SUSTAINABILITY IN BUILDING CONSTRUCTION: THE MANAGEMENT AND CHALLENGIES OF STAKEHOLDERS IN THE INDUSTRY.

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ABSTRACT

Achieving sustainability-related targets in construction projects is increasingly becoming a key performance driver. Yet sustainability is a complex concept in projects and there are many diverse stakeholders. Some stakeholders are generally recognized as important, i.e., the client and main contractor, yet there are others not always perceived as such and whose absence from the decision-making processes may result in a failure to address sustainability issues. Construction is said to be sustainable when it meets environmental challenges, responds to social and cultural demands and delivers economic improvement. The fundamental concept of sustainable construction is to deliver long term affordability, quality and efficiency, value to clients and users, whilst decreasing negative environmental impacts and increasing the economic sustainability. Given the conflicting interests, different professional approaches and poor managerial strategies, it is difficult to integrate the highly diverse stakeholders into a single process, but not insurmountable challenge. This can only be achieved when all stakeholders are integrated and managed to work as a team. Data were sought through secondary sources by reviewing journals and other literatures related to the subject. The paper contends among others that, there is need to identify and manage all key stakeholders related to different sustainability targets.

Keywords: sustainability in Construction, Challenges, stakeholders’ management.

INTRODUCTION

Sustainability has been a major concern for many industries including the building industry. Achieving sustainability of a building requires a shift in decision making throughout the entire life cycle of a building including its design, construction, operation, and disposal. Starting with the building owners, many parties involved in the creation of the built environment have come to realize that the only way to fully achieve the principles of sustainability is to work towards it as a team. A typical list of participants in the building industry includes the client (owner), designer (architects and engineers), constructors (builders), public officials, and the public (Bilge Gokhan Celik, 2013). All participants in the realization of a sustainable building construction are referred to as stakeholders.

According to the “Project Management Institute (PMI) Standards Committee” in (Menoka Bal et al 2013), project stakeholders are individuals and organizations who are actively involved in the project or whose interests may be affected by the execution of the project or by successful project completion. Design, construction, operation and disposal of buildings and cities also impact social and economic standards. Building industry’s triple and high interaction with the human development requires professionals within the industry to reevaluate their development approaches. This requires designers such as architects and engineers, as well as the builders to understand the basics of sustainable development and how it has been and can be incorporated into their professions (Bilge Gokhan Celik, 2013). Many resources in this area focus on the technical aspect of sustainability as an effort to train professionals in sustainable applications. However, sustainability is a more complicated concept that evolves based on time, location, and intent. Thus it is critical for building professionals to evaluate sustainability and sustainable development at a conceptual level, which can allow them to make better decisions in a continuously changing global world.

In this new global economy, stakeholder engagement is increasingly becoming a part of construction project practice in order to deliver excellent project outcomes. For example stakeholder identification is a critical component of the initial scoping phase and should occur before an engagement plan is formulated.
and consultations begin. As each stakeholder usually has their own interest in the project which may cause different priorities, conflicts and dramatically increase the complexity of the situation. A well-managed stakeholder engagement process helps the project stakeholder to work together to increase comfort and quality of life, while decreasing negative environmental impacts and increasing the economic sustainability of the project (Menoka Bal et al, 2013). Stakeholder engagement should therefore be taken as a core element of any “sustainable development” plan. Hence a project is more likely to be successful —especially in the long-term, if it takes into consideration the expectations of the stakeholders and endeavors to meet their needs.

SUSTAINABILITY IN CONSTRUCTION

The principles of sustainable development require the current generations to meet their own needs without compromising the ability of future generations to do the same (United Nations, 1987) in (Bilge Gokhan Celik, 2013). Building industry, a significant contributor to the environmental problems, needs to evaluate these relatively new principles and how they can be applied within. There is general consensus among scholars and stakeholders that the construction sector is culpable in some of the most serious environmental damage and equally adverse social and economic impacts on humanity (CIOB, 2004) in (Afolabi A. Dania et al, 2013). The solution will derive from a collaborative effort between various industries, policy makers, professionals, stakeholders and the general public. The process will include reconsideration of philosophies and technologies within the current economy, and the society with an understanding that both are subject to the limits of the environment. Realizing the boundaries was the first step toward a more sustainable future. Now it is time for humans to proceed with the remaining steps to truly achieve sustainability for both current and future generations.

Construction is said to be sustainable when it meets environmental challenges, responds to social and cultural demands and delivers economic improvement. For example, a building could be considered environmentally sustainable if the energy usage throughout the building’s life cycle is low and it considers reusing of materials at the end of the building’s life. The fundamental concept of sustainable construction is to deliver long term affordability, quality and efficiency, value to clients and users, whilst decreasing negative environmental impacts and increasing the economic sustainability. (Menoka Bal et al, 2013). Sustainable construction brings about the required performance with the least unfavorable environmental impact, while encouraging economic, social and cultural improvement at a local, regional and global level. Sustainable construction supply chain delivers tangible benefits to the triple bottom line (TBL) that is (1) Economic Growth (2) Environmental Sustainability and (3) Ethical/Social Performance. According to UNEP in (Menoka Bal et al, 2013) sustainable building and construction should have the following characteristics.

- Routinely designed and maintained to optimize the entire life span,
- Sustainability considerations and requirements should take in building legislation and standards,
- Environmental aspects should be considered in the project and should include short-term as well as long-term aspects,
- Policies and incentives provided by the government to support sustainable building and construction practices,
- Investors, insurance companies, property developers and buyer of buildings are aware of sustainability considerations and should take an active role to encourage sustainable building and construction practice.

STAKEHOLDERS IN CONSTRUCTION

*Stakeholder* is a relatively recent term coined originally for the corporate sector. There are various interpretations of who (or what) can be seen as stakeholders in an organization. A “stake” is an interest or a share in an undertaking while a “stakeholder” is an individual with a stake (Weiss, 2006). Moloney (2006) in (Ezekiel Chinyio et al, 2010) argues that stakeholders are individuals or groups that benefit from an organization.
The simplest definition is that of (Frederick, 1998): “everyone in the community who has a ‘stake’ in what the [community] does”. (Freeman, 1984) in (Menoka Bal, 2013) defines a stakeholder as a person or an entity that “can affect or is affected by the achievement of the organization’s objectives”, a definition that emphasizes the interdependence between stakeholders and organizations, and organizations and their environments (Freeman, 1984). Since relationships cannot be simply reduced to contractual or economic relations, stakeholders are, in fact, moral actors (Hendry 2001), and have a direct influence on organizational performance and survival (Scott and Lane 2000). Friedman and Miles (2006) offer a model of stakeholder definitions based on two principles: normative and strategic.

Normative definitions of stakeholders differ in their scope – either because they embrace all possible things that might be considered as stakeholders, such as future generations and the natural environment or because they restrict the scope of stakeholders to reflect societal norms. In normative definitions, stakeholders are both moral actors and the subject of moral action. On the other hand, strategic definitions of stakeholders are based on the degree of influence that a stakeholder may exert within a certain organizational context, and how critical for the survival of such an organization the actions performed by them are (Friedman and Miles 2006). Different stakeholders are involved in different stages of the built environment’s life cycle, are highly diverse, have diverging perceptions and interests, and play different roles. The various concerns, as well as the barriers to overcome and the instruments that may prompt sustainable construction, can be approached from the perspective of each key stakeholder in the different building life cycle phases such as planning, tender, construction, use, eventual refurbishment, retrofitting or renovation, as well as the final demolition and recycling processes.

The checklist of stakeholders in a construction project is often large and would include the owners and users of facilities, project managers, facilities managers, designers, shareholders, legal authorities, employees, subcontractors, suppliers, process and service providers, competitors, banks, insurance companies, media, community representatives, neighbours, general public, government establishments, visitors, customers, regional development agencies, the natural environment, the press, pressure groups, civic institutions, etc. (Newcombe, 2003; Smith and Love, 2004). Each of these would influence the course of a project at some stage. Some bring their influence to bear more often than others.

These stakeholders tend to be either internal or mainly strategic, or external and mainly normative, with public authorities playing both a strategic and a normative role. Some of the key stakeholders appear in the role of clients (e.g. public authorities for strategic planning projects, investors as clients of designers, end-users as clients of apartments or shops), depending on the scale and phase of a project. Other stakeholders, such as media or non-governmental organizations, are “external” stakeholders who play an oversight role.

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<th>TABLE 1. Key stakeholders and their concern in the building life cycle.</th>
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CHALLENGES OF STAKEHOLDER IN SUSTAINABLE CONSTRUCTION

Improving the decision-making processes within sustainable construction remains a difficult, but not insurmountable challenge. Given the conflicting interests, different professional approaches, lack of information, and poor managerial strategies, it is difficult to integrate the highly diverse stakeholders into a single process. The innovations engendered by the new requirements of sustainability create further challenges for the established practices and criteria for decision-making within professions and public and professional institutions at all stages of the construction process. (Henry and Paris 2009). The effective and meaningful inclusion of stakeholders in the processes of sustainable construction is therefore difficult for various reasons, some of which are described below:

1. **High fragmentation of the building sector**: Buildings typically have a long life-cycle with only limited interaction between stakeholders involved in different phases.
2. **Different professional approaches**: The fragmented process of decision making in construction creates a decentralized system which is strongly influenced by professional codes (Van Bueren and Priemus 2002, p.83) and an incapacity of working within a multi-disciplinary team from an early stage of design (Tirone et al. 2003).
3. **Sustainability requirements challenge the status quo**: According to Henry and Paris (2009), the innovations engendered by the new requirements of sustainability question public and professional institutions, their established practices and several criteria of decision making at all the stages of the construction process.
4. **Complexity and interconnectedness of stakeholders’ interactions**: Risks and impacts associated with construction activities are often difficult to determine and measure due to the interactions between many different variables, such as geographic, cultural and economic factors.
5. **Interests and values of stakeholders vary**: In every decision-making phase, sustainable construction raises a set of issues that should be shared by all stakeholders: natural resources; energy supply; social equity, knowledge; democracy; ecological balance; well-being and lifestyle, among others. However, the interests of stakeholders often vary significantly and can be highly conflicting.
6. **Some stakeholders are excluded by market mechanisms**: Economic feasibility and inclusion of stakeholders are key issues to the implementation of sustainability. Nevertheless, there are considerable challenges and barriers to overcome before competitive economic opportunities within the built environment can be created.

STAKEHOLDER MANAGEMENT

Stakeholder management is about relationships between an organization and its stakeholders. These relationships impact on individuals and organizations both positively and negatively. Stakeholders need to be managed in order to minimize their negative impacts and ensure that they do not hinder the achievement of goals by individuals and organizations. An organization can be influenced on several dimensions and in different ways, as the checklist of stakeholders in most undertakings (construction industry in particular), is often long and their differing stakes can also become a major source of conflict. It is thus worthwhile to manage stakes in most undertakings.

As stakes are not static but dynamic, there is a need to manage the constantly shifting balance between the interests of stakeholders (Goodijk, 2003). Stakeholder management dictates that an organization should relate with many constituent groups and should engender and maintain the support of these groups by considering and balancing their relevant interests (Goodpaster, 1991; Freeman, 1994; Logsdon and Wood, 2000). Stake holding is thus a form of social inclusion and so it diminishes barriers to the expertise that is flowing into and out of organizations and groups (Moloney, 2006).

Differing stakes can become a major source of conflict between stakeholders and hence it is worthwhile to manage stakeholders in most undertakings. Stakeholders’ influences are varied (Lynch, 2006) hence the
need to respond to different stakeholders in different ways. Even if all stakeholders have good intentions, and they often do, their large number in a given project warrants their management because the pursuit of their individual objectives may not necessarily be congruent. A proactive approach is needed in dealing with stakeholders as opposed to being reactive. While minimal effort is required in satisfying stakeholders with low levels of interest, greater effort is required in keeping those with high levels of interest happy (Carter, 2006).

The differing claims, rights and expectations of stakeholders can exert tangential forces in different directions. This effect must be countered by managing stakeholders collectively in accordance with the objectives of a given cause (Gibson, 2000). Firstly, each stakeholder should be managed uniquely on the basis of their disposition. That way, the missions, strengths, weaknesses, strategies and behaviour of the different stakeholders will be engaged circumspectly (Cleland, 2002) to avoid any threats they may pose to projects and corporate governance, processes and outcomes (Freeman, 1984; Logsdon and Wood, 2000). Secondly, each project-based set of stakeholders must be managed as a cohort. This activity extends beyond the construction phase of a project. Users of facilities, members of the public, etc. may exert their interests after the construction phase and so stakeholder management stretches in consonance with the life of a facility.

RECOMMENDATIONS

The following recommendations are made for effective and sustainable construction to be achieved.

1. A clause should be introduced in the conditions of contract that will address environmental issues of sustainable construction as this will facilitate the appointment of environmentally responsible stakeholders.

2. Seminars, workshops and lectures should be organised for all stakeholders in sustainable construction to address issues on efficient waste management, environmental management systems, and design for flexibility, durability, adaptability and the use of renewable construction materials.

3. Design for flexibility, durability, adaptability and quality are essential factors necessary for the attainment of technical sustainability in construction.

4. In terms of the individual steps to successful stakeholder engagement that could be adopted by a project team, this work suggests 6 key steps. These steps are: identifying all key stakeholders, relating the stakeholders to different sustainability-related targets, prioritizing the stakeholders, managing stakeholders, measuring their performance and putting targets into actions. By undertaking this process a fully integrated stakeholder team can be engaged with throughout a project life cycle for a sustainable construction.

CONCLUSION

This concluding part is a call to excellence in stakeholder management. The aim of stakeholder management is to increase process and organizational efficiency; waste reduction and lower costs; to maximize the benefits that can be derived from stakeholders while minimizing the possible downsides that could be associated with them. If the role of stakeholders is redefined and expanded, the inclusion of stakeholders is perceived positively as Solutions commonly agreed upon often constitute sustainable solutions. After all, the principles of sustainable development require the current generations to meet their own needs without compromising the ability of future generations to do the same. The process will include reconsideration of philosophies and technologies within the current economy, and the society with an understanding that both are subject to the limits of the environment. Realizing the boundaries was the first step toward a more sustainable future. Now it is time for humans to proceed with the remaining steps to truly achieve sustainability for both current and future generations.

REFERENCES


