}}{\text{Cost}}$$

Where:

Function = The specific worth that a design/item must perform

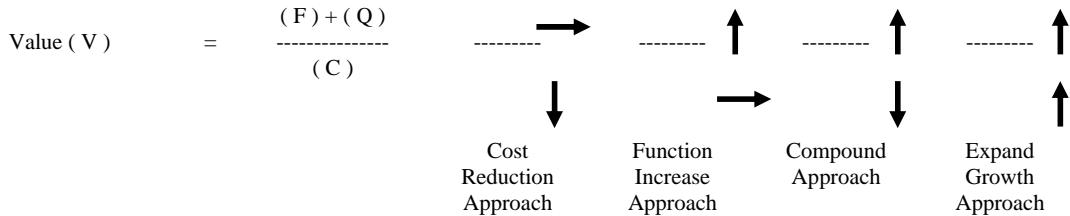
Quality = The owner's or user's needs, desires, and expectations

Cost = The life cycle cost of the product/project.

Therefore, we can say that:

Value = The most cost effective way to reliably accomplish a function that will meet the user needs, desires and expectations.

As such, value can be increased by the following approaches:



At the core of Value Management process is the analysis of functions of the system as a whole

## FUNCTION ANALYSIS

Function Analysis involves clearly identifying what things actually do, or what they must do to achieve the project objectives. Through the analysis of functions, it is possible to identify the wastage, duplication and unnecessary expenditure thus providing the opportunity for value to be improved. The function analysis perspective not only enables Value Management to explore the project and /or program brief but also test the assumption and needs perceived by the author of the brief.

Larry Miles, in his book Value Analysis and Engineering states (with minor modification) by Roy Barton (1996): *The heart of the situation is he customer wants a function. The customer wants something done. The customer someone perhaps, him or herself, pleased. The customer wants something enclosed, held, moved, separated, cleaned, heated, cooled or whatever, under certain conditions, and within certain limits, and/or the customer wants a shape, a colour, an aroma, a texture, a sound, a previous material or whatever to bring pleasure to him or herself or others that he or she wishes to please. That is all customer wants. That is all customers cares about. Thus, the language of function is the language of the heart of the problem. The customer two and only two types*

of function varying degrees in different products or services – *use functions and aesthetic functions* serve his needs

## VALUE MANAGEMENT JOB PLAN

Pre-Study

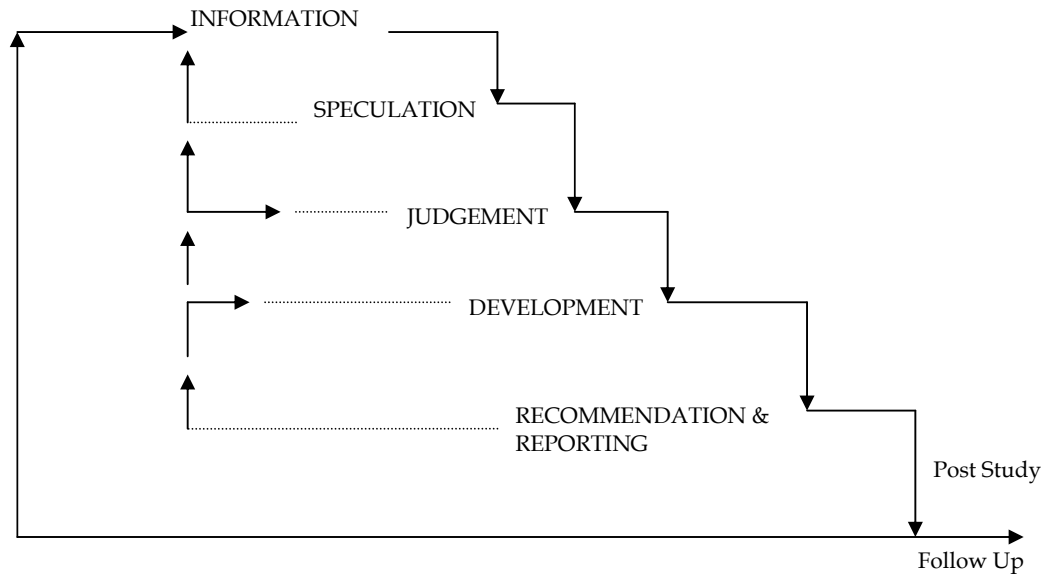


Figure 1 - Five steps on the Value Management Job Plan

The five steps of the Job Plan are shown diagrammatically in figure 1 above. The significant of the arrows is that, whilst a cascade system is used, with each phase flowing on from and using the output of the preceding phase, there is frequently reversion to a previous phase, as a result of some discovery or unexpected development.

### **Pre-study Preparation**

Discussions with the project client prior to the actual workshop is very important so that each party to the study has a clear understanding of how and why a Value Management study is conducted and make known to them of their required input.

### **Information Phase**

The information phase is the beginning of the Job Plan and understanding the decisions that have influenced the development of the project design is crucial. Designers are to present an oral overview of the project.

### **Speculation Phase**

The information phase of Value Management study never ends as it keeps on adding as the study progresses. The Value Management team then accomplishes the creativity phase to generate as many ideas as possible.

### **Judgement Phase**

Ideas generated from the creative phase are then judged as to their merits and demerits. Ideas found impractical and to be irrelevant or not worthy of additional study are disregarded. Those ideas that has potential for cost savings or improvements to the project are then developed further.

### **Development Phase**

The ideas that have been evaluated and selected earlier are expanded into workable solutions. Alternative design sketches and illustrations are prepared whenever necessary. The alternative proposal is estimated preferably its life cycle cost that includes not only initial cost but operation and maintenance during its economic life span. Although each job plan phase has specific items that must be accomplished and specific cut off time and dates it does not mean that the job plan is not flexible. It may be necessary, after receiving new information, to revert back to the earlier phases of the job plan to gain information or brainstorm new ideas.

### **Recommendation and Reporting Phase**

The functions of the recommendation and reporting phase are to sell recommendations, incite action and convey information

### **FUNCTION ANALYSIS SYSTEM TECHNIQUE (FAST) DIAGRAM**

The degree success of the Value Management Study greatly depends on the involvement of the key stakeholders in the Job Plan process. Figure 2.0 identifies the main task normally performed by the members of the Value Management team to achieve certain objectives such as identify target market, differentiate products and services and reduce cost. These targets are all part of the strategic choice in the strategic management.

Figure 3.0 is an example of costed FAST Diagram of a hypothetical case XYZ Sdn. Bhd., a concrete block manufacturing company. The VM test identifies that the Form Products, Cure Products and secure order functions are basic functions of the company and most of Plan Production, Buy Raw Materials the rest of functions are performing supporting functions. The before Raw Materials Maintain Factory, use Power and store Products functions are costed based on historical record and current market rates indicate that the total cost for both are RM 435,000.00 which constitutes about 33% from overall cost of RM 1.3M. This reflects great value mismatch in relation to the basic function of the company and other supporting functions, therefore there are a lot of opportunities of value improvement and will obviously assist the management in their strategic decision making process.

**FAST DIAGRAM - WHAT A VM TEAM DOES**

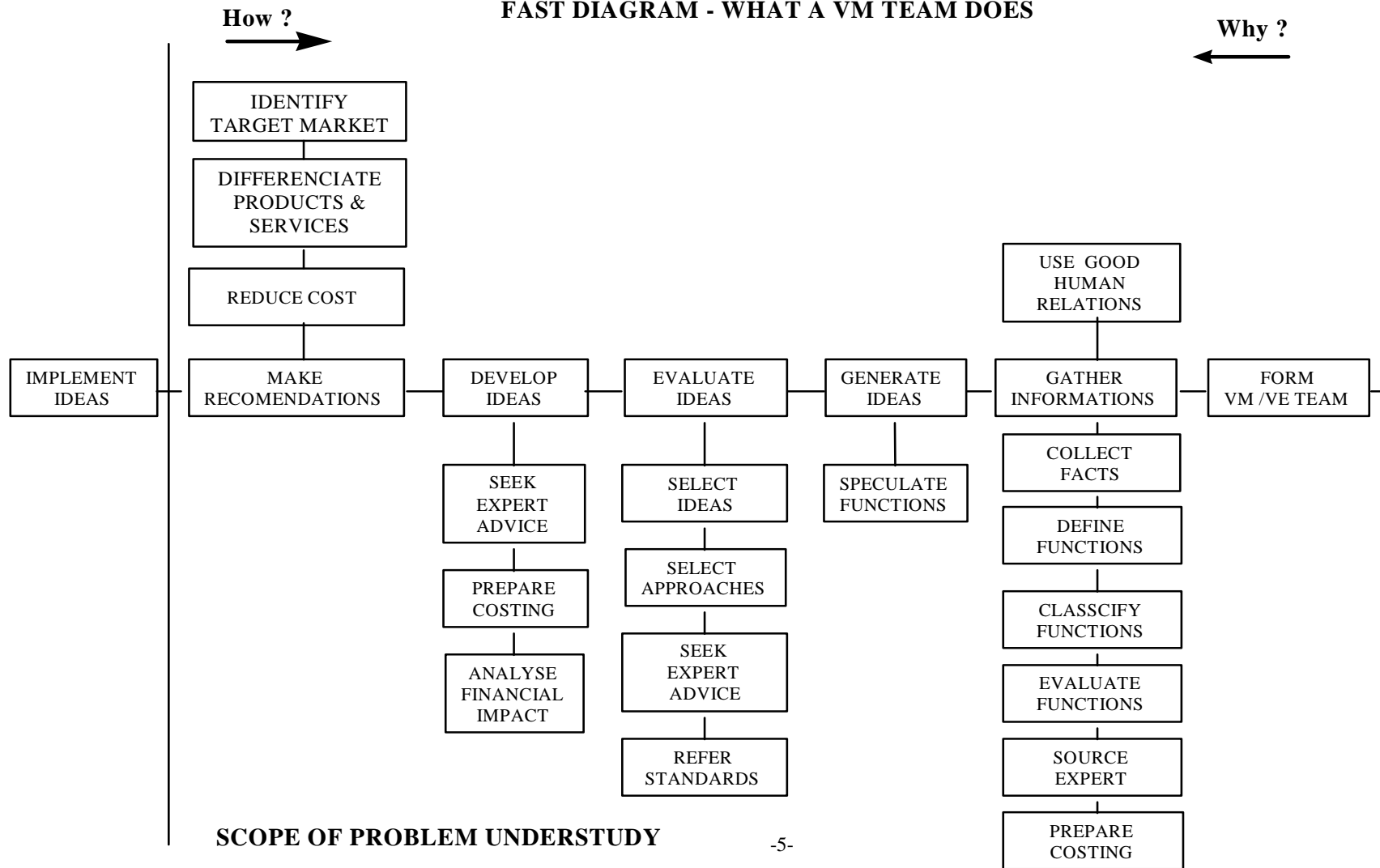


Figure 2.0 – What a VM team does ?

**FAST DIAGRAM OF A HYPOTHETICAL CASE OF XYZ SDN.BHD.  
(A Concrete Block Manufacturing Company)**

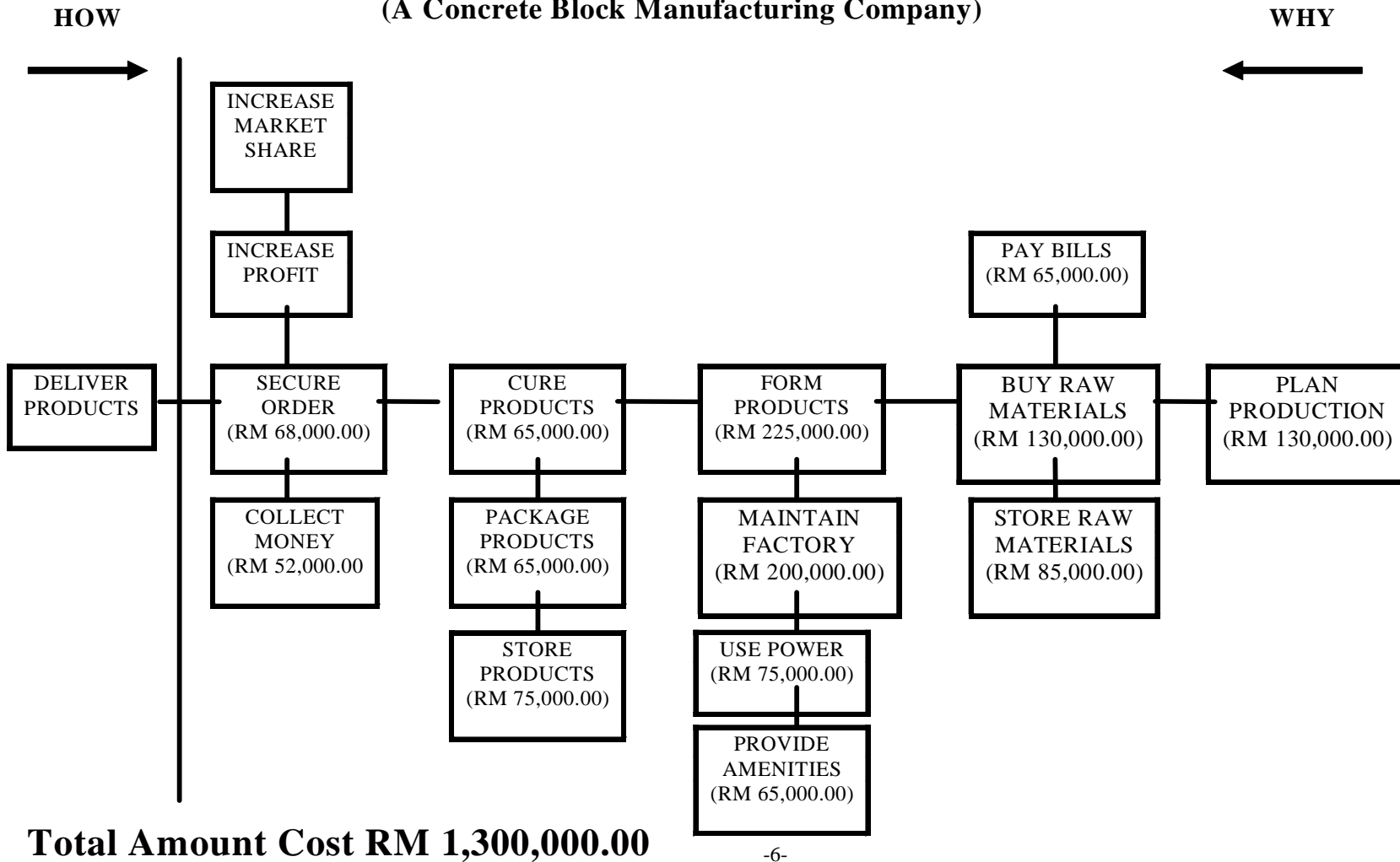


Figure 3.0 – Concrete Block Manufacturing Company

## THE STRATEGIC MANAGEMENT PROCESS

Roy Barton (1995) put forward John Viljoen's definition of strategic management as: *"The process of identifying, choosing and implementing activities that will enhance the long term performance of an organization by setting direction and by creating on going compatibility between the internal skills and resources of the organization, and the changing external environment within which it operates"*

He goes on to say that this definition is useful to isolate activities and process to which senior managers must attend in fulfilling their strategic role within an organization.

It is this very process of isolating activities and process which Value Management addresses through function identification and analysis. As long as we are working at sufficiently high skills levels of abstraction, the VM approach to function analysis, within a facilitated workshop, provides a marvelous vehicle for strategic planning including the creation of visions, missions and objectives. A summary of model the elements of strategic management is given in figure 4.0

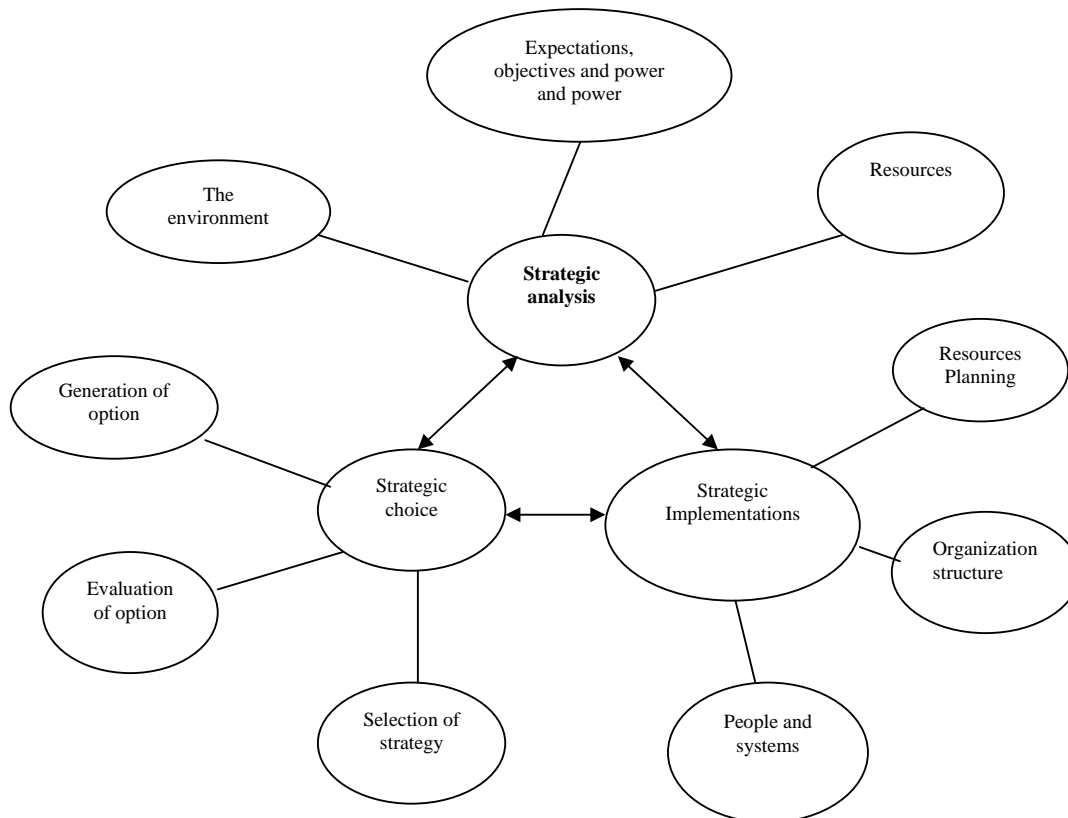


Figure 4.0. A model of strategic management elements  
Source : Johnson & Scholes (1988) Exploring Corporate Strategy

However it has to be made clear that the strategic management process in reality is not specific and orderly sequence of step. As an example, the planning of resources for the purposes of strategic implementation, a study of feasibility is in fact back being undertaken and so too is reassessment of existing resources which might also be described as strategic analysis.

From the above model it is clear that the scope of the strategic management is much greater than that of any one area of factional management. It concerns with the organization wide issue in the content of a whole range of environment influences.

Johnson & Scholes (1988) identified several characteristics of strategic decisions namely;

- The scope of an organisation's activities
- The matching of an organisation's activities to its environment
- The matching of the activities of organisation to its resource capability
- The allocation and reallocation of major resources in an organisation
- The values, expectations and goals of those influencing strategy
- The direction an organisation will move in the long term

- Implications for change throughout the organisation – they are therefore likely to be complex in nature

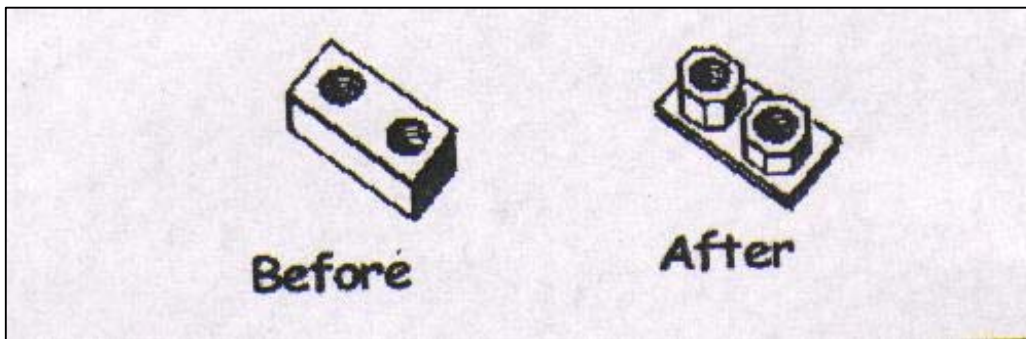
The Value Management methodology fits this concept very well as it views things in a broader perspective rather than narrow view.

### **HOW DOES VALUE MANAGEMENT ASSIST ORGANISATIONS IN MAKING STRATEGIC DECISIONS**

First and foremost it is very important establish the client or stakeholders needs and objective, their vision and mission. Then the strategy can be arranged to achieve those desire goals either through product differentiation, cost leadership or simply focused at particular part of the market.

In the context of Value Management/Value Engineering lets take an analogy of a small fastening plate as quoted by Brown (1992). The plate was being made by what was considered that most economical method a small pieces of bar stock was cut to length, drilled and tapped with two holes threaded and debarred.

Since the past was essentially two nuts combined, used as a twin fastener, it was clear that the same function could be obtained by two nuts jointed together. The component was therefore redesign to use two nuts welded to a steel strip. This reduced the cost of the part by 75%.



Source : Tony J Barry (1998)

The creativity technique in the VM study is adopted in order to generate a large mass of ideas. Question like “Can we combined anything?” are normally asked to stimulate activity.

### **CONCLUSION**

Value Management can provide considerable benefits to organizations in making strategic decisions. This is achieved through Value Management process which requires multidisciplinary and team oriented approach by all managers from cross functional and operational boundaries to deal with strategic problems and come to a strategic agreement at the organizational level to enhance the competitive advantages.



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