In search for the added value of FM: what we know and what we need to learn

Per Anker Jensen
Centre of Facilities Management, Technical University of Denmark, Kongens Lyngby, Denmark
Theo van der Voordt
Faculty of Architecture, Delft University of Technology, Delft, The Netherlands
Christian Coenen and Daniel von Felten
Institute of Facility Management, ZHAW – Zurich University of Applied Sciences, Zurich, Switzerland
Anna-Liisa Lindholm
School of Science and Technology, Aalto University, Espoo, Finland
Susanne Balslev Nielsen
Centre of Facilities Management, Technical University of Denmark, Kongens Lyngby, Denmark
Chaiwat Riratanaphong
Faculty of Architecture, Delft University of Technology, Delft, The Netherlands, and
Mirjam Pfenninger
Institute of Facility Management, ZHAW – Zurich University of Applied Sciences, Zurich, Switzerland

Abstract

Purpose – This article aims to present and compare research perspectives and theoretical reflections from a variety of academic fields on the concept of added value of facilities management.

Design/methodology/approach – The starting point is the so-called FM Value Map, which was presented in a recent article in *Facilities* by Per Anker Jensen in 2010. The article is a first result of the work in the EuroFM research collaboration group and is based on literature reviews of the most influential journals within the academic fields of facilities management (FM), corporate real estate management and business-to-business marketing.

Findings – Good relationship management and building on trust is shown to be equally important as delivering the agreed services.

Originality/value – Usually the concept of added value is discussed from a monodisciplinary point-of-view. The different backgrounds of the authors add value to an increased understanding of the added value of FM by comparing and testing different ways of conceptualising this issue. This is of great importance to FM research and evidence-based FM as a sound basis for the long-term recognition of FM.

Keywords Facilities management, Corporate real estate management, Added value, Strategic mapping, Services marketing, Relationship value, Facilities, Real estate, Value added

Paper type Literature review

Facilities
Vol. 30 No. 5/6, 2012
pp. 199-217

0263-2772
DOI 10.1108/02632771211208486

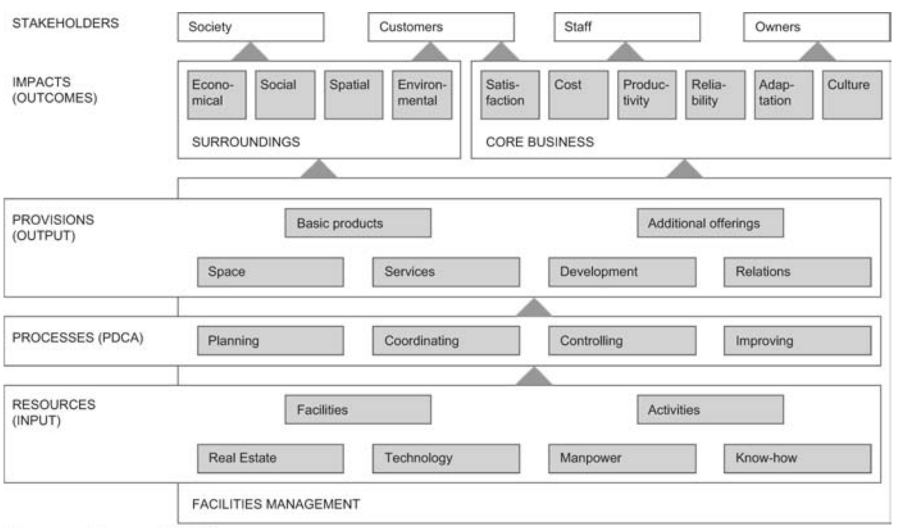
1. Introduction

Both from an academic point-of-view as well as in daily practice there is a need to improve our understanding of how facilities management (FM) can become more effective and add value to the core business and different stakeholders. For this reason the EuroFM Research Network Group established a working party on this topic to search for answers on the following questions:

- What is or could be the added value of FM?
- How is added-value defined in the literature?
- What kind of data are used to document and measure the added value of FM?
- What are the methodological potentials and barriers of measuring the added value of FM?

The group includes researchers from Denmark, The Netherlands, Norway, Finland, Switzerland, and the UK. Participants have met at workshops in Copenhagen, Helsinki and Madrid and have discussed the above questions with each other as well as with businesses representatives. First step was to discuss and reflect on a variety of definitions and theoretical frameworks to conceptualise the added value of FM, in order to reach a more coherent understanding. From this we divided in sub-groups, one group with a focus on comparing and testing frameworks for mapping added value of FM and another group with a focus on comparing and testing frameworks for value chains in FM. This paper discusses the first results of the collaborative work of defining a framework for mapping the added value of FM.

One starting point for the research group has been the FM Value Map, which was presented at the research symposium during EFMC 2009 by Jensen and has been published in a recent article in *Facilities* (Jensen, 2010). The generic version of the FM Value Map is shown in Figure 1. It is a conceptual framework to understand and explain the different ways that FM can create value for a core business as well as the



Source: Jensen (2010)

Figure 1.
FM value map

surroundings for the benefits of multiple stakeholders: owners, staff, customers and society. It maps the resources used by FM as inputs into the internal processes to produce outputs like space, services, development and relations, and the impacts of the provisions from FM can have on core business in terms of satisfaction, cost, productivity, reliability, adaption, and culture, and on the surroundings in terms of economical, social, spatial and environmental aspects. The FM Value Map was developed from inductive reasoning and inspiration from strategic mapping from Balanced Score Card (Kaplan and Norton, 2000) based on case studies of FM Best Practice in the Nordic Countries in Europe (Jensen *et al.*, 2008). An illustration of the use of the FM Value Map in relation to a case of introducing FM in schools in the municipality of Malmö in Sweden is included in the above article in *Facilities* (Jensen, 2010).

The methodology used for this paper was to make literature reviews of recent volumes of the most influential journals within the academic fields divided between the group members and of presentations from EFMC 2009. It was clear from the outset that the researchers had different academic and theoretical backgrounds. Even though they all did research in relation to FM, some of the researchers were more engaged in the related field of Corporate Real Estate Management (CREM). There were also differences among researchers with some coming from architectural and engineering backgrounds and others from Service Marketing and other marketing related backgrounds. These different backgrounds were seen as fruitful in providing different types of insights and frameworks and challenges in reaching common understanding of the benefits and shortcoming of the different theoretical frameworks and if possible develop a common framework to explain the different ways FM can create added value. The perspectives from different fields of research will be used to make further developments from the present value map.

The approach is reflected in the structure of the article. Section 2 presents the preliminary findings from the field of FM, section 3 presents the findings from the field of CREM, and section 4 presents the findings from the field of Business-to-business Marketing. All findings are discussed and reflected upon in section 5. Section 6 gives conclusion with suggestions for future research agenda on the issue of added value of FM. A list of abbreviations is included before the list of references.

2. Findings from the field of FM

The oldest academic FM journal is *Facilities* from Emerald. From volume 8 in 1990 the journal is available electronically. A scan of the 1,142 articles from 1990 to 2009 uncovers nine titles of relevance in relation to the issue of added value of FM. However, two of these come from the field of CREM (Krumm *et al.*, 1998 and Lindholm, 2008) and are covered by related articles in section 3. Two others (Chau *et al.* 2003 and Hui *et al.*, 2008) are focused on value enhancements of refurbishment and therefore purely on economical value. The article by Okoroh (2001) presents a case study of a partnering arrangement in the healthcare sector. One of the main results has been a reduction in staff absenteeism. Even though quality improvements in 110 areas are mentioned, the article seems more to focus on improving efficiency rather than effectiveness. The article by Green and Jack (2004) on creating stakeholder value is interesting by introducing the term “value mapping” with reference to the value chain of Porter (1985) and the EFQM Excellence Model (European Foundation for Quality Management, see www.efqm.org). The concept is very commercially orientated as "ValueMapping" and "ValueMapper" are mentioned respectively as a registered term and trademark. The stakeholders are investors, employees, customers and society, which is very similar to the FM Value Map in Figure 1, but there is no presentation of performance indicators. Wauters (2005) is focusing more on benchmarking than on added value and provides examples of combining cost benchmarking with indicators for user satisfaction, performance and service quality.

The last two articles are from 2009. Sarshar and Pitt (2009) provide an interesting contribution based theoretically on relationship marketing and empirically on four cases studies from clients to the same provider company. With reference to Heskett *et al.* (1994) they present an equation for customer value:

$$\text{Customer value} = \rightarrow \frac{\text{Results produced for the customer} + \text{Service process quality}}{\text{Price to the customer} + \text{Cost and effort in acquiring the service}}$$

From the case studies was learned that clients have different views and requirements at different levels of the same organisation. Trust and no surprises are important for clients and transparency of cost can improve trust. Clients also appreciate to receive management information on demand, high level reporting beyond KPI's, and possibility of data tracking. Codinhoto *et al.* (2009) do not use the term "added value" but they present an interesting conceptual framework of impacts of the built environment on health outcomes with a mapping that resembles the concept of the FM Value Map in a specific health care context.

The first issues of *Facilities* from 2010 document that the interest of added value of FM is an important current research topic. Besides the article of the FM Value Map (Jensen, 2010), issue 3/4 also includes an article by Appel-Meulenbroek (2010) about added value of facilities by knowledge sharing through co-presence in open plan office areas.

A similar scan of 164 articles from the start in 2002 to 2009 of the *Journal of Facilities Management*, also from Emerald, gives four articles related to the issue of added value of FM. Two articles by Lynch (2002a, b) focus on maximising FM's contribution to shareholder value and therefore purely on economical value. The article by Cant (2005) presents a case study of a regional retail centre and mainly stresses the need of a more strategic role of FM. The article by Pathirage *et al.* (2008) focuses on knowledge management in FM. They present a general development of FM including the following four generations:

(1) FM merely considered as an overhead to be managed for minimum cost rather than optimum value.
(2) FM as an integrated continuous process in relation to the organisation's individual business.
(3) FM as resource management concentrating on managing supply chain issues associated with the FM functions.
(4) FM as strategic management to ensure alignment between organisational structure, work processes and the enabling physical environment according to the organisation's strategic intent.

This development reflects the change from the initial dominating focus on cost reduction in FM towards a gradual stronger strategic focus on actively supporting the core business, which is the background for the research on the added value of FM.

One of the case studies in Jensen *et al.* (2008), where the FM Value Map was originally developed, deals with the Danish financial corporation Nykredit, which has defined a so-called user value ratio by inspiration from the above customer value equation:

$$\text{User value} \rightarrow \frac{\text{Quality and Process}}{\text{Price and Difficulties}}$$

The user value ratio was introduced to supplement the cost related factors in the internal decision making process to force the decision makers to take a broader value oriented perspective. It was not developed into a quantifiable tool, although the manager, who introduced, it did have intentions to do so. It was used as a situation specific, qualitative tool to assist decision making (Jensen *et al.*, 2008 – supplemented by information from the former manager, December 2009).

At the research symposium during EFMC 2009 apart from the paper on the FM Value Map (Jensen, 2009) the only other paper on the added value of FM, was by Price *et al.* (2009). They introduced the theory of social construction of realities to explain, why some FM organisations are perceived as having better performance than others. The paper emphasises the need for both quantitative and qualitative research in search for different perceptions of value. The business conference at EFMC 2009 included an interesting case from the Danish based LEGO corporation, where the FM organisation has found a specific way to quantify their contribution to the core business as value add (Møllebjerg, 2009). The LEGO Service Centre has value creation as one out of five strategic focus areas – the others being customers, processes, innovation, and employees – and the Centre uses the Balanced Score Card as a management tool. They have defined their key objective to deliver a minimum of 5 per cent value add every year. To measure this, they have defined the following value equation:

$$\text{Value add} = \frac{\text{Volume} * \text{Quality} * \text{Flexibility}}{\text{Cost}}$$

Volume represents the level of scalability and is calculated as the number of standard services (part of the service catalogue) delivered. Among other measures quality includes the user perceived quality measured by surveys among randomly selected users. Flexibility concerns the number of not standardised services delivered. Cost covers the total company cost of providing services. These measures are in the process of being further developed and refined in a dialogue with the internal client and customers.

3. Findings from the field of CREM

CREM is usually defined as the management of the real estate portfolio of a corporation or public authority by aligning the portfolio and services to the needs of the core business, in order to "obtain maximum added value" for the business and to contribute optimally to the overall performance of the organisation (adapted from Dewulf *et al.*, 2000). For this reason we selected the *Journal of Corporate Real Estate* published by

Emerald in search for theoretical reflections and empirical data on adding value by real estate. The *Journal of Real Estate Research* published by American Real Estate Society was also selected as it has a long tradition in publishing articles on corporate real estate. The first articles (e.g. Nourse and Roulac, 1993) were published in this journal discussing the added value of corporate real estate management. It is also one of the very few real estate journals, which is ISI listed and has an impact factor (IF 0.585), and where corporate real estate is one of the journal themes.

From the review of the *Journal of Real Estate Research* (723 published articles between 1986 and 2009) eight articles were identified regarding the added value of real estate. In most of these articles (Rutherford and Nourse, 1988; Manning, 1991; Manning and Roulac, 1996; Manning *et al.*, 1999; Lindholm *et al.*, 2006) the added value of RE is described as the ability of the real estate decisions, processes and inputs to create shareholder wealth. Rutherford and Nourse (1988) used stock prises as a value indicator, whilst others focused on describing the value channels, not actually proofing the value. All studies described the added value in economical terms: Cost cutting or profitability growth. Stakeholder value was mentioned only by Manning *et al.* (1999) who stated that real estate decisions have an impact on the quality of our environment and/or shareholder wealth.

Some studies focused on the importance of organisational issues in the value adding process. Pittman and Parker (1989) studied the performance of CRE departments. Their survey revealed that CRE executives consider communications and working relationships with the management and operating divisions to be particularly important to a top performing real estate department. Manning and Roulac (1996) reviewed the tasks a CRE function should undertake to create more opportunities for the company's real estate department to increase shareholder wealth. They concluded that this could be best done by organising and managing the CRE function centrally, plus training a significant proportion of the CRE staff to work closely with the operating business units, their support staffs and local business units. Rutherford and Nourse (1988) also concluded that a centralised CRE unit is more efficient and leads more often to money-making opportunities.

Nourse and Roulac (1993) linked real estate decisions to corporate strategy by discussing how alternative real estate strategies can contribute to business objectives. They came to the conclusion that too often the dominant emphasis is on the financial goal of cost minimisation. According to Nourse and Roulac (1993), real estate strategies are required in order to effectively support a range of corporate objectives, multiple, rather than single. They link eight types of real property strategies, including common corporate real estate decisions regarding site selection, facility design, and leasing, to a number of possible aims of a firm. Some encompass the traditional goals of reducing occupancy costs and facilitating production, operations, and service delivery. However, Nourse and Roulac separate facilitating knowledge work from other operations, include flexibility as a real estate strategy and identify that real estate strategies can be integrated with other functional strategies, such as human resources and marketing. In line with Nourse and Roulac, Lindholm *et al.* (2006) identified seven real estate strategies, which create added value to the core business and to the shareholder wealth.

A scan of the titles of 234 papers that have been published in the *Journal of Corporate Real Estate* in the period 1998-2009 traced 80 papers with a possible link to the concept of Added Value of FM or RE. After a second scan based on the abstracts, 47 articles were left that more or less explicitly discuss how to provide added value to the core business by aligning real estate strategy to business strategy. The papers differ with regard to the attention paid to theoretical reflections and empirical research and a focus on the input (HR, information, capital, technology, real estate and other facilities), processes or output indicators. Improving productivity and decreasing costs turned out to be the most discussed areas of adding value by corporate real estate management. Improving productivity covers the areas of providing a more efficient working environment (input), e.g. less m2 and lower costs, and providing effective accommodations and other facilities that support new ways of working and a high quality and quantity of production (output). A number of authors raised the issue of flexibility as a significant aspect that can add value to corporate business (Gibson, 2001; Bradley and Osborne, 1999; Latshaw, 2000; Hiang and Ooi, 2000; O'Roarty, 2001; Vos and van der Voordt, 2001). Many authors discussed the importance of integration of technologies/IT, human resources, and corporate real estate in order to develop tomorrow's workplace (Bradley and Osborne, 1999; Duffy, 1999; Latshaw, 2000; O'Mara, 2000; Joroff, 2002; Drake, 2002; Allard and Barber, 2003).

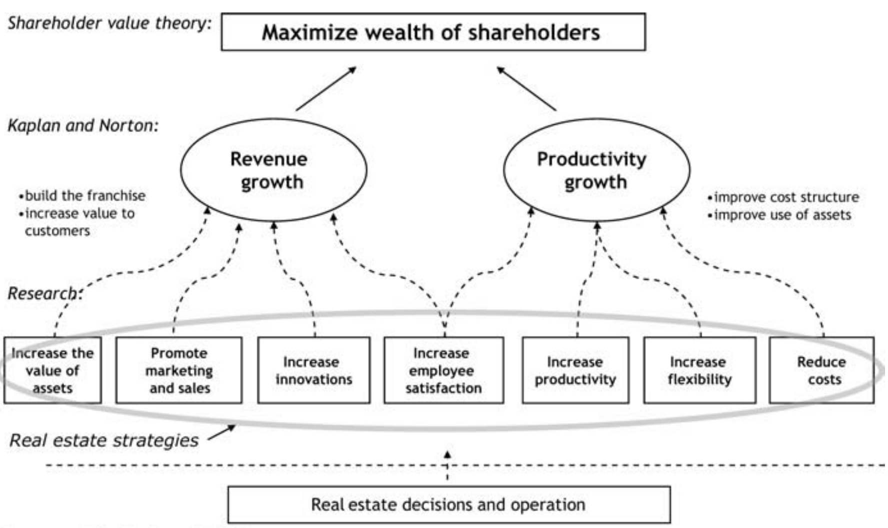
Other interesting issues are the effects of real estate and FM on learning organisations (e.g. the continuous improvements in the Toyota case, Joroff *et al.*, 2003), the impact of collocation on interaction and identity (Becker *et al.*, 2003), and the impact of corporate location decisions on the employee quality of life (Rabianski, 2007). Reed and Wilkinson (2005) identified key benefits from sustainability that include increased energy efficiency and property values. Smith and Pitt (2009) identified the added value of sustainable workplaces to improving employee health and wellbeing and increasing productivity. In order to establish sustainable competitive advantage corporations have to be aware of their capabilities and resources. They should coordinate and align internal resources and capabilities carefully to improve corporate performance (Krumm *et al.*, 1999). The link between added value and outsourcing is found in cost reduction objectives, ranging from redirecting capital, refocusing on corporate core business, transferring real estate related risks and increasing occupational flexibility (Farncombe and Waller, 2005; Louko, 2005).

A promising approach is the analysis of the impact of CRE from both operational (space) and non-operational (asset) perspectives in order to improve our understanding of interactions between real estate strategy with corporate strategy in a non real estate company context (Hiang and Ooi, 2000). This impact can be different in different domains such as offices, manufacturing and leisure and retail. From the articles, however, no clear picture appeared of the focuses and roles of various stakeholders involved in CREM and how different stakeholders can contribute to the added value. Issues that have hardly been mentioned include the use of real estate to improve PR and marketing, to promote sales and selling processes, and to attract external capital. An obstacle to identify the added value to FM/CRE was the lacking of quantitative data. Thus, the effects of interventions in FM and CREM are still hard to tackle on the added value to business.

A list of performance indicators is rarely presented. Exceptions are the papers of Lindholm *et al.* (2006a, b) and De Vries *et al.* (2008). Both also present a clear structured framework of the added value of FM/CRE. Lindholm *et al.* (2006a) discuss strategic performance measurement systems (Balanced Score Card) and tactical techniques and methodologies (benchmarking, POE – Post Occupancy Evaluation, etc.) with regard to practicability and comparison with other tools. Lindholm *et al.* (2006b) proposed a model showing how real estate decisions support corporate strategies and core objectives. The paper discusses the significance of increasing revenues and cost reduction or capital minimisation. A framework is presented with a set of strategies and performance measurement systems that can be used to evaluate how the real estate strategy can add value to the firm (see Figure 2).

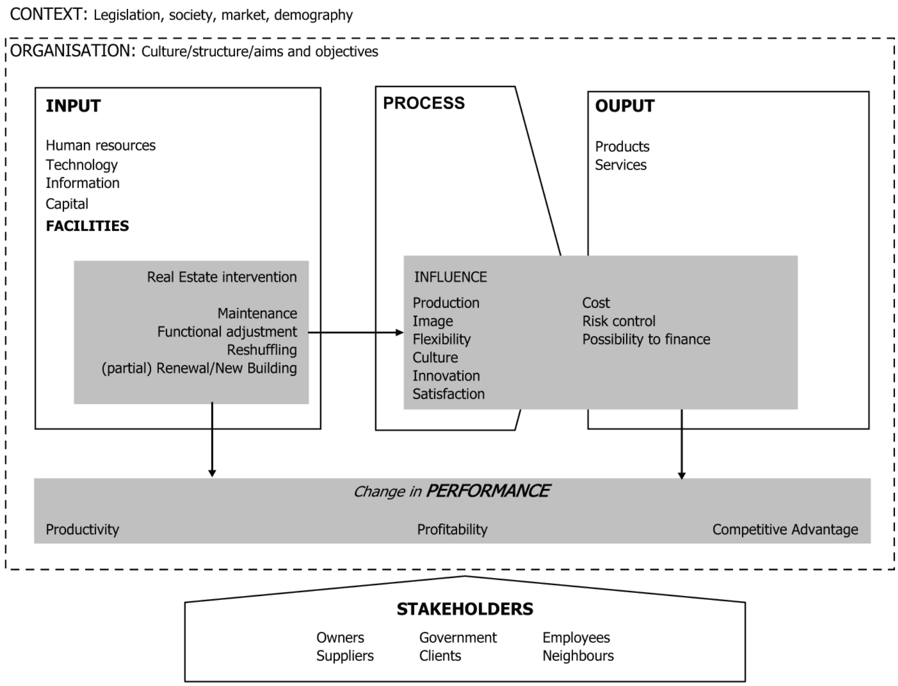
De Vries *et al.* (2008) proposed a theoretical model of the impact of real estate interventions on organisational performance and tried to trace quantitative values of the effects. The added value of CRE/FM was defined as the contribution of real estate interventions to productivity, profitability and competitive advantage, see Figure 3. This model shows facilities as one of the five resources of an organisation. Its added value can be measured by a number of performance indicators, taking into account that "performance is in the eye of the stakeholder" and affected by the external and internal context.

Competitive advantage is one of the business values in the definition of FM (Green and Price, 2000). Joroff *et al.* (2003) discussed the Xerox case with its business objective of developing new ideas and new products and bringing them to the market within shorter time frames. The contribution to competitive advantage could be measured in terms of journal articles, patents, conference presentations and so forth. Another article that demonstrated a structure of value added comes from the network World Wide Workplace Web or W4 (Wilson *et al.*, 2001). The W4 participants identified key performance indicators that are increasingly used to indicate success in public real estate management within the four perspectives of a generic scorecard: customer; financial; innovation and learning approaches that directly communicate the value added. The W4-group aims to demonstrate customer value of real estate and to develop balanced approaches.



Source: Lindholm (2006)

Figure 2.
Added values according to Lindholm (2006)



Source: De Vries *et al.* (2008)

Figure 3.
Conceptual framework of De Vries *et al.* (2008)

4. Findings from the field of business-to-business marketing

The *Journal of Business-to-business Marketing* published by Taylor & Francis, London, is the premier scholarly journal for business marketing, and is positioned to focus on substantive issues in basic research about business marketing phenomena. In regard to FM it is the most appropriate journal to monitor the research activities of FM related value, because the published research deals with internal and external relationships in a business-to-business setting. Providing services in a business-to-business setting, this is what FM is all about. Besides the relation to FM, the criteria for this choice were academic positioning, research rigor, and empirical evidence. The volumes 5-16 of the journal (1998-2009) published a total number of 173 articles but no single article regarding FM. However, 12 articles – of which three empirical studies are selected here – deal with Relationship Value and/or Customer Value. Thus, insights from marketing and relationship management have the potential to shed some light on the value construct in FM.

The marketing literature contains a variety of definitions emphasising different aspects of the value concept. According to Ulaga and Eggert (2005) four main characteristics can be identified:

(1) customer value is a subjective concept (Kortge and Okonkwo, 1993);

(2) it is conceptualised as a trade-off between benefits and sacrifices (Zeithaml, 1988);

(3) benefits and sacrifices can be multi-facetted (Grisaffe and Kumar, 1998); and
(4) value perceptions are relative to competition (Anderson and Narus, 1999; Gale, 1994).

On a high level of abstraction customer value is defined as the trade-off between the benefits ("what you get") and the sacrifices ("what you give") in a market exchange (Zeithaml, 1988). The concept of value is the foundation of the exchange view of marketing (Bagozzi, 1975; Hunt, 1991). All parties involved in the exchange expect to be better off after the exchange. According to Kotler (2000) value is the primary force that drives market transactions and relationships. Anderson (1995) stresses the relevance of value by stating that: "value creation and value sharing can be regarded as the raison d'être of collaborative customer-supplier relationships." Though according to Hutt and Speh (1998) ". . . in essence, value equals quality relative to price" there is a general convergence in literature from various fields, suggesting "that customer value is derived from sources that include, but also go beyond the price-quality trade-off" (Grisaffe and Kumar, 1998). Anderson and Narus (1999) have called for a shift from the traditional narrow view of value being determined by price and quality, but so far there has been very limited empirical evidence to support their position.

Menon *et al.* (2005) provide a rather precise conceptualisation of customer value in business-to-business relationships. The authors agree with the existing conceptualisation that views benefit and sacrifice as determinants of customer value. However, in contrast to previous treatment of the value construct, they argue that benefits should be categorised into "core benefits" and "add-on benefits". Besides, a more precise view of sacrifice needs to include a broad set of costs. So as to provide a complete view of sacrifice in a business relationship the authors include "acquisition costs" and "operations costs" in addition to the basic "purchase price." Results of Menon *et al.* (2005) suggest that add-on benefits have a stronger influence on customer perceived value than core benefits. A reason for this finding could be that while core benefits are influential drivers of customer value, it is a discipline in which all qualified providers perform well. Customers appear to view add-on benefits to be the differentiator for customer value among providers of equal core benefits. Therefore, issues such as supplier flexibility, supplier commitment, and joint working arrangements that influence add-on benefits become increasingly critical in shaping customer value in business-to-business relationships. A second finding of importance is the stronger overall impact of benefits (both core and add-on) on perceived customer value relative to the impact of sacrifices on perceived customer value. This finding suggests that when assessing value in business relationships, customers tend to focus more on the overall benefits that accumulate from the relationship and less on the sacrifices involved. Thus, managers should be encouraged to emphasise benefits resulting from a relationship and not focus solely on lowering the purchase price and related costs when managing customer value. Another finding in this study is that trust is a strong driver of benefits and sacrifices. Clearly, the results indicate that trust (i.e. the customer trusting the supplier) influences core benefits that business customers consider necessary in business relationships. In fact, results indicate that trust has a stronger impact on core benefits than the product characteristics.

Ulaga and Eggert (2005) identified seven common core dimensions of relationship value. The authors define customer value in business relationships as the:

> trade-off between: (1) product; (2) service; (3) know-how; (4) time-to-market; (5) social benefits; (6) price; and (7) process costs in a supplier relationship, as perceived by key decision-makers in the customer's organisation, and taking into consideration the available alternative supplier relationships.

Results of Ulaga and Eggert (2005) are similar to results of Menon *et al.* (2005). The data reveal that relationship benefits are stronger correlated with the overall value measure than relationship sacrifices. Previous research on buyer-supplier relationships confirms this result and shows that client organisations emphasise relationship benefits, whereas suppliers mainly focus on relationship sacrifices (Lyons *et al.*, 1990). In addition, the authors point out that it is necessary to capture value perceptions differently in particular business market settings. The contextual dimensions depend on variables such as the type of industry, the nature of the relationship, and the category of product or service under consideration.

Kumar and Grisaffe (2004) focus specifically on the benefit component. They introduce three extrinsic attributes relevant for the perceived customer value:

(1) perceived industry leadership of the supplier may be defined as buyer perceptions of a firm's overall position in an industry relative to the competition;

(2) innovativeness of the supplier refers to the extent to which buyers perceive a firm and its offerings as being creative and radically different from the competitor's products/services and offering unique benefits to the buyer; and

(3) customer focus of the supplier is defined as the extent to which a firm focuses on their customers' needs. In business-to-business settings customers often evaluate a firm's focus on their needs, not only in terms of product and service offerings, but also in terms of responsiveness and how easy it is to do business with the firm.

As the results of Kumar and Grisaffe's (2004) research show, extrinsic attributes like customer focus and innovativeness can create and enhance the value of the firm's offering to buyers in business-to-business contexts. Among the attributes, customer focus was the most influential. Its effect on quality was four times greater and its effects on value were almost two times greater than the effects of the other extrinsic factors. The effects of customer focus varied across the goods and service industries. In the service industry where there is more interaction between the firm's employees and customers, where customers are often an integral part of the service production process, and where there is more customisation, customer focus has a greater influence on customer value than in the goods industry, which is often characterised by a greater level of standardisation.

When comparing these findings with the FM value map, it becomes apparent that in addition to the attention paid in the FM value map to FM resources, FM processes and FM provisions, thus focusing on internal aspects of value creation, most of the issues from marketing and relationship management concern the very top of the value map, thus focusing on external aspects of value perception. Following the value map's logic of input-output-outcome, it can be stated that the relationship value approach reverses this chronology by starting with the outcome dimension.

5. Discussion

The research shows a number of different definitions and focus points of added value of FM, dependent on the academic field and the area of application. The different research perspectives provide, in combination, a holistic view by the integration of an external market based view (with a focus on the aimed output) and the internal resource based view (with a focus on the input from FM and RE).

With regard to the conceptualisation of value of FM and its measurement, the FM Value Map provides a very broad and qualitative framework. From relationship marketing and practice cases several examples came up of more simplified equations and ratios with attempts to quantify the results in various degrees. The case from LEGO represents a unique example of a quantification of added value of FM. It is a very recent development and it will be interesting to see what the experience, over time will be, and whether other organisations will take up similar models of managing and measuring the added value of FM. Whereas quantification is an important mean to simplify and put all factors on a comparable footing, the intentions with the value map are to be able to explain the different ways that FM can create added value. In combination, the equations or ratios can give inspiration to further development of the FM Value Map.

In relation to the FM Value Map the focus on broad stakeholder value rather than shareholder value has been supported by the recent development in FM and CREM research, while the focus in business-to-business management is mostly limited to customers and clients/owners. The crucial part of value adding lies in the interface between provisions from FM and the impact on the core business as perceived by the stakeholders. Business-to-business management puts particular focus on the relationship aspects of this interface.

The differences between the different academic fields provide exciting promises for the possibilities and benefits of developing a common trans-disciplinary framework of mapping added value. The categorisation of the impact parameters in the FM Value Map can be further refined in this process. But in spite of a growing body of knowledge from academic work and theoretical models that explain connections between real estate decisions, business strategies and organisational performance, reliable quantitative empirical data are still scarce. A reason for this lack of data and problematic interpretations of cause effect relationships may be the broad scope of FM and intermediary effects of different and changing contexts and all kind of other interventions, for instance in organisation policy or human resources. This makes it difficult to trace and measure the impact of particular FM input. Clear standard performance indicators are in its infancy.

6. Conclusions and next steps

According to the title of this article we strive to clarify what we know and what we need to learn about the added value of FM. The main lessons learned are listed below to inspire those who want to develop an FM strategy that explicitly addresses value adding or measures the added value of FM:

- *The concept of added value puts focus on the strategic aspects of FM.* FM is often considered as management of mainly operational services, but by introducing the concept of added value the focus can be changed towards the business impacts and effects of FM. Thereby, it becomes easier to address the corporate top management, because adding value relates to their language and perspective.

- *The focus has changed from economical value towards a more holistic value concept.* This is particular the case within the fields of FM and CREM and can be related to the phases in the development of FM. This changing focus is reflected in the fact that whereas previously shareholder value was the main perspective, nowadays a more holistic stakeholder perspective as included in the FM Value Map has become more accepted. Inspirations for value mapping has been found in management models like Balanced Score Card and EFQM Excellence Model.
- *FM value is a result of linking input and throughput to output.* Most of the issues from marketing and relationship management concern the top of the value map, thus focusing on an external market-based view of value perception. As such this field adds an outside-in perspective to the inside-out perspective of most FM and CREM literature with a focus on an internal resource based-view. Both approaches should not be considered as contradicting extremes but as complementing elements of a holistic view.
- *FM value is multi-dimensional.* Research on value conceptualisation in relationship management literature shows very explicit portraits of benefits and cost dimensions. E.g. authors describe the differences between "core benefits" and "add-on benefits" as well as "acquisition costs", "operations costs", and "purchase price". In addition, it is worth considering that relationship benefits are stronger correlated with value measures than relationship sacrifices. This distinguished characterisation of various value dimensions helps to differentiate between several FM specific dimensions of benefits and costs.
- *FM value is relationship value.* When considering the value of FM, FM has to be acknowledged as a relationship management discipline. On a high level of abstraction, FM is the management of internal or external customer/client supplier relationships. Perceived value can only exist and be produced within this specific network of relationships.
- *FM value is subjective.* The character of value within these relationships includes a strong subjective element that is dependent on the customer's/client's perception. As pointed out by the presented research on the value of relationships, customer organisations tend to emphasise relationship benefits, whereas suppliers mainly focus on sacrifices. Only the subjective perception of the customer/client determines the value of the relationships within FM and the rule "perception is reality" applies here as well.
- *FM value depends on "value for whom".* Priorities and appraisal of the added value of FM depend on who benefits from the added value and who bares the risks and burdens. So it is important to take into account the views and interests of different stakeholders such as the organisation itself (policymakers, staff, controllers, FM/RE managers), owners (investors, shareholders), visitors, suppliers, customers, and society (local, regional, national, global).
- *FM value depends on conditions.* In addition, the subjective value of FM can be very different, depending on market settings, type of relationship, industry

sector, specific situation, etc. This leads to a major challenge when conceptualising a holistic formula for determining the value of FM.

- *FM value research needs both qualitative and quantitative research methods.* To determine the multidimensional and subjectively perceived value of FM, surveys are needed that integrate the different perspectives mentioned above, with differentiated measurement methods such as using multi-item scales and structural equation modelling (SEM). Quantitative surveys should be triangulated by applying qualitative data collection methods such as personal interviews, focus groups with professionals, and content analysis.

These findings have improved our understanding of the added value of FM, both on a conceptual level and from an instrumental point-of-view. This is of great importance to FM research and evidence based FM as a sound basis for the long-term recognition of FM. However, still much work has to be done to learn more about adding value of FM. For instance, surprisingly little attention has been paid to environmental, efficiency of FM, whereas "green FM" is undoubtedly one of the major ways to influence the core business positively and create added value through many "value channels" (save energy, reduce costs, improve image, support productivity etc.). Corporate Social Responsibility (CSR) is another area, where FM has great potential to add value, but no research has so far been undertaken on FM and SCR. With regard to CREM, the literature shows a growing understanding of the impact of real estate on corporate performance and how to cope with the interests and needs of different stakeholders. In particular attention is being paid to the impact of real estate on cost reduction, employee satisfaction and perceived productivity. So far less attention has been paid to the impact of real estate on corporate image, PR and marketing, and sales and selling processes.

So much further research is needed to provide the knowledge that we need to learn about the added value of FM. The issues and questions that we have identified for future research on value of FM are shown below.

(1) Examining the nature of value and its dimensions:
   - What main dimensions and sub-dimensions does value of FM consist of?
   - What value dimensions are most important for different stakeholders?
   - Considering that value is a trade-off between benefits and sacrifices, the questions arise: Do benefits have more impact on value of FM than sacrifices do?
   - Is there a difference between "value of FM" and "added value of FM". If yes, how can it be described?

(2) Identifying value drivers:
   - What variables are drivers of value performance?
   - What FM encounters with clients/customers/end users are most responsible for perceptions of value of FM?
   - What are the key value drivers in each FM encounter?
   - Are key drivers of value the same as key drivers of profits and cost reduction? If not, why?

(3) Exploring conditions of value:
   - How does the potential of value creation of FM vary by industry (e.g. industrial versus office building, hospitals, etc.)?
(4) Suggesting implications for practice:
   - In what ways can FM providers signal high value to clients/customers to obtain desired effects?
   - How can research about value of FM enable a specific focus on the strategic aspects of FM?
(5) Investigating methods to capture value:
   - What qualitative and quantitative methodologies need to be developed to allow us to capture the holistic view of value of FM?
   - What measures are necessary to examine the value relationship between FM and primary business activities in a consistent, valid, and reliable manner?

In connection to these issues, the next steps in this collaborative research will include:

(1) further elaboration of the FM Value map and testing it in case studies in different countries with comparable research methods;
(2) extending the present literature review by including other journals, conference proceedings and research reports and findings from other disciplines, e.g. technology, economy and business administration;
(3) improvement of consistency and standardisation of input (resources and processes), output (provisions: products, services), outcome i.e. impact on performance (added value), and added value for whom: Stakeholder analysis;
(4) search for the best possible Key Performance Indicators on different levels (strategic/tactical/operational) and reliable and valid measurement methods;
(5) reflecting on the impact of research findings both from an academic point-of-view and with regard to practical implications to understand better what we need to do in different fields, taking into account the interests and needs of different stakeholders and different perceptions of value;
(6) writing an anthology on the added value of FM together with the sub-group on FM Value Chain; and
(7) develop practice guidelines for adding value management.

Abbreviations

CRE	Corporate real estate.
CREM	Corporate real estate management.
FM	Facilities management or facility management (cynonyms according to CEN, 2006).
PDCA	Plan, do, check, act (quality circle developed by W. Edwards Deming).

References

Allard, L.E. and Barber, C. (2003), "Challenges and opportunities in aligning real estate and the workplace with business strategy: a survey of leading CEOs", *Journal of Corporate Real Estate*, Vol. 5 No. 3, pp. 213-20.

Anderson, J.C. (1995), "Relationships in business markets: exchange episodes, value creation, and their empirical assessment", *Journal of the Academy of Marketing Science*, Vol. 23 No. 4, pp. 346-50.

Anderson, J.C. and Narus, J.A. (1999), *Business Market Management: Understanding, Creating, and Delivering Value*, Prentice Hall, Upper Saddle River, NJ.

Appel-Meulenbroek, R. (2010), "Knowledge sharing through co-presence: added value of facilities", *Facilities*, Vol. 28 Nos 3/4, pp. 189-205.

Bagozzi, R.P. (1975), "Marketing as exchange", *Journal of Marketing*, Vol. 39, pp. 32-9.

Becker, F., Sims, W. and Schoss, J.H. (2003), "Interaction, identity and collocation: what value is a corporate campus?", *Journal of Corporate Real Estate*, Vol. 5 No. 4, pp. 344-65.

Bradley, S. and Osborne, P. (1999), "The working environment: catalyst or constraint?", *Journal of Corporate Real Estate*, Vol. 1 No. 2, pp. 178-90.

Cant, M. (2005), "Collaboration in infrastructure services in regional retail centres: value-added contribution of facilities management at the Birmingham Bullring", *Journal of Facilities Management*, Vol. 3 No. 3, pp. 215-25.

Chau, K.W., Wong, S.K., Leung, A.Y. and Yiu, C.Y. (2003), "Estimating the value enhancement effects of refurbishment", *Facilities*, Vol. 21 Nos 1/2, pp. 13-19.

Codinhoto, R., Tzortzopoulos, P., Kagioglou, M., Aouad, G. and Cooper, R. (2009), "The impacts of the built environment on health outcomes", *Facilities*, Vol. 27 Nos 3/4, pp. 138-51.

Dewulf, G., Krumm, P. and de Jonge, H. (2000), *Successful Corporate Real Estate Strategies*, Arko Publishers, Nieuwegein.

Drake, A. (2002), "Moving forward: beyond cost per square foot – the other critical success factors in workplace change projects", *Journal of Corporate Real Estate*, Vol. 4 No. 2, pp. 160-8.

Duffy, F. (1999), "Mind the gap", *Journal of Corporate Real Estate*, Vol. 1 No. 4, pp. 377-87.

Farncombe, M. and Waller, A. (2005), "Outsourcing for corporate real estate managers: how can real estate learn lessons from other industries?", *Journal of Corporate Real Estate*, Vol. 7 No. 3, pp. 258-70.

Gale, B.T. (1994), *Managing Customer Value: Creating Quality and Service that Customers Can See*, Free Press, New York, NY.

Gibson, V. (2001), "In search of flexibility in corporate real estate portfolios", *Journal of Corporate Real Estate*, Vol. 3 No. 1, pp. 38-45.

Green, A., Price, I. and Whither, F.M.?.A. (2000), "Delphi study of the profession and the industry", *Facilities*, Vol. 18 Nos 7/8, pp. 281-92.

Green, A.N. and Jack, A. (2004), "Creating stakeholder value by consistently aligning the support environment with stakeholder needs", *Facilities*, Vol. 22 Nos 13/14, pp. 359-63.

Grisaffe, D.B. and Kumar, A. (1998), "Antecedents and Consequences of Customer Value: Testing an Expanded Framework", Working Paper 98-107, Marketing Science Institute, Cambridge, MA.

Heskett, J.L., Jones, T.O., Loveman, G.W., Sasser, E.W. and Schlesinger, L.A. (1994), "Putting the service-profit chain to work", *Harvard Business Review*, March-April, pp. 164-74.

Hiang, L.K. and Ooi, J.T.L. (2000), “Current issues in strategic corporate real estate asset analysis and management”, *Journal of Corporate Real Estate*, Vol. 2 No. 3, pp. 240-9.

Hui, E.C.M., Wong, J.T.Y. and Wan, J.K.M. (2008), “The evidence of value enhancement resulting from rehabilitation”, *Facilities*, Vol. 26 Nos 1/2, pp. 16-32.

Hunt, S.D. (1991), *Modern Marketing Theory: Critical Issues in the Philosophy of Marketing Science*, SouthWestern Publishing, Cincinnati, OH.

Hutt, M.D. and Speh, T.W. (1998), *Business Marketing Management – A Strategic View of Industrial and Organizational Markets*, 6th ed., The Dryden Press, Fort Worth, TX.

Jensen, P.A. (2009), "Theoretical model demonstrating the value adding contribution of facilities management", paper presented at Research Symposium of EFMC2009, Amsterdam, 16-18 June.

Jensen, P.A. (2010), “The Facilities Management Value Map: a conceptual framework”, *Facilities*, Vol. 28 Nos 3/4, pp. 175-88.

Jensen, P.A., Nielsen, K. and Nielsen, S.B. (2008), *Facilities Management Best Practice in the Nordic Countries – 36 Cases*, Centre for Facilities Management – Realdania Research, Kongens Lyngby.

Joroff, M.L. (2002), “Workplace mind shifts”, *Journal of Corporate Real Estate*, Vol. 4 No. 3, pp. 266-74.

Joroff, M.L., Porter, W.L., Feinberg, B. and Kukla, C. (2003), “The agile workplace”, *Journal of Corporate Real Estate*, Vol. 5 No. 4, pp. 293-311.

Kaplan, R.S. and Norton, D.P. (2000), “Having trouble with your strategy? Then map it”, *Harvard Business Review*, September-October.

Kortge, G.D. and Okonkwo, P.A. (1993), “Perceived value approach to pricing”, *Industrial Marketing Management*, Vol. 22 No. 2, pp. 133-40.

Kotler, P. (2000), *Marketing Management: Analysis, Planning, Implementation, and Control*, Prentice Hall, Upper Saddle River, NJ.

Krumm, P.J.M.M., Dewulf, G. and de Jonge, H. (1998), “Managing key resources and capabilities: pinpointing the added value of corporate real estate management”, *Facilities*, Vol. 17 Nos 12/13, pp. 372-9.

Krumm, P.J.M.M., Dewulf, G. and de Jonge, H. (1999), “The impact of evolving structures on managing corporate real estate”, *Journal of Corporate Real Estate*, Vol. 2 No. 1, pp. 58-67.

Kumar, A. and Grisaffe, D.B. (2004), “Effects of extrinsic attributes in perceived quality, customer value and behavioral intentions in B2B settings: a comparison across goods and service industries”, *Journal of Business-to-business Marketing*, Vol. 11 No. 4, pp. 43-74.

Latshaw, M. (2000), “Guidelines for corporate campus workplace solutions”, *Journal of Corporate Real Estate*, Vol. 2 No. 3, pp. 198-207.

Lindholm, A.-L. (2008), “A constructive study on creating core business relevant CREM strategy and performance measures”, *Facilities*, Vol. 26 Nos 7/8, pp. 343-58.

Lindholm, A.-L. and Leväinen, K.I. (2006a), “A conceptual framework of CREM performance measurement tools”, *Journal of Corporate Real Estate*, Vol. 8 No. 3, pp. 108-19.

Lindholm, A.-L. and Leväinen, K.I. (2006b), “A framework for identifying and measuring value added by corporate real estate”, *Journal of Corporate Real Estate*, Vol. 8 No. 1, pp. 38-46.

Lindholm, A.-L., Gibler, K.M. and Leväinen, K.I. (2006), “Modelling the value adding attributes of real estate to the wealth maximization of the firm”, *Journal of Real Estate Research*, Vol. 28 No. 4, pp. 443-75.

Louko, A. (2005), “Four cases of corporate real estate portfolio outsourcings”, *Journal of Corporate Real Estate*, Vol. 8 No. 3, pp. 108-19.

Lynch, B. (2002a), “Maximising FM’s contribution to shareholder value Part 1: can the capital expenditure process for fixed assets be improved?”, *Journal of Facilities Management*, Vol. 1 No. 1, pp. 48-55.

Lynch, B. (2002b), “Maximising FM’s contribution to shareholder value Part 2: tactics for improving the capital budgeting process – and producing results?”, *Journal of Facilities Management*, Vol. 1 No. 3, pp. 222-6.

Lyons, T.F., Krachenberg, A.R. and Henke, J.W. (1990), “Mixed motive marriages: what’s next for buyer-supplier relations?”, *Sloan Management Review*, Spring, pp. 29-36.

Manning, C. (1991), “Managing environmental risks and investment opportunities to maximize shareholder wealth”, *Journal of Real Estate Research*, Vol. 7 No. 3, pp. 351-9.

Manning, C. and Roulac, S.E. (1996), “Structuring corporate property function for greater bottom line impact”, *Journal of Real Estate Research*, Vol. 12 No. 3, pp. 383-96.

Manning, C., Rodriguez, M. and Ghosh, C. (1999), “Devising a corporate facility location strategy to maximize shareholder wealth”, *Journal of Real Estate Research*, Vol. 17 No. 3, pp. 321-40.

Menon, A., Homburg, C. and Beutin, N. (2005), “Understanding customer value in business-to-business relationships”, *Journal of Business-to-business Marketing*, Vol. 12 No. 1, pp. 1-38.

Møllebjerg, L. (2009), "Facility management value add", presentation at Business Conference of EFMC2009, Amsterdam, 16-18 June 2009.

Nourse, H.O. and Roulac, S.E. (1993), “Linking real estate decision to corporate strategy”, *Journal of Real Estate Research*, Vol. 8 No. 4, pp. 475-94.

O’Mara, M.A. (2000), “Strategies for demand forecasting in corporate real estate portfolio management”, *Journal of Corporate Real Estate*, Vol. 2 No. 2, pp. 123-37.

O’Roarty, B. (2001), “Flexible space solutions: an opportunity for occupiers and investors”, *Journal of Corporate Real Estate*, Vol. 3 No. 1, pp. 69-80.

Okoroh, M.I., Gombera, P.P., John, E. and Wagstaff, M. (2001), “Adding value to the healthcare sector – a facilities management partnering arrangement case study”, *Facilities*, Vol. 19 Nos 3/4, pp. 157-63.

Pathirage, C., Haigh, R., Amaratunga, D. and Baldry, D. (2008), “Knowledge management practices in facility organisations: a case study”, *Journal of Facilities Management*, Vol. 6 No. 1, pp. 5-22.

Pittman, R.H. and Parker, J.R. (1989), “A survey of corporate real estate executives on factors influencing corporate real estate performance”, *Journal of Real Estate Research*, Vol. 4 No. 3, pp. 107-20.

Porter, M. (1985), *Competitive Advantage – Creating and Sustaining Superior Performance*, Free Press, New York, NY.

Price, I., Macdonald, R. and Ellison, I. (2009), "Practical postmodernism – FM and socially constructed realities", paper presented at Research Symposium of EFMC2009, Amsterdam, 16-18 June.

Rabianski, J.S. (2007), “Employee quality of life in corporate location decisions”, *Journal of Corporate Real Estate*, Vol. 9 No. 1, pp. 50-63.

Reed, R.G. and Wilkinson, S.J. (2005), “The increasing importance of sustainability for building ownership”, *Journal of Corporate Real Estate*, Vol. 7 No. 4, pp. 339-50.

Rutherford, R.C. and Nourse, H.O. (1988), "The impact of corporate real estate unit formation on the parent firm's value", *Journal of Real Estate Research*, Vol. 3 No. 3, pp. 73-84.

Sarshar, M. and Pitt, M. (2009), "Adding value to clients: learning from four case-studies", *Facilities*, Vol. 27 Nos 9/10, pp. 399-412.

Smith, A. and Pitt, M. (2009), "Sustainable workplaces: improving staff health and well-being using plants", *Journal of Corporate Real Estate*, Vol. 11 No. 1, pp. 52-63.

Ulaga, W. and Eggert, A. (2005), "Relationship value in business markets: the construct and its dimensions", *Journal of Business-to-business Marketing*, Vol. 12 No. 1, pp. 73-99.

Vos, P.G.J.C. and van der Voordt, D.J.M. (2001), "Tomorrow's offices through today's eyes: effects of office innovation in the working environment", *Journal of Corporate Real Estate*, Vol. 4 No. 1, pp. 48-65.

De Vries, J., de Jonge, H. and van der Voordt, D.J.M. (2008), "Impact of real estate interventions on organisational performance", *Journal of Corporate Real Estate*, Vol. 10 No. 3, pp. 208-23.

Wauters, B. (2005), "The added value of facilities management: benchmarking work processes", *Facilities*, Vol. 23 Nos 3/4, pp. 142-51.

Wilson, C., Leckman, J., Cappucino, K. and Pullen, W. (2001), "Towards customer delight: added value in public sector corporate real estate", *Journal of Corporate Real Estate*, Vol. 3 No. 3, pp. 215-21.

Zeithaml, V.A. (1988), "Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence", *Journal of Marketing*, Vol. 52 No. 3, pp. 2-22.

Further reading

CEN (2006), *Facility Management – Part 1: Terms and definitions. EN 15221-1*, CEN (European Committee for Standardization).

Corresponding author

Per Anker Jensen can be contacted at: pank@man.dtu.dk