

PERFORMANCE MEASUREMENT IN FACILITIES MANAGEMENT; STATE OF KNOWLEDGE

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The nature of performance measurement has changed over the past few decades. In FM the tendency to benchmark to industrial averages has led to stagnation and a reduction in the adoption of innovative practices. This paper examines the state of knowledge of performance measurement in a facilities management context. The concepts underlying current performance measurement are examined in relation to their ability to drive the innovation process in industry. The paper examines internal and external benchmarking systems and their strengths and weaknesses. Exploring the possibility of applying a benchmarking technique in service performance measurement will be highlight. The paper suggests that a fully developed performance measurement solution can deliver as a business tool whilst acting as a driver in the innovation process.

Keywords: performance measurement, facilities management, innovation, service performance.

INTRODUCTION

Performance measurement is an area to which companies have paid much attention recently. Performance is regarded as a major competitive issue (Tranfield and Akhlaghi 1997). In a facilities management (FM) context, there is a wide range of choices in measuring facility management performance reflecting the varied nature of the field. The focus of FM skills and techniques should be in the area that contributes to the overall management of a business by relating accommodation and support infrastructures issues to business, financial and personal criteria (Barret 1992). As FM is concerned with all aspects of the services delivery, research in this area attempts to review the state of knowledge of performance measurement in FM and seeks to explore measurement of service performance linked to the innovation process in organisation. The discussion on performance measurement focuses on the benchmarking techniques in measuring service and this drives the framework of the FM service performance measurement solution.

PERFORMANCE MEASUREMENT PRINCIPLES

The traditional view of performance measurement, determined by Teague and Eilon (1973), is that it has three broad purposes: to ensure the achievement of goals and

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objectives; to evaluate, control and improve procedures and processes; and to compare and assess the performance of different organisations, teams and individual.

An early attempt at developing financial measure was made by Du Pont (Walters 1997). Du Pont, widely acknowledge as being the founder of financial performance measurement, introduced a pyramid of financial ratios as early as 1903 (Anderson and Mc Adam 2004). However in late 1970s and 1980s numerous authors expressed a general dissatisfaction with traditional backward looking or lag accounting based performance measurement systems (Anderson and McAdam 2004). In the 1990s attention of performance measurement shifted to quality and consumer satisfaction. A broader conceptualisation of business performance has been emphasised on indicators of operational performance (i.e., non-financial performance) in addition to indicators to measure business performance (Venkatraman and Ramanujam 1986).

Drucker (1993) described a traditional measure as inadequate for business evaluation and failing to meet new business needs in that most measures are lagging indicators. The argument was supported by Kaplan and Norton (2001) who claim that financial measures are historical in nature as they report only on outcomes and the consequences of past actions. Amaratunga and Baldry (2003) have summarised the views advanced in debate to traditional performance measurement as follows:

- Criticism of traditional management control (Brown and Laverick 1994; Stone 1996, Letza, 1996, Rangone 1997, Neely 1998).
- Need to represent non-financial measures (Olve *et al.* 1999, Ernst & Young 1998)
- Lack of prescription on how to implement the measures (Olve *et al.* 1999, McFadzean 1995)
- Lack of strategic focus (Hally 1994)

The debate and the criticism on the traditional performance measurement show that financial performance measurement is not a solution to the measurement of business performance. For Nani *et al.* (1990) performance measurement systems were developed as a means of monitoring and maintaining organisational control

“organisational control may be defined as the process of ensuring that an organisation pursues strategies that lead to the achievement of overall goals and objectives”.

Hronec's (1993) work defines performance measures as vital sign of the organisation and how well the activities within a process or the outputs of a process achieve a specific goal. For Zairi (1994) performance measurement is the systematic assignment of a number of activities whilst Kanter (1995) claims that in today's dynamic business environment the emphasis has shifted to the “three Cs - concepts, competence and connections- which drives from investments in innovation, education and collaboration. As cited in Wilson (2000) the roles of performance measurement have been intertwined with the premise that organisations achieve success by delivering services with greater efficiency and effectiveness than their competitors (Ghobadian and Ashworth 1994).

Further themes relating to adding value to performance measurement systems have been determined and analysed by Wilson (2000). These themes are;

- Measurement for improvement which states measurement systems are service function and only have a right to exist if they add value to the organisation (Schalkwyk 1998).
- The integration of broad measures which see the challenge for performance measurement systems as being the ability to balance multiple measures (i.e. cost, quality and time) across multiple levels (i.e. the organisation, the process and the people) (Hronec 1993).
- Clear communication and dissemination. If information is poorly presented, it may be misunderstood, poorly assimilated, or at the extreme, completely ignored (Harvey 1984)

Amaratunga and Baldry (2003) described performance measurement as a process of assessing progress towards achieving pre-determined goals, including information on the efficiency by which resources are transformed into goods and services, the quality of these outputs and outcomes, and the effectiveness of organisational objectives. Therefore, the basic foundations of performance measurement are of quantifications of elements which impact on organisational objectives, management control and evaluation. Fitzgerald *et al.* (1991) examined performance measurement in services businesses. They have synthesized the idea of performance measurement in the service sector in six generic performance dimensions, namely competitive performance, financial performance, quality of service, flexibility, resource utilization and innovation. They concluded that performance measures fell within two broad categories: end results, and means or determinants. The results were further subdivided into “competitiveness” and “financial measures”. The means or determinants were subdivided into four broad categories. These were: quality of service; flexibility; resource utilization; and innovation.

FACILITIES MANAGEMENT OVERVIEW

FM could be said to have emerged with the integration of three main strands activity which is property management, property operations and maintenance and office administration (Kincaid 1994). More significantly it established a focus on the management and delivery of the business “outputs” of both of these entities; namely the productive use of building assets as workplaces (Varcoe 2000).

Over few years, facilities management has grown as a business discipline and also as a scientific discipline, slowly finding and anchoring its position among the organizations’ business processes. Nowadays, dedication of FM organizations to new developments and continuous innovation processes seems to be the way to stay in business, constantly exceeding customers’ expectations and adding value to the core business of the client organization (Mudrak, Wagenberg and Wubben 2005).

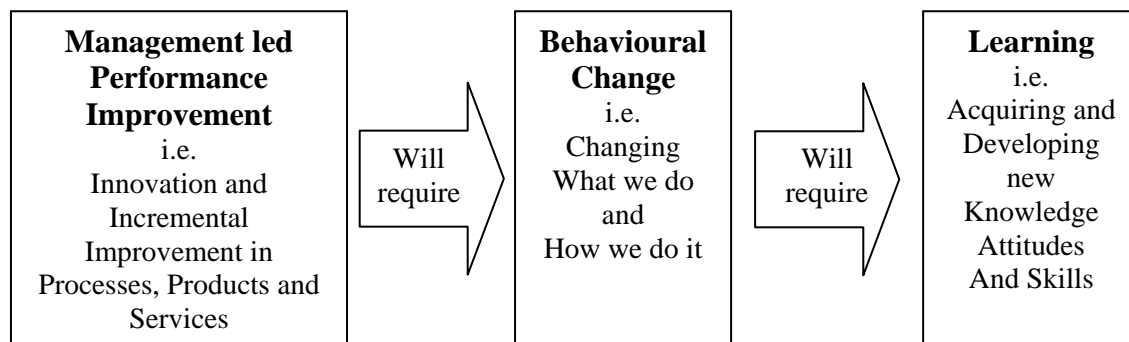
FACILITIES PERFORMANCE AND INNOVATION

Innovation can be defined as a continuous process of bringing new ideas into practical uses (Tidd *et al.* 2001). A broad definition as cited in Mudrak, Wagenbergh and Wubben (2005) innovation is “a management process, involving multiple activities, performed by multiple actors from one or several organisations, during which new combinations of means and/or ends, which are news for a creating and/or adopting unit, are developed and/or produced and/or implemented and/or transferred to old and/or new market-partners (Gemuenden, 2003)”. According to (Tidd *et al.* 2001) the innovation processes in product and service development are similar in principle;

however, they vary in specific routines and activities performed, by which the innovation processes are enable. One of the more common debates concerning the definition of innovation asks whether innovation should be regarded as a process or a discrete event (Cooper 1998).

Either process or event innovation seems to be a synergized element to organisation growth and to be competitive in the market. According to Cooper (1998) understanding of learning processes is a key requirement for the facilitation and optimisation of improvement and innovation in business process. By understanding and optimising learning process, managers in organisations will be able to achieve behavioural change leading to performance measurement. With respect the performance measurement and the innovation process in organisation it shows that performance measurement is the driver. Buckler (1998) explained that there is a link between learning and performance improvement and stated that by understanding and optimising learning process, managers in organisations will able to achieve behaviour change leading to performance improvement (see Figure 1). Therefore the growth in performance measurement of the FM discipline seems to be related and has a direct impact upon organisational performance through innovation.

Figure 1: The link between learning and performance improvement



Source: Buckler, 1998

FACILITIES PERFORMANCE MEASUREMENT

The focus of facilities management skills and techniques should be in the area that contributes to the overall management of a business by relating accommodation and support infrastructure issues to business, financial and personal criteria (Barret 1992). Therefore the issue of measuring facility performance is a critical task to the facilities manager. However, why should FM organisation want to measure performance? From a classical management perspective there is a need to assess performance in order to guide management decision making, as FM is a subset of general management, performance measurement applies to management in FM context (Amratunga, Baldry and Sarshar 2000). Further more, as discussed earlier, performance measurement is a driver to the innovation process within an organisation.

Alexander (1996) identifies measurement of performance as one of “three essential issues for the effective implementation of a facilities strategy. Thus performance measurement has become increasingly important both for reason of justification to general management and to support management and practise within facilities management organisation. The measurement of facilities has three main components,

namely, physical, functional and financial (Williams 1996). Physical performance relates to the behaviour of the building's fabric and embraces physical properties such as structural integrity, heating, lighting, energy efficiency, maintainability, durability etc. Functional performance concerns the relationship of the building with its occupiers and embraces issues such as space, layout, ergonomics, image, ambience, communication, health and safety and flexibility, etc. Finally, financial performance arises from the physical and functional performances of the building and comprises capital and recurrent (life-cycle) expenditures, depreciation and efficiency of use etc.

For Amaratunga and Baldry (2003), the contribution made by FM will be judged by an organisation's stakeholder over a wide range of performance criteria, including the hard metrics of finance and economics. FM is seen to be able to contribute to performance of an organisation in many ways, including strategy, culture, control of resources, service delivery, supply chain management and the management of change. Quality, value and the management of risk emerge as significant factors. Thus it is important to have systems to measure the effect of the FM functions on an organisation's core business together with systems to measure FM's own performance.

There is wide range of choices in measuring facilities management performance reflecting the varied nature of the field. It regarded as a major competitive issue (Kincaid 1994). The facilities manager must understand the nature and the business organisation and the work process in order to derive effective and efficient measurement tools. Besides this the facilities manager may also have to clarify the purposes of measurement before deciding upon the performance measurement technique to be applied.

BENCHMARKING AS TECHNIQUE/TOOL IN MEASURING FACILITIES SERVICE PERFORMANCE

Benchmarking is essentially a cost reduction method (McDougall and Hinks 2000). The principle of benchmarking evolved out of the total quality management movement and allows managers to place their performance measurement in context (Camp 1989). It is the most powerful technique for gaining and maintaining competitive advantage (Codling 1992). Sarkis (2001) outlines, from a manager's perspective, that benchmarking has been defined as a continuous, systematic process for evaluating the products, services and work processes of organisations that are recognised as representing best practices, for the purposes of organisations improvement.

In facilities management, benchmarking as a performance measurement technique is well established. The application of benchmarking to facilities management performance criteria is now common within large organisations (McDougall and Hinks, 2000). It is the ideal tool for setting corporate goals and transforming them into tangibles which are delivered to the end customer and it is the tool that enables the senior manager to answer questions such as: Where are we now? Where do we need to be? How do we get there? How could we remain there? The desired standards of performance are therefore to optimize process performance in order to deliver total quality and 100 percent value to the end of customer (Zairi 1994).

Benchmarking within facilities management began to appear around 1984 when the International Facilities Management Association (IFMA) started to collect data on facilities trends and demographics. This was expanded in 1987 to include occupancy costs, which coincided with the initial interest in such data in the UK (Varcoe 1996). Gilleard and Yat–ling (2004) state that facilities management benchmarking issues are typically driven by financial, organisational, change management and customer-related needs. They may be either internally focussed or external driven. Therefore it puts pressure on FM teams to value customer driven issues such as delivery of quality and timely services. It also fails to take into account how an organisation performs at the strategic level, whether from the worker or workplace perspective. The Department of Trade and Industry, in London has produced an executive guide and point out the importance of benchmarking against:

- The best you can find whether within your industry or outside
- What the relevant to your customer’s view of what is important
- That thing that effect financial performance

In a facilities management context, many people think that benchmarking is only about comparing cost levels. However, Wauter (2005) works revealed there are another numerous aspects of facilities management than it can be benchmarked. Several of the aspect revealed is as listed below.

- **Space use.** Benchmarking the space use is a prime as this drives all of the premises costs and the floor areas need to be known for the purpose of comparing costs of maintenance, cleaning, etc.
- **FM management.** Benchmarking the effectiveness and cost of the facilities management operation on a strategic/tactical level
- **Computer aided facilities management systems.** Benchmarking of the costs and effectiveness of the help desk.

In addition, Hinks and McNay (1999) emphasize the need to measure performance gaps between service delivery and customer satisfaction. Hence Hinks and McNay (1999) stress the need to rank benchmark criteria, linking these to performance and service in such a way that their overall influence may be evaluated against business driven imperatives. Further, Hinks and McNay (1999) suggest the application of a management by variance tool. The tool identifies business and facility key performance indicators (KPI), helping to create a rank order among the benchmarking criteria.

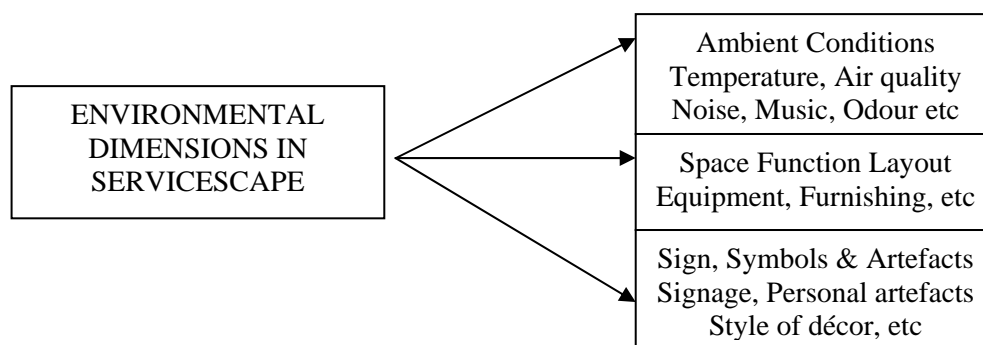
Benchmarking Service Performance in FM

Most services are provided through facilities (Brackertz and Kenley, 2002) and it has been suggested that facility performance measurements should relate to the main business indicators for the primary task such as customer satisfaction or service delivery (Walters, 1999). As an integrated approach in managing the workplace, service is one of the key components for the facilities manager to consider in achieving the goals of the organisation. In service provision, facilities management is concerned from the major strategic decisions to very detailed decisions such as posting the signs to the ladies’ toilet in restaurant (Looy, Gemmel and Dierdonck 2003). Therefore measuring service performance is crucial to the facilities manager.

Applied models that link facility performance measurement to organisational strategy have, to date, been limited (Brackertz and Kenley 2002). Bitner (1992) notes that in service firms the importance of the physical setting depends on the nature of the job as well as the consumption experience. Consequently she presents a typology of service environments or “servicescape” According to Looy, Gemmel and Dierdonck (2003), the customer perceives the servicescape holistically. This includes environmental dimensions comprising ambient conditions, spatial layout and process and sign, symbols and artefacts.

Ambient conditions refer to largely background characteristic such as noise, temperature and scent. In short, all the elements of our human environment affect human five senses. Spatial layout and process includes elements of the environment that are closely related to the core element of service and it is these things that are necessary to deliver the service. These dimensions refer to the method of arrangement and the physical and psychological effects to the customer. The other dimensions are sign, symbols and artefacts. It is physical environment that serves as an explicit or implicit communication to its user in relation to the workplace (see figure 3).

Figure 3: Servicescape Environment



Source: Looy, Gemmel and Dierdonck 2003

Applying benchmarking to service performance is too new a concept to reach any firm conclusions. Further research is required.

EMERGING RESEARCH NEED

Generally this paper has determined an area of proliferation in the measurement of FM performance. Measuring facilities performance contributes to the organisation's success in the innovation process. Benchmarking is among the accepted approaches involved in measuring 'hard' and 'soft' issues in facilities performance. Focusing on measuring service performance in a facilities management context, benchmarking seems to be the most common approach used. However questions to be asked as an on going research before applying a benchmarking technique as follow.

- i. How does customer value the service performance and how to distinct the service it self?
- ii. What are the mechanism to measure the service performance and how to measure?
- iii. How to differentiate between the appreciation of service provide with the physical environment.

CONCLUSIONS

Performance measurement is an established concept that has taken on renewed importance in a variety of organisations. In a facilities management context performance measurement makes an important contribution to organisational success in terms of effectiveness, efficiency and adding value. This paper suggests that the key components that impact on FM implementations are a *synergistic blend of “hard” and “soft” issues*. In principle benchmarking seems to be the technique that can be applied in measuring facilities service performance. However it is important to highlight that the characteristic of service itself is very subjective and this needs to be addressed if any objective data is to be obtained.

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