

# Sustainable Corporate Real Estate Management



Market penetration and future potentials

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## Abstract

Sustainability is the number one topic of the present and the future. Not only the society as a whole also companies will have to live sustainability actively in the future to be successful on a long-term basis. Statutory regulations and the changes in demand in the market will force Real Estate owners to act sustainably. We recommend to apply sustainability first in the cost and value-related company fields.

Sustainability

The originary place of rendering services for companies are the properties used for own business purposes. Corporate properties form between 5-10% of the fixed company capital and regularly causes costs amounting to several millions. Hence Corporate Real Estate Management (CREM) is of vital importance in the overall company context.

CREM

Via strategic and operative junction of CREM and sustainability by means of sustainable CREM long-term increase of efficiency and added value as well as cost savings may be generated and moreover the "Ecological Footprint", the reputation as well as acquisition of clients and employees can be improved long-term.

Sustainable CREM

This survey shows for the first time comprehensively chances and risks of single sustainability measures in CREM and presents concrete approaches how sustainable CREM can be applied in the company practice.

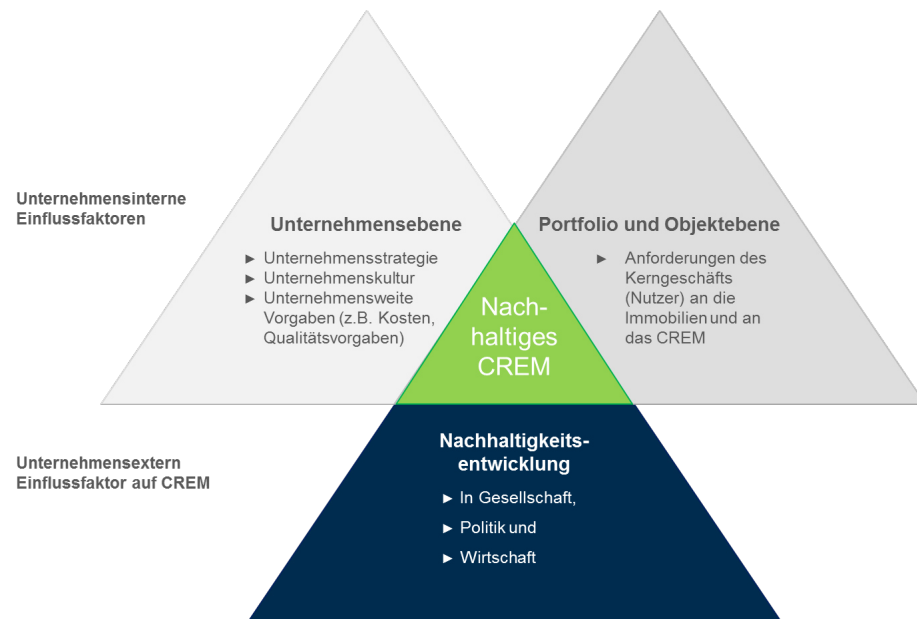
## 1. Sustainability and CREM – a liaison for the future

For only very few corporations and the private industry the core business consists of Real Estate activities. So-called „Non-Property-Companies“ define the property merely as secondary production factor with an only supportive character. At the same time these companies are the biggest owners and users of the Real Estate stock in Germany.

The so-called Corporate Real Estate Management (CREM) as management of corporate properties for Non-Property-Companies is one the one hand subject to structures predefined from the general corporate policies and culture. Particularly the corporate prerequisites from the management regarding costs and quality are to be considered. On the other hand CREM is considered a secondary company function with the purpose to meet the property-related requirements of the core business, as e.g. space requirements and quality.

Besides this company internally conflicting priorities there are external factors having an impact on the CREM business (see Image 1).

Image 1: Stress fields of a sustainable CREMs



Particularly the topic of sustainability poses new challenges for companies and hence for CREM. Sustainability is the topic of the present and the future and has a high presence and importance. For a long time this topic has not only been interesting for marketing departments but can also be found in the core business of most companies. Addressees of entrepreneurial sustainability are all stakeholders as well as shareholders, investors, clients and the general public in the same way. Hence it is possibly not enough that sustainability is only “linked in the core business” and consequently the interest of companies successively to work sustainably on all levels.

Why sustainable CREM?

The question of a sustainable CREM is consequently the logical consequence of the combination of increasing importance of sustainability with corporate real estate management. Goal of the survey is to show the concrete opportunities for the company praxis, how sustainability can be integrated into CREM as well as to identify the current market penetration and future potential of CREM by means of expert interviews.

## 2. Definitions and design of survey

In this section we will provide you with a short introduction of the essential terms of this study (sustainability, market penetration and future potentials). Furthermore the section contains a detailed depiction of the applied methodology of the survey (design of survey).

### 2.1 Sustainability

Sustainability is a term with a multitude of definitions and interpretations. In politics and science as well as in corporate strategies and in everyday life various definitions are applied. Many of these definitions

are not primarily focussed on a substantial definition of the term. Mostly the term is used to establish a certain goal normatively. An example for this is particularly the often quoted definition of the Brundtland-Report of World Commission on Environment and Development from 1987:

*„Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs.“*

Global generation equity as a basis and goal of sustainable development were in the focus of the international sustainability discussion in the wake of the Brundtland-Report, however, latest since the conference of the UN in Rio de Janeiro in 1992. It emerged that ensuring ecologic as well as economic and social productivity and effectiveness of all global societies should be the focus of sustainable actions. In 1998 the Enquete-Kommission of Deutscher Bundestag (“German House of Parliament”) named “Schutz des Menschen und der Umwelt” (“Protection of human being and nature”) stated as follows:

*„Sustainably future development comprises much more than environmental issues.“*

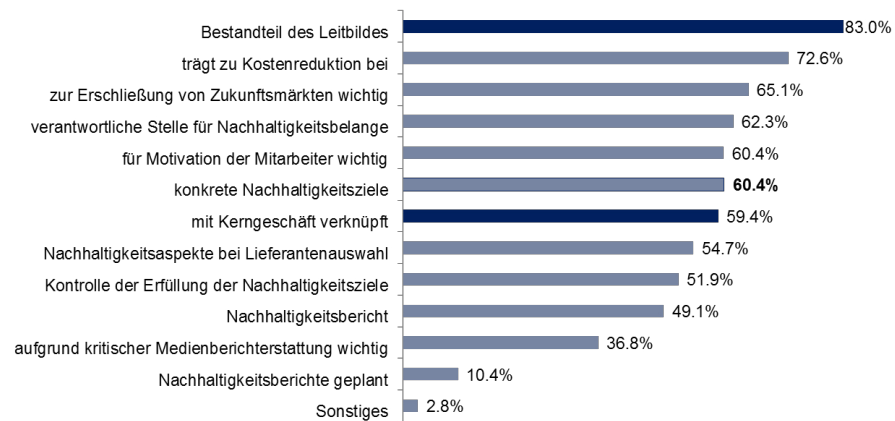
Sustainability is considered as an integrated concept which coordinates the goals and interplays between the **dimensions Economy, Ecology and Social Stability** long-term and balanced. This concept is called “Triple Bottom Line” (TBL). The equal ranking of the three dimensions underlines that sustainability is not an equivalent to ecology.

Sustainability is the number one social development direction of the moment. Not only the increasing number of Organic Products in the supermarket but also e.g. the increasing interest of the media in the topic “Green Building” underline the perception that especially in Germany sustainability has a high significance. Economic decisions are increasingly subject to ecologic prerequisites. Particularly due to the shortage of commodities as well as stricter Environment Protection Provisions there is a strong economic and ecologic need to operate sustainably.

Many companies world-wide show extra-ordinary tendencies to more sustainability. According to IW-Umweltexpertenpanels 2012 (“Environment Experts’ Panel”, Image 2) sustainability is already today an essential part of corporate identities (83.0%) and strongly linked to the core business (59.4%).

Sustainability - Trend or long-term development?

Image 2: Sustainability in companies



Source: Umweltpanel 2012 (2013), S. 21.

The idea of a sustainable economy starts to establish in real economy and can hence be seen as more than just a short-term trend but rather as phenomenon beyond economic cycles and trend-setting model of economy. Companies with the goal of long-lasting success have to be aware of this and have to integrate sustainability actively as key part of their economic activities.

## 2.2 Market penetration and future potential

Definition market penetration  
and future potential

The term market penetration expresses to what extent information and products are known to market | the user groups and are already used in the praxis. This market penetration can especially be increased via marketing activities or lower prices.

The term future potential on the other hand expresses the potential of innovations to satisfy current and future client requirements as well as the capability to establish in the market long-term. Hence it is all about determining chances of information or products to become market standards. Examples for this are the reporting standards DNK and GRI defined more in detail in chapter 3.

Applied on the question in the focus of this study there are several aspects to be clarified regarding market penetration and future potentials. The key questions are on the one hand if in the corporate reality approaches for sustainability in CREM are already applied resp. how the topic sustainability is involved on the company, real estate portfolio and property level. On the other it is important to analyse to what extent sustainability will become a central task of CREM in the future and how it will establish in the corporate reality.

## 2.3 Design of survey

### a. Survey and analysis method

As empiric survey method for the survey at hand the qualitative guided interview of selected experts, i.e. the interviews were structured by means of a prepared interview guideline. Objective of the interview carried out was to investigate the above-mentioned aspects in depth and to ensure a comparability of cases by this standardisation. The guided interviews enable a detailed inquiry via open questions whereas in contrast to a standardised questionnaire (e.g. with triple choice), no limitation of answers is carried out. The guided interview consequently reflects a possible course of the conversation, however, without explicit prior wording and restrictive sequence of the questions intended.

Survey and analysis method

For the analysis of market penetration and future potential of sustainable CREM it is necessary to find out the special knowledge of persons experienced in Corporate Real Estate (Experts) and to deduct the corresponding conclusions from that. An expert is a person due to long-standing experience of a specific knowledge or skills and who often has an exclusive position in the context under scrutiny.

Selection of experts

The selection of experts was carried out on the basis of the so-called "purposive sampling". This targeted selection of experts focusses the detailed analysis of various expert' opinions. In this respect the targeted selection is based on the assumption that market penetration and future potential of a sustainable CREM can primarily be assessed by executives from the operative CREM business.

For this study 17 persons of 46 inquired were willing to participate in an expert' interview (Return rate ~37%). The participants are all executives of corporate real estate management of German companies with international real estate portfolios. Amongst the parties inquired there were 70% DAX and MDAX companies, 4 more stock-listed companies and one company not stock-listed. Furthermore 85% of the 17 companies inquired are operating in mechanical engineering, technology and chemical industry.

Upon selection of the persons to be surveyed that they were able, due to their expertise, position in the company as well as practical experience, to contribute significantly answering the question in the focus of this study. For confidentiality reasons and due to several compliance regulations in the companies only one interview partner was willing to have a non-anonymised interview (Matthias Grimm, Head of Global Facility Management, SAP AG).

### b. First results of the study

The first essential result of the interviews is that all participants see sustainability as the one relevant topic of the presence and the future.

Sustainability as topic of the presence and the future

*„Basically, we see sustainability as international development which no company can ignore.“*

Indeed clients and the state are also drivers of sustainability, however:

*„Main driver of sustainability is the company itself and especially the employees as such.“*

Some of the experts inquired, however see the driver of the corporate sustainability strategy in the core business and currently not or only partly in CREM. One interview partner put this extremely drastic:

*„The level to do something regarding sustainability in the core business is about 50 times higher than for sustainability in CREM as secondary function of the company.“*

The majority of companies inquired (14 experts) saw this less extreme and assumes that CREM is not effected as strongly by sustainability yet as the core business. However, nearly the half of the companies inquired states that sustainability will become very relevant also in CREM mid-term:

*„Market pressure, however, requires that the factor sustainability gathers more and more importance an all company divisions.“*

### **3. Sustainable CREM – Approaches for the business practise**

After earlier concerns regarding permanence and evaluation parameters of the impacts of sustainability meanwhile the involvement of companies in sustainability increases successively. The implementation and operative realisation of sustainability is a long-term process which has to be initiated actively by every company considering the specific circumstances. This basically also applies for sustainable CREM. In order to understand sustainable CREM it is helpful to transfer existing concepts from the discipline "Sustainability in the real estate business" to the corporate real estate management.

Sustainable CREM will have an impact on two essential levels of Non-Property-Companies: Company as well as portfolio and property level. The following sustainability aspects are currently present in the real estate business and can be transferred effectively to CREM (see image 3).



Image 3: Integration of a sustainable CREM in Non-Property-Companies



### 3.1 Corporate level

#### a. Corporate Social Responsibility

Sustainable CREM will only be integrated in the company and it will only be possible to establish it if corporate strategy and culture live the CSR concept actively.

Hypothesis

Entrepreneurial success is no longer only limited to economic parameters but also to extra-economic factors are increasingly involved for the evaluation of companies. Corporate Social Responsibility (CSR) is the most known concept of “social responsibility of companies”; on this basis companies integrate social and ecological interests in their entrepreneurial activities and in relations to their stakeholders on a voluntary basis. ISO 26000 is the international standardisation of the term and is targeted at every form of organisation like e.g. NGOs and donations.

CSR

Reasons for the implementation of the CSR concept are particularly the improvement of risk management due to the holistic approach of governance (consideration of economic, social and ecologic risks), but also reputation and image boost towards clients, suppliers and own staff. Especially regarding a growing sensitiveness of society towards environment and social issues it can be noted that the CSR concept is advantageous for companies and will gather a significant role in the presence as well as in the future.

Reasons for CSR

A conclusion from the expert interviews carried out is that sustainable economic operation on corporate level has a significant importance and that apparently companies have accepted their social and eco-

First findings from the study

gic responsibility pursuant to the CSR concept. The majority of companies surveyed (76%) emphasizes the significance of the topic on corporate level and quotes sustainability as a part of corporate policy and culture. The CSR concept is already actively implemented in corporate reality and will have an impact on CREM in the future:

*„Sustainability concerns the core business in the first place. In the real estate departments it is not so predominant in the moment, will however, become a topic in the near future.“*

## b. Sustainability reporting

Hypothesis

Sustainability reporting already has an international standard. Sustainable CREM will have to contribute to an improved sustainability reporting.

In annual reports of international companies hints to „takeover of economic and social responsibility“ are indispensable of the reporting. Companies either publish a CSR reporting or the integrated CSR issues in their annual reports. Consequently, there were first efforts to develop and establish sustainability reports.

Deutscher  
Nachhaltigkeitskodex (“German  
Sustainability Codex”, DNK)

On national level Deutscher Nachhaltigkeitskodex (“German Sustainability Codex”, DNK) was created in collaboration between CSR-Forum of German Government and Rat für Nachhaltige Entwicklung der Deutsche Nachhaltigkeitskodex (DNK) which is intended as a voluntary reporting tool for politics as well as for economy. Objective of the codex text published in 2011 is to reflect transparency standards for companies of any size and type. This serves for the purpose of comparability of corporate responsibility for analysts as well as stakeholders. By means of specific indicators (e.g. greenhouse gas emissions, discrimination events etc.) a standardisation of sustainability reporting shall be achieved to increase their practical relevance. Allianz SE, BMW AG and RWE AG are only some examples for companies already applying sustainability reporting.<sup>1</sup>

Global Reporting Initiative (GRI)

Besides this reporting tool developed in Germany on an international level the guidelines of Global Reporting Initiative (GRI) have developed to become a standard for sustainability reporting in the last years. According to a world-wide KPMG-Study from 2013 82% of the 250 biggest companies world-wide have referred to the GRI guidelines in their sustainability reporting.

Reasons for sustainability  
reporting

<sup>1</sup> Vgl. <http://www.deutscher-nachhaltigkeitskodex.de/de/anwendung/dnk-datenbank.html>

In the future the question for companies will no longer be if they publish a sustainability reporting or integrate them in their annual report. In many industries and countries they have been standard for a long time now. The pressure on companies from the side of the stakeholders to apply them is steadily increasing. GRI-G4 requires for example that it needs to be proved along the whole supply chain how the suppliers can be assessed regarding sustainability standards. Hence particularly suppliers are forced to integrate CSR and to introduce a sustainability reporting.

The essential question will more likely be how and what shall be published in the course of the sustainability reporting. In DNK as well as in the GRI-guidelines there are not indicators to be found yet referring explicitly to corporate real estate. Some indicators, however, are directly linked to real estate like e.g. workplace security and health protection, consumption of primary energy, emissions and material selection. The quality of the reporting as well as means and instruments to appeal to the target groups of the sustainability reporting will come into the focus of companies.

A sustainable CREM may contribute to the clarification of these questions in Non-Property-companies and create an added value particularly the comprehensive collection and analysis of real estate-related data. This may e.g. be expressed e.g. in the fact that a detailed consumption-related measuring of power, heat and water consumption as well as emissions is carried out and a continuous analysis of savings potentials is realised. Also a reporting of the applied building materials (e.g. less CO<sub>2</sub>) can contribute to a higher quality of sustainability reporting. Moreover the introduction of key figures for real estate sustainability as well as standardised measurement and analysis systems (property-related Green-Scoring and rating system) is to be considered for the whole portfolio.

Already as many as 40% of the companies inquired publish an annual sustainability reporting, thereof 70% according to GRI-Standards. This shows that especially GRI has already established as a standard in the company. For the future it is expected that ca. 80% of all companies will carry out a sustainability reporting. Sustainable CREM will have to contribute to an improved reporting, particularly via supply of real estate-related sustainability figures.

Results from the study

### 3.2 Portfolio and property level

#### c. Life Cycle Costs | Life Cycle Assessment

Parallel to the establishment of the CSR concept and sustainability reporting on corporate level sustainability will be involved mid- to long-term also on the level of the corporate real estate portfolio and property level. A wide-spread concept on this level are the LCC and also the LCA approach.

The consideration of LCC and LCA in CREM contributes to optimisation of company expenses and the establishment of sustainability.

LCC

The procedure for determination of life cycle costs (LCC) considers all payment transactions during the life cycle of a property, i.e. initial costs as e.g. investment and production costs as well as future operating costs, usage, maintenance and demolition costs. During the time of operation generally 80% of the overall LCC arises so that especially in this life cycle section a big savings and optimisation potential can be tapped. LCC are contributed to the economic dimensions of the Triple-Bottom-Line-concept as monetary flows are observed.

LCA

The international norm ISO 14040 describing the Life Cycle Assessment (LCA) however, puts the emphasis rather on material streams and is consequently allocated to the economic dimension TBL. LCA (also called eco balance) analyses all energetic and material implication which the property has on e.g. air, water or earth.

Reasons for LCC | LCA

Sustainable CREM is labelled by the three dimensions of sustainability according to the TBL concept. As a consequence it makes sense in the course of the corporate real estate management to consider the whole life cycle of the property in the form of LCC or LCA. Besides environment-friendly building measures a sustainable CREM may e.g. also bank on energy-saving building automation and hence reduce the LCC.

Results from the study

An inquired company tries e.g. to consider the life-cycle approach actively via a software tool (the so-called energy tracker). The tool registers the consumption of the biggest locations, provides an internal benchmarking of these locations and is accessible for all employees. The tracking serves for an internal cost control over the whole life-cycle as well as for the internal sustainability competition.

Nearly 40% of the inquired companies try to minimise the LCC and to optimise the LCA in a way that they generate the energy themselves (geothermal energy and block heat power plant), or also use production-related waste heat e.g. for the heating of office spaces. CREM can manage corporate real estate professionally only by means of the LCC- | LCA approach and moreover reduce real estate related costs. Positive side effect is that CREM can deliver a contribution to more sustainability. In a long-term perspective companies will be bound to make LCC- | LCA approach to an essential element of the CREM-strategy.

#### d. Green Buildings

CREM will strive increasingly for more certifications especially for rented properties and for office properties.

Hypothesis

„Green buildings“, „Sustainable building“, „Green Building“- there is a multitude of terms trying to paraphrase the real estate which are considered as resource-saving, energy-saving, environment friendly and health saving. Standardized certification systems like LEED, BREEAM or DGNB have the goal to assess the sustainability of real estate based on diverse criteria and hence achieve despite their heterogeneity a certain comparability and transparency. These international and national renowned systems have in common that they examine in the course of the certification the whole real estate life cycle as well as they consider the three dimensions of sustainability.

Green Buildings - Definition

Several companies as e.g. Siemens and Deutsche Bank AG have already committed to subordinate the corporate new buildings to a standardised certification.<sup>2</sup>

The mid to long-term usage of sustainable real estate for Non-Property companies has so far not finally been investigated. However, in science there has been a multitude of studies published dealing with the general topic of the advantages of Green Building.<sup>3</sup> Often the higher marketing potential in case of sale | lease or the improved image of the company are referred to. An essential advantage, however, concerns the socio-cultural implications of Green Building which according to several studies due to their environment and health friendly construction method contribute to a higher well-being and increased productivity of users. This can be achieved via certification resp. via an improved light, acoustic and interior design.

Usage of Green Buildings

With these features Green Buildings provide an optimal basis for the introduction of modern work environments. This new type of work environments is labelled especially by functional and flexible room concepts.

Hence the employees may use for rooms for concentration and retreat as well as for communication and interaction. Studies show that modern work environments have a significant impact on performance, motivation and health of employees.<sup>4</sup> Building erected or modernised according to Green Building Standard create an essential basis to

<sup>2</sup> Vgl. <https://www.db.com/cr/de/konkret-gruene-immobilien.htm?dbquery=null%3AImmobilien;>  
<http://www.siemens.com/press/pool/de/pressemitteilungen/2013/corporate/AXX20130431d.pdf>

<sup>3</sup> Vgl. z.B. EICHHOLTZ, P., KOK, N. & QUIGLEY, J.M. (2009); FEIGE, A., WALLBAUM, H., JANSER, M. & WINDLINGER, L. (2013); LANDGRAF, D. (2010); RASHID, M., SPRECKELMEYER, K. & ANGRISANO, N.J. (2012); SINGH, A., SYAL, M., GRADY, S.C. & KORKMAZ, S. (2010); SMITH, A. & PITT, M. (2011); WORLD GREEN BUILDING COUNCIL (2013).

<sup>4</sup> Vgl. z.B. BAUER, W., RIEF, S. & JURECIC, M. (2010); EICHHOLTZ, P., KOK, N. & QUIGLEY, J.M. (2009); FEIGE, A., WALLBAUM, H., JANSER, M. & WINDLINGER, L. (2013); HANER, U.-E. & DREHAROV, N. (2010); SPATH, D., KELTER, J., RIEF, S., BAUER, W. & HANER, U.-E. (2009); SPATH, DIETER, BAUER, WILHELM & RIEF, S. (Hrsg.) (2010).

introduce modern ways of working and hence to generate positive impact on the success of the company.

Image 4: Exemplary advantages of Green Building in CREM

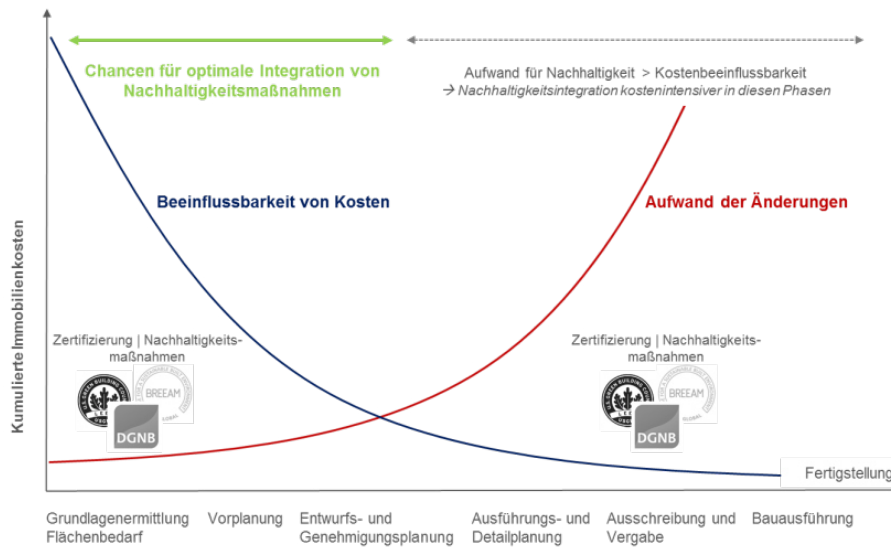
	Vorteile Green Building
<b>Unternehmensebene</b>	<b>Corporate (insges.)</b> <ul style="list-style-type: none"> <li>▶ Unternehmensimage und Prestige</li> <li>▶ Operative Umsetzung des CSR-Konzepts</li> <li>▶ Einhaltung von Compliance Vorgaben</li> <li>▶ Geringerer Life Cycle Costs</li> <li>▶ Höherer Marktwert der Immobilien</li> <li>▶ Höher Rentabilität bei Immobilienverkäufe</li> </ul> 
<b>Portfolio- und Objektebene</b>	<b>Kerngeschäft   Nutzer</b> <ul style="list-style-type: none"> <li>▶ Gesteigertes Wohlbefinden und verbesserte Gesundheit der Mitarbeiter</li> <li>▶ Anstieg der Mitarbeitermotivation</li> <li>▶ Verbesserte Mitarbeitergewinnung</li> <li>▶ Gesteigerte Produktivität</li> </ul> 

#### Costs of Green Buildings

Firstly, however, the striking figure for the deciders are the costs for the certification as well as the additional effort regarding building and certification planning. Additional investment costs are depending from the specific location, complexity of the project, the market and the micro location as well as the certification system and level selected.

We could identify additional costs of ca. 2% to 6% for Green Buildings in comparison with conventional real estate. The additional costs are generally lower in case of project developments for new buildings which were erected and planned according to Green-Building-Standard in the first place than for retroactive sustainability measures regarding certifications for existing properties (Image 5).

Image 5: Interference of additional costs for Green Buildings (idealised case)



Measures to achieve a certification for an existing building should however not be completely negated (e.g. LEED system variance „Existing Buildings: Operations and Maintenance“). Hence especially real estate which is absolutely vital for the core business | the production have to regularly be maintained in order not to jeopardize the business success. In the course of a sustainable CREM it is advisable to carry out such required maintenance measures (e.g. at roof and walls) with a higher quality of fit-out. This finish should moreover comply with the sustainability standards of certification systems. Via such sustainable measures the certification | sustainability level of the existing property may be elevated (see Image 6).

It is advisable e.g. that e.g. instead of a “simple” maintenance of a heating and power system, an installation of a block power plant is carried out. Such a power plant can be the prerequisite for obtaining a LEED-Silver-certification. An existing real estate has consequently the possibility via (regular) maintenance measures to elevate its sustainability level from „certified“ to „silver“.

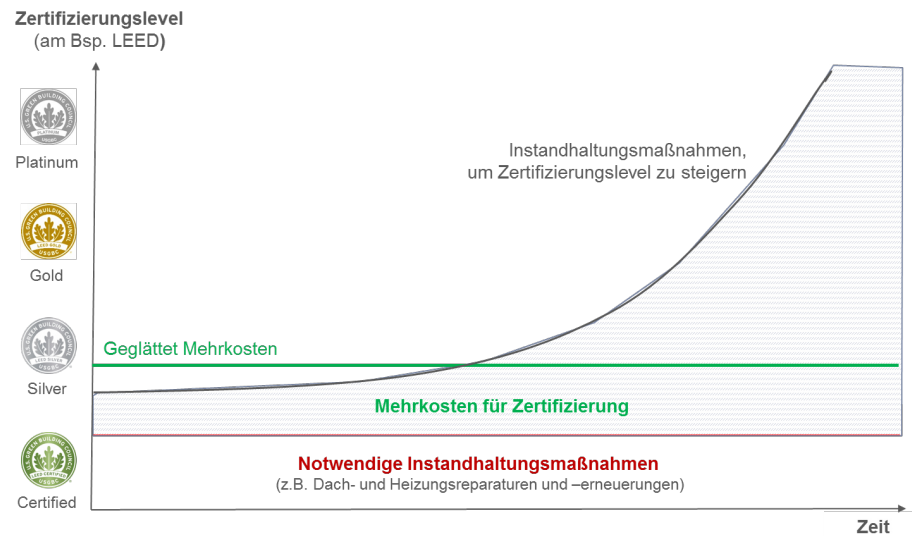
The additional costs for such sustainability measures are generally only slightly higher than the anyhow required maintenance costs. In other words: The costs for the measures to increase the sustainability level will be reduced by the costs of the required maintenance measures (see Image 6).



Over time the additional costs straighten up over time and are consequently manageable. The concrete execution | achieving should be aspired at the time when the company has reached the certification level desired by it.<sup>5</sup>

In conclusion it can be stated that a certification of existing buildings is advisable with a long-term planning period. An ad hoc certification of all existing buildings of the portfolio, however, is less recommendable.

**Image 6: Straightened additional costs over the period**



Long-term advantages of  
Green Buildings

Via the LCC compliance with certification systems possible economic implications of Green Building are detectable as a holistic cost management as well as optimisation is carried out during the whole life cycle. Green Buildings have the capacity to save costs via lower energy, waste and water consumption and hence in a long-term perspective cause lower operating and maintenance costs.

Sustainable properties dispose of significant advantages towards conventional properties especially due to a long-term cost advantage. A further increasing market penetration of Green Buildings is to be expected. Green Buildings will be the real estate standard of the future. The advantages resp. premiums of Green Buildings are in place as long as the market dominance of conventional buildings is broken. Non-sustainable conventional buildings will be imposed with a discount by the market players. Additionally, it is to be expected that the legislation regarding sustainable building will be aggravated regarding sustainable building in the future and consequently put pressure on

<sup>5</sup> Note: The costs for the certification itself cannot be considered here. Reason: certification costs can be split in fix and variable costs.

- Fix certification costs are generally the certification fees, i.e. the costs for the handling of the whole certification process from the system supplier. The fix costs differ from system to system and are depending from various factors (e.g. also from memberships in the respective societies).
- The variable certification costs comprise mainly the advisor costs for planning and execution of the certification process. This cost block is particularly depending from type and age of building, usage as well as certification level.

Due to the quoted dependencies and specifications of certification costs remain unconsidered in this respect.



“old fashioned” properties and to boost sustainable modernisation measures in the inventory. Hence the sustainability certifications resp. the compliance with Green-Building-Standards have the potential to ensure particularly the marketability of a real estate long-term.

Another CREM leader explains in this context:

*„The administration buildings developed by us in the company headquarter have to comply with the highest certification standards as per corporate policy.“*

One of the basic question a (sustainable) company poses itself in this respect if all corporate real estate shall be certified. Consequently, it should be considered if also new and existing corporate real estate, all kinds of usage in the portfolio (e.g. office, production and logistics properties) and the properties from all locations have to comply with Green-Building-Standards. The dominance of profitability and economic feasibility in most companies seems to be currently far-fetched.

Results from the study

One interview partner sums it up as follows:

*„It is questionable how sustainability in production buildings in the form of certifications is realisable in a profitable way“*

These assumptions also reflect in the fact that only four of the inquired companies have certified companies in the portfolio. In all cases these are rented or self-erected office properties.

For rented corporate real estate the additional costs are allocated to landlord and the letting party, the Non-Property company. Hence for a sustainable CREM certifications are also interesting also for office properties rented.

For the future it can be expected that nearly all Non-Property-companies will face the topic of Green Building. Estimations assume that in a long-term perspective 60-70% of the office stock in Germany will have a Green-Building-certification. CREM will increasingly strive for more certifications and focus in this respect on new buildings and existing buildings as well as on rented properties in office usage.

### e. Green Leases

Green Leases will establish in letting of spaces from external parties as well as in case of internal space provision.

Hypothesis

Besides Green Buildings so-called Green Leases are the most recent development regarding sustainability in the real estate business. Munich RE and Deutsche Bank AG for example are already testing to

Green Lease – what is it?

introduce Green Leases for properties used in the group resp. have already declared Green Leases as company standard.<sup>6</sup>

Simply speaking these are contractual agreements which require from landlord and tenant side the ecologic operation of the property. Green Lease clauses are generally rights and duties unanimously agreed, juridically defined and stipulated in the lease agreement (resp. in the amendments to the lease agreement) which shall optimise the sustainability performance of the real estate during the period of usage. Green Lease mostly distinguishes from Standard Lease via green regulations additionally integrated to the standard clauses (examples see Image 7). Such green contracts can be negotiated for new buildings or for contract extensions of existing real estates.

Image 7: Example of „green“ lease agreement clause

Klauseln zu Lasten des Vermieters / Eigentümers	Klauseln zu Lasten des Mieters
<ul style="list-style-type: none"> <li>• Verwendung zertifizierter Baumaterialien beim Bau und bei Instandhaltungsmaßnahmen</li> <li>• Anstreben einer Nachhaltigkeitszertifizierung</li> <li>• Zur Verfügung stellen von Flächen und Behältnissen für Recycling</li> <li>• Durchführung energetisch notwendiger Modernisierungsmaßnahmen (z.B. Wärmeschutzdämmung) bei Bestandsobjekten</li> <li>• Bei Instandhaltungsmaßnahmen: Ersetzen von defekten Einbauten durch ressourcenschonende Alternativen</li> <li>• Einbau energieeffizienter HVAC-Geräte</li> <li>• Tageslichtoptimierte Verdunkelungstechnik zur automatischen, thermischen Regulierung</li> <li>• Montage von Solar- und Windkraftanlagen</li> <li>• Umlage der Heiz- und Warmwasserkosten nach Verbrauch</li> <li>• Energiemonitoring und -management</li> </ul>	<ul style="list-style-type: none"> <li>• Verwendung umweltfreundlicher Materialien bei Mietereinbauten</li> <li>• Einhaltung von Vorgaben für den Betrieb, die sich aus einer Zertifizierung ergeben</li> <li>• Wassereinspar- und -schutzmaßnahmen</li> <li>• Einhaltung von verbindlich vereinbarten Energieeinsparung und Effizienzzielen mit Bonussystem (z.B. Mietnachlässen)</li> <li>• Aktives Recycling</li> <li>• Beziehen von "Ökostrom"</li> <li>• Nutzung von Tageslicht als Beleuchtung</li> <li>• Duldung von nachhaltigkeitsbedingter Baumaßnahmen</li> <li>• Einsatz energieeffizienter Geräte (Kopierer, Drucker, etc.)</li> <li>• Partielle Kostenübernahmen bei energetisch bedingten Baumaßnahmen</li> <li>• Energiemonitoring und -management</li> <li>• Nachhaltigkeits-/Verhaltenshandbuch</li> </ul>

#### Advantages of Green Leases

Green Leases may contribute to hold the certification standard of a Green Building long-term resp. to achieve a certification level at all. Further advantages of "green" lease agreement clauses can e.g. be: Reduction of environment pollutions and resource consumption, energy and waste savings, creation of a co-operative business liaison between tenant and real estate owner, productivity and motivation increase via improved interior climate, image improvement as well as competitive edges via innovator role.

<sup>6</sup> Vgl. <http://www.munichre.com/corporate-responsibility/de/management/environment/operational-ecology/index.html>; <https://www.db.com/cr/de/konkret-gruene-immobilien.htm>

In practice Green Lease contract clauses a ranging from moral declarations (e.g. in the form of a contract preamble) up to obligations (so-called "dark-green" lease agreements) which can trigger sanctions. In countries like Canada, USA, Australia or Great Britain Green Lease has increasingly spread in the last years in letting practice. In Germany this real-estate-related sustainability approach is a relatively young topic.

Spreading of Green Leases

Besides France in most countries there are no statutory provisions prescribing "green" sections in lease agreements. It can, however, be assumed that at least in the industrial nations it is only a matter of time until Green Leases will be imposed on companies by the legislator. Moreover in December 2012 the new energy efficiency guideline 2012/27/EU become effective obliging the member states to eliminate legal and other obstacles for the energy efficiency.

The Green Lease approach can and should be applied practically in CREM especially in consumption-intense industries (as e.g. Chemistry, Automotive) this is recommendable. The introduction of the approach is to be carried out step by step with new lease contracts resp. renegotiations to existing lease agreements. It can e.g. be agreed that defect machines are replaced by resourceful alternatives. Costs of energetically caused building measures may moreover be paid by tenants as well as landlords. Besides power meters per consumer also other meters (for e.g. water, inlet and outlet air as well as thermal gas) can improve the consumption-related cost allocation. Such Green Lease agreements in CREM serve for both interest groups: The letting company unit can claim the savings for itself and CREM can (especially in case of letting of operating spaces) establish sustainability on portfolio and property level long-term.

Practical applications of Green Leases in CREM

Nevertheless the Green Lease approach is only sparsely spread in the corporate real estate management due to insufficient or even missing practical experience of the parties involved in the "green" letting process. The study conveyed that only one of the 17 companies inquired has already closed lease agreements with "dark-green" contract clauses.

Results from the study

One reason for the low level of practical implementation of the Green Lease approach in Non-Property companies could be that the leasing of corporate spaces is regularly carried out internally i.e. one company unit rents spaces from the group resp. from the CREM department. Monetary sanctions for non-compliance of "green" contract clauses (so-called „dark green“ lease agreements) are in this case probably not executable as this would merely mean an internal offsetting. However, there is a possibility of an internal incentive system for the promotion of internal Green Leases. The management can pre-

scribe “top down” the implementation of internal Green leases in the course of CSR and underpin this with a Bonus-Malus-System.

Moreover the study disclosed that several companies could imagine that in case of renting corporate spaces from external landlords at least “bright-green” lease agreements could be considered. For example a majority of the parties inquire could imagine to agree general obligations for the sustainable operation of spaces. Also a contractually agreed cost sharing for energy-saving modernisation measures was considered as futable.

It can be determined that currently in most of the companies Green Lease is not yet corporate standard. However, there is an interest and first attempts of „green“ clauses in lease agreements are underway in the majority of companies. It can be assumed that 25-40% of all Corporates will decide for the introduction of Green Leases in CREM long-term.

#### f. Sustainable building design

Hypothesis

Sustainable building design can have a positive impact on internal and external stakeholders. The reputation as well as client and employee acquisition can be effected positively by this.

Sustainable building design  
with internal effect

Mergers and restructurings of locations for corporate reasons are part of the daily business of international companies may it be in the course of M&A activities or for the purpose of cost reductions. Changes of corporate real estate may be on the one hand extensions, reductions or renewals of corporate spaces or on the other hand mean the merger of company spaces (location consolidation). Non-Property-Companies striving for sustainability may implement such measures actively via corporate real estate management or at least have them involved as a factor in decisions processes.

There is a multitude of possibilities to involve sustainability in case of mergers of spaces and reorganisations. For example the Automation Technology Company Festo AG has erected an energy-efficient new building in the course of a plant expansion in the location St. Ingbert / Rohrbach. In this respect intelligent steering and control engineering, a shading depending on the position of the sun, daylight illumination of work places and energy-efficient source ventilation are applied. Moreover an absorption cooling machine uses the waste heat of the block power plant. Power savings of 44% and the savings in thermal energy amounting to 20% could be realised via sustainable CREM measures. SMA Solar Technology AG even did the next step an erected a CO<sub>2</sub>-neutrale, new power plant. These examples show the potential of a sustainable CREM in the building design which can be tapped especially in the field of production buildings.

Already in the planning phase of the properties the essential parameters for sustainability in the building design are to be set (see also Image 5). Possible additional costs resp. for the installation of a geo-thermal plant or the application of renewable building materials are generally lower at the time of a building conception as in case of retroactive sustainability measures.

Real estate has a substantial external effect – in the best case their design should not only serve for the purpose of usage but also appeal to employees and potential clients. Generally Non-Property-Companies will consider real estate not as the most important aspect of marketing. On the other hand many companies bank on ecologic marketing concepts and market e.g. their products ecologically. Often it is overlooked that CREM provides the opportunity to use real estate via sustainable design as a marketing tool. Sustainable building design may manifest besides the Green Building certification and resp. an environment friendly building automation (e.g. natural ventilation), a thermally engineered building cladding or also the usage of rain water. With corresponding documentation of such measures and presentation externally credibility, authenticity as well as image of the company regarding sustainability can be intensified (Customer & Employer Branding).

Sustainable building design  
with external effect

The companies inquired confirm that properties have internally as well as externally a significant impact on stakeholders:

Results from the study

*„In the future the client will prefer such companies which can pride themselves with sustainability. Real estate has the potential to take over this task due to their conspicuous appearance.“*

It was explicitly emphasised that not only real estate serving the direct client contact (sales rooms etc.), but also buildings not directly accessible to the customer (e.g. headquarter, production warehouses) can have a positive effect:

*„Sustainability is a clear competitive edge, the environmental awareness increases and employer branding is becoming more and more important.“*

The guided interviews show that a CREM which co-ordinates user requirements and sustainability upon design of the building can have a positive impact on internal and external stakeholders. Particularly regarding reputation as well as client and employee acquisition improvements can be the consequence. In a long-term perspective corporate real estate management will put sustainability increasingly in the focus in a long-term perspective.

#### 4. Sustainable CREM – A development with high market penetration and great future potentials

Market penetration of sustainable CREM

As this study shows there is a certain potential that sustainability concepts do have a strategic and operative significance not only in the core business but also in CREM. As described there are drivers concrete opportunities to implement sustainability on corporate, portfolio and property level.

The expert interviews reveal that already several sustainable CREM measures are implemented in various ways in companies. On a company level it shows that the CSR concept is already integral part of all corporate policies of the companies inquired and sustainability reporting develops to become an international standard. The majority of the companies inquired currently focuses on the portfolio and property level on certain forms of sustainable energy supply and Green Building. Moreover Green Lease and sustainable building design are tested in pilot projects. Sustainable CREM consequently disposes of a medium to high market penetration at the moment.

Mandatory framework conditions of sustainable CREM

The experts emphasize, however, that sustainability is a successive process and ad hoc measures as e.g. the energetic refurbishment of all corporate properties at the same time is not appropriate. Nearly all interviewed parties saw the long-term economic profitability of sustainability investments as required prerequisite for sustainable CREM. As further mandatory prerequisite the satisfaction of core business requirements to the corporate spaces. Furthermore the increasing environmental restrictions are guard rails for sustainable CREM measures.

Future potential of sustainable CREM

The guided expert interviews suggest at first glance that corporate real estate management was not adequate as innovative driver of sustainability in companies. After closer observation it becomes evident that sustainable CREM has the future potential to render a big contribution to long-term success. Nearly all experts emphasize that the increasing environmental awareness particularly amongst younger people is to be seen as a chance to position positively in the competition for clients and employees. Via strategic and operative implementation of sustainable CREM not only the ecologic footprint of the complete company can be minimised but also the reduction of costs, increase of company value, image and reputation will also principally generate a competitive edge long-term. Hence sustainable CREM has enormous future potential.

In the long-term perspective sustainable CREM will be standard in the majority of corporates.

#### 5. Conclusion

Sustainable CREM will render an important contribution for a resourceful economy. Sustainability and economic efficiency can be merged in the course of a sustainable CREM. Sustainable CREM is no concept for an “ecologic fig leaf” of economically strong companies but is rather part of the futureable real estate economy which became apparent in the last years. It became evident that sustainability has established over more than one economic cycle in economy and society.

Sustainability regarding real estate ensures competitiveness of the company long-term. Besides the positive reputation effects and environment implications also economic advantages are in favour of sustainable CREM. As shown in the course of the study the introduction of Green Buildings and Green Leases can increase the ecological balance and hence the life cycle costs of corporate real estates.

Despite the multitude of possibilities of implementation of a sustainable CREM this study proved that indeed currently sustainability has a high significance on corporate level, however, on portfolio and property level sustainability is not implemented completely in CREM so far. The fact that sustainability is to be found currently in the primary business fields (production and others) is due to the character of Non-Property-Companies. Nevertheless sustainability will gain importance in CREM inevitably only timely delayed and will generate positive output for the whole company.

Companies, however, are forced to recognise the new developments described above concerning sustainability in the real estate business and to integrate them actively. Especially, Non-Property-Companies could and should tap the respective client, cost and value potentials via implementation of sustainable CREM.

Sustainable CREM pays out

Recommendation for action

**To the companies**

Many thanks to the inquired companies respectively the people who dedicated their time and expertise for the expert interviews. Only thanks to these interviews it was possible to gain an insight regarding sustainability in CREM of internationally operating companies. This study would not have been possible without these surveys. Thank you.



## **TME-project approach: Customised solutions for our clients**

The current and future challenges of CREM can be mastered with a professional status quo analysis, a customised implementation plan as well as a co-ordinated communication by means of the strategy developed by TME. Depending on Target and starting position we support our clients in development and implementation of a sustainable CREM.

Our experienced team of advisors knows the existing transformation hurdles in CREM. Hence we can ensure that this hurdles are actively managed and overcome by us. This ensures a realisation saving time and resources until complete tapping of expected potentials.

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