The Client Briefing Problem: A Method for Assessing the Strategic Needs of Project Stakeholders

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ABSTRACT

The pre-design stage of construction projects has become a focal point in design management research in the last decade, as it primarily the source of problems such as rework, change orders, and contractual claims. In particular, it is widely acknowledged that client briefing is an intractable problem which many projects encounter. Primarily this is because little attention is given to assessing the needs of the client, stakeholders and those of the design team. With this in mind, this paper presents a workshop-based approach known, as Strategic Needs Analysis (SNA). It is designed to assist clients, stakeholders and their design teams in determining their strategic needs for a given project. The rationale for the using a SNA approach during the early stages of the project development process and in relation to the strategic environment of the client organization are presented and discussed. The SNA process is described and applied to a case study project. It is concluded that SNA can improve the strategic decision-making process of a project, as clients are able to identify their strategic needs and thus improve the effectiveness of the briefing process.

Keywords: Client briefing, project initiation, strategic needs analysis, stakeholders

INTRODUCTION

The production of buildings moves through a number of stages involving a legion of participants. The contributions from the more formally constituted client, design and construction teams charged with the responsibility of delivering the project are crucial to the success of a project. However, it is increasingly recognized that external participants such as users, customers and members of the community may have a useful role to play in influencing the location, form, content and timing of the project. In fact, it is now appreciated that the multiple attributes that contribute to the success of a project are influenced by a multitude of decisions by various individuals, bodies and organizations. Decisions made during the formative and early design stages in the life of a project are seen as critical factors that must be taken into account if a project is to be delivered on time, to budget and to the desired quality. Thus, the pre-design stage of construction projects has become a focal point in design management research in the last decade, as it primarily the source of problems such as rework, change orders, and contractual claims. In particular, it is widely acknowledged that client briefing is an intractable problem which many projects encounter (Barrett *et al.*, 1999). Primarily this is because little attention is given to assessing the needs of the client, stakeholders and those of the design team (Smith *et al.*, 1998).

This paper presents a stakeholder-based approach known, as Strategic Needs Analysis (SNA). Through its workshops using a dedicated software program it is designed to assist clients, stakeholders and their design teams in determining their strategic needs for a given project. The rationale for the using a SNA approach during the early stages of the project development process and in relation to the strategic environment of the client organization are presented and discussed using a case study example. The SNA process is described and applied to two case study projects. It is concluded that SNA can improve the strategic decision-making process of a project, as clients are able to identify their strategic needs and thus improve the effectiveness of the briefing process.

PRE-DESIGN STAGE OF PROJECTS

The construction disciplines have long recognized that the early stages (strategic stage) in the development of a project are crucial to its success. The reason is that the inception or pre-design stage, are when significant decisions are made that will influence the characteristics and the form of the project. Once these significant decisions have been made, by their very nature, they cannot be readily deleted or dramatically altered in the subsequent stages (Smith, 1998). Therefore, if these early stages are so crucial to the success of a project it is important that these decisions are properly considered. Ideally, these stages should also attract sufficient time, resources and expertise to be carried out conscientiously. Without doubt the early stages of a project are the most important. It is during these early stages where most of the critical decisions that affect the economy, efficiency, timing, functional content, appearance and most important of all, the real value of the project (Barrett *et al.*, 1999).

PROJECT INITIATION

To improve the process of project initiation, we need to look more closely at the nature of the problem on which we have decided to focus. This may provide us with guidance and insight into traps lurking within the design environment. In general terms, a problem is a question in need of solution. In the context of design and building projects someone, or a group, has identified an unsatisfactory state of affairs that may be solved by the construction of a new building, the extension to an existing building or a re-arrangement of the activities within an existing building, or some combination of these. But, in the design/building literature the definition of problem types does not appear to have received the same attention as the problem solving process (Smith et al, 1998). Taking account of the factors above, a process is needed that can make a valuable contribution to the strategic or formative stages of a project. Johnson and Scholes (1997) propose a comprehensive approach where they include the entire aspects and activities in strategic planning. Johnson and Scholes (ibid.) view strategy as the direction and scope of an organization over the long term; which achieves advantage for the organization through its configuration of resources with a changing environment, to meet the needs of the markets and to fulfil stakeholder expectations. At a project level a strategy must reflect and be sensitive to the strategic direction identified in the strategic management process. It must also be a process that is useful, flexible, well organized, sensitive to client and stakeholder needs and objectives and designed to provide more effective, efficient, innovative and better solutions. Involvement of as many significant stakeholders as is practically possible is sought. Stakeholders are representatives, direct and indirect, who may have an interest and can make a contribution to the proposed project. This group will ideally include members of the client group from the top to the lower levels of the organization. The broader the group the greater will be the potential for better solutions. Moreover, when a process gains the stakeholders' commitment it is more likely to stand a better chance of success.

STRATGEIC NEEDS ANALYSIS

Strategic needs analysis can make valuable contribution to this important formative stage of a project. It reflects and is sensitive to the strategic direction identified in the strategic management process and so overlaps it. Indeed, strategic management (Viljoen, 1994) and problem solving approaches (Popper, 1994) have greatly influenced the development of SNA which, nevertheless, is specifically designed for the concept or project initiation stages of a project. Strategic Needs Analysis starts with the premise that the solution delivered will be the best one to satisfy the client's strategic needs, which will not always be a construction project (Smith *et al.*, 1998). Strategic Needs Analysis is a process that involves the client body and can involve other stakeholders who have an interest and can make a contribution to improving the type, nature and quality of the proposed project.

The authors have adopted this approach and introduced the element of evaluation of alternative strategies using a neural network-based software program called *Strategizer* (after Wyatt, 1995; Wyatt, 1999), which informs and guides the stakeholders in making a choice. Computer based neural networks involve creating mathematical structures with the ability to learn. The methods have been stimulated by academic research into modelling nervous system learning; artificial intelligence. Whilst neural networks have academic origins, the resulting techniques have practical applications as they have the ability to derive meaning from complex or imprecise data and can be used to detect patterns and identify trends that are too complex to be recognized by other means. A trained neural network can be thought of as an *expert* in the type of information it has been given to analyze. *Strategizer* can then be used to provide predictions given new situations of interest and answer *what if* questions. The *Strategizer* neural network attempts to develop expertise in dealing with the strategic issues in built environment problems centered on a consistent set of criteria established for evaluating alternatives (Wyatt, 1999).

THE SNA PROCESS

The SNA process is based on the involvement of as many significant *stakeholders* as practically possible. These are representatives, direct and indirect, who may have an interest and can contribute to the proposed project. The principle followed that a broader grouping can provide the potential for better solutions. When a process gains the stakeholders' commitment as well as their involvement and support it is more likely to stand a better chance of success. This group ideally will include members of the client group from the top to the lower levels of the organization and may involve some or all of the following participants who have an interest in the service or possible facility. A fundamental aim of the SNA process is that clients must re-orientate their frame of reference in defining their projects (project initiation) from the prescriptive and standard response, to one where they have a strategic view of their own organization's real goals, objectives, needs and requirements. The organization must develop a strategic framework for the delivery of their services, for the present and the future. Any projects arising out of this process must be able to withstand scrutiny and justification both internally and externally.

To withstand this type of examination the preferred strategy must have been developed as a result of a rigorous analysis and evaluation process. It is suggested that the SNA process may not be effective unless it is sustained by a climate within the organization that supports a strategic culture and environment that continually demands better ways of providing its core and related activities. If the organization is not prepared to adopt a strategic management approach where it aims to continually improve its performance then this process will not succeed. A characteristic of this strategic culture is that the organization creatively questions and justifies its own activities. The organization does not accept that the historical way of providing services need necessarily be projected indefinitely into the future. As a consequence, the strategic approach inherently involves a greater number of stakeholders in the decision-making process and it encourages and rewards alternative solutions and methods of problem solving that are more effective. Explicitly, SNA is a process that is includes a broad range of people within the client body whose ideas and views are valued. The stakeholder group should also include external representatives to inject a different perspective into considering new directions, options or solutions. Strategic analysis workshops are used to encourage clients to re-orientate their frame of reference from the prescriptive and standard response, to one where they have a strategic view of their own, potential users' and the community's goals, objectives, needs and requirements. The structure of SNA process is based on the following stages:

- briefing(s) to staff of the organization. This will be combined with an information seminar to develop strategic client awareness of the project initiation process and outcomes;
- two workshops to develop a strategic approach to the development of an agreed initial brief that identifies the client's and the stakeholders performance criteria.
- the development of a performance brief to guide the development of the project in the design stages.

Briefing Session

Initial briefing sessions are held with senior managers to raise their awareness of the coverage and depth of the SNA process. After senior management have been briefed an *information seminar* is conducted with all possible stakeholders to brief them about the SNA process. It is important that senior management is seen to be supporting the process and to emphasize the need to think strategically. Participants should be drawn from a wide range of client fields to add diversity to the development of strategies and to make other members aware of their perspective of the problem. It is essential that managers, who are closely involved in service delivery, project identification and implementation is involved in this process.

The information seminar introduces the concept of strategic needs and starts the process of systemic change in the organization. That is, the old methods of operating may not be sufficient for the future and changed methods of service delivery may have to be introduced. Participants should have sufficient knowledge of the service to be able to suggest improved methods of delivery and providing better solutions. An information pack is distributed at this first session. The information provided enables all participants to understand better the problem being evaluated and to consider and suggest alternative ways of solving the identified problem. The type of information provided may consist of background material to the problem being evaluated, details of the SNA process, stakeholder statements, strategic plans and visions of the organization, divisions or departments likely to be involved and affected by the outcome of the process.

Strategic Needs Workshops

The workshops are the significant working and decision making sessions following on from the information seminar. Participants will be actively involved in developing strategies and evaluating them within the organisational constraints. Participants get down to the detailed consideration of need, activities and requirements of the client organization. An information pack distributed at the information session provides the necessary background for all participants to make a contribution on the nature of demand for the service being analyzed and the potential for its delivery. Typically the information pack contains the vision and mission statements, strategy plans and statements for the organization, and where built facilities are being discussed any master planning details that will influence the location and extent of the possible facilities. The first activity is a discussion to agree a vision for the service provision being analyzed in the process. A statement of the vision provides the framework for discussions and the basis for evaluating the alternative strategies later in the workshop.

An important aim of this first workshop is the identification of strategies, which appear to solve present problems and appear to have prospects for coping with future needs, and requirements. The participants are expected to analyze and judge the information provided and use it to inform their opinion and discuss the implications. The creation of alternative strategies is critical to the whole SNA program. Therefore, in the first instance, all options must be considered and their advantages and drawbacks considered. The range of alternatives created are analyzed, discussed, and related to the vision agreed in the first part of the workshop.

Participants are involved in a demanding set of interactive activities, combining discussion, analysis, justifying present and proposed methods of operation. The workshop culminates with the use of the *Strategizer* to analyze the alternative strategies. The criteria used for assessment of alternative strategies and the architecture of neural network elsewhere by Wyatt (1999) and Smith and Wyatt (1998). The analyses from the software inform decisions to be made in the second workshop and provide the basis for decision-making.

After participants have completed their analysis of the alternative strategies using *Strategizer* in workshop one the facilitators analyze the data and produce summaries of for the individual, group, and individual/group. These analyses are presented at this workshop and provide facts for discussion in the group and to form the basis of making a decision on the preferred strategy. It must be emphasized that the decision on the preferred strategy is made by the participants after discussion and is not dictated by the neural network software. The neural network provides the basis for the facilitators to consider the views and choices made by the participants and inform the discussion leading to a final choice of strategy. This workshop reviews the findings of the *Strategizer* analysis and uses it as a basis for discussions leading to an agreement on the preferred strategy for immediate development. Considerations of time, cost and other factors may also guide this final part of the workshop.

SNA Outcomes

The outcome will be an agreed strategy that will satisfy the organization's strategic requirements and result in a decision to fund a project. This strategy may be a construction project, in which case a performance brief will be prepared to guide the design team. For an organisational arrangement strategy a detailed statement of its requirements will be developed, that will consider the financial, human resources, social and other implications of its implementation. Where a built facility is the chosen strategy a performance brief will document decisions in performance terms, stating the outcomes required, rather than a prescriptive way of *how to do it*. That is, it leaves the designer sufficient freedom to develop the project within adequate parameters that guide but do not inhibit the solution. To demonstrate the effectiveness of the SNA process a case study is now presented:

CASE STUDY - LIGHTING (ENVIRONMENTAL) LABORATORY

The Lighting Laboratory represents the use of SNA at a relatively detailed master planning level. That is, it was used to decide on the content and priority of the proposed facility. The second case study of the tertiary institution shows the process operating at the strategic level of decision-making. In this example, the broad thrust of the institution's policy direction was being decided. A major factor influencing this direction was concerned with coping with increased demand in existing facilities. However, another potent influence drawn from the workshops and the participants was the re-organization of departments to cope with change and the influence of new technology in future operations.

A department in a University gained approval and funding for the development of a 'Lighting Laboratory' in the department's new location in a new building. The department had been relocated and the Lighting Lab (which was a

facility in its old location) had not been transferred to the new location. After two years of negotiation (and complaint!) the University Buildings Group made a funding allocation for A\$180,000 for fitting out the Lighting Laboratory in an unspecified location in the new building. The aim of the SNA process was to identify and prioritize the department's requirements so that the Buildings Group could identify a suitable location within the building to accommodate this facility. At a design level the Buildings Group needed an identification of spaces so it could plan and design the new Laboratory. Identification of a suitable location for the new facility was not part of the process. The Buildings Group wished to identify the total content of the new facility (taking account of present and future needs) before they could ascertain a suitable location for it.

It was interesting to note the level of commitment in the group to the process and the proposed facilities. Several external participants (from industry and the research community) attended all three sessions. A disappointing feature was the lack of representation of users of the new facility. The university department and Buildings group drew up the stakeholder list. The department participants consisted largely of Buildings group architects and architects/lecturers from the department. Important groups such as students and facility managers were not invited and as a result not represented.

THE SNA PROCESS

In the initial wide ranging discussions at first workshop it became clear that to restrict the analysis to a Lighting Laboratory was too limiting, impractical and ignored the real benefits of this process. That is, it seeks to identify the strategic aspects of an organization's activities. Thus, with the full agreement of the participants (after initial identification of the full range of spaces) the analysis was broadened to view the Lighting Laboratory as one of several components in a broader based concept based upon teaching and research in the environment. The analysis therefore considered the long-term development of a facility known as an Environmental Laboratory, encompassing the requirements of a Lighting Laboratory.

Definition of the functions and spaces required to be accommodated in the facility developed during the first Workshop. It was clear that the department wished to gain as much from the facility as possible and to gain some element of research and testing (notably missing from the earlier accommodation). A blend of teaching and research emerged through a series of discussions documented on whiteboards, culminating in the final options definition of the various spaces. Whilst everyone recognized that the provision of all these spaces in this minor works grant was unlikely, the process had been used to identify the strategic direction of the facility. The second part of the workshop scored the priority of the spaces making up the Environmental Laboratory.

Four major space components were considered for the Laboratory: a teaching space; experiential learning space (ELS); research and teaching space; and research centre. The participants decided to add a fifth option (space), called *Do Nothing*, that included a bundle of immediate needs not part of the project, but having some value to the department. These five preferred spaces (or stages) were scored using *Strategizer* in the latter stages of the first workshop and the participants were divided into the following three groups:

- solvers (academic staff of the department);
- bystanders (external participants representing various organizations); and
- others (Buildings Group staff).

The overall summary scores for the options by the total group (all the participants) identified the ELS as the preferred choice. A wide ranging discussion of the scores of the three groups in the Workshop provided interesting insights into the views of participants with obvious allegiances to their organization's aims and their own activities. Participants expressed the view that the ELS contained many elements of the total facility and represented a good starting point for the Laboratory to begin its growth and possibly attract research and industry interest.

Outcome of the SNA Process

At the second workshop it was decided that the ELS should be the option given the highest priority as a first stage to the development of an Environmental Laboratory. The participants recommended that this facility should be the subject of the work contained in the budget granted for the Lighting Laboratory. The requirements of the space were defined and descriptions of spaces were expressed in a Preliminary Performance Brief for the ELS prepared within one week of the second workshop. An evaluation survey indicated a high level of satisfaction with the process and the software.

CONCLUSION

The case study demonstrated that SNA is an effective technique for strategic decision-makers at the pre-design stage of a project. The following comments can be made about the SNA process generally and from analysis of the extensive evaluations made of participants in both the case studies:

- the process has showed its robustness by coping with a limited vision application restricted to identifying content and priority of the facility for development (master planning the Lighting Laboratory) and in coping with the broader strategic environment of the tertiary institution.
- the stakeholders contribution in both cases, was positive, and expanded the role and function of the proposed facilities and contributed to identifying realistic strategies.
- the *Strategizer* software displayed the results in a clear and understandable way to the participants. It acted as a significant circuit breaker in the discussions/negotiations between various groups in the workshops and thereby expedited the decision-making. However, the authors are still uncertain as to whether the neural net software is essential in this approach.

SNA appears to make a significant contribution to the pre-design collection of user information that can be used by the design team as they develop the chosen scheme(s). The designers and the project managers from the facility management division found it a useful and efficient mechanism for collecting data and opinions from the participants. Individual interviews with users are unlikely to have gained such rich data that evolved and responded to comments made by other stakeholders.

ACKNOWLEDGEMENTS

The authors would like to thank for those who participated in the SNA workshop. The authors would also like to thank the two anonymous referees for their constructive comments, which helped to improve this manuscript.

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