

Value management in uk construction



Abstract

This dissertation of project will investigate how the value management is being utilised in today's construction industry in United Kingdom and to investigate how the value management was used in the UK construction industry.

The project will consider how the connection between the size of the project and the level of use of value management. The project will also aim to discover whether there is a connection between the size of a company and the level of value management utilization.

It is so hard to find the company as complete however the level of importance of value management in a company places can be judged to a certain by the level of its use within a company, and also whether an organisation provides its employees with value management training and as such this piece of work shall aim to uncover if there is an association between the size and type of a business, and the level of training which it provides.

The main things involved were about the business and the projects. The data will be collected through questionnaire sent to a sample of construction professionals in Dubai, Srilanka and in UK.

The study will conclude that there is an association between the size of a project or business and the level of use of value management. It will also conclude that there is no any association between the type of construction organisation and the level of training provided to employees; however there

is a association between the size of an organization and level of training provided to employees.

Chapter 1: Problem Statement and structure of Dissertation

1. 1 Problem Statement

The value management is the thing which is prepared for the estimating and the classification of the project scope and the means which there can be obtained by the value for money using a specialist facilitator and workshop techniques. According to the institute of value management, the value management has their principles of approaches;

A continuous awareness of value for the organization, establishing measures of estimates of value, monitoring and controlling them;

A focus on the objectives and targets before seeking solutions;

A focus on function, providing the key to maximize innovative and practical outcomes

The concept of value is on the association between the satisfaction of many differing needs and the resources used and the most satisfaction of needs, more the value. Stake holders, internal and external clients may all hold different view of what the value is. The aim of the value management is to resolve these differences and enable an organization to achieve the greatest progress towards its stated goals with the use of minimum resources which you can (see the figure below)

What is necessary for desired user

Satisfaction of needs

Use of resources

=

Value

Everything that is required to satisfy needs

It is very important to understand that value may be better by more the satisfaction of need even if the resource used in doing so increase provided that the satisfaction of need increases more than the increase in use of resources.

Nowadays in construction, customers are mostly concerned with achieving value for money in their construction projects. In response to this demand, a developed number of companies claim to offer the value management as a service, however there is a confusion what actually comprise what actually comprise the value management with some commentators going as far as questioning whether value management differ from the established produce of cost management (Green, 1992)

The previous day the value management is not that it is a cost cutting exercise, or a methods which is to be budgeted within a projects, rather as a mean of achieving best value for money to client value management may raise procurement costs and the price of a project up front, If it means it will increase the value/function ration (Kelly et al, 2002)

Ahsworth and Hogg (2000), claim that for a 1% fee on construction cost, it is possible that a total saving between 10%-15% on construction costs can be achieved. It is hard to prove how accurate this estimate is, however the benefit to client are widely touted, with the Egan report of 1998, also claiming a saving of up to 10% possible. However other the commentators such as palmer (1996) say that the effectiveness of value management depends mostly on the personalities involved, the timing of the study, the interaction of the team and the role of the client and the input of the design team, whilst going on to say that as functional analysis often gets ignored the whole value management process is often no more than a cost cutting exercise.

Most professionals would agree however that value management does have its merits. What this in mind it would seem senseless were value management not to be utilised to its full potential. However difference sources were seem to suggest that the case is that not all, or really very few organisations use value management its full potential (Fong, 2005) This is because of lot of understanding of value management or it is being realize at the wrong time. Kelly (2002). States that the previous value management is realising that the more effective it will be. If the limits of the construction scheme are clear from the Inception, then the design and briefing can be associated with the time, cost and quality constraints of the customer.

With all these points in mind this piece of work aims investigate how value managements being utilised in today's construction industry in the UK. Furthermore, to investigate the views of organisation and individuals in the industry with regard to value management.

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1. 2 Aims

The aim of this dissertation is to investigate how the value management is being utilised in today's construction industry in UK, and to investigate the views of companies and industrials in the industry with regards to value management, by examining how it is spread widely the use of value management, It will be useful to spread projects up into categories based on size to determine whether there is a connection between the project value and the probability of value management being used, and as such test the suggestion,

S1: Value management is important in larger projects.

The scope of this piece of work furthering work by Hogg (1999) and Handerson (2006) whether there is a relationship between the size of a company and the level of value management utilization and in doing so testing the suggestion.

S2: Value management was not utilised in smaller UK construction industry rather than the larger companies.

It is hard to measure the view of a company entirely even though the level of importance a company places on value management can be judged to a certain extent by the level of its use with a company, and also the company should need the employees with value management training to design between companies, they will be separated into groups based on size and type and as such the following suggestion can be tested;

S3: There is no any group between the type of a company and whether value management training is given.

S4: There is no any group between the size of company and whether value management training is given.

1.3 Objectives

The objectives can be realised in meeting some of these intends are;

To expose whether the value managements basic principles are understand amongst construction professionals in the UK, and to employ a testable definition to make it possible to distinguish whether authentic value management is being employed.

To research an investigate the distinguish of boundaries between small, medium, large and very large companies in order to investigate whether there is a connection between the companies size and utilisation of value management.

To research an investigate the distinguish of boundaries between small, medium, large and very large projects in order to investigate whether there is a connection between the companies size and utilisation of value management.

1.4 Structure of dissertation

Chapter 2 of this research will aim is to carry out a comprehensive critical review of literature and past research, incorporation with both accepted and historic literature but also the most up to date material relevant to the topic the literature, in particular the methodologies, data, analytical techniques

etc. So as to ensure the objectives evaluation takes place. A different views and theories will be presented through synthesis and evaluation this section of the research will aim to provide a theoretical framework by;

Essential of topic and terms

Noting items of theory

Noting major references

Executing searches for literature appropriate to the topic and problems

Obtaining and reviewing a range of sources

Produce a review of the material

This research will aim investigate whether or not value management is being fully utilised in the construction industry, in the learning of a range of professionals from differing background s in the construction industry . To measure a general opinion on the topic, it will be necessary to gather research which is relevant to the aim, objectives and the suggestion . This research was done by the journals, books, e-journals, the internet and publications such as building magazine.

Chapter 3 will assessed by the possible mean of data collection, which is that the most appropriate method can be implemented this chapter of the research will be to find the most suitable method of measure the thoughts and views of construction professionals from different backgrounds, to determine whether value management is there knowledge of experience is

being used fully in the construction industry. In this chapter will also evaluate the type of data that will be collected.

There are two types of data which can be collected in order to test the assumptions namely quantitative data and qualitative data which is a combination of both plan may help to achieve a more conclusive end result; Naoum (2003) describes qualitative research as subjective with an emphasis on meanings, experience and description with (Fellows and Liu, 2003) describing qualitative research as subjective whilst providing a 'richness' of data that cannot be obtained from quantitative data.

And finally this section of the dissertation will measure of formal inference to determine which method is most appropriate given the type of data to be collected.

In the chapter 4 of this dissertation the method which we discussed before will be implemented to produce and analyse a primary data, and enabling the earlier outlined aims and objectives to be met.

When the results have been fully examined and checked, they will be visually presented in the form of tables, charts, diagrams and graphs. This will allow the answers of results of the tests to be visually conveyed. Statistical inference is employed which is to be done by the applicability of the results to the issues under examinations. The results will be use to prove or disprove the suggestion.

In chapter 5 will be the results to conclude in the context of the theory to conclude in the context of the theory and literature review, and in light of the

aims objectives set out at the beginning of the project. The finding will be considered in light of theory with the scope by advancement of knowledge. A critical review of what has been achieved throughout the course of the study will be carried out. This will allow the recommendation to make for the further works to be carried out.

1. 5 Principal related work

Ashworth and Hogg K (2000) Added value in construction. Essex, Pearson Education Ltd

Hogg K (2000) Factors inhibiting the expression of value methodology in the UK construction sector : SAVE international conference proceedings available at;

http://www.value-eng.org/pdf_docs/conference_proceedings/2000/2012.PDF

Male, S & Kelly, J (1998) the value management Benchmark; A good practise framework for clients and practitioners. Thomas Telford.

Chapter 2: theory: Secondary Data

2. 1 Introduction

This was originally came from the manufacture Industry in the 1950's, The value analysis tool has came through different names and concepts into value management process as we all know it today which the key industry drivers was used to manage that of cost, time and quality. Value management include design management concepts of whole life costing, risk management and human resource management (Green, 2002) and is principally aimed at achieving the best value of money (in terms of both, <https://assignbuster.com/value-management-in-uk-construction/>

decision arising from the process of value management, the following product and the process itself) to certify a best use of time and resources.

Research and development work was brought out by Kelly and male (1998) together with Green (1990) and palmer (1992) which gave consideration to the application of the philosophy and the process within value management in the UK construction industry. Value management at this time was addressed commonly with passion and seen to have significant importance in the development of a more efficient and reasonable construction industry (hogg, 2000)

Certainly in later years the UK construction industry has come under heavy scrutiny and has received high analysis from major sources. In 1994 the Latham " Building the team" Identified the inefficient built in an adversarial construction industry setting a challenge for change and developments. These analysed coupled with clients increasing demand for achieving value for money have seen designed and contractors take up the gauntlet and improve different types of business relationships and evolved new methods of good practices, and methodologies to develop effectiveness and value to the client.

The meaning of value management was more highlighted when another government endorsed report, ' Rethinking Construction,' (Construction Task Force. 1998)

Which also criticised ineffectiveness in the UK construction industry was presented the deputy prime minister. The report highlighted value management as a mean developing performance describing it as:

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” A structured method of eliminating waste form the brief and the design before binding commitments are made.... value management can also reduce costs by up to 10%” (Construction task force; 1998, P13)

2. 2 What is Value Management?

The value management was defined in order to which the idea of value must be understood firstly. The idea of value relies on the relationship between the satisfaction of many differing needs and the resources used in doing so. The less of the resource used or the greater the satisfaction of needs, the greater the value. Stakeholders, internal and external clients may all hold differing views of what represents value.

The scope of value management is to reconcile these differences and enable an organization to achieve the greatest progress towards its stated goals with the use of minimum resource (which you can see in figure below)

What is necessary for desired user

=

Satisfaction of needs

Use of resources

Value

Everything that is required to satisfy needs

It is important to understand that value may be improve by increasing the satisfaction of need even if the resources used in doing so increase, provided

that the satisfaction of need increases more than the increases in used of resources(I. V. M. 2007)

Value Management has a variety of meaning, but the basic principal of adding a value to the project in terms of the customer to remain the same.

Kelly and Male (1998) defined value management as " a service which maximises the functional value of a project by a managing its development from concept to completion and commissioning through the audit (examination) of all decisions against a value system determined by the client". They advice that the value system of the customer might be made explicit using functional analysis to expose the relationship between time, cost and quality.

Value management is a planned approach to the recognition and valuation of project objectives and of the means by which these may be achieved is order to obtain value for money using a specialist facilitator and workshop techniques. According to institute of value management, the value management approach involves in three root principles;

- A continuous awareness of value for the organization, create measure or estimates of value, monitoring and controlling them;
- A focus on the objectives and targets before seeking solutions;
- A focus on function, providing the key to maximize innovative and practical outcomes.

Value management utilizes workshop techniques, in which the customers and their advisors seek to identify the customer's needs and objectives.

These workshops, help by a value manager use brainstorming techniques and functional analysis to increase value in light of the clients need and requirements by certify that design solutions evolve in accordance with the agreed objectives. A consistent and chronological path is achieved through the use of job plan these workshops, following a five step process:

The workshop begins with an information phase n which details of the project are presented in participants. This phase should give a clear due to all parties as to what the client's needs, wants and limits are the smart method of value management may be utilized at this stage. SMART value management is based upon technique known as the ' simple multi-attribute rating technique' SMART value management understand that it is not sufficient merely to ' achieve the required function cost-effectively' firstly it is necessary to ensure that the key project stakeholders have developed a share understanding of the strategic objectives, with is both the sound in its theory and practical in its implementation (Green, 2003)

The next phase is the speculation phase, which involves generating alternative solutions and ideas. This phase of the workshop is usually performed with the aid of brainstorming and other creative thinking techniques such as the Gordon Technique to encourage the contribution of suggestion to improve value.

The evaluation phase is used to assess the merits of the ideas generated during the creative phase, and compare the various ideas, which have been put forward. A list of best ideas is then carried forward for further development.

The improvement phase considers in detail all of the ideas accepted from the evaluation phase to determine whether or not an idea should become a firm proposal. It should be developed in detail which is of ideas and then need to be priced in order to make a decision whether to present the ideas.

The completion stage is the presentation phase which the team's proposals are presented to the client and their representatives. Diplomacy is an essential part in proposing changed to the original design.

The ability of the catalyst is central to the success of the value management process. The success of the value management process. The facilitator's role is to advising upon the selection of value management team, co-ordinating pre-workshop activities (E. g. issue of relevant information to selected value management participants), deciding upon the timing and duration of workshops, managing the workshop process and preparing reports. The management of the workshop can be a difficult task requiring a variety of skills. These include; the ability to adhere to an agenda; identifying the strengths and weakness of team members and promoting their positive interaction; motivating and directing activity; overseeing functional analysis; promoting an atmosphere conducting a disciplined structure (Ashworth & Hogg, 2000).

Which the test created by Kelly and male (1998) where the test created by Kelly and male (1998) where the outlines of a member in criteria, which is to be met, in order to conclude the authentic value management is being carried out . Those criteria are as follows;

- The workshop should consist of a multi disciplinary team.

- It use of a qualified value management as a facilitator.
- Implemented the brainstorming techniques.
- Implemented of functional analysis (as detailed below)
- Observance to a job plan (as detailed below)

In this piece of work the above test together with the proceeding definition. Shall be use to define whether value management is being carried out.

2.3 Functional Analysis

Functional analysis will mainly give the idea of identifying the common functions of an item, and in terms of construction, It identifies the clients need in terms of function. It is simple and effective with underlying the principle of functional analysis. when the technique applied to a building component on element it invites the question ‘ what does it do’ as opposed to ‘ what is it’ with this in mind, when searching for alternatives, we look for something that will perform the required function rather than attempt to find a substitute for the previous solutions (Palmer, 1992)

FAST is an analysis process that was developed by Charles Bythway. It builds upon work by miles and allows functional analysis to be modelled and used as a means of multi disciplined communication. The application of fast is universal. It is based upon logic and allows aims and objectives to be translated into action Green (1994) indicates that the functional analysis system technique(FAST) is best used for the ‘ hard’ technical problems associated to value engineering which are normally carried out at later stage in the design process than more strategic SMART model used in value management functional analysis, which is central to the FAST technique, forces conciseness and eliminates ambiguity. FAST were also examines the

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cost Vs worth aspect, allowing full consideration of varying functions of one component. The aim of FAST is identifying the clients wants in terms of function not things (Bythway, 1992) One method of carrying out FAST analysis is use of a FAST diagram. This is a powerful technique in identifying the functional requirements of a project.

2. 4 Value Management in Practice

The recent years the UK construction Industry has come under heavy research, and has got heavy criticism from major sources. During the 1990's the Lathan and Egan reports " Building the team" and " Rethinking construction" identified the inefficiency inherent in an adversarial construction industry. In particular " Rethinking construction" set a challenge for change and improvement. These criticism coupled with clients increasing demand for achieving value have seen designers and contractors take up the gantlet and develop different types of business relationships and evolved new methods of good practice, and methodologies to improve efficiency, and value to the client. To this end, a growing number of companies claim to offer value management as a service, incorporating design management concepts, whole life costing, risk management and human resource management (Kelly and Male, 2002) and is principally aimed at achieving best value for money (in terms of both, decisions arising from the value management process, the ensuring product and the process itself) to ensure best use of time and resources.

However there could appear to be some confusion as to what actually constitutes value management. The modern day agreement for value management is not that it is a cost cutting exercise, or a method of keeping

projects within budget, rather as a means of achieving best value for money to the client. Kelly and Male (2004) describe value management as " the process by which the functional benefits of a project are made explicit and appraised consistent with a value system determined by the client" value engineering, on the other hand, is concerned with achieving a given function at minimum cost. This there is some confusion between the value engineering and the value management. That as the value management will do achieve a high value to the client, in terms of meeting client objectives, which the value engineering will contrast looks to improve value in monetary terms by reducing cost, after analysis of function. In other words its aims are to achieve the function, at the least possible cost. That it may not lead to the greatest added value to the client. (Dell'Isola 1982) This confusion in terms has the lead some commentators to go so far as to question whether the value management differs from the established procedures of cost management (Green, 1992)

The lot of majority of material studied however, were of the opinion that value management is a useful tool in identifying the client's needs, and utilising functional analysis to formulate a plan how best to meet these needs. In 1995 the RICS publication, " Improving value for money in construction" It is stated " value management must be undertaken as part of the part of the process of establishing the clients business case in to ensure that the project address real needs and adds value."

In today's UK construction industry, the use of value management is touted as having increased competition and encouraged growth by allowing better, more informed decisions to be made by IVM (Institute of Value Management, <https://assignbuster.com/value-management-in-uk-construction/>)

2000) In project delivery' opportunities for such improved decision making exist through a project inception, design, construction and disposal (Kinnan and Martin, 1997). Allowing value management to be introduced at any stage of project, with the later stages being used to assist project Integrating and procurement, often through the use of buildability concepts and partnering (Hyan, 1997) without value management, however, significant additional costs can be incurred in late design changes (Dell'Isola, 1982) as well as;

- Outcomes that represent poor value for money;
- In appropriate strategic for providing service need;
- Poor definition of service needs;
- An asset operation that cannot support service delivery;
- In effective communication among client/owners;
- Deficient project briefs; and
- Lack of project ownership by end users and managers.

(Daddow and Skit more, 1993).

Therefore to find the unsurprising the value management in construction industry has received attention and support from the government since the early 1990's (Institute of value management, 2000) and for more it use in becoming a requirement in the development and assessment of projects. whether this will ultimately lead to value management being a mandatory requirement in similar way to quality management in the 1980's is not yet known.(Daddow and Skitmore, 1993) Indeed the RICS voice that value management should be made mandatory. Stating " value management should be an automatic part of every project and not be an option ' in the <https://assignbuster.com/value-management-in-uk-construction/>

1995 publication, 'Improving value for money in construction'. (RICS, 1995, P29) In the USA for example, a system of incentives and rebates, referred to as value management incentive and rebates, referred to as value management incentive clauses, are increasingly being introduced into contracts to formalise the arrangements between parties, for sharing the costs involved in implementing value management (Thiry, 1997).

The degree of success, which value management is touted to achieve is also varied. That the most easy source to quote is Sir John Egan's report (1998) rethinking construction; presented to the deputy prime minister, in which a figure of a 10% saving on the contract sum, being forecast as figure to reasonable expected. As previously mentioned, this particular report was damning in assessing the UK construction industry current state, with regards to inefficiency and waste. However value management in particular was singled out, as one of the ways to address these problem, describing value management as " a structured method of eliminating waste from the brief and from the design before building commitments have been made"(Egan, 1998; p13) Ashworth & Hogg(2000) to back this figure up somewhat, claiming that for a 1% be on construction cost, It is possible that a total saving of up to 10%-15% on construction costs can be achieved, should the correct procedures take place. How accurate the estimates are, is hard to prove, and in all likelihood vary from case to case, with many variables determining the success of the value management process.

There are various differing reports from other leading commentators such as Palma (1992) who although not rejecting the advantages of value management, suggest that is not as clear at as deciding to implement value

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management. Palmer states that effectiveness of value management depends largely on the personalities involved, the timing of the study the interaction of the team and the role of the client and the input of the design team, whilst going onto say that as functional analysis often gets ignored the whole value management process is often no more than a cost cutting exercise.

That of man paper seems to agree that there are numbers variables which affect the success of the value management process. Koo et al (2005) suggest the success the key reasons for failure of a value management exercise being;

- Lack of experience and skill of the facilitator.
- Improve use of functional analysis.
- Lack of purpose of purpose of FAST diagramming and no description of FAST diagrams.

Unsatisfactory and impromptu function analysis of the value engineering project was performed in order to get results quickly, easily and superficially.

The table below illustrates the causes and reasons for unsuitable FAST analyse according to Koo et al (2005)

Causes and reasons of the unsuitable function analysis

Description

Causes

Reasons

Functional Analysis

Function Definition

Unrelated function definition for the project

Deficiency of purpose and methodology of function analysis

Unsuitable function definition

Lack of recognition of function analysis

Lack of community between function definition and follows

Lack of education and experience of value engineering team members

Job plan

Unsatisfactory understanding of value engineering project

Function Classification

Classification confusion of the main and secondary function definitions

Lack of understanding of value engineering object

Lack of objectives for function selection

Too much or too little secondary and function description relating to the main function

Fast diagramming

Lack of purpose of FAST diagramming

Difficulty and lack of expertise for diagramming

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No description of FAST diagram.

Lack of adaption value engineering diagramming logic