

## Urban and Regional Analysis Group

VALUE ADDING ATTRIBUTES  
OF CREM

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**Working Paper No. 04-09**  
**October 2004**



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# Value Adding Attributes of CREM

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**Abstract:** *The corporations' primary aim is to add to the wealth of investors/owners. In order to achieve this aim the corporation sets strategic goals for its business activities. This defines the demands for corporate real estate, which should be linked to the corporations' strategic goals. The real estate strategy is enacted through asset management, property management and facilities management. Traditionally, corporate real estate measures have focused on direct costs of providing space. However, the realisation that both tangible and intangible assets are important to corporate real estate management's successful support of the core business necessitates new techniques and tools for measuring, amongst other things, performance, productivity, usability and functionality. This paper discusses possible real estate strategies that could add value to the corporation core business, operating decisions that support the real estate strategies and broader ways to measure whether the real estate operation is adding value through making decisions in support of each strategy. The results presented in this paper are based on a wide theoretical survey and more than 30 interviews with corporate real estate organisations in the USA and Europe.*

**Keywords:** *Added Value, Core Business, Real Estate Strategy*

## **Background**

Globalisation of business operations and other competitive pressures are forcing corporations to re-evaluate their real estate needs. The demand for more efficient utilisation of space and higher workplace productivity has led to businesses adopting a range of strategies for managing their facilities. The emergence of corporate real estate management (CREM) as a distinct discipline has supported this drive and the search for strategies aimed at enhancing the value of real estate assets and facility-related services to the core business. Yet, the relationship between core and non-core business, in the context of real estate management and facilities management is not well understood. It is likely that many possibilities exist for adding value, but they are not properly considered, even if they are recognised.

For many corporations, their real estate and facilities management have evolved over the years. As such they tend to follow broadly traditional values and assumptions that place buildings and services installations in the foreground and "softer" issues in the background. Realisations that both tangible and intangible assets are important to the successful support of the core business necessitates new techniques and tools for measuring, amongst other things, performance, productivity, usability and functionality. Indeed, many corporations and researchers discuss such value-adding concepts yet struggle with their proof. The absence of some form of objective measurement using key indicators inhibits comparison of alternative CREM strategies, and generally, leaves corporations in the dark as to what they are achieving. Furthermore, a broader, more coherent assessment of the ability of best practice CREM to add value to the core business is missing.

Many real estate and facilities units within corporations have been established from the perspective of managing existing buildings owned or occupied by them. CREM decisions are, therefore, based primarily on functions and requirements in relation to buildings and not the businesses that are performed within them. Little attention has been paid to the added value that CREM can generate from supporting core business processes.

This paper concerns the preliminary phase of the research project "Value adding relationship between real estate and facilities management and corporations' core business: A methodology & tool for business users". The aim of the project is to resolve the problem of a lack tools and techniques for use in identifying the various ways which CREM can produce the best added value for the core business of the corporation (Figure 1). Institute of Real Estate Studies at Helsinki University of Technology is responsible for the research, which is done in co-operation with academic professionals from different countries and universities. The project is funded by TEKES (the national technology agency), eight Finnish industry corporations and municipalities. The head of the research team is Professor Kari I. Leväinen and the principal researcher is Anna-Liisa Sarasoja. Ph.D. Karen Gibler from Department of Real Estate at Georgia State University takes part in the project as an international academic expert.

## **Objective of the study**

The objective of the paper is to explore and analyse components of CREM that create added value to the core business. It will draw together the fields of business strategy, business performance, value measurement, corporate real estate management and workplace performance. The goals are to develop an empirical framework that will assist corporate real estate (CRE) organisations understand the direct and indirect added value of corporate real estate on their core business performance and ways to measure the added value of CREM.

In this paper we will ascertain ways corporate real estate strategies can be linked to the overall business strategy, how real estate operating decisions relate to real estate strategies and how to measure the added value of these operating decisions.

## **Research methods of the study**

First we conduct a literature review of relevant research on corporate real estate, strategic management and value management. This provides a framework and key concepts for analysing added value of CRE. Next we are conducting interviews with thirty corporate real estate executives, unit managers and consultant/experts in the US, the UK, the Netherlands and Finland to obtain specifics on the corporate real estate function and value added measurements used in each firm. Our aim is to survey organisations (public and private) in different industries and with different backgrounds. To illustrate the differences of the interviewed organisations we have gathered Table 1, which presents the core business of each organisation, total number of employees, number of CREM employees, total amount of properties in use, percentage of owned properties and percentage of office space.

*Table 1. Background of interviewed organisations*

Corporation	Core business	Total employees	CREM employees	Properties total (m <sup>2</sup> )	Owned (%)	Offices (%)
17 Private	transportation (railway)	14400	140	-	-	-
	Broadcasting	3700	60	270000	70 %	85 %
	National central banking	630	20	130000	99 %	46 %
	Energy providing	14 000	55	320000	30 %	90 %
	Telecommunication services	6500	15	500000	40 %	60 %
	Alcohol industry	24 000	-	-	-	-
	Business consulting services	9000	20	-	-	-
	Bakery industry	3900	1	180000	-	1 %
	Building services desing & consulting	280	0,5	5800	1 %	100 %
	Data management	4800	2	120 000	2 %	99 %
	Home appliances manufacturing	68000	8	4600000	68 %	10 %
	Broadcasting	8000	250	285000	54 %	80 %
	Energy providing	25000	91	1600000	40 %	45 %
	Air transportation	60000	57	430000	43 %	-
	Beverage industry (non-alcoholic)	70000	11	4000000	88 %	20 %
	Banking services	130000	100	6500000	30 %	100 %
	Automotive systems	40 000	-	-	-	-
7 public	Municipal services	6300	300	625000	90 %	8 %
	Municipal services	13000	390	900000	85 %	10 %
	Municipal services	6300	36	430000	86 %	8 %
	education & research	3000	28	230000	0 %	30 %
	education & research	3000	250	420000	90 %	11 %
	Federal services	1000000	500	3600000	44 %	100 %
	Municipal services	-	-	-	-	-

In each interview we are identifying first what the core business is for that firm and then we are determining how they define added value and how they think real estate adds value to the core business. We are exploring the extent to which the firm has a clear corporate strategy and whether that broad strategy specifically includes real estate related strategies. We ascertain the level within the firm at which strategic real estate decisions are made. We then identify the key indicators that the firm is measuring related to real estate and facilities management and how those results are being used in real estate related decisions.

In addition to the interviews with corporate real estate executives we have conducted five interviews with academic professionals and corporate real estate consultants, providing us better understanding and wider views on the corporate real estate practices in each country.

We are then comparing the results of the interviews with the previously published literature and present a revised model of the methods by which corporate real estate decision making adds value to the firm. We further identify and expand upon key indicators that firms can develop and use to make real estate related decisions that better consider the value adding attributes of each real estate and facilities management option.

## Literature Review

### *From strategies to added value*

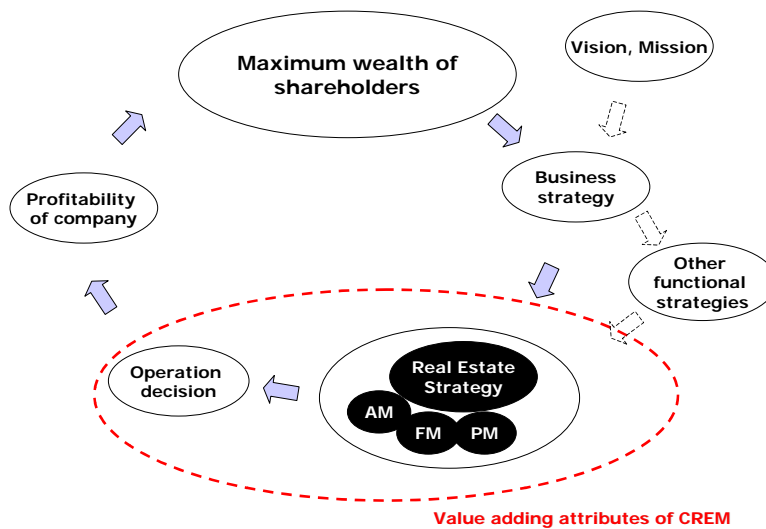
The corporations' primary aim is to add to the wealth of investors/owners. In order to achieve this aim the corporation sets strategic goals for its business activities. This defines the demands for CREM, which is based on a real estate strategy and linked to the organisation's strategic goals. A precondition to formulating a real estate strategy that is derivative of the corporate business strategy is articulation of the corporate business strategy (Nourse and Roulac 1993, p. 473). Thirty years ago Ackoff (1970) identified several conditions that, when present, make a company's decision a strategic one: it has an effect on long duration; it is difficult to reverse; it affects a large number of organisational functions; and it affects organisational values. These conditions are almost always present in decisions regarding corporate real estate.

Based on a meta-analysis drawn from 26 studies, Miller and Cardinal (1994) created a model in order to explain the relationship between strategic planning and firm performance. They created a planning performance model, which demonstrated that strategic planning positively affects performance, or more specially, the amount of strategic planning a firm conducts affects its financial performance. Thus, this can be extended to establish the relationship between the amount of real estate strategic planning to the firm's performance. A key to successful integration of all corporate real estate elements is engaging in a strategic planning process that not only aligns the facilities infrastructure with the core business, but also drives CRE organisational initiatives relative to process, people and enabling systems. (Acoba *et al.* 2002.)

Research (Hesket 1997) has shown that financial performance is correlated with creation of value and delivery of quality products and services. These, in turn, are influenced by employee morale, productivity and satisfaction, which contribute to quality of the products and services that lead to customer satisfaction and loyalty. Similarly, real estate and workplace performance characteristics can be viewed as another set of indirect contributors to the firm's financial performance.

### *Linking real estate strategies to corporate strategy*

Thus, real estate can contribute to the overall business strategy both through direct and indirect channels. To ensure effective contribution, the real estate strategy must be derived from and support the overarching business strategy. The real estate strategy is enacted through asset management, property management and facilities management. Real estate operation decisions that support the real estate strategy are means to achieving the primary goal of the corporations - to maximise wealth (Figure 1).



*Figure 1: CREM as a part of the corporations' strategic framework*

By producing real estate strategic plans that address the business units' objectives (efficiency, customer satisfaction, productivity etc.), corporate real estate executives can best demonstrate their value and provide a platform for being involved in broader corporate planning process (Lambert *et al.* 1995).

According to Nourse and Roulac (1993) to effectively support a range of corporate objectives, multiple rather than single real estate strategies may be required. They believe that there are eight types of real property strategies that encompass how property decisions can be guided (Table 2).

**Table 2. Alternative Real Estate Strategies (Nourse and Roulac 1993, p. 480)**

1. Occupancy cost minimisation
- Explicit lowest-cost provider strategy
- Signal to critical constituencies of cost-consciousness
2. Flexibility
- Accommodate changing organisational space requirements
- Manage variability/risk associated with dramatic escalation/compression space needs
- Favor facilities that can readily be adapted to multiple uses by corporation and others
3. Promote Human Resource objectives
- Provide efficient environment to enhance productivity
- Recognize that environments are important elements of job satisfaction and therefore compensation
- Seek locations convenient to employees with preferred amenities
4. Promote marketing message
- Symbolic statement of substance or some other value
- Form of physical institutional advertising
- Control environment of interaction with company's product/service offering
5. Promote sales and selling process
- High traffic location to attract customers
- Attractive environment to support/enhance sale
6. Facilitate and control production, operations, service delivery
- Seek/desing facilities that facilitate making company products/delivering company services
- Favor locations and arrangements that are convenient to customers
- Select locations and layouts that are convenient to suppliers
7. Facilitate managerial process and knowledge work
- Emphasize knowledge work setting over traditional industrial paradigm
- recognize changing character, tools used in, and location of work
8. Capture the real estate value creation of business
- Real estate impacts resulting from demand created by customers
- Real estate impacts resulting from demand created by employees
- Real estate impacts resulting from demand created by employees

### ***Different ways to create added value***

Corporate real estate management was originally focused on meeting the continuous need for accommodation (Krumm, 1999). Nowadays the prime focus is on outsourcing services and reducing the impact of real estate on the corporate balance sheet. The nature of the added value has changed toward providing functional leadership and cost-effective services for businesses. To meet the biggest challenges businesses are facing today, businesses need efficient, innovative and productive work environments with flexibility for expansion and contraction in response to the market (Gibler *et al.* 2002).

Kaplan's and Norton's (2000, 2004) Balanced Scorecard approach suggests that organisations have two basic financial strategies for driving shareholder value: revenue growth and productivity. The former generally has two components: build the franchise with revenue from new markets, new products, and new customers; and increase value to existing customers by deepening relationships with them through expanded sales. The productivity strategy also usually has two parts: improve the company's cost structure by reducing direct and indirect expenses, and use assets more efficiently by reducing the working and fixed capital needed to support a given level of business. In line with BSC model, Krumm and Vries (2003, p. 67) state that cost reduction and revenue growth are the key elements for global performance. Typically CRE performance has related to the productivity aspect of organisational performance and its contribution

measured through space efficiency, cost reduction, and capital minimization. However, real estate can also help to improve revenues.

In an effort to pinpoint added value of real estate, De Jonge describes seven elements of added value (Table 3) contributing to the transformation of real estate from mere 'cost of doing business' to a true corporate asset (De Jonge 1996 in Krumm 1999, p. 66).

**Table 3. Elements of added value of real estate (Jonge 1996 in Krumm 1999, p. 66)**

1. Increasing productivity	<ul style="list-style-type: none"> <li>- Offering adequate accommodation</li> <li>- Site selection</li> <li>- Introducing alternative workplaces</li> <li>- Reducing absence of leave</li> </ul>
2. Cost reduction	<ul style="list-style-type: none"> <li>- Creating insight into cost structure</li> <li>- More efficient use of workplaces</li> <li>- Controlling costs of financing</li> </ul>
3. Risk control	<ul style="list-style-type: none"> <li>- Retaining a flexible real estate portfolio</li> <li>- Selecting suitable locations</li> <li>- Controlling the value development of the real estate portfolio</li> <li>- Controlling process risk during (re)construction</li> <li>- Controlling environmental aspects and labour conditions</li> </ul>
4. Increase of value	<ul style="list-style-type: none"> <li>- Timely purchase and sale of real estate</li> <li>- Redevelopment of obsolete properties</li> <li>- Knowledge of and insight into real estate market</li> </ul>
5. Increase of flexibility	<ul style="list-style-type: none"> <li>- Organisational measures (working hours, occupancy rates)</li> <li>- Legal/financial measures (mix own/rent/lease)</li> </ul>
6. Changing the culture	<ul style="list-style-type: none"> <li>- Introducing workplace innovations</li> </ul>
7. PR and marketing	<ul style="list-style-type: none"> <li>- Selection of branch locations</li> <li>- Image of buildings</li> <li>- Governing corporate identity</li> </ul>

### ***Ways to measure added value***

To achieve its strategic goals, an organisation needs to compute relevant performance measures, which should derive from the firm's strategy (Keegan *et al.* 1989). Performance measures are used to ensure that an organisation is achieving its aims and objectives as well as to evaluate, control and improve organisational processes (Ghalayini and Noble 1996). To be effective and play a strategic role in the organisation, better real estate performance measures are needed to reflect how well real estate is being utilised in the business (Nourse 1994), not just its cost to the firm.

Several researchers have started identifying the measures currently being used to monitor real estate performance. (These measures are summarised in Table 3.) Nourse (1994) found that among eleven corporations, all used different measures for different types of buildings. Managers with office space tend to use space and occupancy cost measures. Book value was also common.

A research report published by Arthur Andersen (1993) showed that cost per square foot is the most frequently used method to evaluate real estate performance by both senior managers and CRE executives. The other performance criteria used as key indicators were: business return on assets, employee satisfaction with work environment, occupancy cost per employee, sales per square foot, cost per revenue dollar and square feet per employee. IDRC (2001) used six common corporate real estate performance ratios in their

member-research benchmarking program. These ratios are: Lease-to-Own Ratio, Corporate Space per CREM Employee, Space per Corporate Employee, Corporate Sales per CREM Employee, Corporate Employee per CREM Employee and Corporate Sales per Square foot of Space.

Bdeir (2003) found that most CRE units measure operational performance, identifying short-term financial indicators like occupancy costs. Only a few CRE units were able to develop strategic measures like measures of productivity, customer relation, human resource objectives and image and branding.

Table 4. Possible figures for measuring corporate real estate performance identified in previous research

<p><b>Physical Space</b></p> <hr/> <p>Total amount of space Unit of space per employee/seat/ business unit/property type/location Person per seat Percent of space occupied</p> <p><b>Cost of Physical Facilities</b></p> <hr/> <p>Cost per square foot Cost per employee/seat/business unit /property type/location</p> <p><b>Cost Related to Income</b></p> <hr/> <p>Ratio of occupancy costs to sales or revenues Sales per unit of space Business return on assets Real estate spending as a percent of operating expences</p> <p><b>Flexibility</b></p> <hr/> <p>Flexibility of physical facility for changes in use Flexibility of lease provisions to adapt to life cycle of company products</p> <p><b>Satisfaction</b></p> <hr/> <p>Employee satisfaction Customer or client satisfaction</p>	<p><b>Physical Characteristics</b></p> <hr/> <p>Physical condition of exterior Physical condition of interior space</p> <p><b>Tenure</b></p> <hr/> <p>Lease cost versus construction cost Lease cost versus owning cost Lease-to-Own ratio</p> <p><b>Value</b></p> <hr/> <p>Marketability of property -market value Book value of property</p> <p><b>Corporate Real Estate Staff</b></p> <hr/> <p>Cost per CRE employee Cost per in-house versus outsourced employee Corporate space per CREM employee Corporate sales per CREM employee Corporate employee per CREM employee</p> <p><b>Other</b></p> <hr/> <p>Average distance to employee homes/ to customer/ to suppliers/between managers Provision of amenities</p>
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Some of the current measures can be traced to the eight types of real estate strategies shown in Table 2 and the elements of added value of real estate in Table 3. Occupancy cost minimisation and cost reduction (efficiency) can be supported by measuring the cost per unit of space, cost per employee cost per revenue dollar, sales per unit of space, and space per employee. The value of the real estate assets themselves are measured with book value and return on assets. Efficiency of the corporate real estate staff is measured. Even promotion of human resource objectives is reflected in employee satisfaction with work environment. Missing, however, from this list are direct measures relating to value of flexibility, promoting marketing, controlling risk, and facilitating production and delivery of products and services.

No matter what measures they decide to use, real estate executives must develop better means of communication with top executives to explain how real estate contributes to the company's profitably and success. (Gibler *et al.* 2002) Otherwise, these numbers will simply be calculated and never used in making strategic real estate decisions, allowing the firm to make suboptimal real estate decisions that do not maximise real estate's potential contribution to the strategic goals of the firm.

## Interview Results

In the interviews with the corporate real estate directors/managers in different countries we explored first how they define added value and how they think real estate management adds value to the core business. Often mentioned definitions for added value were the traditional economical definitions: financial output is more than input or the added value is the value over that profit investors are expecting for their investments. Respondents saw the main two ways to create value as generating revenue or decreasing costs. However, many also recognised increasing employees productivity as an important element of added value. Besides these economic definitions, the intangible part of added value was recognised through statements such as:

Added value could be work or services (output) that consists of more than the physical or human capital (input); and added value is an activity or an operation that increases the value of the business compared if such an activity or operation is not performed.

Added value was also seen as multi-layered: for employees it's about satisfying their needs and enabling them to work more productively and for shareholders it's about making profit. The business environment affects the type of added value needed: When the core business is struggling, added value is about cost reduction; and when the core business is growing added value is about revenue growth.

When asked how corporate real estate executives think real estate and facilities management functions create added value to the core business, the answers reflected several different themes.

The most common theme revolved around the physical workplace:

- Providing pleasant workplaces for employees
- Providing optimal working environment
- Providing space that attract existing and potential employees and customers
- Providing efficient workplaces which support the knowledge work and innovative processes.
- Creating flexible workplace solutions (instant offices, hot-desking)
- Standardisation of workplaces
- Creating workplaces that support the organisation image and brand

Another theme was service issues:

- Optimising the service production (finding the right balance between outsourced and in-house services)
- Having in-house expertise concerning FM service purchasing
- Providing services that save time, cost or work
- Provide services desired by employees
- Quickly responding to real estate requests

Site selection was also considered an important way of creating added value:

- Finding optimal locations for functions and creating synergy advantages
- Finding optimal locations for employees and customers

The relationship with the stakeholders was one of the most important themes found:

- Having knowledge of core business operations and needs
- Creating a good communication link with the strategic level of the organisation (getting closer to the business)
- Speaking the "same language with different shareholders"
- Providing strategic support in real estate issues
- Being a control mechanism between business units and their real estate needs (bringing discipline)
- Selling new ideas to the core
- Formulating a CREM-brand
- Learning from other real estate experts then adapting it to own organisation
- Translating the business needs into real estate
- Forming formal and informal networks with strategic level of organisation
- Having balance between strategic and operational work.

We also asked the corporate real estate executives what real estate performance measures are used in their organisations. Cost per square foot and employee satisfaction were the most popular measures (more than 70 % are using those measures). Square foot per employee, physical condition of real estate and client/end-user satisfaction were also often used measures (more than 50 %). Only 30 % were using cost per business unit, cost per employee and quality of property. The least commonly used measures (less than 20 %) were cost per workplace, cost per sale, sales per square foot and input per square foot.

Some previously not reported measures found through the interviews were: Importance of property to the core business, number of moves per year, cost per person served, and number of staff who interact with service providers. However, innovative measures for the intangible elements of performance were missing almost in every interviewed organisation. Yet, the corporate real estate staff were aware of the lack of those measures and recognised how important it would be to have those kinds of measures.

### Value adding attributes of CREM from the Literature and Interviews

Based on previous research and interviews with the corporate real estate executives conducted as part of this project, we have produced seven possible real estate strategies that could add value to the corporation's core business. These strategies are structured from the core business point of view. In formalising these strategies we tried to find balance between intangible and tangible sides of CREM. Like Nourse's and Roulac's strategies, it is possible to adapt one or multiple strategies depending on the business strategies. To go further from previous studies we have linked operational decisions that support the real estate strategies along with potential measures for gauging the success of each operational decision in achieving the associated strategic goal.

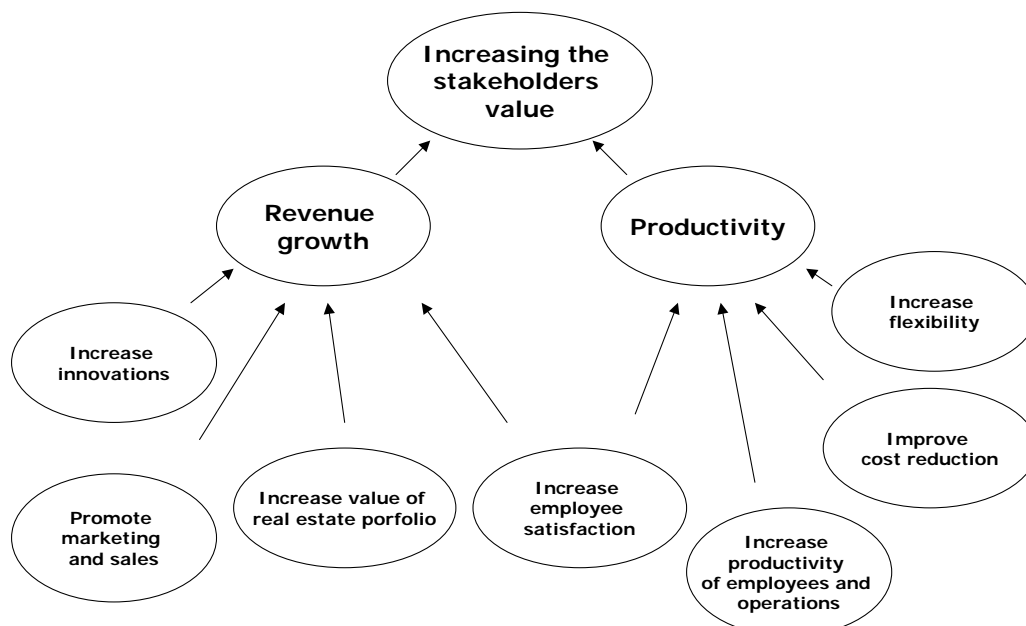
Table 5 illustrate these real estate strategies, operating decisions that support the strategies and ways to measure whether the real estate operation is adding value through making decisions in support of each strategy.

Table 5. Value adding attributes of CREM

Possible real estate strategies	Operations decision	Potential measures
Increase flexibility	Favour facilities that can be adapted to multiple uses	Cost of moving /cost of renovation compared to cost of flexible facilities, amount of distance work settings in use
	Create flexible workplace solutions	Cost of space modification
	Negotiate short-term leases with options for expansion and contraction	Length of lease term, Option to expand/contract in lease
	Choose leasing instead of owning	Lease-to-own ratio, cost of leasing versus cost of owning, Time to get rid of leased space versus time to get rid of owned space
Increase value of real estate portfolio	Obtain current valuations of facilities	Percent of properties valued within x months
	Maintain/increase the value of owned properties	Physical condition of exteriors and interiors, market value
	Redevelop obsolete properties	Cost of redevelopment versus replacement
	Disposition of surplus properties	Amount of dispositions
	Make lease/purchase decision on a facility by facility basis	Cost of owning versus cost of leasing, importance of the property to the core business
	Manage risk associated with properties	Potential loss from risk associated to properties, insurance premium cost versus expected losses from various risks
Increase innovations	Select facilities that inspires the innovative processes	Use of interior design solutions, amount of informal and formal workplace settings, employee satisfactions of interior environment (acoustics, lighting)
	Emphasise knowledge work settings more than traditional industrial paradigm based solutions -task based workplaces instead of individually dedicated workplaces	Number of workstations per employees, the use of work process descriptions in workplace planning
	Provide possibilities for space users to participate design phase and process of use of space	Amount of participation possibilities, user instructions and commonly agreed procedures in use of space
	Develop usability of the workplaces	Employee satisfaction of usability, productivity and efficiency of workplace
	Seek locations convenient to employees	Distance/travel time to employees' homes

Increase employee satisfaction	Seek locations convenient to employees	Distance/travel time to employees' homes
	Provide desired amenities	Number and type and amenities, employees satisfaction of amenities
	Provide pleasant working environment to employees	Indoor environment measures (thermal conditions, indoor air contaminants, lightning, acoustics...)
	Provide functional workplaces	Employee satisfaction of ergonomics, privacy, size of workplace...
	Provide and maintain IT-infrastructure and other office machines	Employee satisfaction of it-systems and office machines.
Increase productivity of employees and operations	Respond quickly to real estate requests	Employee wait time, employee satisfaction of service delivery
	Select locations and layouts that are convenient to service providers	Distance/travel time to providers
	Select location that are convenient to employees between different units	Distance between employees in separate buildings
	Design facilities that improve the creation and delivery of products and services and operations	Production downtime
	Maintain facilities to accommodate optimal operations	Number of service requests, indoor environment measures
Promote marketing and sales	Provide an environment that enhances productivity	Employee productivity, employee turnover
	Make symbolic statement through physical design and location of properties	Potential client/customer recognition of facilities, customer/client perception of image associated with property
	Create workplaces that support the organisation brand	Degree of standardisation of company colours, logos, and design elements
	Provide space that attract customers	Customer perception of space
	Select high traffic locations that will attract customers	Distance travel time to customers, customer traffic
Improve cost reduction	Provide an environment that supports the organisation's sale of its products and services	Customer wait time, sales per unit of space
	Find the right balance between outsourced and in-house services	Outsource service cost versus in-house service cost Quality versus cost of services
	Minimise acquisition and financing costs	Acquisition costs, financing costs
	Utilise government incentives	Value of government incentives obtained
	More efficient use of workplaces	Efficiency ratio, person per seat, space per employee/unit/property, space cost per unit of space/employee/unit, workplace standardisation in use
	Create economies of scale in acquisition of products and services	Number of service providers, workplace standardisation in use
	Minimise operating expenses	Operating expense pass through and caps in lease
	Conduct routine maintenance to avoid repairs and capital expenditures	Maintenance costs versus repair and capital expenditures
	Act as a control mechanism between business units and their real estate needs.	Percent of real estate transactions coordinated or conducted by the CREM staff

To illustrate how these real estate strategies could add value to stakeholders we have used Kaplan's and Norton's approach by which for increased financial performance there should be two basic levers: revenue growth and productivity (Figure 2).



*Figure 2. Seven possible real estate strategies which could add value*

These real estate strategies will not add value to the firm unless the CREM function and decision making are linked to the strategic decision making level of the organisation. To choose the proper strategy to add the most value requires knowledge of the core business and its needs are very important. Such knowledge creates confidence among business units who are then more willing to cooperate and depend upon the CRE staff to make value adding decisions. Interviewees suggest formulating a "CREM-brand" inside the corporation and acting as a control mechanism between business units and their real estate needs as requirements along the path to successful real estate management that maximizes the firm's value.

## **Debate**

Many writers on CREM stress the importance of the business environment and the role that real estate management should take in enhancing business performance, suggesting different approaches and organisational structures (Table 2 and 3). With this paper we have taken into account the approaches in previous studies, identifying common themes as to how CREM could advance the overall business performance and create the best added value to the core business. In addition, we have gathered further knowledge from interviews of corporate real estate executives and academic experts. Based on literature and interviews we have formed the model of how the value adding attributes of CREM contribute to the wealth maximization of the firm (Figure 1). The value added section of the model is based on seven \ real estate strategies that could increase the stakeholders' value through revenue growth or improved productivity (Figure 2). We have expand the model by identifying operating decisions that support each real estate strategy and ways to measure whether the real estate operation is adding value through making decisions in support of each strategy (Table 5).

This list is a first attempt at an organised comprehensive listing of potential measures of attaining both traditional real estate goals such as cost minimisation as well as other value adding activities related to real estate that often go unrecognised and unreported. Some of the measures are based on data that are readily available in most firms; others will require firms to document and track information that previously went unrecorded. A few of the measures are still in the developmental stage and require further refinement and quantification.

From the interviews we found out that the successful CREM executive implementing these strategies and using these measures must be working within the overall corporate strategy and communicating with the strategic decision making level of the organisation. A prerequisite of CREM creating added value to core is developing a good knowledge of core business needs and crating effective communication links to in-house customers.

We will continue this research with additional interviews in additional countries with the goal of further identifying and refining measures that can be used to quantify the many ways value is added to the firm by corporate real estate. We will also approach the problem from core business point of view by conducting interviews with executives at the strategic level of the organisation, testing their opinions on the added value attributes of CREM. We will compare their opinions with the results from corporate real estate staff to identify differences and gaps as well suggest reasons for the differences and make suggestions for how to bring the two groups closer together.

## **References**

Acoba, Fransisco and Foster, Aligning Corporate Real Estate with evolving Corporate Missions: Process-based Management models. *Journal of Corporate Real Estate*, Vol. 5, No. 2, 2002.

Ackoff, R., *A Concept of Corporate Planning*, New York, NY: John Wiley & Sons, Inc., 1970.

Bdeir, Zina, *Strategic Performance in Corporate Real Estate*, M.Sc. thesis in Real Estate Development at the Massachusetts Institute of Technology, September 2003, 67 p.

Ghalayini, A.M. and Noble, J.S., The changing basis of performance measurement, *international Journal of Operations & Production Management*, Vol. 11, No. 8, 1996, pp. 63-80.

Gibler, K.M., Black, R.T. and Moon, K.P. Time, Place, Technology and Corporate Real Estate Strategy, *Journal of Real Estate Research*, Vol. 24, No. 3/2002. Pp. 235-262.

Hesket, James, *The service profit chain: How leading companies link profit & growth to loyalty, satisfaction & value*. Free Press, 1997, 36 p.

IDRC, *Corporate Real Estate Performance Ratios -Membership Market Research*, International Development Research Council, 2001.

Jonge, de H. De toegevoegde waarde van concernhuisvesting, NSC-conference 15 October 1996, Amsterdam.

Kaplan, R., S. and Norton, D., P., *Having Trouble With Your Strategy? Then Map It*, *Harvard Business Review*, Vol. 78(5), 2000, pp. 167-176.

Kaplan, R. S. and Norton, D. P., *Strategy Maps. Converting Intangible Assets into Tangible outcomes*, Boston, Harvard Business School Publishing Corporation, 2004, 454 p.

Keegan, D.P., Eiler, R.G., and Jones, C.R., Are your performance measures obsolete?, *Management Accounting*, 70 (12), 1989, pp. 45-50.

Krumm, Peter, J.M.M. *Corporate Real Estate Management in Multinational Corporations*, ARKO Publishers, Nieuwegeing, 1999.

Krumm, Peter, J.M.M. and Vries, Jackie de, Value Creation through the management of corporate real estate, *Journal of Property Investment & Finance*, Vol. 21, No. 1, 2003, pp. 61-72.

Lambert, S., Poteete, J. and Waltch, A. *Generating High-Performance Corporate Real Estate Service*, Corporate Real Estate 2000 Series report No. 52, IDRC, 1995.

Miller C.C., Cardinal L.B. Strategic planning and firm performance: a synthesis of more than two decades of research. *Academy of Management Journal*, 37(6), pp. 1649-1665.

Nourse, Hugh O. Measuring Business Real Property Performance, *The Journal of Real Estate Research*, Vol. 9, No. 4, 1994, pp. 431-444.

Nourse, Hugh O. and Roulac, Stephen E. Linking Real estate Decisions to Corporate Strategy, *The Journal of Real Estate Research*, Vol. 8, No. 4, 1993, pp.475-494.

*Real Estate in the Corporation: The bottom line from Senior Management*, South Carolina: Arthur Andersen & Co., 1993.