

## Analysis of the Factors Affecting the Stakeholder Management Process in Building Construction Project

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**Abstract:** Construction projects are traditionally divided into series of activities or operations undertaken by different individuals or groups who may have different levels of interest and or involvement in the project. Construction projects are generally unique in nature based on their fragmentation, processes and interaction with numerous parties; and just like any other venture, are constrained by time and resources which are needed for the projects to be delivered. Therefore, the process of design and execution of construction projects constitutes a complex system which involves collaboration and negotiations among many stakeholders which may include the clients, designers, contractors, local authorities and the general project environment etc. The different parties involved both directly and indirectly on the project are referred to as the project stakeholders whose management is vital to achieving project success. Therefore, Stakeholder management has been recognised as an important strategy for achieving project success in construction projects. Various Stakeholders have different levels and types of investments and interests in the project in which they are involved. Managing multiple stakeholders and maintaining an acceptable balance between their interests are crucial to successful project delivery. A negative attitude to a construction project by stakeholders can severely obstruct its implementation. Such obstacle will lead to overruns in time and cost, and poor quality, due to conflicts and argument concerning the design and implementation of the project. An evaluation of the demands and influence of the stakeholders should be taken into account as a necessary and important step in the planning, implementation and completion of any construction project. Stakeholder management is an important variable in the briefing process and considered as necessary to assess the individual stakeholder commitment, interest and power prior to the briefing process and to consider and balance the interest of all stakeholders. Project managers should clearly identify all types of stakeholders and

accommodate their conflicts and needs. The role of stakeholder management as a central project management process has strengthened. Today even the concept of project management is defined through stakeholder's management as "the process of adapting the specifications, plans, and approaches to the different concerns and expectations of the various stakeholders".

**Keywords:** construction, critical success factor, Management, Stakeholder

### 1. INTRODUCTION

The project manager's primary challenge is that a project needs both to consider and gratify a variety of stakeholders, which include the end- users, the customers, the designers, the contractors, and the maintenance team. Moreover, each stakeholder has distinct requirements with respect to the project, which create fundamental conflicts with others. Conflicts are at the root of most project management difficulties at both the strategic level and at the tactical level. Operating in built environments has also changed the focus of construction.

The coeval focus is on delivering integrated solutions that meet the customers' business activities instead of only on construction activities. In rendering integrated solutions, customer needs are met by combining products and systems with services in order to specify, design, build, maintain, support, and operate throughout the construction life cycle. Front-end activities have become highly important when operating in composite environments, particularly in revealing the conflicts between customers' and other stakeholders' requirements and purposes. The ability to understand and manage the roles and requirements of various stakeholders is a critical task for project manager because their primary role is that of facilitator among various constituencies, as well as collector and packer of project requirements to ensure satisfactory conditions for all parties. The central argument is that

there are no systematic processes for the stakeholder identification and management as well as requirements engineering in the construction industry which is causing immense problems, like delays and budget overruns, in some projects.

The taxonomic process may help project management to identify, classify, and manage stakeholders more comprehensively. In addition, the need for research is maturing because relational project delivery methods and integrated project teams are becoming more and more popular.

### **1.1 Objectives**

To identify & rank the most common factors that affecting the stakeholder management process in construction project.

### **1.2 Research Methodology**

The adopted methodology that is used to accomplish this study is the following techniques: review of the literature related to stakeholder management, questionnaire for gathering data, and data analysis.

### **1.3 Questionnaire Design**

The questionnaire is designed by considering 30 critical success factors which are described below.

## **2. CRITICAL SUCCESS FACTORS (CSFs) FOR STAKEHOLDER MANAGEMENT**

Many researchers have used the critical success factors as a means to improve the performance of the management process. CSFs can be defined as “areas, in which results, if they are satisfactory, will ensure successful competitive performance for the organization”. Some researchers viewed them as “those critical areas of managerial planning and action that must be practiced in order to achieve effectiveness”. CSFs are viewed as those activities and practices that should be addressed in order to ensure effective management of stakeholders in a construction project. All the aspect of critical success factors of stakeholder is introduced, so 30 factors contributing to the success of stakeholder management are grouping to six main groups (include management support, identification of stakeholder information, stakeholder assessment, decision making, action & evaluation, and a continuous support group. The six group CSFs and perceptions of successful stakeholder management are identified as follows:

### **2.1 Management support group**

Top level or management support from the implementing agencies, was essential for effective

stakeholder engagement. In some projects, certain individuals at director level are tasked with the responsibility of overseeing their stakeholder management activities and to develop their relevant. Top management must endorse the principle of stakeholder consistently and wholeheartedly. To guarantee successful stakeholder participants should be willing to share power and resource that would benefit overall organization's goal

### **2.1.1. Managing stakeholder with corporate social responsibilities**

The construction industry plays a significant role in the social and economic development in both developed and developing countries through constructing buildings and infrastructure projects that meet the needs of the community in the short and long terms. In addition, it supports government efforts by achieving strategic development objectives, increasing gross domestic product and offering employment opportunities. The stakeholder management must have social responsibilities towards supporting effective management of the stakeholder in the construction project. Managing stakeholder with economic, legal, ethical, environmental, and cultural responsibilities as the precondition step for stakeholder management. According to the definition of social responsibility, the economic responsibility is the obligation to produce goods and services, sell them at fair prices and make a profit; the legal responsibility refers to the obligation to obey the law; and the ethical responsibility covers those issues not embodied in law but expected by society. Recently environmental expectation has also been given much attention by many scholars. Because of the sustainable development expectations, environmental considerations include air, dust, water, and noise. The purpose is to protect the environment and to provide healthy living conditions. The cultural responsibility is related to the consideration of the cultural diversity, especially the differences of language and tradition. The project managers should manage stakeholders taking into consideration of all kinds of these social responsibilities to make sure the project objectives are achieved.

### **2.1.2. Flexible project organization**

A flexible project organization is needed to cope with the complexity and uncertainties of construction. The importance of the flexibility administration of project to recruit personnel to achieve the objectives for the project. As one objective of stakeholder management

was to gain an acceptance from stakeholders on the implementation of the project, and this will be achieved if an organization will be built to contain sufficient resources for communication and interaction with stakeholders.

### **2.1.3. Project manager competences**

The role of the project manager should involve not simply an understanding of the technical realities at hand, but also of the links between technology, the environment, the community and the people in it. For example, a given community possesses unique information about local conditions and circumstances. The project manager should acquire knowledge about the place where the project is located and engage the local community in the planning of the construction project. Thus, an external stakeholder management process should, if conducted properly, be seen as representing an opportunity for improving the project. In most situations the relationship with the stakeholder is taken care of by the project manager. Consequently, the results of the stakeholder management are dependent on the project manager's experience, relationships, and capability. The project managers should be highly skilled negotiators and communicators in order to be capable of managing individual stakeholder's expectations and creating a positive culture change within the overall organization project. The construction industry involves a wide range of stakeholders, each bringing them with a great variety of interests, concerns, requirements and potential opportunities. In project management, effective project managers require keen analytical and intuitive skills to identification of stakeholders and work with them to understand their expectations and influence upon project success. This facilitates managing process that maximizes stakeholder positive input and minimizes any potential detrimental impact.

## **2.2 Information input group**

Identifying stakeholder information is an important task for assessing stakeholder's information is important as it is the backbone in the project success. Before any management activities, information about the project and stakeholders around requires extensive research and analysis. The information includes project missions, full list of stakeholder, area of stakeholder's interests, and their needs and constraints to the project. The stakeholder commitments, interest and power should be fully assessed so that the project manager can tackle the key problems in the

stakeholder management process and the potential impact on success in the project. This information includes:

### **2.2.1. Setting common goals**

The identification of a clear mission for a project at different stages is widely considered to be essential for the effective management of stakeholders. Before every stakeholder management activity, project management team should have a better understanding of the tasks and objectives of the particular stage of the project Lifecycle, including the issues of such as cost, schedule, and budget. The "setting common goals, objectives and project priorities" is significant for improving stakeholder management, and he also suggested that the purpose of the project should be understood, and feedback from stakeholder be solicited in order to achieve alignment between stakeholder and project team, since this the way that expectations could be managed, and hidden agendas could be brought to the surface and project priorities could be established.

### **2.2.2. Stakeholder identification**

Project managers need to identify and interact with key stakeholder in the project system's environment. An important part of the management of the project system's environment is to organize the process in order to be able to identify and to manage the probable stakeholders in that environment and determine how they will react to project decisions. Identification of stakeholders includes both stakeholders that are involved in the project and potential stakeholders who will also improve the support and ownership to the stakeholder management process. The identification of the stakeholders and their necessary

contributions, and expectations concerning rewards for contributions, as a prerequisite requirement for stakeholder analysis in projects for management the stakeholder in the construction project. The project management team could identify stakeholders either by the 'external/internal' guideline, or by their functions such as clients, contractors, and consultants. The identification should be based on common interests and needs of the project.

### **2.2.3. Stakeholder needs and expectations.**

Numerous different and sometimes discrepant interests can be affected, both positively and negatively, throughout the course of a major infrastructure and construction project. Failing to

address and meet the concerns and expectations of the stakeholders involved has resulted in many project failures. During the project process, all stakeholders' needs should be assessed "so that a satisfactory and realistic solution to the problem being addressed is obtained". The stakeholders' needs can provide an indication of the stakeholder groups' concerns, the problems the project team faces, and stakeholders' requirements of the projects.

### 2.3. Stakeholder assessment group

In the real world, stakeholders have influenced projects in a variety of complex ways. In order to analyze the impact of stakeholders upon projects, it is necessary to identify and include the factors by which they do so. To enhance the understanding of project managers on stakeholders, their attributes, behavior, and potential influence need to be assessed and estimated. The conflicts and coalitions among stakeholders also could be analyzed based on the information about stakeholders. Once the information about the stakeholder is priorities, the assessment of stakeholder on the basis of their impact and vested interested in the project could be done, so it is important to have an accurate understanding of the stakeholder attributes in order to categorize the stakeholder according to their attitude classification.

#### 2.3.1. Stakeholders' attitude

The capacity and willingness of stakeholders to threaten or cooperate with project teams should be measured during stakeholder management process. Because stakeholders may have negative or positive impacts on projects, there is a need to determine objectors and supporters. Stakeholder attitude refers to whether the stakeholder supports or opposes the project. In other words, this factor gives a 'clue' for managers to be aware that stakeholders have positive or negative influences on project outcomes. The stakeholders' attitude can be sorted into 3 categories: observed behavior, cooperative potential and competitive threat, a project manager need to clearly understand the range of stakeholder reactions and behaviors. Stakeholder attitude includes five levels: active opposition, passive opposition, no commitment, passive support and active support.

#### 2.3.2. Stakeholders' interests

Stakeholders are characterized as having a 'stake' in the proposed project and trying to influence its implementation so as to guard their individual

interests. There are various stakeholders' interests due to the complex nature of construction projects. Identifying stakeholder interests is an important task to assess stakeholders, these interests including product safety, integrity of financial reporting new product services, and financial returns. Stakeholder interest in a project is considered by many researchers to be a factor affecting the successful outcome of a project. Stakeholders have a vested interest in a project for numerous reasons such as mission relevancy, economic interest, legal right, political support, health and safety, lifestyle, opportunism and survival. Hence, it can be concluded that vested interest is an important driver of the stakeholder-project relationship.

#### 2.3.3. Stakeholders' influence

Project management procedure is affected by project stakeholders. Therefore recognizing the stakeholders' influence is important to "plan and execute a sufficiently rigorous stakeholder management process" The "stakeholder impact index", and he considers that analyzing the potential impact of stakeholders indicates to determine the nature and impact of stakeholder influence, the probability of stakeholders exercising their influence and each stakeholder's position in relation to the project. Therefore recognizing the stakeholder' influence is an important factor to "plan and execute a sufficiently rigorous stakeholder management process".

#### 2.3.4. Stakeholders' conflicts and coalitions

Conflicts in construction project may involve stakeholders external or internal to the project or a combination of those. Conflicts between external stakeholders may be the most difficult to resolve because of their diversity and because of the lack of established procedures for tackling most of them. For example, in developed societies, public opinion tends to be more opposed than supporter of a construction project encompassing some environmental impact, although it may respond to a specified public need; on the contrary, in less developed or poorer countries, the public may be more keen to accept the project if it aims at solving important infrastructure needs (transportation, sewage, pipelines, water treatment, etc.). Analyzing the conflicts and coalitions among stakeholders is an important step for stakeholder management. In fact, conflicting parties seek mutually satisfactory solutions, which can be achieved by joint problem solving to seek alternative solutions. A high level of communication among parties can help in

achieving a mutually acceptable solution. On the other hand a set of steps in order to resolve differences between stakeholder, to deal with conflict by resolving a difference before and after it reach the stage of a dispute. It includes facilitation, negotiation, mediation and arbitration.

### **2.3.5. Stakeholders' power**

Stakeholders' power is defined as an individual or group that may have to permanently change or stop the project or other work, The power as a factor is considered to be a key driver of stakeholder-manager relations for several reasons, since the definitions of stakeholders undoubtedly imply that relationships between stakeholders and the project reflect social-business exchanges, and power means the ability to "control resources, create dependencies, and support the interests of some organization members or groups over others". Successful project managers should have the ability to understand the "invisible power" among stakeholders.

### **2.3.6. Stakeholders' legitimacy**

The legitimacy of a stakeholder is a prerequisite for the success of transactions with stakeholders. Many scholars define stakeholders as those who have such legitimate relationships with the project. The legitimacy is a social good something larger and more shared than mere self-perception that may be defined and negotiated differently at various levels of social organization. Legitimate stakeholders are those whose actions and claims must be accounted for by managers, due to their potential effects upon normative stakeholders. The legitimacy of a stakeholder gives a sense that legitimacy reflects the contractual relations, legal and moral rights in relationships between stakeholders and a project.

### **2.3.7. Stakeholders' urgency**

Urgency is described as the "degree to which stakeholder claims call for immediate attention." The urgency only exists when two conditions are met: (1) when a relationship or a claim is of a time-sensitive nature. (2) Why that relationship or claim is important or critical to the stakeholder. They also state that urgency has two attributes: time-sensitive and critical. The urgency attributes of stakeholders decides the extent to which they exert pressure on a project manager by calling for emergency action.

### **2.3.8. Stakeholders' proximity**

Proximity, implies the extent to which a stakeholder is involved in the project. The need to take proximity into

account stakeholder analysis by stating that stakeholders who may have strong power and influence but are relatively far from the project core may seem transparent. Therefore their potential impact may be underestimated.

### **2.3.9. Stakeholder' knowledge**

Undoubtedly, the more knowledge a stakeholder has about the project, the more he/she is able to influence it observe that today. The receptiveness of each stakeholder to gain the knowledge about the project is very important. Stakeholder knowledge ranges from full awareness up total ignorance. The former refers to the intention of stakeholders to gain knowledge of the project by finding the facts to help them achieve their own objectives. The latter, on the other hand, refers to the fact that stakeholders have knowledge of the project by hearsay and assumptions rather than facts. Additionally, it may be argued that although the stakeholder may have a strong salience to, and great interest in, the project, it hardly accounts for influence if the stakeholder lacks sufficient knowledge. As such, stakeholder knowledge is considered a driver, affecting stakeholder impact on projects.

## **2.4. Decision making group**

Based on the outcomes in 'information input', and the outcomes in 'stakeholder assessment', the project management team has the responsibility to compromise conflicts among stakeholders by choosing the transparent evaluation of the alternative solution based on stakeholder concern, and to decide on the levels of stakeholder engagement in order to ensure effective communication, and formulate appropriate strategies to deal with the issues raised by stakeholders at this stage.

### **2.4.1. Evaluation of alternative solutions**

The clear and transparent evaluation of alternative solutions for the development of a construction project based on the concerns of stakeholders would help project managers to establish the basis of trust needed for an adequate stakeholder management process. Identification process is a cornerstone of the involvement program as it is the first step in incorporating the stakeholder input in the decision-making process. Since it includes the development of alternative solutions based on stakeholder input, analysis of these different solutions with respect to technical design criteria and stakeholder opinion, evaluation of the solutions, and finally selection of

preferred solution and development of preliminary mitigating measures.

#### **2.4.2. Ensuring effective communication**

There are two aspects of improvements for managing the stakeholder one of them is communication with stakeholders. To ensure the success of a project much information, including expectations, goals, needs, resources, status reports, budgets and purchase requests, need to be communicated on a regular basis to all major stakeholders. Communications includes the processes required to ensure timely and appropriate generation, collection, distribution, storage, retrieval, and ultimate disposition of project information. Effective project managers spend about 90% of their time communicating with team members and other project stakeholders, whether they are internal or external to the organization. Effective communication creates a bridge between diverse stakeholders involved in a project, connecting various cultural and organizational backgrounds, different levels of expertise, and various perspectives and interests in the project execution or outcome.

#### **2.4.3. Formulating appropriate strategies**

The central question of stakeholder management was "what are the strategies that organizations use to address stakeholders?" Basically the stakeholder management strategy is the attitude how the project management team treats different stakeholders. In order to identify different kinds of strategies which are enacted by organizations as responses to the demands presented by external stakeholders. Many scholars have proved the importance of formulating appropriate strategies to deal with stakeholders.

#### **2.5. Action & evaluation group**

The action & evaluation is the final management activity group in the process of stakeholder management. The inputs required are the formulated strategies, and the level of stakeholder engagement to ensure effective communication. This group includes three management activities.

##### **2.5.1. Implementing the strategies**

Developing policy implementation strategy development grid can help planners and decision makers gain a clearer picture of what will be required for implementation and help them develop action plans that will tap stakeholder interests and resources. This activity is self-explanatory. The formulated strategies

should be implemented accordingly. The outcome of this activity is to keep the project moving forward.

##### **2.5.2. Predicting stakeholders' reactions**

After the strategies being implemented, the evaluation the stakeholders' reactions to the strategies should be used to improve the objectives in the succeeding stakeholder management process. Predicting stakeholders' reactions is an important factor when project managers make decisions about strategies to deal with stakeholders. The stakeholder analyses have a longer-term aspects that are more related to the management of the whole project Lifecycle and project management must be aware when designing strategies on how to respond to stakeholder claims, and be aware of the implications of their responses to different dimensions of the project success.

##### **2.5.3. Evaluating stakeholder' satisfaction**

There are several stakeholders whose expectations and influences must be included in the project management process. And it has been emphasized that if a project's key stakeholders are not satisfied with the ongoing project outcomes, the project team will as a result be required to adjust scope, time, cost and quality in order to meet the stakeholders' requirements and expectations.

In terms of the construction industry, stakeholder satisfaction can be defined as the achievement of stakeholders' pre-project expectations in the actual performance of each project stage. This concept of construction stakeholder satisfaction has gradually become more important. The level of stakeholder satisfaction depends on two basic considerations:

- The concerns and needs of stakeholders,
- The stakeholder management process, e.g. how they are treated.

#### **2.6. Continuous support group**

Construction projects are transient, but organizations are correspondingly permanent. Since many stakeholders, such as government, local communities and media, would be involved in later stages of the project process or in future projects, project managers, as the representatives of different organizations, have the responsibility to realize the change of their influence and relationships, promote a steady relationship with them, and communicate with them properly and frequently. This group includes the

activities which should be carried out to support the management activities implemented, and the name of this group as 'continuous support' come from that the activities within, not only support a single management process, or contribute to the success of a single project, but can be used for accumulating the experiences and knowledge of the project management team in the long term.

### **2.6.1. Frequently communicating with stakeholders**

Project success is tied to effectively communicate and managing relationships with the various stakeholders of the project. This makes stakeholder management an important issue in project management. Researchers pointed out that formal and clear communication channels are needed to warrant an efficient information transfer. Therefore, increasing the degree of communication amongst the project participants, the higher the participant satisfaction. Communication is an essential process in the world of project management. It is difficult to master, but essential to make a good effort in achieving. Many times on troubled projects, project team members feel that if the communication had been better, the project would have run smoother. Therefore, communication is often listed as one of the most needed areas for improvement. To ensure the success of a project much information, including expectations, goals, needs, resources, status reports, budgets and purchase requests, need to be communicated on a regular basis to all major stakeholders. Project managers should be highly skilled negotiators and communicators who are capable of managing individual stakeholder expectations and creating a positive culture change within the overall project.

### **2.6.2. Stakeholder involvement**

Participation of project stakeholders in different stages of construction project (e.g. the planning and development phases) can be beneficial in several ways. Identifying and analyzing stakeholder concerns in construction projects are indispensable tasks during the participation process in order to arrive at a consensus and avoid project failures. Various problems have been encountered on infrastructure project around the world that has eventually led to project failure. Public opposition due to various factors has been reported as the main reason for failure in several instances, so the stakeholder involvement in infrastructure projects plays a very important role.

### **2.6.3. Promoting relationship with stakeholders**

Successful relationships between the project management team and its stakeholders are vital for successful delivery of projects and meeting stakeholder expectations. It is wrong to ignore the stakeholders or attempt to impose a rigid detailed control on the project-stakeholder relationship. These are challenging and demands which the project manager cannot overlook, but have to take into consideration and address, he/she was recognized that several factors affect project-stakeholder relationships, and identified the following factors as being the most interesting and important for building relationships between a project and its stakeholders: trust; uncertainty and control; resources and knowledge; and goal congruence.

### **2.6.4. Realizing changes of stakeholder**

In reality stakeholders and their influence change over time, and this depends on the strategic issue under consideration. Dynamics of stakeholder is a very interesting and important aspect of the stakeholder concept. The uncertainty caused by stakeholders includes "who the stakeholders are", the influence of them, their needs, and the implications of relationships among stakeholders. The process of identifying, prioritizing, and engaging stakeholders cannot be a once-only event. The work of managing stakeholder does not stop according to plan activities. Since the nature and membership of the project stakeholder change according to the project Lifecycle stage, so the team needs to continuously scan their project stakeholder for unplanned occurrences that may trigger a review when the activity moves from one stage of its implementation to other stages. As a result of that the evaluation of stakeholder demands and influence should be considered as a necessary and important step in the planning, implementation, and completion of any construction project.

### **2.6.5. Higher authorities support**

The top-level support is important for management activities, in an organization with a mature stakeholder management environment, the higher authorities always monitor the management process, help figuring out problems, and used the effects of stakeholder management as an indicator for performance measurement of the management team.

### **2.6.6. Trust**

The importance of trust as a facilitator of positive relationships among project stakeholders. Trust is

argued to enhance a variety of intra-organizational relationships, including project team dynamics, top management support, and coordination across functional departments. Likewise, trust is argued to improve the inter-organizational relationships among the principal actors in project development, such as contractors, owners, and suppliers.

### 2.6.7. Reduce uncertainty

Most projects are subject to uncertainty and these inherent uncertainties need to be integration in order to deliver beneficial objectives of change. They underlined that an important way to reduce this uncertainty was to choose a partnering relationship where the risk was shared between the operator and the contractors.

### 2.6.8. Maintain alignment

Goal congruence means that there are aligned goals, and therefore it is easier to trust the partner doing the job. The willingness to take risks may be an indicator of aligned goals. This may be the reason why we found goal congruence to be more crucial for trust building between the project management and the stakeholders.

### 2.6.9. Access to resources and knowledge

Access to resources and knowledge was seen as an important factor in the formation of relationships. The alliances between organizations can provide a 'means for survival'. The key is learning relationships and knowledge transfer. Acquiring knowledge from other organizations is not a deceitful act, but rather represents a commitment to utilize each other's skill. The project event was an opportunity to acquire knowledge about the main supplier's new technology and for this learning purpose a close relationship was necessary.

## 3. RESULT AND DATA ANALYSIS

Likert scaling was used for ranking questions that have an agreed level. The respondents were required to rate the importance of each factor on a 5-point Likert scale using 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree and 5 for strongly agree. The relative importance index is used for ranking.

## 4. CONCLUSION

A total of 30 factors affecting the stakeholder management process were categorized in six groups in the survey. The findings from the study show that 22

factors are regarded as critical for the success of the stakeholder management process in construction projects by most respondents. The most top three factors that affect the stakeholder management process in construction project were ranked based on their Relative Importance Index are: hiring a project manager with high competencies, transparent evaluation of the alternative solution based on stakeholder concern, and ensuring effective communication between the project and its stakeholder.

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