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Comparisons and Lessons Learned

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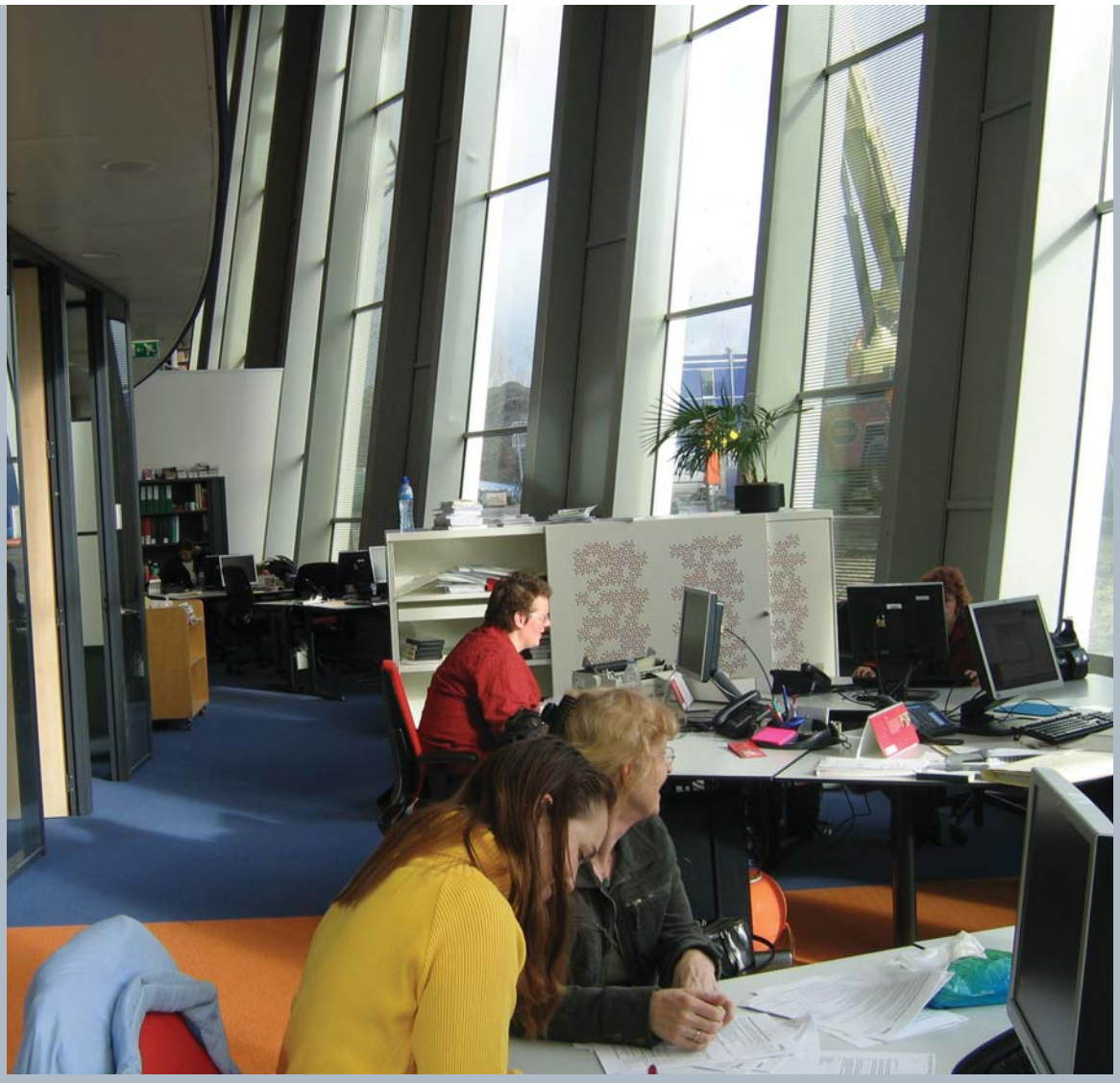
THE ADDED VALUE OF FACILITIES MANAGEMENT
CONCEPTS, FINDINGS AND PERSPECTIVES

PER ANKER JENSEN, THEO VAN DER VOORDT AND CHRISTIAN COENEN (EDITORS)



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CONCEPTS, FINDINGS AND PERSPECTIVES

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17. COMPARISONS AND LESSONS LEARNED

Per Anker Jensen, Theo van der Voordt, Christian Coenen and Anna-Liisa Sarasoja

ABSTRACT

Purpose: To create an overview and evaluation of the achievements of the contributions in this book by identifying, summarising and discussing cross-cutting themes and essential learning points across the former chapters.
Methodology: Based on a purposeful reading of all chapters comparisons are made of the essential theoretical perspectives, conceptual models and findings from empirical research. The most important novel aspects of the contributions are pinpointed.
Findings: The three basic perspectives of FM, CREM and B2B marketing show to provide both overlapping and complementary focus areas. Comparisons of the added value parameters of four conceptual models from FM and CREM show many similarities and a trend towards convergence, but the basic structure of the models are different. This can be related to CREM being oriented on development and management of new and existing buildings, while FM is more service and process oriented. Empirical research regarding the added value of FM is seen to utilise a broad range of both qualitative and quantitative methods in various combinations. The contributions provide important new focus and insights on different types of added value, its dimensions and KPIs, and on areas like value adding management, performance management and performance measurement, stakeholder relationships and relationship management, green FM and sustainability. Furthermore various ideas came up for further improvement of the FM Value Map.
Practical implications: The advancement in new knowledge and understanding that this book provides offers a new state of the art which can give inspiration and guidance for cutting edge FM organisations and professionals as well as for advanced teaching and future research.
Research limitations: The chapter is based on the contributions to this book and does not provide new empirical evidence.
Originality/value: The chapter provides an important overview and evaluation of the contributions in all the former chapters.

Keywords: FM, CREM, B2B Marketing, Added Value, Performance, State of the Art.

INTRODUCTION

This chapter was conceived after all the former chapters were written, reviewed and revised and is based on a purposeful reading of all chapters. The purpose was to create an overview and evaluation of the achievements of the contributions to this book. This was done by identifying, summarising and discussing cross-cutting themes and essential learning points across the former chapters.

The chapter starts with a comparison of the focus points of FM, CREM and B2B marketing. Next the similarities and dissimilarities between four conceptual models and their adding value parameters are being discussed. The reflections on the concept of added value in literature and practice show a shift from operational tasks towards more strategic issues. The chapter also points out that the contributions provide important new focus and insights on areas like stakeholder analysis, relationship management, and "green" FM. Although much progress has been made in measuring performance and added value, still much work has to be done to be able to measure intangibles in a quantitative way. The research methods used in the empirical chapters are also reviewed. The chapter ends with a brief reflection on the FM Value Map that was a starting point for this book.

COMPARISONS

THE THREE BASIC PERSPECTIVES: FM, CREM AND B2B MARKETING

The researchers behind the contributions in this book have different backgrounds as explained in chapter 1 ("Background and Introduction"). Together they represent the three basic perspectives of FM, CREM and B2B marketing. These perspectives were briefly introduced in chapter 1 and further explored in the literature review in chapter 4 ("The Concept of Added Value of FM"). In many of the other chapters the different perspectives are not so clearly distinguished. This is partly due to the fact that all authors relate themselves to FM as an academic discipline in this research work, and partly because the collaboration on this book has helped to bring the perspectives closer together with a joint focus on FM as a practice domain subject to research.

Table 17.1 presents a comparison of the different aspects included in the scope of the three basic disciplines. FM and CREM both have a strong focus on the physical assets of an organisation in terms of facilities, real estate, property and buildings. FM has a much stronger focus on services and service management than CREM, whereas B2B marketing also can have a strong focus on services, particular when applied to the FM domain. B2B marketing naturally has a strong focus on marketing, which is not the case for FM and CREM. Relationships are also very much in focus for B2B marketing, but that is also increasingly the case for both FM and CREM particularly in terms of stakeholder relationships and management and also regarding partnerships between providers and customer organisations. Economy is important for all perspectives, but with major differences in focus. FM has a strong focus on operational cost and CREM has a strong focus on investments and life cycle costs, while price and income generation is the main economical focus of B2B marketing.

B2B marketing as a discipline is mostly based on social sciences with research and teaching at business schools, while FM and CREM have a more multi-disciplinary character with a knowledge base from architecture, engineering and social sciences. Both disciplines are strongly related to the resource based view in strategic management thinking.

Table 17.1: Comparison of the three basic perspectives

Aspect / Perspective	Physical assets	Services	Marketing	Stakeholders	Economy
FM	X	XX		X	X
CREM	XX	X		X	X
B2B marketing		X	XX	X	X

CONCEPTUAL MODELS

When we started to work on this book there were three main conceptual models of mapping added value – The FM Value Map presented in Figure 3.3 (Jensen et al., 2008 and Jensen, 2010) and the two models from CREM presented in Figure 4.2 (Lindholm et al., 2006) and Figure 4.3 (De Vries et al., 2008). The researchers and research groups behind the three models were all represented in the project group: Per Anker Jensen developed the FM Value Map at the Technical University of Denmark, Anna-Liisa Sarasoja – then Lindholm – developed the model in Figure 4.2 as part of her PhD-study at Helsinki University of Technology (today part of Aalto University), and Theo van der Voordt co-supervised Jackie de Vries who was a member of the CREM-research group at the Delft University of Technology when she developed the model in Figure 4.3 as part of her PhD-study (De Vries, 2007).

Chapter 11 "Linking Decisions and Performance: Adding Value Theories Applied to the University Campus" presents a new conceptual model of mapping added value in Figure 11.5 based on the PhD-study by Alexandra den Heijer at Delft University of Technology (Den Heijer, 2011). It is partly based on the model in Figure 4.3, but it so different that it is seen as a new model.

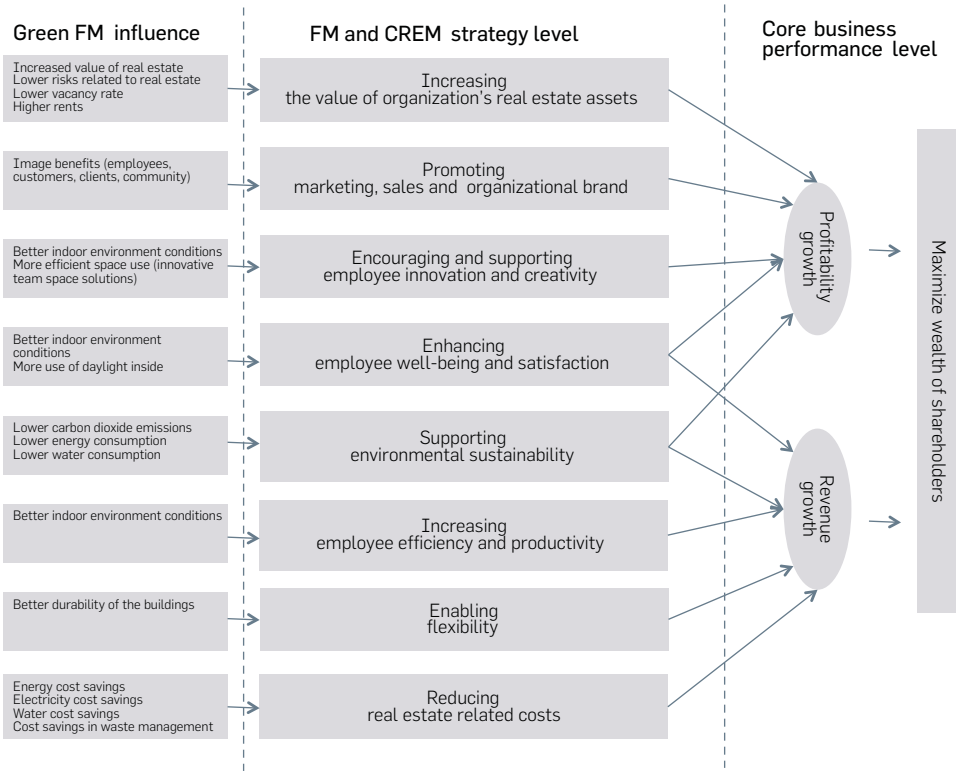
The model in Figure 4.2 has been modified by Anna-Liisa Sarasoja - partly based on the research presented in chapter 12 ("Green FM as a Way to Create Added Value") – by including "Supporting environmental sustainability" as a real estate strategy in addition to the 7 strategies included in Figure 4.2. The modified model is shown in Figure 17.1 with indications of the influence of Green FM on each of the real estate strategies.

This leaves us with four conceptual models in chronological order of the latest versions:

A. The model by De Vries et al. (2008) in Figure 4.2.
B. The FM Value Map by Jensen et al. (2008) and Jensen (2010) in Figure 3.3.
C. The modified model by Sarasoja (Lindholm and Aaltonen, 2011) in Figure 17.1.
D. The new model by Den Heijer (2011) in Figure 11.5.

The models appear quite different - even in their overall graphical presentation. Model A from De Vries et al. is oriented from left to right. Model C was in Lindholm and Aaltonen, (2011) oriented from right to left, but it has for this publication been redrawn from left to right, starting

Figure 17.1: Green FM in the added value model (Based on Lindholm and Aaltonen, 2011)



with Green FM Influences at the left side and ending up with Maximizing Wealth at the right side. Model B (the FM Value Map) and the former version of model C in Figure 4.2 are both oriented from bottom and up, whereas Model D (Den Heijer) is oriented from the centre and out towards the four corners. The similarity between Model B in Figure 3.3 and Model C is based on their common inspiration from Strategic Mapping in Balanced Scorecard methodology (Kaplan and Norton, 2001).

A comparison of the added value parameters in the four conceptual models is shown in Table 17.2 structured according to the four headings: People, Process, Economy and Surroundings.

The parameters related to People are quite similar in model A and D. All models include (employee) satisfaction. Model B defines "Culture" as including "Image", which are separated as different parameters in model A and D. Model C only includes "Increase employee satisfaction" under People, but this model does as the only model include "Promote marketing and

Table 17.2: Comparison of added value parameters in the four models

	A. De Vries et al. , 2008	B. Jensen et al., 2008	C. Lindholm and Aaltonen, 2011	D. Den Heijer, 2011
Core business				
People	Image Culture Satisfaction	Satisfaction Culture	Increase employee satisfaction	Increasing user satisfaction Supporting image Supporting culture
Process	Production Flexibility Innovation	Productivity Reliability Adaptability	Increase innovation Increase productivity Increase flexibility	Increasing flexibility Supporting user activities Improving quality of place Stimulating innovation Stimulating collaboration
Economy	Cost Possibility to finance Risk control	Cost	Increase value of assets Promote marketing and sale	Controlling risk Increasing real estate value
Surroundings		Economical Social Spatial Environmental	Reduce cost Supporting environmental sustainability	Decreasing cost Reducing the footprint

sale" under Economy, which can be seen as an economical expression of "Image", for instance understood as brand.

All four models include at least three parameters for Process with many overlaps; the differences can partly be seen as different degrees of sub-dividing.

In relation to Economy, model B (the FM Value Map) only includes the parameter "Cost", while the three other more CREM based models include parameters for "Value of real estate", "Value of assets" or "Possibility to finance". The parameter "Controlling risk" in model D is defined as related to financial goals, but it is also strongly related to the Process parameter "Reliability" in model B. In model A "Risk control" is included as well, partly related to reducing financial risks, but also to improving health and safety.

Model B was the first model to include parameters related to Surroundings, including the "Environmental" parameter, but the other more recent CREM based models C and D also include a parameter for "Environmental sustainability".

The structure of the FM Value Map (B) differs basically from the three CREM based models (A, C, D) by including a clear separation between FM and core business and inclusion of FM processes. The distinction between FM as a support function to a core business is a fundamental part of much theory on FM – although not undisputed. This distinction is even included in the definition of FM in the first European FM standard (CEN, 2006) using the term primary activities as representing the core business. The set of European FM standards will from 2012 also include a separate standard on FM processes (CEN, 2011).

The CREM based models A and D also include a process view, which is based on the input-output model shown in Figure 11.4. However, the process in question is obviously the core business process with no distinction of a separate CREM process. Thus, it is characteristic that both models see corporate real estate as one out of five input resources with the other four being human resources, technology, ICT and capital. Model C does not include a process view but focuses on different real estate strategies and their impact on revenue growth and productivity. Model C is also different by a focus on maximizing shareholder value, while the two other CREM based models include multiple stakeholders like the FM Value Map.

The distinction in the structure of the FM Value Map and the CREM based models can be related to the basic theoretical understanding in FM and CREM. CREM is a resource based management discipline and connects building science with business administration and business economics, while FM is a service and process oriented management discipline.

KEY TERMINOLOGY OF VALUE AND VALUE TYPES

The various authors of the presented book chapters elaborated very intensively on the concepts and terminology of value, added value, value adding management, and value types such as financial value, exchange value, use value, customer, consumer or user value, social value, relationship value, and environmental value. It can be debated whether it is relevant to define customer, consumer or user value as a value type, because every type of value should be considered as a value type from the customer's perspective. If a provision is not of value for the customer (meaning all three types of customers: clients, users and customers), there is no value. However, this terminology have been used in several chapters in the book. A list of selected key definitions and relevant terminology can be observed from Table 17.3.

To come up with a generic definition of Added Value of FM, we considered the extensive list of value terminology in table 17.3 and combined it with the definition of FM in the European standard. According to the EN15221-1 definition, FM can be defined as *"the integration of processes (...) to maintain and develop (...) services which support and improve the effectiveness of its primary activities"* (CEN, 2006)

Table 17.3: Collection of key terminology on value and value types

Chapter	Author(s)	Terminology
		Fundamental understanding and general definitions
Chapter 4 The Concept of Added Value	Jensen et al. (2012)	The added value can be defined as the value of the product reduced by the value of the resources used during the process.
Chapter 4 The Concept of Added Value	Various authors	The added value of corporate real estate is described as the ability of the real estate decisions, processes and inputs to create shareholder wealth
Chapter 4 The Concept of Added Value	De Vries et al., 2008	The added value of real estate is its contribution to the organisational performance i.e. the fulfilment of organisational objectives from the perspective of various stakeholders.
Chapter 4 The Concept of Added Value	Ulaga and Eggert (2005)	Four main characteristics of value can be identified: (1) value is a subjective concept; (2) it is conceptualised as a trade-off between benefits and sacrifices; (3) benefits and sacrifices can be multi-facetted; and (4) value perceptions are relative to competition.
Chapter 4 The Concept of Added Value	Hutt and Speh (1998)	Value equals quality relative to price
Chapter 5 FM as a Value Network	Zeithaml (1988)	Value is defined as the trade-off between benefits ("what you get") and sacrifices ("what you give") in a market exchange.
Chapter 7 Beyond Financial Performance	Monroe (1990)	Ratio of perceived benefits relative to perceived sacrifice
Chapter 7 Beyond Financial Performance	Woodruff and Gardial (1996)	Trade-off between desirable attributes compared with sacrifice attributes
Chapter 7 Beyond Financial Performance	Grönroos (1997)	Core solution plus additional services divided by price and relationship costs or core plus/minus added value
Chapter 7 Beyond Financial Performance	Ulaga and Charcour (2001) Eggert and Ulaga (2002)	Trade-off between the multiple benefits and sacrifices of a supplier's offering as perceived by key decision makers in the customer's organisation and taking into consideration the available alternative suppliers' offerings in a specific-use situation.
Chapter 7 Beyond Financial Performance	Ulaga and Eggert (2006a)	Trade-off between the benefits and the costs perceived in the supplier's core offering, in the sourcing process, and at the level of a customer's operations, taking into consideration the available alternative supplier relationships.

Chapter 9 Qualitative research approaches	Waldburger and Balslev Nielsen (2012)	FM is a management discipline, that includes a Value creation side (FM as a service management discipline) and a Value perception side: value perception by different FM users/customer types.
Chapter 10 Value adding management	Jensen and Katchamart (2012)	VAM relationship management should differentiate regarding its level (strategic, tactical, operational), demand side (client, customer, end user), focus (business, customer, or services orientation), and coordination form (coalition, negotiation, service charge)
Chapter 10 Value adding management (VAM)	Jensen (2010)	Added value is understood as positive impacts, which brings benefits or improvements to an organisation and relevant stakeholders, both economic like cost reductions, and non-economic. Added Value of FM focuses on the effects and impacts of FM on the core business and possible the surroundings.
Chapter 10 Value adding management	Møllebjerg (2010)	$\text{Value add} = \frac{\text{Volume x Quality x Flexibility}}{\text{Cost}}$
Chapter 11 Linking decisions and performance	Den Heijer (2011)	Adding value is considered as the sum of activities that (attempt to) influence the effect of real estate on performance: to prevent a negative effect or to realize a positive effect.
Chapter 11 Linking decisions and performance	Den Heijer (2011)	Performance refers to both output of primary processes and profitability, "added value" also includes the costs of the real estate intervention. This refers to the concept of opportunity costs: what is the "added value" of alternative investments?
Chapter 13 Adding Value by FM and CREM	Lezinski and Marn (1997)	Value = Benefits – Sacrifices as perceived by customers
Chapter 13 Adding Value by FM and CREM	Van Wagenberg (2009)	Value added is the difference between the value of the product/services delivered to a client during a period (value of output(s) in period Δ t1 – t2) and the value of the input(s) in the production function - or functions in the case of a supply chain - in the same period Δ t1 – t2".
Chapter 13 Adding Value by FM and CREM	Keeris (1997)	Real estate value refers to "the stakeholders' (subjective) appreciation of achieving the stakeholders' goals and purposes.
Chapter 15 FM Blueprinting	Jensen (2010)	Transparency creates added value because due to transparency FM is capable to scale the services up and down as needed.
Chapter 15 FM Blueprinting	Von Felten et al. (2012)	Key characteristics and challenges in FM value perception are 1) Value is a subjective concept; 2) Benefits and sacrifices can be multi-faceted; 3) Value perceptions are relative to competition.
Chapter 15 FM Blueprinting	Von Felten et al. (2012)	FM Blueprinting is a method to visualise the significant value FM contributes to primary processes and to optimise the management of customer-perceived value.

	Value types in general	
Chapter 4 The Concept of Added Value	Jensen (2007)	Based on Cook's understanding the product value can be divided in a relatively objective use value and a more subjective customer value. The use value is under market conditions expressed 'objectively' in quantitative terms by the exchange value, while the 'subjective' customer value is decisive on how the demand for potential customers is divided on competing products.
Chapter 9 Qualitative research approaches	Waldburger and Balslev Nielsen (2012)	Five qualitative studies revealed six types of value i.e. added value, economic value, relationship value, customer perceived value, client/customer value, relative value + the holistic value map.
Chapter 13 Adding Value by FM and CREM	De Vries et al. (2004)	There is a distinction between tangible and intangible values and financial (monetary) versus non-financial values.
Chapter 13 Adding Value by FM and CREM	Various authors	Values of real estate include shareholder value, balance sheet value, investment value, commercial value, economical value, functional value, historical investment value, market value and reconstruction value.
	Value type: Economic/financial/exchange value	
Chapter 2 Nordic focus on Added Value of FM	Nordic FM group	Though the selling point of FM is usually reduction of costs, the added value of FM has much more economic value for the core business, besides its contribution to environmental and social aspects.
Chapter 5 FM as a Value Network	Bowman and Ambrosini (2000)	Financial value dimension describes the realized value "when the product is sold. It is the amount paid by the buyer to the producer for the perceived use value"
Chapter 5 FM as a Value Network	Lusch and Vargo (2009)	Exchange value is described as exchange of money for a market offering
Chapter 5 FM as a Value Network	Jensen (2010)	Exchange value focuses on cost and the connection between output and input in a business process.
	Value type: Use value	
Chapter 5 FM as a Value Network	Bowman and Ambrosini (2000)	Use value is the subjective quality of a product or service customer's (as users) experience in relation to their needs.
Chapter 5 FM as a Value Network	Various authors	Use value is defined as a customer's outcome, purpose or objective that is achieved through service.
Chapter 6 FM Alignment	Bowman and Ambrosini (2000)	Use value refers to the specific quality of a service or task in relation to needs. (See also same definition in chapter 5).

Value type: Customer/consumer/user value		
Chapter 3 The Making of the FM Value Map	Nykredit	$\text{User value} = \frac{\text{Quality \& Process}}{\text{Price \& Difficulties}}$
Chapter 4 The Concept of Added Value of FM	Heskett et al. (1994) Sarshar and Pitt (2009)	$\text{Customer value} = \frac{\text{Results produced for the customer + service process quality}}{\text{Price to the customer + cost and effort in acquiring the service}}$
Chapter 6 FM Alignment	Kok et al. (2011)	Added value is the customer's perceived contribution of the different facility services to the organisation in terms of benefits in comparison to costs and risks.
Chapter 7 Beyond Financial Performance	Grönroos (2011)	To customers, value also has a perceptual dimension, for example, trust, commitment and attraction.
Chapter 7 Beyond Financial Performance	Zeithaml, Parasuraman and Berry (1990)	The consumer's overall assessment of the utility of a product based on a perception of what is received and what is given.
Chapter 7 Beyond Financial Performance	Anderson, Jain and Chintagunta (1993)	Perceived worth of monetary units of the set of economic, technical, service, and social benefits received by a customer firm in exchange for the price paid for a product offering, taking into consideration the available alternative suppliers.
Chapter 7 Beyond Financial Performance	Flint, Woodruff and Gardial (1997)	The customers' assessment of the value that has been created for them by a supplier, given the trade-offs between all relevant benefits and sacrifices in a specific-use situation
Chapter 13 Adding Value by FM and CREM	De Chernatony and Harris (2000)	Added value is a multidimensional construct which includes functional and emotional benefits, as perceived by consumers, relative to the competition; these often also result in benefits for the firm
Chapter 13 Adding Value by FM and CREM	Peter and Olsen (1987)	Value is defined in terms of customer needs or the mental image or cognitive representations of underlying customers' needs and goals.
Chapter 13 Adding Value by FM and CREM	Woodruff (1997)	Customer value is the "stakeholders' perceived preference for, and evaluation of, a product or service and consequences arising from use of a facility, in achieving stakeholders' goals and purposes in use situations"
Value type: Social value		
Chapter 5 FM as a Value Network	McMillan (2006)	Social value is "created by making connections between people, creating or enhancing opportunities for positive social interaction, reinforcing social identity and civic pride, encouraging social inclusion and contributing towards improved social health, prosperity, morale, goodwill, neighbourly behaviour, safety and security, while reducing vandalism and crime"

Value type: Relationship value		
Chapter 4 The Concept of Added Value	Ulaga and Eggert (2005)	Customer value in business relationships is the "trade-off between (1) product, (2) service, (3) know-how, (4) time-to-market and (5) social benefits, as well as (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."
Chapter 7 Beyond Financial Performance	Lindgreen and Wynstra (2005)	• Getting high-quality service and customized products; • Experiencing social (e.g. friendship/fraternization with the suppliers) and special treatment (e.g. economic and customization), especially in services where there is a high degree of contact between the customer and supplier; • Perceiving a reduced sense of anxiety because they trust the supplier.
Chapter 7 Beyond Financial Performance	Menon et al. (2005)	Customer's overall assessment of the utility of a relationship with a vendor based on perceptions of benefits received and sacrifices made.
Chapter 9 Qualitative research approaches	Ulaga (2003)	In-depth interviews identified eight relationship value drivers: Product Quality, Service Support, Delivery, Time-to-Market, Supplier Know-how, Personal Interaction, Price and Process Costs.
Chapter 14 Stakeholder's influence	Katchamart (2012)	A better understanding of stakeholder behaviour enables the added value delivering to FM stakeholders.
Value type: Environmental value		
Chapter 5 FM as a Value Network	McMillan (2006)	Environmental value is value arising from a "concern for intergenerational equity, the protection of biodiversity and the precautionary principle in relation to the consumption of finite resources. Principles include adaptability and/or flexibility, robustness and low maintenance, and the application of a whole-life cost approach. Immediate benefits are local health and pollution."
Chapter 12 Green FM	Junnila (2004)	Whilst facilities related activities cause only a small fraction of the expenses they produce the majority of the companies' environmental impact.
Chapter 12 Green FM	Sarasoja and Aaltonen (2012)	Green FM processes may have a positive impact on employee satisfaction, company reputation, costs, productivity, culture, environment, and increasing the value of real estate assets.

Thus, creating **Value** for the core business, translates for FM into - as a minimum - delivering and maintaining services that - at a competitive level - support the effectiveness of the primary activities. To create **Added Value** it is necessary for FM also to develop the services in such a way that they improve the effectiveness of the primary activities. Furthermore, added value is a perceived trade-off between the benefits of FM (facilities, services, FM processes) i.e. its contributions to improving the performance of the organization regarding people, primary and supporting processes, economy and the surroundings, and the costs and risks connected with achieving these benefits.

The integration of processes is a necessary prerequisite both to create value and to create added value in FM. This integration is the essential management aspect of FM. To create added value the integration has to be at a particular high level regarding stakeholder and relationship management. Thereby FM can become **Value Adding Management**.

The above definitions of Value, Added Value and Value Adding Management are based on the mentioned definition of FM in the European standard. However, we have found that the narrow focus on "the effectiveness of the primary activities" is limiting the true contributions of FM. From the research presented in this book it has become clear, that FM also can contribute considerably to the efficiency of the primary processes and to the effectiveness and efficiency of the supporting processes as well.

PERFORMANCE DIMENSIONS AND KPIS

The contribution of FM and CREM to organizational performance regarding people, primary and supporting processes, economy and the surroundings can result in various outcomes, e.g. financial, social, environmental, relational, etc. and can take shape in various dimensions and KPIs such as improved user satisfaction, productivity gains, cost reduction, profitability, competitive advantage and sustainable development. A list of selected key definitions and relevant terminology regarding different performance dimensions in connection to (added) value can be observed from Table 17.4.

Widely used generic performance indicators showed to be efficiency and effectiveness, the former with a focus on input parameters such as capital (steering on cost reduction), space (optimizing use of space) and speed of delivery, the latter with a focus on output parameters such as quality, satisfaction, health, safety, creativity, flexibility, profitability and sustainability. Other indicators represent the ratio between input and output, for instance productivity (e.g. labour ratio: ratio between output and number of employees) and competitive advantage (by low priced products due to cost reduction and/or high quality products). Many KPIs have been elaborated on a more detailed level, as was shown in the tables 2.1–2.3, 7.3, 8.3 and 8.4, 9.1, 10.2, 11.1-11.3, 13.1 and 16.1. This shows that the contribution of FM to organisational performance is a multidimensional and multi-facetted construct, with different layers as shown in Figure 17.2:

Table 17.4: Collection of key terminology on performance and performance dimensions

Chapter	Author(s)	Terminology
		Performance
Chapter 8 Performance measurement	Slack et al. (2001)	High-performance operations should be high-quality, fast, dependable, flexible and low cost.
Chapter 8 Performance measurement	Tangen (2005)	Performance is an umbrella term for all concepts that consider the success of a company and its activities, regarding productivity (output/input), profitability, and performance on quality, delivery, speed and flexibility.
Chapter 8 Performance measurement	Neely et al. (1995)	Traditional performance management changed into innovative performance management that is more value-based, performance compatible, customer-oriented, long-term, with prevalence of team measures, transversal measures and improved monitoring, both aiming to evaluating and involving.
Chapter 8 Performance measurement	Sink and Tuttle (1989)	Performance is a complex interrelationship between effectiveness, efficiency, quality of inputs-process-outputs, productivity, quality of work life, innovation, and profitability/budget ability.
Chapter 8 Performance measurement	Kaplan and Norton (1992)	According to the Balanced Score Card organisational performance should be evaluated from four perspectives: financial, customer, internal business processes, learning and growth.
Chapter 8 Performance measurement	Preiser (1983) Vischer (1989)	Performance levels include 1) health, safety and security performance; 2) functional, efficiency and work flow performance; 3) psychological, social, cultural and aesthetic performance.
Chapter 16 Performance measurement of workplace change	Riratanaphong (2010)	Drivers to change and performance indicators that are used in practice are linked to the added value of real estate and other facilities i.e. to possible and desired contributions of accommodation change to the overall performance of the organisation.
		Dimensions of performance and value
Chapter 1 Background and introduction	Rust et al. (2002)	The focus of performance can be on cost emphasis (e.g. cost reduction, defect rates, standardisation) versus revenue emphasis (e.g. revenue expansion, customer satisfaction, customization)
Chapter 2 Nordic focus on Added Value of FM	Various authors	Impacts on performance include support to production, standard spare parts, coordination of storage space, speed and efficiency of internal moving, the glue in the organisations, creativity, health and safety, environmental performance i.e. energy saving and waste disposal,
Chapter 4 The Concept of Added Value	Jensen (2010)	Possible outcomes of FM input include the impact on the core business (satisfaction, cost, productivity, reliability, adaptation, culture) and the surroundings (economic, social, spatial, environmental)

Chapter 4 The Concept of Added Value	Lindholm et al. (2006)	Maximizing shareholder value can be obtained by revenue growth (e.g. by increasing value of assets, marketing and sales, innovation, employee satisfaction) and productivity growth (e.g. by increasing flexibility and cost reduction).
Chapter 4 The Concept of Added Value	De Vries et al. (2008)	The added value of CREM can be defined as the contribution of real estate interventions to productivity, profitability and competitive advantage, via influences of real estate on production, image, culture, innovation, satisfaction, cost, risk control, and possibilities to finance real estate.
Chapter 8 Performance measurement	Van Ree (2002)	Performance criteria extended from focusing on effectiveness towards including efficiency, productivity, flexibility, creativity, and sustainability.
Chapter 8 Performance measurement	Lavy et al. (2010)	35 indicators relating to buildings and facilities were classified in four categories: financial, physical, functional, and survey-based indicators.
Chapter 8 Performance measurement	Riratanaphong, Van der Voordt and Sarasoja (2012)	A huge list of FM and CREM KPIs were clustered in connection to the FM Value Map: 1) surroundings (economic, social, environmental); 2) core business (satisfaction, cost, productivity, adaptation, culture)
Chapter 10 Value adding management	Various authors	Parameters for value adding can be grouped in four categories: people, process, economy, and surroundings.
Chapter 11 Linking decisions and performance	Den Heijer (2011)	The added value of CREM can be defined as the contribution of real estate interventions to productivity, profitability, competitive advantage and sustainable development. Twelve ways of adding value are linked to both the variables of real estate decisions (input) and the performance criteria of stakeholders from strategic, functional, financial and physical perspectives (output): Controlling risk; Increasing real estate value; Reducing the footprint; Decreasing costs; Increasing flexibility; Increasing (user) satisfaction; Supporting user activities; Improving quality of place; Supporting image; Supporting culture; Stimulating collaboration; Stimulating innovation.
Chapter 11 Linking decisions and performance	Den Heijer (2011)	The real estate decisions on both project and portfolio level are made operational using 'key variables' from each of these perspectives (goals, users, euros and m2). Four performance criteria - competitive advantage, productivity, profitability and sustainable development - are linked to the same perspectives, which provides a set of KPIs to measure and manage.
Chapter 13 Adding Value by FM and CREM	Van der Zwart (2011) Prevosth and Van der Voordt (2011)	Research revealed 11 indicators of added value: 1) Reduction of real estate costs during the life cycle; 2) Improvement of (labour) productivity; 3) Improvement of user satisfaction; 4) Improvement of possibilities to get real estate financed by external

		parties; 5) Improvement of flexibility to enable future spatial, technical, organisational or juridical adaptability; 6) Support of a positive corporate image; 7) Stimulation of innovations in order to improve business processes; 8) Supporting (change of) corporate culture.; 9) Risk management with regard to time, costs, health and safety, and coping with a changing context; 10) Sustainability; 11) Creating a healing environment.
Chapter 16 Performance measurement of workplace change	Riratanaphong (2011)	Based on BSC, KPIs from the literature can be classified in six categories: stakeholder perception, financial health, organisational development, productivity, environmental responsibility and cost efficiency.
Chapter 16 Performance measurement of workplace change	Riratanaphong (2010)	Performance criteria of the case study cover three main areas: adherence to policy, operating performance and organisational management. Each area contains different performance indicators. The performance criteria are differently weighted.

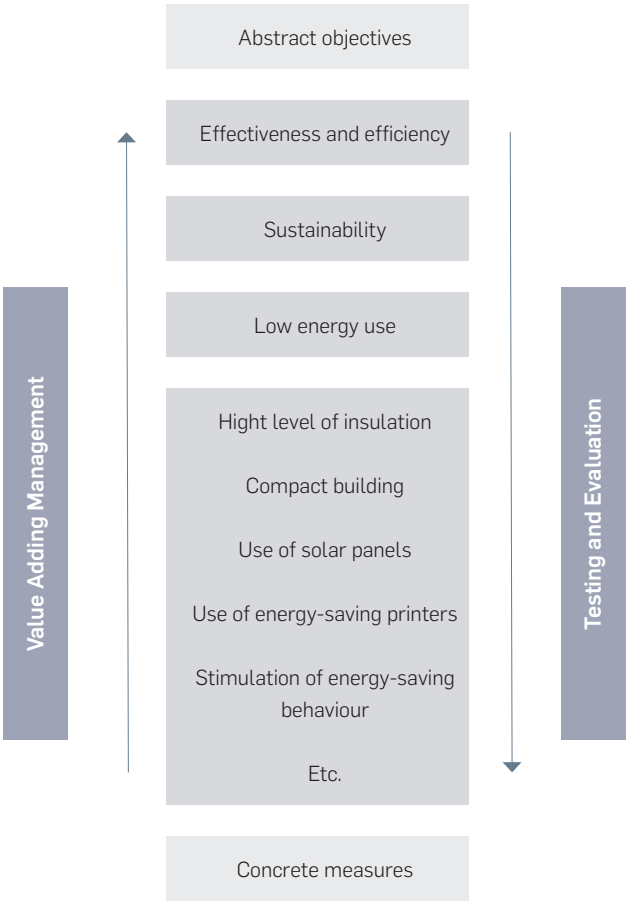
- On a high abstract level: the contribution to improved effectiveness of the primary and supportive processes with lower costs and risks and less resources (efficiency).
- On a less abstract level the contribution to different fields or dimensions of performance including productivity, profitability, competitive advantage and sustainability.
- On a concrete level the contribution to improved outcomes of KPIs such as energy use per m^2, use of space per employee, number of workstations per employee or total occupancy costs per employee at the input side and higher satisfaction scores, product reliability, client retention, reduced footprint and so on at the output side.
- Listings of concrete FM and CREM-interventions e.g. shortening of walking distances in order to improve labour productivity, standardisation of spaces in order to increase flexibility, and implementing Green Building Council's LEED-guidelines or similar to support sustainability and to attain savings in the building carbon dioxide footprint due to savings in heat, electricity, water and waste recycling rates.

LESSONS LEARNED

A SHIFT FROM THE OPERATIONAL TASKS TOWARDS MORE STRATEGIC ISSUES

At the beginning of our search for the added value of FM (see for example chapter 2 "The Start of a Nordic Focus on the Added Value of FM") the cases illustrating how added value is created to the core business were mainly operational, focusing on the facility service processes and technical improvements such as launching a scale calibration service (case of Lundbeck) or improving client's waste disposal practices (case of Coor Service Management). The improve-

Figure 17.2: Example of value adding management by using real estate, facilities and services to add value (ex ante), and testing if added value has been attained by which concrete measures (ex post)



ments and added value created through these operations are no doubt important, but not necessarily enough to raise the interest of the board.

The new "adding value" cases presented in this book are more strategic, focusing on the core business, employees and surroundings of the client organisation in multiple ways. For example chapter 11 ("Linking Decisions and Performance: Adding Value Theories Applied to the University Campus"), chapter 12 ("Green FM as a way to Create Added Value") and chapter 13 ("Adding Value by FM and CREM in Dutch Hospitals") present how added value can be created through FM and CREM processes in multiple ways such as by increasing innovations, supporting image,

improving culture, improving productivity and improving flexibility. In addition, added value is not created only to the core business; also employees, clients, environment and the community could be affected positively by FM and CREM decisions and operations. Thus, it's important for both FM organisations and core business people to recognize that added value of FM is not solely an internal issue; the case studies have showed how FM can contribute to the external environment of the organisations and thereby make FM decision making strategic by nature.

Among the findings from the analysis of the cases from the NordicFM workgroup in chapter 2 is that a change in responsibility – both between core business and in-house FM and between in-house FM and providers - can be an important element in the possibility for FM to create added value. Another observation from the cases is that on-going collaboration can be an important leverage for adding value in FM.

Traditionally, the starting point in research focusing on the added value of FM has been that there has to be other ways in FM to support core business that one-sidedly focusing on cost reduction. The focus on cost reductions can be seen as a restriction for FM, meaning that it prevents other ways to create value. However, based on the case studies presented in this book it seems that cost reductions do not necessarily mean doing less and minimizing FM operations. For example chapter 12 on Green FM showed that by investing a bit in developing the FM processes, added value to the core business can be created in multiple ways and reducing costs at the same time. It should be stressed that creating added value does not necessary mean increased cost.

This kind of empirical evidence and case illustrations is important in order to pinpoint the true added value of FM and really prove that FM can be a strategic resource for the client organisation in multiple ways and at multiple levels.

ADDING VALUE BY RELATIONSHIP MANAGEMENT

Several chapters in this book discuss relationship management and the subjective nature of value, making clear that added value of FM cannot be created without cooperation and by understanding the different value perspectives. For example clients, customers and end users have their own roles in the co-creation of the value and they might also perceive the value differently. In chapter 5 ("FM as a Value Network: Exploring Relationships amongst FM Stakeholders") it is proposed to consider FM as a network of relationships, which create perceived value amongst key stakeholders i.e. clients, customers and end users. Furthermore, perceived value can only exist and be produced within this specific network of relationships. Chapter 5 extends the idea of the FM Value Map by taking up a demand-driven, co-creating, and subjective perspective of value and differentiating between various dimensions of perceived value in FM.

Chapter 6 ("FM Alignment: Creating Added Value Through a Multi-Level Intra-Firm Collaborative Relationship") pinpoints the importance of the alignment of the core business processes and FM. The need for FM alignment stems from the impacts of its activities and facilities on

the results of core business processes. Identifying the interdependencies between primary processes and the different facility services is the first step in optimizing the contributions of FM to the organisation. Looking at the nature of demand and the organisational needs and preferences for facility services, alignment manifests differently on the different organisational levels. It should also be taken into account that organisational needs and the priorities change over time at all organisational levels and evaluation of the services provided should take place where tasks and scope of activities determine the frequency of this evaluation.

Chapter 7 ("Beyond Financial Performance: Capturing Relationship Value in FM") presents a relationship management approach designed to gain insights into the field of relationship value in FM and to provide a contrast to the dominant financial perspective of value in FM. Various value dimensions and relevant drivers of FM relationship value are described and analysed in the chapter, including trust, reliability and adaptability. These insights help FM providers to focus on the key relationship drivers and on how to optimize them. Additionally, the results help FM clients to be more aware of the main drivers that determine a good relationship when selecting a FM supplier. The key learning points being that success of collaborative relationship leads to the success of value delivering to the stakeholders.

Chapter 10 ("Value Adding Management: A Concept and a Case") focuses on the relationships between FM and the core business at strategic, tactical and operational levels and argues in line with chapter 6 that the relationships with the stakeholders should be managed differently at each level. At the strategic level FM should have a business orientation, where considerations for the whole corporation are in focus. This calls for joint decision making involving all main stakeholders at management level, which can take the form of a coalition. At the tactical level FM should have a customer orientation, where the specific needs of each business unit are in focus. This calls for a bilateral negotiation and decision making. At the operational level FM should have a service orientation, where the individual users' needs are in focus and the services are either provided based on price per order or based on a service charge. The chapter also presents an interesting case from the Danish construction toy producer LEGO, where such principles of Value Adding Management (VAM) have been implemented.

Chapter 14 ("Stakeholder's Influence on FM: A Case Study of an Energy Complex in Thailand") analyses how power relations based on the degree of interdependencies between FM and various stakeholders can influence a FM strategy. This is linked to a typology of FM processes and based on a case study it leads to the formulation of four propositions for which FM strategy is expected to be most suitable for different relationships and collaborative arrangements.

SUSTAINABILITY AND GREEN FM

Just like everywhere else, sustainability and especially environmentally sustainability is discussed more and more - also in connection to FM. It is already a widely known fact that at present, buildings contribute as much as one third of total global greenhouse gas emissions and that the building sector has the most potential for delivering significant and cost-effective

green house gas emission reductions in western economies (UNEP, 2009). However, less recognized is that over 80% of greenhouse gas emissions take place during the operational phase of buildings and is (or should be) under control of FM. This book provides a few examples on how organisations have started to recognize the potential of the FM to influence their environmental performance and how greener FM services are applied in practice.

Chapter 11 ("Linking Decisions and Performance: Adding Value Theories Applied to the University Campus") shows that many universities have already applied sustainability targets in their campus strategies including explicit goals to use, manage, or own "less floor area" and in that way reduce emissions. For many universities the "campus of the future" is smaller than the current campus and "sustainable development" or "greening the campus" has become an explicit goal with performance indicators to measure. However, chapter 13 ("Adding Value by FM and CREM in Dutch hospitals") shows that in the health care sector sustainability is mainly taken into account as a prior condition in connection to Corporate Social Responsibility (related to Image) and for economic reasons (reduction of running costs) and less perceived as a highly prioritised objective in itself. Sustainability benefits are heavily balanced against investment costs and pay-back periods.

Chapter 12 ("Green FM as a Way to Create Added Value") studies environmental sustainability from the occupier organisation perspective and identified in a case study several ways to create added value through greener FM processes. This case study shows that improving the environmental performance of facilities and services does not only decrease the energy consumption and greenhouse gas emissions, but also contributes to the organisation in other ways. Greener FM services have a potential to affect employee wellbeing and productivity, improve image of the occupier organisation, and last but not least decrease costs at the same time. These kinds of studies are good examples also on the strategic nature of FM and how FM had a potential to contribute at the strategic level on the client organisation.

With proven and commercially available technologies, the energy consumption in both new and existing buildings can be cut by an estimated 30 to 80% with potential net profit during the building life-span. Consequently, it's not overstating to say that FM has a potential to influence the world more than ever before. This should be seen as a huge opportunity for the whole FM sector to really make a difference and contribute positively to the client companies, their employees and whole communities.

MEASURING PERFORMANCE AND ADDED VALUE

Measuring the added value of FM is a complex and problematic issue. First, most FM outcomes are intangible in nature. Measuring the intangible outcomes in quantitative terms is challenging. Second, most of the existing measures are more like indicators for operational tasks. Reliable and valid strategic performance measures that could help the organisations to identify the contribution of FM to the core business and surroundings are still in its infancy. Third, it is difficult to measure if it is not known what should be measured and for whom. Now we are

reaching the point where we have a quite comprehensive understanding of the different ways to create added value through FM for different stakeholders, so that it becomes possible to identify relevant measurement objects. However, as stated in chapter 11 ("Linking Decisions and Performance: Adding Value Theories Applied to the University Campus"), when trying to find relations between FM/real estate decision and organisational performance, one finds that some relations are likely or plausible, sometimes even convincing, but mostly not very strong. And ironically, proving the negative effects is much easier than proving positive.

Many chapters in this book approached the topic of measuring FM performance and added value and discussed performance measurement in general and in connection to FM and CREM. In chapter 8 ("Performance Measurement in the Context of CREM and FM") a wide range of KPIs were arranged according to the FM Value Map, which showed to be a practical way to categorize a number of KPIs. However, KPIs does not solely prove the added value of FM - they are more likely used to control and identify FM performance and see how well FM is reaching the agreed targets. Thus, to make effective use of its performance measurement outcomes, an organisation must be able to make the transition from measurement to management: *"the use of performance measurement information to effect positive change in organisational culture, systems and processes"* (see chapter 8).

In chapter 11 on managing the university campus it is suggested to benchmark KPIs. The model to assess the added value of real estate decisions can be used ex ante, to make business cases of proposed projects, or ex post, to evaluate projects. The input of the process of adding value – the real estate decision - can be assessed from four CREM perspectives that are linked to four typical stakeholders: policy makers, controllers, users, and technical managers. The added value of real estate and other facilities and services can be assessed on different scale levels regarding the organisation (holding, business units, departments, groups) and the facilities (one building or zooming out to a whole portfolio or area or zooming in to building compartments and spaces). Ideally, the variables of input are compared to related references, for instance the investment level of comparable buildings or the space standards of similar workplace concepts. This will support FM/real estate managers in making business cases for their real estate decisions, relating the input to the output.

The empirical study in chapter 16 ("Performance Measurement of Workplace Change: A Comparative Study of Data from Thailand, The Netherlands and Finland") indicates, that many of the KPIs from literature are not yet used in practice. This is partly due to the time and effort needed for measuring, but also due to a lack of awareness of the need for reliable data as input for evidence based reasoning and decision making.

RESEARCH METHODOLOGY

Chapter 9 ("The Added Value of Qualitative Research Approaches") focuses on qualitative approaches in research on the added value of FM and how methods like interviews can be applied to FM practice. It presents a number of examples from literature on how qualitative research

methodologies have been used to study different types of value in both FM and other domains. The chapter concludes that *"the benefits from applying qualitative research techniques are firstly that the open, dynamic and flexible nature supports an explorative approach and allows the expression of novel insights. Secondly, it is a people-centric approach and therefore useful for investigations of personal interpretations (e.g. of value of FM) and in general to discover the underlying reasons for people's behaviour and FM preferences"*.

Qualitative methods are used in much of the research in this book. However, many of the other chapters present a wider range of research methods. Table 17.3 provides an overview of the research methods used in empirical studies presented in the book. These include all chapters in part C as well as chapter 7 ("Beyond Financial performance") in part B. The empirical study in chapter 7 is a small exploratory study aimed at testing a measurement tool of customer value in the FM field. The study is unique in this context by being purely quantitative and by including statistical testing of data from a questionnaire survey.

Four out of seven chapters in part C only utilise qualitative research methods (chapter 10, 13, 14 and 15). The other three chapters (chapter 11, 12 and 16) include a combination of qualitative and quantitative research methods. Case studies are used both in two purely qualitative

Table 17.4: Empirical research methods in different chapters

Chapter	Purpose/subject	Research method
7	Testing an instrument to measuring relationship value	Questionnaire survey followed by statistical test of correlations and reliability
10	Exploring the concept of value adding management	Qualitative case study
11	Managing the University Campus	Combination of quantitative benchmarks and qualitative evaluations of different ways of adding value applied by 14 universities
12	Creating added value by Green FM	Combination of qualitative evaluations, questionnaire surveys among users and quantitative analysis of energy savings in a case company
13	Adding value in hospitals	Qualitative evaluations based on interviews in a number of hospitals
14	Stakeholder's influence on FM	Case study with qualitative evaluations based on interviews
15	Analysing added value by applying FM Blueprinting	Qualitative analysis process based on workshops with user representatives
16	Performance measurement of workplace change	Case study with a combination of document analyses, interviews and questionnaire surveys.

studies (chapter 10 and 14) and in two studies with a combination of qualitative and quantitative methods (chapter 12 and 16).

The choice of research methodology is to some degree dependent on which research tradition a researcher and a research group belongs to, but it can also be seen as related to the stage of development of a research field. A new research field is more likely to give preference to explorative qualitative research. In a later stage, when theory building and hypotheses formulation has taken place, it can be more relevant to include quantitative methods to validate theory and test hypotheses. Measuring performance and added value of FM obviously requires some degree of quantifications - both in research and practice. Combinations of qualitative and quantitative methods seem very promising for the further research development in relation to the added value of FM.

THE FM VALUE MAP

Chapter 1 ("Background and Introduction") showed a number of strengths and weaknesses of the present FM Value Map and opportunities for further exploration and improvement. The findings so far support these early reflections on the FM Value Map. A strong point is the holistic view of FM and its possible impacts on both the core business and surroundings, by including benefits for all relevant stakeholders and not just shareholders, basic products and additional offerings. It builds on existing models and approaches such as system thinking and the Balanced Scorecard. The concepts and definitions are aligned to the new European FM standards (EN 15221). The FM Value Map turned out to be a useful tool to analyse cases from practice and to show the different ways they create added value.

However, the starting point is a resource based view with a main focus on provision of value (supply side) rather than an orientation on the core business strategy and the perception of value by the clients, customers and end users (demand side), as was shown in the literature review in chapter 4 and in chapter 5. Much attention is being paid to the internal processes of FM and less to the processes between FM and its stakeholders. Although the FM Value Map can be applied in a strategic, tactical and operational level, it is not completely clear *how* to use the FM Value map on these different levels. Furthermore it does not distinguish between value creation and added value. The value map is also fairly static. It can be used to create an overview and basic understanding for academic purposes and to be used as a framework for developing strategies for adding value, but it is not action oriented. There is a need to supplement the value map with a broader management concept for adding value of FM. Chapter 10 presents an example of such a concept called Value Adding Management, which is a further development from the FM Value Map. Until now, there has only been limited research to test the FM Value Map in practice with respect to the outcomes and impact of FM products and FM processes on the effectiveness of primary and supporting processes and its applicability in decision making processes. Much work still has to be done to be able to define and measure the outcomes of FM decisions and interventions in a reliable and valid way.

CONCLUSION

The comparison of the three basic perspectives of FM, CREM and B2B marketing show that they provide both overlapping and complementary focus areas. FM and CREM have a strong focus on the physical assets. FM and B2B marketing both have a strong focus on service management and delivery, which is not so much a focus area in CREM. B2B marketing naturally has a strong focus on marketing unlike FM and CREM. All three perspectives share a focus on stakeholders and relationship management.

Comparisons of the added value parameters of four conceptual models from FM and CREM show many similarities and a trend towards convergence. It is particularly noticeable that the recent models from CREM include "Environmental sustainability" as a parameter, while this parameter earlier only was included in the FM Value Map. However, the basic structures of the models are different, which can be related to CREM being transaction and project oriented, while FM is more service and process oriented.

Based on the extensive list of value terminology in table 17.3 and the definition of FM in the European standard we have attempted to make a generic definition of Added Value of FM:

- *Creating **Value** for the core business, translates for FM into - as a minimum - delivering and maintaining services that - at a competitive level - support the effectiveness of the primary activities.*
- *To create **Added Value** it is necessary for FM also to develop the services in such a way that they improve the effectiveness of the primary activities. Furthermore, added value is a perceived trade-off between the benefits of FM and the costs and risks connected with achieving these benefits.*
- *The integration of processes is a necessary prerequisite both to create value and to create added value in FM. This integration is the essential management aspect of FM. To create added value the integration has to be at a particular high level regarding stakeholder and relationship management. Thereby FM can become **Value Adding Management**.*

The above definitions of Value, Added Value and Value Adding Management are based on the mentioned definition of FM in the European standard. However, we have found that the narrow focus in the standard on "the effectiveness of the primary activities" is limiting the true contributions of FM. From the research presented in this book it has become clear, that FM also can contribute considerably to the efficiency of the primary processes and to the effectiveness and efficiency of the supporting processes as well.

In spite of some limitations, the FM Value Map showed to be an important element in the ongoing research and development in this area, though it should perhaps more being seen as a starting point rather than an end result.

The broad collection of new ideas, concepts, cases and methods that are presented in this book advance the understanding and practical management of the added value of FM and provide important new focus and insights on areas like stakeholder relationships and relationship management, green FM and sustainability as well as measuring performance and added value. Though qualitative research methods seem to dominate research on added value of FM, the empirical research presented in the book utilises a broad range of both qualitative and quantitative methods. Measuring performance and added value obviously requires some degree of quantifications. Combinations of qualitative and quantitative methods seem very promising for the further research development.

The findings show that this book provides important advancements in new knowledge and new understanding about the added value of FM. It offers a new state of the art, which can give inspiration and guidance for cutting edge FM organisations and professionals as well as for advanced teaching and future research.

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18. WHAT WE STILL NEED TO LEARN

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ABSTRACT

Purpose: To outline perspectives for further work on the added value of FM and identify relevant ideas and topics for further research and development.
Methodology: The chapter is based on a screening of all the former chapters in the book, input from various workshops with the authors, information from recent literature and exchange of ideas among the authors of this chapter.
Findings: Added value is expected to be central in the future development of FM, which is confirmed by two recent foresight studies and the recent work on developing a EuroFM research agenda. There is a need for increased focus on the governance structures for FM to secure the necessary alignment between FM and core business - not only at strategic level, but also at tactical and operational levels. Corporate Social Responsibility, Sustainability and Branding are important areas of FM with great potential to add value and to elevate FM to become a strategic partner with corporate top management. Adding value is closely related to innovation and performance improvements. Methods to measure both hard and soft aspects of performance will continue to be an important focus area. Management of stakeholders' perception of value and relationships are essential aspects of adding value in FM and need much further attention. Close collaboration with users is needed and requires new methods to analyse and visualise processes and added value. Research methodology will continue to include a broad range of both qualitative and quantitative methods in many combinations, but soft methods based on close interaction between researchers and practice like action research, participants observations and narratives are expected to achieve increased attention.
Practical implications: The findings include ideas for further research and development on the added value of FM and expectations of the topics that will be important for the FM profession in the future.
Research limitations: The chapter does not present new original research results, but is based on the research presented in the earlier chapters in this book and other recent research activities.
Originality/value: The chapter provides important input to the future research agenda on the added value of FM and gives directions for the future development in FM research and practice.

Keywords: FM, Added Value, Value Network, Research Agenda, Methodology.

INTRODUCTION

In chapter 1 we wrote that the purpose of this book is to introduce and present the topic of added value of FM as a new and increasingly important field of research and practice. This