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Value Management in Hong Kong – Its Success and Barriers for Future Development

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Abstract
As a result of economic downturn in recent years, there has been an ever-increasing demand from clients to pursuit for value for money for their construction projects in Hong Kong. In order to have optimum cost at no expense of the required quality, value management technique is developed by analysing the functions of design components so that alternatives can be used to provide the same functions of performance. The aim of this paper is to examine the current successful use of this technique for a number of Hong Kong construction projects and its barriers for future development. The findings from the structured interviews show that value management is growing continually. Public sector clients are still acting as the main motivator and promoter for its implementation. "Lack of value management knowledge" and "Reluctant to change" are the major barriers for its growth.

Keywords
Value Management, Construction Projects, Cost, Quality, Functions, Barriers

1. Introduction

Under the current economic climate, many clients are definitely pursuing value for money for their construction projects. Hong Kong is of no exception. One of the approaches to achieve the project scope is by means of Value Management (VM). VM is being recognized as an effective way to obtain optimum cost at no expenses of the required quality of performance.

The value management concept has been developed since early 1970s and it becomes one of the modern project management tools widely adopted in construction projects nowadays in different countries like USA, UK, Australia and Japan. Value Management was originally used by technicians for cost reduction, but has been developed to integrate with "more abstract entities such as organisations, lines of management, processes, controls, etc," (Dawnson 1996). Nowadays VM is not confined to technical issues but has already been spread into management activities and company policy. Kelly & Poynter-Brown (1992) defined value management as "*an organised approach to the identification and elimination of unnecessary cost where unnecessary cost is that which provides neither use, life, quality, appearance nor customer features*". They further indicated that quality is a subjective function, but when it is perceived it must be preserved. Therefore the philosophy of value management looks towards reducing cost without sacrificing quality.

The following **Figure 1** by McGeorge & Palmer (1997) illustrated the three stages of functional analysis in value management process:

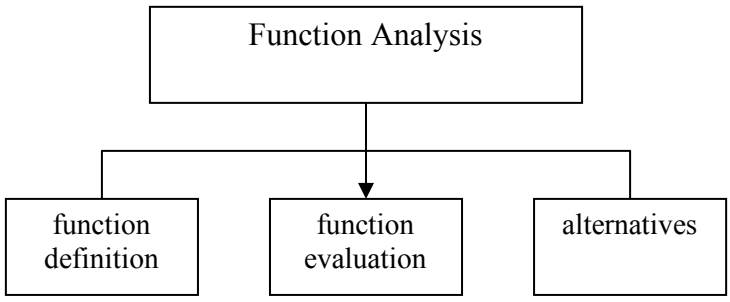

Figure 1: The stages of functional analysis

In view of the current demand and requirement of the stakeholders for a high quality housing especially in Hong Kong market, it become a prime concern of the developer to improve the functional value of buildings and at same time to enable cost saving to eliminate wastage of resources. Therefore it is worth to consider if value management is useful and viable for achieving a common objective of most projects to enhance better cost control in terms of cost saving, for example, by searching design alternative but to improve the value and quality of work.

2. Current Application and Development of Value Management in Hong Kong

Application of value management in Hong Kong is under a development stage with a slow but a continuing growth. Some typical VM applications over the last 10 years are listed in **Table 1** below. Although the number of applications were small, the results of most studies were satisfactory.

Table 1 :EXAMPLES OF VM APPLICATION FOR HONG KONG PROJECTS

Project Name	Year
Value Engineering Training workshop	1988
United Christian Hospital	1988
Ritz Carlton Hotel in Central	1989
Hong Kong Cable Television Network	1989
South China Morning Post Building	1993
North District Hospital Project	1994
Various PAA Projects	1994
KCRC Development Project	1994
Lei Yue Mun Housing Project	1994
Stanley Prison	1994
Haven of Hope Hospital	1995
KCRC Western Rail Project	1996
8 Projects Initiated by ArchSD	1996

With a view to achieve a project objective of cost saving and shortening construction period, there is an increasing trend for use of VM in recent years by clients from both public & private sector. Nowadays, clients are always acting as the motivators and promoters to implement the use of value management. Improvement in design knowledge, efficient communication and cost saving are perceived as the major benefits anticipated for running VM. Experienced VM facilitators act as a major role to lead and provide coaching to team members to produce suggested answers through VM workshops.

3. Perceived benefits and barriers for adoption of VM application in Hong Kong

Norton and McElligott, (1955) listed a number of benefits of value management:

- Provides a forum for all parties involved;
- Provides an authoritative review of the entire project;
- Takes into account life cycle costs;
- Crystallizes the project's brief;
- Identifies project constraints, problems that may have been neglected.

In a study of value management, Fong (1998) highlighted the views of the participants for carrying out VM as shown in Table 2 below. It can be seen that the major reasons for choosing VM are mainly to achieve cost saving, establishment of a clear project objective and provide creative thinking for design improvement.

Table 2 : Participation in VM studies in Hong Kong (Source: Patrick S.W. Fong, 1998)

	Main Reasons for carrying out VM studies	Major Problems encountered
Contractor	• To have a clearer focus on project's objectives • To arrive at a more effective design • To eliminate unnecessary costs but ensure better value for money • To encourage creative thinking • To establish an effective pool of expertise	• Inadequate briefing by the value management facilitator • Insufficient time/no time to carry out a detailed study • Lack of VM specialists • Defensive attitude of the original design team • Prolong design period
Developer	• To arrive at a more effective design • To eliminate unnecessary costs but ensure better value for money	• Defensive attitude of the original design team
Consultant	• To have a clearer focus on project's objectives. • To arrive at a more effective design • To eliminate unnecessary costs but ensure better value for money • To encourage creative thinking	• Insufficient time/no time to carry out a detailed study • Defensive attitude of the original design team • Interruptions to normal works

However they are not without problems. The major barrier could be the defensive attitude of the design team members and as a result, the overall design period would be prolonged.

Chan & Yu (2000) conducted a case study of the North District Hospital for construction process improvement and reported that a two days VM workshop with no lay day in between was implemented during the design stage. The VM team consisted of the client, project manager, the client's design consultants and an external facilitator. Apart from the benefits as mentioned above, the workshop was however also considered not as beneficial as it should have been because it was carried out too late during the design stage when many issues have been fixed and could not be changed. It was suggested that the VM workshop should be conducted at the planning stage before the appointment of contractor. It was also recommended to run workshops on a continuous basis rather than on a one-off basis.

4. Summary of Opinion from the Two Structured Interviews

In order to obtain a better view-points from the practitioners in construction, structured interview is individually conducted by inviting two qualified VM facilitators, one from government sector whereas the other is from a land developer in Hong Kong. They are active members who actively participated in VM studies. The following **Table 2** illustrated their responses over a number of interview questions:

Table 2: Comparison of their views for Value Management in Hong Kong

	Facilitator (government)	Facilitator (developer)
General background		
Why use VM?	• Resolve conflicting interest between parties • Value for money is important for decision to build	• Reduce cost time maintain quality, maximize business profit
When to use?	• At early design stage	• Both design & construction stage
Number of Workshop in HK	• Less than 40	• About 30
Project type	• All	• All
Current VM implementation		
Attitude	• To eliminate unnecessary waste due to tight project budget	• For business point of view, VM is used to maximize profit and reduce cost and time
Benefits	• Cost saving, better communication & resolve conflict	• Cost saving, program review quality improvement with improved methodology
Barriers	• Uneven contribution of participants • Reluctant to change • High VM cost as an excuse to reject	• Uneven contribution of participants • Unwillingness to spare time to attend workshop • Lacking VM knowledge
Criteria to enhance the use of VM	• Sufficient time allowed for VM studies • Client's involvement and promotion	• Sufficient time allowed for VM studies • Client's involvement and promotion
Future trend for VM Development	• Client's involvement and promotion	• Client's involvement and promotion
Promotion, Training and Education	• Government and the HKIVM takes a leading role for VM promotion • Some public clients and VM consultants start to have in-housed trained facilitators	• Government should take a leading role for VM promotion

5. Future Development for VM development

Every facilitator will learn and accumulate their experience upon each workshop completed. They will then develop their technique and make improvements for new workshops.

Client's involvement and his awareness are the important factors that enhance the use of VM but in return they could be the major barriers that hinder the VM development. Provision of training to local clients are important to improve the VM knowledge since the client's involvement is one of the key success factors for enhancement and promotion of VM in construction industry. Under the current economic situation there has been a trend for more applications of VM that will be undertaken and the

prospects of VM development is optimistic. As advised by the above interviewee it has become quite common for some clients from public sector and private VM consultants to have their own staff trained as facilitators for conducting VM workshops. All the above indicates that Value Management has a very positive growing trend in Hong Kong.

6. Conclusion and Recommendations

This study attempts to examine the current application of value management in the construction industry in Hong Kong. The research was designed to investigate the understanding of the current use of this technique to achieve cost savings based on functional analysis of the building components. Based on the interviews, the major benefits of VM applications include the reduction of project cost and project time through better communication among the participants. On the other hand, 'reluctant to change" and "lacking VM knowledge" among the project participants are perceived to be the major barriers for VM growth. Both the interviewees pointed out that the Government together with the Hong Kong Institute of Value Management (HKIVM) should take a leading role for promotion, in terms of education and training so that the clients are aware of the benefits. The last but not the least, is that in order to achieve the best possible outcome of VM workshops, it is recommended that VM should be conducted at planning stage and in a continuous mode of studies, otherwise it would be too difficult to change when a lot of design functions have been fixed with proper cost allocated.

7. Reference

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