

SUSTAINABILITY IN FACILITIES MANAGEMENT: A REVIEW OF DRIVERS AND POLICY ISSUES

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Spurred on by a variety of drivers and policy issues, the continued growth in the development and implementation sustainability, as an obligation and expectation within businesses, has placed more responsibilities on facilities managers. However, it is not clear which of the drivers, issues and responsibilities are most important for facilities managers to develop skills and knowledge in. It is also not clear how issues such as energy management and productivity are closely linked to responsibilities. Drawing on a web based self-administered questionnaire survey of facilities managers, the key drivers, issues and responsibilities are identified and ranked. With a response rate of 22% representing 268 respondents, the results indicate that legislative directives, corporate image and organisational ethos are the most important drivers for the development and implementation of sustainable practices. Similarly, the keys issues and responsibilities identified are energy management, waste and recycling management, health and safety, and carbon footprint. These findings demand that facilities managers develop competences in the identified areas in order to manage and improve the environmental performance of their businesses. Clearly, sustainability policies and responsibilities continue to be influenced by the proliferation of energy and carbon footprint related environmental issues than a balanced approach which takes into consideration the wider social and economic aspects of sustainability. The trend in developing and implementing sustainability will continue due to new statutory directives and requirements.

Keywords: carbon footprint, energy management, facilities management, sustainability policy, waste management.

INTRODUCTION

Sustainability, defined as meeting the needs of the present without compromising the ability of future generations to meet their own needs (World Commission on Environment and Development, 1987) has grown in significance across many businesses. Organisations are progressively concerned with the impact of their business activities on environmental, social and economic sustainability, as well as the impact of sustainability issues on their business (Adams and Frost, 2008; Lindsey, 2011). Hence, the perception of sustainability, as a matter of benevolence with no direct impact on organisations' core business strategies, has changed over the years as organisations actively incorporate sustainability principles into their core business strategies. Increasingly, organisations are now integrating sustainability issues into their corporate reports for reasons such as complying with regulatory changes, or

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improving their environmental, social and economic reputation (Global Reporting Initiative, 2008; KPMG, 2008).

The growing importance of sustainability and its wider variety of sustainability issues affecting and influencing stakeholders with different values, has initiated a debate on the appropriate motivators and issues that provide guidance towards sustainability implementation, assessment and improvement in the built environment.

The built environment's potential as a significant contributor to achieving sustainability goals is well documented and recognised within the facilities management profession (Wood, 2006; Shah, 2007). The built environment has a significant impact on the sustainability agenda as it accounts for nearly 40% of limited natural resources consumed, and 40% of waste and greenhouse gases generated (Chartered Institute of Building, 2004). Indeed, existing building stocks use as much as 45% of generated energy to produce power and heat (Wood, 2006). With increasing utility and maintenance costs, coupled with increasing legislative and regulatory requirements on energy use and carbon reduction, many organisations committed to the sustainability agenda, have developed sustainability policies as an integral part of their Corporate Social Responsibility (CSR) (Walker *et al.*, 2007).

Given that facilities management activities have a significant influence over how buildings and facilities are used, facilities managers (FMs) have an important role to play in developing and implementing their organisation's vision and commitment towards the sustainability agenda. Although sustainability policies directly influence FMs' activities and responsibilities, due to the presence of several different drivers and issues influencing good sustainable practices, it is not clear which drivers and issues are key and if these have been acted upon. There is therefore a need to identify and gain an understanding of the current key drivers, policy issues as well as responsibilities in practice.

This study sets out to identify and rank the key drivers, policy issues and responsibilities for managing and improving sustainability in facilities management through a questionnaire survey of FMs. The study assesses whether emphasises placed on policy issues correlate with the responsibilities of FMs. Knowledge of these drivers, issues and responsibilities will enable FMs to develop skills and competences to manage and improve the environmental performance of their businesses as well as sustainability in facilities management.

SUSTAINABILITY IN FACILITIES MANAGEMENT

The potential contribution of facilities management professionals to achieving sustainability goals is well documented. In a study of the barriers and commitment of the facilities management profession to the sustainability agenda, Elmualim *et al.* (2010) highlighted that FMs tasked with implementing and managing sustainability as a core business strategy face many responsibilities and challenges. Drawing on the stakeholder theory approach (Freeman, 1984), FMs as primary stakeholders "at the forefront of organisational behaviour change are in a position to influence individuals working in business, government departments and public services" (Elmualim *et al.*, 2010), have the best chance to add value for their organisations and customers through efficient management of sustainability issues and practices.

The stakeholder theory, provides a suitable theoretical framework to analyse the relation between the policy issues and responsibilities as it explains how to identify and engage with stakeholders for group effort, mutual dependence and legitimacy.

Hence knowledge of the key sustainability issues and drivers that motivate FMs to adopt sustainability practices is of theoretical and practical importance.

What is driving the sustainability uptake?

The shift towards sustainability means businesses have to respond to increasing environmental and social pressures and thus consider the needs and expectations of a broad spectrum of primary and secondary stakeholders (Hall and Vredenburg, 2003). Hall and Vredenburg argue that there are several drivers of sustainability uptake. For example, there is some evidence that increasing legislative pressure rather than environmental and corporate image of businesses is the key driver (Shiers *et al.*, 2007). Shiers *et al.* demonstrated, through reference to relevant literature and law reports, that recent laws relating to energy consumption in buildings was evidence of the ever-widening set of legal obligations regarding energy efficiency. Within organisations, applying these regulations is often the responsibility of FMs. However, a major concern for FMs is that regulatory objectives and business objectives of their organisations have to be aligned at all levels.

As organisations want to be seen as environmentally and socially responsible entities, organisational ethos and corporate image becomes an important sustainability driver (Loosemore and Phua, 2011). Arguably, the differences in sustainable practices are related to differences in policies, which are influenced by business contexts such as client and end user demands at multiple levels (Nousiainen and Junnila, 2008). These differences may influence the strategic behaviour and performance of the organisations (Lindsey, 2011; Sioshansi, 2011). Hence, pressure from shareholders, clients and employees may influence current organisational policies, practices and understandings of sustainability. Senior management's leadership style and commitment may also influence sustainability policies and practices (Elmualim *et al.*, 2010). However, as integration of sustainability with core business strategies continuously evolves, emphasis on different drivers varies from one organisation to another. Hence there is a need to explore the current key drivers of sustainability through a questionnaire survey.

FM RESPONSIBILITY ON SUSTAINABILITY ISSUES

With a wide range of stakeholders such as legislators, customers, clients and employees, the responsibilities of practicing FMs is essential at the strategic, operational and tactical levels (Shah, 2007). The responsibilities include setting sustainability policies, implementing, monitoring and reporting on the progress and involve integrating sustainability considerations into all business strategies. An IFMA report (2007), noted that among other issues, sustainability was a key issue where FMs had to develop their competences in order to face the demands, challenges and opportunities of managing environmental performances and impacts. The report emphasised that FMs had to work closely with primary and secondary stakeholders to anticipate changes and respond accordingly. For example, in aligning with secondary stakeholder interests, FMs review or monitor the amount of energy used; adopt energy efficiency measures like switching to efficient lighting equipment to reduce energy consumption. This is consistent with the growing body of research in facilities management which suggests energy management (Wood, 2006), waste management and recycling (Pitt, 2005), transportation (Piecyk and Mckinnon, 2010), carbon footprint (Wang *et al.*, 2010) and biodiversity (Halliday, 2007) as the key sustainability issues. In order to rank the responsibilities of FMs aligned to aspects

covered in sustainability policies, the list of aspects provided by Elmualim *et al.*'s (2010) is adapted as aspects of responsibilities undertaken by FMs.

Sustainability policy issues and FM responsibilities

Sustainability policies seek to establish sustainable frameworks for integrating sustainability concerns into core business strategies. This enables organisations to communicate their commitment to the sustainability agenda, a road map for implementing sustainability, gaining senior management acceptance and support, internally and externally. Thus understandings of what is included in such policies reveal the visions, commitment, aspirations, goals and what needs to be done with respect to specific issues. The kind of information and issues dealt with in sustainability policies include among many others, energy consumption, water consumption, waste disposal and recycling, and employee well-being. Sioshansi (2011) advocated that "the large number of activities, as well as many connections between them makes up a major challenge when it comes to transparency and responsibilities within the system". However, it is argued that from a stakeholder theory perspective, knowledge of the contents of sustainability policies are of greater importance as they determine sustainable development activities in response to stakeholder pressures.

FMs, as primary stakeholders, frequently have diverse and opposing goals, priorities, challenges and demands concerning sustainable development pressures (Hall and Vredenburg, 2003). To identify and rank the key aspects described in sustainability policies, and their correlation with FMs' responsibility, Elmualim *et al.*'s (2010) list of aspects covered by organisations' sustainability policies are adapted (see Table 1).

RESEARCH METHOD

Drawing on the stakeholder theory approach, a questionnaire survey is used to identify the key issues from FMs perspective – considering the needs and expectations of a wider range of stakeholders. The adoption of a descriptive quantitative research method is also consistent with the fact that there is a wide range of drivers, issues and stakeholders embedded in organisations and thus disposed to quantitative research.

To gain an understanding of how FMs are engaging with the sustainability agenda, an online self-administered questionnaire survey was conducted among facilities management professionals. A questionnaire survey was considered the most appropriate method of objectively examining the level of understanding, and opinions toward sustainability drivers and issues among facilities management practitioners. Questionnaire surveys have been used in investigating perceptions and opinions of respondents in several industries in the UK (KPMG, 2008, Elmualim *et al.*, 2010).

The perception of facilities management professionals was sought on a total of eight drivers and fourteen issues relating to sustainability policy and FMs' responsibility, identified in the literature and interviews with practitioners. A pilot survey was conducted among a selected group of practicing FMs. The results of the pilot study were discussed by a focus group organised by the project's steering committee, comprising twelve practising FMs and one academic. The questionnaire was accepted as the main data collecting instrument.

In order to have a broad spectrum of facilities management professionals engaged in implementing sustainability issues participating in the survey, accessibility to the online survey instrument was open to all BIFM members and non-members for a period of one month in May, 2010. Thus, using data from BIFM membership records,

potentially 1200 respondents were targeted. No names or identifying information were requested on the questionnaires, and all respondents were assured of absolute confidentiality.

Data collection

The questionnaire instrument involved, 20 closed questions and 5 open questions. However, to identify the key sustainability drivers and issues addressed in sustainability policy documents, perceptions were sought by asking respondents to simply select key drivers and issues. To identify the key drivers and issues, the data was entered into a Microsoft Excel database and analysed using descriptive statistics. A total of 268 respondents completed the entire survey representing a potential response rate of 22.3%. Of the 268 respondents, 198 (74%) responded to questions on sustainability drivers, 186 (69%) responded to questions on sustainability policy issues and, 190 (71%) responded to questions on responsibility. Thus more than 69% of respondents provided opinions on the issues raised in this paper.

SURVEY RESULTS

Drivers of sustainable practices in organisations

Figure 1 show that of the, 198 (74%) respondents who answered questions on drivers of sustainability, 66% identified legislation as the most significant driver for implementing sustainable practices in the respondents' organisation. 61% of respondents identified corporate image as the next key drivers for implementing sustainable practices. Surprisingly, less than 50% of the respondent perceived organisation ethos (43%) and other drivers like senior management and directors' leadership (39%), and pressure from clients (29%) as key drivers. The least drivers identified by the respondents are pressure from employees (21%) and pressure from shareholders (15%). Hence, the top four drivers identified by the respondents are legislation, corporate image, organisation ethos and senior management/director's leadership.

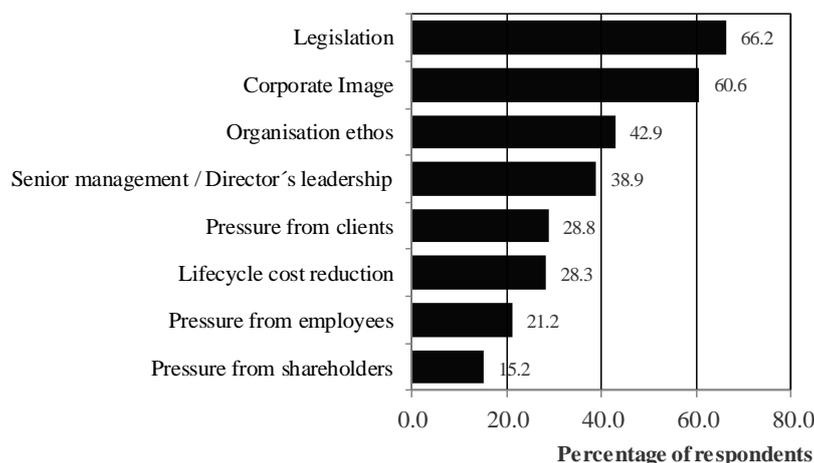


Figure 1: Drivers for implementing sustainable practices

Issues addressed in sustainability policies

Figure 2 show that of the 186 (69%) respondents who answered questions about issues relating to sustainability policies, 90%, 89% and 81% reported that waste management and recycling, energy management and carbon footprint are the key aspects covered by their sustainability policy respectively. Health and safety (69%), and sustainable

travel (66%) are also identified. Other aspects covered by the sustainability policies are targets, measurement and reporting, ethical purchasing and community engagement, specification of sustainable products and services. Only 35%, 30% and 26% reported that building disposal, biodiversity and staff productivity has coverage in their policies. Clearly, the respondents consider waste management and recycling, energy management and carbon footprint as the sustainability issues mostly covered by their organisation’s policies. Comparatively, Figure 2 indicates that for each sustainability issue, majority of the respondents indicated that the key issues were addressed in policies rather than being the responsibility of FMs.

FMs’ sustainability responsibilities

Figure 2 show that of the, 190 (71%) respondents who answered questions on sustainability responsibilities, 76% had responsibility for energy management, 71% indicated responsibility for waste management and recycling and a further 60% indicated Health and Safety. In addition, 52% revealed that they had responsibility for carbon footprint and 42% had responsibility for Targets, measurement and reporting. These results were expected as these issues are already included in activities assigned to FMs regardless of the sustainability components within them.

In marked contrast, only 15%, 15% and 14% of respondents revealed that they had responsibility for sustainable issues such as community engagement, flexible working and biodiversity respectively. The results show that the four key areas of sustainability responsibility assigned to the respondents are Targets, measurement and reporting, carbon footprint, health & safety, Waste management & recycling and energy management. FMs have the least sustainability responsibilities for staff productivity, flexible working, community engagement and biodiversity issues.

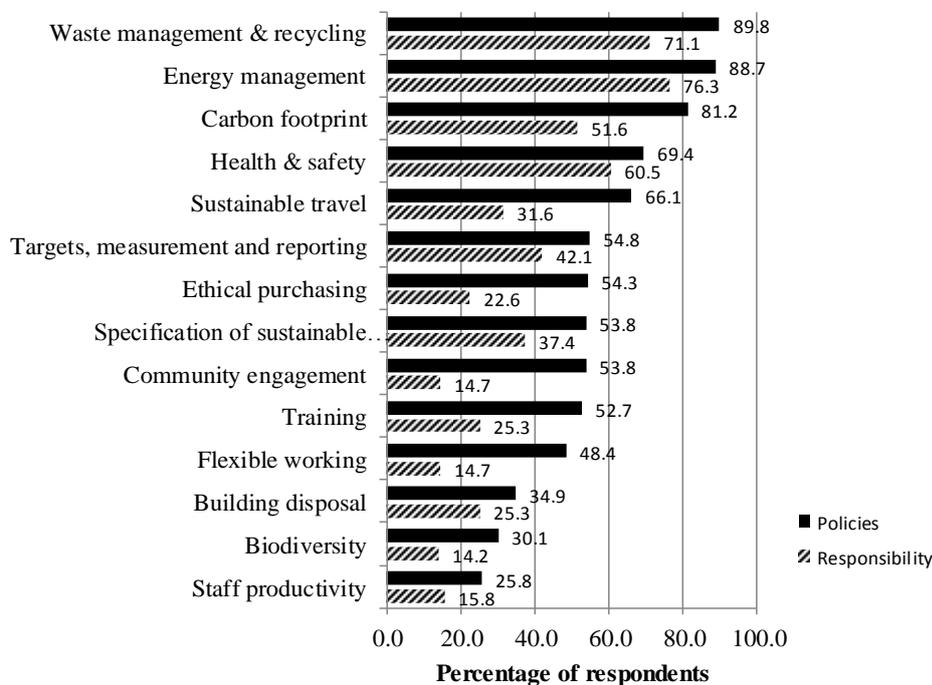


Figure 2: Sustainability issues addressed in sustainability policies and as FM’s responsibility

Table 1 shows a ranking and comparison of the key sustainability issues addressed in sustainability policies and the corresponding key issues for which FMs have responsibility. Table 1 indicates that while the four key sustainability issues remain the same, the emphasis however differ. For instance, the majority of the respondents

identified waste management and recycling as the key issue addressed in policies but energy management as their key responsibility. Similarly, carbon footprint was ranked third key issues in policies but health and safety issues was identified the third key issue in the responsibilities of FMs. While staff biodiversity and productivity were rated as the 13 and 14th key issues identified in the policies, the same issues were rated as the 14th and 11th key issues in terms of FMs' responsibility.

Table 1: Ranking of sustainability issues

Issues	Policies % of respondents	Ranking	Responsibilities % of respondents	Ranking
Waste management & recycling	89.8	1	71.1	2
Energy management	88.7	2	76.3	1
Carbon footprint	81.2	3	51.6	4
Health & safety	69.4	4	60.5	3
Sustainable travel	66.1	5	31.6	7
Targets, measurement and reporting	54.8	6	42.1	5
Ethical purchasing	54.3	7	22.6	10
Community engagement	53.8	9	14.7	12
Specification of sustainable products & services	53.8	8	37.4	6
Training	52.7	10	25.3	8
Flexible working	48.4	11	14.7	13
Building disposal	34.9	12	25.3	9
Biodiversity	30.1	13	14.2	14
Staff productivity	25.8	14	15.8	11

DISCUSSION

In general, the findings are consistent with the argument that issues addressed in sustainability policies often influence the responsibilities of FMs. The findings show that respondents perceived legislation as the key driver ahead of corporate image and organisation ethos (see Ayres *et al.*, 2007, Shiers *et al.*, 2007). A reason might be that legislation forces organisations to comply with regulations and in the process drives the uptake and practice sustainability practices. For instance, the ever tightening legislation around the carbon emission related issues means that FMs are expected to increasingly take ownership over activities flagged under the carbon emissions or energy management arena (Shah, 2007, Holton *et al.*, 2010)

Legislation as the key driver is consistent with the view that governments, as secondary stakeholders, are increasing the pressure on organisations to comply with regulatory frameworks (KPMG, 2008), especially on aspects relevant to the management of carbon emissions. Legislation ensures legal compliance, hence, sustainability frameworks continue to place more emphasis on regulated environmental aspects like carbon emission, carbon footprint and energy usage (Sioshansi, 2011), and not considering the broader social and economic aspects of sustainability. Corporate image and organisation ethos are recognised as key drivers; however, these are often influenced by client demands and competitiveness in the industry.

The identification of waste management and recycling, and energy management as the key issues identified in sustainability policies is consistent with Elmualim *et al.*'s (2010) findings. The findings also indicate that carbon footprint is highly ranked than health and safety in sustainability policies, a contrast to Elmualim *et al.*'s (2010) findings that carbon footprint was not a key issue.

In terms of the responsibilities of respondents, energy management and waste and recycling remain the first and second key responsibilities of FMs as found by Elmualim *et al.*'s (2010). However these rankings do not correlated with that of the policy issues where waste and recycling is ranked higher than energy management. Similarly, as FMs' responsibility, health and safety is ranked higher than carbon footprint even though bon footprint is ranked higher as a policy issue. Clearly emphasis has switched to addressing organisation's carbon footprint, an indication of the increase in significance carbon footprint in sustainability policies and responsibilities.

In spite of key issues addressed in sustainability policies being manifested in FMs' responsibility, the findings indicate the issues and responsibilities are not directly linked within businesses (see Figure 2 and Table 1). For example, only 23% of respondents identified ethical purchasing as their responsibility compared to 54% who identified it as a key issue in sustainability policies. Similarly, only 15% of respondents identified flexible working and community engagement as their responsibility compared to 48% and 54% who identified it in sustainability policies respectively. From a stakeholder theory approach, this can be attributed to organisations holding different perspectives on the importance attached to each particular sustainability issue in terms of policy and responsibility.

Given that the FM profession has a great opportunity to add value to their organisation's sustainability agenda, there is a need for organisations and FMs to tackle equally important issues like staff productivity and biodiversity and flexible working. However, much of the emphasis seems to be on energy management, waste management and recycling and carbon footprint. A reason may be that organisations adopt a compliance approach, hence their presence in sustainability policies and responsibilities. In a study of how the leaders in corporate sustainability in the UK Precast Concrete industry were managing for sustainability, Holton *et al.* (2010) found that by adopting a compliance approach, the organisations engaged in the activities and developing the capabilities necessary to manage for sustainability.

Practice implications

The key drivers for the uptake of these issues seem are legislation and corporate image. The key sustainability issues features in sustainability policies and responsibilities are energy management, waste management and recycling, carbon footprint and health and safety ahead of other issues. Developing skills and competences in the identified areas will enable FMs to manage and improve the environmental performance of their businesses. For example knowledge and understanding of key legislations and regulations will enable FMs to develop energy efficiency strategies and policies. Similarly, the growing trend in carbon footprint management due to associated energy use demands that FMs are competent and skilled in this area.

However, regardless of the levels of uptake, the issue of "effective implementation" is not addressed in this paper; therefore one should not assume that the development of a policy framework implies appropriate management of the policy. The management of the policy is a much broader concept that considers the core project cycle stages (Identification, formulation, appraisal, implementation, monitoring and evaluation). This argument is supported by the evidence in Figure 2 and Table 1, where the proportion of respondents who reported on issues addressed in sustainability policies overwhelmed those who reported on sustainability responsibilities.

CONCLUSIONS

Across many businesses, sustainability continues to grow in importance as an essential obligation and expectation for a variety of stakeholders. The increasing diversity of drivers for its uptake and the lack of consensus on the key policy issues and responsibilities have created a concern for FMs. As the drivers and issues become significant, FMs will require skills and competences in these key areas. Drawing on an online questionnaire survey of FMs, to assess and rank the key drivers, issues and responsibilities in order of importance, more than 66% and 60% of the respondents rated the key drivers for sustainability as legislation and corporate image respectively, while less than half of the respondents viewed organisational ethos, employee and shareholder pressure as key drivers. Clearly the development and management of environmental performance of businesses continue to be influenced by legislation and regulations for the built environment. FMs must now gain competences in regulatory acts that make sustainability in business environment more complex.

The key sustainability policies issues identified, ranked in order of importance, are waste management and recycling, energy management, carbon footprint, and health and safety. However, the key FM responsibilities identified are energy management, waste management and recycling, health and safety and carbon footprint. Obviously, although the policy issues and FMs' responsibilities are the same, they are not directly correlated or aligned, indicating that priorities change within policies and responsibilities. Carbon footprint is now a high priority in sustainability policies and responsibilities while staff productivity, biodiversity and flexible working issues remain the least in sustainability policies and FMs' responsibilities.

Sustainability policy issues and FM responsibilities continue to be influenced by the proliferation of energy use and carbon footprint related issues due to new statutory directives and requirements. Hence FMs must develop competences in the identified areas in order to manage and improve the environmental performance of their businesses while taking a balanced approach that takes into consideration the wider social and economic aspects of sustainability.

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