

DEVELOPMENT OF A VALUE MANAGEMENT FRAMEWORK FOR THE FORMATION OF PROJECT BRIEFS

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Project briefing/architectural programming is the procedure of gathering, analyzing and synthesizing information needed to inform decision-making and decision implementation at the project planning stages of the construction process. Previous research revealed that there are limitations in the existing framework for briefing. This paper describes an international research project which seeks to establish whether a value management framework for project briefing can systematically identify and clarify client requirements, and represent these requirements precisely and explicitly to facilitate the design process. The research methodology first involves the establishment and validation of a theoretical framework for the briefing process. Based on a literature review and the established theoretical framework, a practical framework using the value management approach in project briefing will be developed. The proposed framework will comprise two major elements: a structural job plan and a functional hierarchy to identify, define and represent client requirements. A practical “how-to” guide will also be produced to provide practical solutions to critical issues frequently encountered in project briefing. The final stage of the research project will be completed with the validation of the value management framework for project briefing through real-life case studies.

Keywords: briefing, client’s requirements, theoretical framework, value management framework.

INTRODUCTION

A project brief (or a program referred to in the USA) is described as a document defining the requirements of the client organisation for a building project, which forms the basis for design. The preparation of project briefs is a topical issue in the building industry as inadequate briefs affects the performance of the building. The briefing process is both critical to the successful delivery of a construction project and problematic in its effectiveness. Problems in buildings can be traced back to the briefing process when the major decisions are made. The famous Pruitt Igoe project was demolished in 1976 because it did not respond to the behavioural and social needs of the users. This incident illustrated very well that a systematic identification of client requirement is a prerequisite to project success.

A good project brief protects clients from a major source of delays and cost overruns. When a good brief is in place, design can begin earlier, proceed more efficiently, and suffer less slippage, fewer false starts and client rejections. The term client commonly refers to a complex consortium of stakeholders whose views need to be consolidated into a clearly expressed consensus view of the problem. Due to the increasingly complicated nature of client organizations and the ever-changing social, economic, political and technological environment for building projects, defining client requirements and communicating them to others are very complicated undertakings (O'Reilly, 1987). It requires a shared understanding and commitment among a group of stakeholders of the project, including the client, the end users and the designers.

Previous studies conducted by Graham (1983), Hudson et al. (1991) and Barrett et al. (1996) suggest that, due to the complexities in identifying and conveying clients' actual needs and requirements accurately to the project team and the immense magnitude of project information that needs to be considered during the briefing process, project briefs are often inadequate and not sufficiently explicit, and thus may not truly reflect client requirements. To overcome this problem, a number of studies have been conducted to develop briefing guides for inexperienced clients (CIRIA, 1984; Bailey, 1990; Salisbury, 1998). Despite these early attempts, the current briefing practice is still considered as inadequate by many researchers (e.g. Barrett and Stanley, 1999; Kamara and Anumba, 2001). The findings of Kamara and Anumba's research reveal that there are limitations in the framework for briefing.

The present study seeks to develop a practical framework, which utilizes the value management approach, for systematic identification and clarification of client requirements, and precise and explicit representation of these requirements. This paper introduces the research project and describes the process for the development of the value management framework for project briefing.

LIMITATIONS OF EXISTING FRAMEWORK FOR BRIEFING

The review of literature indicates that there are a number of limitations in the existing frameworks for briefing.

Lack of a comprehensive framework

Although numerous briefing guides have been developed for briefing, many researchers suggest that the general framework for briefing is still inadequate (Newman et al. 1981; MacPherson et al., 1992; Barrett, 1996; CIT, 1996; Kamara and Anumba, 2001). The limitations in the existing framework for briefing can shift the focus away from the requirements of the client, and can result in problems in briefing practice (Kamara and Anumba, 2001).

Lack of identification of client requirements

Successful briefing is about the thorough analysis of needs and rigorous evaluation of available options (Atkin et al., 1995). Latham (1994) and Kamara and Anumba (2001) revealed that commercial pressure from clients may require detailed designs to be prepared as soon as possible. This reduces the time spent on understanding the real needs and requirements of the clients and may affect the performance and success of the project.

Inadequate involvement of all the relevant parties of a project

Previous research revealed that the briefs may not be comprehensive because they are usually prepared by a small group of representatives from the client organisation or by the consultants in the industry only. Most public clients reported that involvement of

other stakeholders would prolong the duration of briefing because of the difficulties associated with identifying them and reaching a general consensus in meetings (Chung and Shen, 2003).

Inadequate communication between those involved in briefing

The use of sketches and drawings to re-state and record changes to client requirements can make it difficult for requirements to be traced to the original needs of the client. Moreover, records of decisions at project meetings can be quite vague, and do not provide any explanation of why those decisions were taken (Kamara and Anumba, 2001).

All these limitations in current briefing practices may affect the end performance of the building and reduce the client satisfaction of the project.

RESEARCH METHODOLOGY

The research project was approached through an initial brainstorming session by three researchers to identify variables likely to be significant in a theoretical framework for briefing. A comprehensive literature review confirmed or rejected the variables as significant and highlighted other variables initially not included. Thirteen significant variables were identified as having an impact from a theoretical perspective and became the theoretical foundation for the project. The thirteen variables were investigated in detail in the first stage to identify their impact, if any, on the construction project briefing process. This work was written-up to form a working research document within which summaries of each of the thirteen parts concluded with those inputs most likely to influence how the process is undertaken and to develop a theory behind the issues involved in the briefing process.

A questionnaire survey is used to identify any missing variables and to validate the established theoretical framework. Questions were formed with reference from the aforesaid working research document and a questionnaire containing four sections was drafted. The first section involves the background information of the respondents. The second section includes the respondents' opinion on the briefing process. The thirteen variables are tested in the third section. Finally, an open ended question is asked concerning the critical success factors for construction briefing. The survey will be conducted in Hong Kong, UK and USA. Multi methods will be used to distribute the questionnaire to project managers and architects who have experience on briefing. A web based questionnaire will be used to administer the questionnaire survey in the UK and USA. In Hong Kong, a postal questionnaire will be adopted in order to increase the response rate of the questionnaire. The subjects will be allowed to complete the questionnaire in eight weeks' time. The data collected will be analysed using SPSS 11.0 Package to determine whether the respondents are in agreement with our theoretical framework.

THE THEORETICAL FRAMEWORK

So far the primary research finding of this project is the identification of the 13 variables that have an impact on the briefing process. It was realised that some of the variables require consideration at particular points in the briefing cycle whereas others are present throughout the life cycle of a facility from the commencement of the briefing stage. This is discussed in the following section on the theoretical framework.

The input of each variable on the briefing process has been investigated and recorded in the 'working document,' and a brief outline of each variable has been given with its relevance to briefing explained. Figure 1 highlights the number of variables that input to the theoretical framework.

Projects...A project is a change orientated event defined as 'an enterprise comprising physical and non-physical activities that include a pre-project stage to ensure effective planning and a post project stage to ensure successful absorption into core business.' Therefore a project is a separate, temporary activity from the organisation's core business but one which will make a change. A brief for a project requires the initiator of the brief to accept change.

Stakeholder Management...In the briefing process, it is necessary to consider the interests of stakeholders, both primary and secondary, and maintain a balance between different stakeholder interests. Those with responsibility for the briefing process should undertake a test of the relationship of stakeholders.

Change Management...The briefing team must recognise that people are at the heart of any change process; therefore communication and involvement are key areas to ensure change management success. The key areas of change management are education, training, communication, team and leadership development.

Knowledge Management...Knowledge management in briefing relies on teamwork, collaboration, face-to-face contact and effective communication structures. Fundamental to briefing therefore is the mapping of individuals' contributions to organisational project knowledge in order to determine the membership of the project briefing team.

Risk and Conflict Management...The importance of applying risk management techniques during the initial project appraisal phase of the briefing process lies in maintaining flexibility in consideration of design and planning alternatives whilst the greatest degree of uncertainty exists. Collaboration and problem solving is preferred to conflict resolution during the briefing process.

POE and PPE...Successes, failures and past experiences of what does and does not work well should be used to inform better decision making in the briefing process.

Teams and Team Dynamics...The briefing team is project focused and interacting; comprised of individuals willing to sacrifice individualism for collectivism.

Client Representation...It is important to ensure adequate representation of client groups to address client needs and to prevent distortion of the brief.

Types of Business and Organisational Theory...The briefing process must take into account that the team may be formed of many different types of organisations with different success criteria. This success criterion is most influenced by stakeholder satisfaction. For example a government organisation or a not-for-profit organisation will differ greatly in terms of success criteria from those in the team who aim to make a profit from the project.

Decision Making...A good briefing team should not limit themselves to just one decision-making method and they should operate in contingency fashion by changing decision methods to best fit the problem and situation at hand.

Communication...The briefing process is essentially one of communication. Active listening should be encouraged in the briefing exercise to allow a free and complete flow of communication.

Culture and Ethics...In managing the briefing team, the influence of culture dimensions such as language, time orientation, use of space, religion, power distance, uncertainty avoidance, individualism-collectivism, masculinity-femininity and long term/short-term orientation must be taken into account. The briefing team may encounter ethical dilemmas which affect decision making in the briefing process.

Critical Success Factors and Key Performance Indicators...The critical success factors in the briefing process range from clear objectives and requirements of the project to trust and involvement of key stakeholders. Key performance indicators include time, cost and quality as well as satisfaction of stakeholders.

As illustrated in Figure 1, briefing has three predominant areas that require due consideration: people factors, management inputs, and a series of controls and measures which intervene at different stages of the briefing process from strategic to project briefing.

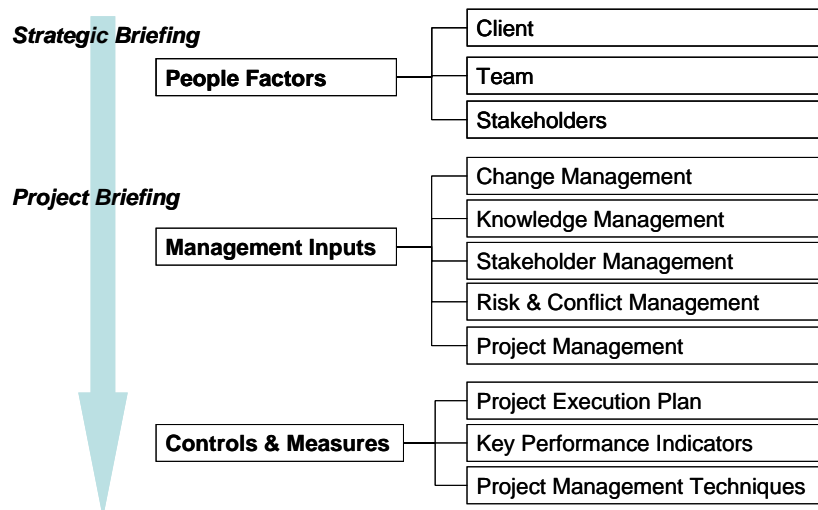


Figure 1 Briefing Considerations

The Theoretical Framework

The briefing process comprises a number of discrete activities:

1. A trigger will highlight the initial identification of the requirement for change in the client organisation.
2. An analysis of the requirement for change will result in a number of project drivers being identified. These drivers become the raw data for the project's critical success factors identified by the client organisation.
3. The project is initiated involving an explicit statement of change to benefit the organisation. To be successful any organisation cannot remain static, therefore to improve it has to undergo change by initiating projects.
4. A team is formed comprising primary and secondary stakeholders within the client organisation and those external to the client organisation that will be impacted by the initiation of a project.

5. The client organisation and stakeholders make up the team to address the strategic brief, also referred to as the concept brief, which is described as being aspirational. A significant point is that whether or not this stage is made explicit it does exist.
6. The formation of the strategic brief is followed by the decision to build.
7. In the event of a decision to build an approach is made to the construction industry. A project team is formed and a technical and solution focused project brief evolves.

At the stage of the project brief there are a number of 'inputs', 'controls' and 'measures' that are established to ensure the successful progression from the briefing stage throughout the remainder of the building's life cycle. These inputs involve all types of management (change management, stakeholder management, knowledge management, project management and, risk and conflict management) as well as their associated techniques to improve project success (brainstorming, tree diagrams, influence diagrams, Delphi method, Nominal Group technique, computer-mediated decision making, ACID test, stakeholder analysis and visualisation tools). For instance, if knowledge management is used as an example, individual members of the team will have tacit and explicit knowledge that will be of valuable input to the project brief. This information will be shared and transferred to knowledge amongst the team to guide and support the project.

The controls and measures set up at this stage involve the use of various project management techniques, the implementation of a project execution plan and the use of key performance indicators, which may be the industry's standard indicators or those identified by the project team, or a combination of both.

The project briefing stage will also be influenced by previous Post Occupancy and Post Project Evaluations which should outline the successes and failures of previous projects and influence decisions made at the briefing stage to ensure organisational learning resulting in more successful projects.

Communication, decision making and, the impact of culture and ethics are factors that span everything from commencement of the briefing process throughout the facility's life cycle.

Value Management Input to Briefing

Kao (2003) states that 'an alternative perspective is needed to introduce and cover social and innovative matters into the briefing process in order to achieve a full understanding of client requirements.' It is understood that briefing has moved on from compiling data and information concerning the client requirements to understanding the client requirements through a social learning process. This presents the case for the input of VM to the briefing process.

The VM service and tools and techniques associated with it may address each of the variables identified provided the method is used properly and by an accredited facilitator. In terms of projects, VM is a project orientated service which relies on clear objectives being set for the workshop(s) to allow for an agenda to be set which will improve project performance. VM is most effective when applied to a project with clearly defined goals and a start and completion date. It also relies on a project team getting together for a workshop to discuss the project and add value in any way possible to the project. How this team performs will depend on the dynamics of the

team and their ability to share and transfer knowledge. In addition, VM can improve communication and understanding of the client, consultants and stakeholders; the essence of briefing.

FUTURE RESEARCH WORKS

After the analysis of the responses for the questionnaire survey of the theoretical framework, a practical VM framework will then be developed on the basis of the results of the questionnaire survey. The proposed framework is likely to comprise two major elements: a structured job plan for the briefing process, and a hierarchical structure to identify, define and represent client requirements. The job plan will provide a step-by-step procedure for gathering and analysing briefing information, and creating and presenting a briefing document. It is anticipated that the hierarchical structure will include but are not limited to the following major items:

1. A mission statement that concisely expresses the reasons a client undertakes a project in the first place. It defines the special purpose of the building project and it answers the question; “Why do we need this project?”
2. A list of functional objectives that should be achieved in order to complete the mission. The objectives express the level of quality to be reached by the design and should be stated clearly so that they focus designers’ intention in a particular direction without limiting the creative expression;
3. Performance specifications - a list of measurable criteria for each functional objective that the design must live up to in order to achieve the objectives. The building must function in a way that promotes the level of excellence desired; and
4. A statement on the level of flexibility of the criteria, indicating flexibility for functions deviating from the assigned configuration. This can vary from an absolute must and not negotiable, to very flexible which is open to suggestion.

The next step is to develop a practical ‘how-to’ guide which explains the application of the proposed framework in detail. The guide will provide practical solutions to critical issues frequently encountered in the briefing process. Tools, techniques and examples of task such as how to identify clients’ needs, how to represent client interest groups, how to set priorities for objectives, etc. will be provided in this guidebook. It will also include important issues, considerations and questions that help clients in preparing and formulating project briefs.

Subsequently, snowball sampling will be adopted to identify VM experts who will be invited to give comments on the initial draft of the guidebook. The snowball sampling technique will commence with the distribution of invitation letters that will be sent to recognized VM professionals who will also be asked to recommend others that are experts in the VM field. The guidebook will then be sent to those VM professionals who are willing to participate in the study by expressing their opinions on the guidebook. Following this, the guidebook will be revised in accordance with their comments.

In order to evaluate and validate the proposed approach, experiments will be conducted by applying the proposed framework to a group of three office projects in Hong Kong and the UK. These experiments will focus on whether the proposed approach can lead to the systematic identification and clarification of client requirements. The results of these experiments will be compared with similar projects

that did not use the proposed approach. The outcomes of the experiments will be used as case studies and discussed with the design consultants of the project to investigate whether the use of the proposed hierarchical structure can provide a precise and explicit representation of client requirements. Views from the design consultants will be collected and compiled. Based on the feedback, the proposed framework will further be improved and refined.

CONCLUSIONS

This paper summarises the research work completed to date and presents the preliminary findings in the previous twelve months. The major areas of findings are the identification of the 13 variables that have impact on the briefing process, a theoretical framework for construction briefing and the need of a VM input to briefing.

The review of literature and the development of the theoretical foundation go some way to overcome the problems evident years ago and still apparent in today's construction industry. It has been discussed that VM provides a proven management technique that may be applied to the briefing process to achieve the optimal solution for the client organisation.

The existing models in the literature are simplistic and focused on two-stage briefing (strategic/ project) which is commonly accepted today. They did not take into consideration those factors such as change, knowledge and risk management which were developed during the same timeframe. Therefore, this international research proposes that the proven foundation will be embodied within a more sophisticated VM framework for briefing.

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