

Adding value by FM: exploration of management practice in the Netherlands and Denmark

van der Voordt, DJM; Jensen, PA

Publication date

2014

Document Version

Final published version

Published in

Proceedings of the European Facility Management Conference EFMC 2014

Citation (APA)

van der Voordt, DJM., & Jensen, PA. (2014). Adding value by FM: exploration of management practice in the Netherlands and Denmark. In *Proceedings of the European Facility Management Conference EFMC 2014* (pp. 1-11)

Important note

To cite this publication, please use the final published version (if applicable). Please check the document version above.

Copyright

Other than for strictly personal use, it is not permitted to download, forward or distribute the text or part of it, without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license such as Creative Commons.

Takedown policy

Please contact us and provide details if you believe this document breaches copyrights. We will remove access to the work immediately and investigate your claim.

Adding Value by FM: an exploration of management practice in the Netherlands and Denmark

Theo van der Voordt
Delft University of Technology, Netherlands
E: D.J.M.vanderVoordt@tudelft.nl
T: +31 6 39251096

Per Anker Jensen
Technical University of Denmark
E: pank@dtu.dk

ABSTRACT

The last decade shows a growing attention into the concept of added value of Facilities Management and Corporate Real Estate Management and how to attain and measure added value. A variety of different types of added value came to the fore such as user value, customer value, financial value, environmental value and relationship value. Furthermore a huge variety of different definitions can be found in publications from different authors, partly depending on their disciplinary background and partly because some authors do not build on former research. In discussions with researchers and practitioners, the concept of added value is definitely recognized. However, people have many different topics in mind. In a workshop at EFMC 2013 all attendants used different terms and mentioned only a few concrete measures how to add value, mostly in rather abstract terms. Further research is needed to harmonize the concept of added value i.e. definitions, dimensions and types, and to be able to operationalize this concept into practical guidelines for implementation and measurement by Key Performance Indicators. This paper relates theoretical reflections on the added value of FM to the findings of ten interviews with practitioners from the Netherlands and Denmark. It aims to explore how practitioners cope with terms and definitions, which concrete FM measures are applied to add value, what value, and if/how managers measure whether the aimed added values have been attained. The paper ends with some reflections and suggestions for follow-up research, both from a theoretical and practical perspective.

Keywords

Facilities Management, Corporate Real Estate Management, Added Value, Performance, Value Adding Management.

1 INTRODUCTION

The added value of Facilities Management (FM) and Corporate Real Estate Management (CREM) has in recent years been one of the key issues in various annual European Facility Management Conferences and other conferences and publications worldwide. The growing interest in the concept of added value of FM and CREM might be related to the growing awareness of physical resources such as real estate and building related facilities and services being a strategic asset (Jensen et al., 2012). Facilities are more and more perceived as enablers of organizational productivity, business profitability, operational efficiency and effectiveness and

end user satisfaction (Katchamart, 2013). The relevance of the added value concept is illustrated in the definitions of FM and CREM. According to CEN (2006) FM is “*the integration of processes within an organisation to maintain and develop the agreed services which support and improve the effectiveness of its primary activities*”. This definition emphasizes the role of FM as an enabler of effective primary activities. According to Dewulf et al. (2000) corporate and public real estate management can be defined as “*the alignment of the real estate portfolio of a corporation or public authority 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*”. This definition focuses on the added value of real estate and its contribution to organisational performance.

Although there seems to be a high level of agreement about the relevance of added value of FM and CREM, a variety of different views can still be found in literature regarding the definition of added value, related stakeholders, types of values, and how to measure.

- a. *Definitions.* In Jensen et al. (2012) over 50 definitions of added value were traced. Various authors focus on the benefits i.e. the outcomes of facilities and services. For instance, De Vries et al. (2008) defined the added value of real estate as “the contribution of real estate to organisational performance and the attainment of organisational objectives from a point of view of different stakeholders”. As facilities involve investments and costs, others - including Jensen et al. (2012) - define the added value of FM/CREM as “the trade-off between the benefits and the costs and risks to achieve these benefits”.
- b. *Stakeholders.* Whereas various authors focus on the contribution of real estate to create shareholder value (e.g. Lindholm & Leväinen, 2006; Lindholm, 2008), most current authors incorporate the interests of all stakeholders, including policy makers, controllers, technical managers, clients, customers, end users and society (De Vries et al., 2008; Den Heijer, 2011; Jensen et al., 2012; Van der Zwart & Van der Voordt, 2013; Van der Zwart, 2014; Riratanaphong, 2014).
- c. *Value types.* Based on a content analysis of sixteen chapters by authors from seven different countries and case studies from different sectors (offices, higher education, industry, health care), Jensen et al. (2012) detected six different types of added value: 1) use value (quality in relation to the needs and preferences of the users); 2) customer user value (trade-off between benefits and costs for the customers); 3) economic, financial or exchange value (the economic trade-off between costs and benefits); 4) social value (e.g. supporting positive social interaction or reinforcing social identity); 5) environmental value (Green FM, environmental impact of FM); and 6) relationship value (e.g. getting high-quality services or experiencing a special treatment). Other authors discuss different values as well, such as productivity, profitability and competitive advantage (De Vries et al., 2008) and sustainability (Den Heijer, 2011). Riratanaphong (2014) clustered the values mentioned by different authors into six categories according to Bradley (2002): Stakeholder perception, financial health, organisational development, productivity, environmental responsibility, and cost efficiency.
- d. *Key Performance Indicators.* The literature shows a huge variety of performance areas, performance measurement models and Key Performance Indicators (Riratanaphong et al., 2012), focusing on quality or costs, effectiveness or efficiency, productivity, flexibility, creativity or sustainability. Riratanaphong (2014) shows that in practice many different KPIs are being used as well.

A workshop at EFMC 2013, that was organized by the authors of this paper together with Christian Coenen, ZHAW, confirmed that the concept of Added Value is interpreted in many ways and linked to a huge variety of different topics. Prioritization of different types of added value showed to be highly subjective and depends on the participant's position, experience and personal beliefs. Most prioritized values included the contribution of FM and CREM to the quality of life, the productivity of the core business, user satisfaction and sustainability. The participants found it difficult to mention concrete measures *how* to add value, partly due to different interpretations of the term "measures" as "interventions" and "ways to measure". The answers ranged from concrete measures such as evaluate happiness, satisfaction and work support, create energy savings in building retrofitting, and take care of shuttle busses and parking facilities for bikes, to abstract measures such as steering on economics, efficiency and effectiveness, or 'good price & value for the client'.

To conclude there is still much work to be done to clarify the concepts of added value, adding value and value adding management and to build a widely accepted framework of value types and ways to measure the impacts of different FM and CREM interventions. For this reason the EuroFM Research Network Group "The Added Value of FM" is continuing working on this topic by exchanging ideas, writing joint papers and supervising MSc and PhD theses.

2 RESEARCH METHOD

In order to further explore how people in practice cope with added value and if and how they incorporate this concept in their daily practice, ten interviews were conducted with experienced senior facility managers, corporate real estate managers, consultants and service providers, five in Denmark and five in the Netherlands (see Table 1).

Table 1: List of interviewees

Country	Role	Company and function
DK1	In-house FM	Novozymes, FM Director and FM Manager.
DK2	Consultant	Real-FM Consulting, Owner.
DK3	Consultant	Fm3, Owner.
DK4	Provider	ISS Facility Services A/S, Division director
DK5	Provider	Bilfinger HSG Facility Management A/S, Managing Director.
NL1	In-house CREM	Stork Technical Services, CRE Manager
NL2	Consultant	Suyker Consultancy, Owner.
NL3	Consultant	Gijs van Wijk Solutions, Owner.
NL4	Consultant	Skenn BV, Owner.
NL5	In-house FM	Vimpelcom, Director of Real Estate

Criteria for selection were senior level of practical experience, a mix of FM and CREM professionals and a mix of in-house FM, service providers and consultants. All interviewees were from the private sector. The final sample represents various sectors such as biotechnology, technical services, maintenance management, FM service provider and consultancy, and functions such as in-house FM, consultant, and director. Educational backgrounds range from Master in FM to Building Engineer and from higher education in logistics, accounting or organisation to MBA in marketing or e-business and civil engineering, economics, town and country planning or economic geography. Years of experience range from 12 to 34 years.

The questionnaire included a number of questions regarding:

- The use of the term Added Value in daily practice, in which context or dialogue, on which levels (strategic, tactical, operational), and benefits and downsides of using Added Value in interactions between different actors.
- Top five of main values, examples of concrete FM/CREM interventions, ways of measuring (KPIs) and documentation, and if/how benchmarking is applied in practice.

3. RESEARCH FINDINGS

a. Use of Added Value in daily practice

Almost all interviewees use the term Added Value (AV) in daily practice, in various settings:

- Internally in in-house FM organisations, between FM organisation and corporate management, and within provider companies;
- Externally between clients and providers (in contract negotiations and on-going collaboration), clients and consultants, and clients and deliverer of IT-systems and equipment

The AV-concept is both used to demonstrate the added value of ones' own function or FM/CREM department and to discuss the added value of FM- or CREM-interventions. Related terms are Value Creation, Value Increase, Appreciation, Total Value Add (TVA) and Economic Value Added (EVA). In the nineties AV was mainly linked to Economic Value Add and Shareholder Value, whereas nowadays the concept has a wider scope, depending on the person you talk with e.g. a CEO, operational manager, supplier or end user. One of the advantages of applying the AV-concept is that the dialogue is moved away from the contractual agreement and the SLA's. According to one respondents: "It makes the customer feel that you are interested in his business and not just in submitting the next bill. It makes is possible to raise the level of the whole FM provision". It helps to speak the language that top managers understand. Downsides of the AV-concept are that AV is perceived differently by different people and difficult to be made concrete and operational and to document. AV concerns things that cannot always be measured in economic terms. It is very important to understand which value is most important for the client or customer and what he or she really needs (often more than simply solve the current problem). In addition to sound data, storytelling can also be used to convince clients of the added value of FM and CREM provisions and proposed interventions.

Most practitioners perceive AV as the trade-off between benefits and costs and steer on value for money and making the Core Business more effective. The term AV is connected to Value, which both has an economical meaning and meanings related to feelings and other subjective and qualitative aspects such as comfort, making complex things simpler and easier to be managed, and high speed delivery. Various interviewees made a distinction between what they called hard economic aspects and more soft aspects related to Health, Safety, Environment and Quality.

Though the term AV is not always used explicitly, practice is always concerned about balancing between the benefits of e.g. flexibility of short term contracts, speed of delivery or better quality and the costs of extra investments or higher running costs. AV depends very much on the client's perception. One of the service providers makes a distinction between the value they provide as part of their standard package at the start of a new contract, and the value they create during the contract. The latter changes a lot depending on what is important for the customer over time.

The focus on particular types of value depends on the involved stakeholders. According to one of the CREM-interviewees:

- Shareholders focus almost one-sidedly on a high Return on Investment and low risk, costs and reliabilities.
- The Board of Management usually connects added value to their strategic vision and policy and steer on maximum turnover (volume of business), minimum costs, and a high Ebit (earnings before interest and taxation).
- Heads of regional units have to cope with both top-management needs (profit), regional customers and employee requirements. They try to find a balance between cost reduction and benefits such as attraction and retention of talented staff.
- Site managers focus more on operational issues and employee satisfaction.

There is also a difference in value adding management on strategic, tactical and operational level. According to one of the CRE-managers adding value on strategic level regards developing site master plans and implementing the real estate strategy. Its focus is on the long term decisions and avoidance of complaints. AV on tactical level regards for instance speed of delivery and to do what is being asked. Issues on operational level include cost reduction, employee satisfaction and customer satisfaction. Although AV is mostly treated on strategic level, it is of relevance on all levels and for everybody in the FM organisation. It should be part of the organisational culture. However, according to one respondent FM is not really a strategic issue in most organisations and CEOs are not really interested in FM. Talking about AV on operational level can even be counterproductive because “operational managers don’t have a clue of what AV actually means”. Focus points in FM also depend on the context. When the economy is booming, avoiding dissatisfaction and commotion might be key issues, whereas in times of economic recession cost reduction will be in the core. The size of the company is a factor as well. In small firms FM is mainly operational.

b. Prioritized values

The interviewees were asked as an open question “What is your top five of main values to be included in management of accommodations, facilities and services?” The responses per respondent are collected in Table 2. The abbreviations between brackets refer to the list of impact parameters in Table 3, see explanation in the text below. One of the respondents stressed that the priority depends on the customer. The open question was followed up by asking for examples of concrete FM interventions to attain these added values, about use of KPI’s to measure if the aimed added values are attained, about benchmarking with data from other organisations and about other methods to document added value.

Table 3 depicts the frequencies of the main values from Table 2 categorised according to the impact parameters from the FM Value Map, see explanation in the text below. The responses are divided in Danish and Dutch interviewees and in total.

Table 2: Main values from open question (impact parameters from table 3 in brackets)

ID	1	2	3	4	5
DK1-INH	Transparency of cost and priorities (C)	Scalability (A)	Release management resources (P)	User satisfaction (S)	Satisfaction with service provider (S)
DK2-CON	Core Business objectives (A)	Innovation (C)	Coherent strategy between Core Business and FM (A)	Productivity of Core Business (P)	Communication (S)
DK3-CON	Create time (P)	Create well-being (S)			
DK4-PRO	Satisfaction of outsourced staff (S)	Make processes smarter (C) (P)	Improvements and innovation (P)	User centricity and service orientation (S)	Corporate Social Responsibility (E)
DK5-PRO	Increase energy conscience and CO2 emissions (E)	Ease of operation (P) (C)	Deliver better service with less or the same cost (S) (C)	Satisfaction (S)	
NL1-INH	Profit (ebit); improving cash position (C)	Cost reduction (C)	Transparency of Real Estate data for shareholders (C)		
NL2-CON	Cost reduction (C)	Affordability (C)			
NL3-CON	Sustainability (E)	Cost reduction (C)	Identity (Cu)	Satisfaction (S)	
NL4-CON	Cost reduction (C)	Improving Core Business / Productivity (P)	Health (S)		
NL5-INH	Efficient use of space (C)	Forecasting future m2-needs (A)	Balance between owned buildings, rented buildings and sale & lease back (C)	Forecasting of future capital need (C)	Engagement (Cu)

Table 3: Frequency of the main values in Table 2 related to impact parameters from to the FM Value Map

Abbr.	Impact parameter	Denmark 24 (100%)	Netherlands 17 (100%)	Total 41 (100%)
S	Satisfaction	8 (33%)	2 (12%)	10 (24%)
C	Cost	5 (21%)	10 (59%)	15 (37%)
P	Productivity	6 (25%)	1 (6%)	7 (17%)
R	Reliability			
A	Adaptation	3 (13%)	1 (6%)	4 (10%)
Cu	Culture		2 (12%)	2 (5%)
Ec	Economic			
So	Social			
Sp	Spatial			
E	Environmental	2 (8%)	1 (6%)	3 (7%)

Table 3 shows that values related to Satisfaction and Cost are most frequently prioritized, but with a striking difference between the interviewees from Denmark and the Netherlands. Satisfaction is seen as much more important than Cost in Denmark, while Cost is seen as much more important than Satisfaction in the Netherlands. Productivity is also important, but mostly in Denmark. Values in relation to Adaptation and Environmental are also mentioned in both countries, while Culture only is represented in the Netherlands. The remaining four impact factors – Reliability, Economic, Social and Spatial are not represented in the response to the open question.

The open question on main values and the mentioned related questions were followed by a more closed question based on showing a list of possible added values found in literature and asking how these values are related to the prioritised main values. The list was based on the impact parameters (outcomes) from the FM Value Map (Jensen, 2010) and was divided in impacts on core business (Satisfaction, Cost, Productivity, Reliability, Adaptability and Culture) and impacts on surroundings (Economic, Social, Spatial, and Environmental), see also Table 3. In response to this more closed question all possible outcomes have been discussed with the respondents. In the following each of the impact parameters are commented on based on the interview results.

Impact on core business

Satisfaction is defined as the impact of FM or CREM on satisfaction of customers, staff/end users and owners. One of the respondents mentions that customer satisfaction has been most important but user satisfaction has become increasingly important, too. Satisfaction is a very subjective parameter and is often measured quantitatively by surveys or more qualitatively, for instance by mystery visits. Surveys results are often benchmarked across organisations.

Cost is defined as operational cost, staff turnover and capital investments. Cost reduction is obviously an important mean, but transparency is also mentioned by interviewees from in-house FM in Denmark and in-house CREM in the Netherlands. An interviewee from a provider mentions that cost primarily has major attention, when there is a problem. Cost impacts are obviously often measured and also benchmarked, both in € and m² per person (f.t.e.) or per workplace, occupancy level, total costs of ownership per m², or in terms of affordability, e.g. the ratio between facility costs and total costs of running a business.

Productivity is defined as efficiency, low staff absence and effectiveness. Impact on core business productivity can be difficult to measure, but a typical way for providers is to measure the number of proposals for improvements and innovations. Often productivity impact is not measured directly but addressed more qualitatively in discussions, business cases and performance reviews. Impact on productivity is rarely benchmarked.

Reliability is defined as business continuity, security and safety. The respondents' views on reliability varied a lot. One view is that reliability is at the lowest level of the Maslow pyramid of needs and therefore is not a motivation factor, which can add value. Another view is that business continuity has become increasingly important. For one of the interviewees it has top priority, e.g. regarding fire safety and data security. An interviewee in a biotech company

mentions that down time is important to control and that compliance to legal requirements has top priority. Reliability is mostly measured in terms of response time and business continuity and is not often benchmarked.

Adaptation is defined as foresight, flexibility and responsiveness. Adaptation is mostly considered on a high management level in relation to capital investments and contract negotiations. An in-house CREM interviewee mentions that technical flexibility and flexibility in renting are becoming more important. Adaptation is rarely measured or benchmarked.

Culture is defined as organizational identity, corporate image and corporate brand. For some companies branding is important, but not for others. Some view culture as related to the image of FM and not as a corporate concern. An interviewee from the Netherlands mentions monitoring the image of FM internally (employee monitor) and externally (customer monitor) and remarks that external image is often more important than internal image. Engagement, i.e. a sense of belonging and being committed to the company, has been mentioned once as well.

Impact on surroundings

Economic is defined as income, commerce and tax. Some of the interviewees did not understand this parameter, and asked for a more clear definition. Others regard the economic impact of FM on society to be mostly indirect. However, one interviewee claims that economic impact is his company's reason for being. There are no examples of measuring and benchmarking economic impact.

Social is defined as employment, education and integration. Social impact can be important in relation to location of new facilities, and it is important for some service providers in terms of integration. As examples of measures of social impact an interviewee from a provider mentions number of apprentices and number of handicapped among staff.

Spatial is defined as architectural expression, landscaping and townscaping. Spatial impact is mostly important for in-house FM/CREM organisations and specialist consultants and is rarely important for service providers. An in-house FM mentions that they participate in working groups with the local municipality concerning transportation and infrastructure. There are no examples of measuring and benchmarking spatial impact.

Environmental is defined as resource consumption, pollution and environmental sustainability. There are clear indications that sustainability has become increasingly important, but it is still not given high priority in many companies. The environmental impact is typically measured and benchmarked quantitatively in terms of energy consumption, but in some cases also documented qualitatively in terms of choice of environmental suitable materials and treatment of chemicals.

c. Value adding management

One of the interviewees pointed to Maslow's pyramid of needs as a starting point for management of value. In his own words: "FM does not create value by supporting the lower levels in the pyramid. They are taken for granted and you will get criticism, if they are not

fulfilled, but you will not receive any appreciation, if they are fulfilled. That is just doing the work that is necessary. To be appreciated you need to deliver something that is beyond basic expectations.”

Besides KPI's there are a number of other ways to visualise or document added value. Providers often prepare performance reviews with fixed intervals to their customers. Other examples are business cases for specific initiatives and reports on finished projects. Added value is also included in the communication with stakeholders in less formal ways as part of on-going dialogue and storytelling. Management of expectations is an important aspect of adding value.

One of the providers have attempted to make an annual added value report on key accounts, but they have not yet managed to find the right way to meet the customers' expectations – 2013, however, will be the first year where they have a draft. Their experience with using Balanced Scorecard is that the economic and people perspectives are quite easy to document, while the customer and process perspectives are much more difficult to measure. It also depends a lot on what triggers the specific customer and user.

d. Topics for future research

Various interviewees expressed a need for a clear framework that links concrete FM and CREM interventions to well defined types of Added Value, Key Performance Areas and KPIs. Furthermore there is an urgent need for best practices, empirical data and stories to illustrate the possible AV of various FM or CREM interventions to CEOs, clients, customers and end users. Other issues for further discussion and research came on the table as well, e.g.:

- Relate AV to the context (Anglo-Saxian countries versus Europe, USA, Asia) and sector (e.g. offices versus health care, education, industry).
- Learn from other disciplines such as economy. Make a clear distinction between market value of RE and value of RE for the business.
- Pay attention to AV in historical perspective and how the concept developed.
- Include AV of ownership versus renting of buildings in connection to mainstream and company focused buildings, flexibility, costs.
- How to improve the impact of FM on macro level?
- How to cope with growing vacancy? What is or could be the role of FM when FM interventions result in lower space demand?

In addition a number of issues were proposed to be discussed in EuroFM meetings and at EFMC conferences, for instance: What to do in case of conflicting values/wishes (e.g. between organisation and end users? Is it possible to argue for the value of sustainability not only because it makes business sense but also regarding the AV of sustainability itself? What are the relationship between FM & Asset Management i.e. how do they overlap and what is their uniqueness?

4. DISCUSSION AND CONCLUSION

Regarding the definition of added value all respondents refer to both benefits and costs of FM/CREM interventions. Benefits are mainly linked to clients, customers and end users but also to shareholders and – less often - to society as a whole. All respondents include different types of added values, without a clear classification into for instance user value versus customer value, or economic value versus environmental value. Practitioners mainly steer on the impact of FM and CREM on the core business and organisational performance, and this is also essential in provider companies' sales arguments.

Prioritized values are costs and satisfaction, followed by productivity. Remarkably, four out of ten outcome parameters - reliability and economic, social and spatial impact on the surroundings - were not spontaneously mentioned at all in response to the open question about prioritized values. These issues came only to the fore when we asked for comments on the list of possible added values that was shown after the open questions. Not all values showed on the list – in particular possible impacts on the surroundings – did immediately ring a bell and raised different interpretations or misunderstanding. Sustainability was mainly perceived as a building characteristic. Most respondents made no clear distinction between impacts on the core business and impacts on the surroundings, and focussed more on a distinction between interventions regarding buildings and building related facilities and services versus choices regarding the location and the surroundings. Because practitioners use different terms, various responses could not be allocated clearly to one particular value.

There were some striking differences in the frequencies of prioritized values by Danish and Dutch respondents. This might be caused by the different contexts but also by the selection of respondents with more Dutch representatives from CREM than in the Danish sample (due to the CREM background of the first author). More interviews are needed to get a more complete picture.

The topics for further research that were mentioned by the interviewees are in line with the findings from the EFMC 2013 workshop that was summarised in the introduction section. The EFMC 2013 participants also showed much interest in the development of a holistic framework that can bring together various elements of FM activities and practices, and concrete ways how FM can contribute to a more sustainable use of office buildings by office users themselves, productivity support, retaining employees and attracting talented new employees, and add value to society. Another issue is what arguments FM could use other than economy to get the CEO interested in FM as a leadership tool/discipline, and how to visualize AV.

Although in the last decade various conceptual models and frameworks have been developed to visualize the added value of FM and CREM (De Vries et al., 2008; Lindholm, 2008; Jensen, 2010; Den Heijer, 2011, apparently academic contributions to this research area are not ready to be implemented into daily practice. An important next step is to integrate the insights of the FM Value Map and other FM and CREM models into a holistic framework, to illustrate adding value by FM/CREM by best practices and data from empirical research, and easy-to-apply KPIs.

REFERENCES

- CEN (2006, *Facility Management – Part 1: Terms and definitions*. EN 15221-1.
- Bradley, S. (2002). What's working? Briefing and evaluating workplace performance improvement. *Journal of Corporate Real Estate*, 4(2), 150-159.
- De Vries, J. C., De Jonge, H., & Van der Voordt, D. J. M. (2008). Impact of real estate interventions on organisational performance. *Journal of Corporate Real Estate*, 10(3), 208-223.
- Den Heijer, A. (2011). *Managing the University Campus: Information to support real estate decisions*. PhD dissertation: Delft University of Technology.
- Dewulf, G., Krumm, P., & De Jonge, H. (2000). *Successful corporate real estate strategies*. Nieuwegein: Arko Publishers.
- Jensen, P. A. (2010). The Facilities Management Value Map: a conceptual framework. *Facilities*, 28(3/4), 175-188.
- Jensen, P.A., Sarasoja, A.L., Van der Voordt, T. & Coenen, C. (2013), How can Facilities Management add value to organisations as well as to society? Conference paper. Brisbane, Australia: CIB World Building Congress, 5-9 May 2013.
- Jensen, P. A., Van der Voordt, D. J. M., & Coenen, C. (2012). *The added value of facilities management: concepts, findings and perspectives*. Lyngby Denmark: Polyteknisk Forlag.
- Katchamart, P. (2013). *Profiling value added position in FM*. Copenhagen: Technical University of Denmark & Centre for Facilities Management (CFM) – Realdania Research.
- Lindholm, A.-L. (2008). *Identifying and measuring the success of corporate real estate management*. Doctoral Dissertation, Helsinki University of Technology.
- Lindholm, A.L. & Leväinen, K. I. (2006). A framework for identifying and measuring value added by corporate real estate. *Journal of Corporate Real Estate*, 8(1), 38-46.
- Riratanaphong, C., Van der Voordt, T., & Sarasoja, A.-L. (2012). Performance measurement in the context of CREM and FM. In P. A. Jensen, T. Van der Voordt & C. Coenen (Eds.), *The added value of facilities management: concepts, findings and perspectives* (pp. 127-149). Lyngby Denmark: Polyteknisk Forlag.
- Riratanaphong, C., (2014), Performance measurement of workplace change in two different cultural contexts. PhD-Thesis. Delft: Delft University of Technology.
- Van der Zwart, J. (2014), *Hospital real estate management in a changing context*. PhD-thesis. Delft: Delft University of Technology.
- Van der Zwart, J. & Van der Voordt, T. (2013). Value adding management of hospital real estate. Balancing between different stakeholders' perspectives. *E-Hospital* Vol. 15, no. 3, 13, 15-17.