

# A LITERATURE REVIEW ON MARKETING GREEN BUILDINGS: USE OF 4C MARKETING MIX APPROACH

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## **ABSTRACT**

*Green buildings is a concept, which is widely discussed in the present scenario. With the depletion of resources, spiralling up of energy costs, and the higher contribution of buildings to this unstoppable phenomenon, topic of green buildings is often heard in many construction platforms. However, in the real world context, green buildings are considered as a luxury and likewise there are many rooted myths which hinders the practical implementation of these greener buildings to a considerable extent. In such a situation, marketing is essential and should be carried out in such a way to promote and eradicate the misunderstandings of green buildings.*

*In general context, marketing green buildings refers to marketing the one off buildings which envisage the environmentally friendly concepts. Based on the marketing mix in order to market these buildings it is necessary to focus on the customer, his needs, cost and benefits communicating the value and focusing on the convenience.*

*Therefore, this research initially identifies the emergence of green buildings, its present context and concepts of green marketing. Then, it is followed by a brief identification of marketing mixes, whereas 4C marketing mix is identified to analyse the present context of marketing of green buildings.*

*Finally, it is concluded that key success is based on the customer satisfaction, which is applicable to three segments of clients namely the developer, owner and tenant. However, it was concluded that communication of facts and figures relating to the green buildings must be improved and so does the convenience in buying.*

**Keywords:** *Green Building; Green Marketing; Marketing Mix.*

## **1. INTRODUCTION**

Within the past couple of decades, the world has changed with an ever-increasing recognition that the mankind can no longer continue to use natural resources without facing environmental consequences (Warren, 2010). Therefore, it became a common goal to find ways and means to preserve the natural resources and fulfil the human needs hand in hand. In 1987, Brundtland Commission identified this as “Sustainability” and was defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. Further, in the perspective of construction, buildings have a profound impact on the environment and thus, even small changes in their sustainability can create major reductions in the current ecological footprint of the whole society (Eichholtz *et al.*, 2010). Hence, it is inevitable to focus on building construction within a sustainable framework.

In the vast area of “Sustainability”, the concept or the subsector of “Green” is given a higher consideration. Sustainability criteria could theoretically be developed through a triple-bottom-line interpretation of sustainability (Pope *et al.*, 2004). In triple bottom line interpretation Social, Environmental and Economical

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subsectors are considered. When considering the ‘Environmental’ subsector in isolation, the green concept comes in to light.

Although no consumer product has a zero impact on the environment, the term green product is used to describe those that attempt to safeguard or improve the natural environment by preserving energy and/or resources and reducing or eradicating use of toxic agents, pollution, and waste (Ottman, 2006). Similarly, “Green building” is a term used to describe a building that is more energy and resource efficient, releases less pollution into the air, soil and water, and is healthier for occupants than standard buildings (Richardson and Lynes, 2007). Therefore, it is essential to note that the Green Buildings (GBs) derive many benefits to its stakeholders and the society as a whole compared to conventional buildings.

However, it is a simple fact that these benefits of GBs must be communicated to the society. This proactive strategy of communicating nature friendly products or services can be identified through green marketing, thus making it extremely important for further discussion (Aggani, 2012).

## 2. GREEN MARKETING

The roots of green marketing run in to 1970s, where the wave of environmental concern gave rise to the ‘ecological marketing’ concept (Hennison and Kinnear, 1976 cited Peattie and Charter, 2003). However, Peattie and Crane (2005) mentioned that in spite of some attention in the 1970s, it was really only in the late 1980s that the concept of green marketing emerged. Since then, the concept of green marketing has passed through several pit falls and plateaus in its journey. Lee (2008) explained evolution of green marketing in three stages as follows;

- First Stage: late 1980s, concept of “green marketing” was newly introduced and discussed in industry
- Second Stage: 1990s, marketers started to experience a backlash as consumer concern for the environment and their desire for green products did not translate into purchasing behaviour
- Third Stage: Since 2000, with the implementation of more advanced technology, stricter state enforcement on deceptive claims, government regulations and incentives as well as closer scrutiny from various environmental organisations and the media, many green products have greatly improved and regained consumer confidence

Hence, it is obvious that Green marketing has now reached a good platform by its third stage. Reasons for this could be various. According to Ottman (2008), strong commitment to green would result in significant opportunities to grow a firm’s business and to innovate and build brand equity. On the other hand, Polonsky, (1994) identified the general reasons for firms to increased use of Green Marketing as follows:

- Organisations recognise environmental marketing to be an opportunity that can be used to achieve its objectives
- Organisations moral obligation to be more socially responsible
- Governmental regulations forcing firms to become more responsible
- Competitors’ environmental activities force firms to modify their environmental marketing activities and
- Cost factors associated with waste disposal, or reductions in material usage forces firms to adjust their behaviour accordingly

The American Marketing Association (AMA) who held the first workshop on "Ecological Marketing" in 1975 explained that "Green or Environmental Marketing consists of all activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants, such that the satisfaction of these needs and wants occurs, with minimal detrimental impact on the natural environment" (Anand and Vasudevan, 2012). Further, Peattie and Charter (2003) defined green marketing as a holistic management process responsible for identifying, anticipating and satisfying the needs of customers and society, in a profitable and sustainable way. However, in general, “marketing” is defined as the management process responsible for identifying, anticipating and satisfying customer requirements profitably. It can be further illustrated in simple terms that the aim of green marketing is to create awareness among the consumers about the environmental issues and help them understand in what ways they can contribute to the helping of the

environment (Jacob 2012, cited in Bartilsson and Christodolouo, 2013). Therefore in a nutshell it can be summarised that green marketing is simply a management process which is put in place to satisfy consumer needs and wants by striking a balance between profitability and minimising detrimental effects to the environment.

Successful green marketing shall focus on both customer satisfaction as well as improved environmental quality (Environmental leader, 2007). Further, it is emphasised that misjudging one of these aspects or overemphasising the later might lead to a phenomenon called “green marketing myopia| whereas if the improved quality of the environment is the main subject used in marketing messages, there is a high risk of failure for green products to reach out to the consumers (Environmental leader, 2007). Further, Ottman *et al.* (2006) emphasise that due to the misjudgments made in green marketing, consumers tend to satisfy from non-greener products. Hence it is crystal clear that when taking decisions on green marketing, it is necessary to follow certain tools, which are in marketing terminology known as “marketing mixes”. This would provide a solid basis to take decisions in marketing as well as strike a balance between two extreme ends. Therefore, this research aims to develop a marketing mix for GBs based on literature.

### **3. GLOBAL ENVIRONMENTAL MOVEMENT AND GREEN BUILDINGS**

Near the end of the 20<sup>th</sup> century, the construction industry became a centre of focus within the environmental movement (Hoffman and Henn, 2008). Building sector is one major component of the construction industry and it is considered as a sector which is highly responsible for increased energy consumption, solid waste generation, global greenhouse gas emissions, environmental damage, and resource depletion (CICA, 2002; Fuerst and McAllister, 2011). According to Rodman and Lensen, 1996 cited Chan and Henn, 2008, buildings have a substantial influence on the environment as it accounts for one-sixth of the world’s freshwater consumption, one-quarter of its wood harvest and two-fifths of its material and energy flows. This effect has become a global scenario and could be seen all over the globe irrespective of regions.

Buildings in the United States are responsible for 39% of U.S. primary energy use (includes fuel input for production), 39% of CO<sub>2</sub> emissions, 70% of electricity consumption, 12.2% portable water consumption and annual generation of 136 million tons of building-related construction and demolition (US Green Building Council, 2008). In Canada, buildings contribute to 35% of greenhouse gases, and they represent 33% of Canada’s energy production, 50% of natural resources extracted, and 25% of waste going to landfill (Persram *et al.*, 2007). On the other hand being Asian cities, in Hong Kong, buildings consume overall half of all energy and about 89% of electricity, mainly and substantially for air-conditioning which is the cause of roughly 17% of Hong Kong’s all greenhouse gas emissions (CE, 2008; EB, 2008 cited Chan and Henn, 2008). In Tokyo, building sector attributes to 73% of its emissions (Green building city marketing release, 2014). Having focusing on these figures, it is necessary to depict that buildings should be tailor-made in a way which would have a minimum negative impact on the environment and the society at large. Hence, Chan and Henn, (2008) argued that when these environmental impacts of building activities become more apparent, “Green Building (GB)” concept gained momentum in the construction industry.

### **4. GREEN BUILDINGS**

Green, or sustainable building, is the practice of creating and using healthier and more resource-efficient models of construction, renovation, operation, maintenance and demolition (US Green Building Council, 2007). Pedini and Ashuri (2010) mentioned that GB is not a matter of choice or luxury but an essential for the environmentally concerned industry professionals, owners, developers, government officials and the rest of the society. It was further argued that though over the years green building principles became standards for many corporations, institutions, and government bodies as an indication of their ethical responsibility, the majority is still not up to the trend (Pedini and Ashuri, 2010). However, McGraw Hill Construction (2013) emphasised that GB is now growing across the globe despite particular region, economic condition or culture.

In the other hand, existing buildings which outnumber the new buildings are another concern within green construction. If all of new construction were to be “green,” and if no renovation took place, it would thus

take several decades to improve the energy efficiency and sustainability performance of the existing building stock (Kok *et al.*, 2012). Hence, green retrofit can also be considered another important aspect of this green building concept.

With reference to the discussion so far, the reason for moving towards to green buildings is mainly due to concern for preserving nature and its depleted resources. However, even though that is the main reason there are many benefits which can be derived by moving towards GBs which would lead to customer satisfaction as well. Many researches have looked into these benefits in different angles and in 2010, Pedini and Ashuri (2010) in their study in GBs summarised these benefits. These benefits can be mainly identified in five different categories which are namely; environmental benefits, market benefits, financial benefits, industry benefits and health and community benefits (Refer Figure 1).

In Green, performance of products are considered in both before purchase and after use perspectives (Peattie and Charter, 2003) and it is arguable that GBs should be analysed in the same way. With reference to Figure 1, many of these benefits are gained after the product is purchased, such as reduction in operating costs, improved air quality, improved productivity and so on. These benefits are derived after occupying or in marketing terms after “purchasing” the building while some benefits such as company recognition, increased job opportunities in the industry, use of intensives are achievable during or before construction. Hence, the customer will gain its satisfaction while using the product whereas the GB.

Even though there is a plethora of benefits of green buildings, the real question is whether these are known by the general public. Yudelson (2007) argued that engineers believe good results simply market themselves. As a result it has become a common understanding that if a green building performs well, that would speak for itself, for the investors or other engineers to go for green buildings in future. In reality, this is hardly the case, as if achievements are not efficiently brought into the public knowledge, they may be forgotten and become insignificant (Yudelson, 2007). Therefore, it is apparent that green buildings must be marketed in the society as it is necessary for fruitful results. Further, as discussed, the satisfaction of using the GB is derived overtime and not as soon as the GB is purchased.

The benefits of green buildings must be communicated to the public through green marketing and eradicate the myths with concrete supportive arguments and information as if not, it may lead to suspicion of possible lack of green building construction (Eerikinen and Sarasooja, 2013). Hence, it is necessary to look into the green building market in the construction industry to get an overview of the present situation.

<p><b>Financial Benefits</b></p> <ul style="list-style-type: none"> <li>• Reduce operating costs</li> <li>• Reduce life cycle energy costs</li> <li>• Enhance asses value and profit</li> <li>• Improve employee productivity and satisfaction</li> <li>• Optimise life cycle economic performance</li> <li>• Lower absenteeism / Increased productivity</li> <li>• Lower health related costs such as insurance premiums</li> <li>• Lower litigation risks because of improved indoor air quality</li> <li>• Staying ahead of regulations</li> <li>• Lower employee turnover</li> <li>• Longer economic life of the facility</li> <li>• Tax abatements at the federal, state and local level</li> <li>• Federal grants used as enticements to promote green building.</li> </ul>	<p><b>Market Benefits</b></p> <ul style="list-style-type: none"> <li>• Create value within the compatible market</li> <li>• Higher occupancy rates</li> <li>• Less vacancy period</li> <li>• Meet growing demands by tenants</li> <li>• Company recognition</li> <li>• Lower advertising costs</li> </ul>	<p><b>Industry Benefits</b></p> <ul style="list-style-type: none"> <li>• Positive impact on the Construction Industry, (integrated, non-traditional processes, new materials)</li> <li>• Allow technology to become part of the green building process improving the outcome of projects</li> <li>• Allow professionals to become more qualified, educated, integrated</li> <li>• Allow opening other countries and selling green building know-how</li> <li>• Help other industries to benefit from new opportunities</li> <li>• Help to increase job opportunities</li> <li>• Eligible for grant money</li> </ul>
<p><b>Benefits of Green Buildings</b></p>		
<p><b>Environmental Benefits</b></p> <ul style="list-style-type: none"> <li>• Enhance and protect eco-system and biodiversity</li> <li>• Improve water and air quality</li> <li>• Reduce solid waste</li> <li>• Conserve natural resources</li> </ul>	<p><b>Health and Community Benefits</b></p> <ul style="list-style-type: none"> <li>• Improve air, thermal, daylight and acoustic environments</li> <li>• Enhance occupant comfort and health</li> <li>• Minimise strain on local infrastructure</li> <li>• Contribute the overall quality of life</li> <li>• Set example in the community</li> </ul>	

Figure 1: Benefits of Green Buildings  
Adapted from: Pedini and Ashuri (2010)

## 5. CURRENT SCENARIO OF GREEN BUILDING MARKET

As investors and occupants become more conversant with the environmental and social effects of the built environment, buildings with better sustainability credentials enjoy increased marketability (World Green Building Council, 2013). Yet, Chan and Henn, (2008) supported the fact that GB development still faces challenges in its market penetration as comparably higher initial costs and extra risks associated with GBs still act as barriers to the stakeholders from voluntarily entering into the new market. Nevertheless, Kats (2003) argued that the cost to build green will decline over time as the firms gain more experience designing and building environmentally sustainable structures.

However, according to McGraw Hill Construction (2013), Green building market has shifted from ‘push’ to ‘pull’ and GB is increasingly seen as a business opportunity. This movement might be due to the fact that change in cost of buildings and the alarming savings of energy and resources with all other perceived benefits as evident from Table 1.

Table 1: Costs and Savings of GBs

Costs / Savings	World Green Building Council (2013)	McGraw Hill Construction (2013)	Wiley <i>et al.</i> (2008)	Kats (2003)
Design and construction cost increases	0.4% to 12.5% (new green building) 0.3% to 40.0% (green retrofit)	-	-	3.00 to -5.00/ft <sup>2</sup>
Operating cost reductions		15% (new green building) 13% (green retrofit)	-	\$8.50/ft <sup>2</sup>
Sales price / Asset value increases	0% – 30%	7% (new green building) 5% (green retrofit)	\$30-\$137/ft <sup>2</sup>	
Rental increases	0% – 17.3%	-	7.3%-17.3%	
Occupancy rate increases	0% – 23.1%	-	10%-18%	
Energy saving	25% - 30% (new green building) 3%-17% (green retrofit)	-	40%	\$5.80/ft <sup>2</sup>
Water saving	39%	-	-	\$0.50/ft <sup>2</sup>

Besides financial benefits, Productivity enhancement and health benefits are other major concerns of GBs. As per the report of World green building council (2013), there is a 10%-25% of increase in mental function and memory, reduction of 8.5% of hospital stays, 20% - 26% of faster learning, increased productivity up to 18%, and increased retail sales up to 15% -40% is recorded from the employees working within a GB. Kats (2003) emphasised that due to more natural light and better air quality, GBs typically contribute to

improved employee and student health, comfort, and productivity with data supporting that improved ventilation, temperature and lighting each provide measured benefits from 0.5% up to 34%, with average measured workforce productivity gains of 7.1% with lighting control, 1.8% with ventilation control, and 1.2% with thermal control. Thus, company's single most strategic Human Resource investment is likely to be the selection of green leased space as it results in two major benefits which are enhanced occupant productivity, and employee attraction and retention (Persram *et al.*, 2007).

According to Wiley *et al.*, 2008, green-labeled office buildings rent at a premium and achieve higher occupancy, relative to their competitors and further, with associated savings in operating expenses, GBs demonstrate superior income potential in the rental market. At the same time, Table 1 proves that cost premiums associated with GBs could be recovered with its perceived financial benefits over the life time. Hence, many professionals have come to a common understanding that increase in initial cost outweighs the perceived benefits and also the increment in cost for a green certified building would be around 5% compared to a common standard type of a building (Masry, 2012) which is acceptable. Hence, it is evident that initial cost which was the main focus of GB construction in past is now turning in to a concept of value considering the life cycle benefits.

Green Building Council (2013) established that studies around the world show a pattern of green buildings being able to attract tenants' attention and to command higher rents and sale prices and in markets and moreover, there are indications of emerging 'brown discounts' where buildings that are not green may rent or sell for less. Today, due to these environmental and strategic benefits many professionals are concerned about sustainable construction technologies. McGraw Hill Construction (2013) supported this fact highlighting their study which concluded 51% of architects, engineers, contractors, owners and consultants participated in the study anticipated that more than 60% of their work will be green by 2015. With all these derived benefits and proven facts with figures, still approximately 50% of professionals are having second thoughts on "going green" (McGraw Hill, 2013). This is quite alarming fact and it can be concluded that the successful green building projects all over the world has not still speak for themselves for the engineers and architects to move towards Green Buildings without having "second thought". Hence GBs are still to be marketed to a certain extent in the Green market and therefore, new ways and tools should be developed aiming enhancing the GB market. Further, in decision making it is a must to strike a balance to avoid situations like marketing myopia. Therefore, analysis of marketing mixes is essential.

## 6. MARKETING GREEN BUILDINGS

Marketers use numerous tools to elicit the desired responses from their target markets (Kotler, 2000). Therefore, in persuading the stakeholders of construction industry to move directly towards GBs, a tool kit should be developed. Marketing mix is the set of marketing tools that the firm uses to pursue its marketing objectives in the target market (Kotler, 2000). Hence, this tool kit can be used to market the GBs to the respective customers.

McCarthy (1960) offered the "marketing mix", as a means of translating marketing planning into practice (Bennett, 1997). According to Goi (2009), marketing mix is not a scientific theory, but merely a conceptual framework that identifies the principle decision making managers make in configuring their offerings to suit consumers' needs.

The mostly discussed Marketing mix is 4Ps developed by McCarthy. It consists of four components, namely Product, Price, Place and Promotion. These four components can be illustrated as follows:

- Product – All factors relating to the actual product visible to the consumer
- Price – Listed price together with the factors associated with price such as discounts
- Place - All distribution points and locations from which the product is available to the customer
- Promotion – Efforts made by the company to publicise the product.

With reference to MaCarthy, it is essential to focus on these components when making decisions. However, this marketing mix was criticised by many researches, (Yudelson, 1999; Anderson and Taylor, 1995). Further, Anderson and Taylor (1995) illustrate that even though this marketing mix is applicable in the post second world war period, the applicability in the present is questionable. Brownlie and Saren (1992) argue

that consumers' and society's requirements of business are now broader and are expected to tackle major sustainability challenges. Hence it is a marketing mix with customer perception is required.

McCarthy's 4Ps concept has been criticised as being a production-oriented definition of marketing, and not a customer-oriented (Popovic, 2006 cited Goi, 2009). Lauterborn (1990 cited Goi, 2009) claimed that each of these variables should also be seen from a consumer's perspective. Marketing mixes can be identified in product perspective as well as in customer perspective. As construction industry is a customer centric industry which produces tailor made, unique products the researchers are more specific in customer perspective in choosing a marketing mix for this study.

This transformation of McCarthy's 4Ps to customer perspective is accomplished by converting product into customer solution, price into cost to the customer, place into convenience, and promotion into communication, or the 4C's. The 4Cs model has a customer-centric focus and ensures the marketing mix from the customer's point of view. Hence, Next section analyses each component of 4C model in the context of green buildings.

## **7. MARKETING MIX IN GREEN BUILDINGS PERSPECTIVE**

### **7.1. CLIENT/CUSTOMER SOLUTION**

The first C of the 4C model suggests that a product is required to cater the needs and wants of client. Further, recent researches indicate that over 60% of construction builders and re-modellers report that customers are willing to pay for green (McGraw Hill, 2012). Hence, it is evident that the customer focus is now towards the GBs. Further, when defining "customers" in buildings there are couple of clusters to focus onto which are namely; Owners, Developers and Tenants. The needs of these segments are different. The owners concern would be to increase the return on investment, reduce cost and depreciation. In contrast, the tenants would be more concerned towards the wellbeing of the users and operating cost. Developers are more concerned on higher values of building and lower costs and higher prices in the market. These segments and the respective needs and wants are therefore different although there may be certain similar requirements be present (Refer Figure 2).

Knowing the customer and their needs are the key to success in Green Marketing (Ottman, 2008; Aggrawal and Satnam, 2014). Hence, in marketing GBs, identifying the customer needs and satisfying these needs would be one of the requirements. Green marketers can attract customers on the basis of performance, money savings, health and convenience, or just plain environmental friendliness, so as to target a wide range of green consumers (Indoria, 2012).



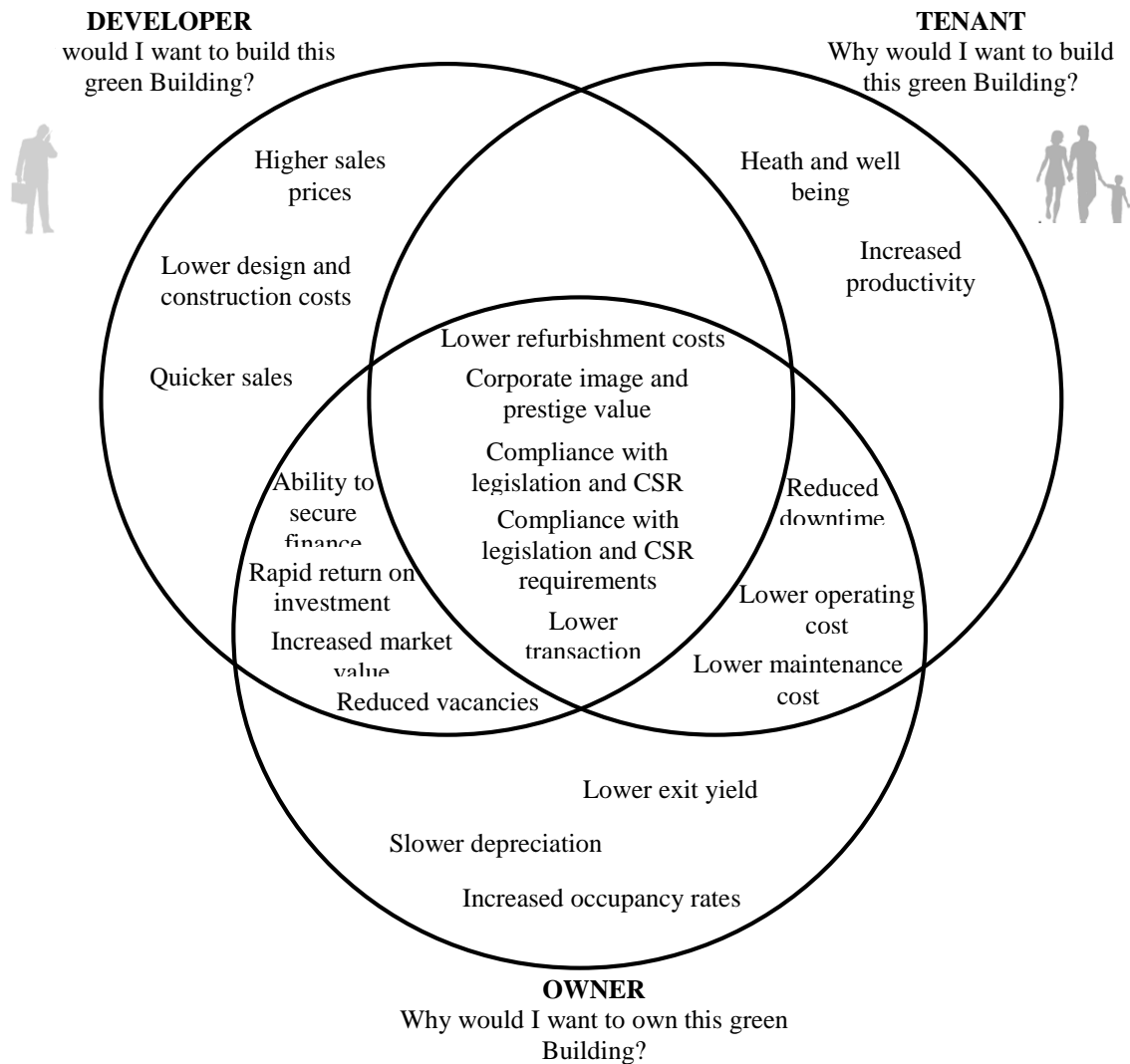


Figure 2: Interests of Clients  
Source: World Green Building Council (2013)

## 7.2. COST

The cost in four C's marketing mix relates to all the costs incurred in satisfying the clients. Hence, from the initial stage of the construction to costs incurred throughout the life cycle is concerned in this component of 4C model.

As far as the initial cost is considered, the increasing affordability of green commercial real estate is not well understood by many real estate professional (Tobias, 2011). The main myth involved in costs is that 76% (McGraw Hill, 2012) believed that the initial costs higher which acts like as a huge barrier in green building development. It is evident that extra costs will gradually be reduced when the new practices and technologies are developed and accepted by the market (Chan and Henn, 2008)

When referring to Table 1, it is crystal clear that the overall cost is reduced due to green buildings as far as the life cycle of the building is concerned. The operating cost and the maintenance costs are reduced by 15% in new green buildings and 13% in green retrofits (Refer Table 1). Further, reduction in energy usage which is greater than 25%, water consumption reduction 39%, illustrates a higher reduction in life cycle cost (Refer Table 1).

As opposed to standard buildings, green buildings derive many health and productivity benefits. Substantial increase in mental functioning, productivity due to improvements in the system, increase in worker productivity and retail sales are the other illustrated cost incentives (Section 4).

Apart from the quantified data there are many benefits perceived by green buildings. The literature provides the benefits as environmental, market, financial, industry and health and community benefits. (Refer Figure 1). Therefore, in developing a marketing mix, the perceived cost as in the whole process of procuring a green building together with its life cycle can be reduced.

Hence, in applying the marketing mix, 4C model to green Buildings, it is necessary to focus on the initial cost and the operating cost as well. Thus, a whole life cost approach should be adopted. In most of the cases, developers and owners will focus on the lower initial cost, whereas tenants will consider the initial cost as well as the operating cost of the building. As a result in green marketing, when developing a marketing mix, both these aspects must be highlighted to respective clients.

### **7.3. COMMUNICATION**

All interactions between clients are considered as communication in 4C model. The communication is mostly carried out through professional bodies established in many countries such as Green Building Council of Sri Lanka, United States Green Building Council, Australian Green Building Council and so on. These professional bodies carry out many activities and strategies to promote and communicate the benefits and the needs of going green in buildings. Further, these bodies have come up with different green rating systems such as LEED, BREEAM, so that it is possible to provide recognition to green buildings which have a less impact to environment and further, they suggest ways to promote green buildings.

For example, in a tool kit developed by Green Building Council of Australia (2013), certain activities and opportunities are identified to communicate and promote the greener projects, which are generalised and identified as follows;

- Use of certified logos
- Building the profile and awareness of the green building by developing project case studies with the collaboration of the respective green professional bodies
- Issuing media releases
- Improving awareness of the certification through respective websites

Consumer awareness on green buildings products can further be created by spreading the message among consumers about the benefits of environment friendly products which would be through posting of profiles related to green marketing on social networks creating awareness within and across online peer groups (Indoria, 2012). These can be identified as the mostly used methods of communicating to the client on GBs. However, irrespective of these possible communication methods, it is still questionable whether the essence of GBs are communicated to the clients.

Saha and Darnton (2005) argued that that Green marketing has not lived up to the hopes and dreams of many managers and activists. This is somewhat applicable in GBs as well because even though there is an established platform for green marketing the real essence of GBs has not yet reached the customer. Hence, it can be emphasised that benefits from GBs are only vaguely understood and not widely penetrated particularly in the private sector of building industry (Chan and Henn, 2008).

Further in the study by Saha and Darton (2005), most of green marketing suffered from failure as most of its arguments were not put into practice. The main reason may be the miscommunication in the perspective GBs. A study by Akter (2012), specifically identify that majority is unaware of these greener products, its benefits and use, which also applicable to GBs as well to a certain extent. Hence, considering these facts, when developing the marketing mix, this would be considered as the lacking point in GBs.

### **7.4. CONVENIENCE**

Since the marketing mix is developed based on products of standardised nature this is defined as “how and where the product can be purchased”. In the perspective of construction, buildings are considered to be products. These products are one off and unique products based on one location. As a result, purchasing a

building is a project and it commences from the initial design to post development stage of the building. Within that period “convenience” refers to many aspects not just simply how and where it should be purchased.

Irrespective of place of purchasing, the initial cost of a building is ultimately higher compared to any other product. Hence, in the perspective of buildings, financing options in procuring should be convenient for the product or the building to be bought by the client.

Through the study by Tobias (2011) for the US green building finance review, many potential convenient options are identified. These can be illustrated as follows;

- Implement government regulations for leasing preferences for green properties
- Provide incentives for the development and retrofitting of green and energy-efficient buildings.
- The regulation of lending institutions to encourage green and energy efficient lending.
- Use government regulations and tax incentives to encourage investment in green real estate.
- Allowing accelerated depreciation for green property owners in tax calculations

In the study by Ottman *et al.* (2006), emphasise that in order make green marketing successful, the product should be environmentally friendly and there should be customer satisfaction. However, to gain customer satisfaction there should be a value for money for the customer. Hence, in order to make GBs more marketable in the industry it is necessary to make further practical financing options especially focusing on GBs.

## 8. CONCLUSIONS

Rise of environmental concern resulted in emergence of greener products ranging from day today commodities to automobiles and buildings. Construction being a larger consumer of earth’s natural resources became a focus of attention as greening construction would lead to larger reductions in effects to the environment. Thus, green buildings became a globally popular concept. GBs not only focus on constructing new buildings, but also retrofitting the larger number of existing buildings.

GB market is no more a new concept. It has been established and passed through many stages of its life and yet evolving to reach its maturity. Marketing GBs is different from marketing an off the shelf product. Buildings are unique in its nature, incur large capital and custom made to clients’ needs at a particular location instead of mass production at a manufacturing factory. Hence, reasons for building a GB and retrofitting an existing building to a green should demonstrate and convince to clients and this could be considered as the major concern in GB marketing. Hence, this study attempted to find out the factors considered in developing a marketing mix to a GB.

Marketing literature identifies numerous marketing mixes as marketing tools that a firm uses to pursue its marketing objectives in the target market and these were defined mainly from product oriented or customer oriented perspectives. Construction being a customer driven industry, 4C model of marketing was identified as a tool kit to analyse the scenario of green building marketing. 4C model identifies 4 elements as client/customer solution, cost, communication and convenience.

Client is identified as the key factor in marketing GBs. Further, there are three segments of clients namely the developer, owner and the tenant. Each of these clients have different needs and these must be fulfilled in order to market the GBs. The key to success is identifying the needs of customer. Further, customers can be attracted through emphasising the performance of the building.

Cost of the GB is the next component and it is vaguely understood very often. The life cycle cost of the GB is comparably lower than a standard building and the benefits gained by the client add more value to the building itself. However, it is questionable as to whether this is conveyed to the general public. Communication being the third component in marketing mix model this information should be transferred to the community using different media and techniques such as using logos, social media, awareness certificates and so on. As building are unique projects, convenience of buying refers mainly to financing the purchase. This is applicable to any type of client. However, there is a lack of available financing options put into practice specifically focusing on GBs which suggests that more attention is now needed in this regard.

## 9. LIMITATIONS AND FURTHER RESEARCH DIRECTIONS

This study is based on literature and therefore an empirical research of the study is needed. Further, it is necessary to focus on different sectors of buildings such as commercial buildings, recreational facilities and educational facilities as each of these building types will have different special marketing features. There are certain other marketing tools and this study further can be extended based on these tools as well.

Based on the conclusions, it is evident that further research on communication and convenience of marketing is required as there is a lack of research evidence in these segments.

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