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VTT Building and Transport



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Abstract

The goal of this report is to describe the European trends in research in real estate business. This state of the art is based on different seminars and discussions with real estate professionals. Basic events behind this report were two conferences (8th and 9th) of the European Real Estate Society (later ERES), held in 2001 and 2002. ERES was established to create a network between real estate academics and professionals across Europe. Researchers from all Europe that have a shared interest in real estate related issues, encompassing land, commercial property, housing and mortgage markets, could share opinions and experiences. ERES is also a member of the International Real Estate Society (IRES) through which the ERES network has a wider dimension.

However this report does not address the real estate trends merely from a conference point of view but also takes leads from articles – both national and international journals. A special emphasis is given to discussions that are presently going on in Finland. There are two main focuses: firstly, to see the Finnish real estate research in a wider international context and secondly, to see how we should combine the good technology base with user's needs, real estate economics and ownership. The National Technology Agency of Finland (Tekes) started the five-year technology programme "Rembrand" in 1999 to offer public funding for R&D projects concerning real estate management and services.

Internationalisation and professionalisation have raised the concern and also the interest to elaborate processes and tools in real estate finance and management. Finnish real estate research is catching up with the world's top level but we have some limitations. Our real estate market is small and there is a lack of potential investments. Several development processes are in progress and it is obvious that the situation will change in the near future. At the European level, the incipient Sixth framework programme (FP6) will connect research efforts in different areas to achieve, for example, sustainable development. Real estate issues are an important part of this.

This report addresses different topics concerning urban real estate, portfolio and asset management, corporate real estate and development, workplace, home and user requirements. Real estate's relation to firms' core businesses is in the focus, and future research topics in the real estate sector are proposed.

Preface

Emerging discussion has inspired the gathering of information concerning real estate research. In Europe the European Real Estate Society's annual conference is one of the main events in the real estate sector. The Real Estate Education and Training Institute arranges the main annual event in Finland.

This report has been written at the end of the year 2002 and has received financial support from VTT Building and Transport. Hopefully, the report includes the most interesting research subjects for the future and stimulates research in the real estate sector as well.

Without the fruitful discussions with my colleagues this report could not have attained the depth and extent it now has. I would like to give special thanks to my colleagues Esa Nykänen, Leena Sarvaranta, David Payne, Markku J. Virtanen, Kaj Mäntylä, Seppo Teerimo and Anna-Kaisa Kauppinen.

Espoo, December 2002

Johanna Nummelin

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List of Symbols

BSC

Balanced Score Card is a measurement-based strategic management system, which provides a method of aligning business activities to the strategy, and monitoring performance of strategic goals over time.

CIRM

Corporate Infrastructure Resource Management is a management concept that includes information technology, human resources, finance and corporate real estate issues.

CREM

Corporate Real Estate Management promotes real estates to secure and strengthen the competitiveness of a company in its core business.

CSR

Corporate Social Responsibility means company's operation to balance the social, economic and environmental components of their business, while building shareholder value.

FM

Facility Management is a practice of co-ordinating the physical workplace with the people and work of the organisation. It integrates the principles of business administration, architecture and the behavioural and engineering sciences.

GDP

Gross Domestic Product means the total market value of all final goods and services produced in a country in a given year; equals total consumer, investment and government spending, plus the value of exports minus the value of imports.

IAS

International Accounting Standard

MPT

Modern Portfolio Theory explores how risk adverse investors construct portfolios in order to optimise market risk against expected returns. The theory quantifies the benefits of diversification.

NPV

Net Present Value is the present value of an investment's future net cash flows minus the initial investment. If the value is positive the investment should be made (unless an even better investment exists) otherwise it should not.

PPP

Public-Private Partnership is a co-operative venture between the public and private sectors, built on the expertise of each partner that best meets clearly defined public needs through the appropriate allocation of resources, risks and rewards.

Reverse mortgage

A non-recourse loan against home equity providing cash advances to a borrower and requiring no repayment until a future time.

SPE

Special Purpose Entity means a business interest formed solely in order to accomplish some specific task or tasks. A business may utilise a special purpose entity for accounting purposes, but these transactions must still adhere to certain regulations.

SRI

Socially Responsible Investment is a commitment to achieving public good through investment. Socially responsible investors consider a double bottom line: a company's financial performance and its social performance.

URC

Urban Regeneration Company is a proposed company that will act as an agency and be supported by central and local government for attracting investment to specific area and assist local businesses.

1. Introduction

The needs for development, related to real estates, have been recognised in recent years. Changes in business environment have been dramatic in many sectors and have had effects on real estate business as well. Technologies have been developed but the amount of break-through innovations in the real estate sector has been limited. There are also positive challenges, which strengthen the belief in a significant growth of the cluster. This requires fast changes in different kind of fields concerning real estates and an ability to adopt new way of thinking. [1, p. 5]

The life cycle of a building is long – so the renewal of whole building stock is slow. Applications of new technologies have mainly been directed to new buildings. But most citizens live in dwellings where the basic structures and solutions have been made tens of years ago. New technology can solve many problems in old stock too, but new kinds of services are also needed. There is a lack of public interest to intervene and individuals have restricted possibilities to influence developments.

The economic depression of the early 1990s in Finland led to the vacancy of many industrial buildings in different cities of Finland. Economic growth towards the end of the decade increased occupancy of these buildings, but only in some of the larger cities. Today, in small cities and old industrial cities, significant numbers of industrial buildings still lie vacant in the respective city centres. Demand to refurbish and develop these existing industrial buildings is very low. This is compounded by the fact that vacant land for construction of new industrial buildings exists.

In an effort to boost their economies, cities try to attract new firms and investors to make use of existing infrastructure (industrial buildings in particular) and set up industries in their locality. Existing studies suggest that through a local real estate strategy, cities can both control and exploit the availability of existing space in industrial buildings [2]. On the other hand, the big cities, which might suffer more from positive migration, need strategies to manage otherwise uncontrollable growth [3].

The establishment of coherence to a local real estate strategy draws its foundations from an understanding of both the operational environment and key actors engaged. Forecasts of the population, employment, and business activities also make a significant contribution to the local real estate strategy. All these factors are essential in order to be able to estimate the volume of the activity. [2]

Ownership of real estate in Finland is now becoming more and more professional. This fact is verified through differentiation of construction and development. The role of the customer is gaining momentum and importance in the business processes and decisions

of constructors, developers and owners. It is foreseen that in the future, the customer will take a major role in certain real estate co-operations. Therefore, the most effective way to possess and control real estate is through the formation of different partnerships between real estate owners, cities, and other relevant actors in the real estate business. Creation of strategic co-operation is not an easy task. Each partner has to recognise his or her own and other partners' role in the value chain. Otherwise the network does not give any additional value for the partners. [4, pp. 8–9]

Real estate management can be divided into different levels in accordance with activity and output. Figure 1 shows the levels of management and their relationship to a specific output. The extent and scope of policies depends on the size and business focus of the company. [5] The ownership of real estate can roughly be divided into two approaches: occupier-owner and investor-owner [6]. The division between these two is not clear and the occupier-owner can also be investment orientated to a large extent. Real estates are big investments in any case.

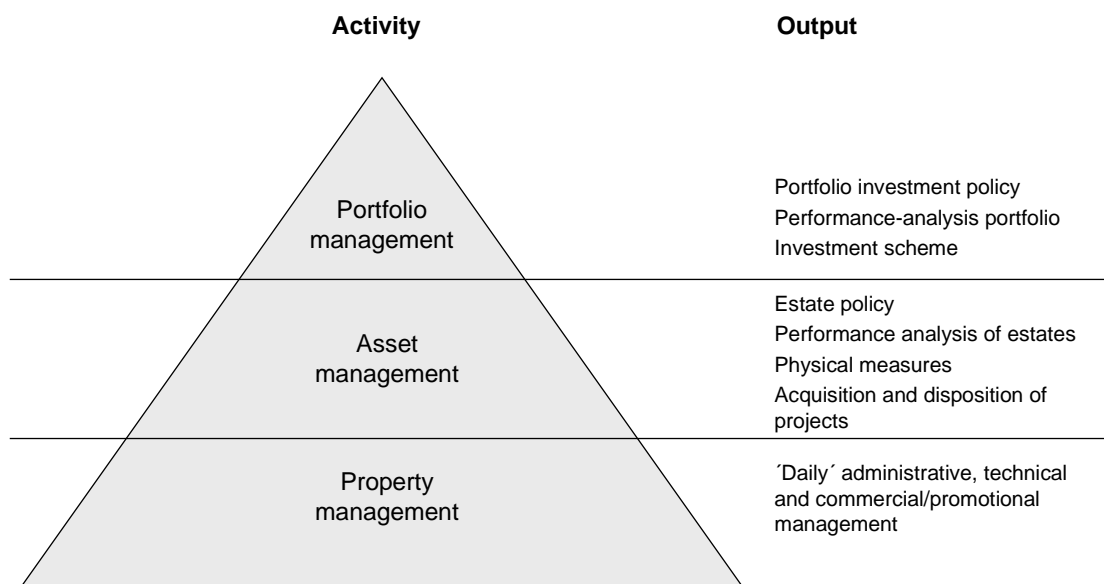


Figure 1. Levels of real estate management [7].

In May 2002 the second version of "Vision 2010" was published. This document has combined the Finnish real estate and construction cluster's vision for 2010 in a unique way. Nothing as wide a co-operation as this, is apparent in other countries. The basic idea presented is to develop the foundation for a good life, where the life cycle and co-operation, service, customership, internationalisation and open development environment are significant conditions [4, pp. 4–5]. An important development area is education. Real estate and construction sectors are very multidisciplinary and specialists in different fields are needed, e.g. engineers, economists and sociologists. [1, p. 16]

Jones Lang LaSalle's research [8, p. 1] about global changes and their effect on real estate business displays e.g. the influence of changes in population, rise of big cities (population over 10 million people), trends of natural-resource consumption and changes in Gross Domestic Product (GDP). The ageing of population is a major concern in Western Europe, Japan and US, and migration will have a key role to maintain healthy support ratios. The research was a result of seminar working between researchers and other professionals, e.g. corporate real estate executives.

Taxation issues have been left in the background even if these have large impacts on decision making of investments. Legislation, overall, should respond to fast changes and even be a little ahead of development to ensure effective functioning of markets, taking the well being of people into consideration.

2. Topics in Urban Real Estate

2.1 Sustainable Development

Any administration – national, regional or local – considers growth and development as their natural policy objectives. The environment and the health aspect, as well as economic growth, are now the key issues. Sustainable development can be seen in two dimensions: social and economical. [9, p. 3] One, internationally known definition for sustainable development is [10]:

"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs"

The action plan of strategies for sustainable development (Agenda 21) was committed and embedded in European and UK legislation by national governments in Rio de Janeiro 1992. In the UK, this commitment was expressed in a form of a White Paper. [9, p. 3] There the definition was stated as [11]:

"Sustainable development does not mean having less economic development. On the contrary, healthy economies are better able to generate the resources to meet peoples' needs as new investment and environmental improvement often go hand in hand...what it requires is that decisions throughout society are taken with proper regard to environmental impact"

The importance of location has a key role when establishing local identity. Now we have a focus on networks, clusters and partnerships but the importance of these should not diminish the importance of location. [9, p. 7] Now there is a need to look more widely at the whole community when making decisions concerning social and economical development. It is not enough to look only at a house or other element, even smaller. Buildings are playing a major role when we think, for example, about energy consumption. [12, pp. 5–6]

Planning is the key role when we talk about urban development. It is an 'honest broker' between the landowners and the needs of the whole society. Central and local governments are those who can use this instrument. It can be argued whether the government is capable to use this instrument the way it should be used. The time frame of planning should be tens of years but each government sits only a few years at a time. The other question is should planning be more market-led than it is nowadays [13, p. 3].

Urbanisation is one path that future development follows globally. Most of the world's population lives in urban areas, especially in Western Europe and the US. This trend is expected to continue and the biggest increase will be in Asia. [8, p. 5] In western countries planning has had an important role for a long time and the tradition is strong. E.g. the Finnish government has a programme for sustainable development that includes following strategic goals concerning especially urban structure [14]:

- changes in regional structure follow controlled ecological, economical and social guidelines
- both urban and rural development policies support balanced development of communities
- functional urban structure creates comfortable and healthy environment, which advance peoples' well being.

Regeneration is a concept that is widely developed and used in the UK. It started from a need to develop big areas in the city including people, place and business, all together. Regeneration programmes last years, even 20 years, and they are always very complicated. Pilots are usually easy but the impact at a larger scale is hard to evaluate. A long-term commitment is needed from all partners, 10 to 20 years, because the goals are also far off. Monitoring and evaluation have to be effective because the partners need to learn from each other's mistakes while the project is still running. [15]

Corporate Social Responsibility (CSR) is not an established concept but it is widely used by companies. It is very likely that CSR will evolve in the future. According to Frankental [16] there are some characteristics, though, that CRS has to fill:

- a commonly understood definition
- a common sense of benchmarks to measure the attainment of CSR
- established processes in place to achieve these benchmarks
- a system of internal auditing
- a system of external verification by accredited bodies.

CSR is constantly developing and organisations in the UK are working to fill the existing credibility gap. CSR in buildings can mean e.g. low heating, lighting and ventilation releases. CSR in financial markets can mean e.g. Socially Responsible

Investment (SRI) policies through ethical funds. CRS criteria to classify the companies can be defined as [17]:

- working towards environmental sustainability
- developing positive relationships with stakeholders
- upholding and supporting universal human rights.

Socially responsible investment (SRI) integrates investor's values and societal concerns with investment decisions. Both investor's financial needs and investment's impact on society are considered. Investors can be individuals or institutions such as corporations, insurance companies, pension funds and non-profit organisations. SRI strategies have developed during recent years and are fixed to three: screening, shareholder advocacy and community investment. [18] There is a growing importance of intangible assets e.g. staff's moral and brand. Measuring responsibility and sustainability is not done and there is a need to increase the reliability of existing tools. [19]

2.2 Urban Area Co-operation

Regional development has risen to be an important topic in construction and real estate business. At the same time internationalisation is beginning to affect the business, e.g. the ownership of the companies will be wider than earlier. Finland is facing a big challenge to combine these two things. To get foreign risk funding for regional development processes is not an easy task but new opportunities are likely to come. [4, pp. 11–12]

Regional development has roots that go back several decades. In Finland, the first big step was taken in the 60's when the city of Espoo, for example, had not enough resources to face the migration. There was a need to build houses, schools, services and municipal engineering. The construction companies bought land all over Espoo and then started to lobby for master plan. The city did not want constructors to gain from the rise of land value caused by town plan, so there became a need for special agreements: land development contracts. But all this caused some problems that can be seen afterwards. The constructor purchased land that was situated in locations that they themselves had thought was good. Urban structure issues were in the background. Town planning put the constructor-owned land in a special position, which led to the urban structure of Espoo being fragmented. [20]

In Finland, there have not been strategies for big cities like in some European cities. The focus here has been to improve the regions that suffer from migration or lack of investments. The big and growing cities face somewhat different problems that are important when we think about Finland in a European context. Helsinki region, Turku, Tampere and Oulu are responsible for almost half of the whole gross domestic product (GDP) of Finland. This is not a minor thing, binding governmental resources too. [21, p. 1]

The European Union does not have an urban development plan or the power over Member States to influence urban development. [3] However, the EU can provide financial and technical support for local authorities to adopt local-level implementation of EU environmental legislation, sustainable urban development and local Agenda 21. [22]

Co-operation between public administration and private organisations can be very widely understood. In this context the co-operation belongs to the daily routine of municipalities' and cities' business activity policies. Financing public construction e.g. schools with private funds, has come up strongly in recent years. Using private funding is not the same as privatisation, which means reorganisation of public administration. However, goals are the same: effectiveness, liberalisation of capital and concentration on core business. All partners, participating in the project, share both risks and rewards. Otherwise the implementation would not succeed or be effective. [23, pp. 8–10]

In Finland, the public partner in public-private partnership (PPP) can be the state, municipality or federation of municipalities. Citizens are the users of final construction. They might pay for the use, e.g. of a swimming hall, or the public partner handles the payment, e.g. for a school. Other partners in these kinds of projects are usually construction companies and investors. The contractual structure of project financing is presented in Figure 2.

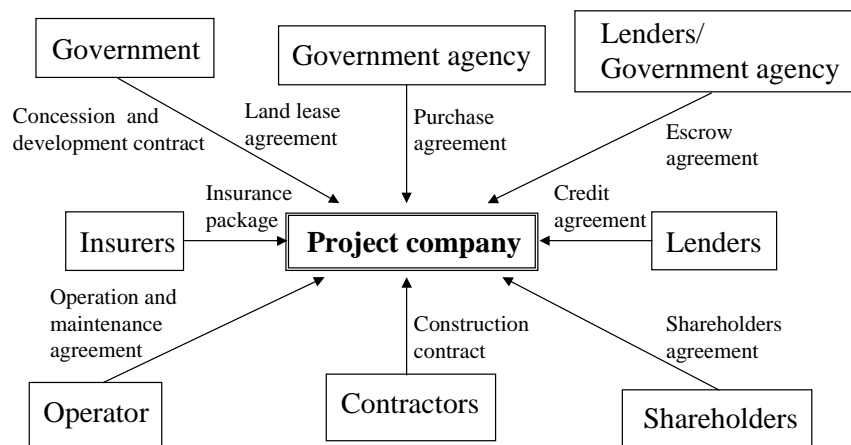


Figure 2. Contractual Structure of Project Financing [24, p. 5].

Legislation concerning e.g. taxation and financing issues shapes the form of PPPs. The basic condition is that all the partners, public as well as private ones, get benefit from the project. That means the existence of a "win-win" situation. Local businesses should be involved in formulating strategies for sustainable development together with local government and local communities. But this is possible only if the firms can have commercial benefits in return. These benefits can include a higher skilled workforce, raised staff productivity or an expanded supplier and customer base. [9, p. 12]

Whenever legislation changes new forms of public-private ownership can be built up. These new collaborations have an influence on development processes. An example of one new form from the UK is the urban regeneration company (URC). It has been put forward in 1999 by the British government as a tool to achieve urban development. URC is a private entity, which co-ordinates both public and private investment plans. It attracts also new investments for radical physical transformation of their areas. [25] Planning itself is not enough when regenerating urban land. Fiscal incentives are more effective than financial penalties. [26]

2.3 Housing

There is a growing need in the housing sector in some European countries to improve asset and property management. Government subsidies have diminished and local authority housing has been privatised. This has led to rationalisation of real estate management among social landlords. Nowadays the need for basic information concerning the market development and market constraints is high. [5] In Finland, the social housing loans have become economically unreasonable. The interest rate of loans has been fixed so that the present level in market is much lower. Legislative conditions

are now unstable so the investors are cautious. The planned improvements do not satisfy social housing companies.

Low-rise and high-density housing has become an important research issue in Finland. Traditions of planning changed during land reforms so that detached houses did not exist anymore in dense villages. But compared to high-rise housing, the densely built low-rise urban structure is almost as effective. According to some research, people want things from housing that low-rise and high-density housing can offer. The Finnish Ministry of Environment has started a research programme to promote this kind of construction. [27]

3. Portfolio and Asset Management

3.1 Development of Portfolio Strategies

The theory and reality do not often meet when we are discussing asset management concerning real estate assets in mixed-asset portfolios. There is theoretical and empirical evidence about the diversification benefits that real estate assets could give to an investor's portfolio but this information is only partly used. Investors try to determine what share of their assets should be allocated to real estate and how this part should be structured. [28, pp. 1–2]

During 1975–2000 the share of real estate assets has lost importance in mixed-asset portfolios e.g. in Germany. One reason for that was that other assets grew nearly tenfold in the same period. [28, p. 4] The second reason is that there is not as good quantitative information available from real estate assets than from e.g. bonds [29, p. 3]. There are also other reasons that can be explained by a detailed analysis of the underlying decision-making process. German experience shows that direct owning of real estate is a good combination with shares and bonds because they correlate negative with direct real estate investments. [28, p. 14] This means that when shares, bonds and real estate are in the same portfolio the risk and return of the whole portfolio is relatively better than looking these assets separately. This is one of the basic lessons of modern portfolio theory (MPT) by Markowitz [30].

There is evidence also from Swedish and Finnish property market that diversification between equity, bonds and real properties gives better risk-return level than having for example, only equity and bonds [31]. This means that it is possible to reach the same return on capital a lower risk level. The investors have different kinds of outcomes when having different portfolio strategies. When the investor is making decisions concerning the portfolio there are factors that are not under investor's control [28, p. 20] e.g:

- legal restrictions
- the state of real estate markets
- political influence on companies' asset management policy
- investments volume
- availability of real estate know-how.

These factors can be divided into two categories: external and internal. Examples of these constraints are shown in the following Figure 3.

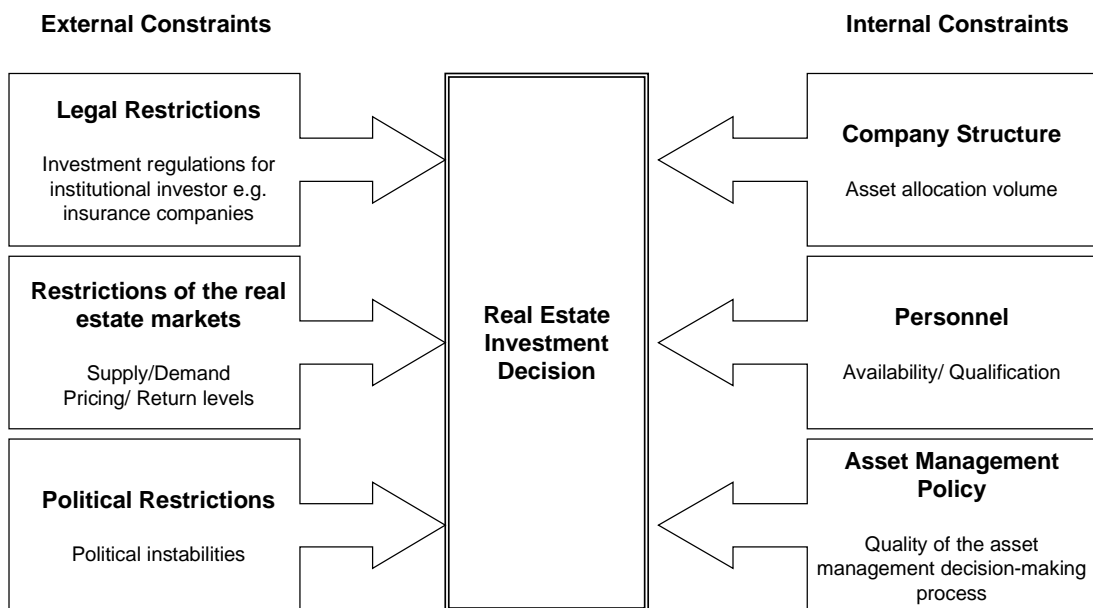


Figure 3. External and internal constraints in real estate investment [28, p. 20].

The findings show that direct property investment can lead both to increasing or decreasing of portfolio return, depending on the performance of property compared to other assets. But strong evidence on behalf of adding property to mixed-asset portfolio proves the certain increasing in risk-adjusted performance. Diversification benefits are obvious. There is a vivid conversation going on how large the allocation to property should be in portfolio. Some have suggested 15% to 20% but the real figure is more close to 10% or even under. This level might not give all the benefits for risk-adjustment performance of portfolio. [32]

In Finland, the legislation regulates capital adequacy of the employee pension insurance companies. This level depends on what kind of assets there are in the portfolio. Regulations determine how to calculate the capital adequacy of mixed-asset portfolio. Real estate assets are considered to be less risky than stocks, for example. Especially apartment houses that have state-subsidised housing loan are considered good from insurance company point of view.

Two development trends of real estate investing can be identified: internationalisation and professionalism. Even though buildings are tied to specific location the market is coming international because of risk diversification benefits. Competition between actors will get harder and only professionals can deal with that. Different kinds of financial techniques exist but are nowadays seldom used. Implementation of techniques,

indexes, financial instruments and benchmarking between real estate assets and others are coming to general use. To make this development possible there is a lot to do also in legislative environment, e.g. reform of legislation concerning capital adequacy, taxation, real estate funds, etc. [33]

Changes in capital market dynamics are main drivers of cross border real estate capital. Currency risk of a single foreign investment is substantial when currency conversions might change hundreds of percents. One example is Europe where the common currency Euro has facilitated the cross border investments. The amount of foreign direct investments has risen especially in countries, which are macro-economically stable. [34] Finland is one of these countries but limiting factor is small markets. E.g. institutional investors in Europe only invest in large objects; order of magnitude is dozens of millions of Euro. We do not have many real estate properties of this size (even in other Nordic countries). One suggestion has been to build a Scandinavian real estate fund [35]. This fund would be big enough to attract e.g. German investments. But as mentioned earlier there should be changes in legislation before this.

The decision making process of the portfolio planning and management is described in Figure 4. This continuous process gives the framework for the manager to handle a portfolio. Selection phase is also dependent on the larger context where the real estates are only one part e.g. insurance company. Of course the case can be e.g. real estate investment company, where the total portfolio consists of only real estates. First three steps, analysis, research and selection, give information to strategic level and through that to operational level. Implementation and monitoring should be directly connected to tactical planning and operational management. [28, pp. 5–7]

Managing has been the main focus of strategies concerning property portfolios despite the fact that the decision-making is based on the intuitive judgement and experiences of property decision-makers. There is a need for financial management tools but these seem to be dependent on sufficiency of data. Inadequacy or even lack of the time-series data is the basic problem that causes the reduction of reliability. Different methods that categorise portfolio strategies have been developed. One of them is shown in Figure 5. It shows how return requirement, volume and adventurism choices describe different strategies. [36, pp. 1–2]

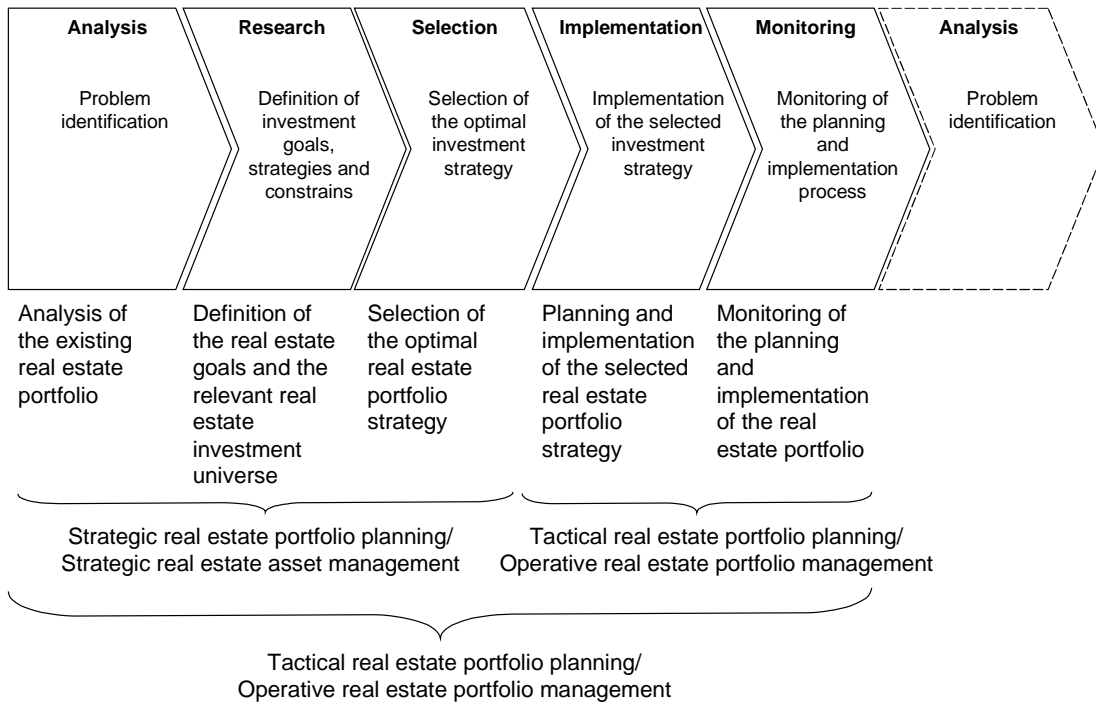


Figure 4. Process phases in real estate asset allocation decisions [28, p. 7].

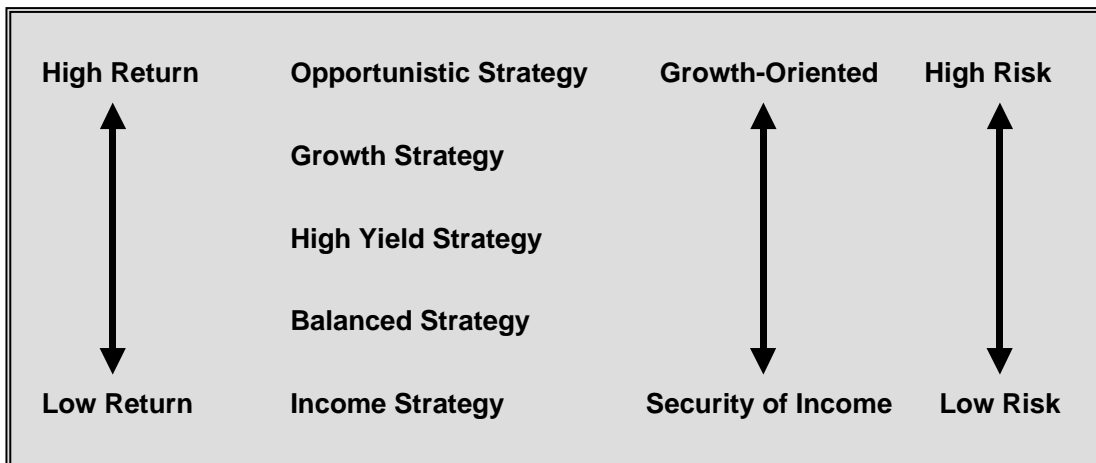


Figure 5. Determinations of Portfolio Strategies [37].

Property types also vary between different strategies. Growth-oriented companies favour office and retail properties, which need a more active portfolio policy. Strategies that are based on security of income and low risk prefer industrial properties. [36, p. 7] E.g. commercial real estate investors hardly use strategic risk analysis techniques. There are two important reasons why they should start that. One reason is that because real estate assets compete with other assets, same kind of information should be available, e.g. reliable information on the risk-return characteristics, correlation of real estate

returns with other asset classes and with inflation. The second reason is that when using these analysing techniques the investor can be more aware of relevant risk drivers, the policy instruments, the objectives and connections between risk drivers, instruments and objectives. [29, p. 3]

There are two different kinds of opinions about opportunities concerning international real estate securities or direct foreign real estate investment. Some think the opportunities are abundant but others claim that fluctuations in exchange rates, currency risks and global financial market performance reduce or remove all the benefits. [38] Wilson, Zurbruegg and Gerlach [39] have found evidence against the diversification benefits when they investigated Asian property markets. At least the benefits are likely to be lower than previously believed.

Internal rent charging has been an important issue in the private sector and during recent years it has become an important issue also in the public sector. It has two aims when it is reflecting property's role as an operational and as a financial asset. First the space should not be used as a free good but rationalise the use. Secondly it should be identified if the invested capital of property asset is earning adequate return or whether other kind of tenure would be more efficient. [40]

3.2 New Financial Instruments

New financial instruments are coming to Europe to serve not just private investors but companies when investing in real estates. There is a need for new instruments partly because regulations are changing and new types of partnerships are arriving. International Accounting Standards (IAS) effects on European real estate markets. IAS-regulations will concern financial statements of listed companies not later than beginning of the year 2005.

Sale-and-leaseback-solutions have been popular among Finnish companies. Coming of IAS puts some of these solutions under different light. It is significant if the investor has really taken the risks to his or her responsibility. High transaction costs have been an obstacle against the outsourcing of large real estate complexes. In Figure 6, there is a basic solution of sale-and-leaseback. There is room for new financial solutions in Finland. [21, p. 12]

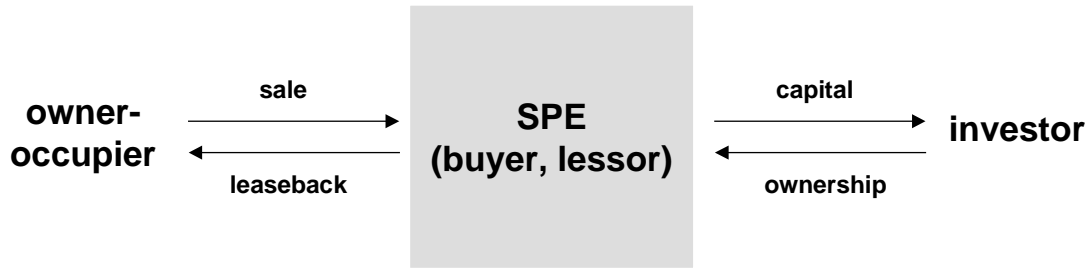


Figure 6. Basic structure of Sale-and-leaseback-solution [21, p. 12].

New financial instruments are also emerging in the housing sector. Eastern European countries are developing basic mortgage systems in a situation where people are not used to own their apartments. In Western European countries the development is different. Some of the differences follow the population structure and welfare e.g. development of reverse mortgage.

3.3 Real Options

Options are a familiar concept from companies and their rewarding systems. Options and option price theory have interested real estate professionals for some time now. Financial option is a right, but not the obligation, to buy or sell a security at a fixed price within a fixed period of time. Option price theory leads on to that the determination of discount rate is unnecessary. There is no need to make assumptions about the risk structure. [41] Real option is an investment that provides the right, but not the obligation, to obtain the cash flow produced by some real world asset, e.g. oil or real estate [42]. Table 1 shows the similarities between financial and real options [41].

Table 1. Similarities between financial and real options [41].

Financial option	Real options	
Option to buy or sell stocks	Real option to invest	Real option to disinvest
Share price (= current value of asset to be purchased)	Net present value of future cash flows (without considering purchase price)	Net present value of future cash flows (without considering disinvestments)
Strike price	(Future) investment payments	(Future) disinvestments
Time to maturity	Time until investment decision has to be made	Time until disinvestments has to be made

The values of investments are usually underestimated when there are options embedded in the investment. Discounted cashflow methods can not take options into consideration. Options can be used to:

- delay or defer when making the investment (delay)
- adjust or alter the production schedules as price changes (flexibility)
- expand into new markets or products at later stages in the process, based upon observing favourable outcomes at the early stages (expansion)
- stop production or abandon investments if the outcomes are unfavourable at early stages (abandonment).

Real options mean that an investor will pay extra for the belief that cash flows in future will be bigger or less risky. It cannot always be seen if there is an option included in an investment decision. Another point is how significant the economic value of the option is. Option pricing model is one tool to value the option but there have been doubts of its competence. [43]

The current and future value of the real estate asset and the variability of value are the main problems the researcher faces when obtaining the data. There are only few experiments of empirical testing of real options. The use of option price theory has enabled the investors notice that even if the net present value (NPV) of investment is positive it might not be optimal to invest. It might be beneficial to wait until the uncertainty concerning future cash flows has been solved. Timing of the investment can be taken into notice by using real option approach. [44]

3.4 Current Topics in Valuation

In Eastern European countries where the orientation to a market economy happened about ten years ago, the real estate valuation is finding its way. The legislation has changed, so the formal rules might follow market based system but it takes a long time before the informal rules do change. The value of real estate had been fixed by regulations so that it did not reflect the conditions on the market but a political will of the legislator. Now the target is more or less to reach a practice in market valuation of real estate but there is lot to be done e.g. among professional valuers. They should use more developed valuation methods rather than the old administrative valuation. The characteristics influencing on valuation can be defined as follow [45]:

1. General characteristic e.g.

Size (km²), geography of the country, amount of population, size of settlements, geographical position.

2. Property ownership e.g.

The stage of the privatisation (building land, apartments, apartment buildings), amount of owner-occupied properties (high amount can cause example high market rents), incomplete legislation of different kind of owning (leasing, investing).

3. Spatial planning system and permits e.g.

Changes in focus of spatial plans (economic potential of location was ignored earlier), procedures to acquire building permits (length, costs).

4. Data e.g.

Existence of regulated real estate records, updating of the existed land registers (effects of privatisation), the quality of data (should offer a basis for safe trade, assessment or impartial taxation), availability.

5. Taxation

Incomplete or absent legislation, incomplete data.

6. Property finance

Level of interest rates, processing times of real estate transactions, underdeveloped mortgage markets, tradition of loaning coming to citizen's informal thinking.

7. Real estate transaction prices

Lack of available official data of prices, level and variation of real estate prices (objective factors cannot always explain the differences), verifying the exact transaction cost is missing (costs effect on prices).

One interesting event was when Eastern and Western Germany united. During a very short period the property markets had to be established and evaluated. There was not an existing real property market in the former Eastern Germany. Also, the statistics were fictional and based on regime's respective five-year-plan. [46]

The expropriation of land for common use is included in many European countries legislation. The legal basis of this right to take private property for public use differs among countries but it is well established e.g. in Germany, Portugal, France and United Kingdom. The establishing means example that the legislation defines the procedure, valuation and valuers expertise. [47] Coming of international accounting standards have been one driven factor for standardising valuation practice. Other drivers are e.g. governments' requirements for publicly owned assets. [48]

4. Corporate Real Estate Issues

4.1 Developments in Corporate Real Estate

Research in corporate real estate (CRE) has increased during the last ten years. Implications of CRE concern two different areas, financial and management issues. CRE means a real estate as an object that is used by an organisation. CRE includes also the people and institutions that relate to that object. The main criteria for the term CRE to be used are that real estate is in an important role of company's production process and that the management needs an organisation of its own [49]. Real estate as an asset has not been very developed in corporate strategies in Europe. This means that real estate assets are not managed the way they should be [50].

The focus, when deciding what kind of workspace is needed, should be part of a company's core business. To have appropriate space and services right on time gives savings to company. That is why it is important that corporate real estate issues are taken into consideration at strategic level of the whole company. This thinking is called corporate real estate management (CREM). But without knowing the core business the real estate management cannot add value to it [51, p. 12]. One main problem when promoting this thinking has been how to allocate the costs properly on those who use the space and services.

A wider concept concerning the real estate business is how to manage the resources of the whole corporate infrastructure. This is called corporate infrastructure resource management (CIRM). [51, p. 14.] Technically, proper space alone cannot offer the optimal work conditions. There are also other factors that should be connected to space. Workplace is a concept that places the worker in focus. Welfare of people and their promotion for productive working are the key issues. In fact this thinking is not only concerning workplaces like offices or industrial buildings but also homes and public places. Technical solutions should make things possible. [52]

Bon et al. [53] have surveyed corporate real estate policies, functions and activities during a period of nine years (1993–2001). They found that CRE units have reached more strategic level in their organisations. Approach has changed towards more professional tools and techniques, and also to higher data requirements. Use of benchmarking is increasing most. CRE organisations have considerable knowledge, which should be collected and spread out in a formulated shape.

4.2 New Technologies and Services in Real Estate Business

The real estate and construction industry is undergoing a change towards service orientation. Technologies in these areas are changing even faster. The exploitation of information technology has had a special impact on practice and also on research. Compatibility of different systems is in a key role when the information from design phase should move on e.g. to management of a real estate. Standardisation is in progress but proceeding slowly. Information technology offers many new opportunities to real estate and construction business. The difficulty is in finding the right technology that improves activities. [54, pp. 11–12]

Customers of business premises have been the driving force of the change in the real estate and construction business. Adding value is now in focus, not e.g. minimising the costs. Competence of service provider will be important, which means that demand of professional services might rise. The owner of real estate has an important role when different future scenarios are considered, e.g. moving the investment policy towards economy of life cycle. Co-operation enables the development and implementation of new solutions. [54, pp. 23, 41–42]

Development in the housing sector has not been as vivid. The technologies and services for special groups, e.g. elderly or disabled, have developed fast together with design, though. One Finnish export product that can be seen in near future is a service concept for elderly people. First example is in Japan and the following direction is to west, to United States. But somehow so called intelligent home has not progressed at the same way. Intelligent home used to include only technical devices but nowadays the meaning is wider including also services. This area has a lot of interesting research topics that requires interdisciplinary know-how.

4.3 Real Estate Information

Real estate information and databases are important for several reasons. One is the public interest, e.g. taxation and urban development. Other reasons are more private concerning individuals or corporations, e.g. functionality of markets. The reliability and accessibility of the information are important issues. This varies highly around the world. In Europe, the development of basic real estate information systems, in some of the countries, is relevant issue but at the same time others are already applying the existing information. The situation of basic property information in Finland is good. E.g. taxation has been one of the driving forces for present situation. Now there is a development of applied information for e.g. growing real estate management sector.

We need information of real estate property because of many reasons, e.g. lack of information is a barrier to entry to market. Standardisation of information is a necessity for the globalisation and mobility of demand. Basically the information concerning real estate is connected to permanent location. In a free market the information has a special role because it ties buyers and sellers. If all the information is available to all participants the market is transparent. This condition has to exist if market functions efficiently. [55]

There are some lessons that can be taken from empirical studies of property markets in Europe. First the creation of databases needs years of work even if there is only simplest data included. Secondly, the use of economic model faces difficulties when trying to apply to statistical data. Third point is that in real estate market the location and related issues are very important. [56]

The information concerning real estate markets can be divided into four parts and there are often problems to access this data. Parts are rental (e.g. rents, demand and supply), investment (e.g. yields, prices), property (e.g. building costs) and capital market (e.g. credit conditions). Transparency of market is a key factor when trying to attract professional investors. Initiators for improvement of transparency are identified in Figure 7. [57]

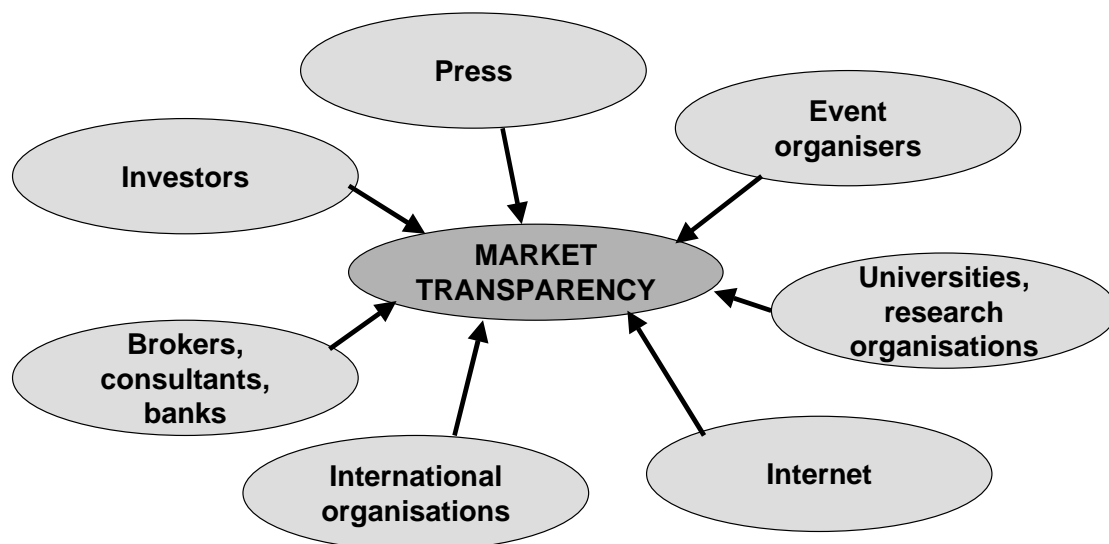


Figure 7. Initiators for improvement of transparency [57].

There is a developing work, concerning indices, going on in several countries in Europe, e.g. Finland and the Netherlands. Indices represent the general market situation about chosen factor like rent, prices or return. The size of the market or availability of data can

be limiting factors to building up the index. But the longer time the index exists, the better it becomes in terms of reliability.

Developing a price index is important for the benchmarking approach that can be used in practical real estate management. Especially the banks, investment funds and insurance companies are interested in this kind of information because they need reliable information on rate changes. Buildings change over time and they are heterogeneous so there is need to have a point of comparison. Theoretical point of view, the importance comes through as an interest to reveal the changes in the market and its trends. The construction of price index can be made in several different ways where the basis of index is different: transaction prices, expert valuations, quota of real estate societies etc. [58] Comparison with statistical tools and different kinds of other methods could be one of the future research topics. Statistical methodologies do not give satisfactory results when there is a lack of reliable data and statistics. [59]

5. Future Workplace, Home and User Requirements

5.1 Technology Integration

The basic element behind technology interaction is human actions. There is a need to move from technology driven systems to services on demand. In this context the studies should cover processes taking place in spaces and premises, human-technology interaction and technical systems. Applied technologies will be more and more used in future and systems will be integrated into the everyday environment so that the use takes place through human interfaces. [60]

Figure 8 outlines the environment where we are operating. Physical environment consists of land, buildings and infrastructure, which include different kinds of technical systems. ICT has enabled products and services that form the virtual environment. Human needs are guiding the markets and the focus is on the user. A good built environment and intelligent products and systems produce wellbeing for people. [60]

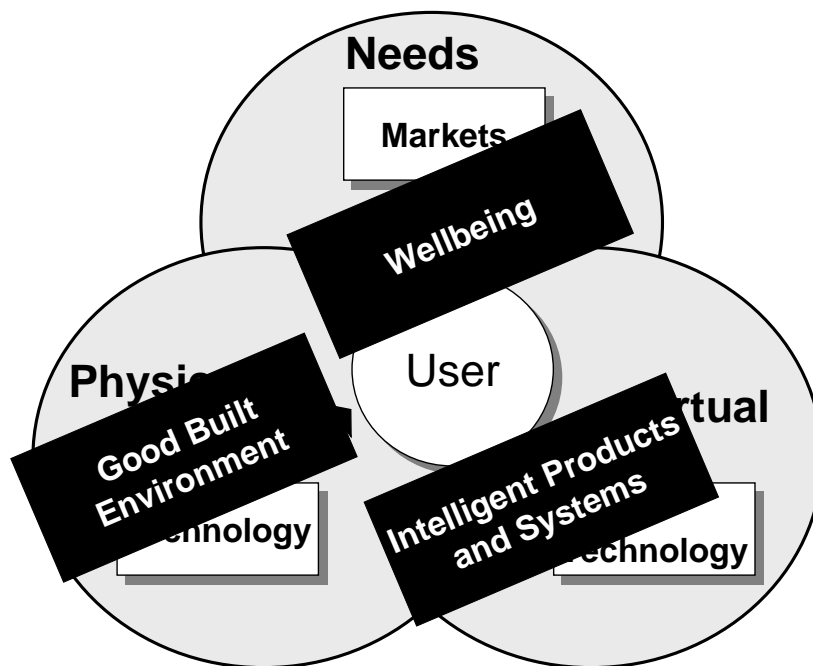


Figure 8. Future's Real Estate and Construction Cluster in Finland might look like this [60].

The development of technical systems has been distinct from one another. This will hardly continue. Instead, we need integrated tools to operate with the whole chain from

materials to spaces and premises. Earlier mass production of single products needs to change towards smart and flexible systems and services so that human needs are better fulfilled. [60.] Mass-customisation, co-configuration and design on demand (DoD) will be driving approaches behind the whole chain: design, manufacturing, selling, marketing and delivering. [61]

One of the biggest challenges in the future is how we fulfil the needs of an ageing population. User-friendly technologies and services are in the focus. There is a need for research that finds solutions for e.g. human technology interaction or integrated systems and services. Home is a place where people fulfil their everyday needs (eating, sleeping etc.) and where they usually enjoy being. Running daily routines is not always possible without extra help. By combining technologies and services people can ease their living, e.g. move some routines to service providers or arrange activities in a more suitable order for them. Technology enables service provision that lets people live independent and secure.

5.2 Future's Workplace

People still need face-to-face contact and technology cannot replace that. At least, not yet. Technology is not enough even though some might think so. But at this point there should be adoption of a new way of thinking: to develop technology on user's terms. This means that users, engineers, researchers of behavioural science, economist's etc. work together.

Current thinking in workplace design is moving towards more flexible spaces that better serve different types of tasks, which include e.g. meeting rooms, touch down areas, club/cafe areas, owned desks, hot desks (shared), owned offices, hot offices (shared). In theory, working is possible anywhere and anytime. People can work alone, coupled and teamed in real space or in cyberspace. [62]

Salaries are the largest cost for most office-based companies but property acquisition and operational costs are the second largest items of expenditure. Information of true occupancy costs, especially concerning whole life cycle, is rarely available to help management. Costs caused by single factors, e.g. IT, can be frequently considered, though. But workplace consists of both physical and virtual spaces, which complement each other. The investment should be considered as a whole so that the real benefits and costs can be seen. This requires more understanding about the relationship between workplace and operational factors. [63, p. 1]

"Space charging" is a commonly used approach for allocating costs but more research is required about the real benefits. The efficiency of measuring facility management (FM) services is another topic that needs attention. The focus is usually on costs and technical measures but not on the effects on productivity of staff. Too little attention has been paid to effects on the changing nature of work: effects caused by functional obsolescence of buildings as well as the knowledge economy. [63, p. 2]

Working culture might also get benefits through changing the workplace. Especially if the overall management thinking and belief systems have been tied to this change. Management issues are more important than issues concerning design. Occupiers' requirements change along market responses. Needs change much faster than property's capability to adjust on those needs. Occupiers are not capable anymore to predict their needs and this has its own effects on property owning and markets. [63, p. 3]

According to Gibson and Lizieri [64, 65] most of the companies think that their new business practices have not affected the lease length or location, but the ability to exit has become one of the main criteria. It is clear, though, that new, more flexible space is needed. Total costs associated with property and facilities are difficult to obtain. The Balanced Score Card (BSC) is a developing approach to measure the outcome of success like customer retention, business process efficiency, learning and innovation alongside the financial performance [63, p. 16].

Market orientation has given a new way of thinking in the real estate sector. Firms in this sector provide services and products that are more and more directed to special customer groups. Product development also follows more closely the customer needs. The importance of branding is increasing because players need to stand out from the each other. The concept is not only restricted to external characteristics of product but also address the emotions and risks related to decision making. [66] Nowadays the design of a workplace considers actions more important than the status of the employer. Workplace design is an important tool to promote innovative working.

6. Concluding Remarks

The real estate industry has been suffering from a lack of innovations and slow growth of productivity. Research and development efforts have not been too high and the risk level of R&D has been low. [67] The Vision 2010 for Finnish real estate and construction sector is a positive achievement; the work started from the initiative of industry.

Development needs co-operation between different parties. This means public as well as private partners. The situations are win-win cases where both partners get benefits. In PPP this might mean swimming hall to citizens and a constant source of income to project companies. The principles of sustainable development are not against economic development.

Risks concerning real estate investment are not going to diminish either. E.g. diversification might be one option but use of this or any other approach needs knowledge of the markets and an understanding of real estate assets. Owners need to have more and more competence for managing their portfolio, real estate and customers. To do this properly they need partners who each focus on their core business e.g. one manages tenants and another buildings. The real challenge is to keep all this under control. Otherwise the benefits might not exist at all.

Investors and owners act differently because of external and internal constraints. Some specific external factors, common for all, can be identified but corporations' inner factors differ. Internationalisation will bring about more professionalism. Legal and political restrictions come closer to each other and the same might happen in companies if the workforce is starting to move.

Eastern Europe is now undergoing the biggest changes in Europe. Ownership, the basic right, is under conversion. This will definitely affect the construction and real estate business all over Europe. In many Eastern European countries the first step is to improve the legislation concerning e.g. taxation. To ensure the system works objectively, a proper real estate register has to be developed. Valuation of properties should be transparent and the valuers should be officially approved and supervised.

There is a transition going on in Europe concerning corporate ownership and governance. New kinds of ways to deliver services, at global and regional levels, together with customer focus, have formulated new partnerships. Much research work has to be done concerning services to the real estate cluster. [68.] In particular, services in the real estate sector are having increasingly important role in the real estate and construction sector. Until now, services and technical devices have been developed

separately but now the situation is gradually changing. Services are more and more often seen as combinations of services and physical products. This will lead to integrated services for specific customer [69].

Housing and working are under constant transition. Exploitation of technology, offers a lot of opportunities but to make wise decisions for the long run is difficult. To predict what is happening after five or ten years is a mission impossible. The research and development should focus more to create these future outcomes together with companies.

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Author(s) Nummelin, Johanna			
Title Recent Trends in European Real Estate Research			
Abstract <p>The goal of this report is to describe the European trends in research in real estate business. This state of the art is based on different seminars and discussions with real estate professionals. Basic events behind this report were two conferences (8th and 9th) of the European Real Estate Society (later ERES), held in 2001 and 2002. ERES was established to create a network between real estate academics and professionals across Europe. Researchers from all Europe that have a shared interest in real estate related issues, encompassing land, commercial property, housing and mortgage markets, could share opinions and experiences. ERES is also a member of the International Real Estate Society (IRES) through which the ERES network has a wider dimension.</p> <p>However this report does not address the real estate trends merely from a conference point of view but also takes leads from articles – both national and international journals. A special emphasis is given to discussions that are presently going on in Finland. There are two main focuses: firstly, to see the Finnish real estate research in a wider international context and secondly, to see how we should combine the good technology base with user's needs, real estate economics and ownership. The National Technology Agency of Finland (Tekes) started the five-year technology programme "Rembrand" in 1999 to offer public funding for R&D projects concerning real estate management and services.</p> <p>Internationalisation and professionalisation have raised the concern and also the interest to elaborate processes and tools in real estate finance and management. Finnish real estate research is catching up with the world's top level but we have some limitations. Our real estate market is small and there is a lack of potential investments. Several development processes are in progress and it is obvious that the situation will change in the near future. At the European level, the incipient Sixth framework programme (FP6) will connect research efforts in different areas to achieve, for example, sustainable development. Real estate issues are an important part of this.</p> <p>This report addresses different topics concerning urban real estate, portfolio and asset management, corporate real estate and development, workplace, home and user requirements. Real estate's relation to firms' core businesses is in the focus, and future research topics in the real estate sector are proposed.</p>			
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The needs for development, related to real estates, have been recognised in recent years. Changes in business environment have been dramatic in many sectors and have had effects on real estate business as well. Technologies have been developed but the amount of break-through innovations in the real estate sector has been limited. There are also positive challenges, which strengthen the belief in a significant growth of the cluster. This requires fast changes in different kind of fields concerning real estates and an ability to adopt new way of thinking.

Ownership of real estate in Finland is now becoming more and more professional. This fact is verified through differentiation of construction and development. The role of the customer is gaining momentum and importance in the business processes and decisions of constructors, developers and owners. It is foreseen that in the future, the customer will take a major role in certain real estate co-operations. Therefore, the most effective way to possess and control real estate is through the formation of different partnerships between real estate owners, cities, and other relevant actors in the real estate business.

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