AN INTRODUCTION TO RISK MANAGEMENT IN REAL ESTATE DEVELOPMENT

DEFINITION OF REAL ESTATE DEVELOPMENT

The views expressed in specialist literature regarding the precise definition of the term “real estate development” (also referred as “property development”) are varied and, in part, differ from each other. Most definitions refer to a sense of creativity and focus and coordination in order to realise real estate assets.

- ✔ Development means the carrying out of building or other operations in, on, over or under land, or the making of any material change in the use of any buildings or other land. This definition reflects the functional characteristics of real estate development and continues to be widely used.
- ✔ Real estate development is a process that involves changing or intensifying the use of land to produce buildings for occupation.

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DEFINITION OF REAL ESTATE DEVELOPMENT

- Real estate is a triangle of space, money and time. In this sense a particular usage is attributed to a defined space which generates an estimated cash flow over a specific period of time.
- The creation and management of space time units is termed real estate development. This definition primarily makes reference to the economic benefit derived from the space produced by the developer.

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DEFINITION OF REAL ESTATE DEVELOPMENT

- Development is an idea that comes to fruition when consumers – tenants or owner occupants – acquire and use the bricks and mortar (space) put in place by the development team. Land, labor, capital, management, and entrepreneurship are needed to transform an idea into reality. Value is created by providing usable space over time with associated services.

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THE PURPOSE OF REAL ESTATE DEVELOPMENT

The purpose of real estate development is therefore to recognise the potential opportunities for increases in value / future cash flows, that are inherent in land or real estate, and to exploit these by suitable measures.

The added value created by the developer does not result solely from the fact that a building is constructed on an undeveloped plot or that a condemned property is redeveloped, but may also be based on other measures of increasing the usage of the property and the productivity of space. This includes, in particular, the structural usage of currently unused space on a plot of land or within a property, as well as conversion / rebuilding measures, e.g. turning auxiliary space into rentable space.

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THE PURPOSE OF REAL ESTATE DEVELOPMENT

Generally, the priority goal of a developer is the optimal realization of the capital appreciation that has been created in connection with the real estate development process: *"perhaps more than in any other industry the property development entrepreneur resembles the classic entrepreneur of economic history."*

The developer's role is essentially one of supplying a stream of entrepreneurial services to the property market through both the identification and activation of market opportunities.

The real estate development industry assembles and applies the financial and physical resources to construct new built space in its role as a converter of financial capital into physical capital.

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THE PURPOSE OF REAL ESTATE DEVELOPMENT

To meet its objectives, a developer has to focus on the satisfaction of the needs of both target and client groups, e.g. the users of the property and the investors. The quality of a project from the user's perspective (user's goal system) relates primarily to the three aspects of quality of use, rental price and service or building management.

The investor's goal system arises from the classic investment objectives, namely return, preservation of value and liquidity.

Developers may be viewed as the risk-taking entrepreneurs who combine land, labour and capital to plan, manage and market facilities which they believe will provide services demanded by space users.

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THE PURPOSE OF REAL ESTATE DEVELOPMENT

Development is a complex process which entails the orchestration of finance, materials, labour and expertise by many actors within a wider, social, economic and political environment.

Real estate development as a highly synergistic and creative process in which physical ingredients are effectively combined with financial resources and professional skills, to create a built-environment that is economically sound, aesthetically pleasing and environmentally responsive. At its best, the development process is synergistic – that is, the ultimate combination of resources has a greater value than the sum of the individual parts.

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THE PURPOSE OF REAL ESTATE DEVELOPMENT

Real estate development is required to combine the aspects of location, project concept / idea and (use of) capital so as to achieve multiple objectives: the results need to be (micro economically) competitive on a standalone basis, should create and / or secure employment, need to be socially, macro economically and environmentally acceptable and they need to generate a positive return over their life-cycle in the long term.

Distinguishes between real estate development in the strict sense, which comprises the period from project initiation until the decision regarding the further procedure within the conceptual framework, and real estate development in the broader sense, which includes both the planning and construction phase and the usage phase of real estate.

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THE PURPOSE OF REAL ESTATE DEVELOPMENT

This conceptual understanding makes stronger reference to the production factors of location, project idea and capital, which form the starting point of real estate development and whose effective combination results in a specific investment. This definition addresses both the macro-economic and the micro-economic effect level of real estate development. From a macro-economic perspective, it is required that the real estate, as the outcome of development process, meets public demand, while it must be competitive, profitable and sustainable from a micro-economic perspective.

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RISKY NATURE OF REAL ESTATE DEVELOPMENT

Real estate development is considered to be one of the riskiest corporate activities there is.

As the creation of real estate products is in many cases speculative and therefore in anticipation of an unknown future demand, risk and uncertainty are key elements of real estate development.

The development business is to be regarded as highly cyclical and volatile asserts that real estate development is knowingly taking risk.

Real estate development is subject to a number of risk factors. Successful development, inter alia, depends on bringing the adequate real estate product to the market at the right time at the right price. The development profit depends on achieving all that while balancing costs against value.

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RISKY NATURE OF REAL ESTATE DEVELOPMENT

Development is fixed both in time and space and involves relatively large amounts of capital. Furthermore, real estate development is a very complex and cross-disciplinary task as it typically demands a dedicated team including people with different skill sets and expertise and the co-ordination of a wide range of interrelated activities.

Local authorities, legal requirements, residents and neighbours are to be satisfied, design teams and contractors to be managed, time scales, costs and contingencies to be monitored and lenders and other stakeholders – especially prospective tenants and investors – to be satisfied. In addition, real estate developers are often faced with considerable changes in their environment and new challenges driven by the macro-economic, social, urban-planning, political-legal, regulatory, environmental and technological framework conditions.

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REGULATORY PRESSURE

Regulatory and corporate governance provisions are increasingly requiring greater awareness of risk and risk management; it is no longer optional but a mandatory requirement in many countries in order to protect the organisation's stakeholders from the implications of the organisation defaulting on its obligations.

The main thrust of regulation has been aimed at the board of directors, calling for more control and discipline towards effective and efficient operation, reliability of financial reporting as well as compliance with laws and regulation.

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CAPITAL MARKETS PRESSURE

The capital market now also requires adequate corporate risk management. Organisations, which are able to provide evidence of efficient risk management, may benefit from a more favourable cost of capital. In contrast, developers who cannot demonstrate systematic management of risks and opportunities, which is a key component of any corporate control mechanism focused on the creation of value, are not rewarded with a high level of confidence and are penalised by the capital markets. It can be assumed that the capital markets are increasingly determining risk management requirements, with shareholders and stakeholders appearing also as key recipients of risk reporting. Effective risk management assists in the targeted control, transparency and communication of the corporate risk situation and should therefore contribute to an improved rating.

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STAKEHOLDERS' PRESSURE

Other stakeholders of real estate development organisations expect an effective allocation and use of capital. It is a safe assumption that organisations, which are able to demonstrate that they are aware of their risks and manage opportunities and threats in an entrepreneurial and effective manner, are able to inspire confidence among their stakeholders including any other business partners who are more likely to consider an organisation managed in a risk-aware manner as being credit-worthy.

In communicating risk-specific aspects to key stakeholders, a significant objective for management is to assure them that adequate risk management strategies have been implemented.

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REAL ESTATE AS A UNIQUE ASSET CLASS

The most prominent characteristics of real estate are that it is tied to its location, it is heterogeneous, it is scarce and it has limited substitutability.

These factors have far-reaching economic, legal and factual implications. The geographic location alone frequently determines the most likely use as well as the physical and / or structural possibilities, and the value of real estate is largely determined by external factors such as the condition and the possible uses of adjacent properties as well as the infrastructural facilities provided by the public sector.

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REAL ESTATE AS A UNIQUE ASSET CLASS

Land cannot be reproduced, any structures built or developed on a specific piece of land are characterised by a high degree of uniqueness. The heterogeneity of real estate can be derived from its immobility. Low level of heterogeneity results in the creation of material and regional sub-markets, thereby restricting the comparability of real estate.

The heterogeneity results in sub-market risks as well as property and valuation risks. Heterogeneity leads to both scarcity and limited substitutability. The possible uses of real estate are largely determined by the combination of geographical location, structural conditions and legal parameters. Thus, real estate is characterised by both scarcity and limited substitutability.

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REAL ESTATE AS A UNIQUE ASSET CLASS

Real estate development is a highly complex, dynamic and multi-disciplinary challenge. The duration and complexity of the development process involves a considerable amount of time and, as a consequence, real estate developers lack the relative flexibility to respond and adjust quickly to any fluctuations in tenant and investment markets. This results in increased economic risk.

Furthermore, the construction of real estate and the acquisition of a completed property require a considerable investment. Against this background and also in view of the objective of maximising the return on equity, external funds are often necessary to cover capital needs as not all property developers are also property investors. As a result, the development industry and capital market are closely interrelated.

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REAL ESTATE AS A UNIQUE ASSET CLASS

Finally, real estate is also characterised by its long life cycle and useful life. Depending on the purpose of real estate, its capability of being used by third parties and its usage concept, the economic life of real estate ranges between 20 and 100+ years. During this long period of time properties have to be maintained, refurbished or repositioned.

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SPECIFIC CHARACTERISTICS OF THE REAL ESTATE MARKET

The real estate market is fundamentally an open, generally accessible market. At the same time, professional development of larger schemes has certain major entry barriers.

The allocation of land is not generally left to unrestricted market forces, both by the state and in the interest of as well as for the protection of the common welfare. The state, for instance, exerts its influence through social and tax policy in the form of rent regulations or depreciation allowances, and more directly by setting planning policy frameworks.

Moreover, because of the particular characteristics of real estate as an economic asset, the real estate market deviates clearly from the ideal of a perfect market.

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SPECIFIC CHARACTERISTICS OF THE REAL ESTATE MARKET

The most prominent characteristic in this context is the fact that real estate is tied to its location and the immobility that this entails. In addition to being clearly associated with a specific location, real estate is also limited in terms of territory. Thus the catchment area of a property is limited and not fungible. It follows from this that real estate can, in principle, not be duplicated and is differentiated essentially by location, size, use and architectural design. In this imperfect market, tenant and landlord or buyer and seller respectively do not possess complete information about all transactions (leases and sales respectively).

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SPECIFIC CHARACTERISTICS OF THE REAL ESTATE MARKET

Generally, the market participants only have access to limited comparables from sales transactions, which circumstance makes the valuation of real estate more difficult. The real estate market thus regularly shows a lack of transparency and complexity and, in part, inefficiency, since the prices do not fully and immediately reflect all facts that constitute drivers of value. It is not possible, on the one hand, to immediately validate current pricing, while it is made significantly more difficult, on the other hand, to ascertain the comparability of the observed (lease and sales) prices. Regular information bottlenecks and the limited individual possibilities of obtaining, processing and disseminating information interfere with the decisions of the market participants as well as communication between the individual market segments.

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SPECIFIC CHARACTERISTICS OF THE REAL ESTATE MARKET

The cyclical nature of real estate markets requires strategic planning and sound market analysis. Risk management should be on a development organisation's radar during all phases of the market cycle. Because of the comparably long development phase of schemes, there is always a realistic possibility that the completed real estate product will be delivered to the (tenancy and investment) market in a changing phase within the cycle. Analysing and planning for the different phases within the cycle is therefore a key activity and risk management tool for developers.

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TYPES OF REAL ESTATE DEVELOPERS

There are many types of developers and an all-encompassing definition is thus hard to present.

Developers may have an independent background but are also often affiliated to financial or construction mother organisations.

Developers may be classified by their strategic capital role, geographic scope, ownership structure, and product type.

These structural characteristics are expected to have an impact on the complexity of risks which would affect the organisation and therefore impinge on the risk management approach.

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TYPES OF REAL ESTATE DEVELOPERS

Essentially, real estate developers operate as either trader or investor developers. In addition to both types, a third category is distinguished, namely the service developer. Different developer types might follow different objectives and also show different risk profiles, which at the same time could have an influence on the risk management approach.

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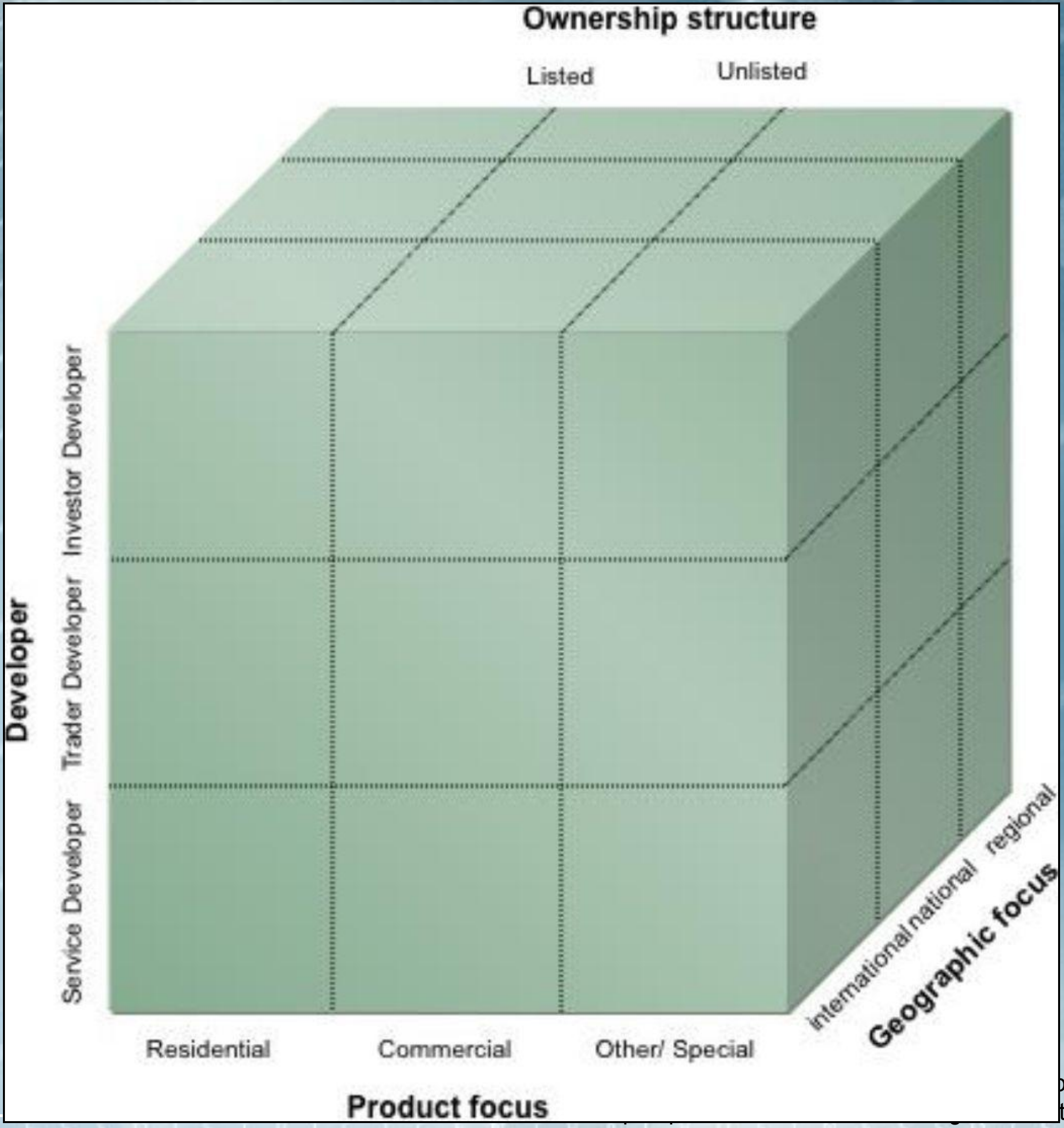
TYPES OF REAL ESTATE DEVELOPERS



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TYPES OF REAL ESTATE DEVELOPERS

Trader-developers typically assume the entire risk until completion of the relevant property, which is then sold together with the land (property and land may even be sold in an earlier development phase in way of forward sales). Their primary corporate goal focuses on exploiting the profit margins throughout the various phases both before and after the actual construction work in the form of development gains. At the end of the development, the trader developer typically decides to sell the property to an investor.

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TYPES OF REAL ESTATE DEVELOPERS

Investor-developers carry out projects to establish a portfolio or for use as owner-occupiers and are responsible for the entire project, from its inception to its completion, and then transfer the real estate into their own portfolio. By combining property development with portfolio investment activities, organisation management can use the steady cash flow from investment properties to finance developments even in times when capital markets are generally not focused on real estate projects or the specific project does not match the financing partner criteria.

Thus investor-developers do – in addition to development profits – capitalise on capital appreciation.

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TYPES OF REAL ESTATE DEVELOPERS

Investor-developers and trader-developers share many characteristics. However, as the time of project exit shifts (i.e. the point in time when the developer has divested all its interest in the assets, and only post-contractual obligations may exist), the objectives may differ.

Trader-developers may evolve to a investor-developer profile over time, once profits from trading are available to be retained in completed real estate schemes for the own portfolio.

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TYPES OF REAL ESTATE DEVELOPERS

Service developers render specific real estate development services as a service provider for third parties in the name and for the account of the client without assuming a majority of risks themselves. This role is often assumed by large, mostly international agency firms or specialist management consultancy firms. Service developers typically focus on the process between project conception and planning stage or, respectively, completion of the building permit process. This is often followed by coordination, project management and coaching tasks.

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TYPES OF REAL ESTATE DEVELOPERS

Financially, service developers commit themselves to the extent that they bear the ongoing costs of preliminary analytical and planning work in connection with the relevant project. Service developers are typically investing only very limited capital at risk into project schemes and aim to generate fee income. Therefore they bear an operating risk role instead of a capital risk role. The clients of service developers are usually owner-operators or investment organisations without any particular expertise in the development field. In the event of capacity constraints or highly complex or specialised projects, other developer types also engage service developers for individual, clearly defined tasks. However, this type of developer is more the exception than the rule.

Hybrid forms also exist, with their differences not being clearly distinguishable.

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TYPES OF REAL ESTATE DEVELOPERS

With regards to the geographical focus of developer's activities, a differentiation into global, national and regional scope may be taken into consideration.

The product categories (residential, commercial, special use) may serve as another classification scheme.

With respect to the ownership structure, listed and unlisted development organisations may be differentiated.

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TYPES OF REAL ESTATE DEVELOPERS

In order to distinguish between different development projects, it would be advisable or even imperative to base any such differentiation on the investment volumes.

Typically, high-volume developments are usually associated with longer development times, entailing greater risks and will likely have an impact on the risk management strategy. In addition to the investor, upon whose requirements and investment criteria a project should be structured, the project size must also take into consideration the working capital, expertise, capacities and resources of the real estate developer.

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TYPES OF REAL ESTATE DEVELOPERS

Organisational size could potentially act as a further classification aspect for development companies. However, developers are typically not disclosing detailed information on their organisations size, therefore information on the structure of human capital is widely only available to a very limited degree. A reason could be that the human capital aspect is indeed one of the most valuable assets and that information on this topic is therefore kept 'confidential'. As a result, it is difficult to draw conclusions on differences in organisational size of development organisations. Developers typically appoint consultants, the number of which will depend on the developer's ability to undertake certain activities inhouse and on the complexity and scale of the proposed development. Thus, the number of senior management and staff may vary significantly from developer to developer.

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STATE OF AFFAIRS IN REAL ESTATE INDUSTRY

The results and observations of the research have identified a lack of understanding in respect of risk management by real estate developers and have also distinguished weaknesses in addressing risk management issues:

- ✔ the developers' approach towards the management of risks tends to be characterized by a lack of formalisation and coordination and largely rely on individual judgment and experience;
- ✔ risk management is not regarded as a continuous and dynamic process and is often fragmented with only few development organisations having formal processes to align risk management with corporate strategy;

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STATE OF AFFAIRS IN REAL ESTATE INDUSTRY

- ✔ most real estate developers do not conduct their risk management aligned to the organisation's specific risk appetite;
- ✔ many organisations have some measures of risk management activities but few can claim to have an enterprise wide risk management strategy;
- ✔ demand for training and education is vital for a rigorous risk management practise.

Hence, various potential benefits could be obtained by development organizations through careful review of their existing risk management practices, which subsequently may also have a positive impact upon the wider economy:

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OVERVIEW TO THE GENERIC REAL ESTATE DEVELOPMENT PROCESS

The real estate development process is based on the understanding the transformation of the physical form, bundle of rights, and material and symbolic value of land and buildings from one state to another, through the effort of agents with interests and purposes in acquiring and using resources, operating rules and applying and developing ideas and values.

In the case of real estate development, the process starts with the three factors of location, project idea and capital and ends with the real estate object being ready for occupation.

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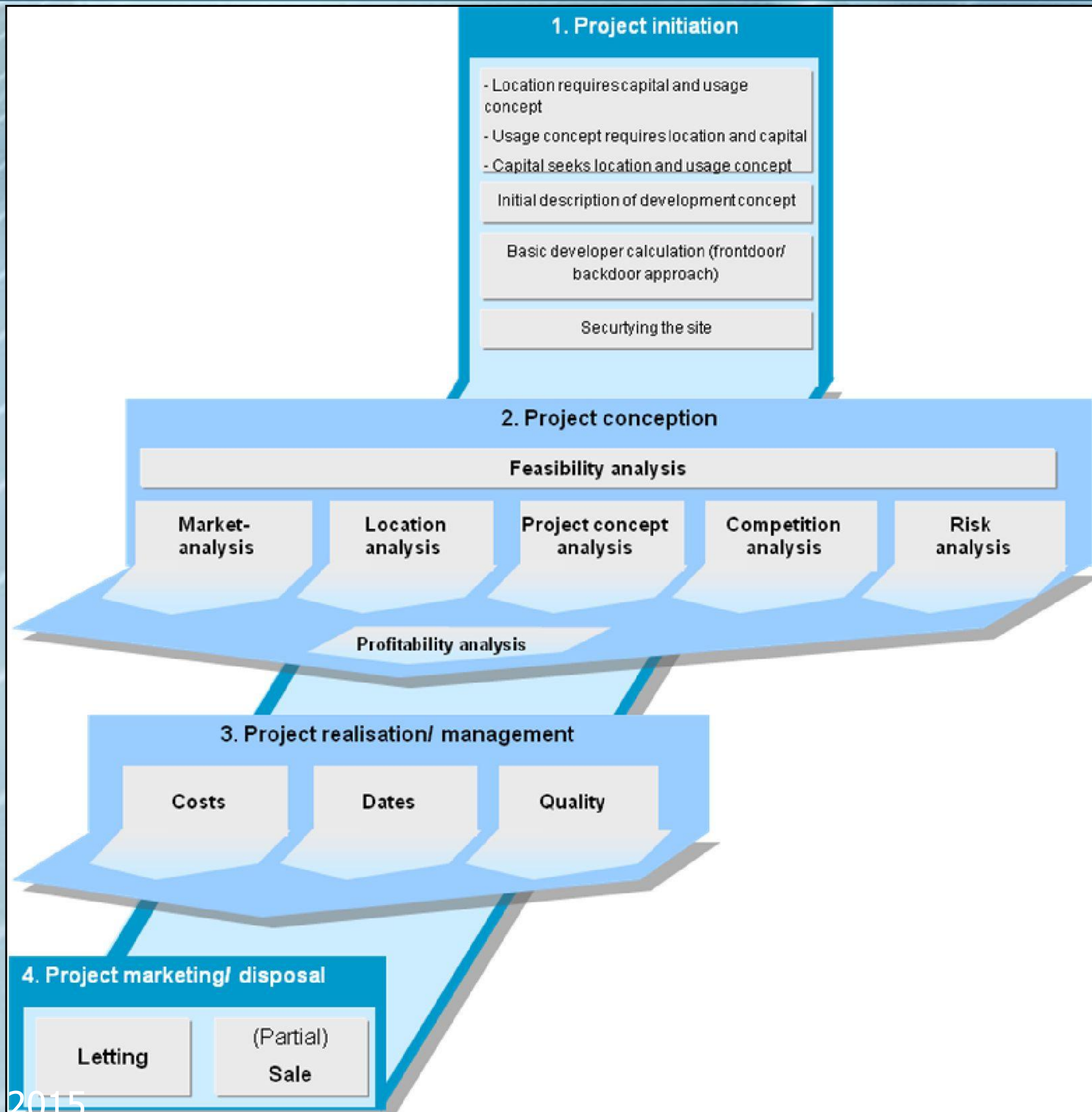
GENERIC REAL ESTATE DEVELOPMENT PROCESS



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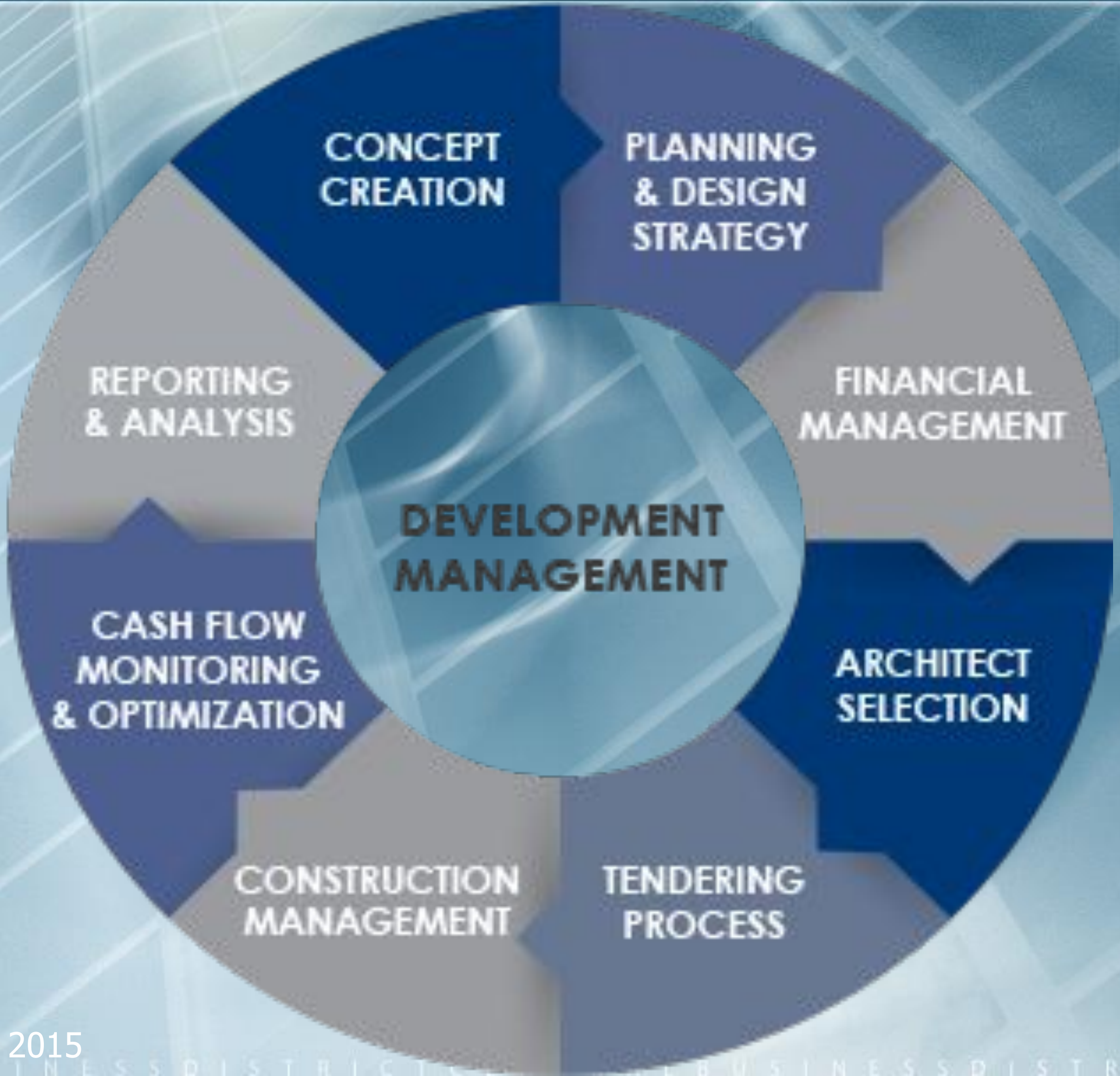
GENERIC REAL ESTATE DEVELOPMENT PROJECT



PROJECT INITIATION

The initiation phase commences the development process.

A main expertise of a development organisation is to identify the future demand on space market to create and provide an adequate supply and thereby to create value.

Creativity and drive are essential for a projects' success.

Generating ideas within the framework of project initiation can, in principle, be divided into a level of factual analysis and secondly a level of inspiration and vision.

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PROJECT INITIATION

Accordingly, the starting situation for a development may either be:

- ✔ an existing plot of land, for which a use / project concept must be found and financing required;
- ✔ a project idea for which a suitable location must be procured respectively capital in search;
- ✔ the availability of capital seeking investment in a real estate project and thus a property / micro location and project idea / project concept.

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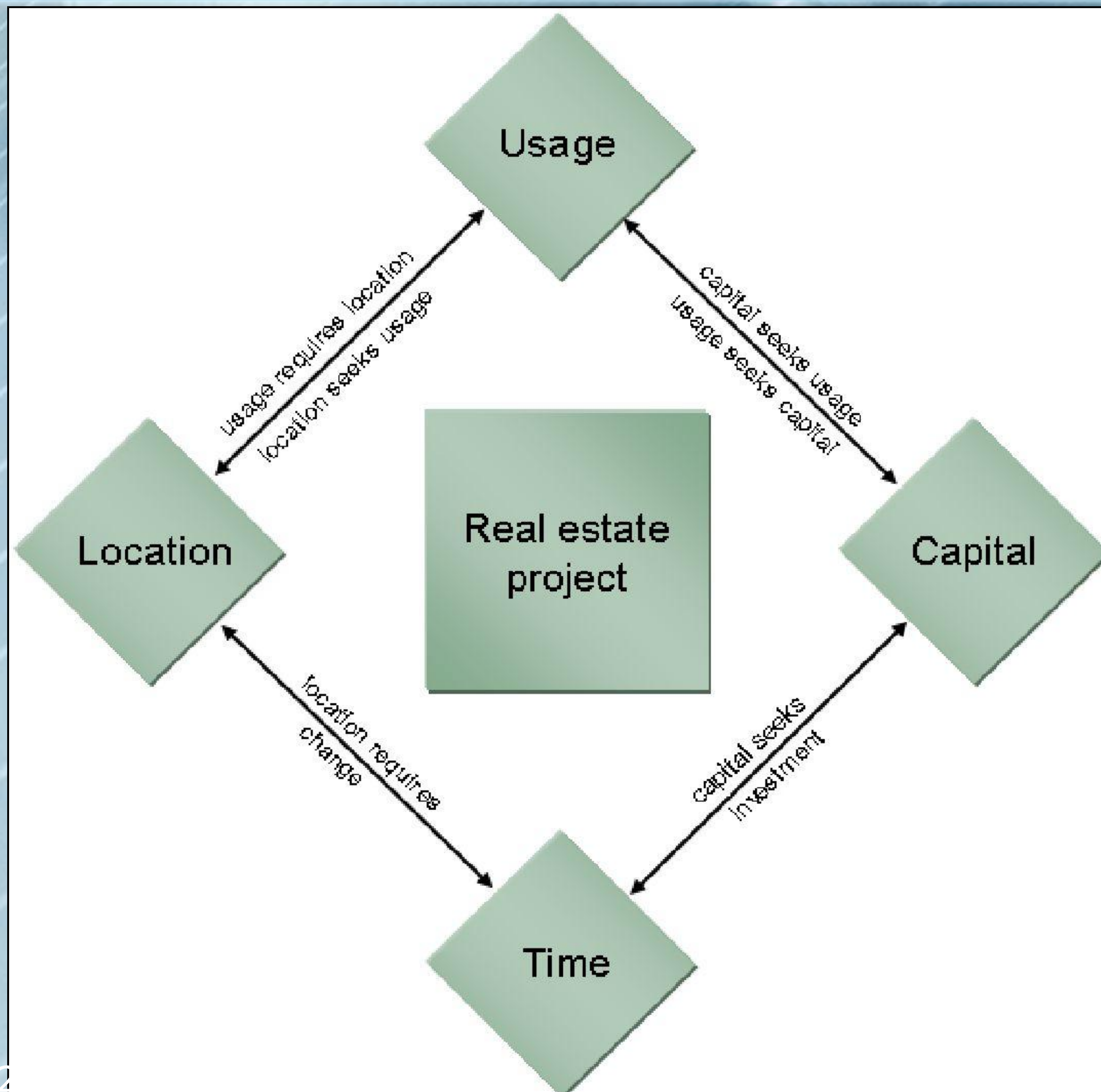
CONCEIVABLE STARTING-POINTS FOR A REAL ESTATE DEVELOPMENT



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PROJECT INITIATION

Accurate and pre-planned "timing" is a critical success factor in this context. This depends on the one hand on project-specific market conditions (tenant and transaction market) and the relevant market cycle and on the other hand on the availability of attractive land plots. In this respect, the developer supplies entrepreneurial services to the property market by identifying and activating market opportunities.

Main activities within the project initiation phase are commencing specific market research to ascertain demand from potential users / tenants and potential investor profiles for the proposed development as well as preparing rudimentary development appraisals that will comprise the design, cost and program elements of the development. In case of a unsatisfying outcome of the concept and its initial economics, the project will likely not be pursued any further.

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PROJECT INITIATION

Based on a positive evaluation, the next major step is to typically obtain approval from the developer's senior management board and other significant stakeholders to proceed with the initial concept.

If the preliminary review is positive, the next step is to secure the required land in case the site is not already in the developer's possession or under exclusivity. In that case, a strategy for identifying and securing a site of suitable size, budget and location is to be elaborated. Often it is preferred by developers not to purchase the land at this stage but ensure exclusivity with the owner(s), given that a full feasibility analysis has not yet been completed.

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PROJECT INITIATION

Option agreements or a purchase subject to conditions precedent are possible routes to achieve this. In case the land has to be acquired with immediate effect, a developer is likely to first undertake the following phase of the development process, the project conception phase, prior to signing a purchase agreement.

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PROJECT CONCEPTION

The conception phase starts with the project feasibility analysis and ends in the implementation decision, or in abandoning the project. This phase can be qualified as one of the most important ones in the development process given its influence to the decision-making of the developer.

Once the rough contours of the project have become visible in the preliminary acquisition review, what matters next is to outline the content of intellectual construct that was created in the initiation phase and to document it as a detailed project concept.

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PROJECT CONCEPTION

This is ultimately intended to answer the question whether and in which manner the project is capable of being realized.

Real estate concepts comprise a great number of elements: function(s), location, size, branch (mix), target group(s), positioning, design, technical implementation / level of finishing, legal structure, marketing strategy, exploitation and management model.

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PROJECT CONCEPTION

The term "feasibility analysis" has become accepted as a general term for the many types of analyses in advance of project implementation that are covered in this phase.

The goal of a feasibility study is to articulate a finding about the economic sustainability (feasibility) of the project under review.

A real estate project is "feasible" when the real estate analyst determines that there is a reasonable likelihood of satisfying explicit objectives when a selected course of action is tested for fit of a context of specific constraints and limited resources.

Prior to committing funds to a development project, a developer as well as his stakeholders and financing partners need a confirmation that market fundamentals will support the values assumed in the project appraisal.

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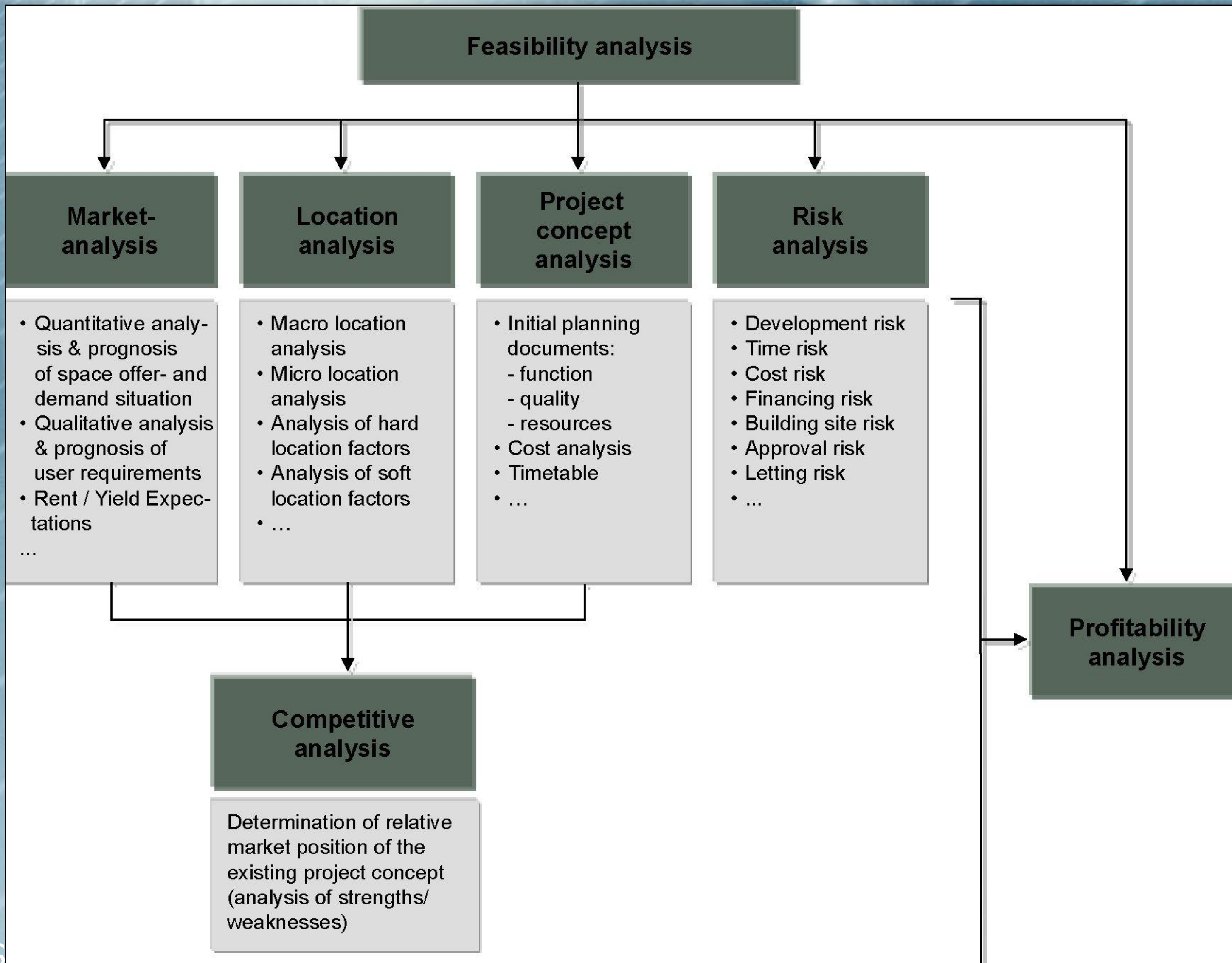
STRUCTURE OF FEASIBILITY ANALYSIS



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MARKET ANALYSIS

The market analysis concerns itself with the supply and demand situation in the short to medium term. It identifies the specific market segment (in terms of use and location – geographical and technical submarkets) applicable to the project.

The main criteria to be considered are the requirements of potential users, how readily the project will be absorbed by the market, and subject to the effects of this absorption, the rent and property values applicable to the project.

The market analysis should be an objective view of the market, and allow the developer to understand the market dynamics and review, which to its own strengths can be utilised to take advantage of those dynamics.

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LOCATION ANALYSIS

The analysis of the location should critically verify the findings of the inception phase as documented in the preliminary acquisition review.

The objective must be to obtain verifiable data that can be analysed and presented in a manner to demonstrate to third parties the planned use of the land.

These analyses are concerned with the long term-effective characteristics of micro- and macro locations.

The location factors are both easily quantifiable "hard" criteria, as well as more “soft” criteria, which will always retain some level of subjectivity.

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PROJECT CONCEPT ANALYSIS

The building or usage concept for the use of the property must be based on the market and location analyses (micro and macro) discussed above. It examines the architectural and technical design of the building. Important criteria are the standard of specifications and the flexibility of the use of the building and its space efficiency.

The objective is to meet market demand while minimising cost (to build and operate) and maximising flexibility.

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COMPETITION ANALYSIS

The three above aspects of market, location and usage concept typically run parallel and are combined as the basis of a competition analysis, comparing the market position of the evaluated project with properties, which are or will be in direct competition.

The first stage is the identification of appropriate benchmark properties.

The objectives are to meet client needs while differentiating the development as much as possible from competitors.

However, the weighting of criteria will always retain an element of subjectivity, which leads to residual risk.

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RISK ANALYSIS

While risks are present at all stages of property development, the feasibility analysis offers the opportunity to analyse them at a preliminary stage and review their impact prior to commitment of capital, as well as documenting and trying to mitigate such identified risks during later implementation.

To some extent, the progress of a development project through the phases of development has a general impact on its risk levels.

In its early stages of the development process, the initiation phase is characterised by a high degree of uncertainty and, in particular, creative and complex search and analysis procedures. At the end of this phase, success potentials and competitive advantages of real estate projects are identified and the project fundamentals defined.

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RISK ANALYSIS

The project-specific manoeuvrability, i. e. the scope for structuring architectural, technical, economic and legal aspects, mostly decreases the further the development advances.

As a project progresses, types and extent of risks may change; new risks may emerge and existing risks may change in their importance. Of particular importance is the relationship between time and flexibility note: "As the process takes place, the developer's knowledge of the likely outcome increases but, at the same time, the room for manoeuvre decreases. Thus, while at the start of the process developers have maximum uncertainty and manoeuvrability, at the end they know all but can do nothing to change their product which has been manufactured on an essentially once and for all basis". Risk management should therefore be a continuing activity throughout duration of the project.

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RISK ANALYSIS

Furthermore, although the overall complexity of the project decreases during the stages of the development process, the ability to influence the project – especially with respect to the commitment of capital or tied-up costs – declines.

A high level of uncertainty occurs in the early stages of a project, which is also when business decisions of major impact for the success of a project are made. It is therefore imperative that potential risks are identified, assessed and allowed for at the outset of any project.

The developer should consider the risks to the project, attempt to quantify them within the feasibility analysis and potentially adjust the project so as to minimise them, where possible.

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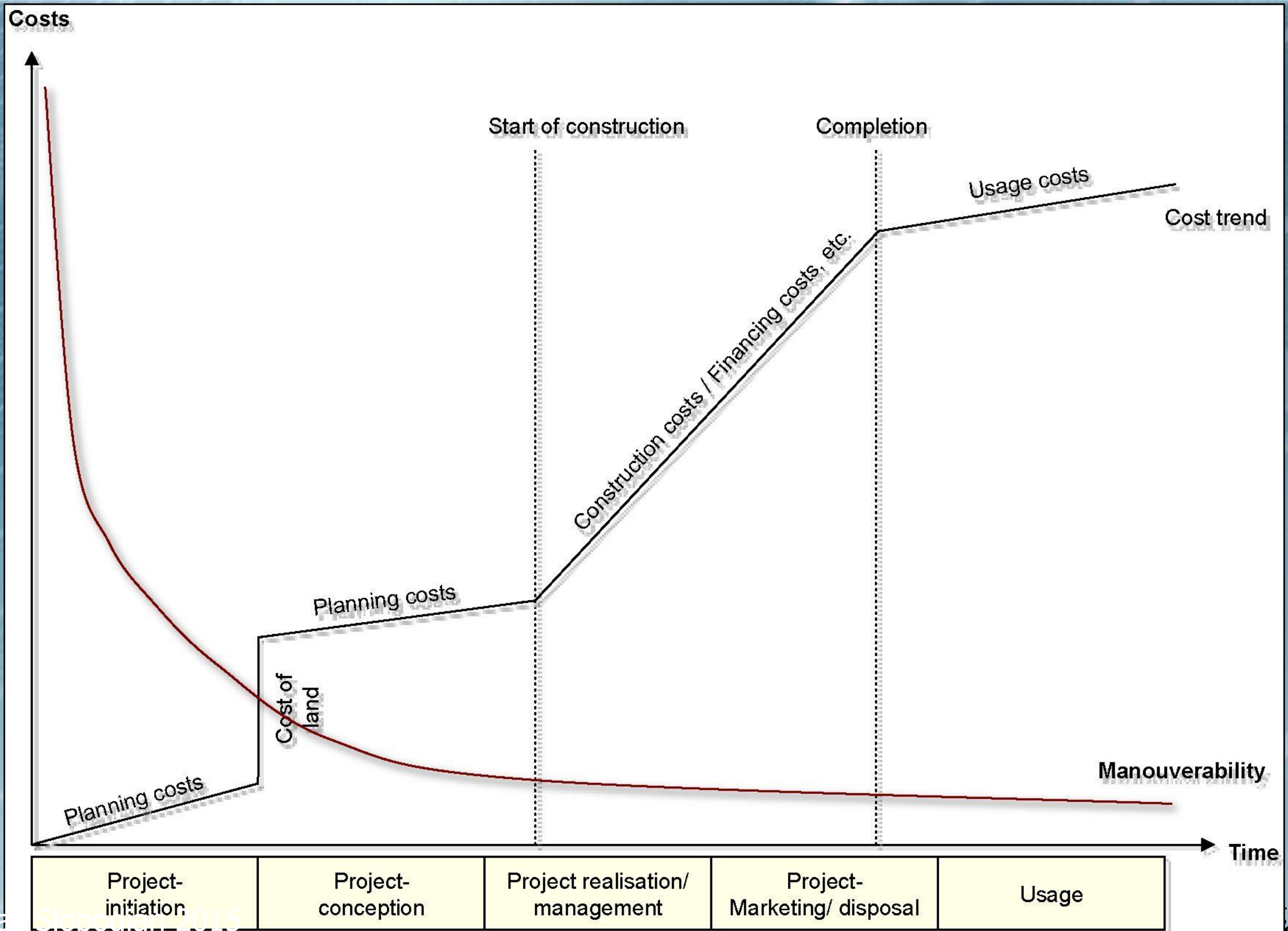
THE DEVELOPER'S DECREASING ABILITY TO INFLUENCE TOTAL COST OVER THE LIFE OF THE PROJECT



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RISK CATEGORIES AND RISK TYPES IN THE REAL ESTATE SECTOR

Risk-categories	Systematic risks	Unsystematic risks
Existential risks	• Administrative risk • Employment market risk • Employment risk • Income risk • Inflation risk • Infrastructure risk • Communication risk • Economic risk • Culture risk • Country risk • Nature risk • Regulatory risk • Political risk • Price risk • Legal risk • Socio-demographic risk • Tax risk	• Risk of inherited environmental liabilities • Structural construction risk • Taxation risk • Operator risk • Land risk • Revenue risk • Completion risk • Investment risk • Cost overrun risk • Management risk • Market transparency risk • Property risk • Risk of accidental loss/destruction • Location risk • Environmental risk • Depreciation risk
Financial risks	• Base risk • Capital market risk • Conversion risk • Transfer risk • Currency risk • Exchange rate risk • Interest rate risk • Term structure exposure • Interest volatility risk	• Lending value risk • Consultancy risk • Valuation risk • Credit risk • Business partner risk • Capital structure risk • Know-how risk • Pricing risk • Default risk • Leverage risk • Liquidity risk • Planning risk • Realisation risk • Fixed-rate risk • Interest rate risk

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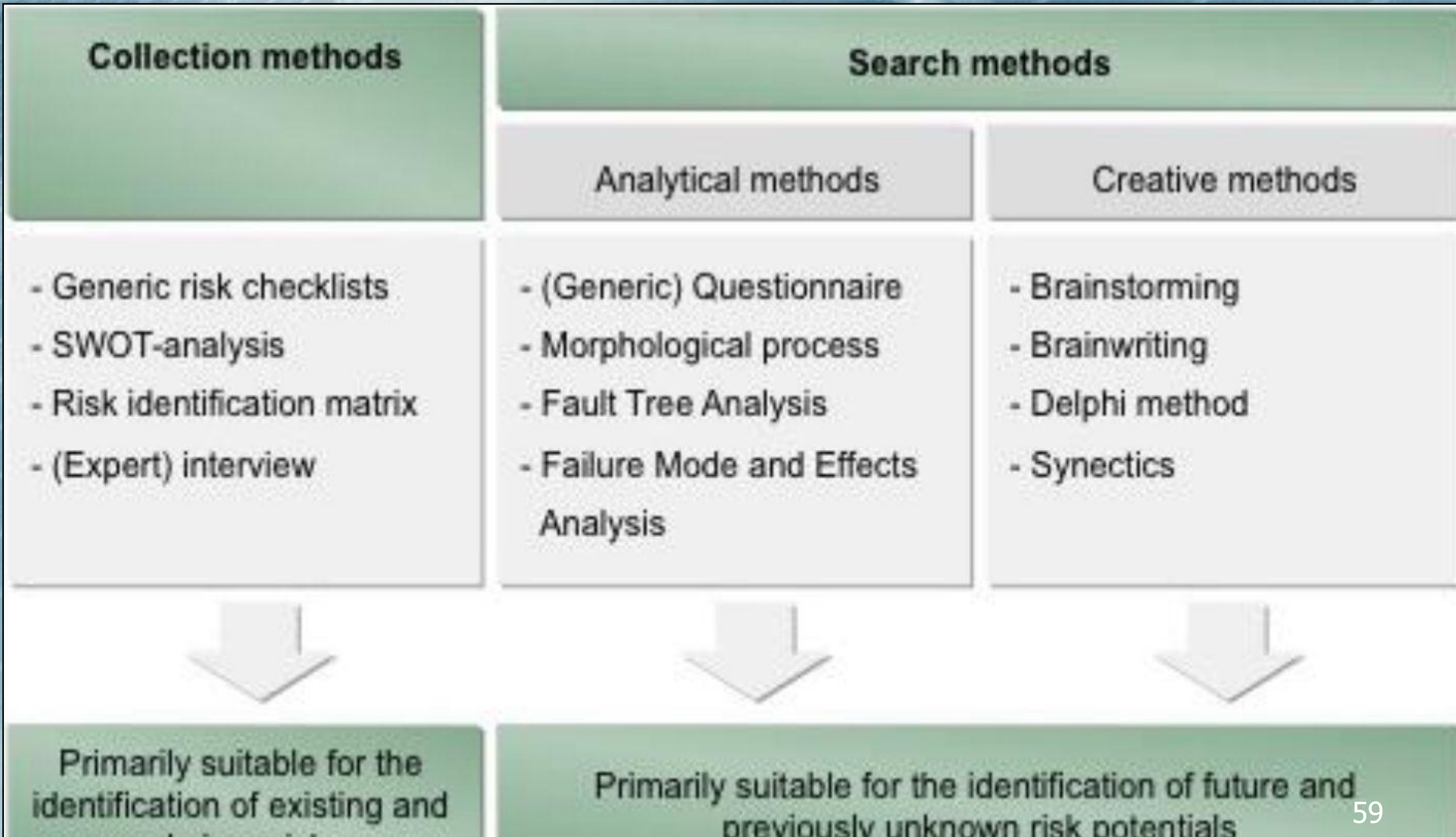
METHODS OF RISK IDENTIFICATION



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DEVELOPMENT RISK

Development risk is defined as the risk that the leasing or sale of the project will generate insufficient returns to cover cost and create the desired return due to a lack of sales or inadequately meeting the needs of the market in terms of type and location.

The more unusual a particular type of project is for the developer, the higher the chance that the developer will misread the market and the higher the development risk.

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DEVELOPMENT RISK

Forecasting and planning risk are also part of risk management. The former describes the risk that forecast data used for the evaluation of a project is proven incorrect in relation to the actual outcomes. Planning risk is caused due to sunk costs that need to be borne when a project is aborted during the planning phases.

This should be minimised by appropriate project reviews prior to engagement of external service providers. However, even internal costs as well as the opportunity cost of using internal resources lead to an ever present planning risk. Some ways to mitigate development risk inter alia include a sound and realistic evaluation of the developer's own abilities, the selection of qualified and experienced external suppliers and partners, a systematic and comprehensive feasibility analysis, a timely start to the marketing of the project and potentially the sharing of risks through the formation of strategic alliances.

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TIME RISK

In general, exceeding the planned project time line leads to two main risks: cost of capital such as interest increases with delays reducing project returns, and market conditions change over time reducing the reliability of forecast data. This is especially relevant as usually top of the market conditions trigger developers to pursue marginal opportunities. As markets turn and consolidate, delays in the completion of such projects aggravate losses.

The time risk can be addressed by professional best practice project management including clear documentation, coordination and communication between project parties, selection of experienced and qualified external suppliers, and timely commencement of marketing. An overall understanding of market forces and dynamics is critical.

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COST RISK

The cost risk is closely related to time risk, as the time needed for real estate development enables cost factors to vary and reduces the reliability of cost forecasts on which the feasibility analysis is based. This means that all the above risk categories also affect the cost risk. Professional project management, in line with corporate best practise, is especially important for effective cost control.

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FINANCIAL RISK

Typically, developers have to obtain appropriate financing schemes at favourable terms, which shall cover the entire length of the development. Thus financing partners and financing conditions are crucial. Often, developers seek to obtain a “forward funding” of a project. In a nutshell, the developer agrees to sell the development on completion to an investor who provides financing during the development process.

Interest rates and financing conditions affect developers both directly and indirectly: as few projects are entirely equity financed, the availability and cost of debt financing affects the overall return and feasibility. Increasing interest rates also increase the expected yield of investment, thus reducing the sale value of the project at the same level of rental income. Both factors combine to make the feasibility of a project highly sensitive to increasing interest rates.

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FINANCIAL RISK

Also, time and finance risk are driven by related factors, so delays in the timely implementation of the project will also increase the financing risk as interest rates may go up during that period and the additional time needed to completion will add interest cost on the debt financing required.

To reduce financing risk, it is advisable to avoid financial commitment to a project prior to completion of the final feasibility analysis and making a decision to implement. The form of financing should also be considered: interest rates may be hedged, and developers may use strategic alliances introducing joint venture and mezzanine finance, thus reducing the need for outright loan financing.

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FINANCIAL RISK

It should also be considered that there are significant differences between a development financing and a long term financing for a developed and leased property. The lender can only base its risk assessment (and therefore interest rate risk premium demanded) on forecast and projected data, as well as general view on the developer's capital resources and professional competence.

In order to secure financing at affordable rates, it is therefore imperative to perform, document and present the preliminary and feasibility analyses in a format useful to potential lenders.

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BUILDING SITE RISK

This is the risk that the selected site is unsuitable, or needs to be modified at cost to become suitable, for the intended use due to environmental issues (such as contamination) or its natural characteristics (stability, water levels, subsidence etc.).

To minimise these risks appropriate external technical and engineering due diligence is to be sought and acquisition contracts drafted so as to retain a right of redress if the site does not meet expected and agreed criteria.

Further, risks on the construction site, which comprise safety of employees, contractors and visitors as well as to assets, should be minimised with appropriate workplace health and safety practises, regulated areas, and use of corporate best practise for safety on construction sites.

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APPROVAL RISK

All development is subject to planning, and while developers in general apply for permissions that are in line with official planning rules and development plans, the multitude of affected stakeholder interests can lead to specific conditions that affect the cost and feasibility of a project. Also, delays in the planning approval process increase the above mentioned time risk.
The approval process should be project managed professionally to minimise this risk. Potentially “soft” factors such as early communication with other stakeholders and the projection of a positive organisation image can be helpful. Depending on the size and complexity of the development, developers will consider whether it is appropriate to approach the planning authorities for their initial view on the proposed development. Involved architects and planning consultants typically take a lead function when liaising with the planning authorities.

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PROFITABILITY ANALYSIS

Combining the results of the five analyses above (market, location, project concept, risk and competitive analysis), the developer needs to calculate a detailed profitability analysis showing appropriate sensitivities for the risks identified.

The profitability of a real estate development project with an already fixed land purchase price is mostly affected by short-term interest rates, building cost, rental values and investment yield. Rental values are largely determined by the demand for and supply of space, whereas the investment yield is driven by capital market perceptions of real estate as an investment asset in general and the evaluation of the specific project concerned.

The maturity and liquidity of real estate markets is a key factor for investors to correctly prize markets and projects.

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PROFITABILITY ANALYSIS

The profitability analysis should use clearly defined quantitative measures of a project's robustness and return, such as net operating income to cover debt service, operating costs (i.e. break-even test), net cash flow after debt service to provide adequate risk adjusted returns on equity, net present value of returns to exceed project cost, and net present value analysis to cover construction, absorption and operations periods.

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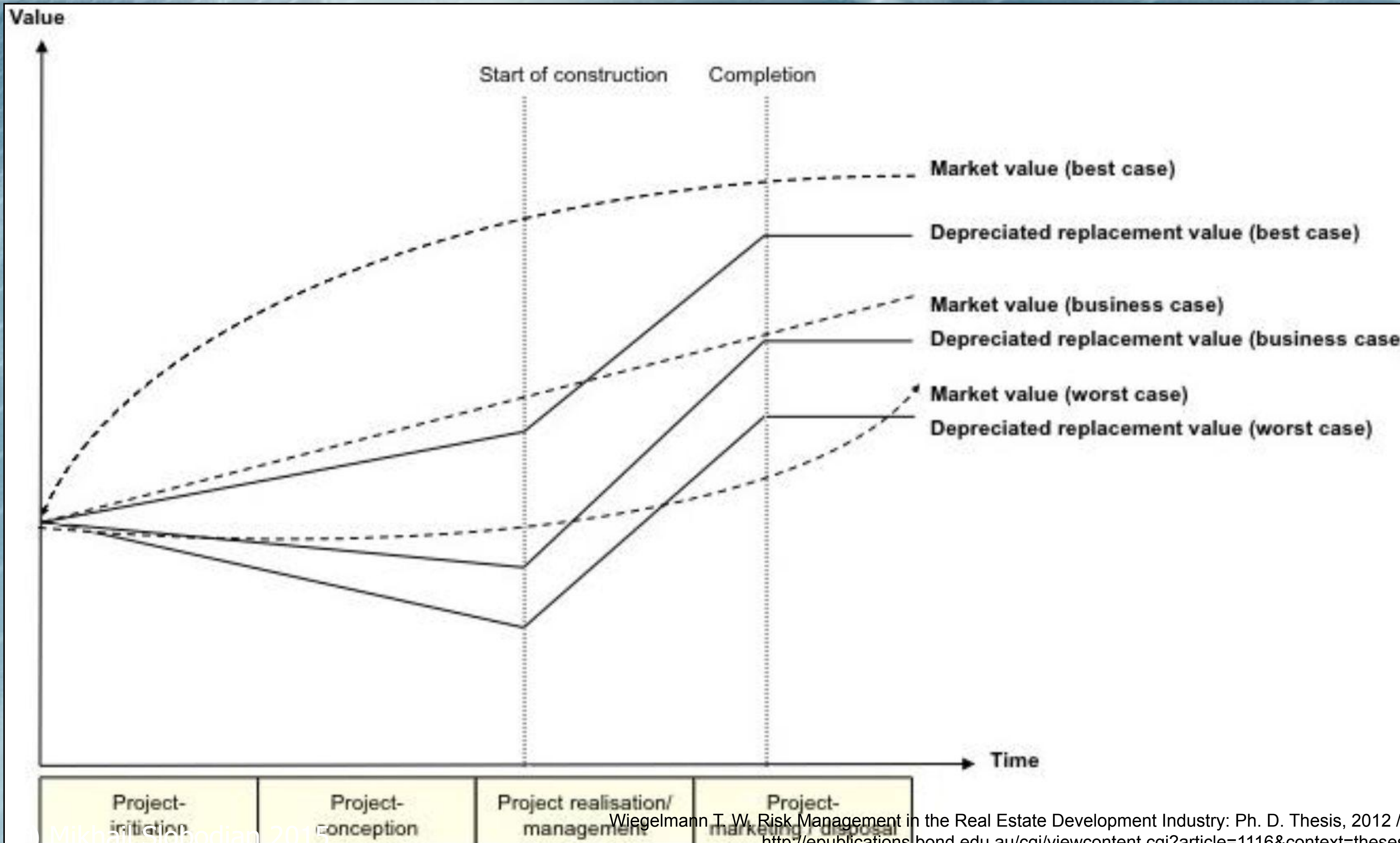
POTENTIAL VALUATION THROUGHOUT THE DEVELOPMENT PROCESS



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CONCLUDING THE FEASIBILITY ANALYSIS

Having assembled the above data and analysed it based on appropriate assumptions, the results need to be presented and the developer will make a decision whether to proceed with the project. Progressing the feasibility analysis and making the project more concrete involves more effort and cost than optimal in case the project.

The risk of sunk costs is ever present, but the level of detail required before a decision can be made should be obtained at reasonable cost, both internal and external.

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CONCLUDING THE FEASIBILITY ANALYSIS

In the framework of the project initiation, it is the objective to answer the question in which manner and in what time the factors location, project idea and capital can be combined against the background of the strategy concept in order to produce a property that is competitive and acceptable in macro-economic terms: "Land, labour, capital, management, and entrepreneurship are needed to transform an idea into reality."

In case the project concept phase did not indicate that the developer's business requirements and objectives could be met, the project will likely be aborted.

In the case of a satisfying outcome and outlook, the phase of project realization / management will be entered.

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PROJECT REALISATION / MANAGEMENT

The confirmation of the project's potential for success by the feasibility analysis triggers the initiation of negotiation and decision in the realisation phase.

At this point, at the very latest, the other parties to the project enter into the development process. These include the property owners, architects and engineers, building authorities and other representatives of the public interest, construction contractors, financial institutions, user groups, special service providers to the real estate industry (project managers, consultants, brokers, etc.) and – unless this is a development for own use – investors.

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PROJECT REALISATION / MANAGEMENT

While the decision to realize the project was only provisional until that time, it can ultimately be made only with the final issuance of the building permit and subject to the presumption that the other negotiations have reached the stage where they meet a certain level of requirements as stipulated by the developer, for instance with respect to financing commitments, leasing status and construction service contracts awarded.

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PROJECT REALISATION / MANAGEMENT

The acquisition is made in the project realisation phase by means of a binding right of purchase or the actual acquisition of the property to be developed. Finalising the purchase can present unexpected difficulties and changes compared to the feasibility study base case as time has passed and stakeholder expectations are evolving. The price offered and agreed should be within the forecast parameters. Legal documents should be subject to appropriate due diligence and mitigation of execution risks.

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PROJECT REALISATION / MANAGEMENT

General risks that can occur during this phase include title issues which may not be satisfactorily resolved, inability to reach agreement on purchase / sale terms or inability to achieve a favourable quality of purchase agreement, purchase / sale terms which are less favourable than market comparables, as well as after purchase / sale additional issues that should have been discovered during entitlement and due diligence process.

Another goal of preparing a more detailed usage concept is the definition of an optimal user mix on the basis of the feasibility study, which typically already includes a preliminary usage concept. In the sequence of the development process, this phase of the work is either performed after the acquisition of the property and in the course of the project planning process or – in a case of adequate or guaranteed certainty relative to planning – already during the feasibility study.

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PROJECT REALISATION / MANAGEMENT

Questions of building functionality, flexibility of use, building efficiency and architectural design are discussed as part of the usage concept. Thus a further core task in connection with this phase is the preparation of a planning, implementation and contracting concept.

Obtaining adequate financing on competitive terms is a complex activity that requires for specialist knowledge. The availability and cost of third party financing has a considerable effect on the success of a development and the profit margin of the developer. Depending on the intended holding period of the development project, the developer may pay off a short term financing from the sale of the completed property in order to realise his profit from the development process.

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PROJECT REALISATION / MANAGEMENT

Alternatively, the developer may wish to hold the completed asset as investment property (or owner occupied property) and as a result seek to place long term financing.

The (notarized) execution of the negotiated final purchase contract or all contracts required for the acquisition of the property is the basis for the closing of the legal transaction. Inadequate due diligence procedures create potential post-sales risks such as a failure to properly identify environmental issues, or failure to obtain and confirm clean title of the property.

Once a transaction is closed, only limited activities along the specific reps & warranty catalogues may be taken to deal with negative aspects, which have not been identified and adequately addressed in the context of a due diligence.

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PROJECT DESIGN

The objectives of the project design should be to balance the requirements of the intended user (functionality) with construction costs and sustainable operating and facility management costs, the expertise of construction firms, planning requirements, engineering considerations and aesthetic preferences in order to produce a project-specific optimum design for the site.

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PROJECT DESIGN

Detailed plans for land, structural and capital improvements have to be prepared and necessary permits and licences obtained.

With the intended marketing and leasing in mind, the design of the structure to be built and / or capital improvements to be made to an existing structure (taking into account tenant specifications) has to be completed and documented in detailed working drawings and specifications. The feasibility analysis should be kept updated with the approved development / capital improvement plans, intelligence on competitor activities, engineering analyses, regulatory requirements, detailed land development, architectural and capital improvement plans and drawings for project, project budget, and approved building permits.

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PROJECT DESIGN

A significant risk is that the project design does not meet market needs and results in lower than anticipated rents or sales proceeds. Also, the initial project design may not address all regulatory issues. Costs to comply with regulatory requirements may reduce projected margin or return.

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PROCUREMENT

One of the main procurement tasks of the real estate developer is to obtain a building permit within the schedule and on the basis of the previously developed usage type. The usual risk during this stage is that bids from vendors / contractors require more time and / or money than originally anticipated in the feasibility study, and that satisfactory vendors / contractors cannot be identified. Vendor/ contractor negotiations may result in substantial revisions to project design.

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CONSTRUCTION

The construction phase starts with the granting of the building permit and the aim is the completion of the project within the planned framework of schedules, costs and quality. Once all necessary permits have been obtained, the developer gives the orders to start work.

The real estate developer retains a coordination and internal reporting function. The building owner's functions that cannot be delegated are performed within the context of corporate management. All construction, planning and consulting contracts are entered into, and project controlling / project accounting tasks are performed in this context. There are further obligations to act as representative vis-a-vis all project participants and especially vis-a-vis the public during the entire development period, as well as the task of reporting to the principal / investor or the providers of outside capital.

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CONSTRUCTION

The high portion of outside financing makes real estate developers very susceptible to variations in the project yield because of the leverage effect. Negative as well as positive events have an over-proportional influence on the developer's equity yield.

Risks during this phase include the weather affecting building time, the viability and reliability of vendors and contractors, change in prices for materials and labour, as well as physical characteristics of property and improvements and changes to building code, labour laws and regulations driving time and cost changes.

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CONSTRUCTION

The availability of financing depends on credit market conditions, economic conditions and industry trends, which are affecting construction prices, availability and letting prospects. Even changes in such inconspicuous items as accounting rules may result in differences to forecasted (if not underlying commercial) profit and affect investors' and lenders' perception. Failure to meet construction deadlines will result in penalties, and inadequate procurement process may lead to excessive costs, as would poor construction management oversight.

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CONSTRUCTION

The marketing of the project via leasing or sale can begin at any time in the process, but is likely to occur towards the end or after completion. This is however, a market driven and asset type related decision. Typically it is the objective of the trader developer to market as early as possible, as an early leasing or sale will reduce financing costs and minimise the risk that specific tenants requirements necessitate late and costly changes to design and construction. Thus, the project marketing must be a priority in the developer's initiation / concept from the very beginning.

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PROJECT MARKETING / DISPOSAL

In real estate industry practice, distribution policy is often characterized by specific forms of in-house and third party sales. Specialized forms, such as the sale of shares in open-ended or closed real estate funds will not be more closely considered at this point. As the completion of the construction project approaches, activities shift increasingly in favour of project marketing, while some individual marketing tasks have already proceeded in parallel with the entire development process. The tasks associated with marketing can be assigned to third parties, i.e. brokerage organisations. Since the long-term success of the property is very strongly dependant on an effective leasing strategy in general and on finding an appropriate mix of tenants in particular, many developers retain marketing in house.

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PROJECT MARKETING / DISPOSAL

The focus is therefore on developing and safeguarding a “unique selling proposition”, which endows the project with advantages or benefits in the eyes of later users or investors compared to competing projects or properties, and in this way introduces important determinants of competition in addition to price.

A generally applicable incorporation of the leasing performance phase into the development process is not possible and not required. Leasing activities commence with the initial contacts with users. The earlier leasing takes place, the greater will be the (financial) security of the entire development project.

Marketing and prospecting aim to provide promotional materials and information to prospects and enable to identify tenants to lease the property.

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PROJECT MARKETING / DISPOSAL

As part of this task it is necessary to plan and budget a detailed marketing, advertising, and promotion program. Cooperative agreements with brokers need to be developed and managed, and leasing staff and internal procedures have to be in compliance with government regulations. After initially providing promotional materials to prospective tenants, it is necessary to collect their data and conduct follow-up contacts.

Significant risks relate to the effectiveness of marketing: advertisements may not be placed effectively and may be unable to reach its target market, the advertising may be excessive and not cost effective, advertisements and promotional materials may be visually unappealing, and promotional materials may not contain sufficient information to satisfy prospective tenant's questions.

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PROJECT MARKETING / DISPOSAL

Lease negotiation and execution involves the screening of prospective tenants, and negotiating, preparing, and executing lease agreements, thus allowing the property to be leased at the highest possible rent to tenants with low credit risk. Ideally, the quality of the tenant will enhance the value of the location.

Key performance indicators to evaluate the effectiveness of the leasing process are brokerage expense as a percentage of annual rental income, advertising money spent per prospect or advertising money spent per square meter leased. A comparison of budgeted rent to actual rent should be made throughout the leasing process, and the occupancy rate should be monitored. Other data to be collected and analysed includes leasing and marketing expense as per cent of revenue, and average free rent (or concessions) on new leases.

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PROJECT MARKETING / DISPOSAL

Significant risks of the leasing process are that not sufficient tenants are attracted to the development. In a bid to achieve full occupancy, larger incentives may have to be provided to tenants and suboptimal contracts are signed, ultimately resulting in lower returns. Insufficient occupancy may be because contracts cannot be executed due to qualification issues, or tenants decide not to lease space due to market reasons or asset type.

Further, suboptimal contracts arise if lease agreements are not prepared in accordance with legal requirements, clauses in lease agreements are vague and cause misunderstandings, and uncompetitive lease terms are granted because of a lack of market knowledge or negotiation skills.

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PROJECT MARKETING / DISPOSAL

There is a significant risk that a tenant can terminate a legally faulty agreement prematurely, especially after market rents have declined, forcing the owner to seek a new tenant in adverse market conditions. Other risks include the possibility of breaching laws if leasing agents do not produce sufficient documentation to comply with laws of equity. Finally, a less quantifiable risk is to generate an unattractive tenant mix, which affects the perceived popularity of the project and negatively affects long term rent levels achievable by the property.

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PROJECT MARKETING / DISPOSAL

The development process ends with the completion, handover for use and / or disposal of the project. In the event that the project is not intended for sale, it is transferred into the developer's own holdings. From the perspective of the property life cycle, this initiates the property and asset management phase, which extends until the redevelopment of the property. The timing of the property sale is dependent on the exit strategy of the project sponsors. Accordingly, it is not possible to assign a generally applicable place within the overall development process to this stage in the value-added chain. Risks related to exit can be caused by a failure to exit at the right time. Capital tied up in excess / underutilized real estate undermines returns and prevents it being recycled into higher yielding projects.

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PROJECT MARKETING / DISPOSAL

Also, if the selected exit strategy does not correctly reflect market conditions, it will not maximize return. Limited access to capital markets (e.g. IPO, securitization) may negatively affect returns and prevent exits altogether. If the developer is unable to manage flow of information to prospective purchasers, or has insufficient contact management, the selection of potential purchasers will be sub-optimal and potentially lead to lower than possible sales prices being achieved. There are also execution risks in the form of inadequate due diligence procedures (post-sales risk) and mismanagement of the closing process. Both can cause uncertainty, delays and financial loss. An insufficient executive approval process shows the failure of internal risk management.

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