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KNUST

**Assessing Strategies for implementing Sustainable Real Estate Management at
Ghana Cocoa Board.**

By

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Management, College of Art and Built Environment in
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MASTERS OF SCIENCE

NOVEMBER, 2018

DECLARATION

I Kwadwo Ossei-Acheampong confirm that this work submitted for assessment is my own and is expressed in my own words. Any uses made within it of the works of other authors in any form (e.g. ideas, equations, figures text, tables, programmes) are acknowledged at their use. A full list of the references employed has been included.

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ABSTRACT

The concept of sustainability has lately been over stressed by many government official and international bodies. Recent forum held both by the World Economic Forum and Ghana Economic Forum advocates for corporations to consider incorporating sustainability into their practices. Several researchers have looked at how sustainability is applied to real estate management practices. The concept sustainability as defined first in the Brundtland report has been adopted as the definition that explores the practices that can be considered as sustainable practice of the real estate socially, economically and environmentally. There are scant researches into the practices that are considered as sustainable management practice of the real estate in Ghana. This study seeks to assess factors for implementation of sustainable real estate management practices in Ghana using Ghana Cocoa Board (Cocobod) as a case study by examining the real estate management practices that exists at Cocobod, identify sustainable practices in real estate management and lately propose strategies for implementing sustainable real estate management practice. The survey was conducted purposively with selected Real Estates Officers in the various Estates departments of Cocobod given as a sample size of 25 respondents through discussions and questionnaires of the concept reviewed from the literature. The analysis was done both with Statistical Package for Social Sciences (SPSS) figures and Relative importance index tables. The study concludes that Government should come out with legislations that would compel government agencies to incorporate practice that are sustainable in the management of the real estate asset. Consequently, the study recommends that other government agencies who have real properties should consider the structure of the estates department of Cocobod that have

Estates Officers who handle the soft issue of the real estate and work superintendent to handle the hard issues of the buildings.

Keywords: Sustainability, Sustainable Corporate Real Estate Management, Commercial Real Estate

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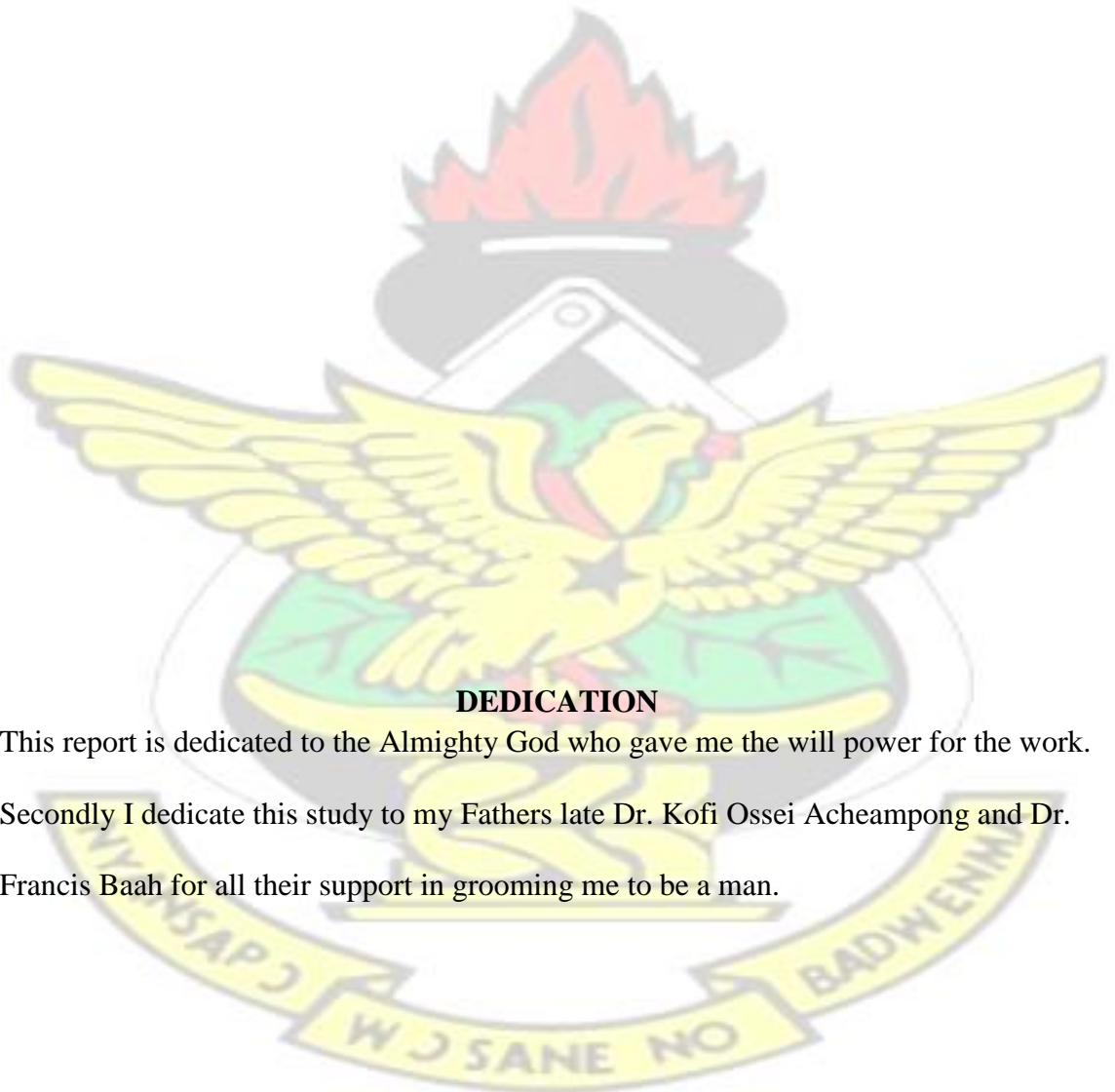
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DEDICATION

This report is dedicated to the Almighty God who gave me the will power for the work.

Secondly I dedicate this study to my Fathers late Dr. Kofi Ossei Acheampong and Dr.

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CHAPTER ONE

GENERAL INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Alertness of the requirement for sustainability has advanced from the growing global attention on the world's finite resources, excessive carbon dioxide emission levels, and the threatening consequences of global warming and climate change to the need for solutions to preserve our way of life for future generations (Stern et al., 2006; Garnaut, 2008). In this day and age, governments, as well as the private sector are increasingly being pressed to act sustainably since the concept has gradually increased in awareness and is a key consideration in public and private organizations across the globe. (Holfert and Villamide, 2011)

Sustainability in corporate real estate management (CREM) has recently been accepted as an essential part of almost every business. Haynes (2007) argues that real property accounts for a considerably high amount of a corporations operating costs and is suspected to contribute with roundabout 20 % to the overall costs of a company taking into account the special characteristics of real estate such as immobility, durability, locational characteristics and others, therefore a need for professional management of this resource can be established. Sustainability according to Kates et al. (2005) is almost always seen in terms of three dimensions social, economic and environmental. This is embodied in the definition of sustainability adopted by the United Nations in its Agenda for Development "Development is a multidimensional undertaking to achieve a higher quality of life for all people. Economic development, social development and environmental protection are interdependent and mutually reinforcing components of sustainable development". This

changing mindset about sustainability in the field of real estate commenced during the recent debt crisis where real estate investment funds were encouraged to create new opportunities and avert disincentives from the market. This resulted in an increasing awareness to create and exploit sustainable opportunities in order to maintain a stable cash flow and minimize the risks. This stresses the fact that sustainability appears to have a significant share in real estate investment decisions since the start of the Eurozone debt crisis (UNEP, 2009). This increasing interest in sustainability can also largely be attributed to the fact that the real estate market attributes to 40% of the current overall energy consumption (United Nations Environmental Programme, 2012).

In recent reports like the Deloitte report (2014) sustainability is becoming a major issue for commercial real estate (CRE) owners, investors and renters who are affected by long-term value generation and short-term profitability. CRE owners who develop robust approaches to sustainability for existing assets can derive competitive advantage and improve the performance of their portfolio, according to John Lovell in the Breakthrough for Sustainability in Commercial Real Estate.

In achieving more sustainable development by the global community, Lorenz and Lutzkendorf (2008) is of the view that probably no sector has a greater potential role as property and construction. For instance, in the organization for economic co-operation and development (OECD) countries alone, the built environment is responsible for between 24 to 40 per cent of total energy use, 30 per cent of raw energy use, 30 to 40 per cent of solid waste generation (OECD, 2017). That implies that, the largest single share in the global environmental degradation and impairment of human well-being falls upon on the property and construction sector.

1.2 PROBLEM STATEMENT

Real estate is the commonest form of asset held by corporate bodies and individual investors; it constitutes a major part of assets value in companies' balance sheets which can be used as collateral for corporate loans.(Lorenz and Lutzkendorf, 2008) These institutions use the real property for office, industrial and retail purposes for the operations of the business.

The place of real property in the economic growth and overall well-being of any nation cannot be overemphasized. Based on a survey by senior Corporate Real Estate (CRM) executives in Australia, Warren et al. (2007) it was concluded that there is a significant divergence in the perception of the impact of real estate to the organization between commercial real estate (CRE) and business managers. Lindholm (2008) believed that the recognition of Corporate Real Estate Management (CREM) as a strategic support function is only recent and that CREM decisions are seldom based on the businesses performed within the properties. However, properties are not known to be socially and environmentally kind commodities as confirm in (Lorenz and Lutzkendorf, 2008; Pivo, 2008). The real estate industry is a major source of negative environmental impacts contributing significantly to raw material depletion, harmful gas emissions, solid waste generation and energy use as established by these researchers (Addae-Dapaah et al., 2009; Goering, 2009; Robinson et al., 2005; Lorenz and Lutzkendorf, 2008).

The peculiar nature of properties and the impact of their construction on the environment and also the fact that they are part of assets value in companies' balance sheets suggest that companies ensures that the practices or methods used in managing the real estate

today, does not limit the quality of life of the property and its occupants today and also in the future.

Nonetheless there exists scant published research in the academic literature that can be found covering sustainable practice in Real Estate Management in Ghana.

1.3 AIM AND OBJECTIVES

1.3.1 Aim

The aim of the study was to assess strategies for implementing sustainable Real Estate management in Ghana Cocoa Board.

1.3.2 Objectives

In achieving the aim of the study, the following objectives were set:

1. To examine the real estate management practices that exists at Cocobod;
2. To identify sustainable practices in real estate management practice; and
3. To propose strategies for implementing sustainable real estate management practices.

1.4 RESEARCH QUESTIONS

1. What are the real estate management practices that exist in Cocobod?
2. What are the sustainable practices found in real estate management practices?
3. What are some of the strategies for the implementation of sustainable real estate management practices?

1.5 SIGNIFICANCE OF THE STUDY

Challenges faced by corporations today such as globalization, the effects of the recent financial crisis or the struggle of whole economies to maintain solvent are only supporting the importance of a sustainable professional management of all business branches of a company, including corporate real estate. The significant contribution of this study is that it makes a valuable contribution to the body of knowledge of sustainable practices of real estate management, results and process and also provides the basis for further research into the use of sustainable practices in management of the real estate assets.

1.6 SCOPE OF THE RESEARCH

The study was limited to the real estate management practices by the Estates Departments of COCOBOD in Accra.

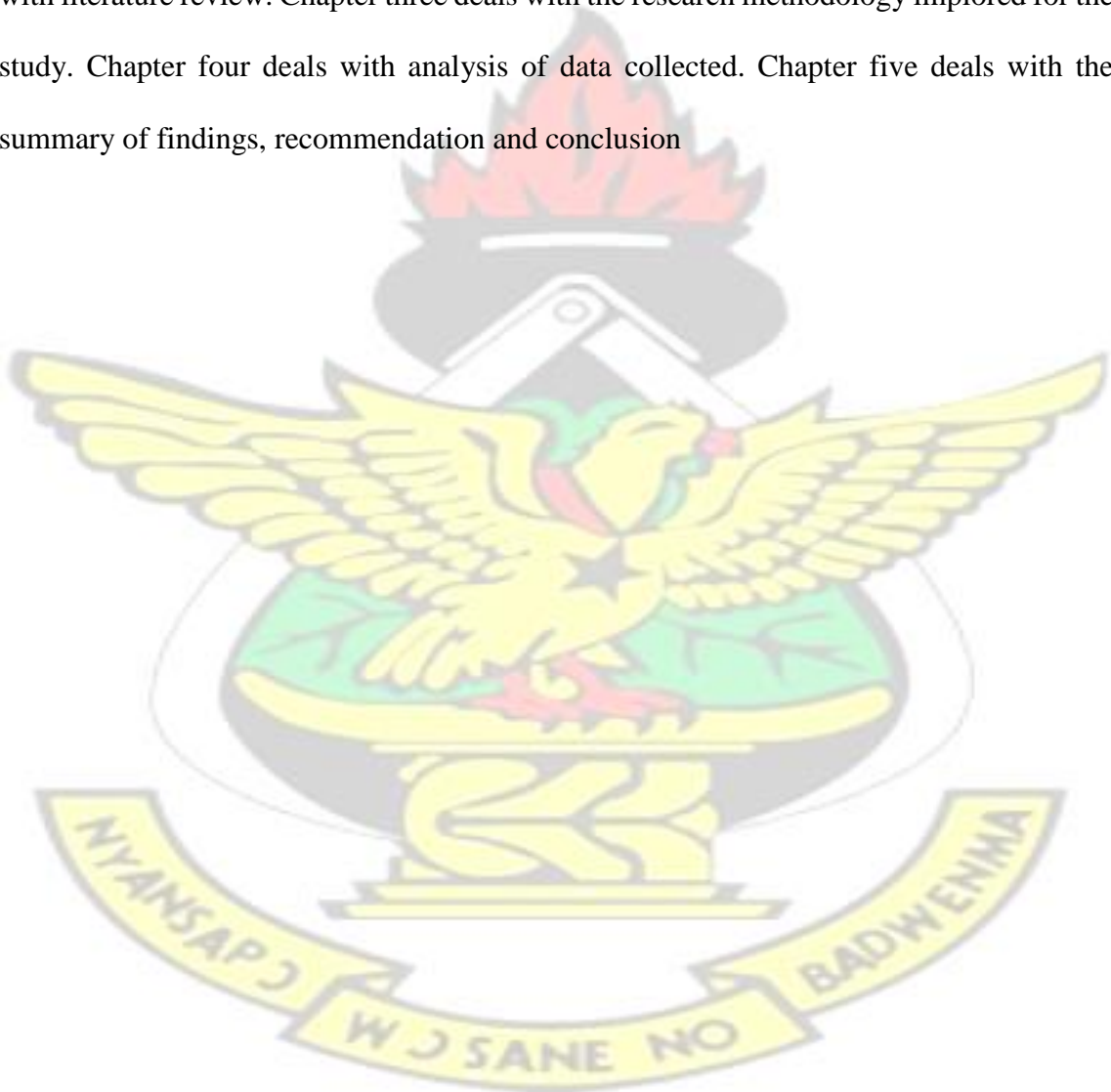
1.7 RESEARCH METHODOLOGY

A case study research design was used to assess factors for the implementation of sustainable real estate management practices at Ghana Cocoa Board. The study adopted the quantitative method in collecting data from the respondents. The research started with the undertaking of a literature review from secondary source of information collected from textbooks, journals and previous research work on the area of sustainability in real estate management. A sample size of 25 respondents from the various Estates departments in Accra was given questionnaires to answer. The analysis was done by the support of the Statistical Package for Social Sciences (SPSS) after the gathering of the data from the respondents who are asked to rank the practices extracted from the literature review are retrieved. The relative importance index was used to analyse the ranked responses in the

questionnaires submitted. This design is selected because of the need to study the phenomenon within its context.

1.8 ORGANIZATION OF THE STUDY

The study consists of five chapters. Chapter one deals with the general introduction to the study, the problem, objectives, scope of the study and organization. Chapter two deals with literature review. Chapter three deals with the research methodology implored for the study. Chapter four deals with analysis of data collected. Chapter five deals with the summary of findings, recommendation and conclusion



CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter reviews literature on the concept of sustainability and sustainable real estate management, practices in corporate real estate management and propose strategies for implementing sustainable real estate management practice in Ghana Cocoa Board.

2.2 DEFINITION AND CONCEPT OF SUSTAINABILITY

What is sustainability? There are many definitions or understanding of what the word sustainability means. The traditional definition of sustainable development was developed and appeared in the Brundtland Report of 1987: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. This definition is a very broad statement, developed to be all encompassing and not able to be applied practically in everyday life. In reality, a more useful working definition could be considered to be - ‘the ability to continue a defined behaviour indefinitely’.

However, sustainability is complex and is understood in different ways by different people. It is influenced by people, context and power and how people see their ‘system’ as working. There is no single, standardized approach that can be adopted across projects and programmes. The process of sustainable development is inherently a process in which interventions and activities change and improve rather than remain static at an achieved state. (Brundtland, 1987)

To be able to define a sustainable approach at the individual project level it is important to have a full and in depth understanding of the root causes of the problem you are hoping to tackle and address the following ‘5 Whys’

- Analyse the root causes, look beyond the superficial layer to the fundamental causes of the problem,
- Have an objective understanding of the environment in which your programme is set,
- Do an analysis of what the resistance to sustainability is at the system level. What do the institutional and regulatory frameworks look like? Relate this to the wider picture (consider the policy, governance, institutions and financial enabling environment) as well as the local context (consider how your communities work, environmental context and technology restraints),
- Carry out an analysis of the sustainability of the institutions you are working with
 - identify capacity building needs for all partners, NGOs, private sector, government;
- Follow completion of your analyses; define your sustainability goal or aim.

(Senyo, 2016)

Then look at how to achieve your sustainability goal in your programmes in terms of three pillars:

- 1) Social (how can the programme optimise quality of life? What kind of political or policy changes can the programme influence? How can the programme affect cultural behaviour change?)

2) Economic (How will the project lead to greater economic empowerment? How can the project support beneficiaries in graduating from poverty or raising beneficiaries over the poverty line? What is the impact of the programme on growth and development?

What does a potential long term financing model look like?)

3) Environmental (What will the impact be on the environment without the intervention? What will the impact be on the environment from the intervention? What are the external environmental factors affecting the intervention? How can you use innovation and technology in your programme? Consider how these three pillars or circles overlap to improve human lives. For the purpose of this study the authors adopted the concept of sustainability reported in Mannion Daniels, (2016).

2.3 CORPORATE REAL ESTATE MANAGEMENT (CREM)

CREM was defined by Pittmann and Parker (1989) as the management of real assets within a corporation, including both facilities and land. Veale (1989) acknowledges the importance real assets have for any given corporation both as a cost and as a value factor. In his study, the author was already able to predict the emergence of a new management discipline in the following years and the vast amount of literature written in the past two decades on the topic of CREM proved him right. Ever since the early 1990s the CREM's definition has been redefined, renewed and completed by various researchers.

Another way of understanding corporate real estate (CRE) is the one described by Joroff et al. (1993), as cited in Appel-Meulenbroek & Feijts (2007). He describes CRE as part of an interwoven network built upon four other resources: knowledge, employees, technology and capital. Together these five resources are necessary within an organization to successfully transform inputs into measurable outcomes.

To the extent of this research, CREM will be defined as the active management of a corporation's real assets in order to realize maximum performance towards the overall business success while creating a productive, effective, efficient, creative and healthy workplace and maintaining generic flexibility and sustainability.

2.4 CORPORATE REAL ESTATE (CRE) OBJECTIVES AND PRACTICES

Research has dealt extensively with the importance of clearly defining CREM goals and objectives (Carn et al., 1999; Gibler et al., 2002; Ilsjan, 2007; Lindholm, 2008). They have mostly tried to identify the main objectives of CRE from a managerial perspective. According to this literature the operational objectives for CRE are to facilitate any issues related to the core business, to optimize real estate resources and to be consistent with the corporate objectives (Carn et al., 1999). According to a survey by Gibler et al. (2002), CRE managers stated as top three objectives: meeting the workplace needs, meeting the particular needs of business operating divisions and minimizing the portfolio's operating expenses. These results were consistent with previous findings but also underline the fact that CREM objectives were mostly viewed from the traditional perspective of accommodating operations at the lowest possible cost instead of focusing on issues such as productivity and flexibility (Gibler et al., 2002)

Roulac (2001) argued about the risks associated with the absence of CRE strategies for corporations. He also believed that the main reason for companies not developing a formal CRE strategy was the lack of explicitly articulated strategies in terms of CRE, in many cases deriving from top management's attitude towards real estate and their frequently used cliché: "We are not in the real estate business!" (Nourse & Roulac, 1993).

The contributions of superior CRE strategies according to Roulac (2001) were: (1) create and retain customers, (2) attract and retain outstanding people, (3) contribute to business processes, (4) promote enterprise values and culture, (5) stimulate innovation and learning, (6) enhance core competency and (7) enhance shareholder wealth.

2.5 ORGANIZATIONAL ISSUES

“High standing CRE organisation, (...) are indicated by fewer levels between the CRE executive and CEO, frequent CRE meetings with senior management, a broad span of control for facility and real estate operations, and an executive committee for real estate matters (...).” (O’Mara et al., 2002)

2.6 STRUCTURE AND ADMINISTRATION OF CRE

CREM can be organized within a company in a centralized or decentralized fashion or sometimes even through a subsidiary in what is known as spin-offs (Rodriguez & Sirmans, 1996). Empirical research demonstrates that spin-off announcements are usually associated with increases in stockholders wealth, evidencing that corporate restructuring is beneficial for enhancing firm value. This basically implies that the market recognizes the importance of a company effectively managing its real estate asset (Rodriguez & Sirmans, 1996).

Ilsjan (2007) claimed that the structure of CREM within the organizations varies considerably according to size, outsourcing strategy and the development phase of both, the organization and the market. However, the number of CREM configurations has proven to be relatively small compared to the variety of challenges and broad range of solutions faced by a large number of corporations (Krumm, Dewulf, & de Jonge, 1999). Furthermore, recent literature on the subject identified five CRE management models,

which describe the manner in which CRE responsibilities are allocated within a company (Hartmann, Linneman, Moy, & Siperstein, 2010). Results demonstrate that even though the models are useful in describing practices, there is only weak statistical significance between them and that certain external factors may influence the choice for either one of them. It is therefore unlikely that a particular CRE management model could be the best approach for any specific situation. Apparently, there is no one size fits all approach when it comes to defining an organizational structure for CRE (O'Mara et al., 2002).

2.7 CRE SKILLS AND TRAINING ISSUES

The skills and training needed by CRE managers is another area where literature has been focused on for more than a decade (Carn et al., 1999; Krumm et al., 1999; Gibler et al., 2002; Epley, 2004; Fisher et al., 2009). This probably comes as no surprise taking into account that the skills required for many CRE tasks have varied considerably over time and are still subject of permanent evolution due to a continuously changing environment (Carn et al., 1999). According to the results of a survey from 1999 the most important skills for CRE executives and managers were those related to financial and legal issues, communication and general management (Carn et al., 1999). These results are in line with those of Krumm et al. (1999) who recalled that even if most CRE departments originally required technical skills for their staff, these requirements later changed towards both financial and managerial skills.

More recently, Fisher et al. (2009) proposed that CRE managers should go beyond relationship management towards value management in order to raise their strategic relevance in the organization. She first provides a list of the expectations from senior

management followed by a list of important issues/tasks for CRE managers to evolve into value managers.

2.8 ROLE OF CRE MANAGERS AND EXECUTIVES

The approach proposed by Fisher et al. (2009), regarding CRE executives and managers evolving from a functional role to that one of a value manager, is a qualitative shift regarding the roles and functions of CRE executives and managers, from an operational to a fully strategic position in the organization. The standing of CREM within the organization seems to be of crucial importance towards the success of CRE (O'Mara et al., 2002). When CREM is perceived as more important and the CRE managers within the corporation have a higher standing, the more strategically CRE is managed and viewed as supplementary rather than imperative.

Veale (1989) was among the first to acknowledge that the role of CRE managers should move towards the one of general management and incorporate a strategic approach by engaging in the portfolio-wide decision-making process in a proactive and comprehensive manner. The development and evolutionary stages of the CRE function have also been analyzed in depth by literature. Overall, five different stages have been identified: taskmaker, controller, dealmaker, intrapreneur, and business strategist (Joroff et al., 1993 as cited in Gibler et al., 2002).

2.8.1 Business alignment

It has been argued already that CRE departments and managers should have a strategic approach towards the CRE function and that this should be consistent with the overall corporate strategy. Consequently, researchers have approached extensively the business alignment concept as it is regarded as the key to this particular issue (Nourse & Roulac,

1993; Nourse, 1994; Roulac, 2001; Gibler et al., 2002; Allard & Barber, 2003; Lubieniecki & Desrocher, 2003; Pfnuer & Armonat, 2003; Scheffer et al., 2006; McCarty et al., 2006; Singer et al., 2007; Warren et al., 2007; Lindholm, 2008; Fisher et al., 2009). More specifically, researchers have focused on the manner in which CRE aspects affect organizational performance, the relationship between CRE executives and senior management, together with the corporate executives' understanding of real estate and the conflicts and difficulties faced by CRE. CRE decisions are effective only if they are aligned with the objectives of organizations and it is therefore crucial to determine in which way CRE strategies support overall corporate strategies (Nourse & Roulac, 1993). Moreover, dealing with CRE operations as individual transactions diminishes CRE's capability to enhance the profitability of the company (Gibler, Black, & Moon, 2002). Research has shown that in general those companies leasing their premises are more prone to relate operating decisions to strategy compared to those owning their properties (Nourse, 1994). According to Roulac (2001), the impact of CRE on business strategy had been overlooked in the past, both by researchers and practitioners, while being focused primarily on facilities. In his paper from 2001, he extends prior research by Nourse and Roulac (1993) in a study aimed at demonstrating the positive impact of effective CREM to the overall business.

In particular, his objective was to analyze how each of the alternative CRE strategies from the original list by Nourse and Roulac (1993) contributed to competitive advantage. He concluded that superior CRE strategies can contribute to the overall organization mainly by supporting both its competitive advantage and its core competencies (Roulac, 2001).

2.8.2 Cooperation with other business units

In order to reach a coordinated strategic approach, CRE managers should seek collaboration from other business units (Gibler et al., 2002; Foster & Dye, 2005; Mousa et al., 2018). According to Nourse (1994), a closer relationship between CRE operations and corporate strategy can be reached by creating a facility committee including operating, finance and real estate managers. It is also believed that a corporate finance perspective would benefit the evaluation of CRE asset strategies (Liow and Ooi, 2004). Ilsjan (2007) acknowledged in her paper that even though some authors believe accounting should play an important role in CRE (Pfner & Armonat, 2003), other authors (such as Carn et al., 1999) believe that this trend leads in general to organizations gathering accounting data rather than decision-making data.

Results from a study performed in Asia, Europe and North America show that even though most CRE managers work closely with legal, operations and facility units, they seldom do so with the human resources or marketing departments (Gibler et al., 2002).

According to O'Mara et al. (2002), using relationship management among business units is a way of improving the sharing of planning information. They further concluded in their paper that integrating CRE to facility management will provide benefits such as a better integration of services and an improved tracking of true occupancy costs.

2.9 CONFLICTS AND DIFFICULTIES FACED BY CRE MANAGERS

Finding ways to communicate the contribution of CRE to the organization is one of the main difficulties faced by CRE managers (Allard & Barber, 2003). Some authors believed this difficulty relies on the lack of adequate CRE measures deriving from the failure in analysing and communicating CRE's contribution to the core business to senior

management (Appel-Meulenbroek & Feijts, 2007). Lindholm (2008) also acknowledged the challenge. According to her, the uniqueness of each corporation's needs makes it very hard to develop a general model for the contribution of CREM. Knapp and Oliver (2008) believed the problem relies not only in the absence of common language between CRE managers and senior executives but also in the lack of confidence between them both. Even when adequate CRE measures and a common language are established it seems extremely challenging to link successful CREM and its contribution to the core business.

According to Manning and Roulac (2001), the CRE role has grown in complexity in order to keep up with the changing economic environment and this has induced CRE managers to pursue different and sometimes conflicting goals such as reaching for operating efficiency while focusing on property investment returns. Krumm and de Vries (2003) provided a simple explanation to why CREM in general is prone to conflict and contradiction in the first place. They believed that from a corporate perspective, CRE decisions are based according to business needs rather than market timing. Consequently, it is seldom the case that organizations perceive CRE decisions and activities from an investor's perspective (Krumm & de Vries, 2003).

2.9.1 Operational issues

Nourse and Roulac (1993) defined CRE transactions as operating decisions regarding the acquisition, control, management and disposal of property interests. They further identified fourteen different operating decisions considered critical to CRE. These decisions need to be not only aligned with the CRE strategy but also with the overall business (Nourse & Roulac, 1993).

2.9.2 The impact of a changing business environment

An important discussion starting by the late 90s was the issue of CREM evolution towards an established management discipline (Schaeffers, 1999; Krumm et al., 1999). It is argued that during the lifetime of a company, CRE functions can change and so does the management of those functions. Especially due to the changing environment CRE is faced with challenges, which demand different perspectives. Within the same company for example, the perspective towards CRE can evolve over the years from a pure cost of production approach (cost center) towards a view when CRE is handled as value adding (profit center) towards the business strategy (Liow & Ooi, 2004). Different opinions within the literature exist whether or not to view CRE as a cost (Lubieniecki & Desrocher, 2003) or a profit centre (Martin & Black, 2006). In addition, different phases on the business cycle also have influence on certain activities towards CRE, such as outsourcing or relocating (Dettwiler, Lindelöf, & Löfsten, 2006).

2.9.3 The impact of a changing workplace environment

A similar important aspect addressed by literature is the implementation and impact of new working practices resulting from new organizational structures (Gibson & Lizieri, 2001; Gibson, 2003; Haynes, 2008; Fawcett & Rigby, 2009). Among the new working practices identified by researchers are: home working, hot desking, team working, outsourcing, downsizing, business process re-engineering, hotelling and workstation sharing (Gibson and Lizieri, 2001, Gibler et al., 2002; Roulac et al., 2003). It needs to be mentioned here that the terminology of different working practices to date is unclear and sometimes overlapping.

Gibson (2003) addressed the implications of flexible working practices on the workplace design and space provision. She argued that the challenge for CRE is to provide space that adequately supports the ever-changing business environment. In order to do so CRE managers need to understand the working processes actually taking place in the organization if they are to provide appropriate space (Gibson V. , 2003). Haynes (2008) reviewed in his paper the literature linking working patterns with office layout and agreed with Gibson (2003) that in order to effectively identify the needs of office occupiers, different working practices need to be categorized and analyzed.

2.9.4 Workspace management

The approach towards workspace management varies considerably across organizations (Ilsjan, 2007) and is something usually handled by small departments (Fawcett & Chadwick, 2007) rather than by centralized units. Knapp and Oliver (2008) provided an overview of the associated benefits of occupancy planning programs. Results show that through the implementation of occupancy planning programs, companies obtain better data and forecasts and, hence are more prone to improve overall space utilization. Recent work by Fawcett and Rigby (2009) analyses the cost-effectiveness of alternative workstation sharing strategies. They concluded that workstation-sharing strategies need to be determined case-by-case if the focus is on cost-effectiveness, implying that there is no single appropriate workspace-sharing solution for all organizations.

Traditionally, demand for office space was based only on employment forecasts while office space per worker was taken as given (Hakfoort & Lie, 1996). Hakfoort and Lie (1996) further provided an economic explanation to office space demand per worker. Their results show that workspace demand is a function of rent, expected business growth and

uncertainty, the lease period, the substitution possibilities and of other associated costs. These results also confirm certain space consumption patterns by industry type.

2.9.5 Flexibility

Since Carn et al. (1999), the discussion of flexibility and workplace in the literature started to emerge. Various authors have identified different aspects and contributed with their surveys and case studies to a better understanding of the subject. It seems that although the requirements towards and the variety of the function of CRE increased with time, the management of CRE has not gone the same way in its evolution (Gibler et al., 2002) and therefore the potential of CRE as an asset contributing to a corporation's success still lies fallow.

Even though real estate is a rather inflexible asset, CRE managers are permanently searching for increased flexibility in the properties they manage (Gibson V. , 2001).

Acquiring flexible buildings has a twofold advantage for corporations. On one hand it provides companies the possibility to adapt the building to new uses at a relatively low cost in the future and on the other hand it allows the business to sell any surplus space at a more favorable price if eventually needed (Nourse & Roulac, 1993). The flexibility issue became central to CRE managers mainly because of an increased awareness of the liabilities associated with the properties (Gibson, 2003).

2.9.6 Outsourcing

The decision to use external service providers is another important research area within CRE (Rodriguez & Sirmans, 1996; Carn et al., 1999; Krumm et al., 1999; O'Mara et al., 2002; Ilsjan, 2007; Jacobs et al., 2007; Fisher et al., 2009; Hartmann et al., 2010). Even

though the use of external service providers usually implies considerable cost savings, it is not only related to them (Carn et al., 1999). In fact, having external service providers, in general may lead to higher costs in the case the fees charged exceed the internal costs of training and providing accommodation. Firms usually decide to use external providers in order to outsource non-core activities (Carn et al., 1999; Krumm et al., 1999). However, merely outsourcing in the quest of operating efficiencies is no longer acceptable since a decrease in real estate costs may be associated with a reduction of the competitive business position (Krumm et al., 1999). According to Rodriguez and Sirmans (1996) it is uncertain how the market evaluates outsourcing or simply, under what circumstances the outsourcing of CREM is able to provide wealth increases to stockholders.

2.9.7 Information management

Despite being usually underestimated, the availability of information is in fact one of the main factors affecting CREM performance (Ilsjan, 2007). Enhanced CRE information is essential for organizations in order to make informed strategic decisions and adequately respond to the marketplace needs (Roulac et al., 2003). Among the first comprehensive surveys regarding CRE practices where those carried out by Harvard University and the MIT in 1981 and 1987 respectively. Veale (1989) argued that one of the most relevant results from the MIT study was the acknowledgement that corporations did not gather relevant and/or sufficient information regarding their real estate assets, which led in most cases to assets being undermanaged. More recent research by Knapp and Oliver (2008) evidenced that even though many CRE managers are aware that part of the information they handle is inadequate, they are still unable to correct this due to certain budgetary or manpower constraints. According to Ilsjan (2007) the main problems CRE managers face

are not related to the technical maintenance of databases but to the quality of the information and the manner in which corporations make use of it.

2.9.8 Information on costs, productivity and performance

Real estate executives are constantly looking for strategies in order to reduce occupancy costs as they are the first priority in terms of superior CRE performance (Noha, 1993) and because they are typically one of the largest sources of overhead costs for most corporations (French & Wiseman, 2003). Also surplus space is usually analyzed when no additional cost reductions seem available (Knapp & Oliver, 2008). Consequently, organizations gather information on vacancy and churn rates together with data on unnecessary expenses and space redundancy in order to manage their real estate portfolios efficiently.

Retrieving occupancy data is frequently very hard, especially for large organizations and it is usually the case that “inaccurate numbers lead to uninformed real estate decisions, and uninformed decisions are almost always bad ones” (Knapp & Oliver, 2008). Occupancy costs for instance are usually measured on an employee rather than workplace basis, which is inadequate for organizations implementing workstationsharing strategies (Fawcett & Rigby, 2009).

2.10 SUSTAINABLE CORPORATE REAL ESTATE MANAGEMENT (SCREM)

In a recent study conducted by Pernille Christensen (2012) in Strategies of Sustainable Real Estate Decision in the United States, SCREM includes the dimension bound with management by value. It will be a system that allows creating and maintaining value by

improving the management of business processes in order to increase the productivity of corporate real estates (property performance), understood as: functional quality, technical quality, cultural & social quality, economic performance, and environmental performance. According to Chappell and Corps (2009), the term ‘sustainability’ is amid one of the widely used and misused terms in the real estate industry. Pernille Christensen (2012) identified four different ways of integrating sustainability into strategic decisionmaking and planning process for real estate.

The four categories of description are: (a) the *Environmental Economics Approach*, which is concerned with environmental concerns - as long as there is no negative economic impact on the bottom-line; (b) the *Brundtland Approach*, which balances consideration for the social equity, environmental and economic factors associated with real estate; (c) the *ESG/RPI Approach*, which emphasizes the importance of economic value and feasibility as the primary factors, identifies corporate governance issues as a means to structure sustainability efforts and considers the impact of social and environmental focused action; and (d) the *Global Stewardship Approach*, which emphasizes that there is a moral imperative to take a holistic, integrated approach to addressing the environmental justice, social equity and economic stability impacts of commercial real estate.

As with the pragmatic ecologist perspective listed in the outcome space for the concept of ‘sustainability’, this way of understanding the concept of ‘sustainable real estate’ includes consideration of environmental factors (specifically mentioned by experts were issues relating to the site management, energy and water usage, waste and emissions reduction and use of natural resources) and economic factors (specifically mentioned were issues such as pay-back period, valuation implications, cost and feasibility of implementing

environmental sustainability actions). Panelists felt that this way of understanding how ‘sustainability’ can be integrated into real estate decision-making and the strategic planning process was prevalent within the real estate industry, in general, and was most common among the real estate development stakeholders.

(Pernille Christensen, 2012)

As with the Brundtland ‘3E’ Follower perspective listed in the outcome space for the concept of sustainability, this way of understanding sustainable real estate includes: (a) the Environmentalist, who focuses primarily on the environmental aspects; (b) the Practical Ecologist, who believes in integrating environmental concerns as long as there is no negative impact on the bottom-line; (c) the Brundtland ‘3E’ follower, who equally considers the social equity, environmental and economic factors; (d) the Economist, who recognizes the ‘3E’s of Brundtland’s definition but emphasizes that economic value and feasibility must first be present before socially and environmentally-focused actions can be undertaken; and (e) the Global Steward, who believes there is a moral imperative to get involved with doing the ‘right thing’ for the planet, the people on the planet, and the economy – for today’s generation as well as for future generations. (Pernille Christensen, 2012)

The creation of a sustainable construction environment in the processes of CRE development and management is to be based on assumptions of the concept of sustainable development (SD). Sustainable development is understood as meeting the needs of the society while taking into account the limitations of the natural environment of the planet and enabling the realization of the aspirations of future generations. As a response to the challenges of SD, social responsibility (SR) constitutes an expansion of this idea and

remains closely associated with it. It refers to corporate social responsibility (CSR) of an enterprise towards its stakeholders, including the society and the environment, and the realization of specified targets is to contribute to maximizing the contribution of the organization to sustainable development. The concept of social responsibility, considered in accordance with ISO 26000 guidelines (EN/ISO 26000, 2012) in the context of the functioning of a socially responsible company, assumes its willingness to take into account social and environmental issues in the decision making process and decision-related activities, and the disclosure of the impact of those decisions and activities on the society and the environment. This means an attitude representing the ethical and transparent activities of the company, contributing to sustainable development in accordance with the applicable law and remaining consistent with the accepted norms of conduct. In the real estate management system, it will mean the implementation of the Responsible Property Investment (RPI) and sustainable management with the stated objectives of environmental sustainability, social responsibility and environmental, social, and governance (ESG). SCREM requires the improvement of existing real estate management processes and defining new ones. Hence the necessity to include the process approach in the SCREM model and to formalize the knowledge of the SCREM processes in the form of a process maturity model (see: e.g. Kania, 2013). The process approach aims to result in a more efficient use of corporate real estate, as well as in taking into account the socio-cultural aspects and their neutral impact on the environment. The authors also indicate a particular importance of the use of ICT in the sustainable corporate real estate management system. In this system, ICT is a factor that stimulates activities in the following areas:

- Environmental protection,

- Economic growth,
- Social and cultural development, – Corporate governance.

Overall, the SCREM conceptual model includes the following components: CRE, real estate management concepts and other pillars of corporate sustainability management, processes, internal and external stakeholders and ICT (Ziemba et al., 2015).

In other researches, the question investigated the perception of sustainability in real estate as a consideration for investors' portfolios. The analysis used a frequency of response analysis, and identified that owners' perceptions of sustainability were primarily focused on operating expenditure and energy consumption. There were other factors discussed including rating tool assessment, location, indoor environment quality, and quality of office space; however, lower emphasis was placed on these areas.

Research by Consol, (2012) on why is benchmarking sustainability important? He stated that "Sustainability is a vague term, and it's hard to put a number on it. But if you ask the right questions and translate that into a benchmark, it allows the capital market to integrate sustainability into their underwriting, investment decisions, their engagements with investment managers and so on. Once benchmarking is transparent, the sector can really start to move forward. For example, if you can compare office REITs using the same criteria, it becomes clear how active some property managers are in implementing sustainability solutions, where others are not yet fully engaged" (Consol, 2012).

Nzmfe, (2007) explores the reason why several refrains emerged as to why owners focused on certain initiatives and strategies including: (1) clear identification of the return on investment; (2) identification of the increase in net income; (3) anticipation of

increasing energy and other resource costs; therefore, minimization would reduce this risk; (4) future-proofing against the possibility of carbon taxing; and (5) minimizing real estate risk and obsolescence, from a functional, technical, and market perspective.

To address this issue and to seek for drivers for sustainability, Eichholtz et al, (2012) demonstrates that green properties provide certain benefits such as higher occupancy ratios, energy efficiency (lower service costs), higher valuations can lead to ancillary benefits such as better reputation and increasing loyalty of employees. Besides the advantages for investors, sustainability creates benefits for tenants as well. In this respect, Peterson & Gammill (2010), Fuerst et al. (2011), Eichholtz et al. (2012) demonstrate that the occupiers of commercial real estate assets gain benefits out of reducing absenteeism through a better working environment, improvement of their brand image and savings on service charges

Finally, Kats, et al, 2003 have identified seven sustainability aspects in the built environment that are concentrated on reducing the environmental footprint of the building primarily, through: (1) reduced production of greenhouse gas emissions (particularly carbon dioxide); (2) reduced use of natural resources, in particular, water, gas and electricity; (3) reduced waste production and increased recycling; (4) enhanced building occupant health, comfort, and safety; (5) production of renewable resources; (6) collection of water for potable and non-potable uses; and (7) recycling and treatment of sewage and waste water (Kats, 2003)

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter presents the approach to the study, strategy as well as the details of the data collection techniques used for the research which is a holistic survey of assessing factors for implementation of sustainable real estate management practice in Ghana Cocoa Board (Cocobod).

3.2 RESEARCH DESIGN

The study found the correlation research design more appropriate. In this design, each of the estates department in cocobod, Accra would be investigated. The cross- sectional design would be used to administer similar questions and the results obtained would be compared before a general conclusion would be drawn from the results.

3.2.1 Research Approach

This segment deals with the procedure adopted for the study which is a deductive reasoning research approach. With this, an in-depth investigation is made as to practices that ensure sustainable real estate management practices used by Cocobod. It is important to note that, multiple methods of collecting data complement one another in testing the

completeness and accuracy of data obtained from one or more methods (Hussey and Hussey, 1997).

3.2.2 Research Method

The quantitative research method was adopted. The reason for using the quantitative method was to gather literature and test them using mathematical tests. In this sense, literature was gathered on sustainable corporate real estate management to design a questionnaire for data collection (Naoum, 1998).

3.2.3 Research Strategy

Survey research was adopted to solicit response from the workers in the real estate departments in Cocobod, Accra. This strategy would allow the researcher come into contact with the respondents from whom data would be collected and new facts about the issue under investigation would be generated.

3.3 POPULATION

The population of the study takes into consideration all Cocobod estates department in Accra, namely: Seed Production Division (SPD), Quality Control Company Limited (QCC), Cocoa Marketing Company Limited (CMC) and Cocoa Health and Extension Division (CHED). All the divisions have Estates Departments being headed by Estates Managers that reports to the Main COCOBOD headed by a General Services Director.

3.3.1 Sample Size

Using the purposive sampling approach, the researcher selected the qualified personnel as to who could provide the best information to achieve the objectives of the study, five

persons from each department were selected. This gave us a total of five respondents each from the five divisions making a total of (25) twenty-five sample size.

3.3.2 Sampling Technique

The non-probability sampling technique employed by the study was purposive sampling. Purposive sample was used to select workers in the real estate departments. In all the estates departments there exist an estates manager, estate officer, a works superintendents, works foreman and assistant estate officers. One (1) person each who qualifies as the above mentioned workers would be selected. Purposive sampling was used to select those who could make a point quite dramatic.

3.4 RESEARCH INSTRUMENT

Structured survey questionnaire which would involve closed and opened-ended questions, as well as interviews would be used. The questions in the questionnaire would be used to elicit appropriate information from respondents by face to face interview sections.

3.4.1 Procedure

The under listed procedure was employed in order to attain our objective;

1. An introductory talks, and walkthrough, would be carried out during which the members of the real estate departments as well as key informants including the estate officers would be informed of the objectives of the research and also to gain permission to carry out the research.
2. Sending of questionnaire to all estate managers, officers in the departments. The questionnaire measures sustainable practices in real estate management with performance criteria of the work environment, socially and economically stated in the literature review.

A few additional questions were included concerning the education and training and job description of the respondent, the amount of time spent on various office activities and the way the worksite was used.

3. Analysis of the study data with the SPSS statistical and data management package as well as relative importance index.
4. Feedback in two group discussions with respondents of the findings and interim conclusions.
5. Preparation of the final report and making of agreements about communication of the results of the research and the conclusions and recommendations.



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CHAPTER FOUR ANALYSIS AND DISCUSSION OF OUTCOMES

4.1 INTRODUCTION

This chapter deals with the analysis and presentation of the data collected from the survey.

This chapter presents the research work with graphs, diagrams and tables used in the assessment of the information obtained. The study targeted twenty five (25) respondents but was able to retrieve twenty three (23) questionnaires administered. The responds rate for the sample is 92% which implies that every single person answered all the questions. The remaining two respondents had travel out of the country at the time the questionnaires were being retrieved. The information was mainly acquired through interview, observation and survey.

The survey consisted of four different sections: Background information of the respondents, overview of real estate management practices with the organization, identification of sustainable real estate management practices and propose ways of implementing sustainable real estate management practices. All sections are in line with the objectives of the research.

4.2 BACKGROUND INFORMATION ABOUT THE RESPONDENTS

The beginning part of the survey was aimed at determining the current professionals and their status in the organization in order to get a general overview of their experience and educational background to help categorize results.

4.2.1 Status in the Real Estate Department

Out of 23 respondents, 4 of them are managers representing 18%, 13 of the respondents are senior officers this includes (4) four estate officers and (9) nine works superintendents representing 17% and 39% respectively. This implies that 74% of the respondents are senior staffs who run the day to day activities therefore can influence change in the organization.

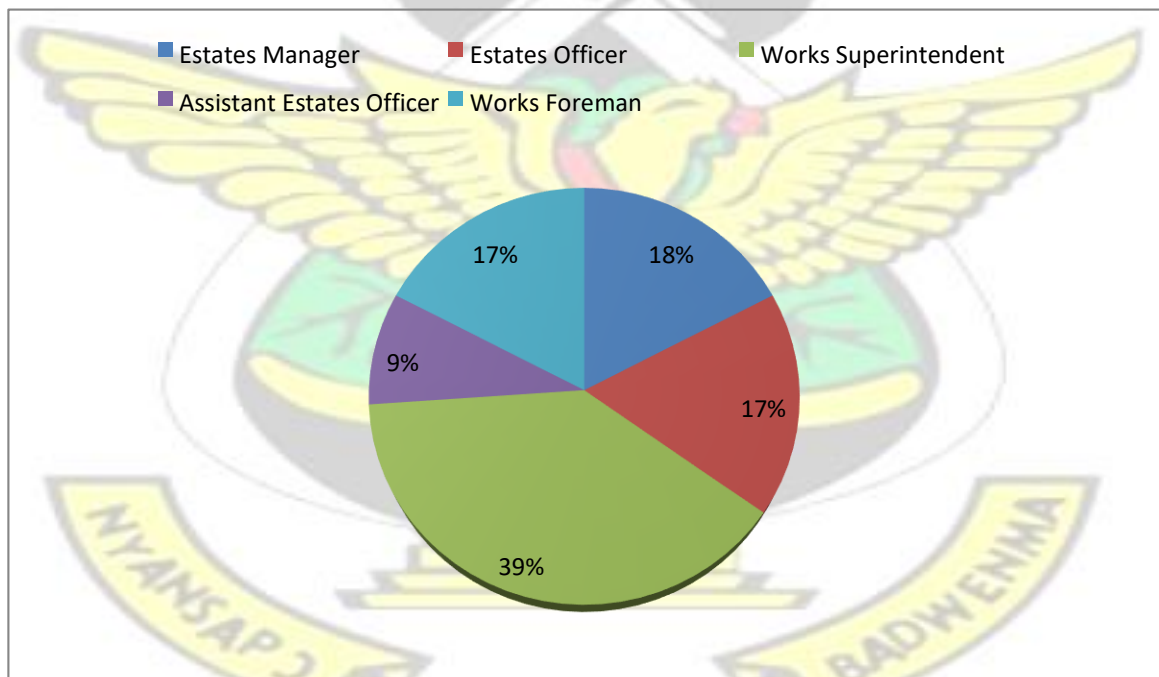


Figure1. Status in the Real Estate Department

4.2.3 Experience in Corporate Real Estates Management

From the result, 9 of the respondents representing 39% have experience in the real estate field for between five to ten years. 8 pupils are having experience in corporate real estate

management for more than ten years representing 35% and the remaining 6 representing 26% have experience less than five years. This shows go faith in the responds given to help achieve the research objectives.

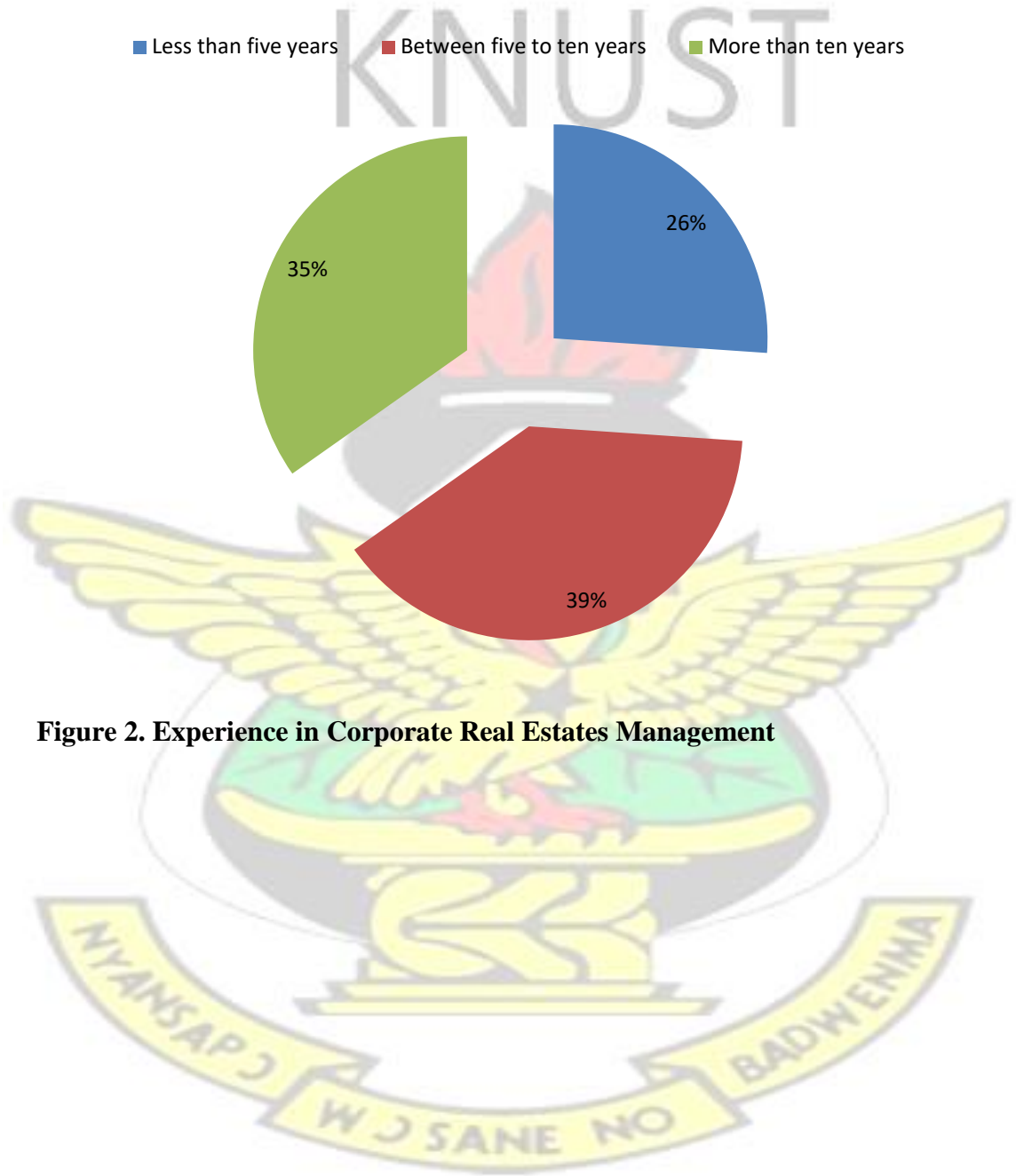


Figure 2. Experience in Corporate Real Estates Management

4.2.4 Educational Background

The results indicate that 9 respondents have Bachelor degree, 5 Masters, 6 HND, Phd and 1 others of who stated PmP as the highest form of educational background. This implies that Cocobod has well qualified professional available to manage the real property of the corporation.

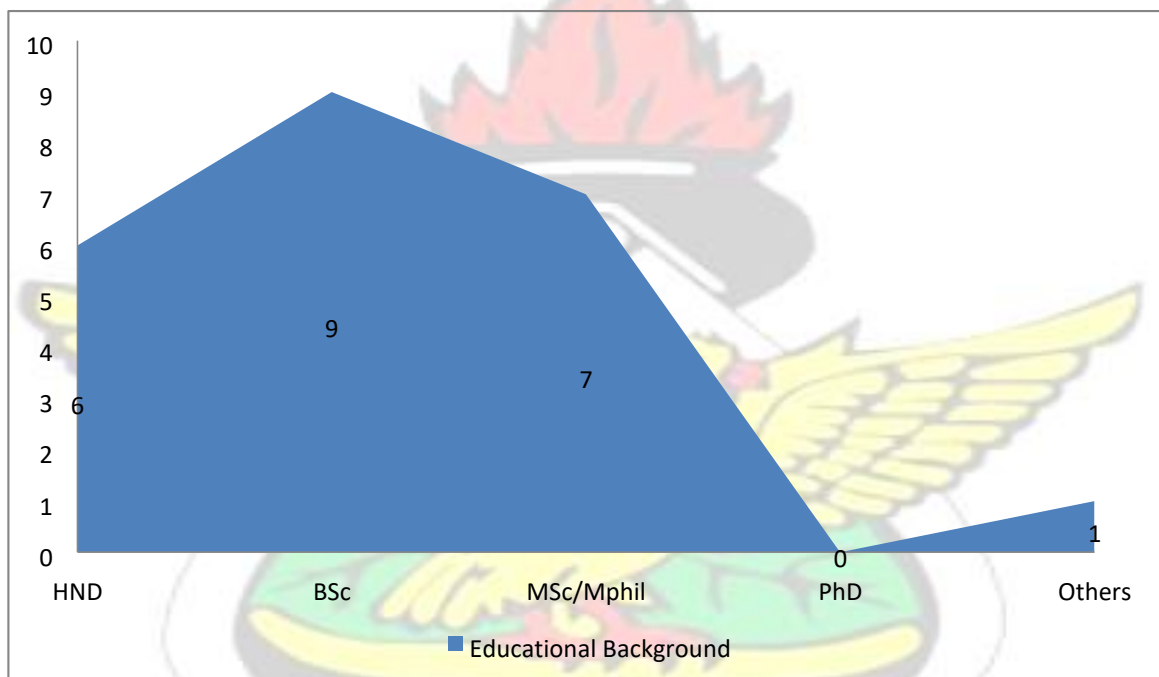


Figure 3 Educational Background

4.2.5 Membership of Professional Body

From the results it was noticed that 5 of the respondent belong to Ghana institute of surveyors, 6 had others and 11 did not belong to any professional body.

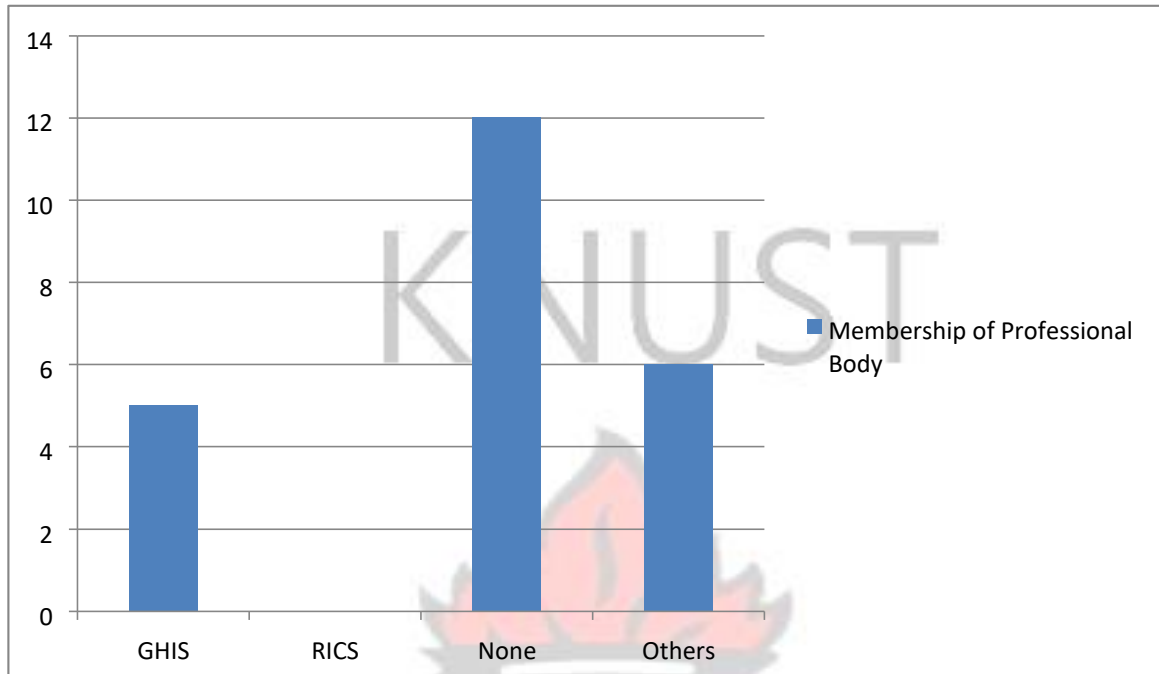


Figure 4. Membership of Professional Body

4.2.6 Results

Considering the fact the most respondents are on senior management level, greater percentage have working experience in corporate real estate management from 5 years and beyond and high educational background cutting across Masters and Bachelor Degree and lastly affiliations to professional bodies, implies that there are enough professionals with strong academic background capable of managing the real estates of Ghana Cocoa Board. This probably comes as no surprise taking into account that the skills required for many Corporate Real Estates Management (CREM) tasks have varied considerably over time and are still subject of permanent evolution due to a continuously changing environment (Carn, Black, & Rabianski, 1999).

4.3 OVERVIEW OF REAL ESTATE MANAGEMENT PRACTICE IN COCOBOD

This part was aimed to examine the real estate practices that exist at Cocobod to help appreciate the level of understanding and perceptions of the respondents in the field of corporate real estate management in the various departments.

4.3.1 Opinion of the real estate portfolio

Considering how the respondents view the real estate portfolio in the organization, 14 of the responds considered the real estate portfolio as a strategic corporate resource and 9 also saw it as space provider. This shows good faith in the respondents because perception can influence the way one executes his work (field survey, 2018). According to a survey by Gibler, Black and Moon (2002), most managers viewed the real estate from the traditional perspective of accommodating operations at the lowest possible cost instead of focusing on issues such as productivity and flexibility. This is contrary to the results achieved because most of the estates staff views the real estate portfolio as a strategic resource which needs to be strategically managed.

4.3.2 Classification of the Estates section

19 out of 23 respondents classify the estates as a Department and the remaining four considers it as a unit. A department here means that there is an Estates Manager who reports to the Executive, this organizational structure is healthy because it enhances managerial processes and increase interaction (source: observations, 2018). Researchers like O'Mara & Valenziano, 2002 stated that "High standing organization, are indicated by fewer levels between the corporate real estate executive and CEO. This promotes frequent

real estate meetings with senior management, a broad span of control for facility and real estate operations, and an executive committee for real estate matters.”

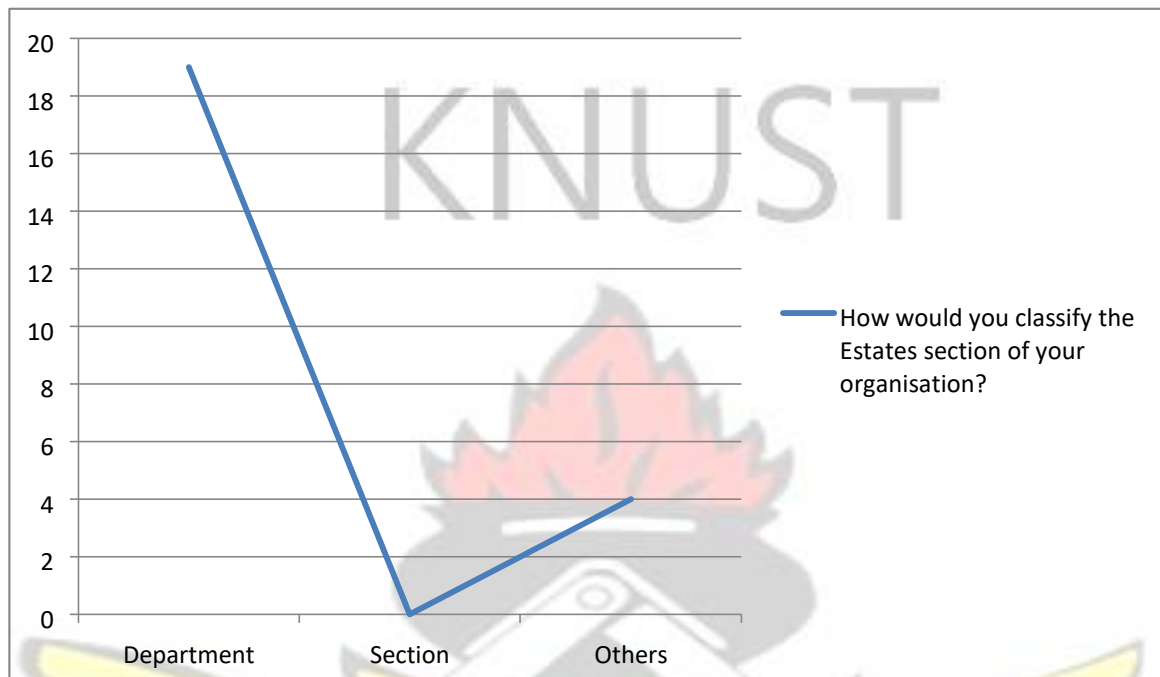


Figure 5. Classification of the Estates section

4.3.3 Number of years the Estates Department has existed

From the survey, it came out that most (18) respondents said the estates section has been in existence for more than 25 years. This explains why the structure is well laid down for the entire departments. The department has Estates Officers to handle the soft management issues (for example waste management and energy management) and the Works Superintendents to handle the hard management issues (e.g construction and renovations). This basically implies that the company recognizes the importance of effectively managing its real estate asset. Empirical research by Rodriguez & Sirmans, (1996) demonstrates that spin-off announcements are usually associated with increases in stockholders wealth, evidencing that corporate restructuring is beneficial for enhancing firm value. CREM can be organized within a company in a centralized or decentralized

fashion or sometimes even through a subsidiary in what is known as spinoffs (Rodriguez & Sirmans, 1996)

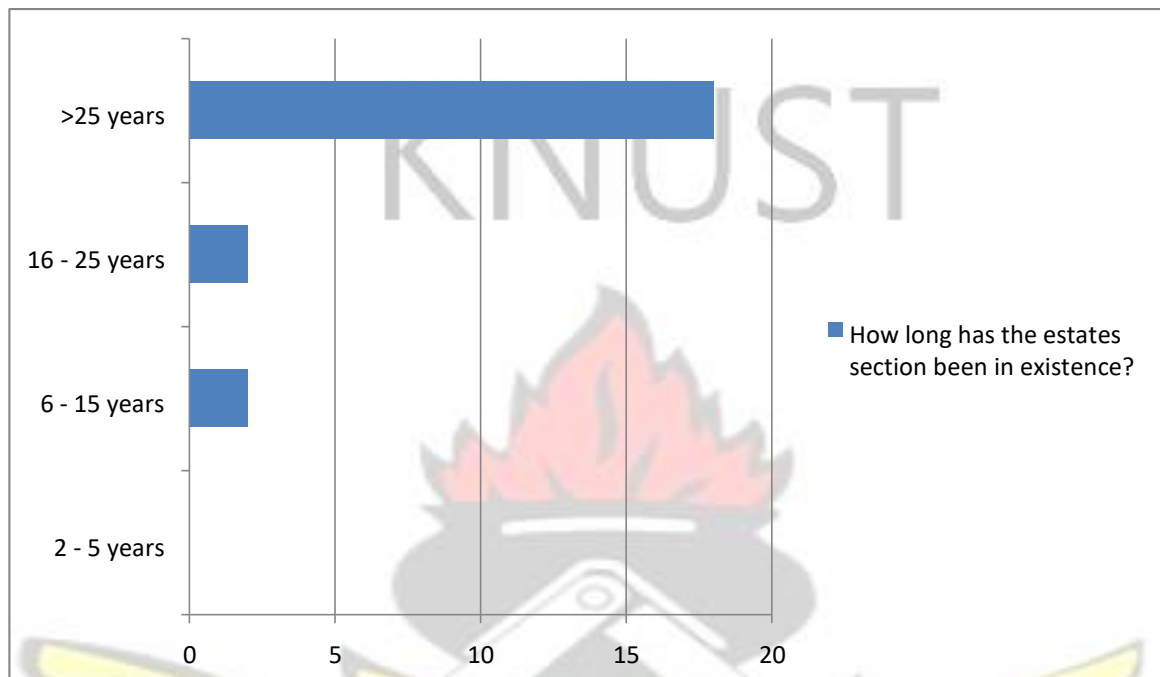


Figure 6. Number of years the Estates Department has existed

4.3.4 Contribution of the real estate to the operation of the company

From the survey, it was noticed that 15 respondents rated the contribution of the real estate to the operations of the company as high. 5 rated it as average and 1 as low. When CREM is perceived as more important and the CRE managers within the corporation have a higher standing, the more strategically CRE is managed and viewed as supplementary rather than imperative as suggested by O'Mara & Valenziano, 2002.

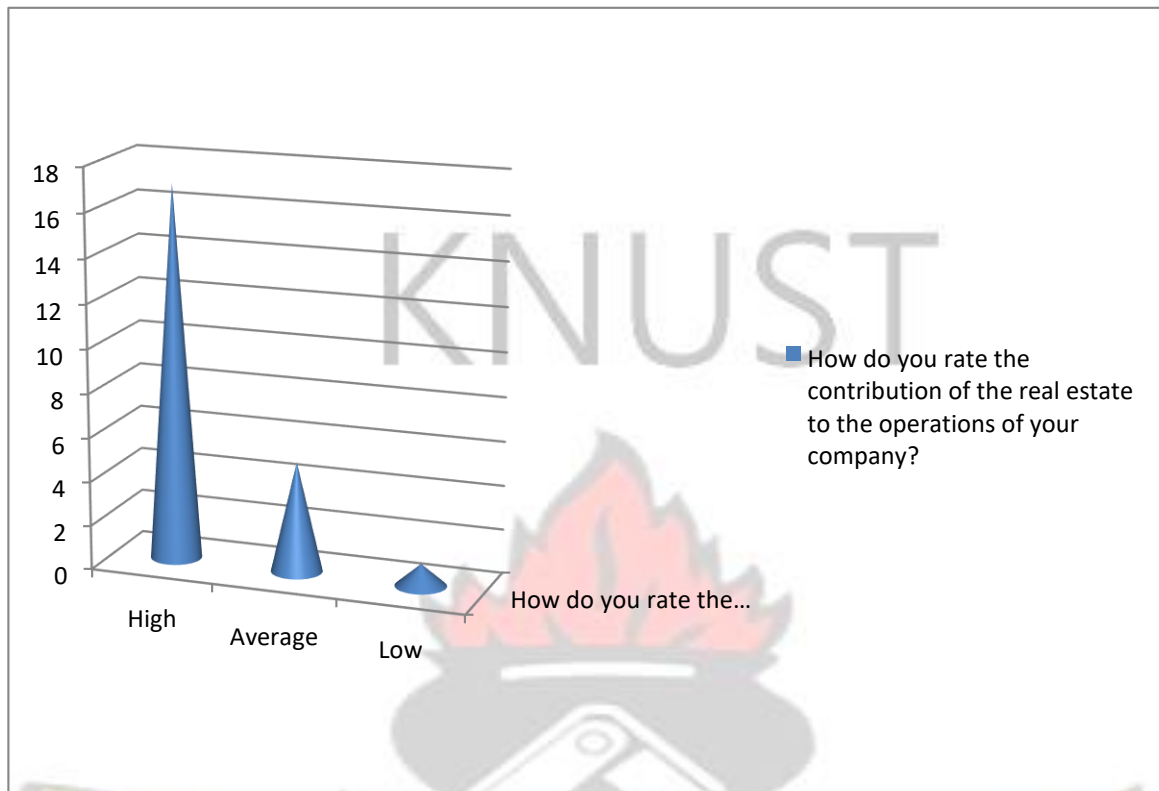


Figure 7. Contribution of the real estate to the operation of the company

4.3.5 Availability of real estate strategy/policy

9 respondents representing 39% said yes and referred to the housing policy others (14) also said there is no real estate strategy/policy. It has been argued already by Gibler et al, 2002 that CRE departments and managers should have a strategic approach towards the CRE function and that this should be consistent with the overall corporate strategy. In line with this every organization should have a real estate policy which in this case Cocobod already has.

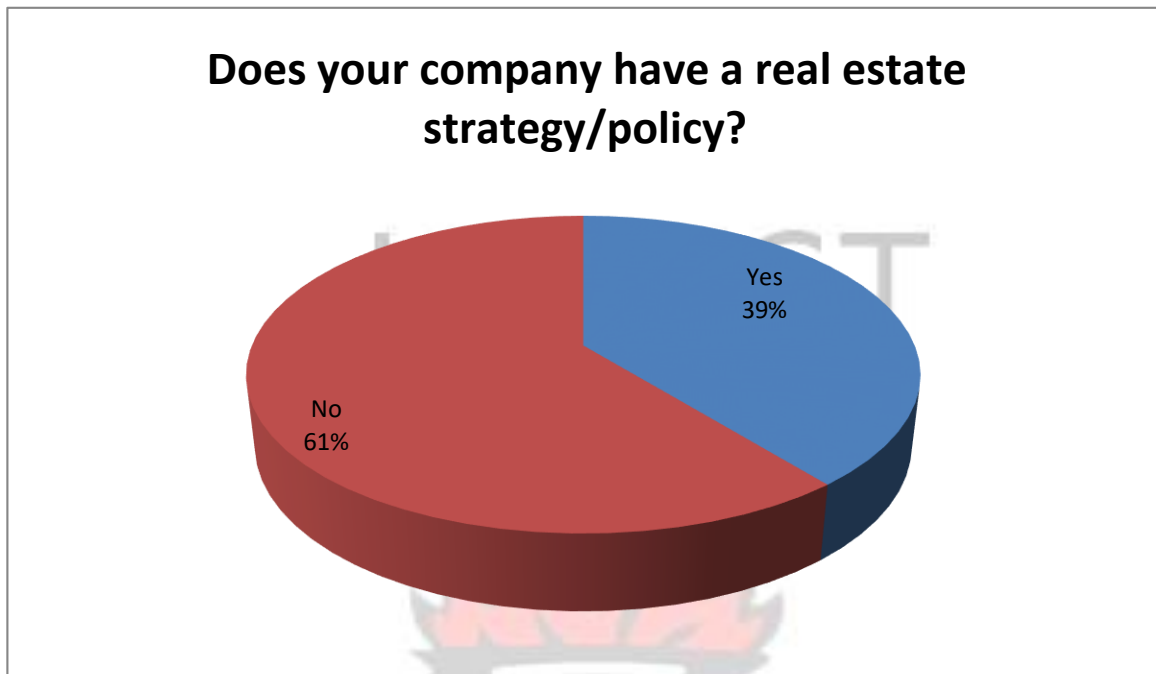


Figure 8. Availability of real estate strategy/policy

4.3.6 Reporting of real estate results

The outcome of the survey is that 13 of the respondents reported results monthly while 6 answered annually. Finding ways to communicate the contribution of CRE to the organization is one of the main difficulties faced by CRE managers (Allard & Barber, 2003). Some authors believed this difficulty relies on the lack of adequate CRE measures deriving from the failure in analysing and communicating CRE's contribution to the core business to senior management (Appel-Meulenbroek & Feijts, 2007). I am of the view that as the survey depicts; communicating frequently in this case monthly results of the real estate will help improve on communication gap between the estate departments and senior management to ensure that operation decisions need to be not only aligned with the CRE strategy but also with the overall business as revealed by Nourse & Roulac, (1993).

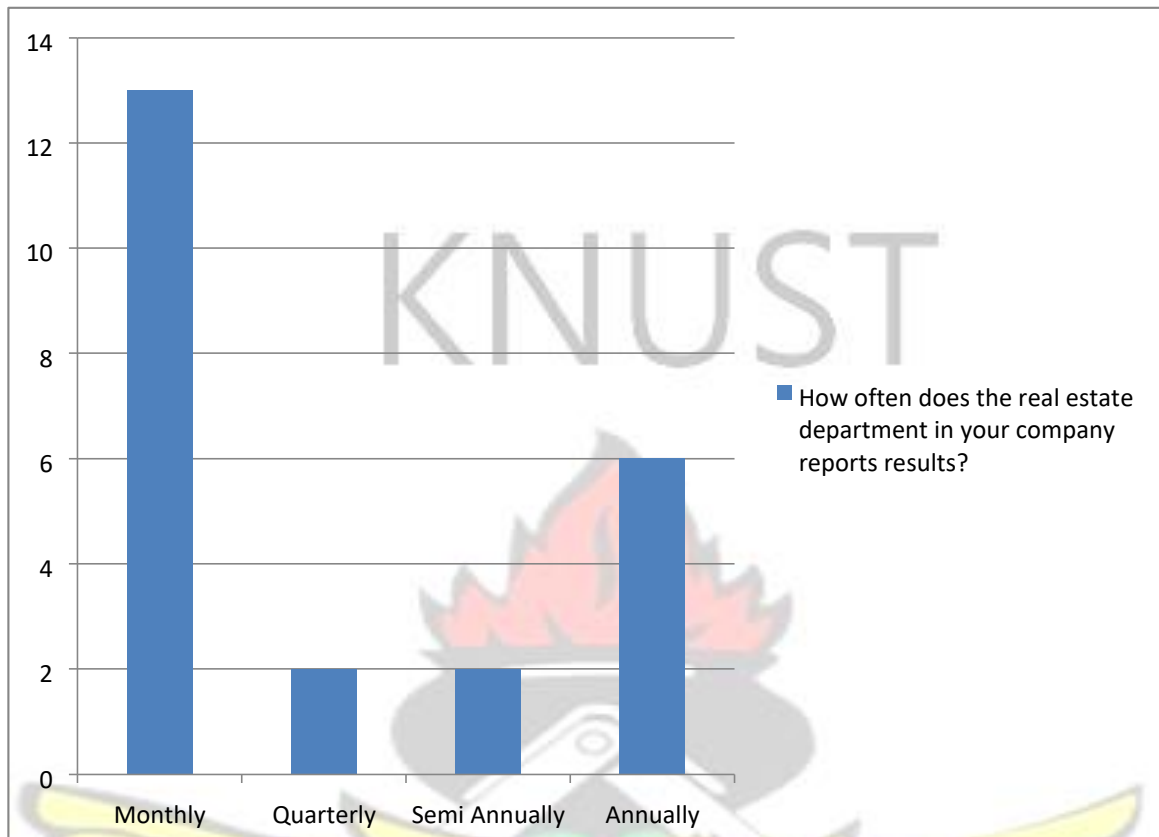


Figure 9. Reporting of real estate results

4.3.7 Number of Property

It came out clear from all respondents that Cocobod is currently occupying over 50 buildings. Out of 23 respondents two (2) thought otherwise.

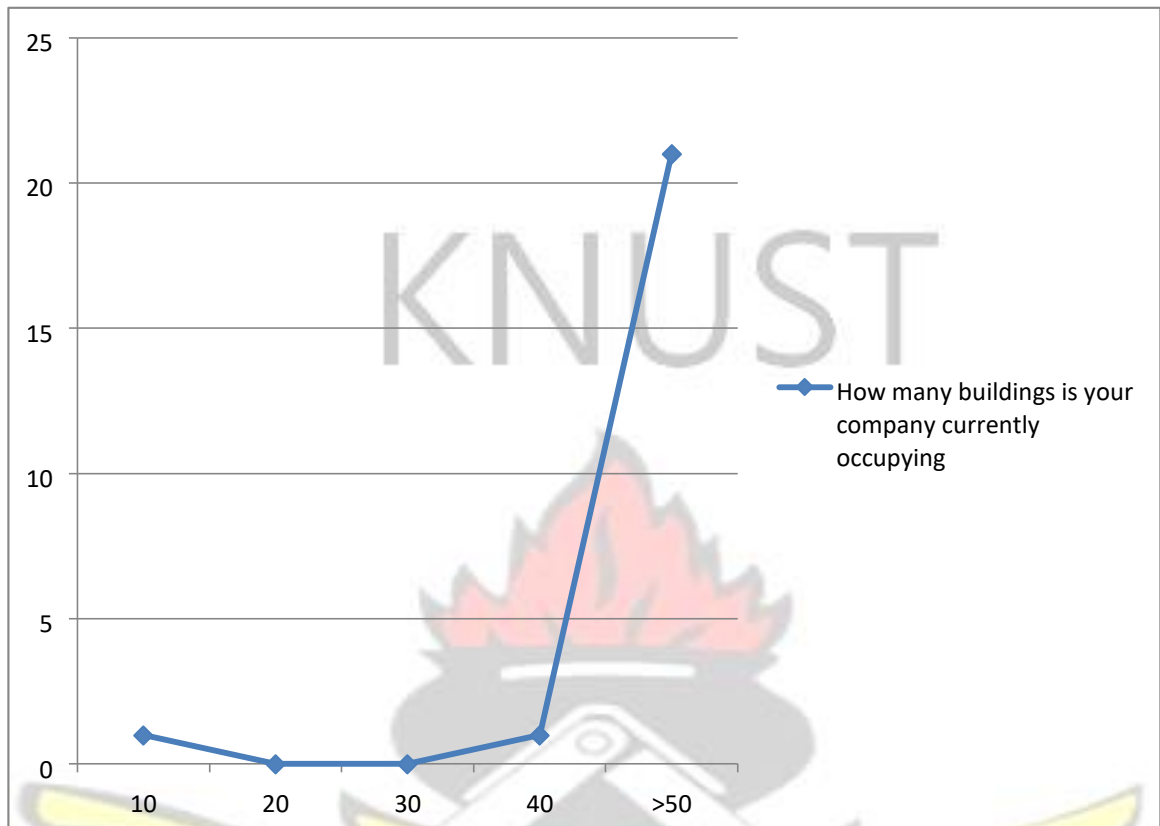


Figure 10. Number of Property

4.3.8 Type of Properties

Regarding property type, all respondents occupies office which is reflected in the outcome of 42% flowed by residential with 38%. Industrial also had the third highest second of 14%. This implies that Cocobod is currently occupying all the types of properties for the running of the organization.

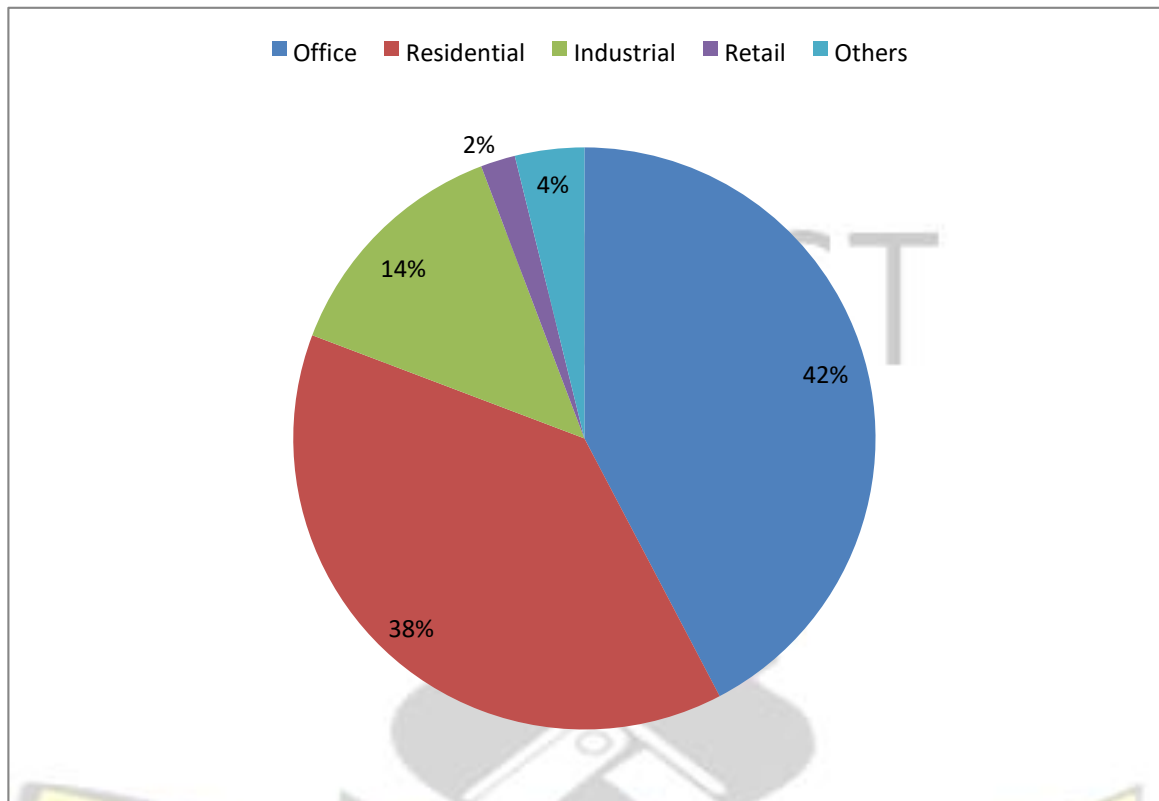


Figure 11. Types of Properties

4.3.9 Location of the Properties

Not surprising results, cocobod buildings are mainly located in the City Centre, suburban and rural areas. These comprises of offices, residential, and industrial. The retail buildings are limited and predominantly located at the city centre and are mainly owned with a small portion being leased.

Regarding the opinion whether sustainability is applicable to estate management, 99% answered yes to this question. This shows complete awareness of the term sustainability by the respondents.

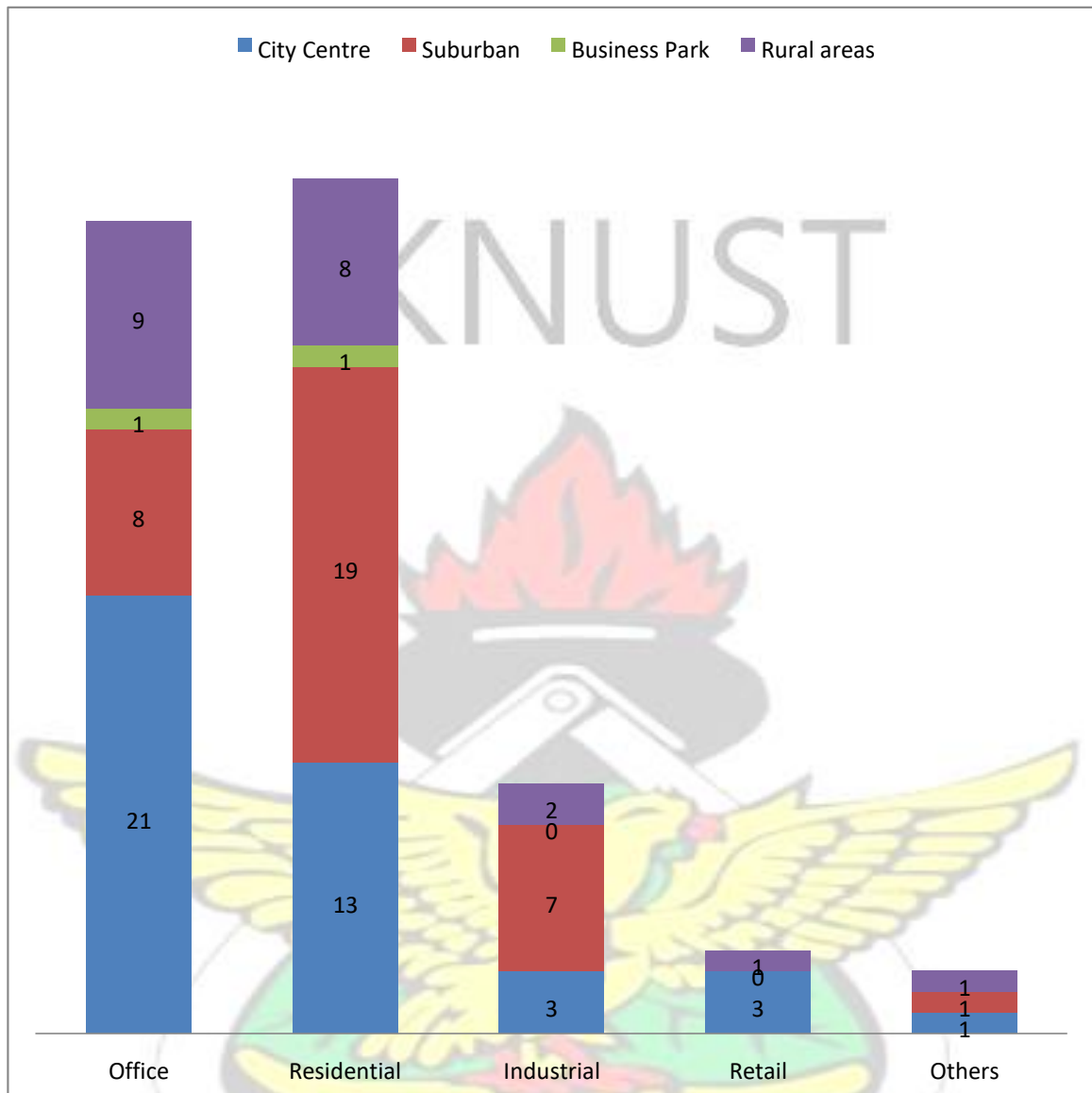


Figure 12. Location of the Properties

4.3.10 Discussions

According to Roulac et al (2003), Enhanced CRE data is important for organizations in order to make informed strategic decisions and adequately respond to the marketplace needs. In line with the above, information of the real property like number of the properties, property types and their location as well as ownership issues currently being occupied by the organization are crucial and as a matter of fact should be gathered to put an end to the problem of real estate assets being undermanaged because of lack of relevant

information as established in Veale (1989) that “one of the most relevant results from the Harvard University study was the acknowledgment that corporations did not gather relevant and/or sufficient information regarding their real estate assets, which led in most cases to assets being undermanaged”. This conclusion does not imply to the study because the respondents were able to furnish the research with all the information ask concerning the real estate assets.

4.4 SUSTAINABLE REAL ESTATE MANAGEMENT PRACTICES

This portion goal is to identify sustainable practices in real estate management practice as recognized in the literature review under the three pillars of sustainability established by the Brundtland Approach of the three core factors of sustainability: Environmental, Economical and Social

4.4.1 Social Sustainable Real Estate Management Practices

A questionnaire was distributed with aim of achieving the second objective which is to identify the sustainable practices in real estate management practice. A Likert scale rating 1 to 5 was used with *Unimportant -1, Of little Important-2, Moderately Important-3, Important -4, Very Important-5*. Relative importance index was used as a technique to analyse the collected data. The factors are ranked in table 4.1 and discussed further.

Table 4.1 Social Sustainable Real Estate Management Practices

NO	SOCIAL	MEAN	(ΣW)	RII= $\Sigma W/(5*N)$	RANK
1	Facilitate and control production, operation and service delivery	4.478	103	0.896	2

2	Increase flexibility [functional, physical and/or financial]	3.522	81	0.704	9
3	Promote human resources objectives and influence workplace performance	4.130	95	0.826	7
4	Facilitate managerial processes and increase interaction/knowledge spillover	4.391	101	0.878	3
5	Promote sales and selling process	4.261	98	0.852	4
6	Promote marketing message	3.348	77	0.670	10
7	Promote corporate social responsibility	4.565	105	0.913	1
8	Use of computer aided tools	4.217	97	0.843	5
9	Promote Marketing and image	4.174	96	0.835	6
10	Enhance building occupant health, comfort, and safety	4.000	92	0.800	8

From Table 4.1, Promote corporate social responsibility ranked first with an RII value of 0.913. Facilitate and control production, operation and service delivery ranked second with a value of 0.896. Facilitate managerial processes and increase interaction/knowledge spillover ranked third with a value of 0.878. Promoting sales and selling process ranked fourth with a value of 0.852. Use of computer aided tools ranked fifth with a value of 0.843. Promoting Marketing and image ranked sixth with an RII value of 0.835. Promoting human resources objectives and influence workplace performance ranked seventh with a value of 0.826. Enhance building occupant health, comfort, and safety ranked eighth with a value of 0.800. Increase flexibility [functional, physical and/or financial] ranked ninth with a value of 0.704 whilst Promote marketing message ranked tenth with a value of 0.670.

4.4.2 Economic Sustainable Real Estate Management Practices

The respondents were assigned to rank some economic sustainable real estate management practices recognized through literature review. For the purpose of achieving the objective of the research, the respondents ranked the variables (economic practices) to a Likert scale which was designed as follows:

1= No Potential; 2=Little Potential; 3 = Moderate Potential; 4= Much Potential; 5= Great Potential. The results from the survey was analyzed with Relative Importance Index.

Table 4.2 Economic Sustainable Real Estate Management Practices

No	ECONOMIC	MEAN	(ΣW)	RII= ΣW/(5*N)	RANK
1	Space utilization and occupancy planning	4.739	109	0.948	3
2	Identification of Capital value for company's real estate assets	4.435	102	0.887	6
3	Re-evaluation and renegotiation of contracts	4.000	92	0.800	8
4	Identification of annual real estate cost as proportion of total annual cost of the company	4.609	106	0.922	4
5	Identification of the return on real estate investment	4.304	99	0.861	7
6	Performance measurement and Benchmarking for managing the real estate	4.522	104	0.904	5
7	Documentation of Occupancy to cost minimization	4.870	112	0.974	1
8	Use of computer aided tools	4.826	111	0.965	2

Table 4.2 illustrates the results from the relative important index. The results of the ranking showed that the highest and the lowest RII were 0.974and 0.800. The

respondents placed Documentation of Occupancy to cost minimization highest and Use of computer aided tools flowed second with mean of 0.965. Space utilization and occupancy planning ranked with RII of 0.948 in the third position. Identification of annual real estate cost as proportion of total annual cost of the company was the fourth with RII of 0.922 and was closely followed by the Performance measurement and Benchmarking for managing the real estate in the fifth position with RII of 0.904. Identification of Capital value for company's real estate assets, Identification of the return on real estate investment and Re-evaluation and renegotiation of contracts were ranked as the sixth, seventh and eighth with RII of 0.887, 0.861 and 0.800 respectively.

4.4.3 Environmentally Sustainable Real Estate Management Practices

In the attainment of the stated research the respondents were also provided information on the environmental activities related to real estates. The survey instrument was designed for the respondents to rank how these activities are handled using a scale; *1 as Not Part; 2 as Outsourced; 3 as In- house*. The Relative importance index was used in analysing the data.

Table 4.3 Environmental Real estate Management Practices

No	ENVIRONMENTAL	MEAN (ΣW)	RII= $\Sigma W/(5*N)$	RANK
----	---------------	---------------------	--------------------------	------

1	Reduce production of greenhouse gas emissions (particularly carbon dioxide)	2.304	53	0.461	6
2	Reduce use of natural resources, in particular, water, gas and electricity	2.565	59	0.513	1
3	Reduce waste production and increase recycling	2.391	55	0.478	4
4	Procurement of renewable resources	2.348	54	0.470	5
5	Collection of water for potable and nonpotable uses	2.522	58	0.504	2
6	Recycling and treatment of sewage and waste water	2.435	56	0.487	3

The results from Table 4.3 shows how the above environmental activities relating to real estate are handled. It is observed that Reducing Waste production and increasing recycling ranked first with RII of 0.513 which is followed by Collection of water for potable and non-potable uses with RII of 0.504 ranking second. The Third rank had RII of 0.487 which is the Recycling and treatment of sewage and waste water. Depending on the results of the analysis, reducing waste production and increase recycling was the fourth to be ranked with RII of 0.478. However, the Procurement of renewable resources ranked fifth displaying an RII of 0.470 whilst, reducing production of greenhouse gas emissions had RII of 0.461 which was ranked sixth.

Generally, the sustainable real estate management practices from literature can be categorized into three separate aspects. They are the social, economic and environmental aspects (Ziemba et al., 2018). The results indicate that the pertinent practices in the social category include promoting corporate social responsibility, Facilitating and controlling production, operation and service delivery to facilitate managerial processes and increase interaction/knowledge spillover and also promoting sales and selling process. The economically related practices feature, the documentation of Occupancy to cost minimization, Identification of annual real estate cost as proportion of total annual cost of the company and also the use of computer aided tools, Space utilization and occupancy planning. The practices that are environmentally associated also include, the reduction of the use of natural resources specifically, water, gas and electricity (Singer et al., 2007). The collection of water for potable and non-potable uses, engaging in recycling and treatment of sewage and waste water and also reducing waste production and promoting recycling and reuse, measures.

4.5 WAYS/STRATEGIES OF IMPLEMENTING SUSTAINABLE REAL ESTATE MANAGEMENT PRACTICES

The respondents were further tasked to provide responses in relation to strategies to implement sustainable real estate management practices. They were provided a questionnaire containing variable obtained through extensive review of literature to rank on a Likert scale. The scale was a five-point Likert scale where they were to show approval or agreement in different degrees as follows; *1 as Unimportant; 2 as Of little*

Important; 3 as Moderately Important; 4 as Important; 5 as Very Important

Table 4.4: Strategies to implement sustainable real estate management practices

No	STRATEGIES	MEAN	(ΣW)	$RII = \Sigma W / (5 * N)$	RANK
1	Designing a policy on sustainable real estate management	4.043	93	0.809	1
2	Performance measurement and benchmarking energy performance of properties	4.000	92	0.800	2
3	Motivation plan for managers based on lower service cost	3.565	82	0.713	6
4	Government legislation for companies to incorporate sustainability in their corporate objectives	3.478	80	0.696	8
5	Provision of incentives for both managers and employees on energy savings	3.522	81	0.704	7
6	Awareness creation by education programs for both building users and managers	3.826	88	0.765	5
7	Waste Segregation	3.913	90	0.783	4
8	Recycling and treatment of sewage and waste water	3.957	91	0.791	3

The data from the field survey was analysed using relative importance index to rank the strategies identified. The strategy that topped the ranking was designing a policy on sustainable real estate management with RII of 0.809. The second strategy which closely followed the highest was Performance measurement and benchmarking energy performance of properties which also had RII of 0.800. The third ranked variable also obtained 0.791 was the Recycling and treatment of sewage and waste water. Waste Segregation with RII 0.783 was the fourth while awareness creation by education programs for both building users and managers also with RII of 0.765 was ranked fifth.

It was also observed that Motivation plan for managers based on lower service cost had RII of 0.748 to be ranked sixth, it was followed by Provision of incentives for both managers and employees on energy savings with RII of 0.730 ranking seventh and Government legislation for companies to incorporate sustainability in their corporate objectives had the eighth with RII of 0.713.

The key strategies that can be adopted to ensure sustainable real estate management practices is designing a policy on sustainable real estate management, performance measurement and benchmarking energy performance of properties and recycling and treatment of sewage and waste water. Also, Waste Segregation as well as Awareness creation by education programs for both building users and managers. The smooth implementation can be achieved if the above identified strategies are fused together with organizational practices so as to successfully implement sustainable practices in real estate management.



CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter summarizes the objectives and states the findings from the data which was analyzed using the relative importance index. The purpose of the study is to assess factors for implementing sustainable real estate management practices at Ghana Cocoa Board. Questionnaires were administered to professionals of the various real estate departments in order to help examine the real estate management practices that exists at Cocobod. The conclusion of the study is made with some recommendations stated.

5.2 REVIEW OF OBJECTIVES

The study aimed at assessing the factors for implementing sustainable Real Estate management in Ghana Cocoa Board. The objectives set to accomplish the aim of the study are as follows: to examine the real estate management practices that exists at Cocobod; to identify sustainable practices in real estate management practice; and to propose factors for implementing sustainable real estate management practices.

5.2.1 Examination of real estate management practices used at Cocobod

Literature was reviewed to examine the real estate management practices that exists at Cocobod. The results showed that a good management practice affects the practices at Cocobod since the professionals to manage the real estate has high educational backgrounds and have a positive perception of the real estate asset and collects right information on the real estate for sustainable management of the corporate resource.

From these findings it can be concluded that the real estate management practices at Cocobod are incompatibility with best practices used in managing the performance of

the real estate.

5.2.2 Identification of sustainable real estate management practices

To achieve the objective stated above, existing literature on sustainable real estate management practices was reviewed. Questionnaires were developed as such to collect data from respondents. The survey used the Brundtland Approach in the literature review that is Economic, Social and Environmental sustainability. The analysis was done using relative importance index

With Social sustainable practices in real estate management; These practices were identified: Using computer aided tools; promoting marketing and image, promoting sales and selling; facilitating and controlling production, operation and service delivery, increasing feasibility, promoting human resources, objectives and influence workplace performance; facilitating managerial processes and increase interaction spillover and enhancing building occupant health, comfort and safety.

With respect to the economic sustainable practices in real estate management; Documentation of occupancy to cost minimization ranked first with a value of 0.974 and the lowest ranked was Re-evaluation and renegotiation of contracts also with a value of 0.800. Other economic practices that were identified are: space utilization and occupancy planning, identification of capital value for company's real estate assets, identification of the return on real estate investment, Performance measurement and Benchmarking for managing the real estate, use of computer aided tools and Performance measurement and Benchmarking for managing the real estate.

Environmentally sustainable practices in real estate management identified in this study are as follows: reducing the use of natural resources in particular water, gas and electricity;

procurement of renewable resources; collection of water for potable and non – potable uses; recycling and treatment of sewage and waste water and Reducing waste production and increase recycling. The objective of survey has been met as the respondents helped in identifying sustainable practices in real estate management.

5.2.3 Propose strategies for implementation of sustainable real estate management practice

The last objective was to propose measures and extant literature was reviewed to gather information for questionnaire development. Relative Importance Index was conducted to rank the strategies. The RII values obtained were very high and close to each other, hence give the indication they were all having very high importance. The strategies are; designing a policy on sustainable real estate management, Performance measurement and benchmarking energy performance of properties, recycling and treatment of sewage and waste water, waste segregation, awareness creation by education programs for both building users and managers, motivation plan for managers based on lower service cost, provision of incentives for both managers and employees on energy savings and Government legislation for companies to incorporate sustainability in their corporate objectives in order of importance per the analysis.

5.3 LIMITATION

The study encountered certain challenges some of which were at the questionnaire distribution and collection stage. The non-availability on the part of the respondents and also the limited time range for the distribution hindered the effective progression of the study. Also, the respondents' inability to relate to the technical terminologies in the survey

instrument was experienced. And this required that the researcher was present to provide further explanations as a guide to answer the questions.

5.4 RECOMMENDATIONS

The recommendations drawn from the study touches on the practical and the theoretical angles. Practically the result from the study recommends that;

Government should press upon all its agencies to incorporate sustainability practices in the management of its real estate assets. This can be done through the establishment and reinforcement of policies that regulate and check compliance. These agencies could as well through education; sensitize the incorporation of sustainable practices.

Also, Institutions should ensure that they maintain the values of the properties through adoption of best value practices. Organizations should also follow the structure of the estate section of Cocobod where there are both Estate Officers who handle soft issues related to management of the real estate and Works Superintendent handling the hardreal estate management issues. This structure is sustainable because all professional in the built environment all fall under one department which facilitates managerial processes and interaction or knowledge spillover.

Theoretically, the study focused on real estate management practices and sustainability issues must be more delved into. This is to help realize more issues towards the development of a holistic strategy to enhance sustainable practices in real estate management. Also, further studies can be done to examine other real life cases (in aspects of real estate management) for incorporation of sustainable practice in the management of the real estate asset.

5.5 CONCLUSION

The concept of sustainable real estate management has gradually gained recognition in both international and locally economy hence the need for companies like Ghana Cocoa Board to make sure they use practices that are sustainable in the management of the corporate real estate asset. There is a saying that “Ghana is Cocoa and Cocoa is Ghana” which implies that the countries backbone is Cocoa therefore industry players of this sector should see to the strategic use of the real estate asset to ensure outmost return from the real property.



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KNUST

The logo of KNUST (Kwame Nkrumah University of Science and Technology) is centered in the background. It features a red flame atop a black base, with a white pickaxe and a yellow hammer crossed in front of it. Below this is a yellow eagle with its wings spread, perched on a green shield. The shield contains a red and yellow design. At the bottom is a yellow banner with the text 'WISDOM BEGETS NO VAIN APPETITE' in black capital letters.

APPENDIX

QUESTIONNAIRE

ASSESSING STRATEGIES FOR IMPLEMENTING SUSTAINABLE REAL ESTATE MANAGEMENT PRACTICES AT GHANA COCOA BOARD

Preamble

This questionnaire is designed to attain information on the sustainable practices in real estate management in your company. The objects of the study are:

- To examine the real estate management practices that exists at Cocobod
- To identify sustainable practices in real estate management practice; and
- To propose strategies for implementing sustainable real estate management practices.

The researcher assures that the information is needed for academic purpose for the award of Master of Science in Project management. The researcher is also a staff hence responses will be treated as strictly confidential.

Kindly answer the following questions by ticking or otherwise without making reference to other materials outside of the questionnaire.

Section A: Background information

1. Please indicate your rank in the real estate unit or department?

Estates Manager ☐ Estates Officer ☐ Works Superintendent ☐
Assistant Estates Officer ☐ Works Foreman ☐

2. How many years of experience do you have in the field of corporate real estate management?

Less than five years ☐ Between five to ten years ☐ More than ten years ☐

3. What is your educational background?

HND ☐ BSc ☐ MSc/Mphil ☐ PhD ☐ Others ☐

4. What professional body do you belong to?

GHIS ☐ RICS ☐ None ☐ Others ☐

Section B: Overview of Real Estate management practices

5. How do you view the real estate portfolio of your company?

a. Space Provider ☐ b. Strategic Corporate Resource ☐ c. Others.....

6. How would you classify the estates section of your organization?

a. Department ☐ b. Section ☐ c. Others.....

7. How long has the estates section been in existence [in years]?

2 -5 ☐ 6 – 15 ☐ 16 – 25 ☐ >25 ☐

8. How do you rate the contribution of the real estate to the operations of your company? a. High ☐ b. Average ☐ c. Low ☐

9. Does your company have a real estate Strategy/Policy? Yes ☐ No ☐

If yes please

state.....

10. How often does the real estate department in your company report results?

Monthly ☐ Quarterly ☐ Semi Annually ☐ Annually ☐

11. How many buildings is your company currently occupying?

10 ☐ 20 ☐ 30 ☐ 40 ☐ >50 ☐

12. What is the main property types currently being occupied by your company
[multiple answers possible]?

Office ☐ Residential ☐ Industrial ☐ Retail ☐ Others ☐

13. Where are the premises or buildings mainly located according to their property
type?

	Rural areas	City Centre	Suburban	Business Park
		Office	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Residential	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Industrial	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Retail		<input type="checkbox"/>
	<input type="checkbox"/>	Others		<input type="checkbox"/>
<input type="checkbox"/>				

14. Which proportion of the premises is owned according to their property types [if
applicable]?

	100% owned	Mainly owned		
Mainly leased	100% leased	Office	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Residential	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Industrial	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Retail		<input type="checkbox"/>
<input type="checkbox"/>		Others		<input type="checkbox"/>
<input type="checkbox"/>				

15. In your opinion, is sustainability applicable to the work you do as an Estates

Officer/Manager? Yes ☐ No ☐ I do not know ☐

Section C: Sustainable Real Estate Management Practices

16. How important are the following sustainable real estate management practices
recognized under the three pillars of sustainability for your company?

Please tick ☐ where appropriate.

Social	Very important	Important	Moderately important	Of little importance	Unimportant
Facilitate and control production, operation and service delivery					
Increase flexibility [functional, physical and/or financial]					
Promote human resources objectives and influence workplace performance					
Facilitate managerial processes and increase interaction/knowledge spillover					
Promote sales and selling process					
Promote marketing message					
Promote corporate social responsibility					
Use of computer aided tools					
Promote Marketing and image					
Enhance building occupant health, comfort, and safety					

17. How does your company evaluate the potential of the following economic sustainable real estate management strategies? **Please tick [√] where appropriate.**

Economic	Great potential	Much potential	Moderate potential	Little potential	No potential
Space utilization and occupancy planning					
Identification of Capital value for company's real estate assets					
Re-evaluation and renegotiation of contracts					
Identification of annual real estate cost as proportion of total annual cost of the company					
Identification of the return on real estate investment					
Performance measurement and Benchmarking for managing the real estate					
Documentation of Occupancy to cost minimization					
Use of computer aided tools					

18. How does your company handle the following real estate related environmental activities?

\Environmental	Inhouse	Outsourced	Not part of our activities
Reduce production of greenhouse gas emissions (particularly carbon dioxide)			
Reduce use of natural resources, in particular, water, gas and electricity			
Reduce waste production and increase recycling			
Procurement of renewable resources			
Collection of water for potable and non-potable uses			
Recycling and treatment of sewage and waste water			

Section D: Ways of implementing sustainable real estate management practice

Please rank the following ways (relative to each other) of implementing sustainable real estate management practices in your division. (With 1 being the most important function, and 10 the least important function)

Strategies	Ranking
Designing a policy on sustainable real estate management	
Performance measurement and benchmarking energy performance of properties	
Motivation plan for managers based on lower service cost	
Government legislation for companies to incorporate sustainability in their corporate objectives	
Provision of incentives for both managers and employees on energy savings	

Awareness creation by education programs for both building users and managers	
Waste Segregation	
Recycling and treatment of sewage and waste water	
Others (please specify)	

Please provide your email address [a summary of the results of the survey will be sent to you]

THANK YOU!!

