Benchmarking Commercial Property: Retail, office, residential and industrial buildings

CREDIT Case DK06

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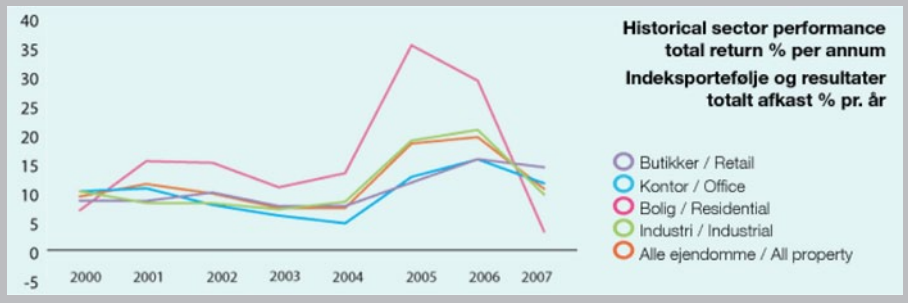

Danish Building Research Institute
AALBORG UNIVERSITY

CREDIT©

Construction and Real Estate -
Developing Indicators for Transparency

Benchmarking Commercial Property

Retail, office, residential and industrial buildings

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Stefan Christoffer Gottlieb
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Contents

Preface

This report describes the results of a case study undertaken as part of the Nordic/Baltic project *CREDIT: Construction and Real Estate – Developing Indicators for Transparency*. The case study is part of the work in work package 4-6 with respect to project assessment tools, application in firms and national benchmarking systems.

CREDIT includes the most prominent research institutes within benchmarking and performance indicators in construction and real estate, namely SBi/AAU (Denmark), VTT (Finland), Lund University (Sweden) and SINTEF (Norway). Further, three associated partners have joined CREDIT. The three associated partners are the Icelandic Center for Innovation (Iceland), Tallinn University of Technology (Estonia) and Vilnius Gediminas Technical University (Lithuania).

The project has been managed by a steering committee consisting of the following persons:
- Kim Haugbølle, SBi/AAU (project owner).
- Niels Haldor Bertelsen, SBi/AAU (project coordinator).
- Päivi Hietanen, Senate Properties
- Pekka Huovila, VTT.
- Ole Jørgen Karud, SINTEF.
- Magnus Hvam, SKANSKA.
- Bengt Hansson, Lund University.
- Kristian Widén, Lund University.

The project group wishes to thank our industrial partners and all the contributors to the case studies. In particular, the project group wishes to thank the four Nordic funding agencies that sponsored the project as part of the ERABUILD collaborative research funding scheme: The Nordic Innovation Centre (NICe), TEKES in Finland, FORMAS in Sweden and the Danish Enterprise and Construction Authority (Erhvervs- og Byggestyrelsen) in Denmark.

Danish Building Research Institute, Aalborg University
Department of Construction and Health
August 2010

Niels-Jørgen Aagaard
Research director

Summary

The purpose of this particular study of using indices for benchmarking of commercial properties is:
– To map how cost and value are assessed and made transparent in this type of property index (performance management and cost/value assessment).
– To analyse how international comparisons are carried out.
– To explore how this property index is continuously adapted to accommodate for users' needs (innovation process).
– To analyse the implications of implementing benchmarking by using a commercially driven property index.

The study focuses (with increasing intensity) on the use of IPD Denmark Annual Property Index on three different levels:
– Property level.
– Enterprise level.
– Benchmarking system level.

Buildings (WP4) summary
At the property or building level, the assessments employed are public valuations as well as property management records.

These assessments methods are applied on every single building in the portfolios of the commercial property owners, and are used for taxation, accounting purposes and facilities management. Further the methods contribute by providing basic information used on the other levels of analysis. A main lesson to be learned is that much information is readily available through other sources that can be used for specific benchmarking purposes.

Enterprises (WP5) summary
At enterprise level, the documentary analysis focuses on how the IPD system is used strategically by a specific property investor as a legitimising device for supporting a managerial decision of selling certain properties. As such the case contributes by drawing attention to an often overlooked aspect of legitimisation in relation to the purpose and operation of benchmarking systems, i.e. of using benchmarking systems to legitimise decision-making processes.

National benchmarking (WP6) summary
At benchmarking system level, the analysis is concerned with the establishment, structure and operation of the IPD system. Focus is placed on both the technical aspects of the system as well on the IPD Denmark Annual Property Index administrated by the Danish Property Federation (Ejendomsforeningen Danmark).

At the most general level of observation, the system can be seen as a means to create transparency in the national and international property markets. Enterprises adopt the system in order to compare own investments to those of its competitors and hereby benchmark the performance of its investments.

It is shown how the system is institutionally anchored at an umbrella organisation that collects data and coordinates between the different users of the

system. It is argued that this particular type of institutionalisation, where a mediating association promotes the benchmark system only as a part of its larger 'package' of paid member services, seems to constitute an important element in the operation of the system, and hence for the fulfilment of the purposes of creating transparency in the market.

1. Introduction and objectives

This chapter describes the objectives of the CREDIT project, the background, scope and purpose of the case study of search engines for private homes, and the research design of the study.

1.1 Objectives and work packages of CREDIT

Sir Winston Churchill once said, “We shape our buildings, afterwards our buildings shape us” (28th Oct 1943). This quotation underlines how strong a building can influence an occupier or a user. Providing complex public facilities for example hospitals, schools, universities and libraries that are able to meet both the internal and external stakeholders’ needs and requirements is not without complications. The aims and demands of different stakeholders within a project can sometimes create conflict with each other’s interest. Understanding the needs and requirements of these stakeholders are essential to remain competitive in today’s market. A client that pays attention to the needs of the end-users will be rewarded with a high-performance property. Simultaneously, this shift seeks to solve many ills associated with inadequate building conditions and resulting in poor building function.

Due to the amount of both public and private money being invested in delivering public and private facilities, strong actions must be adopted. Collaboration with the relevant stakeholders will help building owners in identifying the required performance indicators to create high-performance facilities. The project aims to define a model for the implementation of performance requirements, which ensure the fulfilment of the various types of users’ and stakeholders’ needs and demands. The model shall also allow for the continuous measuring of the effectiveness of the used requirements and the model as such so that it may be improved as more knowledge and experience of it is achieved.

Following the themes of the ERABUILD call closely, the aim of CREDIT is to improve transparency on value creation in real estate and construction. Thus, the objectives of CREDIT are:

- To capture end user needs and requirements in order to identify and quantify – where possible – value creation in real estate and construction.
- To develop compliance assessment and verification methods.
- To define and develop benchmarking methods and building performance indicators in real estate and construction.
- To set out recommendations for benchmarking internationally key building performance indicators.

Consequently, the deliverables of CREDIT are:

- 1. The establishment of a network of Nordic and Baltic researchers for benchmarking and performance indicators through frequent interactions in workshops across the Nordic and Baltic countries.
- 2. A State-of-the-Art report, that will identify and critically examine a number of existing tools, databases, mandatory reporting, approaches and benchmarking schemes to capture and measure end-user needs, client and public requirements on performance and value creation.

– 3. A strategic management and decision making tool to guide the definition and development of benchmarking methods and building performance indicators in different business cases.
– 4. A comprehensive performance assessment and management tool with associated key performance indicators to capture end-user requirements and to continuously measure and verify the compliance of performance throughout the lifecycle of an actual building project and linked to building information models.
– 5. Recommendations as to how sectoral and/or national indexes for performance indicators can be designed in order to allow for international benchmarking of construction and real estate.
– 6. Dissemination of the lessons learned and tools developed through news articles, press releases, workshops with actors in the real estate and construction cluster etc.

1.2 Background, purpose and focus of the case study

The purpose of this particular study of using property indices for benchmarking commercial facilities is:
– To map how cost and value are assessed and made transparent in this type of property index (performance management and cost/value assessment).
– To describe how international comparisons are carried out.
– To explore how this property index is continuously adapted to accommodate for users' needs (innovation process).
– To discuss the implications of implementing benchmarking by using a commercially driven property index (implementation – state/market, public policies, intention vs. result etc.).

The study will focus on four different levels:
– The individual commercial property.
– The commercial facility manager/owner.
– The Danish Annual Property Index being administrated by the Danish Property Federation (Ejendomsforeningen Danmark) (www.ejendomsforeningen.dk).
– The investment property index developed by the Investment Property Databank (IPD: www.ipd.com). IPD is a world leading supplier of performance analysis for the owners, investors, managers and occupiers of real estate.

1.3 Research design and methods applied in the case study

Theoretical framework

In the past decades a number of new management theories like total quality management, business process reengineering, supply chain management, and benchmarking have emerged within the building and construction industry (see e.g. McGeorge et al. 2002 for an introduction). Often these management concepts and theories have been adopted from writers associated with mass-production. Adopting benchmarking in construction is no exception.

In the wake of quality assurance, benchmarking and key performance indicators have been emphasised as an effective strategy to improve productivity and stimulate innovation. Over the past decade much work has been done to establish key performance indicators for the performance of both buildings and companies within the construction and real estate cluster.

Benchmarking was introduced by Camp (1989) in his pioneering work at Xerox Corporation. The story of an American company being superseded by its Japanese counterparts and regaining its competitive edge through systematic comparisons with its Japanese sub-company Fuji-Xerox and a mail order firm on sports equipment L. L. Bean has become a famous classic example in the benchmarking literature.

Turning our attention towards the construction and real estate cluster will reveal an increased and wide-ranging interest in benchmarking internationally. Three trends can be identified. First, studies have been conducted within a wide range of subjects like property development indices in the Commonwealth countries (Newell & Webb 1998; Lum 2004) the performance of building authorities in Northern Ireland (McAdam & O'Neill 2002); and methodologies (Massheder & Finch 1998) and priority issues within facility management (McDougall & Hinks 2000). Other studies have focused on various aspects of the building process like the selection of contractors (Palaneeswaran & Kumaraswamy 2000); the performance of contractors (Xiao & Proverbs 2002); and the effect of the use of key performance indicators in the construction industry in Great Britain (Beatham et al. 2004).

Second, several models for benchmarking has been developed within the construction and real estate cluster. Kaka (1999) uses historical data for monitoring the progress of current construction projects in a stochastic benchmarking model. Chan & Chan (2004) uses data from 56 high-rise building projects in Hong Kong to develop a benchmarking model to predict construction times. Li et al. (2001) introduce the COBAP model as a cooperative benchmarking approach to partnering. Sommerville & Robertson (2000) uses a case study of Morrison Construction Group plc to show how construction companies can adopt the excellence model of European Foundation of Quality Management (EFQM).

Third, a number of benchmarking schemes have been implemented around the world. A world-wide search conducted in relation to the Dutch PSIBouw programme identified some 25 examples of construction benchmarking schemes excluding environmental performance schemes established as 'national' benchmarking schemes to improve performance in the construction sector (Bakens, Vries & Courtney 2005).

Adopting benchmarking in the construction and real estate cluster has not occurred without critical notice. As Bresnen & Marshall (2001: 335) points out, the construction industry tends to ignore the problems of transferring theoretical as well as practical knowledge on new management principles from other industries to the construction industry. Garnett & Pickrell (2000: 57) argues that the literature on benchmarking tend to focus on the benchmarks and the design of the benchmarking schemes, but not the theoretically or epistemological underpinnings of benchmarking. As these observers have pointed out, we need to reflect on some of the fundamentals or institutional settings in which benchmarking schemes operate.

Research design: Case study

IPD Denmark Annual Property Index is used to discuss the role of property indices for benchmarking of commercial facilities. It has been selected as a case for CREDIT because it constitutes a paradigmatic case (Flyvbjerg, 1991) when it comes to performance indicators for commercial facilities. Further, a number of reasons justify the selection of IPD Denmark Annual Property Index as a paradigmatic case for CREDIT:

– The IPD Denmark Annual Property Index is a part of the global IPD market indices, being the largest of its kind in the world.

– The index is simple and easy to understand and use, and therefore has as high degree of transparency and communicability.
– The case of the index covers and links the investment and operation processes of commercial facilities – a focus area that is not explicitly included in the carpenter model (Pemsel *et al.*, 2009) otherwise being employed in the CREDIT project. Thus, it may challenge the adequateness of the carpenter model.

Data and methods

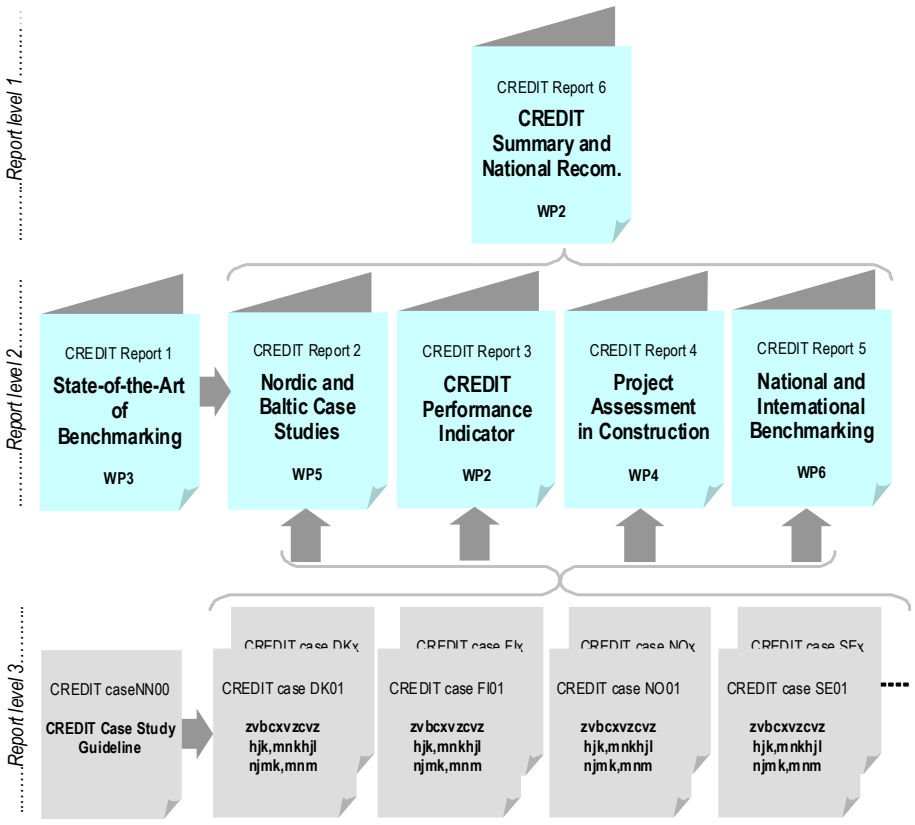
This case study primarily uses two types of data:
– Documentary material, in particular downloadable material from IPD and IPD Denmark websites.
– Qualitative research interview with Morten Marott Larsen from The Danish Property Federation (Ejendomsforeningen Danmark)

1.4 Reading instruction

This report summarises the case study of the property index as input to work package 4-6 of the CREDIT project. Chapter 2 in this report addresses issues relevant to WP4 on assessments at project level. Chapter 3 addresses issues relevant to WP5 on the application of assessments in firms. Chapter 4 addresses issues relevant to WP6 on sectoral, national or international benchmarking systems. Chapter 5 discusses and concludes on the lessons learned with respect to the three levels of projects, firms and systems.

The work of each work package (WP) is documented in various other reports, articles etc. Below, a graphical illustration of the hierarchy and linkages between the individual reports is given.

Figure 1. Graphical illustration of the hierarchy of the CREDIT reports.



2. Buildings – assessments in construction or real estate processes

In terms of assessment in construction or real estate processes, the present IPD case differs somewhat from the archetypical case in the CREDIT project as it is not a specific building that is the centre-of-attention in the IPD system. This chapter therefore describes on a very general level, how a building is established as an economic entity in the public sphere.

2.1 The actual building, building parts and processes

Below is given an example of a residential property owned by Foreningen Fast Ejendom, who contributes to the IPD through its membership of the Danish Property Federation (see Figure 2).

Figure 2. An example of a residential property

(http://www.fastejendom.dk).

Gall (2007: 1) tells that valuation of real property is carried out by various institutions and for various private and public purposes.

As an example Gall (2007) mentions that private mortgage companies e.g. make their own valuation of the properties prior to determining a mortgage application and private real estate agents assess the property value prior to sales or on demand from individuals (cf. Haugbølle and Bertelsen, 2010).

In addition, properties also attract a public property valuation. According to Müller (2000/2005: 1), Denmark has three types of recurrent property taxes, being:

- A land tax on all types of land.
- A service tax on the value of buildings used for business or administration.
- A property value tax on the owner-occupiers of dwellings and summer houses.

2.2 The applied assessment methods and tools in the processes

For a property of the above type, data is compiled from valuations and management records for the specific building and reported by the property manager to the investor and further to the IPD.

The valuation can e.g. be based on the public valuation by SKAT (the Danish Tax Authorities) that provides the following detailed valuation information a given property (see Figure 3).

Figure 3. Detailed valuation information of a residential property

Detaljerede vurderingsoplysninger

Adresse:	[redacted]		
Vurderingsår:	2008		
Kommune:	GENTOFTE	**Ejendomsnr.:**	[redacted]
Vurderingskreds:	GENTOFTE/ORDRUP		
Benyttelse:	Beboelse og forretn	**Lejligheds antal:**	5
Matrikel:	[redacted]	**Grundareal:**	948
Ejendomsværdi:	10.900.000	**Grundværdi:**	3.754.100

Grundværdispecifikationer:

Nr.	Prisbetegnelse	Areal/Enhed	Bebyg.%	Enhedsbeløb	Total
01	Kvmpris etageareal	948	100,00 %	3.960 kr.	3.754.080 kr.
	Grundværdi:				3.754.100 kr.

"Fordelinger", "Fritagelser", "Fradrag for forbedringer" med totaler.

Dækningsafgift: 3.930.200 kr

(http://www.vurdering.skat.dk).

Müller (2005: 13) describes how a total of 224 valuation committees make decisions about the values for each property:

> *"Each committee has a chairman and two other members. The Minister of Taxation appoints the members. They are instructed and paid by the Central Customs and Tax administration. There are no professional requirements for being appointed as a member of a valuation committee and it is a part time job. The members are offered one-week training courses about valuation and they are required to attend instruction meetings."*

Each valuation committee is responsible for valuation in a certain area called a valuation circle consisting of one or more municipalities, which give secretarial assistance to the committees (Müller, 2005).

Property management records, on the other hand, typically contain information concerning running costs, maintenance costs, rentals etc., which is used in the daily management of the actual building. In addition, 27 supervisory boards carry out supervision of the valuation procedures and results. According to Gall (2007: 6):

> *"The basic valuation principles are that values for each property are assessed for **the total property** (land and building) as well as the land. The total property value is assessed as the full market value of the property including land and buildings but excluding machinery, furniture and animals. The value is assessed to reflect the average cash payment that a sensible buyer would pay for the property at the time of valuation. The value should also reflect the best possible economic use of the property."*(original emphasis).

2.3 Cost and performance indicators applied in the assessments

According to Müller (2000/2005 in Gall, 2007: 11) the following cost indicators are applied in the assessment:

> *"Sales prices are the only direct evidence of the market value of properties. The gathering and analyses of sales prices is therefore the basis for the estimation of market values of immovable property. Rents are an important indirect evidence of market values, and this type of information must also be gathered and analysed. Finally, information about construction costs and depreciation must be gathered for those types of properties where neither sales prices nor rents are available."*

Furthermore, Section 4.2 contains a list of the data input IPD relies on in constructing their indices for benchmarking purposes.

2.4 Relation to different enterprises and national benchmarking

The public property valuation is the tax authorities' estimate of property value and lot value. Commercial properties are valuated biennially and the valuation affects the property tax and taxable value of the property.

The property value is the value of the entire property consisting of lot and all buildings. The property value, as previously mentioned being the estimated value that a so-called sensible buyer would pay for the property, contributes towards the valuation data used in the IPD system.

2.5 Innovation and visions for future improvements

According to Müller (2000/2005: 1) the Danish property valuation system has undergone the following main changes from 2000 to 2005:

- Central government has in 2002 taken full responsibility for valuation. Before municipalities gave secretarial assistance to lay political elected members of valuation committees.
- Annual revaluations (1998-2002) has been replaced with revaluations every second year. Dwellings one year – business and agriculture the next year.
- General tax freeze from 2002. Freeze of tax amount for property value tax on owner-occupied dwellings. Ceiling for land tax – except for municipal decisions to increase the land tax rate.

Future changes might be anticipated due to political changes; however no information on this can be disclosed at present time.

3. Enterprises – assessments and indicators internally applied

This chapter was originally intended to be written based on an interview with a member of the Danish Property Federation that uses the IPD data in their daily operations. It has however proved difficult to get enterprises to participate. Confidentiality reasons have been given by some as explanation for not wanting to participate. Others have rejected stating that they are just not interested in participating, whilst some have been unable to return calls and find the right person involved to talk to.

Due to time restraints, the present chapter is therefore based on the (scarce) accounts on the use of IPD Denmark Annual Property Index at property investors found on the web in order to illustrate how the index can be used.

3.1 The actual enterprise, company and firm

21 of the leading professional property investors, organised in the Danish Property Federation, contribute to the IPD Denmark Annual Property Index. These members are listed below in Table 1.

Table 1. Property investors contributing to the IPD Denmark Annual Property Index.

Property investors contributing to the IPD Denmark Annual Property Index
Aberdeen Property Investors
ATP Ejendomme
C.W. Obel Ejendomme*
DADES
Danica Ejendomme
Danske Bank
Danske civil- og akademiingeniørers Pensionskasse (DIP)
Finanssektorens Pensionskasse
Foreningen Fast Ejendom
Juristernes og Økonomernes Pensionskasse (JØP)
Kirkbi Invest A/S
Lægernes Pensionskasse
MP Pension
PensionDanmark
PFA
SAMPENSION
SEB Pension
Slots- og Ejendomsstyrelsen*
Topdanmark Ejendom
* Included in the databank but not in the Index

In the remainder of this chapter, we focus on the Danish pension fund JØP (pension fund for lawyers and economists). JØP invests in financial assets, primarily stocks, bonds and properties. Properties make up approximately 10 % of the total financial assets invested in (JØP, 2009a).

3.2 Assessment methods and tools applied in the enterprise

JØP conducts benchmarks of all their investments. Results are published on their website as well as in the yearly operating review. Data on the financial performance of the specific properties are collected from the corresponding accounts. Results are documented at the most general level, illustration JØP's total returns in a 15 year period compared to that of other selected commercial companies and property owners.

3.3 Costs and performance indicators applied in the enterprise

Speaking of property investments, JØP focuses on the total return as the primary indicator of performance. For JØP a building is thus constructed primarily as a financial entity, whereas topics such as the number of defects, product performance indicators such as quality or properties such as energy, indoor climate, accessibility, usability, architecture or more social values are disregarded.

3.4 Relation to building cases and benchmarking organisations

In their overall 'fund management guidelines' (fondsstyringsinstruks) under the topic of properties it reads that:

> *"…IPD Denmark is to be used as benchmark, in so far as possible positions of listed property stocks is measured against FTSE EPRA/NARREIT Global Real Estate Index." (JØP, 2009b: 7).*

The IPD Denmark Annual Property Index thus plays an explicit strategic role in the overall operation of the pension fund. This can also be seen in the notice to the 2007 AGM in the pension fund. Under item five of the agenda (proposals from members of the pension fund), a member suggested that:

> *"The general assembly gives the board a reprimand for disregarding good business practice – hereby damaging the members' economic interests – by selling 33 properties […] in 2006." (JØP, 2007: 8; own translation).*

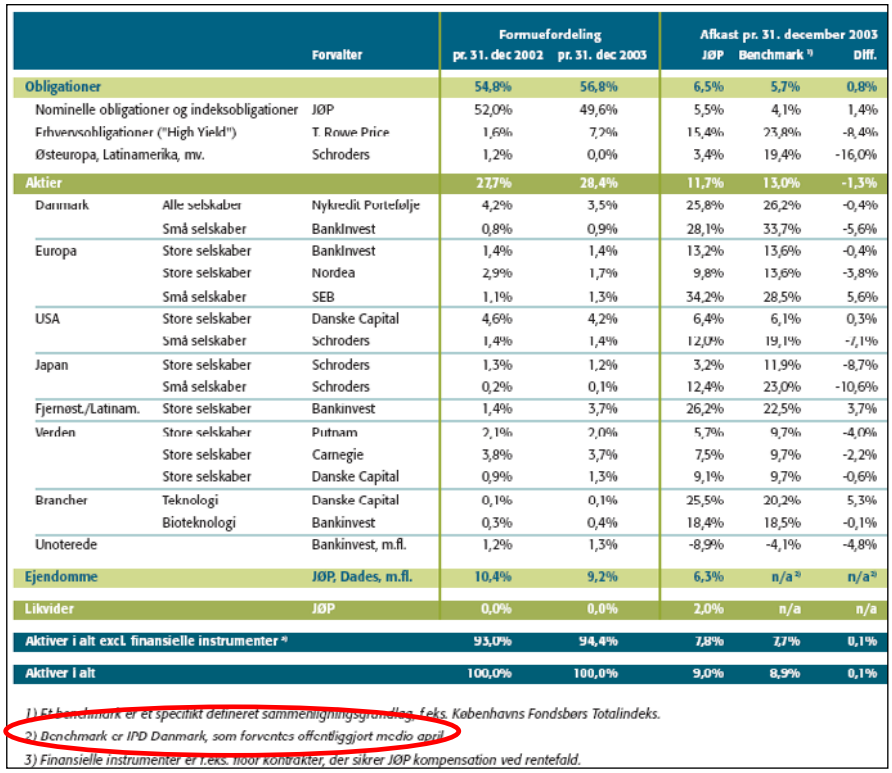
The board on the other hand recommended the proposal to be rejected in that:

> *"…a reprimand would be unfair and unsubstantiated. The acquisition of the 33 properties in 2002 and the subsequent sale in 2006 has proved an excellent investment. This part of JØP's property portfolio yielded, in the period 2003-2005, the highest total return among pension funds and companies in the Danish IPD Property Index. (JØP, 2007: 9; own translation; emphasis added).*

As written in Section 3.2 above, IPD Denmark Annual Property is used in JØP's benchmarking and communication of results to the public and their members. In their 2004 financial account and report, IPD is mentioned explicitly as a benchmark for property returns (see

Figure 4).

Figure 4. Assets, total return after tax and benchmark (JØP, 2003: 9).



		Forvalter	Formuefordeling pr. 31. dec 2002	Formuefordeling pr. 31. dec 2003	Afkast pr. 31. december 2003 JØP	Benchmark [1]	Diff.
Obligationer			**54,8%**	**56,8%**	**6,5%**	**5,7%**	**0,8%**
Nominelle obligationer og indeksobligationer		JØP	52,0%	49,6%	5,5%	4,1%	1,4%
Erhvervsobligationer ("High Yield")		T. Rowe Price	1,6%	7,2%	15,4%	23,8%	-8,4%
Østeuropa, Latinamerika, mv.		Schroders	1,2%	0,0%	3,4%	19,4%	-16,0%
Aktier			**27,7%**	**28,4%**	**11,7%**	**13,0%**	**-1,3%**
Danmark	Alle selskaber	Nykredit Portefølje	4,2%	3,5%	25,8%	26,2%	-0,4%
	Små selskaber	BankInvest	0,8%	0,9%	28,1%	33,7%	-5,6%
Europa	Store selskaber	BankInvest	1,4%	1,4%	13,2%	13,6%	-0,4%
	Store selskaber	Nordea	2,9%	1,7%	9,8%	13,6%	-3,8%
	Små selskaber	SEB	1,1%	1,3%	34,2%	28,5%	5,6%
USA	Store selskaber	Danske Capital	4,6%	4,2%	6,4%	6,1%	0,3%
	Små selskaber	Schroders	1,4%	1,4%	12,0%	19,1%	-7,1%
Japan	Store selskaber	Schroders	1,3%	1,2%	3,2%	11,9%	-8,7%
	Små selskaber	Schroders	0,2%	0,1%	12,4%	23,0%	-10,6%
Fjernøst./Latinam.	Store selskaber	Bankinvest	1,4%	3,7%	26,2%	22,5%	3,7%
Verden	Store selskaber	Putnam	2,1%	2,0%	5,7%	9,7%	-4,0%
	Store selskaber	Carnegie	3,8%	3,7%	7,5%	9,7%	-2,2%
	Store selskaber	Danske Capital	0,9%	1,3%	9,1%	9,7%	-0,6%
Brancher	Teknologi	Danske Capital	0,1%	0,1%	25,5%	20,2%	5,3%
	Bioteknologi	Bankinvest	0,3%	0,4%	18,4%	18,5%	-0,1%
Unoterede		Bankinvest, m.fl.	1,2%	1,3%	-8,9%	-4,1%	-4,8%
Ejendomme		**JØP, Dades, m.fl.**	**10,4%**	**9,2%**	**6,3%**	**n/a [2]**	**n/a [2]**
Likvider		**JØP**	**0,0%**	**0,0%**	**2,0%**	**n/a**	**n/a**
Aktiver i alt excl. finansielle instrumenter [3]			**93,0%**	**94,4%**	**7,8%**	**7,7%**	**0,1%**
Aktiver i alt			**100,0%**	**100,0%**	**9,0%**	**8,9%**	**0,1%**

1) Et benchmark er et specifikt defineret sammenligningsgrundlag, f.eks. Københavns Fondsbørs Totalindeks.
2) Benchmark er IPD Danmark, som forventes offentliggjort medio april.
3) Finansielle instrumenter er f.eks. floor kontrakter, der sikrer JØP kompensation ved rentefald.

3.5 Innovation and visions for future improvements

No information is available on this topic.

4. National benchmarking – indicators, assessment and organisation

This chapter focuses on the systemic qualities of the Investment Property Databank's 'IPD Denmark Annual Property Index.' Using the term systemic qualities we refer to the operation, organisation, management and institutionalisation of this particular benchmark system in a Danish context.

4.1 The actual benchmarking organisation and its purpose

The Investment Property Databank (IPD) describes itself as:

> *"…a global information business, dedicated to the objective measurement of commercial real estate performance." (IPD, 2009: 2).*

IPD is the world's leading provider of real estate performance analysis for funds, investors, managers and occupiers. Among the business services that IPD provides are market research, reporting, benchmarking, conferences and indices. IPD operates in more than 20 countries including most of Europe, USA, Canada, South Africa, Australia, New Zealand and Japan. Of special interest for the present case study are IPD's indices, which form the basis for developing commercial property derivatives market.

Establishment and constitution

IPD was established in 1985 in the UK as a joint venture between six leading UK firms of Chartered Surveyors and the originators of the concept. After compiling data from leading commercial property investors, hereby creating UK's first consistent index of commercial property return, the company began exporting its services to other markets in 1990 (IPD, 2007).

Internationally speaking, IPD is an independent company with the majority of ownership in their equity held by the company's founders as well as several UK property-investing organisations. These organisations hold app. 35 % of the shares of IPD.

IPD operates under a set of articles and shareholder agreements that aim to preserve the company's operating principles and independence. This e.g. means that no shareholder is allowed to hold more than 10 % of the shares, and that the shareholders must subscribe to the stated aims of the company including open access to data (www.ipd.com).

Operation

IPD's stated basic purpose is to provide real estate performance analysis for funds, investors, managers and occupants. IPD provides a number of so-called information services ranging from confidential portfolio benchmarking to research that is targeted for the public domain.

On this latter subject, we find the most visible face of the IPD – its indices of the investment returns to various property markets around the world. With these indices IPD aims at assembling and maintaining consistent as well as comprehensive financial and descriptive information on each of the individual buildings that make up specific investment portfolios:

"… so that true property returns can be fairly and precisely reported, and compared across asset classes [i.e. equities, bonds, properties] and national boundaries." (IPD, 2007: 4).

This is described as IPD's main transparency endeavour. An endeavour based on the efforts to strip away fund level overlays of cash and debt management in order to provide:

"…a fair and all-inclusive comparison of the underlying direct property markets, reporting the undistorted total returns, net of the capital costs of delivering growth and the operating costs of delivering an income stream." (IPD, 2007: 4).

Headline results of the IPD indices are freely available to the public, thus reflecting IPD's objective to bring *transparency* to the property investment markets. Thus, according to IPD (2008: 5):

"Because IPD indices are built up from records of individual properties, they are completely transparent in terms of the samples used and the calculations applied."

IPD's indices are based on open market appraised valuations of real properties and buildings owned by the organisations that contribute data to the IPD. A break-down of the profiles and estimated market sizes of the contributing organisations can be seen below in Table 2.

Table 2. Databank profiles and estimated market sizes of the contributing organisations (IPD, 2008: 6).

Table 1: Databank profiles and estimated market sizes – end-2007

	Number of funds	IPD Databank number of properties	IPD Databank capital value (€bn)	IPD Databank capital value ($bn)	Total market size estimate (€bn)	Total market size estimate ($bn)	Estimated IPD coverage, end-2007	Status (Frozen, unfrozen, consultative)	Frequency (others available)
Austria	18	332	8.2	12.0	17.7	25.8	46%	Unfrozen	Annual
Belgium	24	292	6.0	8.8	37.0	53.9	16%	Unfrozen	Annual
Denmark	21	1,036	13.6	19.8	28.3	41.2	48%	Unfrozen	Annual
Finland (KTI)	35	2,697	19.1	27.8	28.8	42.0	66%	-	Annual
France	57	6,929	108.3	158.0	203.3	296.6	53%	To be frozen end-2008	Annual, Biannual available from Oct 2008
Germany	51	3,901	44.5	64.9	277.6	405.0	16%	Unfrozen	Annual
Ireland	12	324	5.9	8.6	7.6	11.1	78%	Unfrozen	Quarterly
Italy	45	1,225	17.0	24.8	65.2	95.1	26%	Unfrozen	Annual, Biannual available from Nov 2008
Netherlands	43	5,020	44.9	65.5	86.4	126.0	52%	Frozen	Annual, Quarterly indicator available
Norway	14	542	14.2	20.7	32.1	46.8	44%	Unfrozen	Annual, Quarterly indicator available
Portugal	26	671	9.2	13.4	13.8	20.1	67%	Unfrozen	Annual
South Africa	21	2,183	13.4	19.6	20.1	29.3	67%	Unfrozen	Annual, Biannual available from Oct 2008
Spain	24	553	16.5	24.1	34.3	50.1	48%	Unfrozen	Annual
Sweden	15	1,113	24.6	35.9	84.4	123.1	29%	Unfrozen	Annual
Switzerland	27	3,466	30.3	44.2	97.2	141.7	31%	Unfrozen	Annual
UK	287	12,234	250.2	364.7	411.3	599.9	61%	Frozen	Annual, Monthly & Quarterly available
Australia	20	751	56.0	81.7	171.6	250.3	33%	Unfrozen	Quarterly
Canada	29	2,266	60.3	88.0	113.5	165.6	53%	Unfrozen	Quarterly
Japan	42	897	33.3	48.5	201.2	293.5	17%	Unfrozen	Annual & Monthly available
Korea	9	89	3.7	5.4	14.8	21.5	25%	Consultative	Annual
New Zealand	12	316	3.7	5.3	10.3	15.1	35%	Consultative	Quarterly
United Stated (NCREIF)	-	5,711	212.0	309.3	1,287.2	1,877.9	16%	-	Quarterly
All IPD Eurozone	**335**	**22,544**	**279.6**	**408.0**	**771.7**	**1,125.8**	**36%**	**Unfrozen**	**Annual**
All IPD Europe	**699**	**40,935**	**612.4**	**893.3**	**1,424.8**	**2,078.6**	**43%**	**Unfrozen**	**Annual**
IPD Global	**832**	**53,148**	**994.9**	**1451.2**	**3,243.5**	**4,731.7**	**31%**	**Unfrozen**	**Annual**

As seen, the databank profile for Denmark reveals that the estimated IPD coverage make up 48 % of the total market, distributed on 21 (per end of 2007) enterprises and funds. These 21 funds own 1,036 properties totalling a capital value of € 13.6 bn. (IPD, 2007: 6). Below, we focus more closely on the Danish market.

The Danish Property Federation

In Denmark, the Danish Property Federation (Ejendomsforeningen Danmark) handles the secretariat function for the IPD Denmark Annual Property Index.

The Danish Property Federation is the trade association of the Danish property industry, representing owners, investors and managers of commercial and residential property. The property assets held by its members are more

than 15 billion Euros. The Federation has approximately 3,500 members, including:
– Real estate/property companies.
– Property managers.
– Homeowner's associations.
– Individual persons, funds and associations owning tenanted properties.
– Lawyers and real estate brokers.
– Banks, insurance companies and pension funds.

The stated role and purpose of the federation is basically to assist its members in their aim to sustain and expand their businesses (http://www.ejendomsforeningen.dk). The Federation conducts the following principle activities:
– Lobbying.
– Members' service.
– Economic research.

As lobbyist, the Danish Property Federation maintains member interests by means of contact with politicians and the media. At political level, the Federation is a principal body consulted by the government about proposed legislation affecting the private property industry. In addition, the Federation monitors relevant proposals for legislation that might influence their members in order to ensure that they are informed and advised on affairs affecting the industry. Further, the Federation maintains contact with organisations representing other parts of the property industry.

Being a member of the Danish Property Federation gives access to several services. The Federation thus runs a private education on topics of law and regulations of private property and on property management. The Federation also gives legal advice on issues concerning commercial and residential property and conduct meetings, seminars, and conferences that constitute the network-building function of the federation.

Finally, on the topic of economic research, the Danish Property Federation initiates and support research and development activities on property investments. Most central in this respect, is the Federation's cooperation with the Investment Property Databank (IPD) that has resulted in the development of a system for benchmarking of costs and returns on Danish property investments – the IPD Denmark Annual Property Index (Dansk Ejendomsindeks).

IPD Denmark Annual Property Index

The IPD Denmark Annual Property Index is financed through membership to the Danish Property Federation. An arrangement initiated and sanctioned by the members of the federation.

According to the Danish Property Federation, the above members contribute to the IPD Denmark index for the following reasons:
– Benchmarking of own portfolio compared to the property market in general as well as to sub-segments of the market.
– Portfolio analysis with assessment of each individual property.
– Market analysis and detailed assessment of the property market compared with other financial markets.
– Tool for decisions about future investments and for efficiency improvement of the property management.
– International market analyses and opportunities for benchmarking across boarders.

In addition to these company related benefits, the federation further promotes the IPD Denmark Annual Property Index as an information tool for the property sector in general and for the investors on the Danish financial markets. As an information tool, the Danish indices provide:

– Market information and key figures.
– Detailed assessments of the market, total returns and expenditures.
– An international standard for measuring total return and for benchmark of investment properties.
– Tool for strengthening of the Danish property market and investments in Denmark.
– Exposure abroad relating to the Danish property market and investments in Denmark.

As discussed in Section 3.1, the Danish contributors to the IPD index includes a number of the leading national real estate investors who own a variety of different building types as can be seen from the following illustration (see Figure 5).

Figure 5. The IPD Denmark Property Index composition (IPD, 2008: 26).

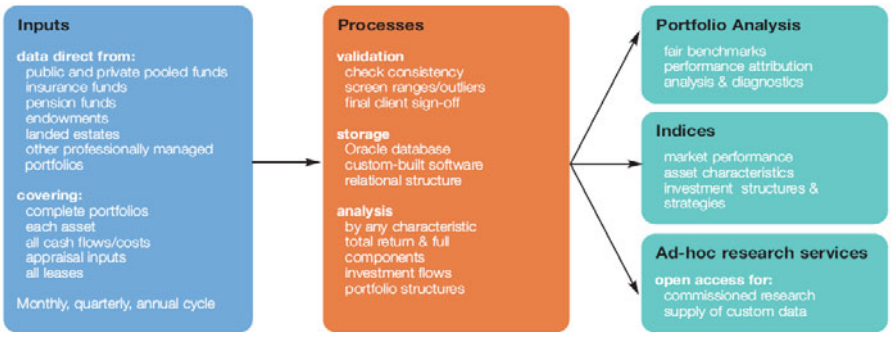
	Capital Value (Local Currencies)	Capital Value %	No. of Props	No. of Funds	No. of Valuers
Retail Shopping Centres	20,528	20.3	32	6	-
Retail Other Retails	4,641	4.6	271	10	-
Office Copenhagen CBD	7,419	7.3	75	12	-
Office Copenhagen Harbour	9,136	9.0	24	6	-
Office Copenhagen Broer & Fred.	7,441	7.4	58	16	-
Office Copenhagen other	5,670	5.6	36	15	-
Office Copenhagen South & West	9,197	9.1	86	12	-
Office Copenhagen North	9,202	9.1	51	14	-
Office Odense, Århus, Ålborg	4,770	4.7	73	14	-
Office Rest of Denmark	1,756	1.7	44	10	-
Residential Copenhagen	13,453	13.3	136	13	-
Residential Odense, Århus,Ålborg	1,948	1.9	33	9	-
Residential Rest Denmark	2,422	2.4	57	10	-
Other	3,550	3.5	60	11	-
Retail	**25,170**	**24.9**	**303**	**12**	**-**
Office	**54,592**	**54.0**	**447**	**19**	**-**
Industrial	**2,004**	**2.0**	**29**	**4**	**-**
Residential	**17,823**	**17.6**	**226**	**14**	**-**
Other	**1,546**	**1.5**	**31**	**10**	**-**
All Property	**101,136**	**100.0**	**1,036**	**21**	**-**

An estimated 48 % (measured in total capital value) of the professional investment market is covered by the IPD Danish Annual Property Index.

4.2 Assessment applied in the benchmarking organisation

From its databases the IPD constructs indices relating to the non-geared total returns to directly held standing property investments from one open market valuation to the next. The IPD databases hold records of properties owned by investors and managed by portfolio managers. The overall structure of the IPD system can be illustrated accordingly (see Figure 6).

Figure 6. The IPD process (IPD, 2008: 11).



The cornerstone of the system is the direct data input from the users of the system cf. the above Figure 6. We focus on the indices in the following description of the system.

The databases

IPD's national databases are the foundations of its outputs, in that they hold records of properties owned by investors and managed by portfolio managers. The databases contain financial and descriptive information on each of the individual buildings that make up investment portfolios.

The role of the IPD is to collect information (using clear definitions), to ensure that this data is consistent, and compare this data across different portfolios and countries. The raw data used by the IPD is taken directly from the systems of property investors and occupiers. As stated above information is collected "building by building" for complete investor portfolios, making it possible to analyse different aspects of property investment from national markets down to individual buildings.

Processes and validation

Although it is the contributors to the IPD index that themselves delivers the data input to the system, it is important to note that this data so to speak is institutionalised or institutionally anchored – with which we refer to the fact that the main part of the input already is available for the different contributors by means of information from:

– Auditing reports.
– Tax authorities.
– External valuators.
– External accountants.

IPD however validates these data. This is something that is described as an essential part of the IPD system. Furthermore, in an effort to minimise errors IPD's databases are subject to a wide range of automated validation routines, which:

– Check for completeness.
– Identify internal inconsistencies.
– Highlight any numbers that look implausibly large or small.

If problems are identified, these are raised with participant investors as queries. Moreover, IPD's validation process checks each fund for errors. These can be errors in client data, errors from data entry and errors from data processes, including (IPD, 2008: 11):

– Responses outside specified ranges.
– Logical validity of responses in relation to each other (cross checks).
– Missing data in essential fields.
– Missing financial records.
– Exceptional growth/performance.

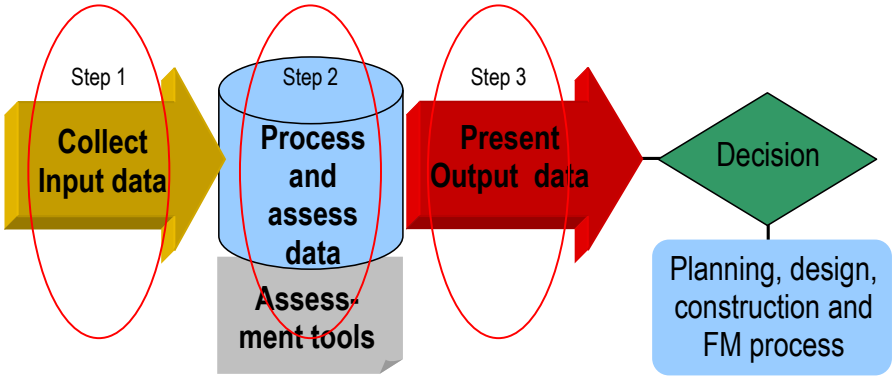
Validation of data is, regardless of which country index (see Chapter 4) is being constructed, conducted centrally from the IPD headquarters in London. This is done in order to ensure that the IPD system can be considered consistent across country borders.

4.3 Cost and performance indicators applied in benchmarking

In this Section 4.3 we discuss the cost and performance indicators applied in the benchmarking exercise. We focus on *input data* as well as *output data* – and thus compare these factors, and consider the processing and assessment that links these two types of data together.

Using the CREDIT information model as illustration hereof, the focus and order of analysis is as follows (see Figure 7).

Figure 7. CREDIT information model and foci of the following analysis.



Step 1 – Input data format
IPD records all types of property investments that are contained in their participants' portfolios. Each directly held asset (building) that attracts a separate open market capital valuation is individually recorded in the IPD database according to the following indicators (see Table 3).

Table 3. Data on properties recorded in the IPD database (IPD, 2008: 10-11).

Indicator	Description
Location	Address, postcode, type of location.
Investment interest	Type of investment, owner occupied status, tenure, ownership share.
Direct property type	Predominant current use, percentage use mix.
Physical/historical data	Building condition, listed building or conservation area status, construction date.
Purchase data	Method of acquisition, purchase date, gross and net purchase price, purchase costs: stamp duty, legal fees, agents fees, other fees.
Sale data	Sale date, gross and net sale price, sale costs: legal fees, agents' fees, other fees. Sales are dated to the end of the month.
Valuation data	Valuation date, managing agent, valuer (company name), open market capital value, open market rental value, rent passing, net lettable area, current gross, net, equivalent yields and cap rates, method of valuation.
Lease and headlease details	Tenant name, tenant use, lease start and expiry dates, rent review dates, whether upward only, step dates and amount, rent review frequency, lease status, gearing information, net lettable floor space, date and type of break clause, rent passing, open market rental value.
Vacancies	Start and end dates of last vacancy, days vacant, anticipated letting date.
Capital expenditure and receipts	Development expenditure, on-going capital expenditure, transaction costs, part purchases and sales, other capital receipts.
Revenue expenditure	Ground or head rents, property management costs (base management fees, rent review fees, lease renewal fees), other irrecoverable revenue costs including expenditure on vacancies and bad debt write-offs.
Rents and income	Rent passing, contracted rent, rent receivable, other income, net income receivable. Income is recorded in daily amounts.

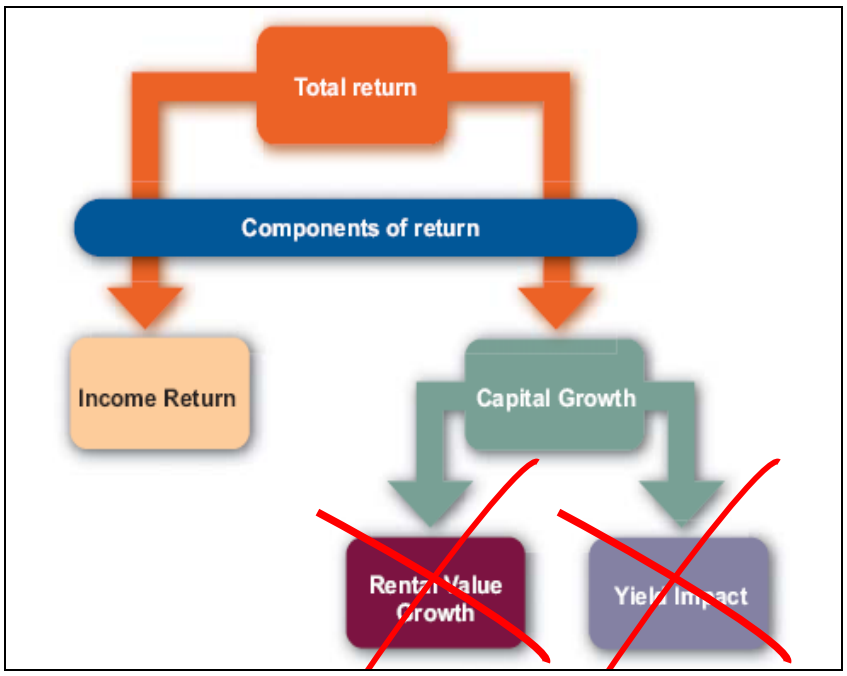
IPD measures total returns to directly held standing property investments and thus covers the process of building operation – referred to as facilities management in the CREDIT 'carpenter model.' Although this is the predominant direct focal area it is important to note that the IPD indices also are used by companies in investment decisions as described in the previous chapter and therefore also can be used in the pre-brief phase as input to decisions on what type of building to buy/sell/lease etc.

It is the contributors to the IPD index that delivers the data input to the system – a process, which according to an interview conducted with a representative of The Danish Property Federation (www.ejendomsforeningen.dk) entails certain 'reporting burden' on behalf of the contributors (se also Chapter 4). This burden has though been decreased a few years ago when the amount of data to be delivered was reduced.

Step 2 – Data processing

Figure 8 illustrates the cost and performance indicators applied in the annual IPD Property Index.

Figure 8. Cost and performance output data (IPD, 2008: 12).



The three indices (total return, income return and capital growth) are the core elements of the public face of the IPD services and are the standardised performance measures that the IPD uses across all markets where they are represented – regardless of which type of building benchmarked.

Key IPD calculations

Given the following input variables (IPD, 2008: 21):

- TR_t (total return in month t),
- CV_t (capital value at end of month t),
- $CExp_t$ (total capital expenditure in month t),
- $CRpt_t$ (total capital receipts in month t),
- NI_t (day-dated rent receivable during month t),

IPD calculates the following principal single period measures accordingly.

Total return is calculated as the change in capital value, less any capital expenditure incurred, plus net income, expressed as a percentage of capital employed over the period concerned:

$$TR_t = \frac{\left(CV_t - CV_{(t-1)} - CExp_t + CRpt_t + NI_t\right)}{\left(CV_{(t-1)} + CExp_t\right)} * 100$$

Capital growth is calculated as the change in capital value, less any capital expenditure incurred, expressed as a percentage of capital employed over the period concerned:

$$CVG_t = \frac{\left(CV_t - CV_{(t-1)} - CExp_t + CRpt_t\right)}{\left(CV_{(t-1)} + CExp_t\right)} * 100$$

Income return is calculated as net income expressed as a percentage of capital employed over the period concerned:

$$INCR_t = \frac{(NI_t)}{(CV_{(t-1)} + CExp_t)} * 100$$

Step 3 – Output data format

In Denmark, the Property Index is released annually in the following format (see Figure 9).

Figure 9. Format of the IPD Denmark Annual Property Index (IPD, 2009).

Looking closer at the central features of the index, we see how the three main indices are presented. We see how properties are distributed into one of five different categories of properties, being:

- Retail properties.
- Offices.
- Industrial properties.
- Residential properties.
- Other.

In the various national IPD Property Indices a building is always attributed a type and location. The IPD Danish Annual Property Index composition as of December 2007 is e.g. as follows:

- Retail Shopping Centres.
- Retail Other Retails.
- Office Copenhagen.
- Office Copenhagen Harbour.
- Office Copenhagen Brokvarterer & Frederiksberg.
- Office Copenhagen other.
- Office Copenhagen South & West.
- Office Copenhagen North.
- Office Odense, Aarhus, Alborg.
- Office Rest of Denmark.
- Residential Copenhagen.
- Residential Odense, Aarhus, Aalborg.
- Residential Rest Denmark.

For each of these property types, the total return, income return and capital growth, as discussed previously, can be seen. Furthermore, a total return index is provided as well (see Figure 10).

Figure 10. Documentation of total return per property type (IPD, 2009: 1).

IPD Dansk Ejendomsindeks afkast	Totalt afkast Total return index	Totalt afkast Total return %	Direkte afkast Income return %	Værditilvækst Capital growth %	Totalt afkast per år % Annualised total return %		
	Dec 1999=100	1 yr	1 yr	1 yr	3 yrs	5 yrs	9 yrs
Alle ejendomme / All Property	241.4	3.1	5.2	-2.0	9.9	10.8	10.3
Butikker / Retail	232.3	7.6	5.9	1.6	11.8	10.5	9.8
Kontor / Offices	219.9	3.6	5.4	-1.8	9.9	9.3	9.2
Industri / Industrial	210.3	4.1	6.6	-2.4	10.3	8.6	8.6
Bolig / Residential	285.8	-6.5	2.9	-9.2	5.8	12.8	12.4
Andet / Other	246.5	8.4	5.8	2.5	11.7	10.6	10.5

IPD Denmark Annual Property Index Returns

For each property category the current years return rates are presented, as is the annualised total return percentage in a three, five, and nine years period.

In the communication of information back to the sector, the below chart is however main feature of the IPD Denmark Annual Property Index (see Figure 11).

Figure 11. Historical performance (IPD, 2009: 1).

Here information on the historical performance of different segments of the market is depicted. This is the primary face of the IPD Denmark Annual Property Index. These figures are further elaborated by the IPD at the Annual Index conference, where e.g. the topic of 'trends on the property market' is an important item on the agenda.

4.4 Relation to enterprises, building project and real estate

Previously we have seen a) how the documentation and reporting of the assessed indicators is used, b) how the information gathered and processed in the system is communicated back to the enterprises and c) how the gathered information is communicated back to the sector as more general information.

Relation to enterprises

IPD measures total returns to directly held standing property investments and thus covers part of the process of building operation – referred to as facilities management in the CREDIT 'carpenter model.' Further in relation to the use of the IPD indices and benchmark in enterprises, the data is used in sales and procurement decisions.

The IPD indices are used by investors and portfolio managers to assess property performance in different countries and regions as well as to identifying trends in key market sectors. Moreover, the IPD indices are also used to

compare property returns with those of other major asset classes. As an illustration of this purpose the below Figure 12 can be observed.

Figure 12. Comparative data (IPD, 2009: 1).

Sammenlignelig data						Comparative data	
Aktier / Equities	137.4	-50.3	-	-	-11.2	5.9	3.6
Ejendomsaktier / Property Equities	113.6	-61.3	-	-	-28.8	6.5	1.4
Obligationer / Bonds	158.4	9.5	-	-	4.1	4.3	5.2
Inflation / Inflation	121.0	3.7	-	-	2.6	2.2	2.1

Data sources: Equities - OMXCBCAPGI; Property Equities - OMX4040 Until 2001 Price index and from 2002 Total return; Bonds - Bloombergs EFFAS 3-5 yrs Danish governmental bonds Nordea ; Inflation Rate - HICP Dec - Dec Denmark Statistics

This table (which is taken from the IPD Denmark Annual Property Index) highlights total returns for four types of investments:
– Equities.
– Property equities.
– Bonds.
– Inflation.

This is a simple, yet highly telling method of illustrating past performances of the direct property market in relation to other potential investments.

Information on the non-geared total returns to directly held standing property investments from one open market valuation to the next is aggregated at multiple levels as covered by the various IPD National Annual Property Indices (treated in Chapter 4):
– Pan-European level (for purposes of the IPD Pan-European Index).
– National level (for the various national IPD Property Indices).
– Regional/city level (for benchmarking of the economic performance of different regions/cities).

Relationship to real estate

The Danish Property Federation maintains the so-called Property Statistics Database (Ejendomsstatistikken), which is a collection of data within nine different areas based on information from a series of different sources – public authorities as well as private players in the property market (see Table 4).

Table 4. Categories of data in the Property Statistics Database (http://www.ejendomsforeningen.dk).

Topic
1. Property population
2. New construction
3. Construction expenditures
4. Property management expenditures
5. Return, price and lease of real estate
6. Tenants (private and enterprise)
7. Vacant premises and accommodations
8. Turnover of properties
9. International comparisons

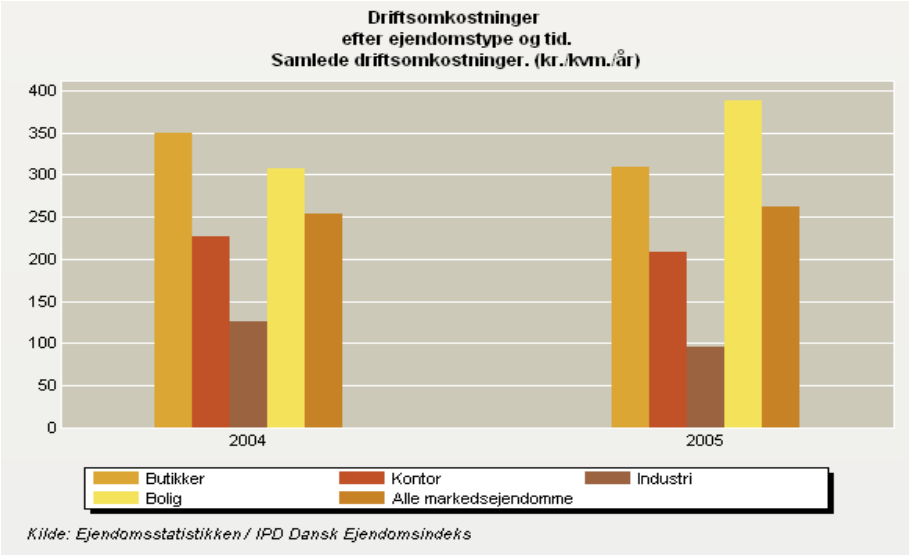
From this database a total of 105 different output charts can be created, 11 of which stems from the IPD Denmark Property Index (see Table 5).

Table 5. Output data in the Property Statistics

Topic	Output chart
1.	-
2.	-
3.	-
4.	**Property management expenditures:**
	OME01: Running costs according to cost type, property type and time
	OME02: Running costs of property management according to sector, cost type, construction year and time
	OME03: Running costs of property management according to sector, cost type, construction area and time
5.	**Return, price and lease of real estate:**
	AFK01: Return and change in market rents according to type of return, type of business and time.
	AFK02: Return and change in market rents according to type of return, segment and time.
	AFK03: Return and change in market rents according to sector, type of return, construction year and time.
	AFK04: Return and change in market rents according to sector, type of return, area and time.
	IND01: Income according to income type, segment and time.
	IND02: Income according to income type, segment construction year and time.
	IND03: Income from property management according to income type, sector, area and time.
6.	-
7.	-
8.	-
9.	**International comparisons:**
	INT09: Return according to country, business type, return type and time.

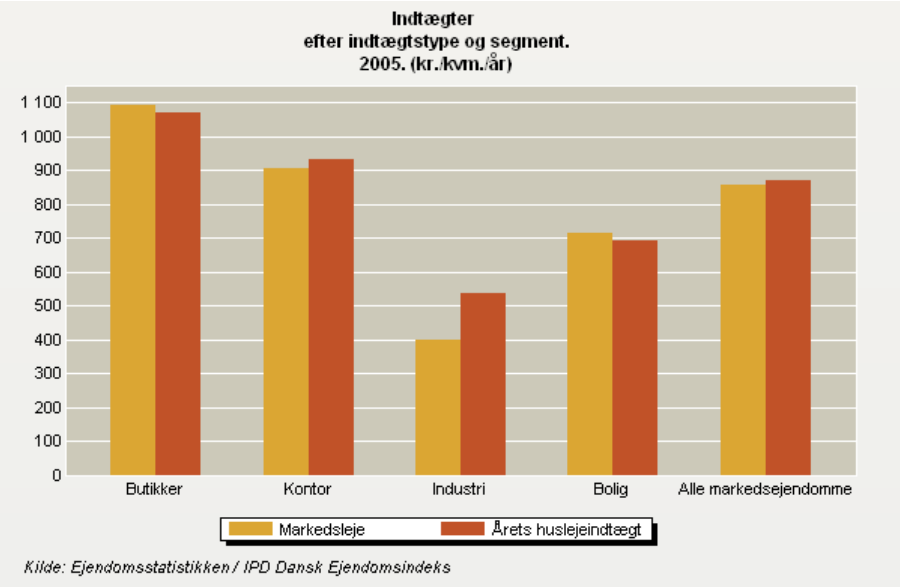
Source: IPD Dansk Ejendomsindeks (http://www.ejendomsforeningen.dk/).
Examples of the different output charts produced are illustrated below (see Figure 13, Figure 14 and Figure 15). All charts are taken from the online property statistics module at The Danish Property Federation's homepage (http://stat.ejendomsforeningen.dk).

Figure 13. OME01: Running costs according to cost type, property type and time.



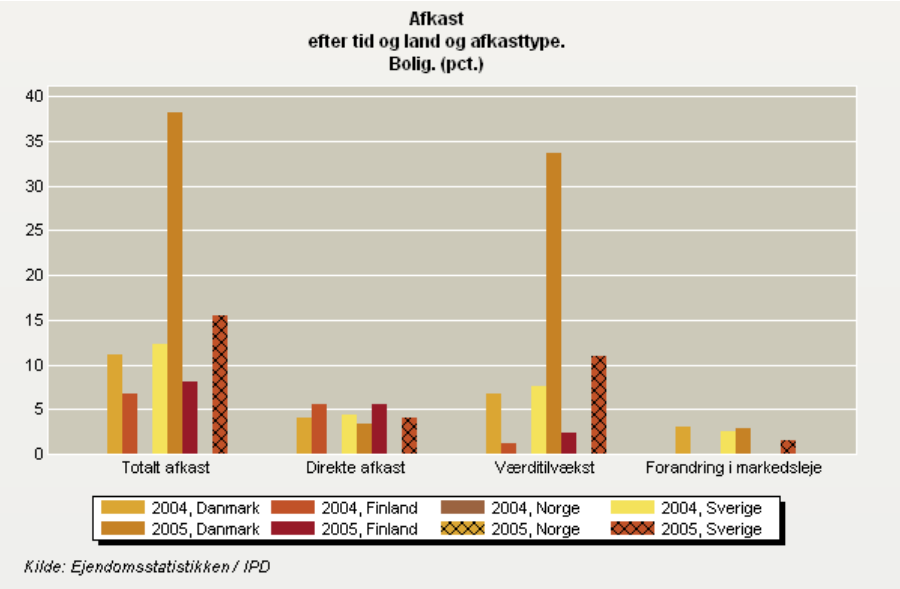
Source: IPD Dansk Ejendomsindeks (http://www.ejendomsforeningen.dk/).

Figure 14. IND01: Income according to income type, segment and time.



Source: IPD Dansk Ejendomsindeks (http://www.ejendomsforeningen.dk/).

Figure 15. INT09: Return according to country, business type, return type and time.



Source: IPD Dansk Ejendomsindeks (http://www.ejendomsforeningen.dk/).

According to Anne Kaag Andersen (n.y.) the database, established with funding from the i.a. Realdania, should be seen as a response to the increased demands for data on the real estate market that have surfaced the recent years as a consequence of the increasing professionalization of the sector. This professionalization i.a. entails that:

> *"Several professionals want to 'benchmark' – compare themselves – in relevant areas, and this requires rich data of high quality." (Andersen, n.y.).*

One of these areas of comparison regards FM-costs (se also CREDIT DK Case Report 07), so an agreement between the Danish Property Federation and the Danish Facilities Management Benchmark Secretariat (DFM-Benchmark) has ensured that DFM-indicators are included in the topic

"Property management expenditures" in the property statistics (DFM-Benchmark, 2009).

4.5 Innovation and visions for future improvements

IPD utilises valuation data as the core information source for their performance measurement indices. Over the year IPD has attempted to find alternative sources to base their indices on; however:

> *"There is clearly very little that can be done to replace valuation data as the core information source for a performance measurement for the UK (or any other) direct property market." (IPD, 2009: 8).*

The reason for this is, that evidence from the market place suggests that lot sizes are increasing within investment portfolios, as are the cost of trading. This in turn implies that turnover levels are modest compared to other investment markets, making the amount of available transaction data upon which to develop an index too small.

Nevertheless, IPD has undertaken many tests of possible transaction based indices over the last couple of years. The problem however is that:

> *"Despite some encouraging results, these tests have to date produced indices that are far less convincing as robust and transparent records of the movement of the market than the simpler valuation based alternatives." (IPD, 2008: 8).*

Even though a continuous close monitoring of the accuracy of property valuations remains critical for the IPD, we can say that IPD has opted for a simple, robust system in favour of a more complex system with more details and features, and that the this simplicity and stability of the system is one of the great strengths and reasons for the success of the system.

Innovation strategy

Concerning visions for the future and the innovation strategy of the IPD Denmark Annual Property Index, it can be argued that a two-stringed strategy is followed:

– First, there is the *demand-pull* from members and national associations.
– Second, there is the *technology-push* from IPD to the members.

These two strings are intertwined and functions in a reciprocal relationship in that the exact content of the different indices are determined partly by the array of data that IPD can deliver, and partly by requests from the members.

Demand-pull

Let us start by observing the demand-pull aspect of the system's operation in the Danish Property Federation. According to our interview with Danish Property Federation, the steering committee for the Danish IPD index has ongoing discussions and considerations relating to the form and content of the index, including discussions over the frequency of the publication of the index, i.e. the output side of the system.

In addition to the meetings in the steering committee, the Danish Property Federation conducts two technical meetings each year in order to ensure that the system reflects the needs of the members. At these technical meetings, members and system operators can discuss practical issues relating to the use of the system, including how to report data to the system.

The Danish Property Federation also conducts a series of conferences and member meetings, where feed-back on the use and content of the system is gathered. Moreover, and in addition to the more informal feedback gathered this way, a formal member satisfaction survey is conducted each year.

Technology-push

The above activities are conducted on a national level. No international steering committee is established; however, representatives from the Danish Property Federation participate once a year in an international rally held by the IPD, where participants are given presentations on the newest trends and possibilities. This information, which can be seen as a *technology-push* facet of the system, is then distributed to the Danish audience at the above meetings and the like.

Recent years, several specific issues have been addressed within the Danish IPD system when dealing with possible changes. Most notably concerning the frequency of data reporting (on the input-side), but also indicators for sustainability has been considered for inclusion in the system (e.g. pertaining to energy consumption and the like). According to the Danish Property Federation, these indicators have not yet been implemented in Denmark; however IPD will be able to provide the indicators – are the members willing to pay the cost.

With inspiration from the UK debate concerning the IPD indices, there have been talks about converting the index from considering non-geared investments towards considering geared investments, i.e. include debt situations. This is however not a change that has been implemented in Denmark as it is not so common among the types of property investors comprising the Danish index to make geared investments.

5. Discussions and conclusions

This chapter discusses the lessons learned on indices for benchmarking of commercial properties and draws conclusions with respect to work package 4-6 on project building, enterprise and system level.

5.1 Buildings – lessons learned and recommendations

The case does not deal with a specific single project/building/process in which an assessment of specific nature has taken place. Experiences with the usability of employed assessment methods and tools for collection of information, data handling, assessments, evaluations, etc. can therefore not be described from the point of actors applying the methods.

Studies however exist, which deal with the sectorial institutionalisation and the construction of buildings as economic/financial entities and highlight usability issues in relation to the operation of the system (cf. Ministry of Housing and Urban Affairs, 1999; Müller, 2000/2005; 2003; 2005; Gall, 2007).

It is recommended, that national experiences with property valuation and taxation, which in Denmark has a 100 years history, is included for consideration in the further work of the CREDIT consortium.

5.2 Enterprises – lessons learned and recommendations

It is not possible to draw direct conclusions as regards to the experiences with the usefulness of the evaluation, neither in terms of the assessed parameters nor of the use of the evaluation in the enterprise, as no enterprise could be contacted to take part in the case. Various reasons were given as to why specific enterprises could not, would not or did not participate. These ranged from simple reluctance in partaking to confidentiality concerns.

Evidence from published material from one of the property investors participating in the IPD Denmark Annual Property Index indicates however, how the index is used strategically at the highest organisational levels (board, top management and AGM). At the AGM, IPD was used as legitimising device in the defence of the management's decision to sell off certain properties.

Political legitimacy is a factor often overlooked in the assessment of the operation and impact of managerial systems, including benchmark systems. This case contributes by drawing attention to this often overlooked aspect.

It is recommended that this aspect is included in the further deliberations on the design and implementation of a CREDIT benchmark system. Benchmarking systems and evaluation tools should thus never be seen as neutral, but rather interwoven with the context in which they are constructed as e.g. Dahler-Larsen (2006) argues.

5.3 National benchmarking – lessons learned and recommendations

On the systemic level this is a case of a voluntary international benchmark system promoted by the 'parent' organisation as a means of creating transparency in the market and adopted by companies in order to compare their investments to those of the market, and thus promote their own investment portfolios *vis-à-vis* those of the rest of the market.

We concur with the statement that the system brings transparency to the market, as it is immediately possible to attain information on the financial performance within various segments of the market across different geographical locations.

The system is institutionally anchored at an umbrella organisation that collects data and coordinates between the different users of the system. This seems to be a pre-requisite for the operation of the system, and hence for the fulfilment of the purposes of transparency in the market, as it ensures that uniform standards, measures and methods are used.

The market can therefore rely on the accuracy of the data (for comparative purposes) given that they accept the premises of the system – including the use of valuations rather than sales prices. This however should not pose a problem in that all the premises for the operation of the system are readily available for scrutiny.

Conclusions on the system

Looking into the technicalities of the IPD system, it is possible to draw attention to some of the features of the applied methods that can account for usability concerns. From this perspective, the usability of the assessment methods and tools can be summarised as follows:

Use of existing data: IPD to great extent relies on pre-existing data from auditing reports, tax authorities, external valuators and external accountants. Following a reduction in the amount of data to be delivered to the system initiated a few years ago, the system has become simpler to use in terms of the time consumption required in the data input process.

Automated validation process: An important system feature is the attempt to eliminate human errors in the reporting of data, by flagging possible data errors, including responses outside specified ranges, missing data in essential fields, missing financial records, and exceptional growth/performance numbers. This contributes to the credibility of the system.

Uniform inputs and results: Every country in the system input the same type of data and is given the same output in order to facilitate comparative purposes.

CREDIT information model – decision making as focus

In relation to the CREDIT information model (see Figure 6 in Section 4.3) the main feature of the IPD system *from the point of the users* (i.e. the property investors) is that IPD Denmark Annual Property Index is seen as a tool for making decisions about future investments and rationalisations. Focus is placed on presenting output data for use in decision processes rather than on rigidity of input data.

In the terminology of the CREDIT benchmarking typology model, the IPD arrangement can be seen as a cross-over of a business model and an asso-

ciation model. Part of the success of the model can be explained from the fact, that the IPD benchmarking system is not a stand-alone solution offered to the market.

In a Danish context, IPD is part of a larger 'package' of paid services that the different enterprises (i.e. property investors and owners) pay for through their membership of the Danish Property Federation. As such the system is institutionally anchored at an association, which the members acknowledge serves their specific interests. At the same time, members are provided by the IPD with the tools necessary to conduct benchmark of own portfolios in relation to the rest of the market. An important element in actually realising this objective is the *historicity* of the system. IPD's long track-record and consistency in data input and output formats can be considered part of the reasons for its success.

It is recommended that the wider organisational and institutional embedding and anchorage of a CREDIT benchmarking system is considered in the further deliberations in the CREDIT work groups.

Table 1. Questionnaire to evaluate CREDIT Indicator Classification.

Comments: Not filled out since the questionnaire was not available at the time of interviews.

CREDIT Indicator Classification

Company:

Role:

Project: Country:

Date: Sign:

To which degree are the following indicators preferred?

Please use the following scale when answering:

2 Always - strategic and very important

1 Sometimes, depends upon the project

0 Not at all, unimportant

Cost and performance indicators	Public demands	Internal project demands	Measures during building process	Measures when finished project	During facility management	Comments and other indicators recommended
1. Cost, price and life cycle economy (LCE)						
11 Capital, investment, construction, commissioning cost						
12 Building services related to operation and maintenance						
13 Business services related the activities in the building						
2. Location, site, plot, region and country						
21 Location and address						
22 Plot opportunities						
23 Spatial solution and property aesthetics						
24 Surrounding services						
25 Social values						
3. Building performance and indoor environment						
31 Category of building, quantity, size and area						
32 Safety and security of burglary						
33 Usability and adjustability						
34 Thermal comfort						
35 Air quality and health						
36 Visual climate						
37 Acoustic climate						
38 Aesthetics of building and indoor spaces						
39 Feelings and sensations						
4. Building part and product performance						
41 Category of building parts, quantity, size and area						
42 Safety						
43 Durability						
44 Thermal quality						
45 Impact on air quality						
46 Lighting quality						
47 Acoustic quality						
48 Aesthetic quality as form, surface, colour and details						
49 Feelings and sensations						
5. Facility performance in operation and use						
51 Category of tenancy and operation and area of space						
52 Applicability of the facility						
53 Operation						
54 Services						
55 Social performance						
6. Process performance in design and construction						
61 Category of process, supplier and organisation						
62 Resource control and project management						
63 Health and safety and work environment						
64 Quality management						
65 User involvement and cooperation						
7. Environmental impact						
71 Resource use						
72 Emissions						
73 Biodiversity						

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CREDIT©

Construction and Real Estate -
Developing Indicators for Transparency

This report describes the results a case study on financial benchmarking of commercial facilities.

The study was undertaken as part of the Nordic and Baltic project CREDIT: Construction and Real Estate – Developing Indicators for Transparency. The analysis is aiming at three levels: the property, the enterprise and the national benchmarking system.

The study concludes that financial indicators as applied in the IPD property index can be applicable in the CREDIT benchmarking system.

Further, financial indicators as used in the IPD system represent valuable sources for creating transparency in the market.

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