

Sustainability Balanced Scorecard as a Framework for Performance Measurement in Facility Management - A Literature Review

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Abstract

Facilities management (FM) subsists to prop up the core business that is the prelude goal-seeking actions of the enterprise. The responsibility of FM in facilitating organizational performance, and by this means in provide competitive gain, is generally acknowledged. Environmental management matters have acknowledged an augmented amount of responsiveness in recent years and make use of the balanced scorecard for the intention of environmental management is an important pursuit. The advantage of sustainability and green practices in facility management like diminution in energy consumption, productivity amplifies, waste reduction, and many other beneficial effects of sustainability can be enumerated and offered to an organization's leadership in order to secure sustainable practices and their constructive effect on the underneath line. Many of the affirmative economic possessions do not be evident directly; however one must take a long-term outlook of mainly sustainable practices and cautiously assess green options to conventional structure, operating and maintenance methodologies. The facility manager is the one who visualize the intact process and is often the person in charge of the only group that has influence over the complete life cycle of a facility. Thus, the facility manager often turns out to be the advocate of sustainable and green practices. Equipped with the appropriate financial and strategic planning tools, the facility manager can generate enduring significance to the organization by developing, implementing and maintaining sustainable facility practices.

Keywords: Performance measurement, Facility Management, Balanced Scorecard, Sustainability

Introduction

Increasingly, researchers and practitioners have much concurrence as to the significance of facilities management (FM) as an underneath management service to the key business of an Organization, it considers an interface among physical workplace and people and it necessitate a multi-skill approach (Barrett, 1994). The epitome of FM exists in which facilities are optimized to business requirements and in the usefulness of the systems that make sure that non-fundamental actions provide worth for money (CFM, 1992). It has been extensively acknowledged that performance measurement possibly will accord to additional valuable control all the way through giving apprehension as to whether, and if so which control means to decide (Neely, 1998). The performance of FM is simply of significance to an organization if it is

observed within the perspective of the on the whole accomplishment and achievement of the key business. Environmental concerns have received substantial awareness in the recent years and numerous aspects have provoked business organizations to scrutinize and advance environmental performance (Lämsiluoto & Järvenpää, 2008) and these can also be incorporated into an existing performance measurement system or systems (Figge et al., 2002) by developing a balanced scorecard (BSC) to envisage the cause and effect association between diverse measures (Malmi, 2001). Adaptations to the original BSC which unequivocally regard as environmental, social or ethical matters are over and over again referred to as sustainability balanced scorecards (SBSCs). Several positive economic consequences do not show up instantaneously; however the role of facility manager has control over the complete life cycle of a facility in order to envision a long-term outlook of most sustainable practices and vigilantly assess green alternatives to conventional structure, operating and maintenance methodologies. Therefore, the facility manager oftentimes promotes the sustainable and green practices. In the present paper, we examine the research literature on the importance of Facilities management performance through explicitly integrating strategically relevant environmental, social and ethical goals by using sustainability balanced scorecard and vital role of a Facility Manager.

Theoretical background

Facilities management perspective in common - The genesis of FM can be referred to the scientific management time and the ensuing sudden increase in office administration. The shift in the direction of enhanced management of facilities is lay down to continue as structure with their content and organizations persist to develop into more refined. Explanation of FM propagates and to date there has been no one generally established explanation of what FM involves. As per US Library of Congress, FM is seen as co-coordinating activity where the physical place of work with people and effort of the organization amalgamates the principles of business administration, architecture and the behavioral and engineering sciences. This definition is very vast, even as inadequate as a direct basis for creating a operational model for facilities management. However, in general terms, the three main aspects to the facilities management division embrace well in each state (Barrett, 1994):

- It is a supporting arm to the key business of an organization;
- It establishes an association between physical place of work and employees; and
- It leads to a multiple skill approach.

The Centre for FM in the University of Strathclyde (1992) describes FM as the practice by which an organization brings and upholds a superiority working environment along with eminence support services to convene the organization's objectives at best outlay. The operational environment embraces the physical, administrative and social atmosphere for fruitful progress and the characterization encompass all the systems and services that sustain the business operation and involve that FM is essentially driven by demand and should be directly associated with strategic planning in an organization. The fundamental actions and reactions of FM resides in the means in which facilities are adjusted to business requirements and in the usefulness of the systems that make assured that non-fundamental tasks brings benefits (CFM, 1992).

Performance evaluation notion - Measurement has always been of great significance and it is a domain which has been paid attention in recent times. Sinclair & Zairi (1995) established the necessity for measurement in facilitating superior planning and control; management of change; communication; uninterrupted enhancement; resource allocation; motivation; and extended focal point, determined it to be "a suitable management instrument". Thus, the practice of measurement act as a support to the dissemination of key values to the entire organizations is now universal. Neely (1999) recognized commonalities among business strategy, organizational behavior, and manufacturing societies, noting a agreement that "strategies are comprehended in the course of reliability of decision making and accomplishment" which may be armored by performance tracking techniques.

Application of Performance measurement in facilities management - It has been referred previously that the perspective of this study is FM organizations. The critique has been made that FM researchers do not use the notions of performance measurement in a scrupulous manner. Moreover, they do not utilize universal discussions of performance measures like the importance of making a FM performance measurement framework, and include performance measurement in FM processes like the way that they put in project management methods. The performance measurement study in the FM environment has therefore been apparent to some extent (Bradley, 2002). Even though the literature on performance measurement is huge, but less evident that the concepts are operational in the entire globe, particularly in FM. Latest FM literature review pointed a inclination towards performance measurement, predominantly for strategic expansion. Additionally, the FM organization offers a superior environment for the study of performance measurement and this will be perceived in two folds. First, as a "critical success factor" in the strategic expansion procedure and, second, as a learning practice

within the FM organization which refers to a process whereby the FM organization aligns itself by seeking information, either from the marketplace or through the creation of scientific awareness, and the following relevance of this in organizational development processes.

Background to balanced scorecard - The balanced scorecard was developed in the USA in the beginning of the 1990s by Kaplan & Norton (1992) and criticized the existing methods for assessing business performance for being too narrow and looking back instead of looking forward. From this starting point, they created a method which they named the "balanced scorecard". This method aims at making the business strategy more quantifiable and tangible. Additionally, it forces the business managers to believe what the strategy and vision are really about and what are the actions that direct to satisfying the ideas named in the strategy and vision. Producing a balanced scorecard starts by naming the viewpoints of the effort. Mainly the balanced scorecard effort is conceded out from the four viewpoints suggested initially by Kaplan & Norton (1992): financial viewpoint, customer viewpoint, viewpoint on the internal processes and viewpoint of learning and growth. Other possible viewpoints that are used in the literature are linked to, among others, human resources, the environment, sub-contractors and social impacts. A balanced scorecard finds a fine equilibrium to the financial and non-financial actions (Malmi et al., 2005). It is evenly imperative to make the measures, collect the data, and update the data and adjust the measures time to time. The measures are ineffective in the long sprint if they are not used in assessing the business actions and, when necessary, in correcting the dealings according to the measures.

Balanced scorecard in FM - Balanced scorecard has been utilized in loads of lines of business. Several research on the topic has even been facilities management linked (Hedley et al., 2002; Levin, 2005; Bigliardi & Dormio, 2010; Bigliardi & Bottani, 2010; Wilson et al., 2004). In facilities management field, the balanced scorecard has been utilized in two ways. First, the facilities management goals and measures may be combined to be a part of organization wide measures. In this case, the strategic foundations are resulting from organizational strategies and vision. Second, there have been balanced scorecards that are specially done from the point of view of facilities management (Nenonen & Lindholm, 2006). The Ouye (2003) approach is remarkable as it intends at understanding workplace-related issues for core business purposes. In addition, this method seeks important and available measures and assesses the impact of the functioning environment on how the organization works.

The Sustainability Balanced Scorecard (SBSC) -As numerous environmental and social issues are non-financial and often influence an organization primarily over the long term, both academics and practitioners regarded the BSC as

suitable instrument to relate sustainability issues. The SBSC differs from the BSC in its structural design by calling out sustainability related goals and performance measures. Scholars have highlighted the potential of the SBSC for combining conventional strategic management with corporate sustainability management for two reasons (Figge et al. 2002): first, it allows management to address goals in all three dimensions of sustainability by amalgamating economic, environmental and social issues, whereas other approaches simply spotlight on, for example, the environmental dimension. Second, the SBSC incorporates these three proportions in a single integrated management system. Based on these, researchers have developed extended scorecard designs under the names of sustainability balanced scorecard (e.g. Figge et al. 2002), sustainability scorecard (SIGMA 2003) or approachable business scorecard (van den Brink & van der Woerd 2004; van der Woerd & van den Brink 2004; van Marrewijk 2004).

Significance of Facility Manager - It is believed that a productive work environment is a remarkable contributor to an organization's productivity and the way facility is designed and maintained are usually influenced, if not directly controlled, by the facility manager, the facility manager has a huge amount of influence over the productivity and profitability of an organization. The facility manager bridges the gap between all phases of the facility lifecycle (Hodges, 2005). If the facility management group is viewed as a true collaborated in running the business, the work required to help an organization develop sustainable practices is much easier and more readily achieved.

Research Method

This paper is based on a systematic review has been adopted as the research design most suited to the aims of this paper. In particular, following its conventional process (Tranfield et al., 2003; Parris & Peachey, 2013):

- The Business Source Premier (EBSCO), Scopus and Web of Science (WOS) as the research databases were selected.
- Three constraint criteria established :
 - o only published peer-reviewed journal articles were considered in order to endorse quality control; thus, books, chapters in books, reports, conference proceedings, working papers and other unpublished works were barred
 - o articles had to be written in English
 - o they had to be published in the period January 2001 to June 2016
- It was required that FM is the main interest of the publication in order for papers from it to be included in the review.

- o Consequently, papers published in the following journals were included: Facilities, Journal of Facilities Management (JoFM) and Journal of Corporate Real Estate (JoCRE).
- o We also identified a number of other publications that covered FM topics, such as the Nordic Journal of Surveying and Real Estate Research (NJSR), the Journal of Real Estate Research and Property Management. These were left out because their main focus was not on FM.
- o Also some publications were left out as had FM as a main topic but were intended purely for practitioners, such as the Facility Management Journal and Facilities Management World.
- o Altogether reviewed 44 FM papers were reviewed (See Table 1 in Appendix).
- As terms such as the SBSC are somewhat broadly applied, a more detailed definition in the form of inclusion and exclusion criteria was necessary to distinguish the concept as used in this review given in Table 2 (See in Appendix). First, although the BSC and SBSC have also been applied to non-profit organizations (Kaplan and Norton 2001a; Somers 2005), only studied for profit organizations.
- Inclusion and exclusion criteria based on the SBSC definition given above were used to further narrow down the publication set. The application of these criteria to abstracts and full texts as well as the removal of duplicates led to a significant reduction to 13 publications.
- We did not further investigate the quality of individual publications (e.g. their methodological rigor), but relied instead on the quality screening undertaken by the research databases identified during the selection phase.
- All publications were listed in a data extraction form using basic information (authors, titles, etc.) and specific information (details, method, etc.). The form served as both a log book for decisions within the analytical process and as a basis for subsequent data synthesis.
- We focused on an interpretative, thematic analysis for answering our research questions. First, we analyzed the theoretical perspectives in publications justifying role of FM and usage of BSC. Second, we analyzed the proposed framework for SBSC and role of a facility manager. The final sample size (13; see Table 3 in Appendix) shows that the SBSC literature represents a research field which is somewhat emerging.

Findings

Facilities management (FM) has developed into a major, thriving business segment and, as a discipline, continues to

grow across the world. The strategic contribution of FM to the overall organization should be judged by an organization's stakeholders over a wide range of performance criteria including the hard metrics of finance and economics (Sarshar, 2006). FM is seen to be able to contribute to performance of organizations in many ways (Livingstone, 2002), including culture, control of resources, service delivery, supply chain management and, perhaps most importantly, the management of change. Quality, value and the management of risk emerge as significant factors. In the FM literature, the performance measurement models appear to be a relatively new topic of investigation. However, in recent years the attention towards this concern has enlarged remarkably and today scholars are stressing how important performance measurement of FM activities is for the business success and any improvement in FM effectiveness should lead to a significant cost saving for the organization. That being stated, a transition from performance measurement to performance management has been recently advocated because, as Amaratunga and Baldry (2002) suggest, "measurement is not an end to itself, but a tool for more effective management". With this context, several ways and instruments to measure FM performance have been developed over the years and, among them are: benchmarking (Roger, 2003), the balanced scorecard (Rasila et al., 2010) and key performance indicators (KPIs) (Hedley et al., 2002).

Aligning suitable objectives for FM in the Balanced Scorecard for 'Internal' purposes (for use by individual FM Managers to help run their own organizations) stands facilities management objectives as a total set will be unique and specific to the circumstances of the particular FM organization and its parent body. Individual objectives may be the same or similar to other FM organizations (Rasila et al., 2010) but it is highly unlikely that this will be true of the whole set. Balanced Scorecard for 'External' purposes (for use by a number of FM Managers to benchmark quantitative performance measures and qualitative measures / practices between their organizations) means FM objectives must be generic to be able to serve all the participating organizations and have a degree of relevance to each of them. The objectives provide a stimulus for choosing a balanced set of key performance indicators but their role need go little further. For benchmarking purposes the Balanced Scorecard has a set of generic objectives and key performance measures (KPIs). For 'internal' purposes the Balanced Scorecard has a set of objectives specific to the individual FM organization, and the KPIs are used to measure the level of achievement against those objectives. In addition the Facilities Manager will probably wish to: define targets for the managers responsible for each KPI; document strategies and tasks by which the objectives will be achieved; fix accountabilities among his/her people for each strategy and /or task.

Traditionally sustainability covers three pillars: environmental, social and economic development and translating this concept to FM allows an organization to build and operate facilities that meet organizational goals, enable the productiveness of workers within the office and allow working in harmony with the environment. This leads to the concept of environmental management (Cooper, 1998) and is defined as the processes and practices introduced by an organization for reducing, eliminating and ideally preventing negative environmental impacts arising from its undertaking. The awareness in this topic is increasing and it is highly related to the fact that buildings (both residential and commercial) have worldwide, to date, a significant role in the total energy consumption and atmosphere's pollution. Further, (Aaltonen et al., 2013) also state that "an estimated 80–90% of climate change impacts caused by commercial buildings are created during the operational phase of existing buildings". Thus, 'green buildings' (structures that have less impact on the environment than conventional buildings) today represent an important area of research, although this is still at the premature phase. Simultaneously, the attention paid to the role of FM and facility services in the field of green buildings nowadays is at a very early stage of research. The few studies selected here suggest that FM services have to support user organizations in their effort to become more environmental-oriented (Hodges, 2005). In fact, end-user companies already expect facility managers to be able to provide environment- and energy-related services as they are the only ones to have the knowledge about the entire lifecycle of a building, and thus able to effectively operate (Hodges, 2005).

The facility manager should play a vital role in balancing sustainability and green practices. A facility manager needs

time to learn and absorb these practices. Facility managers need to understand the finances of their organizations and gain the confidence of the financial officers of the organization by maintaining a working relationship with the finance department. Regardless of the organization's financial goals, they almost always dictate the organization's attitude towards how they run their facilities, and whether facilities are treated as assets. And this, by association, dictates how receptive an organization will be towards the issues of sustainability and green buildings. If a facility manager can build an economic case for them, the odds of success for green projects increases dramatically (Gibler, 2006).

Limitations

Our study is subject to some methodological limitations. The first is that the sample is in principle drawn from only English-speaking literature. Second, sample for the review was limited to publications explicitly dealing with the BSC.

Conclusions

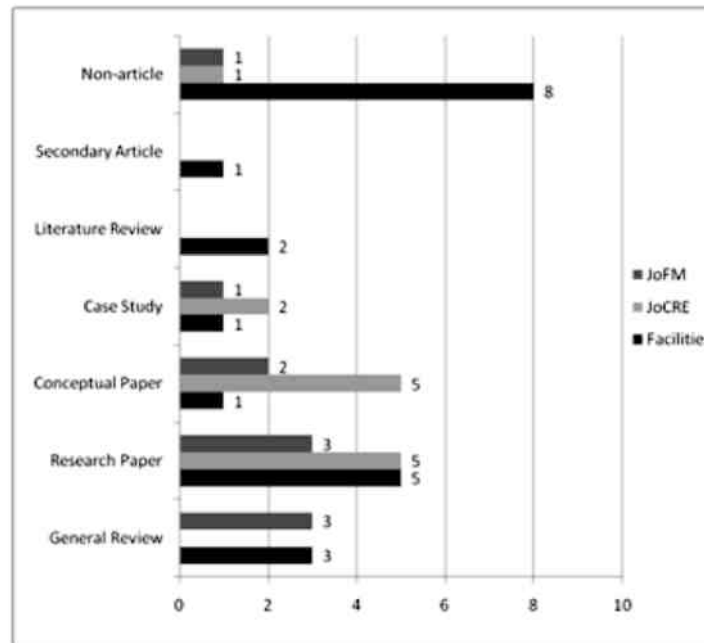
The balanced scorecard is a way to understand facilities management-related issues from the point of view of the support services and working spaces. Often, decisions about the supporting functions are made on a financial basis alone, as easily happens. However, there must be ways to see this more widely and to understand how the supporting functions may support the core business ever better. At present, green and sustainable do not necessarily mean long lasting. The facility manager can and should act as integrator in this process. In order to integrate sustainable practices with an organization's desire for cost-effective facility management, two need to be integrated into the organization's overall strategy.

Table 1: The amount and sources of data

Year	Facilities	JoCRE	JoFM	Amount
2001	2	1	-	3
2002	1	1	4	6
2003	1	1	2	4
2004	-	3	-	3
2005	-	1	-	1
2006	1	1	2	4
2007	1	-	-	1
2008	1	-	1	2
2009	-	-	-	-
2010	3	1	-	4
2011	1	1	-	2
2012	1	1	-	2
2013	1	-	-	1
2014	4	-	-	4
2015	4	1	1	6
2016	-	1	-	1
Total	21	13	10	44

Table 2: Inclusion and exclusion criteria

Criteria	Inclusion	Exclusion
Organizational types in which SBSC is applied	For-profit enterprises; Companies with mixed ownership	Non-profit companies
Nature of application	BSC used as strategic management and measurement tool	Environmental (or related) scorecards without strategic relevance to the organization
Level applied	Corporate and business unit ; support functions directly linked to sustainability	Conventional support units (e.g. HR) not addressing issues beyond the conventional BSC

Table 3: The amount of different paper types

References

- Aaltonen, A., Määttä, E., Kyrö, R. & Sarasoja, A.L. (2013). Facilities management driving green building certification: a case from Finland. *Facilities*, 31(7/8), 328–342.
- Amaratunga, D. & Baldry, D. (2002). Moving from performance measurement to performance management. *Facilities*, 20(5/6), 217–223.
- Barret, P. (2004). *Facilities management towards best practice*. London: Blackwell Science.
- Bigliardi, B. & Bottani, E. (2010). Performance measurement in the food supply chain: a balanced scorecard approach. *Facilities*, 28(5/6), 249-60.
- Bigliardi, B. & Dormio, A.I. (2010). A balanced scorecard approach for R&D: evidence from a case study. *Facilities*, 28(5/6) Nos 5/6, 278-89.
- Bradley, S. (2002). What's working? Briefing and evaluating workplace performance improvement. *Journal of Corporate Real Estate*, 4(2), 150–159.
- CFM (1992). *An Overview of the FM Industry Part 1*. Centre for FM at Strathclyde Graduates Business School, Glasgow.
- Cooper, I. (1998). Emerging issues in environmental management. *Facility Management: Theory and Practice*, 111–119, London: Spon Press.
- Cummings, S., & Daellenbach, U. (2009). A guide to the future of strategy? The history of long range planning. *Long Range Planning*, 42(2), 234–263.
- Figge, F., Hahn, T., Schaltegger, S. & Wagner, M. (2002). The Sustainability Balanced Scorecard - linking sustainability management to business strategy. *Business Strategy and the Environment*. 11(5), 269-284.

- Gibler, R. (2006). Using scorecards to routinely evaluate distribution facility locations. *Journal of Corporate Real Estate*, 8(1), 19–26.
- Hedley, C. & Whelan, A. (2002). Defining, collecting and using property performance indicators: The UK higher education sector experience. *Journal of Facilities Management*, 1(2), 177–187.
- Hodges, C. (2005). A facility manager's approach to sustainability. *Journal of Facilities Management*, 3(4), 312–324.
- Kaplan, R.S. & Norton, D.P. (1992). The balanced scorecard – measures that drive the performance. *Harvard Business Review*, January-February, 71-9.
- Kaplan, R.S. & Norton, D.R. (2005). The Balanced Scorecard: Measures That Drive Performance (cover story). *Harvard Business Review*, 83(7/8), 172-180.
- Lämsiluoto, A. & Järvenpää, M. (2008). Environmental and performance management forces: Integrating “greenness” into balanced scorecard. *Qualitative Research in Accounting & Management*, 5(3), 184-206.
- Levin, A. (2005). Changing the role of workplace design within the business organization: a model for linking workplace design solutions to business strategies. *Journal of Facilities Management*, 3(4), 299-311.
- Livingstone, M. & Dibkey, B. (2002). Utilising performance measurement to drive operational excellence in a post-merger environment. *Journal of Facilities Management*, 1(2), 131–141.
- Malmi, T. (2001). Balanced scorecards in Finnish companies: A research note. *Management Accounting Research*, 12(2), 207-220.
- Malmi, T., Peltola, J. & Toivanen, J. (2005). Balanced Scorecard Rakenna ja Sovella Tehokkaasti. Talentum, Helsinki.
- Neely, A.D. (1998). *Measuring Business Performance: Why, What and How*, The Economist and Profile Books Ltd. UK: London.
- Nenonen, S. & Lindholm, A. (2006). A conceptual framework of CREM performance measurement tools. *Journal of Corporate Real Estate*, 8(3), 108-19.
- Ouye, J. (2003). *Measuring Workplace Performance: Using the Performance Map*. World Workplace, Yokohama.
- Parris, D. L., & Peachey, J. W. (2013). A systematic literature review of servant leadership theory in organizational contexts. *Journal of Business Ethics*, 113(3), 377–393.
- Rasila, H. & Nenonen, J. (2010). Using balanced scorecard in operationalising FM strategies. *Journal of Corporate Real Estate*, 12(4), 279–288.
- Rogers, P. (2003). Performance matters: How the high performance business unit leverages facilities management effectiveness. *Journal of Facilities Management*, 2(4), 371–381.
- Sarshar, M. (2006). Improving service delivery in FM: case study of a UK hospital facilities directorate. *Journal of Facilities Management*, 4(4), 271–285.
- SIGMA (2003). The SIGMA guidelines toolkit: Sustainability scorecard. <http://www.projectsigma.co.uk>
- Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*, 14, 207–222.
- Van Marrewijk, M. (2004). A value based approach to organization types: Towards a coherent set of stakeholder-oriented management tools. *Journal of Business Ethics*, 55(2), 147–158.
- Van den Brink, T. W. M., & van der Woerd, F. (2004). Industry specific sustainability benchmarks: An ECSF pilot bridging corporate sustainability with social responsible investments. *Journal of Business Ethics*, 55(2), 187–203.
- Van der Woerd, F., & van den Brink, T. W. M. (2004). Feasibility of a responsive business scorecard—A pilot study. *Journal of Business Ethics*, 55(2), 173–186.
- Wilson, C., Hagarty, D. & Gauthier, J. (2004). Results using the balanced scorecard in the public sector. *Journal of Corporate Real Estate*, 6(1), 53–64.
- Zairi, M. & Sinclair, D. (1995). Business process re-engineering and process management: a survey of current practice and future trends in integrated management. *Management Decision*, 33(3), 3–16.