

Green Buildings: Importance to the Key Stakeholders

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Abstract: The Green Building can be defined as a structure which is sensitive to the natural resources, uses less energy, has a lesser waste generation, and simultaneously provides a better and healthier environment to the occupants. Green buildings on all the above parameters are better than the orthodoxly designed buildings. Green Buildings have been quite instrumental in leading the way of Sustainable living and developing sustainable habitats.

Considering the ongoing global climate crisis, green buildings have certainly proved its mettle to reduce the negative impact on the environment. Although there are volumes spoken about the efficacy of the Green Buildings seldom important stake holders such as the occupants, (buyers), designers, developers take efforts to be fully aware of the importance the Green Buildings and about the well laid out designing process.

The paper gives important insights on) how the Green Buildings are sensible from business sense and b) how they have a positive impact on the key stake holders and, the actual reason they should either demand or construct Green Buildings, else the engagement with Sustainability will merely boil down to “Green washing”.

Keywords: Green Buildings, Stakeholders, Green benefits, Green Economy.

1] Introduction

The advent of the Green Building solved multiple problems ~ made buildings more sustainable, responsible and environment friendly and at the same time retaining the modernity.

In context to India, the first Green Building came up in Hyderabad which was the CII Sohrabji Green Business Centre. It achieved the highest Platinum rating which gave a tremendous motivation to multiple stake holders paving the way for Green Building Rating system in India.

Initially with a small area of just 2000 sq. mtr, the Green Buildings have now crossed almost 9 billion sq. ft with more than 6000 plus projects fully functional in India. This is considered as major milestone as it was achieved in a span of just over 21 years.

Various State governments and municipal corporations have further started offering sops and incentivize Green Buildings by the way of extra FAR / FSI.

Due to which multiple types of buildings have adopted the Green Building rating such as Hotels, Hospitals, Mass Transit, Industrial, Educational, and even large Exhibitions centres

2] Statement of Problem

With such an encouraging figure of 10 billion sq. ft. of Green Spaces and overall increment in penetration of the Green Building movement, there is still a lot of scope of penetration of designing buildings which are environmentally friendly or green. We are at the tip of the iceberg and if we compare the overall construction happening pan India vis a vis the buildings which are Green, we have a lot of tasks to be undertaken. The overall acceptability has to enhance, for which the concerns or drivers for adoption are fully addressed and understood.

The paper identifies the key stake holders, the role they play in the Green Buildings ecosystem and their approach / outlook towards the Green Buildings. The paper attempts to understand the inertia of these stakeholders, towards embracing the Green Buildings with more zest.

The outcomes of the paper will help prospective product suppliers / manufacturers to address the concern of the key stakeholders by knowing their drivers of adoption and position their services and products complimenting the drivers.

3] Green Building Ratings System in India

Energy Conservation Building Code (ECBC), National Building Code, and standards and guidelines set by rating programs such as Leadership in Energy and Environmental Design-India (LEED-India), Indian Green Building Council (IGBC), TERI - GRIHA, and other similar certifications and energy efficiency bureaus all combine to create India's Green Building Code (BEE). The National Building Code (NBC) provides basic and general recommendations for energy efficient buildings, but these are recommendations only.

A] Indian Green Building Council (IGBC)

The Confederation of Indian Industry (CII) launched the Green Building Campaign in 2001. The Indian Green Building Council (IGBC) was established when the CII-Sohrabji Godrej Green Business Center Building in Hyderabad became the first green building in

India to receive the prestigious and coveted LEED Platinum rating from the United States Green Building Council (USGBC) it was done. Not only that, but it also became his first LEED platinum building in the world. IGBC provides 30+ ratings to accommodate various building envelope types.

B] United States Green Building Council (USGBC)

The US Green Building Council (USGBC) developed LEED (Leadership in Energy and Environmental Design). Buildings implement strategies independently validated by LEED, an internationally recognized green building certification methodology, to improve performance on indicators such as resource use, carbon emissions reduction and indoor environmental quality. should be adopted. We use the Green LEED benchmark index adopted by over 57 countries. In India, most builders, developers, architects and end-users have accepted and approved his LEED standards for both core or shell structure construction and building interiors.

With 6 rating systems, USGBC is the foremost rating system offered in India.

C] GRIHA (Green Rating for Integrated Habitat Assessment) by TERI (The Energy and Resources Institute):

Developed jointly by the Ministry of New and Renewable Energy and TERI (The Energy and Resources Institute), the Integrated Habitat Rating Green Rating was adopted by the Government of India in 2007 as a national green building rating system. It outlines the basic requirements of green buildings in relation to the given standards.

Griha has 10 variants as a part of their portfolio offering.

D] GEM (Green & Ecofriendly Movement):

The "GEM Sustainability (Green) Certification Program" was introduced by ASSOCHAM in 2017 with the aim of promoting the design and construction of environmentally friendly green buildings. BEE ECBC 2017 and NBC 2016 form the basis of the GEM Sustainability Certification Program. We aim to address the sustainability of specific developments through design, construction, and operation.

GEM is the new entrant in the rating system and offers an easy to comprehend 7 nos. of ratings.

4] Key Stake holders and their roles.

There are 4 key stake holders in the ecosystem from concept till continued maintaining of the building envelope.

These stakeholders have their very own reasons to be affiliated with Green Buildings. It's essential to first understand the role these individuals play in the complete cycle and why the Green Buildings are relevant to them.

The key stakeholders who drive the ecosystem are as follows,

1. Building Owners or Developers
2. Specifiers (Architects / Service Consultancy firms)
3. Product Manufacturers
4. Building Occupants

1. Building Owners or Developers

These are the entities who either create habitats for their self-consumption or for other corporates or individual use. These buildings can be Residential, Commercial properties or even factories.

Typically, the driving force for BO/D is driven by Cost Economics for sustainability along with the environment, society and culture.

Drivers for adoption- The typical trigger is the commercial viability and ROI. The catalysts are incentives or concessions given either by Local Self Government or State / Central ministries.

Taking the cue for the drivers and making Cost economics as a pivotal point, we need understand the understated reason for adoption that actually should be.

Actual Reason for adoption- Research conducted across various demographics have suggested that the green buildings or buildings with better sustainability credentials enjoy increased marketability. This definitely offsets the perceived higher costs, while in reality Green Buildings do not cost more than 5-10% over conventional buildings.

2. Specifiers (Architects / Service Consultancy firms)

Specifiers which comprise of Architects and Service consultancy firms together conceive the external and internal look along with the functionality aspect of the of the building envelope.

They are very critical element in the ecosystem ~ since they design and recommend using type of functional and aesthetics materials which adds immense value to the overall marketable value of the Building Envelope.

Drivers for adoption – Practice as you preach – Since specifiers can influence the product selection, they will tend to recommend environmentally sustainable product which can offer a more holistic advantage.

3. Product Manufacturers

Product Manufacturers globally are racing to develop and offer better products which can bring in more value to their end customers. Over a period of time there have been multi-fold increase in product offering of technologically superior products which again have a limelight life till such time a new product is offered by other manufacturer. This leads to either faster obsolescence or becomes commoditise.

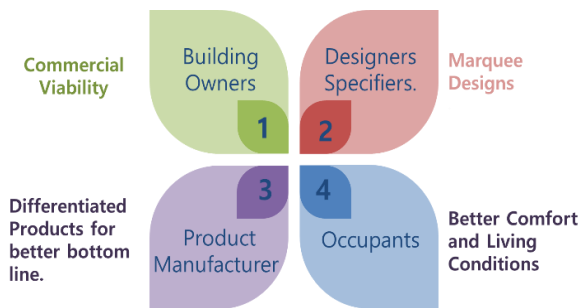
Drivers for adoption – In order to be relevant in the business and simultaneously ensure they also contribute to ESG governance, large organisation ensure they offer environmentally sustainable products or even use it.

4. Building Occupants

The litmus test of the Green Building efficacy is the level of differentiated comfort the occupants observe and feel. The occupants may not be concerned about the CAPEX financial implications, in case they are the tenants, but will would be more concerned OPEX. Green buildings clearly demonstrate:

- That they use less energy and water, lowering long-term operating and maintenance costs.
- The Design and construction methodologies result in lower running costs at higher rents, resulting in faster payback periods.
- They can have indirect benefits in terms of space renovation and retrofit costs, in addition to lower operating costs.

Drivers for adoption- The way a green building is designed has a positive impact on worker productivity and occupant health and wellbeing, resulting in improved bottom line of the businesses.



5. Conclusion

The paper took into consideration the “hard” aspect of taking into account Green Building ~ the economic aspects, which has been a major driver for most of the stakeholders.

In addition to Life Cycle Assessment costs, most literature searches focus on environmental aspects of sustainability, such as energy consumption, water impact, greenhouse gas emissions, and their technical solutions.

There exists a scope to enhance the awareness and the benefits of Green Buildings to various stake holders, with respect to Indian scenario in a structured manner, amongst the people not only in Tier 1 cities but dripping down to Tier 2 and Tier 3 cities, which are eventually getting urbanised and hence the need of the depleting resources will be straining ecologically and economically.

The process of awareness needs to start from the early stages ~ school / college level and eventually penetrated through relevant government channels to catalyse the process of awareness and the implementation of the Green Buildings.

Green buildings are no more a futuristic optional need, but looking at the current environmental situation and global warming its now a necessity. The more number green buildings come up, the lesser with the depletion of natural resources and more will be the liveability for the mankind.

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