CAPTURING KNOWLEDGE FROM FACILITIES MANAGEMENT PRACTICES – Issues and Possibilities

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Abstract
This is an exploratory paper that looks at issues and possibilities in relation to capturing experience and knowledge from facilities management practice. The underlying premise is that hitherto, current facilities management practice is largely unstructured leading to tremendous waste of facilities managers’ time (a critical resource) in day-to-day problems solving. If facilities managers’ ‘attention resource’ is to be optimized, then a structured way of capturing their experience should optimize waste associated with ‘re-inventing the wheel’ within the organization concerned. The possibilities of linking recurring problems to specific or related knowledge content within the scope of activities of facilities management (FM) can potentially provide a fruitful path for exploring and managing the capture, analysis and classification of emerging core knowledge areas as corporate knowledge unique to the particular business and portfolio setting.

This paper begins with a critical analysis of the concepts behind ‘knowledge management’ and other management tools like business process reengineering, total quality management, project and risk management; as they currently appear in published literature. This analysis considers the notion of knowledge and how it is able to be managed as well as providing context to the emergence of knowledge management as a “new wave” management technique. Issues surrounding current definitions of knowledge management will form the basis of the derivation of a working definition that will be used to propose a knowledge management model for facilities management practice.

The proposed knowledge mapping model will combined knowledge captured from FM practice and content matching against commonly accepted FM core activities/areas or competences. The paper will explore issues and consider possibilities of structuring a proposed knowledge content that reflects the realities of practice.

Keywords: knowledge mapping, facilities management practice, knowledge management, management tools

INTRODUCTION
Knowledge Management is one of the more recent business management disciplines which has attracted a great deal of interest, particularly over the last decade. Along with quality management, value management, risk management, change management, performance management and the list goes on; it presents, within the business context, another emerging area of management considerations that purports to enhance value to the corporate bottom line performance over time.

It is important, from a facilities management perspective, that practitioners understand the thrust of this new management approach to build broader business management proficiency and be able to determine if, where and how such an approach could impact on or even taken advantage of, within the practice of facilities management within a corporate setting.

This paper is an attempt to understand how the knowledge management concept can be harnessed to benefit FM practice, an area of management that is often typified by reactive problems solving in a constantly changing environment. The paper also explores issues and
possibilities of capturing the experience of facilities managers and relating these to emerging core FM knowledge areas as defined by major professional FM institutions around the world. A preliminary framework linking FM practice to FM knowledge areas is proposed as a sustainable facilities management knowledge management model. A primary aim of the paper is to break the constant cycle of 'reinventing the wheel' in FM practice.

KNOWLEDGE MANAGEMENT IN A BUSINESS MANAGEMENT ENVIRONMENT

What is Knowledge Management?

“I don’t believe knowledge can be managed. Knowledge Management is a poor term, but we are stuck with it, I suppose. “Knowledge Focus” or “Knowledge Creation” (Nonaka and Takeuchi, 1995) are better terms, because they describe the mindset which sees knowledge as an activity not an object” (Sveiby, 2001).

It is interesting to note one of the founders of “knowledge management”, Karl Erik Sveiby, who wrote the first book on knowledge management in 1990, is now uncomfortable with the term. Sveiby's views are supported by the fact that there are a myriad of definitions for knowledge management, many with a common theme of knowledge management ensuring or being a potential source of competitive advantage and achieving the mission of the organisation (Sarriegi Dominguez J. M. et al., 2003; Zhao and Byar, 2002; Ram, 2002; Pierce, 2002; Grey, 1999; Barclay and Murray, 1997; Malhotra, 1998; KM Forum, 1996). Knowledge management can take the form of transformation of individual knowledge to organisational knowledge, sharing and applying knowledge, managing and developing personal competencies, managing information, measuring the intellectual capital and organisational learning (Sarriegi Dominguez J. M. et al, 2003).

Equally common in published literature on knowledge management is an information technology focus, which is reflected in the following definition:

“In information technology, knowledge is, to an enterprise or an individual, the possession of information or the ability to quickly locate it” (http://searchcio.techtarget.com/sDefinition/0,,sid19_gci212448,00.html).

Pierce J (2002) states that "technology is a key enabler of managing knowledge", which suggests knowledge can be captured.

The concept of knowledge and knowledge management needs to be carefully examined. As part of knowledge management, knowledge is generally considered to be either explicit or tacit. Explicit knowledge being knowledge that is formalised knowledge, while tacit is knowledge that is "hidden" in our consciousness: it is contained in the human mind (Nonanka and Takeuchi, 1995; Kucza, 2001; Wilson, 2002; Mezel, 2003). Wilson (2002) argues that the use of the term tacit knowledge has been applied incorrectly and the correct term is implicit knowledge as this refers to previously unexpressed but expressible knowledge, while tacit knowledge is inexpressible. This view is then consistent with the position that knowledge is a product of the human mind and is not able to be captured. However, if the concept of knowledge is unpacked from the broader jargonistic term of knowledge management, it usually is defined as a state of mental apprehension, perception or cognisance and is generated only in people’s minds (Nonaka and Takeuchi, 1995; Wilson, 2002; Barclay and Murray, 1997). The KM Forum (1996) quoting Karl M Wiig (1996), defines knowledge as “the insights, understandings, and practical know-how that we all possess and is the fundamental resource that allows us to function intelligently.” This is in distinct contrast to the above views on the management of knowledge in that knowledge is an intrinsic human function relating to the mind and how the mind is able to learn and understand. As mentioned by Wilson (2002) the notion of managing the mind and capturing and documenting the content of the mind is fanciful, however he suggests that if information practitioners need to be referred to as Knowledge Managers then this may not be harmful. If this is the approach in practice, it may be a misrepresentation of the deliverable and may embed a complacency within an organisation that the knowledge needs to sustain competitive advantage are now captured and any loss of personnel will not impact on the corporate knowledge bank. The notion of corporate knowledge is complicated even more when considering an organisation is merely:
"A consciously coordinated social unit, composed of two or more people, that functions on a relatively continuous basis to achieve a common goal or set of goals" (Robbins et al, 1994).

However, knowledge can be classified as being corporate or enterprise; strategic or business; tactical or management; and operational or hands-on (KM Forum, 1996). Fundamentally the context needs to be clearly defined in the first instance and then a "knowledge management" approach can be considered.

Based on the above discussion, the general problem encountered with the definitions examined is that there is a notional separation between knowledge and people. The transformation of data to information, to knowledge, to wisdom; is depicted as a mechanical process that can occur so long as there are tools that enable this transformation to happen. There has been criticism in the past relating to this overly simplistic approach to knowledge creation particularly, the model by Nonaka and Takeuchi (1995).

**Business Drivers, the Emergence of Knowledge Management and the Cost of Knowledge**

In broad terms, key business drivers that influence the strategic direction and performance of a business and ultimately its value are:

- Maintaining or increasing market share:
  - Changes in market or community demand for existing products and services.
  - Demand for new products and services.
- Seeking more cost effective production or delivery of services.
- Introducing more modern and efficient equipment.
- Implementing changes in regulations requiring modifications to the facility or plant and equipment.
- The dynamics of the market place, which may result in mergers or acquisitions.

Getting the above correct are often reflected in reduction of cycle times, operating with minimum fixed assets and overheads, shortening product development time, improving customer services, empowering employees, innovation and delivering high quality products, enhancing flexibility and adaptation, avoiding costly mistakes, reducing risks, capturing information, creating knowledge and sharing and learning and improving profitability. (Barclay and Murray, 1997; Van ‘T Hof, 2003; Grey, 1999; Sarriegi Dominguez J. M. et al. 2003). The knowledge content associated with the above initiatives can be broadly grouped under the following:

- Knowledge as a product: It is generated packaged and sold.
- Transfer of knowledge and best practices: Identification of best practices and transferred to other parts of the company.
- Customer-focused knowledge: Capturing customer needs, preferences and business to increase sales.
- Personal responsibility for knowledge: Support every single person in identifying, maintaining and expanding their knowledge.
- Intellectual asset management: Corporate-level management of specific intellectual assets such as patents, technologies and operational and management practices (Kucza, 2001).

Considering these drivers and suggested knowledge classes, fundamentally a key component to enable the development of responses to the drivers and to have the knowledge available to be classified is the capability or capacity of the business. This will have a direct relationship to the business’ profitability, growth and survival, and future direction. It also has a direct relationship to the skills and competencies of the human resources of the business. The skills and competencies of the human resources have a foundation in the knowledge that these human resources have and how they are applied. In recent times, however, there may have been an undervaluing of the knowledge contained in these human resources. As Lurie (1999) indicates in the United States:

*"From 1993 to 1996, there was a sentiment in the market that smaller up-start companies were going to overtake the larger, blue chip corporations, which were perceived to be bloated with superfluous workers and internal red tape. Although these*
rumours of diseconomies of scale were widely exaggerated, many large corporations slashed their labour force in a move to maintain an aura of competitiveness."

This period saw the emergence of the "downsizing" management vogue. It was sparked by a view, as alluded to by Lurie, that cutting costs to improve the market's perception of the organisations' value and to be able to better compete with other businesses would provide immediate results to the bottom line. This was not only an approach adopted by the private sector. The public sector, facing ongoing pressures relating to the costs of providing services and the political sensitivities relating to increasing revenues through higher taxes and charges, saw downsizing and outsourcing as measures to reduce costs and defer the pressures for a short period – hopeful to the next government or next term of office.

While Lurie's view is more concerned with the value of the organisation's market value i.e. share price, and not non-economic issues relating to the operational performance of the business, such as loss of corporate knowledge, an article in Business Review Weekly (Knowledge in action, by David James, 23 Feb 2001, BRW) said "if knowledge is 'owned' by the worker, staff turnover represents the loss of an asset for the enterprise. Cronin (Bernard Cronin, chief executive of the Australian Institute of Management) estimates the cost of losing an employee to be between $150,000 and $340,000." Pierce (2002) proposes that the annual avoidable cost for an organisation of 10,000 with a 15% attrition rate is $225M.

Stephen Roach, Chief Economist at Morgan Stanley, who was a strong protagonist for downsizing, changed his strong views in 1997 stating that it was a recipe for disaster (Wilson, 2002). This is reinforced by Jenkins (1997), as reported by Wilson (2002), that downsizing was the most pervasive yet unsuccessful change effort in the business world. Certainly the notional costing above reflect that the "downsizing" euphoria had some dire consequences to organisational knowledge. While this may be a notional cost, the retrenchment of significant numbers of staff represents a potentially important loss of corporate knowledge – this point reinforces the previous assertion that knowledge resides in the person not the organisation. Taking this further in terms of recognising knowledge as an asset from an accounting perspective i.e. it provides further economic benefits, there is the view that it should be recognised as part of the intangible assets that often make up to 50% of an organisation's value.

(http://www.cibasolutions.com.au/Resources/res_news_article.htm) In so doing, retrenching staff will then affect the bottom line because of flow on implications to the operating result due to asset disposal and reducing the financial position of the business. However, this leads to further discussions on intellectual property and knowledge and the key accounting issues of relevance and reliability of measurement etc., which are outside the realms of discussion for this paper.

The timing issue relating to the downsizing period as mentioned above is worthy of a closely examination. Wilson's research (2002) indicates that an exponential growth in knowledge management activity in the years commencing 1997. It would appear that, from a business management perspective, knowledge management emerged as a response to the consequences of the downsizing activity of the late 1980s to mid 1990s, and is taken as a panacea to the knowledge loss experienced by businesses that embraced the downsizing strategy to reduce costs and improve the market's perception of the value of the business. (Figure 1)
The Use of Knowledge Management

Notwithstanding the issues pertaining to the validity of the knowledge management concept, there is value in understanding the flow of information within and between organisations to determine when and where information is needed to assist is improving the manufacture of a product or the delivery of a service.

Grey (1991) and Van ‘T Hof (2003) suggest that knowledge management complements, enhances and builds on other organisational initiatives such as total quality management (TQM), business process re-engineering (BPR) and organisational learning (Senge, 1990), providing a new a urgent focus to sustain competitive position. Again, while BPR has been another management vogue enthusiastically grasped as another panacea to streamline processes, discarding non-value-adding processes and thus reduce costs, two-thirds of BPR exercises have said to have failed (Wilson, 2002; Malhotra, 1998).

The concept of the learning organisation is probably closer to the intent of what knowledge management is aiming at achieving. A learning organisation generally focuses on the continual learning of individuals and integration of knowledge to organisational routines and actions; effective knowledge sharing among the people in the organisation and eventually also outside the organisation (it may be embodied in products or services); critical, systemic thinking allowing the questioning of established procedures; a culture of learning, where new ideas are honoured and rewarded; a spirit of flexibility and experimentation including the possibility to take risks in order to innovate; and a people-centred environment that cares about the development and well-being of people (Liebowitz, 1999).

For both Business Process Reengineering (BPR) and knowledge management a mapping exercise forms part of the process to identify processes and information flows and broadly speaking a mapping exercise is a part of most of the practices, though taking various forms. The main aim of knowledge mapping is to give managers enough information about their knowledge resource to allow them to make informed decisions.. Knowledge mapping is therefore aimed at explicit knowledge management by managers rather than providing a computer based document management capability. The use of knowledge mapping can lead to managers taking informed decisions about the use of other knowledge management approaches (Gordon, 2002).

BPR is a recognised management tool used by organisations to improve their performance across a range of indicators. The purpose of reviewing an organisation's business processes is to gain a comprehensive understanding of the way the organisation currently operates, to identify bottlenecks and difficulties in the current system and to redesign those systems to produce an improved outcome for the organisation and its stakeholders.

Close examination of the BPR and knowledge mapping approaches indicates very similar information being gathered as part of the mapping processes, though there is a different focus in terms of how the information is to be used e.g. for BPR to identify the actual process flow while the knowledge map is identify information flow and information access points. It could be argued that the same process map could be used for both purposes with the specific requirements being gathered as a secondary output of the process mapping exercise.

While knowledge mapping may not be a synonym for business process mapping, the above illustrations suggest that the same process could be used for both management practices with particular outputs being derived as a result. It further illustrates that as these management practices emerge the general thrust remains the same in terms of overall approach, a particular focus is taken based on the nature of events that have necessitated the development of a management approach e.g. reduce costs through streamlining process and reduce costs though maximising the knowledge-base of the individual in the organisation.

What has been learned?

As suggested earlier, the timing of the growth of interest in knowledge management in the late 1990s and early 2000s would appear to have some relationship to the downsizing and outsourcing turbulence of the late 1980s and early 1990s, of which loss of corporate knowledge was seen as a major detrimental consequence. Certainly, based on the information from Wilson’s research (2002), knowledge management was embraced with vigour at this time and it could be argued that the reason for this was that the concept was lauded as a response strategy, though
superficial as the concept has been ill-defined, to the loss of corporate knowledge resulting from downsizing and outsourcing.

The literature reviewed so far appears to support Wilson’s findings (2002) that “there is absolutely no agreement on what constitutes “knowledge management”. Certainly the concept has been embraced, but as Wilson (2002) surmises, this seems to be driven more from the consultancy arena rather than being philosophically driven by organisational management. This view is supported by a survey undertaken by Bain and Company in 2000, which indicated that only 35% of their world-wide sample of 451 companies was using “knowledge management”, reporting a satisfaction rating of 3.5 on a five-point scale, compared with 70% of companies using benchmarking and 80% using strategic planning. Knowledge management was in 19th position out of 25 management tools.

A MODEL OF A FACILITIES MANAGEMENT APPROACH TO KNOWLEDGE MANAGEMENT

Current Facilities Management deficiencies

Facilities Management, as a management discipline, has not been able to establish a clear identity as has its close business management relations in human resources, finance and information technology. One primary obstacle is that most activities undertaken by the facilities management function are seen as a business cost and not seen as contributing to maximising shareholder and business value – unlike human resources, finance and information technology which are seen to be directly contributing to improve business performance through:

- recruitment of the right resources and skills;
- making the right investment and financial decisions; and
- establishing the right operational infrastructure to ensure that the business operates efficiently and effectively and to enable information to be readily accessible for financial and human resource management requirements.

Facilities management identity is also obscured by the various disguises that it can operate under. As facilities management is multidisciplinary, its identity can be lost through a specific discipline focus within a business whether that be architectural, engineering, property management or maintenance. This apparent lack of focus further erodes the ability of a facilities management function to grow internally through building internal capability. The multidisciplinary nature of facilities management also can obstruct its functional ability to adapt quickly to business dynamics.

As a result, the general perception remains of facilities management being a non-value adding cost to the business and potentially being loosely defined as “non-core”. This view generally results in facilities management support services being identified as part of any downsizing and/or outsourcing initiatives to reduce the cost to the business.

Outsourcing Impacts

The above review appears to support the notion that the downsizing and outsourcing activity of the late 1980s to mid 1990s created a major corporate knowledge vacuum. Knowledge management emerged as a response to the consequences of the downsizing and outsourcing agenda as a panacea to the knowledge loss experienced by businesses that embraced the downsizing approach as the strategy to reduce costs and improve the market’s perception of the value of their businesses.

Observations from the outsourcing of facilities management support functions would agree that the risks relate to:

- The outsourcing trend contributing to the loss of internal knowledge;
- The outsourcing trend adding uncertainties to ownership issues in terms of corporate information; and
- Outsourcing placing the onus on the client to effectively manage the suppliers’ deliverables, which assumes the existence of adequate internal capabilities if corporate knowledge (culture, processes, core content) is not to be lost forever.
Clearly, there needs to be an adequate level of internal business capability to ensure that the above risks are mitigated and managed over time and that business performance is not compromised.

**Building Facilities Management Capabilities**

The risks presented by unstructured or ill-conceived outsourcing arrangements can be mitigated or minimised through careful planning. In this instance, the internal capability required to effectively manage an outsourced facilities management supply arrangements is in question. The business can respond to this knowledge gap by either:

- Building internal capability through internal learning; or
- Building internal capability through external education and training.

It is proposed that a primary strategy is to achieve this through a structured, internal knowledge-based approach to building internal capability. Even more mission critical to the business however, is ensuring that strategic and operational facilities management capabilities are sustained and developed over time. It is this overall risk that a knowledge-based facilities management model for building internal capabilities is proposed as a viable risk mitigation measure.

**Knowledge Management Definition for Facilities Management**

The development of any plan to introduce a new management approach must recognise the business requirements. In general terms, the business will require a return on investment from this new approach, which translates into maximising the wealth of the business and in turn the wealth of shareholders.

The previous discussion relating to business drivers indicates that, as utility theory proposes, the primary business motivator relates to maximising the value of the organisations. For the particular period that has been examined, this was pursued through a strategy of businesses being able to better compete with other businesses through cost reduction to provide immediate results to the bottom line. The new approach needs to “fit” with the strategic business direction and is able to contribute to the achievement of this strategic business direction and maximising the value of the business.

The facilities management linkage to business success is illustrated in Figure 2 below. This aligns facilities management to the four (4) specific business focus areas: strategic direction, resources and capability, governance, maximising the value of the business and shareholder wealth.

![Figure 2: Context of Facilities Management in supporting Business Success](image)

The model’s four quadrants define how this alignment manifests itself to support the achievement of the four focus areas. The facilities management function is able to contribute to the success of the business by:
- Ensuring that the right governance arrangements are established, through clearly defined accountability structures, processes and practices, to protect the business and provide confidence to prospective investors and shareholders.

- Ensuring that adequate consideration is given to building FM capacity in terms of the skills and knowledge which staff will need to perform and manage the FM functions and having the finance, people and systems which are necessary for FM and the delivery of facilities services.

- Making better business decisions that will contribute to the achievement of growth and survival, and future direction by ensuring the availability and quality of information, which supports decisions, and assessment of outcomes.

- Enabling the FM function to align with and contribute to the achievement of business profitability, growth and survival, and future direction.

Fundamentally the model suggests that the facilities management function requires knowledge of strategic direction, facility risks and contribution to the achievement of strategic direction and the value of the business, corporate, organisational and environmental governance requirements and the resources and capability required to enable all this to be realised.

As concluded earlier, a definitive definition for knowledge management is arguably not available due to the nebulousness of the concept. However the term is recognised as a new management tool and as is not easily discarded. Rather than attempt to argue for a better definition or for a more relevant term to use to replace knowledge management, a definition for knowledge management that is relevant for the purpose of use for facilities management is the approach taken for this paper.

For this paper, the issue of knowledge management is not so much about the term but the application of what it means in the context of facilities management. Taking the view that knowledge is a human function and that knowledge has a direct relationship to the ability to perform a function, the knowledge management definition used for this paper, which also gives credence to Svieby’s notion of “knowledge focus”, is:

“The management of knowledge, which has been gained over time by individuals through their own learnings about the way business is conducted through business processes and practices, and nurturing this knowledge to enable it to be used to its maximum benefit to the business to enable information to be utilised (gathered, captured, stored, retrieved and applied):

- that can be leveraged to inform the business on facility implications resulting from maintaining or increasing market share. Either through:
  - Changes in market or community demand for existing products and services.
  - Demand for new products and services.

- that can be further analysed to identify:
  - opportunities where facilities can contribute to more cost effective production or delivery of services.
  - opportunities where more modern and efficient equipment may be introduced.
  - where changes in regulations require modifications to the facility or plant and equipment.
  - trends or emerging issues relating to the dynamics of the market place which may result in mergers or acquisitions and development of appropriate facilities management response strategies.”

This provides a definition with a focus on knowledge rather than managing knowledge per se. This has a closer relationship to the learning organisation mantra then trying to determine how an information system might try and manage knowledge. This focus on knowledge relates to the building of internal capability to better perform a function, rather than pursuing a management model for knowledge that is illusive.

Relating this back to being a facilities management response to the key business drivers the model’s elements enables information to be utilized (gathered, captured, stored, retrieved and applied) for the following purposes:
To leverage and inform the business on facility implications resulting from maintaining or increasing market share. This may be either through changes in market or community demand for existing products and services or demand for new products and services.

- To analyse business processes in order to identify opportunities where facilities can contribute to more cost effective production or delivery of services.
- To identify opportunities where more modern and efficient equipment may be introduced.
- To identify where changes in regulations require modifications to the facility or plant and equipment.
- To support strategic facilities planning by identify trends or emerging issues relating to the dynamics of the market place, which may result in mergers or acquisitions, and development of appropriate facilities management response strategies.

This provides a framework within which a knowledge management approach can be applied within the FM function. On the basis of having a defined focus on how knowledge can be utilised within a FM function to support the achievement of business directions, it is suggested that careful consideration be given on how to maximise this approach within the business to ensure that it will add value and contribute to overall business profitability, survival and growth, and future direction.

**Defining the Scope and Competencies of Facilities Management**

The growing body of academic literature and publication on the nature of FM practice (e.g. Nutt (2000), Grimshaw (2002); McGregor & Then (1999), Atkin & Brookes(2000), Best, Langston & De Valence, 2003) has done little to dispel the impression that there is still diversity in FM practice and that FM in whatever guise, will continue to grow. However, the term “FM” is now recognised in all five continents. The FM profession is developing at a time of rapid change in all the areas that define its practice. The landscape for FM is also increasing global in context rather than national given trends in ‘total outsourcing’ of physical portfolio and services delivery by large public sector authorities and major international corporations. In short, in its continued evolution, FM must embrace change and allow diversity in the way it defines and manages practice.

The debate on whether FM has claimed the mantle of being a true profession or discipline with its unique core knowledge base will no doubt continue. In reviewing the ‘the professional core’ of FM of three national institutions of facility or facilities management in North America, Britain and Australia, Then (2004) summarized that Facilities Management is about:

- Understanding the business
- Planning and providing for the business
- Managing the facility as an asset resource over its functional life cycle
- Managing the facility as functional enablers to support human resource and production processes within affordable occupancy costs
- Managing change
- Being visible as a value-adding resource for the business
- Being professional

If we accept the above propositions as valid outcomes for the continued development of FM, it will be appropriate to provide a conceptual model that encapsulates the ‘professional core competency’ as advocated by the above national FM professional bodies. Then (2003) proposes a model that sees FM’s involvement spanning from *facilities provision* (strategic components) to *facilities service management* (operational components). The four components of Strategic Facilities Planning, Space Planning and Workplace Strategies, Facilities Support Services Management and Asset Management and Maintenance, reflect the broad, but inter-related resources base (investments, space, assets and people) that the practice of FM must manage effectively to bring about an optimum solution to business demands.

In functional terms, the scoping of facilities management can also be defined to embrace the following:

- Strategic Facility Management (governance and organisational capability)
- Facility Planning (identification of business need and response)
It is our proposition that in order for corporate facilities managers to perform their intelligent client role effectively, they would benefit from a growing knowledge framework that ensures key learning’s are captured from the on-going practice of FM operations through a thorough analysis of problem areas that emerge in the course of strategic evaluation, the procurement process and subsequent service management processes. The phase ‘intelligent client role’ is used to summarise the professional or managerial activity which regulates decision-making in the facilities function in terms of both facilities provision and delivery of facilities support services which enable the primary business to be conducted.

The notion of a taxonomy as “. . a classification system for improved information management” within a corporate context is central to the accumulated knowledge of real-world problems captured from the experience of operational management. Access to the knowledge-base assembled will contribute to improving the capacity of users and managers to sustain and improve the operations of the business. The key concept relates to how the use of the taxonomy, which should be closely aligned to the business processes, will contribute to corporate learning and continuous improvement through critical internal process analysis and comparison with best known current practices. Figure 3 illustrates the link between problem areas in FM practice and a proposed taxonomy covering FM knowledge areas or functions. The outcomes from practice analysis will form the basis of key corporate learning and innovations.

It is anticipated that outcomes from the practice analysis will highlight areas/gaps within the FM knowledge taxonomy that will require actions to be taken. Such actions may be in terms of knowledge gaps and inadequate competencies in strategy development and/or operational practice, or lack policy clarity in project brief, inadequate performance measures, training needs, etc.

Figure 3: Facilities Management Practice and Knowledge Capture
For many large corporations, the role of facilities managers has evolved into an intelligent client role in which the focus has shifted from managing day-to-day service transactions to managing service packages by third party service providers and ensuring that prescribed service performance are met at affordable costs. In addition, knowledge of the supply market and awareness of industry best practices are critical elements in arriving at informed decisions in matters relating to service specification, procurement options, selection and subsequent monitoring of external service providers.

In an outsourced environment, the onus and responsibilities on the facilities manager is more demanding in that the element of control becomes more critical and often more problematic. In such a situation, access to appropriate information becomes a crucial aspect of on-going monitoring of service delivery and identifying changing corporate demands. The situation is often compounded in many clients’ organization which choose to or have outsourced.

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Conceptually, the steps involved in operationalising the above model include:

- Identify and classify problem area by establishing the context and cause.
- Relate problem area to knowledge area(s) or function(s) within taxonomy of FM.
- Analyse the problem area and decide on course of action by determining the information required to remedy the problem.
- Classify and codify problem area in relation to knowledge area(s) within FM taxonomy and identity information needs and tools required to build on internal capability to solve similar and related problems in the future.
- Improve internal FM capability by sharing of practice knowledge through periodic formal/informal training or mentoring, linked to performance evaluation.
- Review and continuously improve the approach.

As an example, a management decision to consider outsourcing of facilities maintenance may be the trigger to examine the knowledge requirements to manage an outsourced arrangement and how, over time, individuals through their own learnings about the way business is conducted through business processes and practices, and nurturing this knowledge to enable it to be used to its maximum benefit to the business to enable information to be utilized.

CONCLUSION

The paper has critically analysed the knowledge management concept and postulates that there needs to be caution to blindly jumping on the knowledge management bandwagon.

The model for adopting a knowledge management approach, with a knowledge focus foundation, for facilities management that carefully considers how information can be utilised (gathered, captured, stored, retrieved and applied) to build capability and the knowledge of the individual, to add value to the organisation, is the position taken in this paper having considered the broader learnings from organisations jumping on the knowledge management bandwagon without thinking through the issue.

As Einstein stated "Knowledge is experience. Everything else is just information" (Kucza (2001)).

The primary issue is how can experience be captured to obviate the wasteful effort of ‘reinventing the wheel’ when a similar problem is encountered again. The practicality is to optimize the attention resource of hard pressed facilities managers.
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