

MEETING CLIENT NEEDS

Refereed Paper

ENSURING VALUE FOR MONEY: A VALUE MANAGEMENT APPROACH TO MANAGE MULTIPLE STAKEHOLDERS IN THE BRIEFING PROCESS

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ABSTRACT

Ensuring value for money is of paramount importance to client organisations in today's ever-increasing competitive environment. Construction projects, especially projects in the public sector, however, are also becoming more and more complex, involving many stakeholders of diverse backgrounds and professional expertise. Effective management of these stakeholders to achieve better value for money is essential to the success of construction projects. In the briefing process, it is necessary to consider the interests of all stakeholders, both primary and secondary, and maintain a balance between different stakeholder interests. Those with responsibility for the briefing process should strive to maintain a good working relationship among all stakeholders.

This paper introduces how value management can be used to manage multiple stakeholders to work collaboratively to ensure value for money for construction projects. The effective use of value management in real life projects are given in details through case studies, to illustrate how a client organization can work closely with other stakeholders including the enabling agencies, approval authorities, its consultants (and sometimes potential contractors) to develop innovative value improvement solutions for their projects, and to build consensus in the early stage of the development process. The paper also elaborates the important roles played by the use of value management in creating an environment whereby all stakeholders can develop ownership of the proposed solutions and be committed to the implementation of these proposals.

The factors that are critical to the success of value management applications in managing multiple stakeholders in construction are also discussed in depth, including the use of the value methodology, management of the process, executive client support, attitude of participants, and professional facilitation. It is concluded that value management is one of the best approaches to manage multiple stakeholders in the briefing process of large construction projects to ensure value for money for the projects as whole.

Keywords: value management, stakeholders, briefing, value for money

1.0 INTRODUCTION

Briefing (also known as architectural programming in the USA) is the process of identifying and defining the requirements of the client organisation in the early design stage of a construction project, through which a client informs others of his or her needs, aspirations, and desires for a project (CIB, 1997). A brief is the document that defines client requirements for a facility. Defining client requirements and communicating them to other stakeholders are crucial to the successful delivery of a project (O'Reilly, 1987). Briefing is a complex and dynamic process involving frequent interactions with the stakeholders of the project to create a shared understanding and commitment among them (Barrett and Stanley, 1999). A good brief should include a precise description of the functionalities required by the stakeholders in the context of an understanding of their individual value systems. Such a precise definition and good understanding of these requirements will benefit all of the stakeholders. The need to identify and meet client requirements in the construction industry has also led to repeated calls to make briefing more client-oriented, and to deliver better value for money by renewing its focus on client requirements (Latham, 1994; Egan, 1998).

Due to the complexities involved in accurately identifying the actual needs and requirements of the client and conveying them 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 the requirements of the client (Graham, 1983). To overcome this problem, a number of briefing guides have been developed to aid the formulation of briefs (e.g., Newman et al., 1981; Goodcare et al., 1982; Pena et al., 1987; Salisbury, 1990). Despite these early attempts, the current briefing practice is still considered to be inadequate by many researchers (e.g., Kelly et al., 1992; Duerk, 1993; Barrett and Stanley, 1999, Kamara et al., 2002, Shen et al., 2004; Kelly et al., 2005). The problems of traceability of requirements, identification of stakeholders, assessment of their interest and commitment to the project, and the management of potentially conflicting requirements remain unresolved in the current practice.

Ensuring value for money is of paramount importance to client organisations in today's ever-increasing competitive environment. Construction projects, especially projects in the public sector, however, are also becoming more and more complex, involving many stakeholders of diverse backgrounds and professional expertise. Effective management of these stakeholders to achieve better value for money is essential to the success of construction projects. In the briefing process, it is necessary to consider the interests of all stakeholders, both primary and secondary, and maintain a balance between different stakeholder interests. Those with responsibility for the briefing process should strive to maintain a good working relationship among all stakeholders. Despite all the efforts from the industry and academia, inadequate involvement of relevant stakeholders remains to be one of the major problematic areas in the briefing process, and little attention is given to the management of multiple stakeholders in this early stage of project development.

This paper introduces how value management can be used to manage multiple stakeholders to work collaboratively to ensure value for money for construction projects. It describes the importance of managing stakeholders in the early phase of a project and presents a method of managing stakeholders through identification and assessment of their needs, wants, commitment, interest and power. The effective use of value management in real life projects are given in details through case studies, to illustrate how a client organization can work closely with other stakeholders including the enabling agencies, approval authorities, its consultants and sometimes potential contractors to develop innovative solutions and to build consensus in the early stage of the development process. This paper also elaborates the important roles played by the use of value management in creating an environment whereby

stakeholders can develop ownership of the proposed solutions and be committed to the implementation of these proposals.

2.0 THE NEED TO MANAGE MULTIPLE STAKEHOLDERS

The number of stakeholders interested in a project can dramatically increase the complexity of the project. Each of these stakeholders usually has his or her interest in the project and this may lead to different priorities and conflicts. Poor stakeholder management can lead to many serious problems in construction projects. For instance, a clear and comprehensive definition of the success or failure of a project may not be determined; the project manager may strive to meet goals that were never intended by the stakeholders (Meredith and Mantel, 2000). Additional problems caused by inadequate stakeholder management that could lead to the failure of a project include poor scope and work definition, inadequate resources assigned to the project (both in terms of quantity and quality), poor communication, changes in the scope of work, unforeseen regulatory changes, unfavourable news about the project in the press, and negative community reactions to the project (Black, 1995; Karlsen, 2002), all of which may be the major source of delays and cost overruns. These problems can be overcome if the stakeholders are actively included in the front end planning and integrated into the project team, and a systematic approach is used to identify and manage project stakeholders in the project delivery process (Jergeas et al., 2000).

The term “stakeholders” is defined as “individuals and organisations who are actively involved in the project, or whose interests may be positively or negatively affected as a result of project execution or successful project completion (PMI, 1996). It is worth distinguishing this term from the term “client”, which refers to the sponsoring organisation or initiator, who is directly responsible for the production and development of a project (Bresnen et al., 1990). Different stakeholders have different levels and types of investment and interest in construction projects and can be seen as multiple clients for the project in which they are involved. Those who advocate a stakeholder theory of organisations maintain that business needs to consider the interests of a wider range of groups apart from maximising the financial returns to the owners. Fig. 1 shows project stakeholders as interpreted by Cleland (1986). The instrumental view of stakeholder theory is to maintain a reasonable balance between the interests of different stakeholders. Previous studies have shown that managing multiple stakeholders and maintaining an acceptable balance between their interests is crucial to successful project delivery and democratic preferences. At the corporate level, project stakeholders are the people and groups with an interest in the project, and who can affect its outcome. They represent a primary focus for project managers, who need to understand and interpret stakeholder requirements so that their expectations would be reflected in the solution.

The effective management of stakeholders in a project is a key to project success in construction projects (Jergeas et al., 2000). However, this is often an aspect that is not addressed effectively, and the probability of having a successful project is reduced due to conflict between the project team and one or more stakeholders. Jergeas et al. (2000) suggested that the purpose of the project needs to be understood, communicated, and feedback from stakeholders be solicited in order to achieve alignment between the stakeholders and project team. This is the only way expectations can be managed, hidden agendas brought to the surface, and project priorities established. More research is needed to determine the extent to which these problems affect project managers so that the appropriate measures can be taken. However, the management of stakeholders is generally limited to those that have a direct effect or are directly affected by the project. The indirect stakeholders are dealt with only on a reactive basis; they are managed only when they create problems preventing the project from being successfully completed. A more formalised process for identifying and managing stakeholders is needed.

3.0 APPROACHES IN MANAGING STAKEHOLDERS

Walker (2000) put forward the argument that a broader view of 'the client' needs to be considered to encompass at least major stakeholders and a stakeholder analysis should be undertaken to ensure that a balanced view of quality is obtained from the outcome perspectives of all major stakeholders. Smith and Love (2000) developed an approach known as "strategic needs analysis" for stakeholder management at the inception of a project. This approach uses a workshop setting to focus on stakeholder involvement in proposing and identifying a range of strategic options for the proposed project. Karlsten (2002) conducted a survey among project managers in Norway to collect their views on stakeholder management. He described a formal and systematic project stakeholder management process, including initial planning, identification, analysis, communication, action, and follow-up, which provides some empirical insights into the process of project stakeholder management. Newcombe (2003) explored the concept of treating project stakeholders as multiple 'clients' for construction projects and used stakeholder mapping to analyse the nature and influence of various stakeholders on a major construction project.

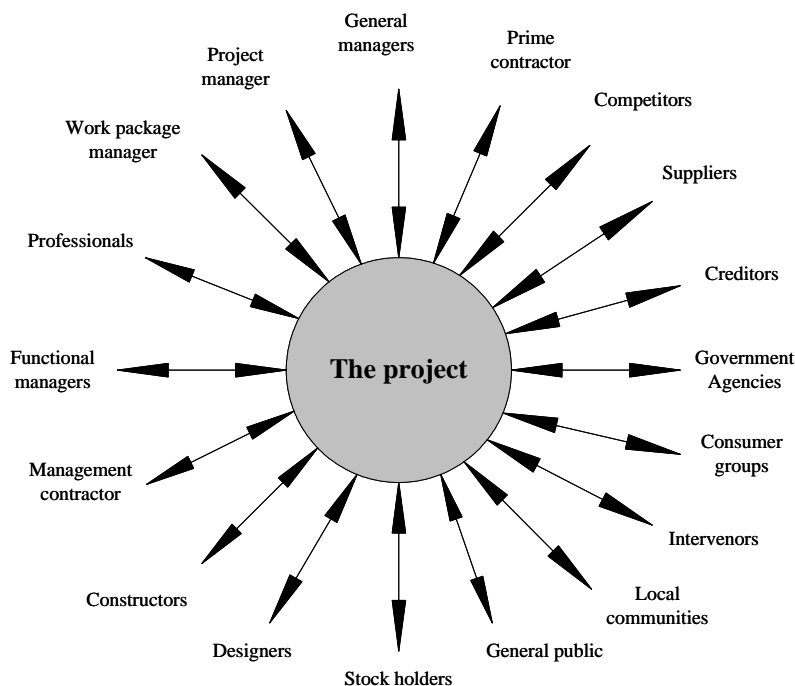


Fig. 1 - Project Stakeholders (Cleland, 1986)

Boddy (2002) proposed a holistic approach to carry out a stakeholder analysis during the early stages of a project. Leung et al. (2004) investigated the impacts of commitment amongst temporary stakeholders in the project. The results indicate that high affective commitment induces high performance and satisfaction, whereas continuous conflicts provoke an intention to quit. It is recommended that further studies on the factors affecting the forms of commitment in construction management be conducted to improve the performance of construction professionals. Olander and Landin (2005) opined that a negative attitude to a construction project by stakeholders can severely obstruct its implementation. Such obstruction will lead to overruns and exceeded time schedules due to conflicts and controversies concerning the design and implementation of the project. The study reveals that an evaluation of the demands and influence of the stakeholders should be considered as a necessary and important step in the planning, implementation, and completion of any construction project. They suggest that further research is needed to formulate a more general model of how a stakeholder management process should be conducted for construction projects. The model should be able to combine the identification of stakeholders, an assessment of their needs and their demands on project implementation, an assessment of their potential influence on project decisions, choice of stakeholder strategy, an assessment of consequences of project decisions, and an evaluation of the stakeholder management process.

Although a few techniques have been used in the manufacturing industry to ensure that the developed product meets customer requirements, very few of these techniques can be practically used in managing the needs and requirements of multiple stakeholders of construction projects. Taking Quality Function Deployment for example, although it is beneficial to the product development process, it is limited in its ability to deal with conflicting requirements (Prasad, 1996). In the context of a team of multidisciplinary stakeholders, where the focus, perspective, orientation, knowledge, and expertise of the stakeholders are often quite diverse, there is a strong need for a structural process to manage their diverse and conflicting requirements, and to present them in a design-neutral way. One of the tools that can meet this challenge is Functional Performance Specification (FPS), which enables a precise definition of the needs for a facility to be made in functional terms without reference to the technical solutions (BS EN12973: 2000).

4.0 THE VALUE MANAGEMENT APPROACH

Using Value Management (VM) in the briefing stage, as a means of formulating the brief, is the most beneficial application (NSW Government, 1993). By definition, VM is a structured and analytical group process which seeks to improve value and, where appropriate, value for money in products, processes, services, organisations, and systems. The VM study process is centred upon a participatory workshop involving a multi-disciplinary, representative group of people working together to seek the best value outcome for a particular situation (Standards Australia, 2004). It enables clients to participate fully in the briefing process, and facilitates communication between clients and other stakeholders (Barton, 2000). An essential element of the VM methodology is the expression of client requirements as functions (a function is the specific purpose or intended use of a project that makes the project sell, produce revenue, or meet requirements) (BS EN12973, 2000). This VM approach enables a systematic identification and clear definition of client requirements, an improved understanding of the objectives and perspectives of various stakeholders, and the effective accomplishment of these functions (Kirk and Spreckelmeyer, 1988; Shen, 1993). It also acts as a common language among stakeholders of the project, so that they can work together harmoniously to identify opportunities available for development and to highlight any potential problems at the very beginning of the project (Gray et al., 1994; Lawson, 1997).

In Hong Kong, the technical circular issued by the Environment, Transportation, and Works Bureau (2002) calls for VM studies in major public projects. The Construction Industry Review Committee (2001) also recommended that VM should be used more widely in local construction, because VM can help the clients and the project team to focus on the objectives and needs of the project and of all stakeholders, both long and short term. While the VM approach is effective at bringing stakeholders together to formulate briefs, existing tools within the VM toolbox cannot address client requirements effectively; thus, it is essential to identify and/or develop effective tools to specify client requirements (Shen et al., 2004).

In order to understand the various interested parties in the project, all types of stakeholders should be identified and represented during the early stages of the project. The stakeholders' commitment, interest and power should be assessed before the briefing exercise. During the briefing process it is important that all stakeholders' needs are assessed so that a satisfactory and realistic solution can be obtained. Much time and effort should be devoted to the key players in the briefing process. Important tasks for the project manager include:

- identify stakeholders in a project;
- assess their commitment;
- assess their power to help and hinder the change;

- assess their interests, and how this will affect what they think and do about the change;
- assess their needs as distinguish their wants from true needs; and
- manage relations with them – to gain their support, minimise opposition and generally create favourable attitudes to the change.

4.1. IDENTIFICATION OF STAKEHOLDERS

Project stakeholders are identified by their interests in the project resources and how those resources are likely to affect their well-being. A simple way to visualize this is to prepare a map showing the stakeholders in a project as described in the following:

- Write the name of the project in a circle at the centre of a sheet of paper.
- Draw other circles around the sheet, each identifying an individual or group whom you regard as having a stake in the project. Place the most significant nearer the centre; others around the edge.
- Make sure that all relevant interests have been included – senior management, colleagues, staff, and people in other organizations.

Kelly and Duerk (2002) propose that those with responsibility for the briefing process should undertake a test of the relative position of stakeholders. This test is known as the ACID test. It is used to determine who should be a member of the briefing team and the details are as follows:

- A** Authorise – include those who have the authority to take decisions appropriate to the stage of the development of the project. Those have executive authority to take decisions are invaluable members of the value management team through their ability to immediately sanction a particular line of discovery or take a decision during the workshop which resolves an issue or unblocks a particular line of investigation.
- C** Consult – include experts who have to be consulted regarding particular aspects of the project during its evolution at the workshop. If a particular line of investigation is dependent upon consultation with an absent expert, workshop progress may be compromised.
- I** Inform – do not include those who have only to be informed of decisions reached during the workshop.
- D** Do – include those who are to carry out major tasks specified at the workshop. In this way those who are for example, to design or construct, based on decisions taken at the workshop will be fully conversant of that decision.

4.2 ASSESSMENT OF THEIR COMMITMENT

The next step is to assess the degree of commitment of the main stakeholders to the project. The project manager can assess the level of commitment of each stakeholder on a scale as shown in Table 1. Mark both current and desired levels on the scale for each stakeholder – such as ‘present’ = X, ‘hoped for’ = Y.

Table 1 - Stakeholder commitment (Boddy, 2002)

Key Stakeholder	Vigorous opposition	Some opposition	Indifferent towards it	Will let it happen	Will help it happen	Will make it happen

4.3 ASSESSMENT OF THEIR INTERESTS

The next step is to assess the interests of the main stakeholders – those on whom you want to concentrate. This can be done on a grid as shown in Table 2.

Table 2 - Grid for summarising stakeholder interests and reactions (Boddy, 2002)

Stakeholder	Their goal	Current relationship	What is expected of them?	Positive or negative to them?	Likely reaction?	Ideas for action

4.4 ASSESSMENT OF THEIR POWER

Johnston and Scholes (1999) introduce the idea of analysing not only the interests of stakeholders, but also their power in an organization's strategy (see Fig. 2). This idea is also relevant at the level of the project, as it indicates what kind of relationship the manager needs to establish with each group. The acceptability of the direction of a project to key players (segment D) should be a major consideration. The manager needs to devote much time and effort to key players. Less effort, or a different kind of effort, will be acceptable to those in other segments. A major hazard to be aware of is that players may suddenly change their position – such as from Segment B to D. The project manager needs to adapt their approach accordingly.

4.5 ASSESSMENT OF THEIR NEEDS

To assess the true needs of the stakeholders, Bytheway (1965)'s function analysis system technique (FAST) can be used, which comprises three steps to construct a FAST diagram:

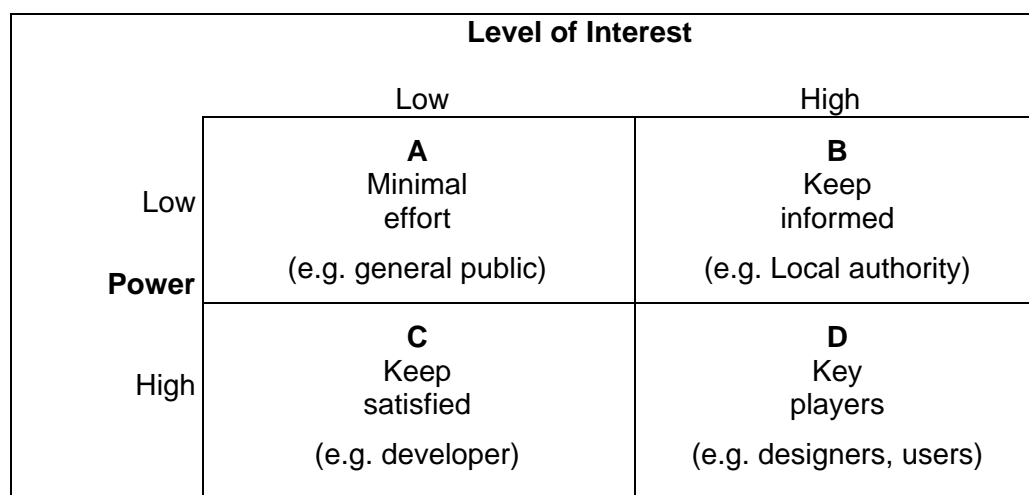


Fig. 2 Stakeholder mapping: power/interest matrix (Newcombe, 2003)

(i) Generation of functions

The key stakeholders will be asked to participate in a workshop to brainstorm the functions that are required by the project. These functions may be high order executive functions or relatively low order wants. All functions are expressed as an active verb plus a descriptive noun, recorded on sticky notes and scattered randomly across a large sheet of paper. A list of brainstormed functions for a residential development is shown on the Table 3.

Table 3 - A list of brainstormed functions for a residential development

Allow private participation	Create value
Better utilization of land	Enhance communication
Change community perception	Enhance environment
Control finances	Establish local community pressure
Control operational cost	Improve safety standard
Control programme	Limit cost
Create pleasing environment	Maintain access
Enhance facilities	Monitor dust
Ensure buildability	Monitor environment
Ensure building lifetime	Please neighbourhoods
Ensure operability	Preserve parking
Ensure user comfort	Protect existing building
Establish multi-function integration	Provide recreational space
Establish project brief	Reduce dust
Improve accessibility	Reduce government accommodation
Improve user interface	Reduce mosquitoes
Increase flexibility	Reduce noise
Meet community needs	Satisfy compensation
Minimize nuisance to public	Satisfy safety
More recreational facilities	Secure funding
Reduce deterioration	Suppress vibration
Relieve compliant	Transfer responsibility to private sector
Secure environment	
Upgrade living standard	

(ii) Classification of functions / construction of project function priority matrix:

At the completion of the brainstorming session all the participants are invited to sort the notes into a more organized form. The functional priority matrix is constructed by asking of each sticky note function whether it is technical or strategic and whether it constitutes a need or a want. The note is transferred to the appropriate box in the matrix where its position is ordered relative to the other function in the box (Table 4). The higher priorities are listed at the tops of the respective boxes. It should be emphasised to the team that this is an iterative process and therefore any team member is entitled to move a previously ordered sticky note. Although this sounds confrontational it is very rare for disagreement to occur and ultimately the correct ordering of all the functions is achieved.

(iii) Construction of function diagram:

A strategic or customer oriented Function Analysis System Technique (FAST) diagram, as shown in Fig. 3 was constructed by focusing on the strategic needs and wants. The highest order needs formed the mission of the project with supporting functions being positioned to the right. The strategic wants were positioned below the centreline of the mission statement. The mission statement required word crafting to make it read as a flowing statement.

4.6 MANAGING STAKEHOLDERS

The following issues are worth noting:

Relationships

- Identify key players and what can be done to help them before their assistance is needed. Build relationships before they are needed. It is always easier to receive a favour after it has been granted (Gray and Larson, 2002).

- Establish the links between stakeholders. There may be close links between some of these interest groups – or links may rapidly develop during the project. This refinement of stakeholder map may indicate how actions to deal with one group can affect others – either in favour of or against the project. Stakeholders talk to each other, and will pass bad news as well as good round the grapevine (Boddy, 2002).

Table 4 - The project function priority matrix

Strategic needs	Technical needs
Secure environment Establish multi-function integration Enhance facilities Ensure user comfort Meet community needs Create pleasing environment Upgrade living standard Improve user interface Better utilization of land Change community perception Minimize nuisance to public Reduce deterioration Control finances Control operational cost Relieve compliant More recreational facilities Improve accessibility Increase flexibility	Allow private participation Ensure buildability Ensure operability Ensure building lifetime Establish project brief Control programme Improve safety standard Limit cost
Strategic Wants	Technical Wants
Please neighbourhoods Reduce government accommodation Transfer responsibility to private sector Protect existing building Establish local community pressure Satisfy compensation Enhance environment Secure funding Create value Provide recreational space Enhance communication	Reduce mosquitoes Reduce dust Preserve parking Suppress vibration Reduce noise Maintain access Monitor environment Monitor dust Satisfy safety

Sleepers

Not all stakeholders will be obvious at the start. Project staff may not anticipate their interests, and they themselves may not realize that the project will affect their position. They may still emerge later in the project to protect their interests. It is better that the project manager takes the initiative to seek them out and be aware of potential difficulties (Boddy, 2002).

Timing

The attitudes and actions of stakeholders may change as the project takes shape, and at different phases. The significance of this is that it emphasizes the dynamic nature of the relationship between the project and the stakeholders. Outside events, as well as the actions of the project manager, affect how the interest groups view the project. Sometimes

this will bring them around as supporters – at other times the shift will be the other way. The project manager has to be vigilant, not take the current position of a stakeholder as certain, and be alert to external changes which may shift the position (Boddy, 2002).

Face-to-Face Contact

Trust is sustained through frequent face-to-face contact. Project managers must maintain frequent contact with key stakeholders to keep abreast of developments, assuage concerns, engage in reality testing, and focus attention on the project. Frequent face-to-face interactions affirm mutual respect and trust among others (Gray and Larson, 2002).

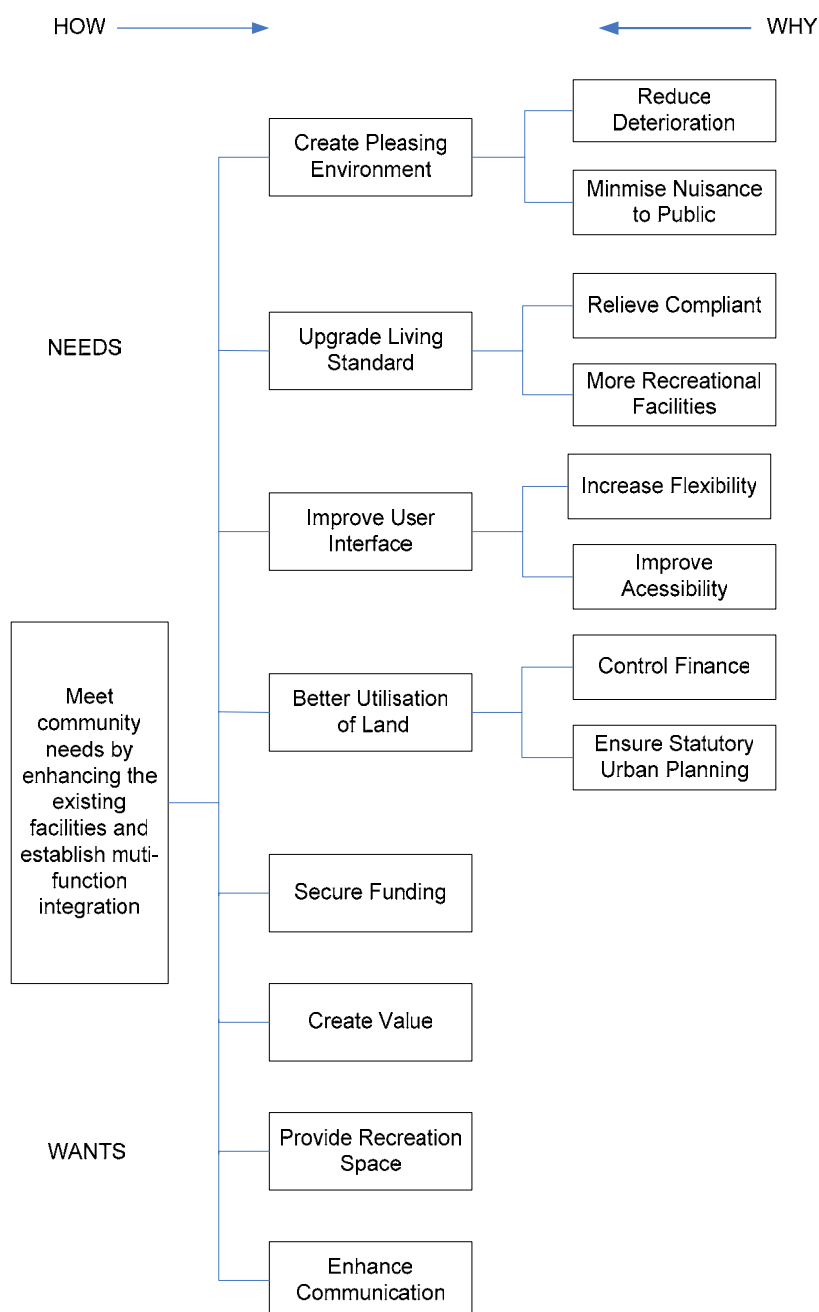


Fig. 3 - A strategic FAST diagram

5.0 USING VM TO MANAGE MULTIPLE STAKEHOLDERS IN WATER SUPPLY PROJECTS – A CASE STUDY

One of the vital factors to support the sustainable growth of a metropolitan is the availability of a reliable and wholesome water supply to consumers. Hong Kong, being a metropolitan city and a dynamic economic centre, is no exception. Over the past few decades, it has been successful in turning the community water supply from a situation of serious shortages to one with high quality services. Many innovative ideas have contributed towards the success of Hong Kong in this regard. The use of seawater for flushing, building reservoirs in the sea, and delivering raw water from Dongjiang in Guangdong over the hills to Hong Kong are some well-known examples. Apart from adequate water resources, efficient water treatment processes and distribution to individual consumers' taps are also essential.

These water supply projects not only involve complex planning, design and construction activities, but also often necessitate negotiations with a large number of stakeholders whose interests may be conflicting with one another (Ku and Shen, 2003). One of the examples is a recently-completed feasibility study of developing desalination facilities for fresh water supply in Hong Kong. The objective of this study was to investigate the use of the best available desalination technologies for the cost-effective provision of fresh water supply in Hong Kong. Aspects to be covered in the study include technology, engineering, cost, and environmental issues. The stakeholders of this project include:

- Management Group, Water Supplies Department (WSD)
- Environmental Protection Department (EPD)
- Agriculture Fisheries Conservation Department (AFCD)
- Planning Department (PlanD)
- Antiquities and Monuments Office, LCSD
- Lands Department (LD)
- Marine Department (MD)
- Consultant's study manager and members

The focus of the VM workshop was to identify suitable sites for each of the three identified desalination technologies of RO, MSF and MED-VC, for the cost-effective provision of freshwater supply in Hong Kong. Participants of the workshop include representatives from each of the above stakeholders. They have different professional backgrounds, knowledge and expertise, representing a constructive and complementary overlap. This is in-line with the normal practice in conducting VM workshops, which normally involve process experts, engineers, departmental representatives, representatives of major stakeholders of relevant socio-economic sectors. Involving these stakeholders is also demanded by the mission of the WSD that is to provide a reliable and adequate supply of wholesome potable water and sea water to the customers in the most cost-effective way; to adopt a customer-oriented approach in the services; to maintain and motivate an effective, efficient and committed workforce to serve the community; to remain conscious of the responsibilities towards the environment; and to make the best use of resources and technology in striving for continuous improvement in services.

By following the VM approach, all the stakeholders, including the project team, are able to critically review and examine the functions of the proposed waterworks. Although the client may have a pre-conceived idea of the use function of a particular project element, other stakeholders may see things differently and propose aesthetic functions that can add value to the project. For example, the use function of a reservoir is apparently to store water for future use. The drainage expert may see that a function of the reservoir is to regulate runoff after heavy rain. With systematic communications during the VM workshop, all stakeholders,

especially the project team, will have a thorough understanding of the projects from all angles. Hence, the project team will be able to incorporate the views of the stakeholders in bringing forth the project, making it more readily accepted by all the relevant stakeholders at the subsequent implementation stages.

In the creativity stage of a VM workshop, all sorts of initiatives to serve the same function of the projects will be explored. For example, in looking for a suitable site to build a desalination plant, the stakeholders practically examined all possible sites along the coastlines in Hong Kong. A qualitative assessment conducted in the VM would be a useful step to prioritise the sites for detailed studies. With consensus reached amongst the stakeholders this would greatly facilitate subsequent public consultation as all possible sites had already been examined by relevant stakeholders. Although the short-listed sites might not be perfect in all aspects, they would at least be more readily accepted. This is an obvious benefit of the team approach adopted in VM. With a properly planned and executed job plan, the VM for waterworks normally requires 2 days only. Significant process can be made during this short period of time: the functions of the proposed waterworks are critically examined, alternative options can be considered, and preferred options are recommended and owned by all the stakeholders, which can lead to commitment to the implementation of the proposals.

It is essential to identify the key stakeholders and solicit their commitment and participation in the VM. Practically there is an upper limit on the size of the group participating in the VM beyond which communication will become ineffective. With this limitation, it is very important for the project team to identify a VM group that can represent a wide spectrum of interest groups. It does happen that during VM study new stakeholders are identified.

From the implementation of the VM approach in a variety of real-life construction projects (including building and civil engineering projects), we can summarise that the critical success factors in using the proposed methodology to manage multiple stakeholders in the briefing process of construction projects are as follows (Shen and Liu, 2003):

- The methodology
VM job plan must be followed in the workshop
- Attitude of participants
Right attitude, appropriate stakeholders, awareness of the process
- Executive client support
Support to the VM workshops and implementation of proposals
- Management of process
Clear objectives, set time, follow-up actions, review and feedback
- Professional Workshop facilitation
Probing with the right questions, use appropriate tools, managing the process, maintain the momentum of the team

6.0 CONCLUSIONS

It is of vital importance to identify project stakeholders and to understand their expectations and needs for a construction project in the briefing process. Stakeholders with different levels and types of power and interest in construction projects have different expectations. This must be addressed by the project managers adequately. It is essential to consider the interests of the project stakeholders and maintain a balance between different stakeholder interests. Much time and effort should be devoted to the key players of the project. The effective management of stakeholders in a project is one of the critical success factors of the briefing process.

The VM methodology for managing multiple stakeholders in the briefing process has been proved to be successful in a variety of projects. As soon as the project stakeholders are identified, their commitment, power and interests should be assessed before the briefing exercises. By so doing, the needs of all the stakeholders including the clients can be identified and clarified, making the briefing process more effective and efficient, which is essential to client satisfaction as well as successful delivery of construction projects. Further research has been planned to investigate additional techniques and tools that can be used in managing stakeholders, and to validate the proposed methodology further by studying the results and implications of using the methodology in managing multiple stakeholders in the briefing process in real-life projects.

ACKNOWLEDGEMENT

The work described in this paper was supported by the Research Grants Council of the Hong Kong Special Administrative Region, China (PolyU 5007/02E).

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