

# *Added Value of Corporate Real Estate Management in Industrial Premises*

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## ***Abstract***

*Industrial facilities (manufacturing facilities, warehouses, logistics centers, etc.) constitute a significant proportion of the overall real estate assets in Western countries. However, mainstream of the previous corporate real estate management research (CREM) has focused mainly on knowledge intensive branches and office use while there has been only a few studies about CREM in industrial facilities. The main objective of this research is to recognize the added value elements of corporate real estate management in industrial companies. The study is implemented with a constructive research method and it applies a normative case method implemented with three case studies and web based surveys for a larger sample. Based on the empirical research nine value adding attributes of CREM in industrial premises are recognized. Of these the most effective attributes to create added value are to promote employee safety and health, improve employee satisfaction, cost control, reduce environmental impacts and enhance productivity.*

***Keywords:*** *Industrial premises, corporate real estate management, added value*

# 1 INTRODUCTION

Industrial facilities (manufacturing facilities, warehouses, logistics centers, etc.) constitute a significant proportion of the overall real estate assets in Western countries. In Finland the amount of industrial facilities is almost six times larger than that of office premises (Statistics Finland, 2007). The volume of industrial space provides a solid starting point to investigate the future visions for Corporate Real Estate Management (CREM) in industrial environment. CREM research has focused mainly on knowledge intensive branches and office use while there has been only a few studies about CREM in industrial facilities.

There are many distinctive factors that differentiate industrial real estate from offices that could affect CREM. Among these differences are that industrial premises are often located outside urban structure, they are preferred to be owned by their user and the main definer for their qualities is the production line. The design and construction of industrial facilities are made with the principle of optimal performance of the process. The facilities are not seen as a resource – they are only providing the shelter for the production processes. Also the functionality of the facilities is based on the production process. For example the design requirements are made to be in scale for trucks and lorries – the human scale is taken into account mostly from a health and safety perspective. (Schless *et al*, 2000)

In order to allocate resources efficiently and gain the full benefits out of CREM companies have to understand the role of CREM in the industrial premises and identify key value adding elements in industrial facilities. Only by doing so CREM can provide added value for core business of the company. This study aims to identify those key elements in industrial an environment.

The study is implemented with a constructive research method (Kasanen *et al*. 1993; Labro & Tuomela 2003) and it applies a normative case method implemented with three

case studies and web based surveys for a larger sample. The constructive research approach was chosen as it is a useful tool for solving problems relevant to managers. The approach provides a solution oriented normative method which combines a target oriented and an innovative step-by-step development of a solution. The solution is also empirically tested and utility areas are analyzed which gives the method a ground in practical usability.

Following this introductory section, the paper is divided into four more sections. The second section discusses the previous research conducted around the added value of CREM within industrial facilities. The third section focuses on the empirical research conducted for this paper. The results of the empirical study are presented in the fourth section. The fifth section contains conclusions and discussions about the topic.

## **2 PREVIOUS RESEARCH**

### **2.1 Added Value of CREM**

One of the first well established models for corporate real estate value creation and real estate strategies is the Nourse and Roulac model presented in 1993. They state that in order to formulate an effective real estate strategy it has to be linked to the corporate business strategy. This has been illustrated by identifying nine strategic driving forces, consisting of the product/market, capability and result based driving forces, and discussing the real estate strategies that can contribute to them. Each strategic driving force has been reflected at each real estate strategy. The real estate contribution of each real estate strategy has been evaluated for each corporate driving force.

De Jonge (1996, in Krumm 2003, p. 64) identifies seven elements of added value that make corporate real estate a valuable resource. The elements are: Increase productivity, cost reduction, risk control, increase of value, increase in flexibility, changing the culture, PR and marketing.

Lindholm (2006) uses the balanced scorecard method (Kaplan & Norton, 2000) to link real estate strategies and operational decisions into the strategic objectives of a corporation. Lindholm's corporate real estate added value model divides the process of adding value into three levels that are Core Business Performance Level, Real Estate Strategy Level and Real Estate Decision Making and Operational Level.

The ultimate objective of CREM's added value is to maximize the wealth of shareholders which can be achieved through revenue growth and/or profitability growth. Profitability and revenue growth can be enhanced in real estate context through seven different real estate strategies. Three of the strategies add value by increasing a firm's revenue. These three strategies are increase value of assets, promote marketing and sales and increase innovation. Also for profitability growth three strategies can be distinguished. These real estate strategies are increase productivity, increase flexibility and reduce cost. One of the real estate strategies, increase employee satisfaction, can add value through both revenue and profitability growth. Lindholm identifies the operational objectives that fulfill each of the real estate strategies.

Jensen (2010) included 36 cases of FM practices from the Nordic countries and used inductive reasoning to form a model referred as FM Value Map. The FM value map is a conceptual framework that aims to understand and explain different ways that FM can create added value to the core business and to the surroundings. The value creation starts from resources as inputs which give provisions or outputs when combined with processes. These outputs have an impact on the core business and the surroundings which can create added value to stakeholders. The provisions or outputs are subdivided into basic products consisting of space and services and into additional offerings which are development and relationships. The impacts on the core business are subdivided into satisfaction, cost, productivity, reliability, adaptability and culture. The impacts on the surroundings are economic, social, spatial and environmental.

The added value of real estate is often described as the ability of the real estate decisions, processes and inputs to provide added value for the core business by aligning real estate

strategy to business strategy and ultimately to create shareholder wealth. However, the value is usually defined through economic measures such as cost cutting, profitability growth or revenue growth (Jensen *et al.* 2010). Rutheford and Nourse (1988) have used the stock price as a value measure unlike many other authors who have defined different value channels for the added value of CREM without accurately defining the shareholder wealth itself.

Although the added value has been studied in CREM research mostly in context of shareholder wealth and in Facilities Management (FM) research there have been some studies that also discuss the effects of real estate and facilities on other stakeholders besides shareholders (Jensen *et al.* 2010). In one of the more recent studies Jensen (2010) illustrates how FM can create value for the core business and variety of stakeholders including shareholders. Jensen identifies society, customers, staff and owners as the most important stakeholders for FM. Environment has been a much neglected aspect of CREM in the previous research. The environmental discussion within CREM is closely related to the recent stakeholder impact studies and probably this approach will be one of the major trends in CREM research in the future.

## **2.2 CREM in Industrial Context**

Even though corporate real estate research has nowadays focused merely on the offices and service sector, the origins of the professional real estate management have actually born in industrial companies at beginning of the last century. As Tang and Tang (1999) states industrial property was once the backbone of any developing economy. It was the source of economic growth and the key towards urbanization. Krumm (1998) has described the evolution of CREM: At first, for a long time industrial activities did not require specialised space, due to the limited size and scale of these activities; they were accommodated either in a partition of one's house or simply out in the open. Accommodating early industrial activities was the sole responsibility of the owner of the firm. The lack of complexity of these premises hardly required any professional help for their construction, maintenance and management; the owner/ founder of a firm was

involved in all its activities, including real estate. (Krumm, 1999). The industrial revolution and the changes in accommodation needs led to the construction of buildings especially for accommodating industrial processes. The growth of industrial activities and the continuous need for accommodation also resulted in managerial attention to real estate and facilities. Changes in the nature of business processes and in the size and scale of the activities often triggered the need for new accommodation. Parallel to the increasing size and complexity of buildings and real estate portfolios in general, the management of corporate real estate portfolios changed as well. The increasing number and geographical spread of properties resulted in the establishment of a separate discipline within corporations. (Krumm 1999).

All in all during the last few decades the real estate and facilities management profession has undergone radical transitions. The professionalization of the real estate market, the transitions and transformation in the corporate setting, and the subsequent changes in the role and position of staff and supporting departments, have spurred a rethinking of how to manage corporate real estate and facilities. The origins of the corporate real estate profession have started in industrial companies and in the 90's the industrial sector has been the dominant platform of the development of the profession. Consequently, in the last twenty years the research and concept development has concentrated mainly on service sector side. However, there are few studies focusing on the CREM in industrial context.

Roulac *et al.* (2005) studied corporate real estate management of Irish industrial and other companies. The sample consisted of 150 top companies in Ireland of which 44 are in the manufacturing sector and of these eleven were chosen for an industrial sub-group in the research. Roulac's study focuses on the 11 companies in the industrial sub-group while the other companies in the sample are used as a benchmark for the sub-group. Comparison between industrial and non-industrial sub-groups in Roulac's study indicates that industrial companies in Ireland are significantly less utilizing real estate as a corporate asset compared with non-industrial companies. This can be due to the lower proportion of real estate related costs in overall operating costs for an industrial company.

The lower emphasis on real estate as a strategic asset expresses itself in a range of practices and systems relating to real estate information and its reporting as well as the level of importance involved with real estate investment appraisal.

Thompson (2005) studied the ongoing changes in the distribution and logistics property sector across Europe in his article in 2005. In the study Thompson recognizes the following changes in the logistics industry: outsourcing, desire for supply chain flexibility and responsiveness, the globalization of the supply chain, legislative changes and growing IT capability. Derived from the ongoing changes the responses of the industry include complex and highly specified warehousing, increased demand for state of the art telecommunications and optimization of location.

Stadlhofer (2010) uses a questionnaire to identify CRE performance in industrial corporations focusing on pharmaceutical companies. The questionnaire was aimed to top 20 global pharmaceutical corporations from which 8 participated in the survey. The aim in Stadlhofer's study is to categorize CREM outperformers and underperformers and compare how strongly CREM performance is correlated with a set of selected financial measures consisting of share price performance, expense ratio and asset intensity.

The questionnaire was divided into seven sections of questions: general questions, CRE's place in the organization, real estate decision making, CRE's linkage to the business, use of information technology, CRE performance and CRE areas of added value. Stadlhofer's questionnaire used de Jonge's (1996) seven elements of added value as a division for the added value of CRE. The contribution to each of the elements of added value was asked separately from 1 to 0 with 1 being high value added and 0 being no value added. The respondents assess that the highest contribution of CRE is in reducing costs (score 0,78) and changing the culture (0,69). While the least contribution of CRE is in supporting public relations and marketing (0,31) and increasing productivity (0,41). Other elements of added value had the following results: increase flexibility (0,63), control risk (0,50) and increase of values (0,47). (Stadlhofer, 2010)

### 3 EMPIRICAL RESEARCH

The constructive approach was chosen for this study and it aims to solve a managerial problem by producing novel entities, such as models, diagrams and plans that provide a solution to emerging problems in running business organizations. Constructive studies can be carried out as either qualitative or quantitative and are explicitly normative by nature. Usually, as in this study also, constructive research applies the normative case method. Constructive research consists of seven distinctive steps (Figure 1). Most of the steps are partly overlapping and the third step, *obtaining a general and comprehensive understanding of the topic*, continues throughout the whole research process. This study uses literature review to implement this step. Although the exact theoretical linkages can be drawn only in the final part of the research process, the seventh step expands to cover the entire process because in order to make a rigorous research the theoretical contribution should be considered throughout the process. (Labro & Tuomela, 2003)

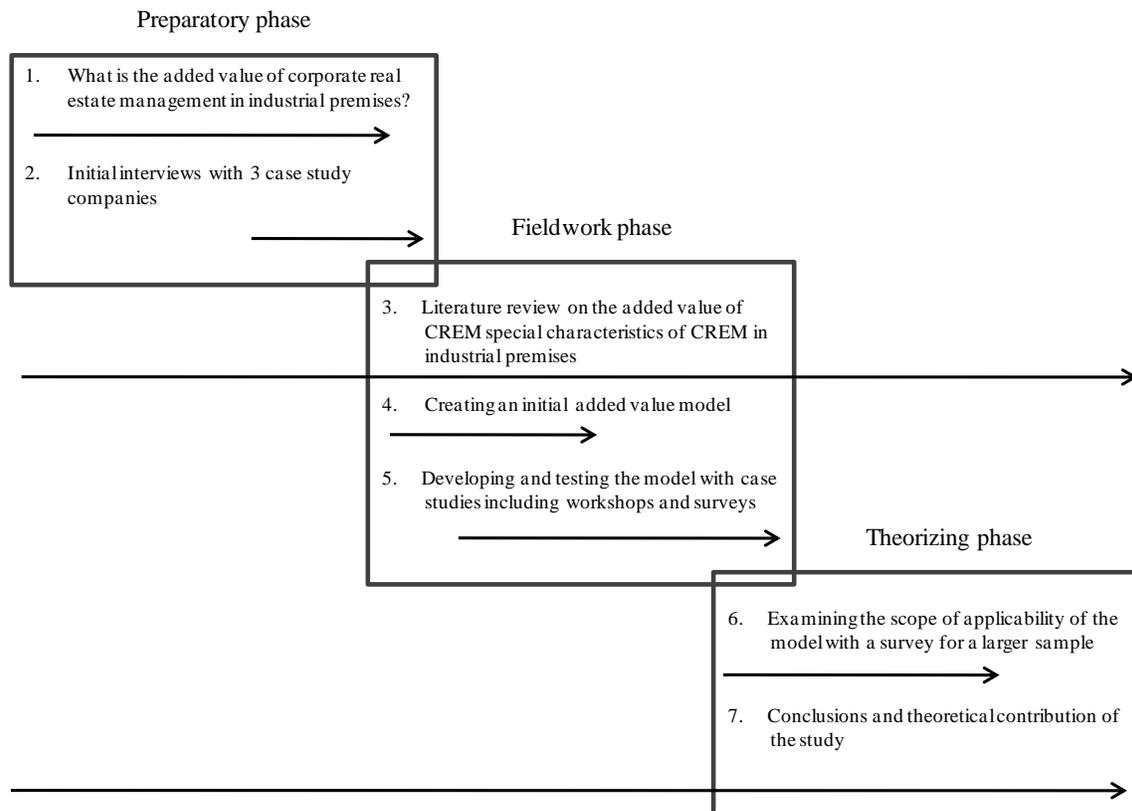


Figure 1. Constructive research method

The case study companies are global publicly listed industrial companies. Case study company A operates 27 countries with a personnel of 11 700 employees while case study company B operates in 160 locations in 70 countries and has 18 000 employees. Case study company C has 7400 employees in 40 locations around Finland.

### **3.1 Preparatory phase**

The preparatory phase in this study aims to specify the research problem from CREM point of view and clarify the relevancy of the objective with the case study companies. The specification for the research problem is implemented with initial interviews held with the case study companies' real estate management. The initial interviews aim to clarify the research problems in context of the empirical research. Also the research process and publication and confidentiality issues are clarified to the case study companies.

For the initial interviews, the themes of discussion were considered based on the literature review and the research plan. To explicate the themes, a few clarifying questions were considered beforehand in order to keep the interviews focused on the pre-considered themes. The themes for the discussions were sent to the interviewees beforehand in order to get as much accurate information about the themes as possible.

The initial interviews and workshops in the fieldwork phase are implemented through applied focused interviews (Merton *et al.*, 1956). Focused interviews were chosen because the purpose of the interviews and workshops is to interactively create the added value model. Also focused interviews were selected because a focused interview does not curtail the opinions of the interviewees. Especially due to the special characteristics and demands of a production process it would have been a difficult process to create a generic model that applies to practice without gaining thoughts and opinions from the real estate managers and production representatives. A preliminary added value model is created based on initial interviews and further developed in the fieldwork phase.

## 3.2 Fieldwork Phase

The first part of the fieldwork phase is implemented with a literature review. Main sources of information for the theoretical part are real estate journals and other scientific journals. Literature review aims to illustrate predominant theories on the added value of corporate real estate and examine previous studies of CREM in industrial context. Case studies are started with three case study companies simultaneously with literature review and based on those studies and the findings from the literature review an initial added value model is created. The initial model is further developed and tested with workshops and surveys held with the case study companies.

The workshops aim to develop the preliminary model further with the case study companies and bring practical applicability to it. Workshops are occasions that promote open dialogue between participants and encourage expressing one's opinions. The preliminary model is discussed at three levels that are the corporate level, CREM strategy level and the operational level. The interviewees for the workshops are real estate managers, production managers and financial administrators.

Following the workshops the added value model is tested with the case study companies using a structured questionnaire. On real estate strategy level value adding attributes of the model are being assessed through their value adding ability. The respondents are asked whether a value adding attribute provides the company with added value and how much using a scale bar from 0 - "does not provide added value" to 5 - "provides a lot of added value".

On the operational level the operative objectives under each strategic level value adding attribute are assessed through their importance to core business and the level of contribution of real estate management to achieve a certain objective. The respondents assess the importance with a scale bar from 0 - "not important at all" to 5 - "very important". Real estate managements contribution is assessed with a scale bar from 0-

“not effective” to 5 - “very effective”. Respondents can also give additional objectives that they can assess. Also for each operational objective there is a field for open comments.

### **3.3 Theorizing Phase**

Theorizing phase aims to test the model in practice with a larger sample and it was implemented through a web based tailored design survey. The survey is done separately and the questions also differ for the case study companies and the larger sample. The larger sample consists of real estate managers in the companies while with the case study companies some of the respondents represent production management.

For the larger sample, the survey had more general questions because it is presumable that with the case study companies it is possible to ask more precise questions while they have been involved in the research from the very beginning. Also it is presumable that the larger group would less incentive to answer a survey than the case study companies and therefore the survey should be shorter and less complicated than with case study companies.

In the survey for a larger sample, the respondents were asked to evaluate each strategic level value adding attribute based on their ability to provide added value for core business. The scale in the responses varies from 0 - “does not provide added value” to 5 - “provides a lot of added value”. The results of the case studies and surveys are compared with previous research and conclusions are drawn based on the theoretical contribution.

## **4 RESULTS**

Case studies and literature review indicates that on a corporate level the added value of corporate real estate management for stakeholders in industrial premises stems from supporting production processes, embracing sustainability and promoting company brand. In the literature review one focus area were CREM value adding strategies in

previous research. These value adding strategies have usually many similar elements. Based on those predominant value adding strategies a group of CREM strategies were prioritized and tested with case studies and surveys. Each of these tested CREM strategies contribute either to production processes, embracing sustainability and promoting company brand or all them. The following CREM strategies were identified to be to most effective in industrial premises.

- **Enhance productivity** (support production process)
- **Cost control** (support production process)
- **Reduce environmental impacts** (embrace sustainability)
- **Ensure social and economic sustainability** (embrace sustainability)
- **Realize company brand** (support company brand)
- **Support interaction** (support production process, embrace sustainability, support company brand)
- **Improve employee safety** (support production process, embrace sustainability, support company brand)
- **Improve employee satisfaction** (support production process, embrace sustainability, support company brand)
- **Risk control** (support production process, embrace sustainability, support company brand)

The most effective CREM strategies identified in the case studies were tested with the surveys. The surveys had a total of 40 respondents from 27 companies. Based on the responses each CREM strategy provides added value for core business but five of these strategies was seen to produce more added value than the remaining four. Therefore the CREM strategies are divided into two groups based on their ability to produce added value for core business. The primary group holds the most important value adding strategies. This primary group consists of promote employee safety and health, improve employee satisfaction, cost control, reduce environmental impacts and enhance productivity. These strategies should be the first priority in organizing CREM for industrial premises.

The secondary group of CREM strategies also produce added value for core business but in less extent than the CREM strategies in the primary group. The secondary group consists of risk control, support interaction, realize company brand and ensure social and economic sustainability. (Figure 2) Despite being among the least important CREM strategies, supporting interaction was repeatedly emphasized in the workshops by both real estate managers and production managers. Close interaction between production and real estate managers was considered a precondition for any other value adding attributes studied in the survey.

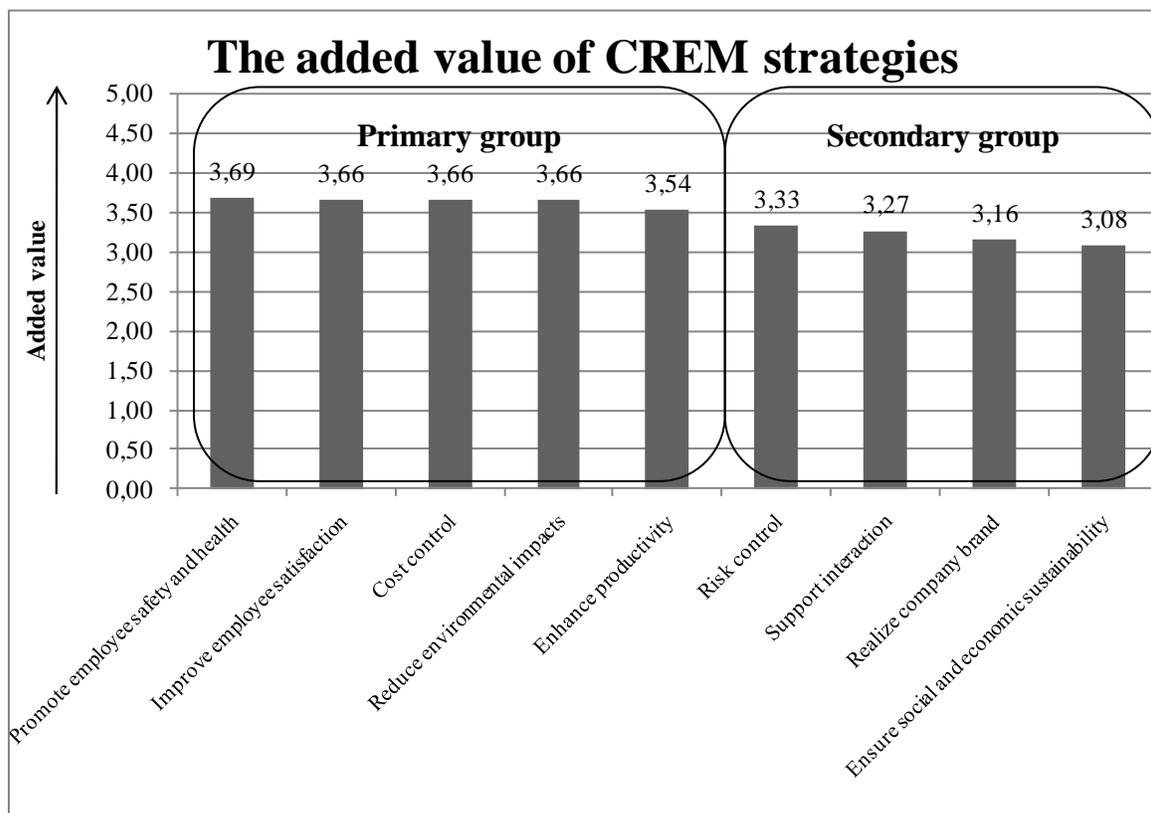


Figure 2. The most value adding CREM strategies

Comparison of the value adding attributes identified in this study with dominant value adding theories in real estate research is illustrated in Table 1. Employee safety and health was identified as the most effective CREM strategy in industrial premises but in the previous studies this has not been identified as a value adding attribute. Reducing environmental impacts has been recognized only in a very recent study by Jensen.

*Table 1. Comparison of Value Adding Attributes*

Ristaniemi (2011)	De Jonge (1996)	Nourse and Roulac (1993)	Lindholm (2006)	Jensen (2010)
Promote employee safety and health				
Improve employee satisfaction		Promote Human Resources Objectives	Increase Employee Satisfaction	Satisfaction
Cost control	Cost Reduction	Occupancy Cost Minimization	Reduce Cost	Cost
Reduce environmental impacts				Environmental
Enhance productivity	Increase productivity	Facilitate and Control Production, Operations and Service Delivery	Increase Productivity; Increase innovation	Productivity
Risk control	Risk Control; Increase in Flexibility	Flexibility	Increase Flexibility	Reliability
Support interaction	Changing the Culture	Facilitate Managerial Process and Knowledge Work		
Realize company brand	PR and Marketing	Promote Marketing Message	Promote Marketing and Sales	Culture
Ensure social and economic sustainability	Increase of Value	Promote Sales and Selling Process; Capture RE Value Creation of Business	Increase Value of Assets	Adaptability; Economic Social; Spatial

## 5 DISCUSSION/CONCLUSIONS

The aim for the study was to describe and model the added value of corporate real estate management in industrial premises. The main research question is: What is the added value of corporate real estate management in industrial premises? The study was implemented using a constructive research method. Based on the findings from literature review a novel construct modeling added value from the stakeholders' point of view was formed and tested by case studies and surveys.

The added value of corporate real estate management has been studied often during the last twenty years. However, these studies have focused mainly on offices and industrial premises have been left uncovered despite the fact that they form a significant portion of national wealth in western countries. The distinction is important because the nature of these property types is substantially different in terms of requirements, qualities and management. Therefore the added value of corporate real estate management in industrial premise stems from different attributes than with offices. Added value creation in industrial premises is illustrated in figure 4.

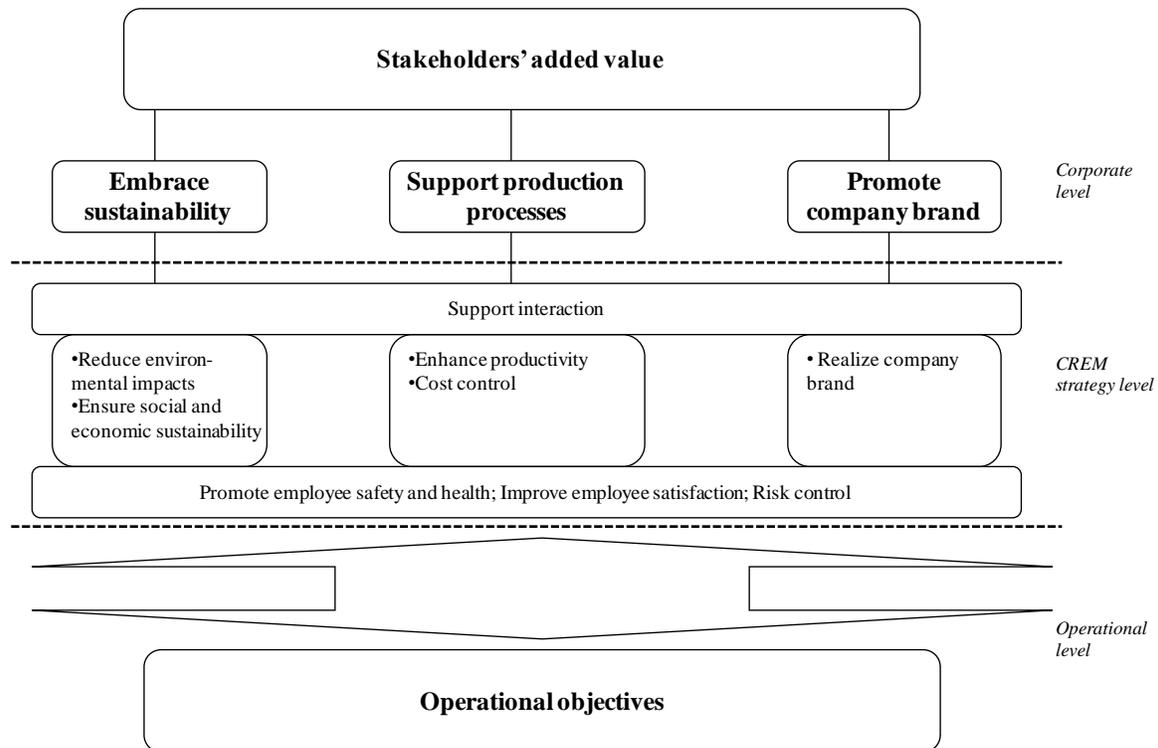


Figure 4. Added value model for industrial premises

Due to the large differences in industrial premises and offices, the previous added value models of corporate real estate management created mainly for offices, are not applicable to industrial premises. Previous added value models emphasize flexibility, innovations and increasing value of assets which also are important in industrial premises but based on this study are not among the most important value adding attributes. On the other hand the previous added value models do not include some of the more important value adding channels in industrial premises as increasing employee safety and health.

One of the issues that became evident during the case studies was the lack of interaction between real estate managers and production representatives. Improving the interaction with both production managers and the workers would be a significant benefit to CRE units in their ambition to create added value for core business. The earlier real estate managers can get involved in investment decisions the better companies can benefit the added value provided by CREM. Interaction was proven to be of value to each of the CREM value adding strategies. User participation in facility design for example improves

productivity enhancement, improves worker safety, improves worker satisfaction, prevents costly mistakes in design and increases social wealth. Co-operation with production managers on the other hand supports the production process as a whole, assists in promoting sustainability and enables the brand promotion with facilities. Improving interaction is not only on real estate managers' responsibility but still it a very important value adding strategy that affects all the other strategies.

The conclusions can illustrate corporate real estate and production managers the added value of industrial real estate management. The added value model can help the real estate managers to illustrate their importance to the company and focus on actions that provide added value for the company. The added value model and the value adding attributes are generic but every company has specified needs for their industrial real estate due to large differences in the processes used in production. Therefore the generic model should be used with a certain level of prioritization when using it for purposes of a single company.

To continue the research considering the added value of corporate real estate management in industrial premises from stakeholders' point of view it would be essential that simple measures and metrics for the corporate and CREM strategy level value adding channels are created. This would make the model more useful for industrial companies or companies possessing industrial real estate.

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