

DEVELOPING AND MARKETING SUSTAINABLE CONSTRUCTION SERVICES

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ABSTRACT

Increasing calls for action on addressing the negative impact of human activities on the natural environment have led to the growth of new markets for sustainable solutions. At a more macro level, the role of construction and marketing in economic development has been well established. In striving towards economic growth, a balance between marketing and construction should be considered to achieve sustainability. Engineering consultancies and other businesses have been developing the provision of 'sustainability services' to a diverse range of sectors including construction, energy and transportation, corporate and others. This has also been stimulated by policies enshrined in governmental legislation. Market growth in developed countries such as the UK and Singapore has been fast due to the implementation of more stringent regulations. This paper considers how the principles and practice of marketing may be applied to the promotion of sustainability services offered by engineering and construction consultancies and contractors. It will also consider the constraints and barriers, together with the opportunities for sustainability service markets in developed and developing countries.

Keywords: sustainability, services, marketing, construction, economic development

INTRODUCTION

This paper will set out to define sustainability and the development of markets and services associated with sustainable construction. It will consider the applicability of services

marketing, in particular “green” marketing, to the promotion of sustainability services by consultants and contractors in the built environment sectors.

Awareness of the importance of sustainable development has been growing around the globe for the last few decades. ‘Agenda 21’, the closing document of the UN ‘Earth Summit’ in 1992 in Rio de Janeiro, the Kyoto protocol for reduction in greenhouse gas emissions, and many other international and national initiatives show the growing concern for protecting the environment for the future generations by introducing sustainable development concepts (Parkin, 2000). Recently, nearly 100 world leaders accepted UN Secretary-General Ban Ki-moon’s invitation to participate in an historic Summit on Climate Change to mobilize political will and strengthen momentum for a fair, effective, and ambitious climate deal in Copenhagen in December 2009.

There are many definitions for sustainable development. The World Commission on Environment and Development (WCED) has defined sustainable development as development which meets the needs of the present without compromising the ability of future generation to meet their own needs (Bourdeau, 2000).

The construction industry has a huge contribution to fulfill our quality of life. Construction, building materials and associated professional services together account for some 10% of Gross Domestic Product and provide employment for around 1.5 million people (Raynsford, 2000). Buildings and structures change the nature, function, and appearance of cities, towns and rural areas.

Building has a significant impact on the environment, accounting for one-sixth of the world fresh water, one-quarter of the wood harvest and two-fifth of its material and energy flows (Gottfried, 1996). All the resources are needed to create, operate, and replenish, so to remain competitive and continue to expand and produce profits in the future, the built environment sectors must address the environmental and economic consequences of its actions. Moreover, that recognition is leading to changes in the way the building and building owners/developers approach the design, construction, and operation of the structures which is seen as implementing sustainable construction.

According to Sage (1998), sustainable development refers to fulfill the needs through the improvement of environment, social, economics, culture and technological.

Other researchers define sustainable development, through different perspectives. According to Chaharbaghi and Willis, (1999), every single professional they have their own perspectives of sustainable development such as politicians define as sustainable development a rhetorical device, environmentalists define sustainable development as avoiding a catastrophe, and technologists define sustainable development as a problem they can solve and others.

By referring to Malik et al. (2002), the Department of Environment, Transport and Regions (DETR) argue that sustainable development is all about ensuring a better quality of life for everyone, now and for generation to come through social progress that recognizes the needs of everyone, effective protection of the environment, prudent use of natural resources and maintenance the level of economics and employment.

Sustainable development comprises the three broad themes of social, environmental, and economic accountability. According to Malik et al. (2002) these themes were called ‘triple bottom line’. The summary of this themes are outlined in Table 1.

Table 1: Themes of Sustainable Development

Theme	Social	Environmental	Economic
Sub-theme	Equity Community	Global Local and site Internal	Constructions Materials Infrastructure
Issues	Poverty Minorities Inner cities Transport Communications	Climate changes Resources Construction Internal environments Wildlife	Profitability Employment Productivity Transport and Utilities Building stock values

Sustainable is an opportunity to use natural resources efficiently while creating healthier buildings that improve human health, build a better environment and provide cost savings. A green building is a structure that is designed, built, renovated, operated, or reuse in an ecological and resources efficient manner. Green buildings are designed to meet certain objectives such as protecting occupant health, improving employee productivity, using energy, water and other resources more efficiently and reducing the overall impact to the environment (Aysin Sev,2000).

Sustainable Construction

Sustainable construction has different approaches and different priorities in various countries. Some of them identify economic, social and cultural aspects as part of their sustainable construction framework, but it is raised as a major issue only in a few countries (Md Zin Dang Anom, 1998).

According to Charles J. Kibert, sustainable construction could be best defined as the creation and responsible management of a healthy built environment based on resource efficiency and ecological principles (Malik et al., 2002). Sustainable construction is generally used to describe the application of sustainable development to the construction industry. Therefore, sustainable construction also is describe as a subset of sustainable development, which includes design, tendering, site planning, and organization, material selection, recycling, and waste minimization (Langston and Ding, 2001).

There are six main principles for sustainable construction, presented by Charles J. Kibert, University of Florida (Y. Miyatake, 1996). The principles are:

- i. Minimization of resource consumption
- ii. Maximization of resource reuse

- iii. Use renewable and recyclable resources
- iv. Protect the natural environment
- v. Create a healthy and non-toxic environment

Pursue quality in creating the built environment

APPLYING MARKETING AND “GREEN MARKETING PRINCIPLES

Marketing means different things to different people. Typically, people perceive marketing as advertising, which is only a part of the marketing activities. Marketing is also frequently simplified to selling. Marketing is also adversely associated with such distorted phrases as ‘marketing tricks’ and ‘marketing ploys’. In the field of marketing, however, marketing is seen as a business function, an orientation, and business philosophy.

According to Drucker (1968), the fundamental purpose of business is ‘to create customers’. This provides first piece of evidence that marketing is concerned with customer orientation. Furthermore, Drucker (1968) believed that marketing is the basic function of any business. He stated that ‘because it is its purpose to create a customer, any business enterprise has two – and only these two – basic functions: marketing and innovation’ (Drucker, 1968). Additionally, he maintained that marketing aims to satisfy the needs of today’s customers whereas innovation aims to satisfy the needs of tomorrow’s customers (cited by Rickards, 1999). This concept of ‘marketing as a business function’ is important because it demonstrates the importance of marketing in any business environment.

Kotler (2003) has classified his definition of marketing into two categories, as social and managerial definitions. For a social definition, marketing is the societal process by which individuals and groups obtain what their wants through marketing activities. A managerial definition, on the other hand, places the emphasis on marketing as a business function, a concept or business philosophy that governs the direction of any business. The concepts of ‘marketing as customer orientation’ and ‘marketing as business function’ are important because they shape the perceptions of academics in interpreting marketing. Recent marketing literature has been focusing on marketing as customer orientation, and some sources offer broader viewpoints by suggesting competitor orientation and interfunctional coordination (Narver and Slater, 1990).

Marketing scholars acknowledge that service is a special kind of offering in business environment. Service is ‘intangible’ and ‘variable’ (Baker, 1996; Jobber, 2001; Kotler *et al.* 1999; Kotler, 2003). Such service as consulting has a few tangible elements. Therefore it brings difficulties to service providers to display or demonstrate what kind of service is being offered. At the same time, it is also difficult for customers to measure the standard or quality of the service before buying (Baker, 1996; Jobber, 2001; Kotler *et al.* 1999; Kotler, 2003). On the other hand, because of its variable nature, it is difficult to standardize the quality of service delivery. Because of this, it requires extra care and attention in formulating strategic marketing activities for service industry.

Furthermore, according to Donnelly and George (1981), services marketing is marketing based on relationship and value. It may be used to market a service or a product. Marketing a service-base business is different from marketing a goods-base business. There are several major differences, including:

- i. The buyer purchases are intangible
- ii. The service may be based on the reputation of a single person
- iii. It's more difficult to compare the quality of similar services
- iv. The buyer cannot return the service

The major difference in the education of services marketing versus regular marketing is that apart from the traditional "4 P's," Product, Price, Place, Promotion, there are three additional "P's" consisting of People, Physical evidence, and Process (Donnelly and George, 1981). Service Marketing has been relatively gaining ground in the overall spectrum of educational marketing as developed economies move farther away from industrial importance to service oriented economies.

Green Marketing

Green marketing is defined as "The process of selling products and/or services based on their environmental benefits" (<http://sbinfocanada.about.com>).

"Green marketing incorporates a broad range of activities, including product modification, changes to the production process, packaging changes, as well as modifying advertising" (Polonsky, 1994).

The American Marketing Association (2010) defined the green marketing as: The marketing of products that are presumed to be environmentally safe. This definition has three key components:

- It is a subset of the overall marketing activity;
- It examines both the positive and negative activities; and
- A narrow range of environmental issues are examined. It ensures that the interests of the organization and all its consumers are protected, as voluntary exchange will not take place unless both the buyer and seller mutually benefit.

As the above definitions illustrate, green marketing encompasses a broad range of activities from product design to writing advertising copy. It is increasingly important because consumers are paying more attention to a product's or service's sustainability features as well as the practices of the provider organization.

Nowadays, a concept of "green marketing" is becoming more and more popular. Li and Cai (2008) mentioned that, it began in Europe in the early 1980s when specific products were identified as being harmful to the earth's atmosphere. Terms like Phosphate Free, Recyclable, Refillable, Ozone Friendly, and environmentally friendly are some of the things consumers most often associate with green marketing. While these terms are green marketing claims, in general green marketing is a much broader concept, one that can be applied to consumer goods, industrial goods and even services. For example, around the world there are resorts that are beginning to promote themselves as "ecotourism" facilities, i.e., facilities that "specialize" in experiencing nature or operating in a fashion that minimizes their environmental impact. Thus green marketing incorporates a broad range of activities, including product modification, changes to the production process, packaging changes, as well as modifying advertising.

Mankind has unlimited wants while limited resources on the earth. Green marketing looks at how marketing activities utilize these limited resources, while satisfying consumers wants, both of individuals and industry, as well as achieving the selling organization's objectives.

SUSTAINABLE CONSTRUCTION AND MARKETING IN ECONOMIC DEVELOPMENT

The role of construction in economic development has already been well established for many years. The relationship between construction and economic development is especially crucial in the developing countries where infrastructures and buildings play an important role for economic growth. The construction industry is also an important sector in the developed countries even though the rates of growth of the construction industry in the developed countries might be less than those of the developing countries following the formative years of the former (Turin, 1978; Edmonds, 1979; Drewer, 1980; Ofori, 1990; Low and Leong, 1992; Hillebrandt, 2000).

The role of marketing in economic development has likewise been well established for many years. As far back as the 1950s, Drucker (1958) urged that attention should be paid to marketing for countries to achieve economic growth. Marketing inputs at both the domestic and international platforms were seen to contribute to economic development (Dixon, 1981; Cundiff and Hilger, 1982; Etemad, 1984; Kaynak, 1986; Kaynak and Hudanah, 1987). In this context, marketing has been defined as the management function of identifying, anticipating and satisfying client needs at a profit (Kotler, 1967, 1988).

Given that both construction and marketing played their respective role in economic development, it is therefore necessary to ensure that both sectors provide balanced inputs into economic growth plans. Too much of construction inputs at a time when marketing is still lagging behind, can lead to white elephants and under-utilized infrastructural facilities (i.e. over-build). Similarly, when marketing is actively in place, construction must provide adequate infrastructural support to avoid transportation gridlocks and logistical potholes (i.e. under-build). The need to balance both construction and marketing was highlighted by Low (1995) for global economic development.

The macroeconomic views of construction and marketing were presented above. The construction industry has contributed to global climate change because of the massive carbon emissions generated by processes in the industry (Wu and Low, 2010). There is now an urgent need for the construction industry to move towards more sustainable practices. Fundamentally, there are two ways to accomplish this: (a) through cutting-edge technology and (b) better management. Adopting new and appropriate technology (such as renewable building materials and photovoltaic cells in buildings) can be effective but may turn out to be very expensive for the sustainability agenda. Effective management of the building process is seen as a better alternative because it is able to prescribe a less costly solution towards sustainable construction (Low, 2009). In so far as management is concerned, marketing has a significant role to play in that as a business function, marketing helps to identify, anticipate and satisfy client needs at a profit (Kotler, 1967). Hence, just as in the macroeconomic phenomenon described above, there should likewise be a balance approach to matching construction with good sustainable practices through the marketing function.

Sustainability Markets and Development of Services

As the global environmental agenda gathered pace through the 1980s and 1990s, new markets emerged to address the demand for more sustainable solutions. Developed nations in particular experienced a rapid growth in 'sustainability services' aimed primarily at the construction, housing, transportation and corporate sectors. Supported by policies and directives enshrined in governmental legislation, the construction sector has increasingly sought specialist services to ensure acceptable levels of sustainability and achieve governmental standards and targets for performance.

The development of sustainability services in the UK is an example of the rapid growth in this market. The rise of environmental and sustainability discourses during the 1990s and 2000s had a profound and unprecedented impact on the UK construction sector. Whilst ecology and energy related policies have been a part of UK policy for a number of years, this period was characterised by a mushrooming of sustainability policies and increasingly more stringent technical and planning requirements for new developments. National, regional and local planning legislation have placed unprecedented levels of sustainability criteria on all stakeholders involved in construction, covering a variety of issues which include environmental impact of materials, water usage, and on-site waste generation during construction.

To meet these requirements and examine the full spectrum of options for sustainability, property developers working in the construction sector have turned to professional firms to fill the knowledge gap; these include specialist sustainability firms, architects and multi disciplinary engineering companies of various sizes. As a result, the market for sustainability services in the UK has become a competitive and tightly fought arena with companies vying for private and public sector contracts, in the UK as well as overseas (Verdantix, 2010).

The growth of the sustainability market has not been homogenous across the world. Developed countries have tended to enforce more stringent sustainability policies and mechanisms which has stimulated a demand for sustainability services. Specific knowledge and skills of the different technical and non-technical aspects of sustainability performance has become relatively wide spread which, in turn, has supported the growth of the market in these countries. In developing countries however, market growth has been significantly slower in response to a focus on the goals of economic development and less extensive awareness and knowledge in this field. In Malaysia, for example, there is not the national or local legislation in place to support high levels of sustainability in the construction sector and, therefore, sustainability efforts in the design and construction of buildings are currently carried out on a voluntary basis. As a consequence, the sustainability market has not developed at the same pace as a developed country and is unlikely to until there is greater commitment from government in terms of legislation and an appropriate supporting knowledge economy.

Marketing Sustainable Construction Consultancy Services

We live in a marketing-driven, if not marketing-dominated world. Sustainable construction has to be sold along with everything else. Marketing helps a firm develop a platform for telling others about its achievements. The sustainable construction phenomenon is no longer a fad; it's a full-fledged revolution. According to Yudelson (2008) between early 2000 and late 2007, the number of green buildings has grown from a handful to more than 8,000 actively seeking LEED certification. Lots of people already know this, and they want to

know, “How should design and construction firms and professionals profit from this change?”. Marketing sustainable construction is becoming increasingly important and will become a major point of differentiation for all architects, engineers, quantity surveyors and builders. People who take the lessons learned in this sustainability concept and principles seriously will have a major head start on the competition.

There are various ways of developing and marketing sustainable construction, for example:

- i. Focus on Capabilities
 - Know what the principals and senior level people are doing in the area of sustainable construction and learn what they are hearing about the need and demand for these services among the clients.
- ii. Competitors
 - Know the strengths and weaknesses of the competition in this area of design and construction, so that we will be prepared.
- iii. Differentiate services
 - The major focus of sustainable construction marketing has to be some form of service differentiation. Make sure clients know how the firms can approach the project differently from major competitors by showcasing the team design tools and understanding of sustainable construction.
- iv. People
 - The firm needs to realize that there is a huge commitment required to training and education, as well as to acquire specialized expertise and tools, to compete effectively in the sustainable construction and green building marketplace.
- v. Publish results and press
 - Tell the story aggressively to as many media outlets as we can. Successful sustainable construction projects are still rare enough in this country. This is one of the main vehicles for new clients to become aware of the firms.
- vi. Membership and event activities
 - Membership “has its privileges”, to borrow a phrase. The consultant and construction firms in Malaysia can join Green Building Index or Malaysian Green Building Confederation for example, and use their logos on proposals, stationery and brochures. It is probably the best investment a firm can make to establish credibility with clients.
- vii. Narrow the focus

- Last but not least, narrow the focus. Not every client is a candidate goes green marketing at this time. Not every client wants to be the “first kid on the block” or to be a technology leader. Therefore, focus most of the marketing efforts on the more adventurous owners, the innovators and the environmentalist clients.

CONCLUSION AND RECOMENDATIONS

As the economic benefits of green and energy-efficient buildings become apparent to more developers and builders, the demand for advice and consulting on technologies and processes is skyrocketing among developers and builders large and small. That is a great business opportunity for entrepreneurs and job seekers with expertise in green architecture, design, and engineering. There will be demand for firms and individuals with expertise in very specific areas, such as the latest window glazing, solar roof system and rainwater harvesting, as well as those skilled in green building project management and accountability. As the sustainability agenda gained momentum through the 1990s, new markets emerged to satisfy the requirement for sustainable solutions in the built environment. However, the growth of sustainability services has been characterised by a distinct global unevenness; relative economic prosperity in the developed world has afforded market and policy expansion whilst developing countries have been unable to prioritise sustainability in the same way.

As demonstrated in the paper and reflective of the global trend more generally, the sustainability market in the built environment sector is experiencing a continuing growth. Based on the evolution of sustainability services, opportunities globally and in particular in developing countries can be identified and include improved policy instruments, capacity building, and public awareness.

Change is inevitable, and should the markets in developing countries follow the trends observed in the developed countries, sustainability in the built environment will become a more mainstream part of the business. Therefore, currently the built environment sector in emerging economies offers a unique opportunity for businesses to invest and develop sustainability services while this part of the marketplace is still at its infancy. Companies focusing on capacity building and development of skills and expertise in sustainability will benefit when policy implementation and enforcement follows the resulting government commitments. The same companies will benefit from a strong Corporate Social Responsibility commitment, enhanced public image and increased recruitment opportunities. By investing in sustainability services now, the construction business has the potential to enjoy the benefits of being a market leader in the future.

The global construction sector would benefit from more detailed recommendations on implementation measures to support the growth of the sustainability service market in the built environment. Research on the specific areas suffering the most from shortages of skills and expertise, could assist in prioritising the capacity building and knowledge transfer exercise. Finally, a comparative assessment of the businesses in the global construction sector on the status of their sustainability services is another area where further research is recommended. Such an analysis within the individual sector groups (such as developers, contractors, consultants, engineering and architectural firms) could provide an interesting insight into the sector, identify gaps and business opportunities.

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