Knowingly taking risk
Investment decision making in real estate development
KNOWINGLY TAKING RISK
ELLEN GEHNER

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Proefschrift

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Preface

My interest in the decision making behaviour of real estate development organisations was aroused by my prior research on risk analysis in real estate development. The focus was, like many other publications on risk management, risk analysis. This research, *Risicoanalyse bij projectontwikkeling*, was published and quickly found its way into real estate development practice and educational programs. Still, I wanted to know how real estate development organisations do actually take risk, in other words how they decide to invest in real estate development projects.

My PhD research took me into the boardrooms in three Dutch real estate development organisations and into the investment decision making process of real estate development organisations. An important part of this process is the analysis and evaluation of risks, although this process is less explicit than might be expected considering the available risk analysis techniques. Aside from the rationale of a decision, its timing and the willingness and ability of both the project manager and the strategic board to take accountability for a decision appeared to play an even important role in the way decisions are made.

This research presents a theoretical model of knowingly taking risk, a description of the decision making processes in three organisations, and a method of evaluating or (re)designing an investment decision making procedure that ensures that risks are taken knowingly. In doing so, I strove for scientifically sound research, as this is the primary goal of a dissertation, but with practical value, which is characteristic of engineering research.

Now my PhD thesis has been published, the real estate development sector is suffering the effects of the credit crunch. Markets are on the downturn and companies are facing the consequences of the risks they have taken. This makes research in risk management more relevant and timely than ever before. Yet, whether or not companies will withstand the crisis has already been determined by the decisions they made years before, when the economy was still flourishing. Knowingly taking risk is essential to the business of real estate development and of all times, good or bad. This thesis offers new insights into how risky decisions are made and suggests ways of improving decision making procedures.

Ellen Gehner

*The Hague, December 2008*
Real estate development is knowingly taking risk. A real estate development project starts with an opportunity to construct a new building in which people can live, work, or shop. This opportunity has to be developed from an idea into something real. At the moment a real estate development organisation takes a development opportunity, it has to manage risks pertaining to the acquisition of land, permits, the design and construction process, and of course the lease and sale of a project. Every decision to invest in a project implies that risks are taken. As risk taking is essential for real estate development, this study will examine how investment decisions in real estate development projects are made. This will reveal how real estate development organisations have developed and institutionalised skills and procedures to deal successfully with the risky nature of the business. In other words, how they manage to knowingly take risk.

1.1 Practical relevance
Real estate development is the transformation of an idea for newly built space into a real property (Miles et al., 2000; Peiser and Frej, 2003; Nozeman, 2008). Real estate development projects can take the form of the development of a new block of houses on former agricultural land, the transformation of former industry sites into a multifunctional centre with a combination of retail, residential and office buildings, or the redevelopment of a (part of the) city centre. Sometimes these projects are completed rapidly, while other projects take years or even decades. Section 1.1.1 describes the complexity and uncertainty of real estate development. Sections 1.1.2 and 1.1.3 describe current trends in the Dutch real estate development sector. Section 1.1.3 explains the relevance of a study on risk management in real estate development.

1.1.1 The complex and uncertain nature of real estate development
Real estate development can be characterised by its complexity and inherent uncertainty. This section discusses four indicators that can account for the nature of real estate development.

In the first place, its multidisciplinary character is related to the many activities for which a developer is responsible. These activities start with the search for a site looking for a use or the search for a use looking for a site. The developer purchases a site and commissions designers, including an architect, an urban designer, and a structural and mechanical engineer. A project cannot come to fruition without
approval of changes in zoning plans and a valid building permit. Once the permits have been granted, a contractor is hired for the construction and the developer supervises it. In the meantime, marketing activities are carried out to arrange for the sale or rental of the property as soon as the project is completed. All these activities are internally financed or have the backing of financial institutions. This means that a real estate developer needs to have expertise on various disciplines as he has to cooperate with many different actors. Most of these parties are directly involved as the developer needs their expertise, resources or power. However, future users and interest groups can also exert their influence through a public inquiry procedure, which adds to the uncertainty in a project.

In the second place, a real estate development project has a one-off character, which is caused by the unique characteristics of its location. The conditions of the land and surroundings, the legal status of the land property and the social context influence its development opportunities. Moreover, the value of real estate is determined by the combination of the building and the location: not only the characteristics of the local real estate market, but also spatial quality and accessibility influence the way in which users and investors value real estate. This means that each development project requires specialised local knowledge.

In the third place, real estate development processes are characterised by their long duration. Because of the cyclical character of the real estate market (Louw, 1993) it is hard to predict construction costs, rental or sales revenues. While pre-investments are made at the start of a process, the market conditions on the construction and the property market at the moment of tender or the moment of completion of the project are likely to change. This might lead to the completion of a real estate project when demand has already diminished. The market dynamics in combination with the duration of real estate development process make prognostications difficult.

Finally, real estate developers have to deal with the long time horizon of real estate. A real estate developer often sells a project directly after completion to a user or investor; however, during the lifetime of real estate, multiple users and owners can be expected to occupy a building. A developer has to balance quick wins by cost cutting and delivering a product that meets the market demands at the moment of completion and create value for the long term by investing in flexibility and sustainability to make a project more valuable for investors with a long time horizon. A real estate developer cannot know in advance how extra investments will be valued, how time horizons will vary, or how supply and demand will change.
1.1.2  Trends in real estate development in the Netherlands
In recent years the complexity and uncertainty of real estate develop-
ment have increased due to several trends. Risk management has conse-
quently become more important.

First, real estate development projects are more complex and
uncertain in areas in which the available land is becoming scarcer.
Development locations are no longer mostly greenfield areas, but also
brownfield and inner-city locations. Redevelopment is taking the place
of new construction. The size of these types of projects increases in
order to secure an integral development. In these areas multiple func-
tions are combined, from residential and office buildings to leisure and
retail. Moreover, real estate has to be integrated with renewal or expan-
sion of infrastructure to guarantee the accessibility of the location.
In such projects more parties participate, more financing is required,
more technical and logistic constraints are set, and it becomes harder
to purchase land; all of this leads to greater complexity and uncertainty.
Consequently there is not only a more urgent need for new solutions
in financial and legal engineering, but also for a more general way to
structure the process and focus on the risks of a project.

A second and related trend is the lengthened duration of real estate
development projects. Therefore public parties are looking for private
parties that can cooperate on long-term projects. This demands large
financial commitments from both parties and new ways of sharing
risks; at the same time this requires a trustworthy party. As a result new
contractual forms of cooperation are developed, such as public-private-
partnerships, private-private-partnerships, and integral contracting,
such as combinations of design-build-finance-operate-maintain. To
support this trend, risk management can be used to communicate about
a project and to support the negotiations on transferring and sharing
risks, and making contractual arrangements.

A third trend is the increase of national and European environ-
mental regulations. In the past few years many restrictions have been
imposed to protect the air quality and promote sustainability, and
on contracting and tendering. In the Netherlands a new policy on
spatial planning was implemented in July 2008 (nieuwe Wet ruimtel-
ijke ordening). These developments are hardly predictable and
influenceable. Moreover, policies can change after elections. Proac-
tively dealing with this uncertainty is hardly possible; however, meas-
ures should be taken as quickly as possible.

1.1.3  An increasing need for transparency in the Netherlands
In addition to the trends leading to more complexity and uncertainty,
some events have led to a demand for more transparency in real estate
development.
In the first place, the reputation of the Dutch real estate development sector and of the Dutch real estate sector in general, has been badly damaged over the past years. First, the sector had to deal with the building fraud inquiry in 2002. Subsequently, several serious construction problems resulted in casualties and evacuation of the buildings. These have brought protracted litigation over who is legally responsible for these faults: the real estate developer, the contractor, the architect, or the engineer. Moreover, charges of real estate fraud in 2008 have generated pressure for more transparency.

As a consequence of the building fraud inquiry, the oversight for accounting rules has been increased for all parties in the construction industry. Moreover, the need for financial transparency in accounting is subject to a tightening of financial regulations. In particular, developers linked with financial institutions and developers with a stock-exchange rating must comply with the terms of the International Financial Accounting Standards (IFRS) and the Basel II Accord, prescribing that risks in a business unit must be made transparent.

Finally, in the second half of the 1990s many real estate development organisations began to scale-up in order to deal with tendering regulations and the increasing size of projects. Many smaller real estate development companies have grown substantially and several mergers and takeovers have taken place in the Netherlands, such as the mergers of Rabo Vastgoed, Bouwfonds and MAB, and Fortis and William Properties. These changes in organisational structure may create instability, because the norms, values, and internal procedures of the companies involved in the merger or takeover companies do not match; AM and Multi Development eventually split. In the end, management has to make sure that all projects are successfully managed and brought to completion. To streamline either a natural growth or a sudden change in organisation structure, transparency is required and this is where risk management can be instrumental.

It can be concluded that the inherent and increasing complexity and uncertainty of real estate development and the need for transparency are important reasons to professionalise this sector. In the USA several handbooks of real estate development have become available in the last few decades (e.g. Miles et al., 2000; Peiser and Frej, 2003). In the Netherlands, the NEPROM (Association of Dutch Real Estate Development Companies) has recently published its first handbook (Nozeman, 2008). This handbook was welcomed as a laudable initiative to professionalise the sector. As risks are inherent to real estate development, a natural next step would be to increase proficiency in risk management.
1.2 Risk management in real estate development

Before starting to research risk management in real estate development, it is important to clarify what is already known about risk management in general and more specifically in real estate development. Section 1.2.1 describes how the literature defines risk management, what methods and techniques are available, and offers a typology of risk. Section 1.2.2 focuses on the application of risk management methods and techniques in the construction and real estate sector. Section 1.2.3 concludes by summarising the research problem of this thesis.

1.2.1 Risk management and a classification of risk

Various forms of risk management can be distinguished, such as operational risk management, financial risk management, and project risk management. Operational risk management is directed at failing internal processes, people and systems and extreme external events (Ridder, 2006). Financial risk management is the application of financial analysis and financial instruments to the control and reduction of financial risk, especially credit and market risk. Project risk management is directed at project risks.

According to PMI (2000) a project risk management method starts with a risk identification to determine the risks that might affect a project and document their characteristics. Subsequently a qualitative and quantitative risk analysis can be made. A qualitative risk analysis is the process of assessing the probability and impact of identified risks in qualitative terms in order to prioritise the effects on project objectives. A quantitative risk analysis is the process of analyzing numerically the probability of each risk, its consequences for project objectives, and the extent of the overall project risk. Risk response is the process of developing options and determining actions to enhance opportunities and reduce threats to the project’s objectives. Based on the risk response, a plan to take risk measures is made. The final steps are to monitor the risks and execute the risk plan.

For the steps of identification and analysis, various techniques have been developed. The most common risk identification techniques are brainstorming, interviews, checklists, stakeholder analysis, cause-and-effect diagram or a swot-analysis. Qualitative risk analysis techniques are for example influence diagrams or a probability/impact risk rating matrix. Examples of quantitative techniques are sensitivity analysis, scenario analysis, decision tree analysis, expected monetary value-method, and probabilistic simulation (Byrne and Cadman, 1984; Flanagan and Norman, 1993; Raftery, 1994; Gehner 2003).

These quantitative techniques have been developed in the tradition of operations research (Ackoff and Sasieni, 1968), based on mathematics and economics. The assumptions made in these prescriptive
theories on decision making under risk are to a large extent the basis for the engineering perspective. The assumption of this perspective is that risk can be modelled as a probability on a certain event multiplied by the impact of that event. Moreover, it is assumed that decision making under risk is based on the idea of rationality. That is to say that decision makers select the course of action that maximizes their expected utility (Von Neumann and Morgenstern, 1947). Being able to make a fully rational decision assumes the completeness of information – the impact and probability of a risk can be assessed objectively – and the ability to compute with perfect accuracy.

However, whether or not these assumptions hold in the field of real estate development are open to question. This is explained by making use of four categories of decision making under risk (Halman, 1994: 25-26). Table 1.1 presents the four categories distinguished by frequent versus non-frequent risk events and risks taken in a static versus a dynamic decision making context.

<table>
<thead>
<tr>
<th>Static ('gamble view')</th>
<th>Frequent</th>
<th>Non frequent</th>
</tr>
</thead>
<tbody>
<tr>
<td>The result cannot be influenced</td>
<td>Objective estimates</td>
<td>Subjective estimates</td>
</tr>
<tr>
<td>Example: casino games, non-workable days in contractor’s planning</td>
<td>Example: the buying of a share</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dynamic ('management view')</th>
<th>Frequent</th>
<th>Non frequent</th>
</tr>
</thead>
<tbody>
<tr>
<td>The result can be influenced during a dynamic process</td>
<td>Objective estimates</td>
<td>Subjective estimates</td>
</tr>
<tr>
<td>Example: quality procedures in process (serial) industry</td>
<td>Example: real estate development project</td>
<td></td>
</tr>
</tbody>
</table>

Table 1.1 A typology of decision making under risk (adapted from Halman, 1994; Halman, 2008)

In a real estate development project one has to deal with many risks that occur non-frequently, which means that probabilities cannot be readily calculated, such as by tossing coins, throwing dice or drawing cards. Neither can probabilities be assessed by recurrence of risks, such as the frequency of failure in serial industry. For both the assessment of probability and impact, decision makers in real estate development have to rely on subjective estimates. Although risk analysis techniques and decision theories are adjusted to deal with subjectivity to a certain extent (Von Neumann and Morgenstern, 1947; Beach and Connolly, 2005), the reliability of the outcomes of a risk analysis can be questioned when probability estimates are hard to make.

Another aspect on which the practice of real estate development differs concerns the management perspective. In case of a gamble, giving its static nature, the consequences cannot be influenced after a decision has been made. Examples of these types of decisions are gambling decisions made in a casino or decisions to buy shares. The outcome
(gain or loss) of these decisions can only be awaited. However, given the
dynamic nature of real estate development, risks can be influenced by
preventing, recognising and intervening in the development process
(MacCrimmon and Wehrung, 1986).

It can be concluded that the assumptions about risk in operations
research do not correspond with the practice of real estate develop-
ment. This might explain the very limited application of quantitative
risk analysis techniques in real estate development.

1.2.2 The application of risk management techniques in real estate
development

The following studies have investigated the application of risk manage-
ment techniques in the construction industry:

- Akintoye and MacLeod’s (1997) survey with a sample of 100 top firms
  in the UK construction industry with a response of 30 general contrac-
tors and 13 project management practices;
- Lyons and Skitmore’s (2004) survey with a sample of 200 organisa-
tions in the Queensland engineering construction industry with a
response of 17 contractors, 11 consultants, 10 owners and 6 develop-
ers;
- Gehner, Halman and de Jonge’s (2006) survey with a sample of 31 of
  the largest real estate developers in the Netherlands with a response
of 15 developers;
- Uher and Toakley’s (1999) survey with a sample of 713 Australian
  firms involved in the conceptual phase of construction projects with a
response of 200 companies of which 37 property developers;
- Baker, Ponniah and Smith’s (1999) survey with a sample of the 100
  largest construction companies in the UK with a response of 40 con-
struction companies and 12 oil companies.

Akintoye and MacLeod (1997) show that only 3% of the contractors
use probabilistic techniques and 13% decision analysis, although 20% respectively 44% of the respondents are familiar with the technique.
Lyons and Skitmore (2004) show that developers make least use of
Monte Carlo simulation, the Expected Monetary Value (EMV)-method
and decision analysis techniques, whereas intuition, risk premium and
sensitivity analysis are mentioned as most used.

Gehner, Halman and de Jonge’s (2006) study of the Dutch develop-
ment sector found that no single respondent makes use of probabilistic
techniques, whereas intuition and qualitative techniques are often
used. All real estate developers use some risk identification technique as
part of an investment proposal consisting of a financial estimation and
a qualitative description of the project. The risk identification is not
intended to be complete, but to reveal the most serious risks. For this
purpose a checklist can be useful, especially for inexperienced managers. Other instruments to identify risks, such as a risk matrix, are rarely used. The techniques that are most used are scenario or sensitivity analysis.

Uher and Toakley (1999) claim that in the Australian construction sector, the most knowledgeable group regarding risk management consists of quantity surveyors and financial consultants, followed by general contractors and property developers. The most commonly applied risk identification techniques were checklists, brainstorming and flow charts. From a range of risk quantification methods, subjective judgment was by far most frequently used; apart from sensitivity analysis, the respondents’ knowledge of various quantitative risk analysis techniques, such as probability analysis, decision tree and risk adjusted discount rate, is poor. The main obstacles to the application of risk management were inadequate knowledge of and skill in risk management, and lack of understanding of its potential benefits.

Baker, Ponniah and Smith (1999) show us that the construction industry makes less use of quantitative risk analysis than the oil sector does. Whereas in the construction industry only the expected monetary value method, break-even analysis and scenario analysis are used, the oil sector uses those and five more quantitative techniques: expected net present value, algorithms, decision matrix, decision tree, and simulation. The reasons for not using these techniques are a lack of familiarity, difficulties in seeing the benefits, lack of reliable data, lack of expertise, and the idea that fairly subjective risks are better dealt with on the basis of experience from previous contracts undertaken by the firm.

The conclusion is that quantitative risk analysis techniques are significantly less applied than qualitative techniques. Education can compensate for the lack of familiarity and expertise. However, lack of reliable data, lack of understanding the potential benefits, and the idea that subjective judgment better suits the decision problem raise the question of whether quantitative risk analysis techniques can deliver better performance. Therefore, a refinement and implementation of risk analysis techniques by adjusting them to the specific businesses or by education does not seem to be the best way of handling the increasing interest in risk management in the real estate development sector.

1.2.3 Research problem
The previous sections result in the following research problem. There is an increasing interest in risk management in real estate development in order to cope with the challenges real estate development organisations are facing regarding their internal operations as well as the external relations with other parties. One may expect that these organi-
sations have learned how to manage the inherent risky nature of real estate development. After all, many developers have been in business for many years and have survived several market cycles. This survival could not merely have been a matter of sheer luck.

However, notwithstanding their built up experience and interest in risk management, there is a lack of insight and knowledge about the way real estate development organisations actually deal with risk. Given the fact that real estate development is more complex and riskier than ever, this knowledge and insight is needed to professionalise the real estate development sector.

1.3 Research perspective
To get insight in how real estate development organizations actually take risk, a perspective must be chosen by which the decision making process of these organisations can be described and analysed. This perspective is described in section 1.3.1. Section 1.3.2 narrows the research perspective from risk management to investment decision making and introduces the concept of knowingly taking risk.

1.3.1 An organisational, behavioural perspective
The aim of this research is to describe the actual decision making behaviour of real estate developers and more specifically how risk is taken. In the field of decision making, two generations of descriptive research can be distinguished (Beach and Connolly, 2005). The first generation explains the differences between the prescriptions of prescriptive or normative models and what decision makers actually do; this research is mainly based on experimental research. The second generation is influenced by real life observations of professional decision makers and has developed behavioural theories of decision making. The behavioural perspective is the more suitable of the two to address the research problem.

More specifically, this research aims to describe how a real estate development organisation takes risks. While research on project risk management is directed at the project level, this research focuses on the relation between project and organisation. The purpose of project risk management is to realise a project within budget and planning and meet other predefined project objectives. The aim of a real estate development organisation is to take risks by developing real estate projects in order to make profit and also to realise other organisational objectives. It is true that a real estate development project is a business on its own, but at the same time it takes place within the real estate development organisation. In addition to a single project perspective, an organisational perspective is needed to address the research problem. The organisational, behavioural perspective has been developed in the
scientific field of decision making. However, in the field of real estate development this perspective has not yet been applied.

1.3.2 From risk management to investment decision making
This research focuses on taking risk, rather than managing risks. In the first place because taking risk is the core business of real estate developers and in the second place because all phases of risk management are concentrated in the process of risk taking: by examining how decisions are made, at the same time is examined what risks are identified and analyzed and what control measures are going to be taken in response. Moreover, the research does not deal with day-to-day decisions, but focuses on the so-called investment decisions. The investment decision moments and the characteristics of these decisions are explained in section 2.4.

Furthermore, two important assumptions are made. The first assumption is that real estate development is risky. The second assumption is that at least a selection of real estate developers is capable of successfully dealing with the risky nature of real estate development. Real estate development organisations that have survived several economic cycles over a lifespan of at least two decades, cannot have survived on sheer luck, but are expected to have incorporated risk management. These organisations are able to make a balanced decision between taking enough risk to be profitable and not so much risk that continuity and other non monetary organisational objectives are endangered: they take risk knowingly.

1.4 Exploring knowingly taking risk
This section explores what research steps have to be taken to comprehend the meaning of knowingly taking risk. Section 1.4.1 presents the research objective, the main research question and the sub research questions. Section 1.4.2 gives an outline of the research.

1.4.1 Research objective and research questions
Notwithstanding the fact that risk taking is an essential part of real estate development, there is still a lack of insight in the way real estate development organisations deal with risk. To enrich our understanding of risk taking in real development, this research will focus on the investment decision making process in real estate development. In real estate development, the main risks are taken when decisions have to be made about potential large financial investments in real estate development projects. The objective of this study is to:

Provide insight in the characteristics of the investment decision making process in real estate development organisations that contribute to knowingly taking risk.
The aim of the empirical field study is to describe the investment decision making processes in real estate development organisations and to extract what management practices are used in order to safeguard that risks are taken knowingly. This results in the following main research question:

How do real estate development organisations safeguard that risks are taken knowingly by means of their investment decision making procedures?

To guide the research, the following six sub research questions have been formulated.

- Why is it relevant to research risk management in real estate development from a decision making perspective?
- What are the characteristics of investment decisions in real estate development?
- What organisational perspective on strategic decision making is most suitable to examine how risks are successfully dealt with?
- What explanatory framework is suitable to examine the investment decision making process in real estate development?
- What is a suitable research design for examining knowingly taking risk in practice?
- What management practices contributing to knowingly taking risks are used in practice?

Figure 1.1 depicts the coherence between the central research question and the derived research questions. This coherence is explained in section 1.4.2.

1.4.2 Outline
The research has a theoretical and an empirical part. The theoretical part consists of literature reviews in the field of real estate development and organisational decision making: the theoretical part results in a synthesis of both literature reviews in a framework of knowingly taking risk in order to guide the empirical field study. The empirical part consists of a multiple case study and a cross case analysis: this part answers the main research question and reflects on the framework of knowingly taking risk.

The first part of the literature review, described in chapter 2, elicits insights into the characteristics of investment decisions in real estate development projects. When are investment decisions made during a real estate development project? What risks are taken into consideration? Who are involved in making investment decisions? Based on these characteristics the investment decision problem can be posi-
1. Introduction
Research question: Why is it relevant to research risk management in real estate development from a decision making perspective?
Research problem: a lack of insight in the way real estate development organisations actually deal with the risky nature of their business.

Problem diagnosis

2. Towards investment decisions in real estate development
What are the characteristics of investment decisions in real estate development?

3. Towards a perspective on investment decision making
What organizational perspective on strategic decision making is most suitable to examine how risks are successfully dealt with?

Literature review

4. Framework of knowingly taking risk
What explanatory framework is suitable to examine the investment decision making process in real estate development and define knowingly taking risk?

Synthesis

5. Research design
What is a suitable research design for examining knowingly taking risk in practice?

Research design

6. Knowingly taking risk at TCN
What management practices contributing to knowingly taking risk are used in practice?

7. Knowingly taking risk at
What management practices contributing to knowingly taking risk are used in practice?

8. Knowingly taking risk at BH
What management practices contributing to knowingly taking risk are used in practice?

Empirical research

9. Cross case analysis
How do real estate development organisations safeguard that risks are taken knowingly by means of their investment decision making procedures?

Reflection

10. Reflections
1. What are the main findings of the research?
2. What are suggestions for further research?
3. What are the practical implications of the research?

Figure 1.1 Research framework
tioned as a strategic decision in the field of organisational decision making. Moreover, these characteristics are used in an integral model of investment decision making in chapter 4.

In addition to the characteristics of the decision problem, insight is needed into the decision making process. Since investment decisions are regarded as strategic decisions, the second part of the literature review, described in chapter 3, is directed at understanding how strategic decision making processes take place. What is known about decision making under risk? What theories of organisational decision making have been developed? What theory gives the most insight into how effective decisions are made? This second part of the literature review results in a set of decision activities that is essential for making effective decisions. This set of decision activities is used as input for chapter 4.

Chapter 4 synthesises the findings from chapter 2 and 3 into an explanatory framework of knowingly taking risk. First, a model is presented in which the investment decision making process is related to the real estate development project and the real estate development organisation based on the characteristics of investment decisions. This model reduces the investment decision making process into a set of related phases, aspects and actors in order to describe cases in practice. Second, based on this model and the decision activities of chapter 3, a set of propositions is advanced on what kind of decision activities contribute to knowingly taking risk. Third, the concept of knowingly taking risk is defined on the bases of the integral model and the propositions.

The use of the integral model and the propositions is described in the research design in chapter 5. In contrast to most studies, the propositions here are not primarily tested or validated, but the propositions are used to extract what management practices are used in order to safeguard that decision activities are carried out in such a way that they contribute to knowingly taking risk in real estate development. The empirical research consists of a multiple case study in three Dutch real estate development organisations: t cn property projects (t cn), Johan Matser Projectontwikkeling (j m p) and Blauwhoed (b h). The case selection criteria, the methods for data collection and analysis are described. In addition to the multiple case study, the results of the cross case analysis are tested; the method of evaluating the reliability, robustness and applicability is also described in chapter 5.

Chapters 6, 7 and 8 describe the investment decision making processes at t cn, j m p and b h. First the characteristics of the organisation, the real estate development procedure and the investment decision
making procedure are described by making use of the model of investment decision making. Next, the investment decision making process is described in detail by making use of the propositions; from these descriptions a set of management practices is extracted that contribute to knowingly taking risk.

In chapter 9 the management practices are compared in a cross case analysis to indicate the suggested practices from the perspective of knowingly taking risk. Based on these results the definition of knowingly taking risk can be refined. Moreover, this section answers the main research question by determining the key elements of an investment decision making procedure that guarantees knowingly risk taking behaviour. The results are confirmed by an evaluation of their reliability, robustness and applicability.

Chapter 10 summarises the findings, suggests further research and cites the practical implications of the research.
Towards investment decisions in real estate
development

This chapter gives insight in real estate development and specifically in the investment decisions that take place in real estate development organisations. Section 2.1 describes the real estate development sector, its history, structure and the important characteristics of real estate development organisations. Section 2.2 presents a model of real estate development processes in terms of development phases and development aspects in order to define the investment decision moments and to structure the content of investment decisions. Section 2.3 uses the model to give an overview of the risks and risk control strategies in real estate development. Section 2.4 describes the nature of investment decisions.

2.1 The real estate development sector

Real estate development is defined as the transformation of an idea for new built space into a real property. A real estate development organisation is not able to do this on its own. Many other parties are involved in the development process, such as an architect, engineers, a contractor, and an investor, but also the public sector and interest groups.

In the Netherlands, the real estate developer as a private, risk taking property developing firm exists now for about one century. Before – but also today – the role of a real estate developer as client and coordinator was taken by, for example, private end users or public institutions, like municipal departments or public works or the Dutch Government Building Department.

This research focuses on the private real estate development organisation. After a short overview in section 2.1.1 of the history of the private real development sector in the Netherlands, based on a publication of the Association of Dutch Real Estate Development Companies (Neprom, 2000), sections 2.1.2 and 2.1.3 will describe its structure and characteristics, respectively.

2.1.1 History of the private real estate development sector in the Netherlands

The private real estate development industry in the Netherlands arose around 1900, when building contractors and real estate investment companies started to acquire parcels of land on which to construct public housing. The private real estate development organisations were obliged to obtain approval from the municipality to develop their plans.
These plans had to be evaluated on zoning plans and building regulations that municipalities formulated according to the ‘housing act’ (Woningwet 1901). Despite the great influence of municipalities and housing corporations, private developers developed complete districts of Dutch cities until the Second World War. During and after the war municipalities were instrumental in urban reconstruction.

In 1949 social housing became an attractive investment because of a change in the fiscal regime. Many building contractors started to develop housing projects in the rental sector for investors. In contrast to the early 1900s when developers chose the locations for construction themselves, in the late 1940s the municipalities decided which locations were to be developed. Some developers assumed the risk of creating shopping centres. In 1956 the first shopping arcade opened; the first rental office did not open until 1965. This was the start of the real estate development sector.

In the 1960s the Dutch economy grew and there was a great demand for construction, resulting from the postwar housing shortage and population increase. The rise of the service sector generated a need for office space and the increase in wealth created the opportunity to develop new shopping centres. Contractors profited from these economic circumstances, as investors and financial institutions who became active in real estate development.

At the end of the 1960s an economic recession set in: labour costs, inflation and interest rates rose, the international competitive position of the Netherlands decreased and the housing shortage ended. Dutch real estate developers therefore also extended their business to other countries. To withstand the domestic competition, Dutch real estate developers started to invest in speculative land acquisitions to secure future production. However, municipalities also became actively involved in land acquisitions, even by expropriation procedures, which complicated and delayed the work of private developers. Because of the oil crisis in 1973 the situation deteriorated and development companies had to refrain from their riskiest activities. This situation did not last for long; as in 1975 the economy recovered from the recession.

From that moment the private housing market boomed. By 1976, sale prices of existing houses doubled and the mortgage rate rose to 10%. Real estate developers started to construct large numbers of houses without having presale agreements. Prices were forced up until 1978, when sales slowed. In 1979 the national and international economies stagnated, inflation stayed high and interest rates rose. New development projects were postponed or delayed and sale prices of projects under construction fell. Some real estate developers, contractors, and financiers ran into trouble and some companies went bankrupt. Since then, developers have become more sensitive to the risks they were tak-
ing. They started to pay attention to their solvency; they also became prudent in buying capital intensive speculative land, and only rarely started construction at their own risk.

In 1982 the market reached rock bottom and slowly recovered. The development climate did not improve until the middle of the decade, when the spatial policy of 1988 (Vierde Nota Ruimtelijke Ordening) announced the reinforcement of urban areas and economic regions. At the same time, decentralisation gave rise to public-private partnerships and the economy continued to grow. Especially the office space market grew rapidly which caused a huge supply of office space. When demand fell in reaction to a declining economy and the 1991 Gulf crisis, developers remained solvent thanks to the government’s large housing operation. However, investment companies lost interest in investing in office space any more, so developers were left with a large surplus until 1996.

Major changes took place in the 1990s because of the abolition of some subsidies, decentralisation of the public authorities, and the new spatial policy (Vierde Nota Ruimtelijke Ordening Extra – vinex). The government singled out large extension areas for greenfield housing development to be developed within ten years. Private developers bought land in these areas despite the large claim on capital and the risks involved. Therefore, they sell the land to the municipalities, who are responsible for the land development, in exchange for the option to develop the property. Because of the high selling prices in the housing market, these development projects were very profitable.

The vinex policy led to an enormous scaling-up in development projects and in real estate development organisations. This trend continued in the last decade, but the type of locations has changed. Development moves now from greenfield to brownfield and inner-city areas. The housing market is still short in supply, but the office market is characterised by substitution, either by redevelopment or by demolition and new built space. As stated in chapter 1, projects have become more complex, organisational changes take place to maintain a financially strong position and to have enough human capacity and knowledge. While real estate development organisations in the Netherlands started as business divisions of a contractor or investor to ensure building production or investment assets, nowadays many private and independent real estate developers are active in the real estate development sector.

2.1.2 The structure of the real estate sector in the Netherlands

The multidisciplinary character of real estate development requires expertise in various fields and managerial competences. A real estate developer needs creativity and market knowledge. In addition, a developer needs entrepreneurial skills and to the ability to spot opportuni-
ties to invest and assume the accompanying risks. Management skills, leadership and the abilities to listen, negotiate, convince, coordinate, plan and control are required. Finally, a developer must be ‘annoyingly persistent, but not inflexible’ (Miles et al., 2000: 37) to operate in the dynamic real estate system.

A real estate developer is a central player in the real estate sector by connecting the space, asset, land, construction, and capital markets. The interaction of these five markets constitutes the real estate system (Louw, 1993: 61; Geltner and Miller, 2001: 25). This research adds two markets to the real estate system: the ‘design market’, in which architects, engineers and other consultants provide design services, and the ‘planning market’ in which a use is designated for a plot.

From the perspective of free market processes, the ‘design market’ and the ‘planning market’ take a distinct position from the other markets. Although the design market is a free market, the advisors have little price competition. Moreover, the costs for the design services are relatively low compared to the total development costs. The planning market is not a free market, since the public sector determines a zoning plan and grants permits. However, when a market is considered as a value chain, both the design market and the planning market are critical. A design transforms the idea into a plan: this transformation is an important step in creating value for the developer. The same holds for the planning market: when a housing or office destination is allocated to a plot of land, the land value increases significantly. Moreover, the application of a building permit is conditional for the construction works. Thus, although the design and the planning market might not be considered as free markets, their position in the value chain is so important that the markets are added to the real estate system.

In each market a real estate development project has a different meaning. For a user it is a living space; for an investor a development project is an asset; a contractor sees a project as an amount of work and materials; a financier looks at it as a mortgage; an architect considers it as an expression of creativity; and the public sector may look at it as a means to create employment, or a better image of the city. These meanings play an important role in how each party values the services delivered. Figure 2.1 depicts the structure of the real estate development sector.

A real estate developer must be able to recognise the future demand on the space market to provide new supply and thereby create value. In the space market, rental space is traded between suppliers and tenants. The need, and thus the value of new space, is determined by current rents and occupancy levels. The real estate developer is active in arranging future rental values by closing contractual arrangements. However, in
most cases a developer sells a project to an end user or an investor; the developer does not receive revenues directly from the space market, but the rental incomes flow to the asset market.

On the real estate asset market investors buy and sell real estate assets in order to realise a higher return on their invested capital in the medium or long term. Developers sell their new supply to investors who base their prices on the rental values, determined at the space market, and on the market capital rate, determined by the investors’ desires and perceptions about the investment risks and returns of real estate assets and the investors’ forecasts about the future course of rents (Geltner and Miller, 2001: 26). In the case of owner-occupants the space market coincides with the real estate asset market.

The asset value, the revenues for a developer, is necessary to determine the profitability of a project by comparing it to all development costs, including land and construction costs. When the asset value exceeds the development costs, a project is viable. Land costs are determined in the land market, which is a part of the real estate asset market,
by the opportunity value of land. The opportunity value depends on the municipality’s zoning plans. In this sector of the asset market developers collaborate with municipalities and land owners. However, when capital is largely available, investors become more active in this market, because land is an inflation-proof asset and land acquisitions ensure future building stock.

Construction costs are determined in the construction market. However, the construction costs depend on the markets of subcontractors and raw materials. As construction costs are a significant part of total development costs, a real estate developer needs insight into the trends in the construction market and its underlying markets. Before construction can start, a real estate developer operates on the design market to hire several consultants to design an integral plan. Such a design must reflect the demands of future use to make the building valuable. Moreover, a design is needed to apply for a building permit, and to tender the project.

A building permit is applied for on the planning market: this conditional resource for a development project is ‘traded’ in a political arena in which public authorities approve zoning plans and building applications. In the planning market a permit cannot be granted in return for money, but a zoning plan is allocated or a building permit is granted based on the contribution of the plan to the built environment, the economic value for the municipality, political interests and the confidence of the public authorities in the capabilities of the developer to complete the plan.

To finance the development costs a developer usually needs debt capital either from financial institutions or from private equity providers. In the capital market, loans are provided against an interest rate which is based on the macro-economic capital market, and secondarily on the type of product based on the risk profile of the loan. Moreover, the percentage of the development costs that is financed is also based on the expected return and the risks involved in the development project. As financiers are usually risk averse, a developer has to finance a part of the development with equity capital.

The structure of the real estate development sector shows that a real estate developer, or the development industry, links the space and asset markets, in which the developer operates as a supplier, with the land, design, planning, construction and capital markets, where the developer acquires the necessary resources for the realization of the development project. A developer also takes advantage of different kinds of services which are involved in these markets. Among these players or services are:

2. Towards investment decisions in real estate development
• Land market: land owner, soils engineer, environmental consultant;
• Design market: architect, urban designer, landscape architect, structural engineer, mechanical engineer, cost engineer;
• Planning market: public authorities (municipality, regional government, state government), communication consultant, neighbourhood, community groups;
• Construction market: contractor, project manager, subcontractor, building inspector, insurance company;
• Capital market: financial institutions, private equity providers, appraisers;
• Space market: tenants, market consultant, real estate agent, marketing consultant, advertising agency;
• Asset market: investors, appraiser, property manager.

From the description of the real estate sector the definition of a real estate development organisation can be specified:

A real estate development organisation is a private firm undertaking real estate development projects by means of operating on the land, design, planning, construction, capital, space and asset market with the aim of realising profit and other non-monetary objectives.

2.1.3 Characteristics of real estate development organisations
In the Netherlands almost 2500 companies were registered as real estate development organisation of which 125 companies with over ten employees in January 2007 (Statistics Netherlands, 2008). The yearly turnover of these companies is around 1% of the gross national product with a production of €5.5 billion (Economisch Bureau ing, 2006). Only 5 companies have a yearly turnover of over €200 million, and 8 companies have a turnover between €100 and €200 million; together the 5 largest companies undertake 20% of the total turnover of the Dutch real estate development sector (Dorenbos and Nozeman, 2008).

In Europe the Dutch real estate developers play a significant role: 22 Dutch developers are listed in Property eu’s ranking of 100 leading developers in terms of value of their pipeline (MacRuairi and Seebus, 2008). Dorenbos and Nozeman (2008) show that in comparison with other European countries, i.e. Spain, United Kingdom, France and Germany, the UK delivers the most companies with a turnover with over €200 million and has the longest history. The Netherlands has the most all-round developers: while almost 70% of the Dutch developers focus on both residences, and offices, as well as retail and other products, the average of all-round developers in Europe is about 39%.

Next to a differentiation on product focus, developers can be distinguished by their geographical focus – local, regional, national, international –, the level of in-house expertise – a small organisation that hires
specialised expertise such as legal advice or marketing consultants, or a multidisciplinary organisation –, and the origin of the organisation. In the Netherlands five groups of developers can be distinguished based on their origin (Nozeman, 2008):

- Independent developers: the core business is developing projects and selling them directly or a few years after completion. In terms of absolute numbers, the independent developers are the largest group in the Netherlands, but the portfolio is relatively small;
- Contractor-developers: the development activities originated from the construction activities and a part of the production in the construction activities can be guaranteed by the development portfolio; this is the largest group of Dutch developers;
- Asset-developers: this group develops projects for its own asset portfolio development. The acquisition of assets can be controlled by the development process. This group consists of commercial investors and housing corporations;
- Financier-developers: a small number of developers originate from financial institutions that started development activities next to financing development projects; these developers have the advantage of a large financial backing;
- Others: a small group of organisations have in-house development companies to develop projects for their own use and portfolio.

The focus of an organisation determines the company strategy, and thereby what risks are taken and handled. The focus here is on the independent developer, for whom real estate development is a profit-making opportunity. In section 5.2.1 additional criteria are determined to select cases for the empirical research.

2.2 A framework of real estate development processes
Transforming an idea into a real property may take several years. To manage such a project, the real estate development process is divided into development phases. At the end of each phase a project is integrally assessed to decide whether to make further investments (Gehner, 2003). These moments are the investment decisions, marking the start of a new phase; the decision moments are the transitions between development phases. Each investment decision moment is a ‘project review point where continuation or termination decisions are made’ (Schmidt and Calantone, 2002: 104). Quitting the project means that the developer lacks the confidence in a profitable outcome of the project and uses his exit strategy. Continuing a project implies that the developer is committed to making the future investments needed to complete the project. This section presents a framework of the real estate development process.
2.2.1 Development phases and investment decision moments

The development process is usually modelled as a series of sequential phases, such as ‘evaluation, preparation, implementation, and disposal’ (Cadman and Austin-Crowe, 1983: 3), ‘evaluation, acquisition, procurement, and disposal’ (Birrell and Bin, 1997), ‘inception of an idea, refinement of the idea, feasibility, contract negotiation, formal commitment, construction, completion and formal opening, and property, asset and portfolio management’ (Miles et al., 2000: 6), or ‘planning and initiation, feasibility, commitment, construction, and management and operation’ (Peiser and Frej, 2003: 20-21). These phases are similar; this research uses the terms initiation, feasibility, commitment, construction, and management, as presented in Figure 2.2.

Many activities take place in each phase. All activities in a phase are aimed at reaching a certain end result. For example, in the feasibility phase a developer ‘conducts or commissions a formal market study to estimate market absorption and capture rates, conducts or commissions a feasibility study comparing estimated value of project with cost, processes plan through government agencies’ to demonstrate ‘legal, physical, and financial feasibility’ (Miles et al., 2000: 6). In the construction phase a developer seeks ‘to keep all costs within budget’ and ‘resolves construction disputes, signs checks, keeps work on schedule’ (ibidem) to deliver the building within budget and schedule.

The activities of a development organisation in the management phase differ over the types of organisations. Some limit the activities to the after-care and the closing of the loan and leave the property and asset management to the new owner. Other development organisations include property and asset management in their activities, although these activities usually take place in another department or business unit. In this research the development process is limited to the completion of the project, assuming the project is directly sold to a new owner or to another business unit; the management activities are excluded from further examination.

A traditional development process starts with an idea conception, a feasibility analysis, the purchase of land, the design process, application for a building permit, construction works and the rental and/or sale of the property. The sequence of activities over the development phases can be defined as a development strategy. According to the traditional development strategy, the real estate development organisation approves the following commitments at the investment decision moments:

• Start of the initiation phase: starting up a project administration; closing a development agreement for example in case of winning a competition;
• Start of feasibility phase: commissioning the design assignment to the selected architect;
- Start of commitment phase: applying for building permit, starting pre-rental activities, purchasing land;
- Start of construction phase: tendering the project;
- Start of management phase: selling the project.

Despite the linear models, various authors note that the development process is ‘hardly straightforward’ (Miles et al., 2000: 5) and that ‘development is an iterative process in which the developer obtains more and more precise information in each iteration’ (Peiser and Frej, 2003: 19). In practice the development phases are used to prescribe what activities must be carried out and evaluate at whether the progress is as expected. At these investment decision moments all activities are evaluated. As many activities take place at the same time, it is hard to make a holistic assessment and the division of the real estate development process is not sufficient.

2.2.2 Development aspects

To structure the investment decision making process, the activities in the real estate development process are grouped into development aspects according to the markets in which the developer operates (section 2.1.2). During the development process the real estate markets in which a developer is involved are subject to cyclical fluctuations. Since markets are interrelated, ‘good management of the interactions among various disciplines is essential to successful development’ (Miles et al., 2000: 7). The profitability of a project depends on a good prognosis of future trends on the different markets and a well planned development process.

The development aspects are the items to be evaluated in their mutual relationships at each investment decision moment. Each development aspect consists of activities in preparation of a transaction on the market, the transaction, and activities to control the consequences of the transaction. The development aspects are:

- Land development: all activities concerning the preparation and control of the acquisition of land and making it ready for building, including site selection, investigation of land ownership and soil, land purchase, and site preparation;
• Design: all activities concerning the preparation and control of the realisation of a design, including idea inception, first spatial concept, physical feasibility study, selection of architect, selection of other consultants (engineers, landscape architect), management of the design process;
• Entitlement: all activities concerning the granting of all building permits;
• Financing: all activities concerning the raising of funds under the investments;
• Construction: all activities concerning the physical realisation of the project, tendering and contracting, supervision of construction, and controlling planning and costs;
• Leasing: all activities concerning the rental of the real estate project, including a market analysis, feasibility studies, promotional activities and closing rental agreements;
• Sales: all activities concerning the sale of the real estate project, including a market analysis, appraisal, promotional activities, closing a sales contract and property management.

Activities related to each of the development aspects are carried out simultaneously during all phases; the activities interact and in some cases are time dependent. Interaction means that ‘a single activity can span several stages in the development process and several different activities will be ongoing in any particular stage. Second, the process is interactive in the sense that values of certain variables in the process are conditioned by the values of certain other variables’ (Miles and Wurtzebach, 1977: 332); in other words the outcome of an activity influences another. Time dependency implies that one activity must be completed before another can start. For example, construction can only start when public authorities have given the building approval and financing is arranged.

Although some activities are time dependent, development strategies can be developed with different sequences of activities over the development phases. The development strategy is a combination of sub strategies for each of the development aspects. As the design, entitlement, financing and construction activities are time dependent, the sequence of these activities hardly varies. However, the activities regarding land development, lease and sales can take place at different moments in the development process.

The sub strategy for land development defines the moment that a developer enters the land market. When a land deal starts the development, one speaks of ‘a site looking for a use’ (Isenhöfer, 1999: 52; Geltner and Miller, 2001: 774; Peiser and Frej, 2003: 7). Several variations are possible within this sub strategy:
• Speculative land purchase: land is purchased even before a developer has a concrete idea for that site. Years can pass before it is possible to start a development on the site because of zoning policies, changes in the environment or in the economy. As land becomes scarce, it is interesting to have some land positions; on the other hand it requires a great deal of equity and land prices rise;
• Land purchase on behalf of a concept: once having an idea for a project a suitable location is sought that can be developed in a ‘short’ time. Prices of such land are usually high;
• Entering a competition: by submitting a concept and making a bid developers try to get a location. The initial investment to enter a competition is high and the chance of winning is low.

The sub strategy for leasing defines when a deal with a tenant is closed. When a development project starts with a tenant deal, one speaks of ‘a use looking for a site’ (Peiser and Frej, 2003:7). This strategy is applied by real estate developers who develop for their own use (section 2.1.3). The other categories of developers can choose between the following strategies – depending on the market:
• Tenant deal at the start of the development process;
• Construction only starts when a fixed percentage of pre-rental agreements is closed;
• Speculative development: the end user is not known at the start of construction.

The sub strategy for sales is about the moment of selling the project to an investor. In case of an asset-developer the project is developed for its portfolio and the sale is thereby guaranteed. There are three sales strategies:
• Project is sold as soon as the project is completed;
• Project is kept in portfolio until the value growth diminishes;
• Project is sold to an investor at the start of development.

As multiple development strategies are possible, it is not possible to model the real estate development process. However, each development process can be modelled upon a framework of development phases (in the columns) and development aspects (on the rows). Figure 2.3 depicts a real estate development process: for each development phase the activities by development aspect are described. This example is a traditional development process in which the following sub strategies are modelled: the land is purchased after an idea conception, a level of pre-rental agreements is required before construction and the project is sold after completion.
2.3 Risk in real estate development

The model of the real estate development process can also be used to determine what risks are addressed in a real estate development project. The risk concept is defined in the context of real estate development in section 2.3.1. Section 2.3.2 presents risk categories related to the development aspects. Section 2.3.3 examines control strategies to deal with risk.
2.3.1 Definition of risk

There is no universally accepted definition of risk (Vlek, 1990; Asselt, 2000; Aven and Kristensen, 2005; Atkinson et al., 2006; Chapman, 2006). This section argues that ‘risk is a kind of attribute ascribed to the unknown future: the real dangers and hazards are only known afterwards’ (Asselt, 2000: 151). As the future is uncertain, some events can affect the expected outcome of a real estate development project. Events can both have a positive and a negative impact. According to managerial perspectives on risk, events with a positive impact are regarded as opportunities and events with a negative impact are regarded as risks (MacCrimmon and Wehrung, 1986; March and Shapira, 1987; Akintoye and MacLeod, 1997).

Uncertainty does not imply a risk or an opportunity: ‘if a potential future event has no potential to adversely affect an organisation’s objectives, then it is not a risk to that organisation’ (Loosemore et al., 2006: 9). In other words, risk implies a choice (MacCrimmon and Wehrung, 1986; Stallen, 2002). A real estate developer can choose to invest in a project in which there is a probability that an event occurs that negatively affects this expected outcome.

Moreover, a developer cannot only choose to invest, but he can also influence the risk factors of a project (Keizer et al., 2002). This means that the decision problem is dynamic (Halman, 1994) (section 1.2.1). At the same time this ability is limited because of a lack of control, information and time. ‘If we had complete control over the situation, we could determine the best outcome and there would be no risk. If we had complete information about which event would occur, we could select the best alternative based on this knowledge and again there would be no risk. If we had unlimited time in which to decide which alternative to choose, we could wait until the outcome of the uncertain event was resolved and then choose the best alternative after the fact. This scenario also involves no risk’ (MacCrimmon and Wehrung, 1986: 14).

In order to make the concept of risk operational, risk is usually defined as a function of probability and impact. The probability of a risk event represents the chance or likelihood that an event will occur. The impact or consequence of a risk event is expressed in terms of deviation from the expected or desired outcome. In health and safety management, the impact is usually expressed in terms of injury or death. However, in the case of real estate development the impact is generally measured in terms of financial loss, as profit is the main objective of a developer. Both probability and impact can be expressed in qualitative and quantitative terms.

The debate on risk is directed at the quantitative measurability of these components. At one end of the risk continuum are ‘real, measurable, objective risks that obey the formal laws of statistical theory’,
while at the other end are ‘subjective risks inaccurately perceived by non-experts’ (Royal Society, 1992). As described in section 1.2.1, only little risks can be assessed objectively, as most of them are infrequent. In these cases an estimate has to be based on logical reasoning (Halman, 2008); lack of knowledge due to inexactness, lack of observations and practical immeasurability (Asselt, 2000) need to be reduced to increase the reliability of subjective estimates. As real estate developers have to use subjective estimates, the concept of risk is not exclusively used for objectively measurable risks. This research uses the following definition of risk in real estate development:

A risk is the probable negative impact on the expected value of a real estate development project caused by uncertainty about an event or events that might occur and/or the reduced ability to influence the events, after an actor has irrevocably allocated his scarce resources to that project.

2.3.2 Risk categories

In a real estate development process the risks can lead to the breakdown of the project (when land cannot be purchased or a change in the zoning plan is not approved), a major cost overrun or a decrease of revenues (tender in a tight construction market or a negative yield growth), delays (application procedure takes more time, rental rate lag behind prognoses), or only to minor variations in the budget. Of course, the risk impact can also be measured in terms of inferior quality or serious injuries.

The research views risk from the perspective of the decision makers in a real estate development organisation. As the main objective of an independent real estate development organisation is profit, the consequence of a risk is measured in terms of deviations from the expected return of a project. Quality aspects are indirectly covered by construction and rental prices; time is sometimes directly referred to, as time has a direct relation with the interest costs in a project. Moreover, time is an important factor in controlling risks.

The risks with the highest impact influence the critical time path of the development process, as these risks indirectly influence the continuation of the other activities. The consequence might be the breakdown of a project or severe delay. Another significant group of risks are those with such a high impact on costs or revenues that the feasibility of a project is endangered. The three risks most mentioned by Dutch real estate developers are delays due to the planning application, sales/rental risks, and tendering (Gehner et al., 2006).

Although it is impossible to list of all of the possible risks in a real estate development project, risk categories are made to gain insight into these risks, and to structure the risk identification. Various authors (Miller and Lessard, 2000; Love et al., 2002; Bing et al., 2005; Risman
Instituut, 2005; Ng and Loosemore, 2007) use risk categories as technical, financial, legal, political, physical, social, and organisational. Risks can also be categorised as organisational, project-related and environmental (Have and Nauta, 2004) or macro level (exogenous), meso level (endogenous), and micro level (stakeholder relationships) (Baloi and Price, 2003; Bing et al., 2005; Mbachu and Vinasithamby, 2005). Others assign risk to the parties in the process (Kumaraswamy, 1997; Rahman and Kumaraswamy, 2002).

The purpose of these categories is to cover the spectrum of risks. According to the description of the real estate development process (section 2.2.2), the development aspects, which are related to the real estate markets (section 2.1.2), are used to categorise the risks in a project. The risk categories, including a few examples of the risks in each of these categories, are:

- Land development risks: e.g. land cannot be purchased – land price is disproportionately high considering land conditions and current zoning plan;
- Design risks: e.g. program of requirements cannot be realised on the site – design is not kept within budget – delay of design process due to necessary changes on behalf of market fit or planning application;
- Entitlement risks: e.g. no approval of zoning plan or building permit – delay of planning procedure;
- Financing risks: e.g. financing cannot be arranged;
- Construction risks: e.g. at tender construction costs exceed budget – delay of construction process;
- Leasing risks: e.g. time to market lags behind schedule – design does not meet demand of space market (decrease in rental prices) due to economic fluctuations or innovativeness of product;
- Sale risks: e.g. wrong estimation of yield development.

2.3.3 Risk control strategies

With regard to the day-to-day management of projects there are four principles of mitigating or controlling risks (Vermande and Spalburg, 1998; Institution of Civil Engineers and The Actuarial Profession, 2005; Loosemore et al., 2006):

- Reduction or elimination
- Transfer or sharing
- Avoidance
- Acceptance.

Risks are initially reduced by gaining information, thus reducing uncertainty. Feasibility analyses and soil investigations are made and insights into the zoning plans and spatial policy are obtained. The adjustment of the concept to the limitations of the zoning plan or to the market
demand in a specific region is a way of eliminating risks. Communication with community groups is a form of risk reduction in the sense that a developer tries to win popular support in advance of a project.

The most significant risk allocation tools are the contracts governing each participant’s project responsibilities. ‘Another way to transfer risks is to pass them to an insurance company which, in return for a payment (premium) linked to the probability of occurrence and size of hazard associated with the risk, is obliged by contract to offer compensation to the party affected by the risk’ (Institution of Civil Engineers and The Actuarial Profession, 2005: 42). Only some construction project risks are insurable - generally those that permit insurers to classify and price the risk. Insurers look for risks which have measurable losses, reliable estimates of claim frequency and severity, little potential for catastrophic loss, feasible premium levels, and a large pool of potential insurants to distribute risk. In the Dutch construction sector, Construction All Risks-insurance is very well known. However, in the real estate development sector, there is little insurance because the uniqueness of projects implies a very high insurance premium. The costs of the control measure do not counterbalance the risk impact in most cases.

When risks cannot be reduced or transferred and the impact of the risk is unacceptably high, the developer must undertake the project in such a way that avoids risk. The development strategy might have to be adjusted, or the project itself might have to be aborted. The final choice is between breakdown and acceptance. Acceptance is only possible when there is ‘sufficient margin in the project’s finances to cover the risk event should it occur’ (Institution of Civil Engineers and The Actuarial Profession, 2005: 43).

Peiser and Frej (2003), Isenhöfer (1999), and Miles, Berens and Weiss (2000) provide guidelines on financial, legal and product engineering to undertake and control a real estate development project.

Financial engineering comprises the financial measures to keep control over a project. A real estate developer needs sound cash flow planning by keeping costs low and planning them as late as possible to reduce interest, and by maximising and securing revenues early in the process. These principles might lead to conflicts of interest when a project can be sold to an investor early in the process, while selling later might result in a higher sales price because the yields go down. In such a case a good prognosis of the market must determine the best strategy. Another aspect of financial engineering is to increase the leverage in a project by investing with debt equity financed by financial institutions, investors, private equity providers (Brealey and Myers, 1988; Gatti, 2008). Projects are usually financed by a non recourse loan so the devel-
Legal engineering comprises the legal measures to keep control over a project. These measures are expressed in the contracts made with the other parties involved in a development process. Contracts are made to commission an assignment; for example a municipality commissions the development of a project to a developer, or a developer commissions the construction works to a contractor. The most important clauses in these types of contracts regarding risk are those in which risks are allocated and conditional clauses. Another type of contract is the cooperation agreement to develop a project with another party, thereby sharing risks and profits. The main reason to cooperate with another party is because of the financial investments and the risk; however, cooperation based in different expertise or interests is also common. The liability structure of these contracts influence the risk allocation: limited partnerships (e.g. a Special Purpose Vehicle, Ltd. [UK], Besloten Vennootschap or Commanditaire Vennootschap [NL]) are common, so that the risk exposure is limited to the share in the partnership, while in an unlimited partnership (e.g. Vennootschap Onder Firma in the Netherlands), each partner is liable for the total investments made in that project.

Product engineering comprises the measures taken with regard to the product to influence the project result. These measures are taken in the initiative phase of the process, but depending on the flexibility of the product and the process, product adjustments can be made. The most important aspect of product engineering is to optimise the product in relation to the market demand. Next, the product must be optimised towards both price and quality. Moreover, the product in the form of a plan is used during the development process to convince interests groups with influence over the planning application procedure.

The risk response, i.e. what control measure is going to be taken, depends on the characteristics of impact and probability of a risk, and the costs of controlling a risk. This research does not focus on the mitigation of individual risks in a project, but focuses on the integral evaluation of a project at the investment decisions by assessing the total risk profile of a project.
2.4 **Nature of investment decisions**

This research concentrates on investment decisions taken at the decision moments between two development phases. At these decision moments an integral evaluation of a project is made, taking all development aspects into consideration and assessing the total risk profile of a project. Based on this assessment, a decision is made on whether or not to allocate a budget to a project. When the financial resources of a real estate development organisation are scarce, a project is also evaluated in relation to the portfolio of the organisation to determine whether this is more than or at least as profitable as other development opportunities. An investment decision can be defined as:

*An investment decision is a commitment to the allocation of financial resources of the real estate development organisation to the next development phase of a real estate development project, by making an integral evaluation of the development aspects and taking into consideration the goals of the project as well as the objectives of the organisation, approved at the strategic level of the organisation.*

This section explores four aspects of investment decisions: impact, level of routine, complexity and decision interests.

2.4.1 **Impact of investment decisions**

Investment decisions have financial and time consequences for both the project and the organisation. The literature draws a distinction between strategic and trivial decisions. A decision is strategic when it is ‘important, in terms of the actions taken, the resources committed, or the precedents set’ (Mintzberg et al., 1976: 246), or if it ‘critically affects organisational health and survival’ (Eisenhardt and Zbaracki, 1992: 17). Strategic decision making refers to ‘corporate strategic moves that cause returns to vary, that involve venturing into the unknown, and that may result in corporate ruin’ (Baird and Thomas, 1985: 231). Another aspect of the impact is the time-consequentiality or the endurance of the decision (Hickson et al., 1986: 267). In other words, a strategic decision is about the determination of the basic long-term goals and objectives of an enterprise (Ghemawat, 1999).

The financial impact of an investment decision on the organisational financial situation is of great importance, as the financial resources committed to a project and the accompanying risk capital can take up a considerable amount of the organisation’s total equity capital. Most of the times the equity capital of a real estate development organisation is not sufficient to finance the project completely; therefore, during the development process risks must be allocated to other parties in order not to jeopardise the survival of the organisation.

The time impact of an investment decision determines the course
of action for the next development phase and sets precedents for subsequent, everyday, project management decisions. However, an investment decision also directs the organisation’s goals and objectives. The commitments in a real estate development project are made for a time period of at least 5 to 10 years. During this period the equity demand of a project prevents the organisation from accepting new projects, thus the (middle) long term strategy is set by this decision.

In conclusion, investment decisions can be regarded as strategic decisions, as investment decisions can put the survival of an organisation at stake and determine mid- to long-term investments.

2.4.2 Level of routine of investment decisions
Routine is the repetitive character of decisions. There is a distinction between trivial or everyday decisions with a high level of routine, and strategic decisions which are rare and therefore novel (Hickson et al., 1986: 28). The level of routine of investment decisions can be looked upon from the project and organisational perspectives.

From the project perspective, the repetitive character is low; although multiple investment decisions are made during a development process (section 2.2), each investment decision problem depends on the type of financial commitments that are made. Moreover, the time between two investment decisions may easily take at least a year. Therefore the actors and the economic situation might have changed over time and need to be reassessed.

From the organisational perspective the repetitive character of investment decisions is relatively high, depending on the size of the portfolio. Some routines can be developed to make investment decisions, as similar investment decisions are made for each project. However, unfamiliarity with the decision problem remains, as each project has its own spatial and economic context, parties, and requirements. Economic conditions (demographics, income distribution, and employment) vary by region, political situations differ by municipality, and site characteristics (accessibility, proximity of services, parking space) determine the suitability of a certain function.

In conclusion, investment decisions fall somewhere in the middle of the spectrum of trivial and strategic decisions.

2.4.3 Complexity of investment decisions
A decision problem characterised by a large number of elements, many interactions between the elements and loosely organised interaction between elements, is considered to be complex (Flood and Jackson, 1991: 33), unstructured (Geurts and Vennix, 1989: 36-37) or messy ( Ackoff, 1974; Schwenk, 1995). Complexity, unlike uncertainty, is about the number of possible alternatives, while uncertainty is about the vari-
ability in the outcome of those alternatives. For example, a decision problem with a high level of complexity and a low level of uncertainty is a puzzle; conversely, a decision with a low level of complexity and a high level of uncertainty is a slot machine. When both complexity and uncertainty are high, as with the weather forecast, one has a ‘mirage’.

The level of uncertainty in real estate development project is moderately high due to the long time horizon of both the development process and the lifetime of a building in relation to the real estate markets in which a developer operates. These markets are determined by national and regional economies, especially the land, construction, capital, space and asset markets. The fluctuations of supply and prices in the real estate market are known as the pork or hog cycle. Because of the long development period it is crucial for the developer to anticipate these fluctuations and to consider the implications of the newly built space throughout the life of the building.

Investment decisions in real estate development are complex because of the multidisciplinary character of development. A large number of resources has to be assembled and traded in different markets. To operate in all these markets, a developer needs a range of expertise and the ability to work with market professionals, aldermen, politicians, and representatives of future users of the built environment. All of these activities interact and are interdependent (section 2.1).

The investment decision becomes even more complex when all these interactions are ‘loosely organised’ (Flood and Jackson, 1991: 33), or unknown. However, some activities have an end-start relationship: construction can only start when a building permit is granted, the design is ready and financing is arranged. These relations are determined by law. Other relations are less clear, such as the relation among the different markets in the real estate system.

In conclusion, investment decisions are moderately complex. A real estate developer has to deal with many interrelated variables. However, the framework of the real estate development process (section 2.2.2), structures the decision problem by grouping the elements into development aspects. The success of a project depends on the developer’s ability to coordinate development activities in such a way that either preserves the flexibility to deal with external influences and market dynamics or to prevent other activities from affecting this activity.

2.4.4 Decision interests in investment decisions
The actors who make an investment decision can be grouped into units according to their similar interests or roles. As an investment decision is the allocation of a significant amount of financial resources to a project, so an individual project developer is not authorised to make an investment decision, thus more actors must be involved in investment
decisions. Woodhead (2000) distinguished four roles in the decision-making process: decision approvers, decision takers, decision shapers, and decision influencers.

Decision shapers develop proposals and have their work approved, rejected or delayed for modifications by decision-takers and decision-approvers. Decision takers ‘include senior managers and sometimes executive members of the main board or capital expenditure committees. Their role is to ensure only quality proposals go forward to the decision-approvers’ (ibidem). Decision approvers are ‘those people who ultimately sanction decisions and allocate funds for major capital investments. These people are usually members of the main board or a capital expenditure committee. Their self-assumed role is often to protect the long-term viability of the organisation and the shareholders’ interests’ (ibidem). The group of decision influencers encompasses internal and external people affecting decision shaping, taking and approval, formally and informally.

An investment decision is an internal decision: no external parties have a say in the decision making process, but multiple internal interest units with different roles do. In a real estate development organisation, decision shapers work on the project level; decision takers work either at the program level (project directors), or at the corporate level (financial director). Decision approvers are at the corporate level (general director of financial director). Internal decision influencers are specialists, such as legal consultants or market researchers. All these people have their own interests. However, it is assumed that they all put the organisational strategy, values and beliefs ahead of their personal interests.

In conclusion, investment decisions can be regarded as strategic, as they have to be authorised at the top of an organisation (Eisenhardt and Zbaracki, 1992; Nutt, 2005). However, as Dutch real estate development organisations are relatively small with quite straightforward organisational structures and short communication lines between the operational level of the project manager and the strategic level of decision makers, investment decisions are less strategic than the decisions described in the strategic decision making literature (e.g. Mintzberg et al., 1976; Eisenhardt and Bourgeois, 1988; Nutt, 2004).

In summary, investment decisions are fairly repetitive, the commitments made are substantial in relation to an organisation’s equity capital, multiple decision criteria are taken into account, the decision problem is moderately complex and the decision is made at the strategic level of the organisation with the involvement of a few internal actors. It can therefore be concluded that on the continuum of decision problems investment decisions fall towards the strategic end.
2.5 Summary and conclusions

Investment decisions are of major concern in a real estate development organisation, because they require a significant amount of financial resources and the assumption of considerable risks. Therefore, it is important to know when these investment decisions must be taken and what risks must be assessed. This chapter presents a model of the real estate development process that structures the context for investment decision making. On the one hand a real estate development process can be divided into development phases; investment decisions are made at the gates between these phases. The start of a development phase is marked by, for example, a land purchase or the start of construction. On the other hand a real estate development process is a series of activities that can be structured by a set of development aspects, which correspond to the markets of the real estate system in which a real estate developer plays a mediating role. These development aspects are land development, entitlement, design, construction, sales, lease, and financing. At the investment decision moments these development aspects must be integrally weighed against both the project and the organisational objectives. This involves the strategic level of the organisation. The next chapter explains how investment decisions are made.
Towards a perspective on investment decision making

This chapter explores the literature on decision making under risk in an organisational setting in order to select a perspective to examine how investment decisions are made in the practice of real estate development. Section 3.1 reviews the theories on decision making under risk and explains what variables influence risk behaviour of individuals in a group and organisational setting. This section shows that many variables influence the outcome of a decision. However, theories about risk behaviour do not explain how investment decisions involving risk are actually taken. Therefore, section 3.2 compares three organisational perspectives on decision making. Based on the nature of investment decisions in real estate development, the procedural rationality perspective is selected for this thesis as a reference model to explain how decisions are made. Section 3.3 discusses the procedural rational model of decision making by comparing the studies of Mintzberg et al. (1976), Chapman and Ward (2002) and Nutt (2008). This results in a set of decision activities that this thesis will use to explore the concept of knowingly taking risk in real estate development. Section 3.4 concludes with a summary and reasoning for the selection of the procedural rational model.

3.1 Risk behaviour

In addition to the short description of different perspectives on decision making under risk in chapter 1, section 3.1.1 summarises the main research streams on this topic. Trying to understand risk behaviour proved to be very difficult, as many factors can affect risk behaviour. Economists, psychologists, sociologists, and management scholars are still interested in this topic. Sections 3.1.2, 3.1.3 and 3.1.4 respectively introduce the individual, social and organisational factors influencing risk behaviour. This provides a glimpse into the complexity of real life decision making.

3.1.1 Decision making under risk

Theories on decision making under risk are either prescriptive or descriptive. Prescriptive theories have been developed in mathematics and economics. This line of research started with the utility theory of Bernoulli (1738) and Bayes’ theorem (1763), followed centuries later by the game theory and the prisoner’s dilemma by Von Neumann and Morgenstern (1947) introducing the subjective expected utility theory,
and the economic models like the modern portfolio theory by Markowitz (1952) and the option theory by Black and Scholes (1973). All of these theories assume that people act rationally and aim to maximise the subjective expected utility of a decision.

Simon (1957) introduced the descriptive theory of bounded rationality. According to this theory, people intentionally act rationally, but only in a limited way. As reality is complex and ambiguous, information is limited, and time pressure is often high. Due to these barriers to full rationality, the notion of maximising utility is substituted with the notion of satisficing: people are concerned not with the discovery and selection of optimal alternatives, but with the discovery and selection of satisfactory alternatives (March and Simon, 1993).

Since then psychologists have studied individual risk-taking behaviour and have developed theories to explain the differences in human risk behaviour. The prospect theory, developed by Nobel laureates Kahneman and Tversky (1979) can still be considered seminal. This theory is in line with the expected value tradition, but some important modifications have been made: the theory suggests that the way in which a situation is framed will determine individual risk behaviour. In experimental settings the model is much better able to predict risk behaviour based on a pattern of risk attitudes than the prescriptive theories. However, several studies have contradicted prospect theory (Keren and Wagenaar, 1985; Osborn and Jackson, 1988; Thaler and Johnson, 1990). The main critique is that ‘prospect theory retains the gamble metaphor from prescriptive theory and this metaphor is increasingly seen as inappropriate for many, if not most, real-world decisions’ (Beach and Connolly, 2005: 95).

Based on an integrative analysis of existing theory and empirical findings, Sitkin and Pablo (1992) presented a conceptual model in which risk behaviour is determined by the concepts of risk propensity and risk perception. Risk perception is ‘a decision maker’s assessment of the risk inherent in a situation’ and risk propensity is ‘the tendency of a decision maker either to take or to avoid risks’ (Sitkin and Pablo, 1992: 12). Risk propensity is also referred to as risk attitude, or the ‘willingness to knowingly take risks’ (Simon et al., 2000: 113). In this model, concepts of risk propensity and risk perception are mediating mechanisms among individual, organisational and project-related factors and risk behaviour. In line with this study additional research has been carried out to unravel the determinants of risk behaviour. Sections 3.1.2, 3.1.3 and 3.1.4 respectively examine the cognitive, social and organisational variables in risk behaviour.

Next to the stream of researchers that have tried to explain risk behaviour by making use of laboratory studies or surveys, other scholars have used empirical observation to uncover the cognitive processes
in which professional decision makers engage while making decisions (Beach and Connolly, 2005). However, only a small number of empirical investigations of decision making in organisations have focused on managers’ conceptions of risk and risk taking (MacCrimmon and Wehrung, 1986; March and Shapira, 1987). From these studies it can be concluded that ‘most managers do not treat uncertainty about positive outcomes as an important aspect of risk. “Risk” is primarily a probability concept, but could be better defined in terms of amount to lost (or expected to lost) than in terms of moments of the outcome distribution’, and ‘although quantities are used in discussing risk, and managers seek precision in estimating risk, most show little desire to reduce risk to a single quantifiable construct’ (March and Shapira, 1987: 1408).

Thus, the way in which managers think about and deal with risk differs from many theoretical conceptions of risk. Unfortunately, the few empirical studies on risk taking do not answer the question how decisions about risk are actually made. Therefore, section 3.2 turns to organisational decision theories based on empirical investigations on decision behaviour to examine the investment decision making process in real estate development organisations and how the process incorporates risk taking behaviour.

### 3.1.2 Cognitive explanatory variables of risk behaviour

This section shows four groups of cognitive variables explaining risk behaviour: biases and heuristics, escalation of commitment, individual risk preferences (entrepreneurship), and problem framing and problem familiarity.

#### Biases and heuristics

In an uncertain world, ‘people rely on a limited number of heuristic principles which reduce the complex tasks of assessing probabilities and predicting values to simpler judgmental operations. In general, these heuristics are quite useful, but sometimes they lead to severe and systematic errors’ (Tversky and Kahneman, 1974: 1124). At least, ‘cognitive biases lead individuals to perceive different levels of risk’ (Simon et al., 2000: 126), which explains why some people take more risk than others. Many studies of cognitive biases describe the working of the bias and its effect on risk perception (Tversky and Kahneman, 1974; Hogarth, 1980; Isenberg, 1984; Schwenk, 1984: 123; Das and Teng, 1999; Simon et al., 2000; Hammond et al., 2006). A few examples of biases which are likely to occur in the context of real estate development are overconfidence, illusion of control, belief in the law of small numbers, insensitivity to estimates of the outcome probabilities, and focus on several performance targets and on a relatively small number of alternatives.
For example, the time it will take to obtain a building permit is partially determined by the relationship with the local authorities and the influence of pressure groups. A project manager could be confident that with his negotiating skills and the quality of the design he would be able to control the application process despite all uncertainties and risks. An overestimation of his skills will lead to an illusion of control which influences his prediction of the planning of activities and decreases his perception of time overrun.

Escalation of commitment
Another cognitive process influencing risk perception is ‘escalation of commitment’. Escalation of commitment is ‘the continuation in a failing course of action’ (Schmidt and Calantone, 2002: 104). A salient feature of this theory is ‘that a series of decisions is associated with a course of action rather than an isolated choice’ (Staw, 1981: 578). The key determinant of this retrospective rationality is personal responsibility (Schmidt and Calantone, 2002). Because individuals feel a personal responsibility for previous actions, they commit to courses of action due to self-justification. Because people want to justify or explain away decisions, they perceive a lower level of risk or expect a positive outcome. Furthermore, the justification process can be encouraged by external factors, such as cultural and organisational norms and social pressures. The process of escalation of commitment is described by Otten (2000) in the context of the development process of the city halls of the Dutch cities of Amsterdam and Apeldoorn. Flyvbjerg et al. (2003) show the results of similar processes in the development of megaprojects.

Entrepreneurship
These theories are generally applicable to individuals. Entrepreneurship is a human trait that describes a specific risk behaviour. The differences in behaviour between entrepreneurs and non-entrepreneurs are not explained by differences in risk propensity, but by differences in risk perception. Sarasvathy et al. (1998) hypothesised that feelings of control, responsibility and personal values are relevant to understand risk perception. They concluded in a comparative research between entrepreneurs and bankers that ‘entrepreneurs accept risk as given and focus on controlling the outcomes at any given level of risk; they also frame their problem spaces with personal values and assume greater personal responsibility for the outcomes. In contrast, bankers focus on target outcomes – attempting to control risk within structured problem spaces and avoiding situations where they risk higher levels of personal responsibility’ (ibidem: 217). Other studies offer evidence of the hypothesis that entrepreneurs are more susceptible to cognitive biases,
such as overconfidence and the belief in the law of small numbers (Busenitz and Barney, 1997; Simon et al., 2000; Forbes, 2005).

**Problem framing and problem familiarity**

Problem characteristics also influence the cognitive process. One problem-related feature determining risk behaviour is the decision maker’s experience of or familiarity with the situation. When decision makers are more experienced, they may begin to focus selectively on the evidence of their past ability to overcome obstacles (March and Shapira, 1987) and, therefore, may be willing to undertake risks that less experienced individuals would avoid.

Another influence on risk behaviour is problem framing. Problem framing refers to whether the situation is presented to the decision maker as an opportunity or as a problem, or in terms of gains or losses (Sitkin and Pablo, 1992). Kahnemann and Tversky (1979) based their prospect theory on a study of individual risk behaviour under conditions of varied problem frames, noting that positively framed situations led to risk-averse behaviour, whereas negatively framed situations led to risk-seeking behaviour.

### 3.1.3 Social explanatory variables of risk behaviour

The decision making process is not only influenced by individual limitations in information processing; decisional errors can also be explained by ‘a breakdown in rationality to interpersonal elements such as social power or group dynamics’ (Staw, 1981: 578). Janis (1972) introduced the term ‘groupthink’ as a mode of thinking that people engage in when they are deeply involved in a cohesive in-group, when their striving for unanimity overrides their motivation to appraise alternative courses of action realistically. In groups where groupthink occurs, strong normative pressures for conformity prevail, for example when decisions are based on a majority vote. Another explanation is directive leadership: ‘a leader who is dominant and has high prestige, may paralyse the critical intelligence of his co-workers’ (Noorderhaven, 1995: 118). Another effect of group decision making is the risky shift phenomenon. Group decision making may be expected to be less extremity-prone than individual decisions. However, evidence shows that when individual members are initially relatively cautious, after group discussion groups display an even stronger risk aversity (Whyte, 1989).

In addition to these possible disadvantages, group decision making has advantages over individual decision making. For example, a variety of skills and specialised knowledge can be brought to bear on a question, multiple and conflicting views can be aired and considered to create a shared risk perception, and more organisational members will be committed to decisions, since they have participated in the decision
making process. By means of group size, group composition, leadership style and social norms group decision making can be guided towards effectiveness (Lee et al., 1999).

3.1.4 Organisational explanatory variables of risk behaviour
Risk propensity is both an individual and an organisational trait. A firm’s risk propensity profile – the cumulative general tendency of the group either to take or avoid risk – is determined by key executives’ individual and team characteristics, organisational attributes, the industry mindset and societal values and beliefs (Baird and Thomas, 1985; Pablo and Javidan, 2002). All these factors channel the decision maker’s risk behaviour.

Key executives’ individual and team risk propensity plays an important role in the company’s risk propensity profile because a board approves all important strategy and investment decisions (Sitkin and Pablo, 1992; Papadakis et al., 1998; Pablo and Javidan, 2002). This is partly determined by dispositional traits (Das and Teng, 2001), but also by the top management team’s aggressiveness and level of education (Papadakis et al., 1998).

Organisational attributes influencing a risk propensity profile are the organisation’s control systems, such as the company’s capital budgeting system, reward and recognition system, and its decision making system (Sitkin and Pablo, 1992; Pablo and Javidan, 2002), also in addition to its size, age, financial performance, and organisational slack (Baird and Thomas, 1985; Singh, 1986; Papadakis et al., 1998; Kwak and La Place, 2005). Decision making processes are also influenced by organisational structure, culture and strategy (Fredrickson, 1986; Noorderhaven, 1995; Lee et al., 1999; Drew et al., 2006).

Risk propensity can vary by industry: ‘industry “recipes” may contribute to the development of within-industry managerial orientations to what is “appropriate” risk’ (Pablo and Javidan, 2002: 212). For example, regulatory environment, type and intensity of competitive forces, industry growth rates, capital intensity, and mobility barriers drive a risk propensity profile (Baird and Thomas, 1985; Pablo and Javidan, 2002). Moreover, the industry affects the managerial interpretation of risk: research demonstrates that the applicability of a classical conception of risk is not appropriate across all industry segments (MacCrimmon and Wehrung, 1986; March and Shapira, 1987; Pablo, 1999). Different risk taking behaviour can even be seen across borders due to differences in societal values and beliefs. Over the years there has been a tendency towards risk avoidance (Beck, 1999).
3.2 Organisational decision making perspectives

The previous section shows that many (sub)theories have been developed to explain risk behaviour, and to explain why one decision maker takes more risk than another. However, these attempts have not resulted in a univocal, integral explanatory theory. Nor do these theories give insight into how risks are taken. Therefore, this section focuses on organisational decision making perspectives. More specifically, this section concentrates on strategic decision making. Although they do not treat risk explicitly, they consider uncertainty and risk to be inherent to the decision making process due to the characteristics of strategic decisions. These characteristics are described in section 2.4, which concludes that investment decisions in real estate development can be strategic decisions.

The strategic decision making literature has a wide range of approaches to the understanding and improvement of strategic decisions. The approaches can be summarised into a limited number of perspectives or paradigms on decision making. Eisenhardt and Zbaracki (1992) review the theory and key empirical support of rationality and bounded rationality, politics and power, and garbage can. These perspectives are described, respectively, in sections 3.2.1, 3.2.2 and 3.2.3. In section 3.2.4 a final choice is made for a model of organisational decision making within one of the perspectives to address the research problem in this study.

3.2.1 Rationality and bounded rationality

The rational model of choice follows the everyday assumption that human behaviour has some purpose (Eisenhardt and Zbaracki, 1992).

The first rational theories of choice assume that a decision maker acts as a ‘homo economicus’ by ‘acting only in his self-interest, possessing full information about the decision problem, knowing all the possible solutions from which he has to choose as well as the consequences of each solution, seeking to maximize utility, having the ability to rank alternatives in order of likelihood of maximizing outcomes’ (Zey, 1992: 11).

However, these rational decision making theories are not an accurate description of actual decision-making processes. Simon (1955) introduced the concept of bounded rationality, or limited rationality, stating that people lack complete information and that people have cognitive limitations, as described in the previous section.

The bounded rationality perspective is primarily directed at individual decision behaviour. The organisational perspective on bounded rationality ‘presumes multiple players who pursue the same objectives’ (Schoemaker, 1993: 109); a decision maker acts as an agent of the organisation. Regarding goal congruency the organisational perspective on bounded rationality is comparable to the individual perspective, but
‘simply acknowledges the internal complexity of most teams or organisations, and the consequent imperfections in coordination’ (Schoemaker, 1993: 110). To reach a decision the information and criteria need to be aligned horizontally and vertically. Thus, the way an organisation is structured may exert a great influence on the coordinative efficiency. The focus on how organisations deal with coordinating the decision activities has led to two streams of theories in the bounded rationality perspective.

One stream of theories follows a process-oriented approach to describe actual decision making processes in organisations (Mintzberg et al., 1976; Simon, 1977; Nutt, 1984; Hickson et al., 1986). The underlying paradigm of this stream of research is procedural rationality. This means that ‘given the available information and cognitive faculties, a reasonable decision-making procedure is followed’ (March and Simon, 1993: 8). Such intended rationality is characterised by an attempt to collect the information to form expectations about alternatives, and about the use of this information in the final decision (Dean and Sharfman, 1993a). In contrast to the fully rational perspective, decision effectiveness is measured by the decision process rather than by the decision outcome.

A second stream of theories emphasises that in an organisation standard patterns of behaviour are developed ‘to ensure an acceptable level of co-ordination and consistency throughout the organisation’ (Mazzolini, 1981: 87). This programmed decision making or rule following behaviour was developed by Cyert and March (1992) and March and Simon (1993). Rules are developed and changed by means of several intertwined processes, i.e. analysis, bargaining, imitation, selection and learning. Analysis, a forward looking process, and learning, a backward looking process, are the most rational in the sense that expectations and outcomes are central. The advantage of using the experiential learning cycle (March and Olsen, 1975; Argyris and Schon, 1978) is that the experience present in the organisation is captured in decision rules.

‘Organisations enact decision rules to replace the idiosyncratic heuristics decision makers may use to make their judgments and to increase the reliability of decision making and the predictability of decision outcomes for organisations and their members’ (Sutcliffe and McNamara, 2001: 485). Moreover, ‘operating practices guide decision makers’ attention to the information necessary to form expectations about various alternatives and other elements critical to making a high-quality decision’ (ibidem). In other words, decision rules support a procedural rational decision process. At the same time, ‘existing organisational structures, procedures, routines and rules are a formidable barrier to the implementation of new strategies’ (Noorderhaven, 1995: 53). In a changing environment, decision practices must be sufficiently flexible
to allow decision makers room to adapt (March, 1987). Especially when making more routinised decisions, such as investment decisions, it is more convenient to apply existing rules than to analyse the future expectations and changing the rules, both of which affect the rationality of a decision.

To describe investment decision making in a real estate development organisation, both streams of the bounded rationality perspective are relevant. Decision makers in a real estate development organisation are assumed to act upon the organisational objectives and therefore follow a procedural rational process. At the same time, multiple decision makers participate in such a decision process, whose activities are expected to be coordinated by organisational procedures or rules. To determine if real estate development organisations knowingly take risk, the question is whether they follow a procedural rational decision making process. A secondary question is to what extent this process is guided by organisational rules or practices.

3.2.2 Politics and power

The perspective of politics and power has been developed in political science, but has also been adjusted to organisational strategic decision making processes. According to this perspective most strategic decision processes are political in that they involve decisions with uncertain outcomes, actors with conflicting views, and resolution through the exercise of power (Allison, 1971). ‘This view applies when individual or departmental goals supersede the overarching organisational ones’ (Schoemaker, 1993: 110). Dean and Sharfman (1996: 382) measured the politicality in decision making processes by the following items: ‘the extent to which decision makers sought to maximize their own interests, had hidden agendas, and employed power and negotiation in making decisions’.

The political decision making process is characterised by ‘behind-the-scenes coalition formation, offline lobbying and cooptation attempts, withholding information and controlling agendas. Politics contrast with the straightforward influence tactics of open and forthright discussion, with full sharing of information, in settings open to all decision makers’ (Eisenhardt and Bourgeois, 1988: 738). Especially between actors with similar goals, coordinative efficiency is high to form coalitions; but the process of lobbying and negotiating also has its own informal rules and structure.

This perspective is assumed to be less relevant than the procedural rational perspective to describe the investment decision making process in a real estate development organisation. As investment decisions are internal decisions, a limited number of actors is involved having consensus about objectives, being the profitability of the project on
behalf of the continuation of the organisation. Still, each decision actor might have most interest in particular aspects of the project because of his background or discipline. As each actor is participating in a small project team there is little room for coalition forming within this team; and outside this team little other actors are involved in the decision making process.

Still, some political behaviour is not excluded; moreover, procedural rationality and political behaviour are considered to be complementary rather than competing explanations of strategic decision making (Dean and Sharfman, 1993b). Based on the comparison of decision effectiveness of these process models (section 3.2.4), a final choice is made for a model to describe investment decision making in real estate development.

3.2.3 Garbage can
The garbage can model holds that ‘organisational environments are so complex and human desires so varied, that each decision context becomes its own reality, with limited consistency across situations and goals’ (Schoemaker, 1993: 110). This complexity and level of detail is captured by the garbage can model (Cohen et al., 1972) describing decision making in highly ambiguous settings called ‘organised anarchies’. An organised anarchy is an organisation without a clear set of central goals, using an unclear technology, which means that the organisation does not understand its primary process, and fluid participation (Noorderhaven, 1995: 169). Fluid participation means that the ‘boundaries of the organisation are uncertain and changing; the audiences and decision-makers for any particular kind of choice change capriciously’ (Cohen et al., 1972: 2).

From this perspective, the decision making process is ‘the result of a random confluence of people, problems, solutions, and choice opportunities’ (Eisenhardt and Zbaracki, 1992: 28). Garbage can decision making ‘does enable choice to be made and problems resolved, even when the organisation is plagued with goal ambiguity and conflict, with poorly understood problems that wander in and out of the system, with a variable environment, and with decision makers who may have other things on their minds’ (Cohen et al., 1972: 19). Empirical evidence supporting the garbage can model has been found in studies of universities and schools (March and Olsen, 1976; Eisenhardt and Zbaracki, 1992); however, in organisations where deadlines are imposed on the decision making process, the model tends to become less applicable (Weiner, 1976).

The garbage can model is not assumed to be effective in describing the investment decision making process in real estate development: the objectives in a real estate development project are clear and the roles of
the decision makers involved in an investment decision are determined by the organisational structure. Thus, the garbage can model is not used in examining knowingly taking risk.

3.2.4 Organisational decision making perspective for knowingly taking risk

The aim of the research is to uncover management practices that lead to knowingly taking risk by examining the investment decision making process. Therefore, a decision making perspective must fit the organisational context and give insight into effective decision making. The previous sections showed that the assumptions of ‘bounded rationality’ and ‘politics and power’ fit the characteristics of investment decision making in real estate development. Moreover, within the bounded rationality perspective, procedural rationality serves as a basis for decision making – organisational rules or practices are supportive. The perspective to be selected depends on the effectiveness of decision making processes. The assumption is that different processes – following from the perspectives - lead to different choices and that different choices lead to different outcomes (Dean and Sharfman, 1996). ‘Enterprise risk management cannot prevent bad judgments or decisions, or external events that can cause a business to fail to achieve operations goals. It does, however, enhance the likelihood that management will make better decisions’ (COSO: The Committee of Sponsoring Organizations of the Treadway Commission, 2004: 21).

Decision effectiveness, or decision quality, can be measured in several ways. Zakay (1984) distinguished four classes of decision quality: the outcome of the decision, the correctness of the decision process, the importance and ethical value of the decision, and the decision maker’s feelings about the decision. Most definitions of decision quality, however, refer to the outcome or the process (Fredrickson and Mitchell, 1984; Hart, 1985; Hirokawa et al., 1996; Nutt, 2002; Duke and Geurts, 2004; Jansen et al., 2005). Decision effectiveness is preferably measured by the direct relation between the decision and firm performance, but this focus is problematic as firm performance is a function of an array of factors which may mask the effect of decision processes (Dean and Sharfman, 1996). When a bad decision has a good outcome, it is only by sheer luck (Russo and Schoemaker, 2002). Therefore, decision effectiveness is defined as ‘the extent to which a decision achieves the objectives established by management at the time it is made’ (Dean and Sharfman, 1996: 372).

Following this definition, several empirically based studies have been carried out regarding the effectiveness of procedural rationality versus political behaviour. These studies show that procedural rationality is more effective than political behaviour. ‘Managers who collected
information and used analytical techniques made decisions that were more effective than those who did not. Those who engaged in the use of power or pushed hidden agendas were less effective than those who did not’ (Dean and Sharfman, 1996: 389). Similar results were found by Eisenhardt and Bourgeois (1988) who indicate that the use of organisational politics was negatively related to organisational performance in high-velocity environments. Thus, to find out how risks are dealt with in an effective way, the bounded rationality perspective, specifically the procedural rational model, is preferred to the political perspective.

3.3 Procedural rational decision making
In this section the procedural rational model of decision making is elaborated on by looking into what decision activities are carried out in a decision making process. Several empirical studies have resulted in a set of decision routines, activities or steps describing how decisions are made. These decision activities are synthesised and a set of decision activities is presented that forms the basis for examining the investment decision making process in real estate development organisations.

3.3.1 Decision making activities
Many researchers have utilised the concept of procedural rationality to examine real world strategic decision making processes by case or field studies, but they differ on the unit of analysis and the factors for study (Nutt, 2008). Some of the studies have studied the outcome of decision processes: for example, researchers have explored the relationship between the comprehensiveness of the decision process and the performance of the organisation (Fredrickson, 1983; Fredrickson, 1984; Fredrickson and Mitchell, 1984; Fredrickson and Iaquinto, 1989); others have researched what tactics are used to make fast decisions (Bourgeois and Eisenhardt, 1988; Eisenhardt, 1989b). Other studies have focused on the influence of contextual factors on the level of procedural rationality (Dean and Sharfman, 1993a; Nutt, 2002). The Bradford studies looked into contextual factors and into the content of the decisions to explain differences in decision processes (Hickson et al., 1986). Some of the studies explore what decisions makers do to document the process (Mintzberg et al., 1976; Nutt, 1984; Nutt, 2008).

This research describes the investment decision making process in real estate development organisations in line with the last type of empirical studies. The decision making processes are described in terms of decision activities, varying in number but with similar meanings. The decision activities are specifications of the trichotomy ‘intelligence – design - choice’ (Simon, 1977: 41). Mintzberg et al. (1976) developed a framework with similar decision phases, using the terms ‘identification – development – choice’, described in terms of seven central ‘routines’ or decision activities:
• Recognition routine: opportunities, problems, and crises are recognised and evoke decisional activity;
• Diagnosis routine: information relevant to opportunities, problems and crises is collected and problems are more clearly identified;
• Search routine: organisational decision makers go through a number of activities to generate alternative solutions to problems;
• Design routine: ready-made solutions which have been identified are modified to fit the particular problem or new solutions are designed;
• Screen routine: this routine is activated when the search routine identifies more alternatives than can be intensively evaluated. Alternatives are quickly scanned and the most obviously infeasible are eliminated;
• Evaluation-choice routine: an alternative is chosen either through a process of analysis and judgment or a process of bargaining among decision makers;
• Authorisation routine: when the individual making the decision does not have the authority to commit the organisation to a course of action, the decision must move up the organisational hierarchy until it reaches a level at which the necessary authority resides.

The routines do not have a simple sequential relationship; ‘rather, the process is dynamic, operating in an open system where it is subjected to interferences, feedback loops, dead ends, and other factors’ (Mintzberg et al., 1976: 263). This led the authors to categorise 25 decisions by seven types of processes with an increasing level of iterations and use of all routines.

Nutt (2008) made a typology of decision processes by synthesising studies on how decisions are or should be made; the success of these processes is based on a database of 176 decisions. Each of these types is described in terms of steps and tactics. In each type, each decision step has varying tactics and is taken in a slightly different order. The decision steps followed by the possible tactics are:
• Intelligence gathering by needs or opportunities;
• Direction setting from ideas, problems or objectives;
• Option development by ideas, benchmarking, solicitation or innovation;
• Evaluation by analysis, bargaining, expert judgment, or judgment without justification;
• Implementation by persuasion, edict, participation or intervention.

Chapman and Ward (2002) also distilled decision processes into decision stages. Although the stages are represented as a simple sequence, they describe the possible iterations and overlap of stages as did the previous two studies. In addition, they indicate per decision stage the
sources of uncertainty a decision maker has to deal with, as presented in Table 3.1. To deal with risk successfully, it is necessary to deal with these uncertainties. While Chapman and Ward (2002) demonstrate that the quality of decision making can be improved by the use of formal decision support processes, this research explores these decision stages in investment decision making processes in real estate development to uncover the extent to which risk management factors into decision making.

### Table 3.1 Sources of uncertainty in each stage in the decision process
(Chapman and Ward, 2002: 3)

<table>
<thead>
<tr>
<th>Stage in the decision process</th>
<th>Uncertainty about</th>
</tr>
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<tbody>
<tr>
<td>Monitor the environment and current operations within</td>
<td>Completeness, veracity and accuracy of information received, meaning of information,</td>
</tr>
<tr>
<td>the organisation</td>
<td>interpretation of implications</td>
</tr>
<tr>
<td>Recognise an issue</td>
<td>Significance of issue, urgency, need for action</td>
</tr>
<tr>
<td>Scope the decision</td>
<td>Appropriate frame of reference, scope of relevant organisation activities, who is</td>
</tr>
<tr>
<td></td>
<td>involved, who should be involved, extent of separation from other decision issues</td>
</tr>
<tr>
<td>Determine the performance criteria</td>
<td>Relevant performance criteria, whose criteria, appropriate metrics, appropriate priorities and trade-offs between different criteria</td>
</tr>
<tr>
<td>Identify alternative courses of action</td>
<td>Nature of alternatives available (scope, timing and logistics involved), what is possible, level of detail required, time available to identify alternatives</td>
</tr>
<tr>
<td>Predict the outcomes of courses of action</td>
<td>Consequences, nature of influencing factors, size of influencing factors, effects and interactions between influencing factors (variability and timing), nature and significance of assumptions made</td>
</tr>
<tr>
<td>Choose a course of action</td>
<td>How to weigh and compare predicted outcomes</td>
</tr>
<tr>
<td>Implement the chosen alternative</td>
<td>How alternatives will work in practice</td>
</tr>
<tr>
<td>Monitor and review performance</td>
<td>What to monitor, how often to monitor, when to take further action</td>
</tr>
</tbody>
</table>

3.3.2 Synthesis of decision making activities

In order to define a set of decision activities for examining investment decision making processes, the decision routines or activities described by Mintzberg et al. (1976), Nutt (2008) and Chapman and Ward (2002) are compared and a synthesis is based on the characteristics of investment decisions. In Table 3.2 similar decision activities are presented on the same row; in the final column the set of decision activities is pre-
sented that is used in chapter 4. The reasoning behind the synthesis is explained below.

<table>
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<tr>
<td></td>
<td></td>
<td>Monitor the environment</td>
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<tr>
<td></td>
<td></td>
<td>and current operations</td>
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<tr>
<td></td>
<td></td>
<td>within the organisation</td>
<td></td>
</tr>
<tr>
<td>Recognition</td>
<td>Intelligence gathering</td>
<td>Recognise an issue</td>
<td>Recognition</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>Direction setting</td>
<td>Scope the decision</td>
<td></td>
</tr>
<tr>
<td>Search</td>
<td>Option development</td>
<td>Identify alternative</td>
<td>Search for information</td>
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<tr>
<td></td>
<td></td>
<td>courses of action</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td></td>
<td>Predict the outcomes of</td>
<td>Identification and analysis of courses of action</td>
</tr>
<tr>
<td></td>
<td></td>
<td>courses of action</td>
<td></td>
</tr>
<tr>
<td>Screen</td>
<td>Evaluation</td>
<td>Choose a course of action</td>
<td>Evaluation</td>
</tr>
<tr>
<td>Evaluation/choice</td>
<td>Evaluation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Authorisation          | Implementation | Implement the chosen alternative | Authorisation |
|                       |                | -                                  |               |
|                       |                | Monitor and review performance     | -             |

*Table 3.2 Comparison and synthesis of decision activities*

The first and last decision activities ‘monitoring’, are excluded from the final set of decision activities, because these activities are regarded as outside the decision process and as a part of the development procedure. Rather, these activities are regarded as a means or tactic to recognise a decision problem.

Recognition is considered to be the first decision activity: this activity comprises both recognition and diagnosis (Mintzberg et al., 1976), the steps of intelligence gathering and direction setting (Nutt, 2008), and the stages recognise an issue and scope the decision (Chapman and Ward, 2002). The two decision routines or stages are grouped together, because the decision problems are determined by the investment decision moments in a real estate development process.
The second decision activity is the determination of criteria; although Mintzberg et al. and Nutt do not mention this activity as a separate step, this activity is considered to be very relevant. Both organisational and project objectives play an important role in an investment decision; these criteria can be standards for all projects or per project.

The third and fourth decision activities are the search for information and the identification and analysis of courses of action. These two activities are included by the search and design routines of Mintzberg et al., option development by Nutt, and identifying alternative courses of action and predicting the outcomes of courses of action by Chapman and Ward. The search for information is considered to be a conditional activity for the identification and analysis of courses of action: based on real time information a decision maker can make a speedy decision (Eisenhardt, 1989b), while without this information alternative courses of action cannot be identified or analysed, either implicitly or explicitly. The identification and analysis are taken together, like in the design routine (Mintzberg et al., 1976) and option development (Nutt, 2008). In practice, most iterations between these activities and evaluation take place (Mintzberg et al., 1976).

The fifth decision activity is the evaluation of the courses of action against the decision criteria. Mintzberg et al. divide this activity into a superficial screen routine and a more comprehensive evaluation routine. The last decision activity is the authorisation of the decision: this activity is included in the decision process, because a real estate developer is not authorised to commit the real estate development organisation to a course of action related to the investment decisions, such as a land acquisition or start construction. The implementation of an investment decision is part of the development process.

3.4 Summary and conclusions
This chapter explores the literature on decision making under risk and strategic decision making. From the literature that explains risk behaviour, it can be concluded that many individual, group and organisational factors influence the decision making process and thus the decision outcome. Biases, groupthink, escalation of commitment, leadership style, and organisational culture are some of these factors. Unfortunately, these theories give little insight in how decisions are actually made. Therefore, the literature on organisational decision making has been reviewed. This review resulted in the selection of the procedural rational model as model for this study. This model was selected for two reasons. First, this model fits the assumption that decision makers in a real estate development organisation act according to the objectives of their organisation. Second, procedural rational processes describe
a decision process that has proven to be most effective. The decision activities by which a procedural rational decision process is described will be used in chapter 4 to formulate propositions on knowingly taking risk.
This chapter synthesises the findings of the three previous chapters into an explanatory framework of knowingly taking risk. This framework is developed in order to systematically examine actual investment decision making processes in real estate development organisations. The chapter consists of three parts. The first part, described in section 4.1, is a model of investment decision making in real estate development that is developed by making use of a systems approach. The model consists of three hierarchically related systems: the real estate development process, the investment decision making process, and the structure of the real estate development organisation. The second part, described in section 4.2, is a set of propositions, that explains how real estate development organisations factor risk into their decision making process. In other words how risk is taken knowingly. The propositions are based on the decision activities, described in section 3.3, as the decision activities are expected to contribute to a procedural rational decision. The decision activities are specified towards risk taking in real estate development by using the model in section 4.1. The third part, described in section 4.3, presents an explanatory framework and a preliminary definition of knowingly taking risk.

4.1 Modeling investment decision making in real estate development

Chapter 2 stated that investment decisions are made at a limited number of moments in a real estate development process. At these moments a real estate development project is assessed on the basis of both project and organisational objectives, as the impact of investment decisions is significant. This involves decision actors from the project to the strategy levels. This implies that the investment decision making process links the real estate development process with the real estate development organisation. To model the characteristics of these processes and its relations, investment decision making in real estate development is regarded as a ‘system’ and a systems approach or systems thinking is used to model the processes.

Systems thinking is a conceptual framework to make the full patterns of the system behaviour clearer by seeing the structures that underlie complex situations (Senge, 1990). ‘In systems thinking a system is a complex and highly interlinked network of parts exhibiting synergistic properties – the whole is greater than the sum of its parts’
This research uses general systems theory to model the investment decision making process in the real estate development organisation. According to this theory a system is characterised by elements, their relations, and the system boundary. Moreover, a system consists of subsystems, the smallest of which is a black box (Leeuw, 2002).

The investment decision making model is composed of three hierarchically related systems: the real estate development organisation, the investment decision making process, and the real estate development process. All three systems are isomorphic: they consist of aspects, especially related to risk, phases in time, and actors. The system boundary is the real estate development organisation. The smallest system that is examined is the individual: the cognitive processes are a black box. The cognitive factors influencing the risk behaviour are indicated in section 3.1, but are not part of the analysis.

4.1.1 Model of a real estate development organisation
In chapter 2 a real estate development organisation is defined as a private firm undertaking real estate development projects by means of operating on the land, design, planning, construction, capital, space and asset market with the aim of realising profit and non-monetary objectives. This definition is directed at the external operations of a real estate developer, while a definition should also be directed at the internal operations of an organisation, and specifically of investment decision making and real estate development. Therefore, the organisation or firm, is regarded as a social entity.

An organisation is ‘a social entity that has a purpose, has a boundary so that some participants are considered inside while others are considered outside, and patterns the activities of participants into a recognizable structure’ ((Daft, 1989) in: (Butler, 1991: 1)). The structure of an organisation is the total of the ways in which it divides its labor into tasks and coordinates them (Mintzberg, 1979). In other words, the way an organisation is structured can be described by modeling the organisation as a system in which human resources carry out different activities and interact over time to reach shared organisational objectives.

The structure of a real estate development organisation determines the relations between the human resources of the organisation and the responsibilities of each individual towards achieving the organisational objectives. These objectives are mostly related to years, while the objectives of a real estate development project are related to the time-frame of the project, which usually exceeds a year. Therefore, a distinction is made between activities related to the general management of the organisation and the management of a real estate development project: the latter is described in section 4.1.2. The general managers
are concerned with planning, organising, leading, and controlling the organisation's activities in order to reach its objectives (Gatewood et al., 1995). These activities may take place formally or informally, and regularly or irregularly. One of the central activities of general management is to make investment decisions, which, for example, take place in board meetings.

In conclusion, a real estate development organisation is a social entity, comprising *human resources*, with a recognisable structure aimed at achieving organisational *objectives*, such as profit and non-monetary objectives, during an indefinite *timeframe*, by developing real estate projects. In Figure 4.1 the model describing the elements that structure the activities in a real estate development organisation is presented. The model consists of three axes, representing the human resources (the objects of the system), the organisational lifetime (the time/phases of the system), and the organisational objectives (the aspects of the system). Each of the elements on the axes is defined below.

![Figure 4.1 Model of a real estate development organisation](image)

The *human resources* represent all employees in a real estate development organisation. The resources can be divided in five groups according to their function. Mintzberg (1979) distinguished five parts of the organisation: the strategic apex, the middle line, the operating core, the technostructure, and the support staff. These groups can likewise be distinguished in a real estate development organisation; the names are slightly different to bring them in line with names used in practice:
• General management, representing the strategic apex, which can be composed of a chief executive officer (CEO), chief financial officer (CFO), and a chief operating officer (COO);

• Program or portfolio management, representing the middle line, which can be composed of project or program directors. In small real estate development organisations the middle line is either combined with general management or project management;

• Project management, representing the operating core. This group comprises project managers with a specialisation as conceptual developer or technical manager;

• Specialists, representing the technostructure, who support the real estate development activities directly, such as financial controllers, market researchers, conceptual designers, legal consultants, marketing specialists;

• Support staff that supports the general functioning of the organisation, and thereby the real estate development activities, such as ICT-staff, public relations, human resources management.

The human resources are, after financial capital, the most important assets of a real estate development organisation; the main contribution of a developer is to add value to a real estate development project. The combined knowledge, skill, innovativeness and capabilities of the company’s individual employees is also acknowledged as human capital (Sällebrant et al., 2007). In this research human resources and financial resources are treated differently: the human resources are subject of research, as their behaviour in an investment decision making process is examined. The allocation of financial resources to a development project is central in the investment decision; the allocation of human resources to a project is not taken into consideration.

The organisational objectives are the collective goals or desired results on the level of the organisation. The primary objectives of a privately owned real estate development organisation are continuity, growth and profit. Real estate development organisations might also aim for non-monetary objectives, such as architectural quality or sustainability in their projects, but these objectives must be in proportion to the primary objectives.

The organisational lifetime is the duration of the organisation’s existence. The lifetime of an organisation is in principle indefinite and by the primary objective ‘continuity’ intended to be infinite. In contrast, a project organisation’s lifetime is limited to the duration of the project. Moreover, organisational processes are repetitive: financial objectives are set annually and most general management activities take
place periodically, for example twice-yearly meetings to determine a long-term strategy, quarterly updates, or weekly board meetings. The timelines of general management activities and development activities rarely converge, except at investment decision moments.

4.1.2 Model of a real estate development project

Section 1.1 describes a real estate development project as the planned undertaking of the development of a building, which can be regarded as a business on its own, but takes place in a real estate development organisation. Therefore, a real estate development project is a phase-system of a real estate development organisation: within a limited time-frame human resources are committed to carrying out development activities to complete a project that has to meet organisational objectives. The structure of development activities can be depicted in a model of a real estate development project representing the axes of human resources, time, and aspects; the model is presented in Figure 4.2.

This model is based on the framework developed in section 2.2.2. The development process is described as a series of development phases in which activities related to a set of development aspects are carried out simultaneously. The development phases correspond with the time-axis and the development aspects correspond with the aspects-axis. To these two axes an actors-axis is added: development activities are carried out by development actors with the aim of realising a building and thereby contributing to the organisational objectives. Thus, a real
estate development project is defined as a planned undertaking for the realisation of a building by a team of development actors in a series of development phases whose activities related to development aspects are carried out simultaneously.

The development actors make up a development team. A development team consists of a limited number of people out of three groups of the human resources of the real estate development organisation: program management, project management and specialists. Support staff is not directly involved in a real estate development project; neither is general management. General management only comes into play at the investment decision moments, except when a general manager is a program director as well, being responsible for a part of the total portfolio of projects. Development actors are assigned to one or more projects. Each development actor has a role in the real estate development project which corresponds to his/her position in the organisational structure.

A development aspect represents a set of activities of a real estate development project which can be carried out nearly independently of the other aspects. Towards each development aspect an end result must be achieved to reach the overall objective of the project, which in turn contributes to the organisational objectives; the integral result of the project depends on the tuning of the (results of each) development aspects. The development aspects, as described in section 2.2.2, are:
- Land development
- Entitlement
- Design
- Financing
- Construction
- Lease
- Sale.

The development phases represent a series of definite time periods in a real estate development process in which a predefined level of progress must be achieved towards each of the development aspects. The duration of the development phases is the lifetime of a project, which takes place during the organisation’s lifetime. The development phases as described in section 2.2.2, are:
- Initiation
- Feasibility
- Commitment
- Construction
- Management.
4.1.3 Model of an investment decision making process

The model of an investment decision making process describes the elements that structure the activities in an investment decision making process. Section 2.4 defines an investment decision as a commitment to the allocation of financial resources of the real estate development organisation to the next development phase of a real estate development project, by making an integral evaluation of the development aspects and taking into consideration the goals of the project as well as the objectives of the organisation, approved at the strategic level of the organisation. This definition indicates that the content of decision activities is related to the development aspects in the model of a real estate development project, and to the organisational objectives in the model of the real estate development organisation. Moreover, the definition says that the decision activities take place at the gates between two development phases represented in the model of the real estate development project. And, according to this definition, some decision activities are carried out by the general management, represented on the human resources-axis in the model of the real estate development organisation.

Two more relations can be indicated. In the first place, an investment decision making process is not solely executed by general management; they need input about the project from the development actors. Different groups of decision actors have their own role in the decision process at different decision phases. In the second place, as general management is involved, the moment of an investment decision making process does not only depend on the development process, but also on when general management meets to make such decisions. This results in a definition of investment decision making as a series of decision activities carried out by multiple decision actors in a short period of time in relation to the duration of the development process, which can be divided into various decision phases, aimed at a formal decision on the allocation of financial resources in a real estate development project by taking into consideration a set of decision criteria related both to the development aspects and the organisational objectives. The decision phases, decision criteria, and decision actors are depicted in Figure 4.3.

The decision actors are involved in a decision making process either because of their role in the development process or because of their position in the organisation. The development actors transfer the information of a development project to other decision actors who are not directly involved in the project. Among these actors is the general management. The support staff fulfills a minor role in supporting the information transfer. In the investment decision making process each decision actor as a specific role (section 2.4.4). Three groups of deci-
sion actors are identified: decision shapers, decision takers and decision approvers.

The decision criteria are the standards related to the axis of the development aspects in the project system and the axis of organisational objectives in the organisational system. Decision criteria can be determined on different levels of detail. Per development phase criteria can be determined on the project per development aspect in qualitative terms, such as ‘building permit is granted’ or ‘declaration of intent is signed by land owner’, or in quantitative terms, such as a pre-rental percentage or debt equity percentage. The criteria on the project level determine the development strategy and the risk level of the project (section 2.2.2). In each development phase a project must also be evaluated against organisational objectives. These objectives are translated into quantitative (profit and risk capital of a project) and qualitative criteria (contribution to the composition of the portfolio in terms of spread of functions, location, or size).

A decision phase is a definite period in a decision making process in which a group of decision activities take place, resulting in a decision about the allocation of resources to a development project. In this model the decision making process has a preparation, submission and approval phase. In the preparation phase, project management and specialists provide general management with information. In the submission phase information is transferred to the decision takers and approvers.
In the approval phase the actual decision is taken and authorised. During these phases several decision activities take place, as described in section 3.3. These decision activities are used in section 4.2 to explain how investment decision making processes are carried out using the elements provided by the model of investment decision making.

4.1.4 The integral model of investment decision making in real estate development

A real estate development project can be seen a business within the real estate development organisation. At the investment decision moments, the processes taking place within these systems are linked on the three axes of time, actors/human resources and aspects. Figure 4.4 shows the connections among the axes of the different models. In terms of systems thinking: a real estate development project is a phase-system of a real estate development organisation; an investment decision making is a phase-system of both a real estate development project and an organisation. The connections are explained below.

On the timeline, an investment decision process connects the organisational decision structure (of board meetings) with the project decision structure of the gates between two development phases. The investment decision is a process of decision activities which take some managerial time. On the timescale of the organisation it is just an instance, whereas on the timescale of the real estate development project the duration of the decision making process is short, but might have some impact on the continuance of the project.

Second, in all three sub systems similar actors are involved but with specific roles in the general organisational processes, the investment decision making process and the real estate development process. For example, the board defines the strategic objectives on the organisational level, assesses an investment proposal on the strategic, portfolio and project levels, and monitors the progress of a project without direct involvement in the development process.

Third, the investment decision connects the organisational objectives to the real estate development project by operationalising these objectives into decision criteria which can be applied to assess a project. These decision criteria vary from generic criteria such as profit and importance for image, to portfolio criteria, such as fit into development program, and project criteria which are related to the development aspects. Moreover, per investment decision moment decision criteria can be determined on the level of the development aspects.
Figure 4.4  Integral model of investment decision making in a real estate development organisation
4.2 Propositions on knowingly taking risk

The integral model of investment decision making in real estate development presents the elements of each system and the relations between the systems that influence the investment decision making process. However, this model does not explain how investment decisions are actually made in such a way that risks are taken knowingly. Therefore this section advances seven propositions on how real estate developers make investment decisions which are tested in practice. The propositions are based on the decision activities, that are synthesised in section 3.3.2:

- Determination of decision criteria
- Recognition
- Search for information
- Identification and analysis of courses of action
- Evaluation
- Authorisation.

These decision making activities are steps in a procedural rational process, which are expected to contribute to the effectiveness of decision making processes (Dean and Sharfman, 1996; Nutt, 2008), as explained in sections 3.2 and 3.3. To these six propositions, one more proposition on knowingly taking risk is added. This proposition is related to another aspect that contributes to decision success: decision speed (Eisenhardt, 1989b) or decision efficiency, measured by duration (Nutt, 2008).

Sections 4.2.1 to 4.2.7 offer seven propositions on knowingly taking risk. Per proposition first the importance of the decision activity in a general decision making process is indicated. Subsequently the proposition is advanced. Next, the specification of the proposition towards risk taking is explained by using the integral model of investment decision making: the risks and how risks can be dealt with internally are determined by the relations among the three systems of the integral model. Taken together, the propositions explain what activities of an investment decision making process contribute to knowingly taking risk.

4.2.1 Determination of decision criteria

Before an investment is made, project specific decision criteria must be derived from the organisational objectives. The first reason to determine criteria is because ‘poor choices are more likely when objectives are ignored, sequestered, or ambiguous because there is no clear basis to infer criteria to compare alternatives’ (Nutt, 1990: 170). Thus, for each development project, criteria must be determined per decision moment. However, as similar investment decisions take place in each
real estate development project, the decision criteria can be determined independently from the project: this decision activity does not have to take place in sequence with the other decision activities. Predefining the decision criteria prevents application of double standards in different projects, which make a decision easier to explain. However, it implies a similar risk-return profile for all projects, whereas some diversification in the risk profile might be advisable in the light of the risk profile of the total portfolio of development projects. This pleads for setting decision criteria at the start, or even during, a specific development process.

By determining criteria both the growth ambitions and the risk propensities of the authorised decision makers can be aligned, thus preventing conflict during the decision process about the preferred profit rate and the acceptable level of risk. Risk propensities can be a personality trait, a reaction to changing situations of success and failure, an artefact of reliability, and a reasoned choice (March, 1994: 42). The latter is used when determining risk criteria in advance with multiple decision makers.

**Proposition 1**

*Determining project specific decision criteria regarding the acceptable level of risk contributes to knowingly taking risk.*

One can only speak of risk when scarce resources are allocated in order to reach objectives. In real estate development, financial resources of the organisation (upper model in Figure 4.4) are allocated to a project (lower model in Figure 4.4), as the project is expected to contribute to the organisational objectives. These resources could also be allocated to another project. A project is not continuously and integrally weighed against all organisational objectives, except at the investment decision moments (link lower and upper model via middle model in Figure 4.4). At these moments an acceptable level of risk towards the project must be known from the perspective of the total organisation.

The acceptable level of project risk in relation to the organisational objective of continuity is that the total risk of all projects must not jeopardise the survival of the organisation. The total risk capital is the possible loss in a worst case scenario – in other words the amount of equity capital at stake. As in most real estate development organisations, multiple projects are developed simultaneously, the total risk capital of the portfolio must be kept under a certain limit. This implies that the risks which are accepted are somewhat controllable, but the risks exceeding this level are a gamble. As for the controllable risks, a risk mitigation plan can also be predefined in terms of decision criteria per development aspect for each of the decision moments.
4.2.2 Recognition of decision need

A decision making process usually starts with the recognition of the need for a decision. The investment decision moments in a real estate development project are determined by the phasing of a development process; the decision issue is about making large financial commitments, for example for land purchase or start construction. The moment an investment decision issue is recognised depends on the views of decision actors about the significance or implications of a situation, and about the need for action. Issues may be recognised as threats or opportunities which need to be addressed either reactively or proactively (Chapman and Ward, 2002). As investment decisions moments are determined upfront, the critical issue of recognition is not that the wrong problem is addressed (Nutt, 1990), but that the problem is addressed in time.

**Proposition 2**

Timely recognition of situations in which the risk profile of a project is about to change significantly contributes to knowingly taking risk.

The need for an investment decision arises during a development process (lower model in Figure 4.4). As a project manager is not authorised to make an investment decision, due to his position in the organisational structure, time is needed to align the project to the organisational objectives (upper model in Figure 4.4) through investment decision making (middle model in Figure 4.4). A timely recognition means being able to respond to changes in the external project environment. When directing behaviour at timely recognition, decision makers can take adequate control measures. Thus timely recognition is part of knowingly taking risk.

Time plays ambiguous roles with regard to taking risk. On the one hand, time is crucial for gathering information and control over a project which leads to risk reduction. At the moment an investment decision is to be made, enough information must be available and control measures taken (thus risk must be reduced): it must be opportune to make a decision. On the other hand, a situation can arise in the development process which asks for an investment decision while the desired level of information and control is not yet available. In such situations time can be pressing and waiting will only increase the level of risk. The situations in which a timely recognition is even more important are:

- Opportunity: in some cases a timely decision is needed, otherwise an opportunity is missed. For example, when a real estate developer has the opportunity to purchase land, it might be necessary to decide quickly or lost the land to another developer. This means there is no time to gather information about possible land pollution, zoning plans, or the local market situation;
• Deadlines: in other cases a timely decision is needed as a deadline is imposed on the development process for one of the development activities. For example, a user required an ultimate delivery date for the project, or the municipality demands the start of construction at a certain date. The consequence of not meeting the deadline is either a penalty or the expiration of the development position; it is also possible to meet the deadline while the level of uncertainty (in other development activities) is still very high. For example, a developer might decide to start construction while presales has not even started, thus the risk of vacancy at the moment of delivery is high. Timely recognition is necessary to decide what risk measures can be taken to prevent these risks – and more importantly to have enough time before the deadline to implement these risk measures (proactive handling);

• Market dynamics: it is also crucial to recognise the need for a decision timely in case of changing market conditions. Market dynamics can influence the prospect of a project both positively and negatively so the design will need to be adjusted. Adjustments take time, so timeliness is required.

4.2.3 Search for information

Central to a procedural rational decision making process is the collection of relevant information and the reliance upon analysis of this information in making the choice (Dean and Sharfman, 1996). Thus, the search for relevant and reliable information must support the decision making process. Complete information – as far as technically possible – is not the aim: the search for information must be related to the limited time and the capabilities available and to the level of risk involved. ‘A balance must be struck between the level of detail and effective communication, too much detail may render the picture messy and confusing; it may also detract from the overview’ (Lee et al., 1999: 152).

Estimates must be as objective and as reliable as possible. However, not everything is predicable or controllable, thus the limitations of the validity of the estimate must be indicated. As a real estate development project integrates multiple disciplines, it is preferable to use multiple perspectives (Nutt, 1990) when making estimates. These perspectives can be different disciplines, experiences of decision makers, or involvement in a project. Another way of ensuring the use of reliable information is to base the choice on real time information instead of on future estimates (Eisenhardt, 1989b).

Reliable and relevant information is necessary to prevent under- or overestimation of risks which affects the risk actually taken. ‘If the risk is underestimated, decisions will reflect greater risk taking than is intended. If the risk is overestimated, decisions will reflect less risk taking than is intended’ (March, 1994: 35). Using sufficient, reliable
and relevant information – in other words increasing the technical and social validity (shared and stable estimates) of risk estimates (March, 1994) – biases are to be prevented.

**Proposition 3**

*Making use of reliable and relevant information contributes to knowingly taking risk.*

The search for information does not solely take place during the investment decision making process, but mostly during the development process. A real estate developer in the role of decision shaper, collects and summarises information, then relays it to the board, in the role of decision maker. As multiple investment decisions are made in a project and the level of risk increases with the invested capital, the level of information must be in proportion to the level of risk. This means that the detail of the information must be in proportion to the decision moment related to a development phase.

Relevant information in terms of an investment decision means that information must be gathered with respect to *all* development aspects of a development project (lower model in Figure 4.4) to generate an integral view on the project and weigh the project against all decision criteria (middle model in Figure 4.4). The investment decision moments are the only moments in a development process when each development aspect is put explicitly into the perspective of the other development aspects of the project.

**4.2.4 Identification and analysis of courses of action**

To make a decision, at least one alternative course of action must be identified for which the possible outcomes can be analysed. However, it is preferable to consider *multiple* courses of action in order to reach decision making effectiveness (Hirokawa et al., 1996; Chapman and Ward, 2002). ‘Nearly every of discussion of decision making calls for the decision maker to identify several alternatives before committing to one. However, most studies of decision-making practice reveal that only one alternative receives serious consideration as decisions are made. This behaviour leads to missed opportunities, ignoring innovation, and decision processes particularly susceptible to conventional wisdom and the pet ideas of people with an “ax to grind”’ (Nutt, 1990: 170).

In addition to developing courses of action, the consequences of these actions, in terms of profit and risks, must be analysed. In so doing, the viability of an alternative can be screened against the decision criteria. Screening reduces the alternatives to a number that can be stored and later handled by time-constrained decision makers. This activity
is mostly implicit and superficial; infeasible alternatives are eliminated instead of having appropriate ones determined (Mintzberg et al., 1976). The screening activity is not an autonomous activity, but part of the identification and analysis of courses of action, resulting in realistic alternatives.

**Proposition 4**
*Identifying and analysing multiple courses of action contributes to knowingly taking risk.*

For an investment decision at least the preferred development strategy needs to be described in terms of activities related to the development aspects (lower model in Figure 4.4), and analysed in terms of costs and revenues over time in order to calculate the expected outcome, which is one of the decision criteria (middle model in Figure 4.4). Next to the expected outcome a risk analysis can be made, for example by analysing different scenarios. Alternative strategies can be identified in order to optimise the expected outcome: these alternative strategies may vary from implementing one of the control measures (section 2.3), or by changing the development strategy (the sequence of activities per development aspect, as described in section 2.2). The consequences of a different strategy must likewise be analysed. A special type of strategy is the ‘exit-strategy’: the strategy to withdraw from a project during the development process.

### 4.2.5 Evaluation and choice

In the evaluation activity multiple modes are applied: judgment, subjective, bargaining, and analysis (Mintzberg et al., 1976; Nutt, 2008). In the judgment mode an individual makes a choice without offering public justification; in the subjective mode a decision maker derives facts from experts and personal experiences to support a favoured choice; in bargaining a selection is made by a group of decision makers with conflicting goal systems (interests or expertise), each exercising judgment; and in analysis factual evaluation is carried out followed by managerial choice by judgment or bargaining. The bargaining and analysis modes appear to be most successful (Nutt, 2008). However, the analytic approach is rarely used (Mintzberg et al., 1976) or different modes are used in combination (Nutt, 2008).

To evaluate a course of action analytically, decision criteria must be determined (proposition 2). Ideally a course of action should meet all criteria, but in practice this is not always realistic. Moreover, once started, quitting a real estate development project is no loss-free alternative. Therefore, appropriate priorities and trade-offs between different criteria must be determined, reflecting the risk preference of the
decision maker(s). This way an alternative can be evaluated analytically and ensures that the decision maker is aware of taking more or less risk than the preferred risk profile.

**Proposition 5**
*Evaluating the courses of action on the predefined criteria analytically contributes to knowingly taking risk.*

An investment decision must be evaluated against both project and organisational criteria (middle model in Figure 4.4). Therefore, project specific criteria are determined (proposition 2). The project manager may use these criteria to screen whether a strategy is feasible and choose the most preferable course of action. Still, a project is evaluated by several other decision actors such as a project director and the board, before a decision is made to continue and allocate resources to a project. To evaluate a project the development aspects can be used to assess a project in detail; financial criteria derived from organisational objectives are used for an overall assessment of a project.

4.2.6 **Authorisation of the decision**
A decision must be authorised by a person who has the authority to commit the organisation to a course of action (Mintzberg et al., 1976). The main concern in the authorisation procedure is whether the individual(s) authorising a decision are equipped to make these decisions. With regard to authorisation, ‘a major problem is presented by the fact that the choices are made by people who often do not fully comprehend the proposals presented to them. Thus, in authorisation the comparative ignorance of the manager is coupled with the inherent bias of the sponsor’ (Mintzberg et al., 1976: 260). This stresses the importance of an adequate execution of the other activities in order to guarantee a procedural rational process. This could imply that different activities must be carried out in iterations by multiple decision actors with different roles.

**Proposition 6**
*Authorising the decision at the organisational level that is capable of dealing with the involved risk level contributes to knowingly taking risk.*

Making an investment decision means that the total risk profile of the project must be integrally assessed on the level of both the project – taking into consideration all development aspects – and of the organisation. This implies that the project manager, being responsible for a project according to the project organisation (lower model in Figure 4.4) is not authorised to make investment decisions, as he has not the
position in the organisational hierarchy (determined in the organisational model (upper model in Figure 4.4)) to consider the strategic objectives. The tiered route of approval up the hierarchy depends on the structure and the size of the organisation (Mintzberg et al., 1976).

4.2.7 Total duration of the decision making process

In general the duration of the decision process is important, as ‘decision processes take managerial time and therefore impose a cost upon an organization, and through the opportunity cost of possible benefits foregone while the search for algorithms goes on’ (Butler, 1991: 63). In particular the duration of the decision process is important because during the approval process the development activities are on hold. This becomes critical when the time pressure in the development process is high for reasons of a sudden opportunity, a deadline, or market dynamics (proposition 1).

As timely ways to complete a decision are valued, the decision process must be efficient. ‘Efficiency is important because managers are concerned with producing good outcomes as rapidly as possible’ (Nutt, 2005: 862). Decision speed is not only valued, it also has a positive effect on the performance of the organisation (Eisenhardt, 1989b: 567). The decision speed can be influenced by the way in which decision activities are carried out, by the formal organisational processes (such as frequency of decision meetings), and by the flexibility of the intentional decision procedure. In the end the decision speed must be aligned with the comprehensiveness of the other activities which guarantee procedural rationality; accelerating the process must not conflict with the authorisation process.

Proposition 7

Limiting the duration of the decision making process and gearing it to the urgency of the decision contributes to knowingly taking risk.

In real estate development the duration of the investment decision making process must be limited, in order to prevent delaying the real estate development process. This may even lead to extra risks as described in section 4.2.2. This applies to all three decision phases: preparation, submission and approval. When decision activities take place in formal meetings, the frequency of decision meetings must be adjusted to the urgency of investment decisions. For example, the frequency of board meetings is determined by the organisational process (upper model), thereby reducing flexibility to limit the duration of the decision making process, if the board has to decide.

4. Explanatory framework of knowingly taking risk
4.3 Defining the concept of knowingly taking risk

Up to this moment the concept of knowingly taking risk has been equated with dealing with the riskiness of real estate development, which has been related to procedural rational decision making. In this section a preliminary definition of knowingly taking risk is presented, based on the theoretical modelling of investment decision making in the context of both a real estate development organisation and a real estate development project, and the theoretical propositions. By examining practice the propositions are tested and the definition refined.

Investment decision making is a process in which decision actors carry out a series of decision activities within a certain timeframe by applying a set of (project specific) decision criteria resulting in a decision about the allocation of organisational resources to a real estate development project. This process is modelled by the aspects of time, actors and content (Figure 4.4). If we consider the seven propositions, it can be concluded that these propositions are related to these three aspects. Propositions 2 and 7 are related to time; propositions 1, 3, 4 and 5 are related to content; and proposition 6 is related to actors.

Proposition 2 is about the timely recognition of a decision need. As the issues of investment decisions are predefined by the phasing of the development process, the content of the decision is less relevant than tuning the decision moment and the development process. Proposition 7 is about the duration of the decision making process. The time a decision making process takes, partly dependent on the frequency of decision meetings at the organisational level, determines when a development project can continue. From these two propositions it can be concluded that timeliness of both the start and the end of a decision is required.

Propositions 1 and 5 are about the use of decision criteria: criteria should be determined in advance of a decision moment and applied analytically in order to make a decision that can be justified on objective grounds. Propositions 3 and 4 are about providing decision makers with information about multiple courses of action. Reliable and relevant information, as well as alternatives to choose from are required to assess the project against the criteria. All four propositions contribute to making a justifiable decision.

Proposition 6 is about the authorisation of a decision. Multiple actors are involved in an investment decision making process with different positions in the organisational structure and with different levels of commitment in the development process. As investment decisions are about the allocation of a significant amount of financial resources it is important that a decision actor takes accountability for a decision that matches his position in the organisation and the development project.
The role of each decision actor must correspond to the position in the organisational structure. The way these roles, responsibilities and authorities are organised determine who is accountable.

It can therefore be concluded that the propositions do not contribute to knowingly taking risk directly and in a similar manner, but they do contribute to knowingly taking risk via three indicators: timeliness, justifiability, and accountability. The relations are presented in the explanatory framework of knowingly taking risk (Figure 4.5). This analysis results in the following definition of knowingly taking risk in the context of real estate development: *knowingly taking risk is making timely, justifiable and accountable investment decisions.*

**Figure 4.5 Explanatory framework of knowingly taking risk**

### 4.4 Summary and conclusions

In this chapter an integral model of a real estate development organisation, an investment decision making process and a real estate development project is developed by describing each model in terms of actors, phases and objectives and indicating the relationships between the
three models. In addition, seven propositions on knowingly taking risk are developed on the basis of the decision activities in a procedural rational decision making process and the characteristics of the integral model. Each decision activity, or proposition, does not directly contribute to knowingly taking risk, but via three indicators: timeliness, justifiability and accountability, which correspond with the phases, objectives and actors in the integral model. The propositions and indicators compose the explanatory framework of knowingly taking risk. The next chapter describes what research method is applied to examine whether the propositions on knowingly taking risk are valid and, more importantly, how real estate development organisations behave according to the concept of knowingly taking risk.
This chapter presents the research design for the empirical part of the research. The previous chapters presented a model of investment decision in the context of real estate development and a set of propositions that guide the empirical search. This model is used to answer the central research question and the two sub questions. The central research question is:

*How do real estate development organisations safeguard that risks are taken knowingly by means of their investment decision making procedures?*

The two sub questions are:

1. *Do real estate development organisations carry out the decision activities that are assumed to contribute to knowingly taking risk?*
2. *What management practices are used in the investment decision making processes of real estate development organisations that contribute to knowingly taking risks?*

The first sub question is answered by testing the propositions on knowingly taking risk. The second question is answered by extracting the characteristics of the investment decision making process that actually contribute to knowingly taking risk. The research method that is applied is a multiple case study. Section 5.1 describes the case study method and the reasons for applying it. Section 5.2 describes what cases are selected and what data collection methods are applied. Section 5.3 presents the methods for analysis on the level of the single case, the multiple cases and towards an application for practice. Section 5.4 presents how these latter results are evaluated in order to increase both theoretical validity and practical utility of the concept of knowingly taking risk.

### 5.1 Multiple case study method

The central research question asks for an in-depth, holistic analysis of the investment decision making process in its natural setting. To study such a behavioural phenomenon the case study approach is selected. Yin (1989: 13) defines a case study as ‘an empirical inquiry that investigates a contemporary phenomenon in its real-life context, especially when the boundaries between the phenomenon and context are not clearly evident’. Case studies can both have a descriptive and an extracting nature: the first using deductive logic and the second using induc-
tive logic. ‘Inductive and deductive logics are mirrors of one another, with inductive theory building from cases producing new theory from data and deductive theory testing completing the cycle by using data to test theory’ (Eisenhardt and Graebner, 2007: 25). This research uses both applications.

5.1.1 Descriptive case study
The descriptive case study answers the first sub question by using the propositions (section 4.2). These a priori theory-based propositions limit the scope of the study, thereby guiding a systematic data collection and preventing it from becoming overwhelmed by the volume of the data (Eisenhardt, 1989a; Yin, 1989). Another advantage of such a preliminary model is a firmer empirical grounding of the results (Eisenhardt, 1989a). Per proposition evidence is provided for the confirmation or rejection of the proposition by describing what management practices are used during an investment decision making process.

To provide rich support for the propositions and to increase the generalisability of case studies, a multiple case study is applied (Eisenhardt and Graebner, 2007). ‘Multiple case studies should follow a replication, not sampling logic. This means that two or more cases should be included within the same study precisely because the investigator predicts that similar results (replications) will be found. If such replications are indeed found for several cases, you can have more confidence in the overall results. The development of consistent findings, over multiple cases and even multiple studies can then be considered a very robust finding’ (Yin, 1989: 34). The cases should be selected by theoretical sampling rather than statistical sampling (Eisenhardt, 1989a; Yin, 1989; Johnston et al., 1999; Flyvbjerg, 2006; Eisenhardt and Graebner, 2007).

5.1.2 Extracting case study
This research is not merely aimed at testing whether real estate development organisations decide according to a procedural rational decision making procedure, on which the propositions are based, but especially at how investment decisions are made and thus how the propositions are fulfilled in order to extract what characteristics of the investment decision making process contribute to knowingly taking risk. Thus, the case study is used to answer the second sub question by adding an extra level to the conceptual model of knowingly taking risk in the form of the characteristics of the investment decision making process, which are both linked to the propositions and the indicators of knowingly taking risk.

Van Aken (2004: 230) describes the extracting case study as ‘a kind
of best-practice research and is aimed at uncovering technological rules as already used in practice’. A technological rule is ‘a chunk of general knowledge, linking an intervention or artefact with a desired outcome or performance in a certain field of application’ (Aken, 2004: 228). In terms of this research, the cases are used to extract from the management practices a set of characteristics of an investment decision making process which are critical to take risk knowingly. These characteristics are extracted by reflection and induction: the method for this part of the analysis is described in section 5.3.3. Moreover, the validity of this part of the research results is increased by an extra evaluation, as described in section 5.4.

5.2 Data collection
This section describes which real estate development organisations are selected for the case study, what level of analysis is chosen and what data collection methods are used.

5.2.1 Case selection
To study the investment decision making process in a real estate development organisation in a real-life setting, three real estate development organisations are selected, and one project of each organisation is selected for closer examination. Both selections are based on theoretical sampling to achieve the greatest possible amount of information on the investment decision making process (Eisenhardt, 1989a; Flyvbjerg, 2006; Eisenhardt and Graebner, 2007). The cases are selected from the Dutch real estate development sector.

Case selection of the real estate development organisations
The organisations are selected on the assumption that these organisations have incorporated risk management in their decision making process. As the presence (or absence) of risk management is the topic of this research, no clear selection criteria are available, but some assumptions must be made to indicate the presence of risk management. Next to these criteria indicating the ‘criticality’ of the case, other criteria are used to diminish the differences in influence of contextual factors on the decision making process, which are described in 3.1.4. The criticality criteria are:

- **Track record**: the track record or the performance of the organisation over its history is regarded as a representation of the ability to manage the risks inherent to real estate development. Of course, many other factors influence the performance of an organisation. Therefore, organisations with a history of over ten years are selected, so they have operated in both a declining and rising economy, and occupied a stable position in the Dutch real estate development sector amongst
the top 30 real estate development organisations over the past 5 years (Wessels, 2002; Wessels, 2003; Wessels, 2004; Enk, 2005; Enk, 2006);

- **Size and composition of the portfolio:** another critical criterion is that the organisations have developed projects that involved a considerable amount of risk. However, the riskiness of the project is as hard to measure objectively as is the performance of the organisation. As indicator of the riskiness of a project is taken the complexity of a real estate development project (section 1.1.1). The complexity of a project is influenced by factors such as the size (m²), function (e.g. offices, residential, retail), location (area), type of development (e.g. inner-city, greenfield, brownfield), and number of parties involved. The organisation is not selected on the characteristics of the individual projects, but on the size and composition of the portfolio. The criterion for the size of the portfolio is an investment value of over €250 million (m² x rental value/m² x gross yield). The criteria for the composition of the portfolio are development on a national scale and development of projects with different functions or even multifunctional projects.

The criteria regarding the contextual factors are:

- **Type of real estate development organisation:** in the Netherlands different types of developers are distinguished (section 2.1.3): independent developers, contractor-developers, investor-developers, financier-developers and others. For the cases only independent developers are selected as the core business of these organisations is to develop profitable real estate projects. This aim is not contaminated with objectives of other business units and thus the decision criteria, and also the risk attitude, are assumed to differ less within the subgroup of independent developers than in comparison with the other types of developers;

- **Size of the organisation** (number of employees): the real estate development organisations complying with the criterion of the investment value differ largely in the number of employees. To limit the influence of differences in the organisational structure as a consequence of the size difference, all cases have 40–100 employees active in the development activities;

- **Internal stability:** the final criterion is the internal stability of an organisation. Structural changes, such as a merger or take over, can influence the decision making process and therefore organisations involved in such a process are excluded from consideration.

The final, pragmatic, criterion for the selection was the willingness of organisations to cooperate. As observation of decision meetings is part of the research design, it is often difficult to secure access and maintain
confidentiality which makes empirical studies employing participant observation of the boardroom rare (Parker, 2007). Based on these criteria three Dutch real estate development organisations were selected: tcn property projects (tcn), Johan Matser Projectontwikkeling (jmp), and Blauwhoed (bh). All three organisations meet the selection criteria; the main difference between the organisations is that tcn is more involved in the management phase than jmp and bh. Still, the case study merely focuses on the development phases until completion of the project. Their organisational characteristics in 2006 are described in sections 6.1.1, 7.1.1 and 8.1.1, respectively.

Within case project selection
To study the investment decision making process of a project, a selection is made for a project within each selected organisation. The project selected is an extreme case in which the process of interest is ‘transparently observable’ (Eisenhardt, 1989a). The following selection criteria are applied:

- **High risk project**: a high risk project, according to the decision makers of the organisation concerned, is selected. Such a case was selected because its risk management practices are supposed to become most visible and explicit in a project which is perceived as risky. When risk management practices are not part of the intentional procedures, deviations between the actual and intentional procedures are most likely to reveal themselves;

- **Imminent investment decision moment**: a project is selected in which an investment decision moment is imminent at the moment the case study period is started, so both the real-life decision making process and the project history can be studied. As the investment decisions do not frequently take place during a real estate development process, no selection could be made towards similar investment decision moments.

The combination of these two criteria complicated the selection of projects. The tcn project meets both criteria very well. The jmp project meets the first criterion insofar as all projects at jmp have a similar level of riskiness; the second criterion is partly met: the decision had already been made, but was not yet formally authorised. The authorisation process took place during the case study period. The bh project meets both criteria, but unfortunately the coming investment decision moment, which was expected to take place during the case study period, took place afterwards. The three projects are made anonymous, for reasons of confidentiality. The projects are introduced in sections 6.1.4, 7.1.4 and 8.1.4.
5.2.2 Unit and level of analysis
The unit and the level of analysis are important considerations to limit the scope of the research. The unit of analysis is limited in section 1.3.3 to the investment decision, because of the risks that accompany such a decision. In an investment decision making process, multiple decision actors, divided among several organisational levels, are involved. To limit the scope of the research, the level of analysis is primarily, but not exclusively, the general management or the board.

By choosing this level of analysis, the focus of the observations made in the empirical research is the meetings in which the board makes an investment decision. This choice is based on the assumption that the decision meeting is a distillation of the investment decision making process. The practical reason is that observing decision meetings is much less time consuming than observing the whole decision making process, which would require a longitudinal study. Moreover, it is hard to define when a decision making process actually starts. Therefore, in this research is defined that the investment decision making process starts with the preparation of an investment proposal and ends with the authorisation of the decision. Alternative methods are used to collect data on the other decision phases.

5.2.3 Methods of data collection
The case studies took place from November 2006 until April 2007; each case study period lasted six to eight weeks. During a case study period, the researcher spent two or three days a week at the office of the organisation to collect data and to get a sense of the organisation through informal meetings and observations. In the case study, multiple methods are used to collect data to increase the internal validity of the research results by triangulation (Yin, 1989). The methods used are document analysis, semi-structured interviews, and observation. The methods collect data about the investment decision making process, the context in which the decisions take place, and the investment decision making process of the selected project.

Interviews
Eleven to fifteen in-depth interviews per case were conducted with representatives of each group of decision actors: general management, program management, project management, specialists and support staff (section 4.1.3). The interviewees are highly knowledgeable informants who view the focal phenomena from diverse perspectives and combine retrospective and real-time cases (Eisenhardt and Graebner, 2007), which enrich the reliability of the data. The interviews ranged from 25 to 120 minutes. The average interview lasted 60 minutes. The interviews are summarised in the Appendix. During the interviews, the
researcher took notes and then transcribed the interviews. The interviews were recorded and the recordings supplemented the transcripts.

Semi-structured interviews elicited insight into both the real estate development process and the investment decision making process. The topics were adapted to each interviewee’s functional level in the development project and to his or her role in the decision making process. In addition, a few interviewees discussed the project. Some of these interviews complemented the general interviews; others were combined with those interviews.

**Document analysis**
The researcher gathered general and project-specific documents. The general documents are used to acquire insight in the organisational context and the investment decision making process. These documents include strategic documents (e.g. organisational structure, annual report, code of conduct), tactical documents (e.g. project handbook, meeting schedules), and operational documents (e.g. budget request form, budget reports, project reports). The project documents are used to obtain insight into the risks of the project, the risk measures, and the investment decisions made during the project. The project documents are used to make an ex post analysis in addition to the direct observation of the investment decision. The project documents include (prior) investment budget requests (reports), contracts, investment budgets, situational/urban and conceptual drawings, and program of requirements.

**Observations**
During the case study period, the board meetings were studied by direct observation. In two of the three organisations, investment decisions were made during the board meetings. In the third organisation the decision meeting in which the investment decision took place was observed. The appendix gives the overview of observations. During the decision meetings the researcher took notes on what issues were discussed, who raised them, how they reached a conclusion, and how the decision was formulated. The observations give insight in the content of the discussion over a project, the time spent on an investment decision, the level of attention to risk, the criteria used and the level of interaction and conflict among the decision makers.

**5.3 Data analysis**
The collected data are analysed to describe the investment decision making process and then to extract the characteristics of investment decision making that are critical for knowingly taking risk. The steps taken in the analysis process are within case analysis for each organisa-
tion and a cross case analysis, both of which are descriptive, and the development of a strategy table that includes the critical characteristics of an investment decision making process, which are inductive.

5.3.1 Within case analysis
The within case analysis uses the integral model of investment decision making in real estate development, presented in section 4.1, the propositions presented in section 4.2, and the explanatory framework of knowingly taking risk, presented in section 4.3. The within case analysis corresponds with chapters 6, 7, and 8:

1. The real estate development organisations are described by using the elements of the system of a real estate development organisation as part of the integral model of investment decision making. This analysis is based on collected strategic documents;
2. The intentional procedure of a real estate development project is described by making use of the elements of the system of a real estate development project being part of the integral model of investment decision making. This analysis is based on tactical and operational documents and interviews;
3. The intentional decision procedure is described in terms of the responsibilities and authorities in the decision phases by making use of the elements of the system of investment decision making being part of the integral model of investment decision making. This analysis is based on tactical and operational documents, interviews and observations;
4. A short introduction is given of the selected project and the imminent investment decision moment based on project documents and interviews;
5. The investment decision making process is analysed per proposition. Empirical evidence from the documents, interviews and observations is presented, supporting or rejecting the propositions. The evidence is illustrated by narratives of the investment decision making process in the selected project;
6. The results, consisting of management practices, are summarised in a construct table (Eisenhardt and Graebner, 2007) or conceptually ordered display (Miles and Huberman, 1994). Per case is reflected on the contribution of the management practices to the three indicators of knowingly taking risk. The management practices are input for the cross case analysis.

5.3.2 Cross case analysis
The cross case analysis (section 9.1) compares the management practices – the evidence supporting the propositions on knowingly taking risk – by using a case-ordered display (Miles and Huberman, 1994).
The similarities and differences among the three organisations become visible. As there is no point of reference determining the minimum level of knowingly taking risk, the effectiveness of the management practices is compared to each other, using the explanatory framework of knowingly taking risk, and the three indicators of timeliness, justifiability and accountability. In this evaluation the organisational context and literature, especially on the factors influencing risk behaviour (section 3.4) are considered to describe ‘what is similar to, what does it contradict, and why’ (Eisenhardt, 1989a: 544). Based on these results a set of suggested practices per proposition is formulated. Section 9.2 refines the definition of knowingly taking risk.

5.3.3 Development of strategy table

The aim of this part of the analysis is to extract the key characteristics of investment decision making processes that contribute to knowingly taking risk. This is done by generalising the specific management practices into technological rules (section 5.1.2). The results of the descriptive research can be translated into technological rules provided that they satisfy the following conditions (Aken, 2005):

- The dependent variable must describe something of value to the organisation, like financial performance;
- The independent variables must describe something that can be changed or implemented by the designers.

The dependent variable in this research is in the end the financial performance of the development project and consequently of the real estate development organisation; however, as is described in section 3.2.5, a direct relation between the financial performance and decision outcomes is hard to measure. Therefore, the dependent variable is decision effectiveness in terms of the way risks are handled, which is conceptualised as knowingly taking risk. The independent variables are the characteristics of the decision making process that guide the decision behaviour of the individual decision makers.

The characteristics are derived from the management practices. As there is often not one best way to carry out an investment decision making process, a distinction is made between the characteristics or elements of a decision making procedure and the possible options to design or fill in this characteristic. A strategy table encompasses the possibilities of designing an investment decision making process in different ways. A strategy table is a framework to structure the formulation of a strategy (Geurts and Weggeman, 1992; Joldersma, 2004) – in this research the formulation of a decision making procedure. A strategy table consists of a set of design elements and per element a set of design options is formulated. These are presented in a matrix
5.1), with the elements in the column headings and the design options in the columns. A strategy is formulated by choosing in each column at least one design option; the next step is to combine the design options and check the consistency of the strategy.

<table>
<thead>
<tr>
<th>Element 1</th>
<th>Element 2</th>
<th>Element 3</th>
<th>Element 4</th>
<th>Element 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option 1</td>
<td>Option 2</td>
<td>Option 3</td>
<td>Option 4</td>
<td>Option 5</td>
</tr>
<tr>
<td>Option 2</td>
<td>Option 1</td>
<td>Option 2</td>
<td>Option 3</td>
<td>Option 2</td>
</tr>
<tr>
<td>Option 3</td>
<td>Option 2</td>
<td>Option 4</td>
<td>Option 4</td>
<td>Option 3</td>
</tr>
<tr>
<td>Option 4</td>
<td>Option 3</td>
<td>Option 3</td>
<td>Option 4</td>
<td>Option 4</td>
</tr>
<tr>
<td>Option 5</td>
<td>Option 4</td>
<td>Option 5</td>
<td>Option 5</td>
<td>Option 5</td>
</tr>
</tbody>
</table>

Table 5.1 Example strategy table

Normally the elements and the design options are defined for the specific design problem (Joldersma, 2004); in this research the elements and options are derived from the management practices. The characteristics are design elements of a decision making process that can be influenced or prescribed in an organisational procedure or rules. The design options are alternative ways of executing the decision making process.

5.4 Evaluation of results
The strategy table is a participative method to deal with different perceptions of people and make these perceptions clear and negotiable in order to formulate a strategy with stakeholders (Geurts and Wegeman, 1992; Joldersma, 2004). In this research the strategy table is not applied in a group setting, nor as an intervention; the strategy table is used to evaluate the results of the cross case analysis to determine if the set of characteristics is complete and if the options are relevant, and to evaluate the decision procedures to uncover what improvements can or should be made to the decision procedure considering changes in market circumstances. Only the structuring capabilities and the consistency of the decision procedure are used.

5.4.1 Evaluation criteria
The results are evaluated for three reasons. In the first place an evaluation is done to increase the reliability of the results of the cross case analysis. This is needed as the methods used in a case study are to some extent subject to the interpretations and biases of the researcher. Therefore, the results are presented to the people representing the cases to check the results according to three criteria:
• Recognisability: are the elements self-explanatory?
• Relevance: do these elements of the investment decision making process contribute to manage risks?
• Completeness: are there any other characteristics of the investment decision making process that is part of risk management?

In the second place the results are evaluated to check if the results remain relevant in changing circumstances. A limitation of the case study is that it is only an indication of the investment decision making process at a given moment in time. As real estate markets are cyclical, it is relevant to see what effects changing market conditions have for the investment decision making process as the riskiness of the business changes. However, not only do market conditions change, but organisational changes can also have a significant impact on the way risks are handled. Therefore, the results are evaluated on the criterion of:
• Robustness: are the identified elements in the period of 2006/2007 still relevant under the changed market conditions of 2008?

In the third place the evaluation examines the value of the results for practice. The strategy table has primarily been applied to formulate strategies in R&D projects for Philips International (Geurts and Wegge-man, 1992), and to develop a strategy for the redevelopment of inner-city station areas (Peek, 2006); the application of a strategy table to (re)design an organisational process would be the first of its kind. In this evaluation the method is not applied as a participative method, but a first check is done on the following criterion:
• Applicability: is it possible to reflect on the investment decision making process by making use of the strategy table? Is the strategy table a platform for discussion through which choices also can be explained?

These criteria are tested according to the method described in section 5.4.2; section 9.3 presents the results.

5.4.2 Method of evaluation
The evaluation is carried out with the CEOs of the real estate development organisations that were selected for the case study. The reason is that the evaluation is intended to increase the reliability and robustness of the results in favour of generalisability. The evaluation with each of the participants took about 1.5 hours. These sessions took place in July and August of 2008, 12 to 18 months after the case study period.

In preparation for the evaluation session, the case description and the cross case analysis were sent to the CEOs to check the results and to become familiar with the terminology. The evaluation consisted of two parts:
1. **Forecasting the future of real estate development:** the CEOs are asked to describe the changes over the past 12 to 18 months in the internal organisation and the external environment and indicate which challenges and risks the real estate development organisation will face. This new situation is point of departure for the next part;

2. **Redesigning the investment decision making procedure:** the CEOs are asked to redesign the investment decision making procedure that enables the organisation to meet future challenges in the best possible way given the internal context of the organisation. The strategy table is the basis for the (re)design: per column one or more options must be chosen. During the filling in of the strategy table the CEOs are asked to think out loud in order to gain insight into the considerations made before making a choice, especially when another option is chosen than during the case study period.

The results of the evaluation are presented in section 9.3 in which the three redesigned investment decision making procedures are compared to the procedures in the time of the case study and to each other.
6 Knowingly taking risk at Tcn Property Projects

This chapter describes the real estate development company Tcn Property Projects (Tcn) in terms of knowingly taking risk. Tcn is selected as a best practice in the Dutch real estate development sector, based on its strong growth since its establishment in 1994. The company has occupied a top 20 position in the Dutch real estate development industry since 2003. The case study took place in November and December 2006. The decision making process at Tcn is examined through interviews, document analysis and observations of decision meetings (section 5.2.3). A more detailed analysis of the decision making process is made in the project ‘Omega’. This project illustrates an actual decision making process at the start of the construction phase with a high risk profile regarding the lease and financing activities.

Section 6.1 describes Tcn in terms of the organisational characteristics, the development process and the decision making process according to the integral model of investment decision making (section 4.1). The organisational characteristics give insight into the history, aims and vision, size and structure of Tcn. The intentional development procedure is described in terms of activities per development aspect in each development phase. The description of the decision making process is limited to the intentional decision procedure in terms of who is responsible in which decision phase. In addition, the project ‘Omega’ is briefly introduced.

Section 6.2 analyses the investment decision making process using the propositions presented in section 4.2. Per proposition is indicated what management practices are applied to meet this proposition. A management practice is a characteristic of the decision making process that guides the decision behaviour towards risk. The actual behaviour in a decision making process is illustrated by the ‘Omega’ case.

Section 6.3 summarises the management practices and draws conclusions on the level of the three indicators of knowingly taking risk: justifiability, timeliness and accountability. Final conclusions are drawn as to what extent the propositions are met and what is remarkable about the way the decision process is organised in order to guarantee that risks are handled successfully.
6.1 Description of TCN Property Projects

6.1.1 The organisational characteristics

TCN started in 1994 as a subsidiary of an American real estate development organisation – Trammell Crow – and became independent in 2004. Since TCN is a privately held organisation the majority of shares is owned by the director and a minority by an investment company. TCN operates in several European countries, but this case study is limited to the Dutch organisation. As of January 1, 2006, the reference date of the case selection, TCN had a development portfolio valued at €1,0 - 1,5 billion (Enk, 2006). The portfolio consists of real estate programs representing coherent, innovative product and market combinations to create real estate solutions to meet new market demands. Some of these programs are retail, leisure, commercial and business-to-business projects which are located on brownfield and greenfield areas across the Netherlands.

The essence of the TCN business model is the ‘Think – Make – Do – Grow’ value chain. Its business units or departments – Concepts, Development, and Management – cover the life cycle of a property. TCN can envision a market demand and turn it into a concept, make it a real property and make sure the property is efficiently owned and run. All TCN properties fall within one of its programs. They are compiled as a portfolio by TCN Assets which manages this portfolio on a strategic level. TCN Assets’ investment philosophy is quite simple: ‘we will purchase properties where conscious effort can create upswing in value. We provide a transformation through re-structuring, then provide the investment market with attractive stable properties. Restructuring can be physical, financial or legal. Even where a property has a history of under-performing, we are not afraid to take a long, hard, fresh look at how extra value can be created’ (TCN Property Projects, 2006). As TCN not only develops, but also invests in projects and delivers management services, TCN can best be characterised as an asset-developer. TCN differs from investors pur sang as TCN aims to sell projects at the moment the increase value starts to diminish (when the differential coefficient of the value curve becomes negative); moreover, TCN does not add newly built projects to add to their asset portfolio. This case study focuses merely on the development activities.

The organisation is structured as a matrix by the departments and the real estate programs (Figure 6.1). Each real estate program is crewed by a program director and several project developers, who have the responsibility for a project from initiative until sale. In the different phases, the developer can be assisted by concept developers, technical developers, various (real estate, facility, park) managers, and investment managers. Next to these core activities, the development projects are supported by in-house technocratic staff, mainly legal specialists.
and financial controllers. The total amount of human resources in the Netherlands is approximately 140, of which approximately 60 employees work primarily on a project in one of the development phases prior to management.

6.1.2 The development procedure

The description of the real estate development process is based on the TCN project manual (TCN Property Projects, 2005) and 14 interviews (Appendix). The project manual describes the internal procedure. This manual is the guideline for all employees and the references made by the interviewees to the manual and the physical presence of the manual in the form of a ‘placemat’ on which the development procedure is presented prove that the manual is applied in daily practice.

Development phases, aspects and activities

TCN divides the real estate development process into six phases: acquisition, initiative, pre-development, development, construction, and management. Moreover, TCN determines five development aspects by which the activities per development phase are described: land/building, process and permits, sales and marketing, financing, and budget. Figure 6.2 presents the development phases, development aspects and development activities.

During the acquisition phase, all of the activities are aimed at analysing the feasibility of the project by gathering information without doing investments apart from internal project management costs. The development activities are not specified per development aspect for this phase. As for the management phase, the activities are not described in
<table>
<thead>
<tr>
<th>Development aspect</th>
<th>Acquisition</th>
<th>Initiative</th>
<th>Predevelopment</th>
<th>Development</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land/building</td>
<td>Feasibility</td>
<td>Letter of intent</td>
<td>Preparing land purchase contract</td>
<td>Signing land purchase contract</td>
<td></td>
</tr>
<tr>
<td>Process, permits</td>
<td>Feasibility</td>
<td>PoR, draft design</td>
<td>Schematic design</td>
<td>Final design</td>
<td>Applying for building permits</td>
</tr>
<tr>
<td>Sales and marketing</td>
<td>Feasibility</td>
<td>Letter of intent anchor tenants</td>
<td>Arranging 60% lease contracts</td>
<td>Arranging 60-100% lease contracts</td>
<td>Arranging 100% lease contracts</td>
</tr>
<tr>
<td>Financing</td>
<td>Feasibility</td>
<td>Financing proposal</td>
<td>Financing contract</td>
<td>Arranging down payment</td>
<td>Monitoring down payment</td>
</tr>
<tr>
<td>Budget</td>
<td>Feasibility</td>
<td>Investment budget (aprx)</td>
<td>Investment budget</td>
<td>Construction budget</td>
<td>Finalize investment budget</td>
</tr>
</tbody>
</table>

Figure 6.2 Development activities per development phase and aspect – case TCN

terms of the development aspects, as the activities have a completely different character, such as operational, park or facility management. The activities of the other phases are described per development aspect.

The activities of the development aspect ‘land/building’ are geared toward purchasing land or building(s). At the end of the initiative phase a letter of intent with the land owner is required; the definitive purchase contract is prepared at the end of the predevelopment phase and the contract is signed at the end of the development phase. All activities which are needed to reach this result make part of the aspect ‘land/building’.

The activities regarding the development aspect ‘process and permits’ include the design process, the planning application procedure, and construction. In the initiative phase the program of requirements is made, and an architect is chosen and commissioned to make a draft design. In the predevelopment phase the project manager commissions the schematic design and the final design in the development phase. In this phase an application for a building permit is submitted. During the construction phase the project manager manages and supervises the construction activities.

The sales and marketing activities include all activities to lease the project. These activities start in the initiative phase with the signing of a letter of intent with anchor tenants of commercial real estate. In the predevelopment phase, the project developer strives to lease 60% of the available rental floor area, up to 100% by the end of the development phase and at the latest at the moment of completion. The sale of a project takes place in the management phase when TCN considers the
growth of the capital value of a project starts to decline. The reason for selling the project only after a few years of operation is a consequence of the type of products T C N develops. Investors value projects with a new product-market combination lower than projects with an established product-market combination. Only after a few years of operation is an innovative project assessed at its ‘real’ value.

The financing activities include arranging equity capital for the development costs and debt capital to finance the construction costs. Arranging debt capital is necessary as T C N does not have enough equity to finance all of its own projects. The activities regarding the development aspect ‘budget’ include monitoring the profitability of the project. The budget estimates need to be carefully updated in every phase.

**Development actors, responsibilities and authorities**

According to the organisational structure of T C N, four groups of actors participate in a real estate development project: employees of one of the real estate programs, employees of the departments, technocratic staff, and management staff/board members. Figure 6.3 depicts the responsibilities and authorities of each of the development actors.

In a real estate program a *program director* coordinates all projects from acquisition through sale, supervises the project developers and assists when more expertise or experience is needed. The *project developer* assumes daily responsibility for a project from initiative until completion: the project developer coordinates and plans all activities of real estate development to ensure the progress of the project. For each development phase an investment budget is allocated; within this budget the project developer has the independent authority to make decisions which are consistent with the development strategy.
On the initiative of the project developer, other actors are invited to support the development process and join the project team consisting of internal and external parties. The internal parties in a project team come from all departments of the organisation. Especially in the initiative and predevelopment phases, a concept developer participates to define the product – which is part of the development aspect ‘process, permits’. In the development and construction phase a technical developer takes responsibility for the planning and budget of the design and construction process. An asset or investment manager arranges external financing in the development phase. In the management phase, operational management takes over activities from the project developer: during the development phases their involvement is limited to advising the project developer from the perspective and expertise of the exploitation of the project.

In addition to the support from the departments, asked and unasked advice comes from the departments Legal and Finance & Control. Both Legal and Finance & Control are involved during all phases with some regularity, but they are not primarily responsible for taking part in the process. These departments do not have decision making authority, but they do have the responsibility to communicate possible risks, cost overruns, changes in legislation and the like to the project developer, the program director and to the management staff.

The management staff consists of a chief executive officer (CEO), a chief financial officer (CFO), a chief program officer (CPO), and a chief operational officer (COO). The CEO is overall responsible for the organisation. The CPO is responsible for the real estate programs; the CFO is responsible for Assets and Finance & Control. The COO is responsible for the departments and all other support staff. The management staff is only formally involved in a development project when investment decisions are made. Otherwise, the program directors inform the CPO about the progress of the projects, the Assets and F&C departments report to the CFO and the directors of the departments inform the COO.

6.1.3 The investment decision making procedure
This section describes the intentional decision making procedure. First the investment decision moments are presented, linking the development and the decision making processes. Next, the decision making procedure is described from the perspective of the actors, explaining their responsibilities and authorities throughout the decision process. The decision making process is analysed in section 6.2.

Investment decision moments
The decision making process is primarily linked to the development process by the decision criteria regarding the development aspects.
These progress criteria differ over the decision moments, whereas the portfolio and strategic criteria are generic for each decision moment. The decision moments correspond to the gateways between the two phases (see Figure 6.4). TCN distinguishes five decision moments of which the fifth is the closure of the project with regard to the development process (and is not part of the research).

At the first decision moment, gateway 1 between acquisition and initiative, is decided on opening a project account and granting budget to this project of approximately 1% of the total development costs (with a maximum of €100,000). Until this moment the costs are very limited - hardly any external costs are made - and come from an acquisition budget. At the second and third decision moments, the budget is increased to 2% and 7% of the total development costs, respectively. At gateway 2 commitments are made towards the design and to start lease activities. The decision at gateway 3 gives a budget for finalising the design, applying for a building permit and arranging lease arrangements. At the fourth decision moment the decision is made to purchase the land and start construction; the remaining 90% of the total development costs is released to the construction phase.

**Intentional decision procedure**

At TCN an investment decision has to be authorised by two groups of decision makers in a two-tier approval process. The first group of decision makers, the Program Committee (pc), consists of program directors; the second group of decision makers, the Investment Committee (ic), consists mostly of people from the financial sector. In extreme cases the investment proposal is submitted to the Executive Committee (ec) for a final decision. The decision procedure has three phases: preparation (the recognition of a decision moment and the writing of an investment proposal), submission (when the proposal is handed over to the decision committee members), and approval (when an investment proposal is assessed, a choice is made and the decision is approved) (Figure 6.5). The intentional procedure indicates who is responsible for the different decision criteria, who has authority in each phase of the decision making process, and the frequency and duration of the decision meetings.
The project manager is responsible for initiating a decision process. The decision procedure must be started to request a new budget for the next phase in the development process: these decision moments are the gates between the phases in the development protocol. According to the development aspects and phases, a decision is needed to start new activities: hiring external parties for feasibility analysis (gateway 1), selecting an architect and starting sales activities (gateway 2), applying for a building permit (gateway 3), and committing a contractor (gateway 4). The decision making process can be initiated earlier when the project manager runs over the previous requested budget. To request a new budget the project developer needs to write an investment proposal. Before the developer submits the investment proposal, the program director has to approve it.

The investment proposal must be submitted to the PC (which meets every other Monday) and the IC (which meets every other Wednesday). To give the committee members enough preparation time, the proposal must be submitted at least four days before the meeting. In practice, the proposal is submitted to both committees at the same time. In each meeting of the PC or IC investment proposals are a standard item on the agenda.

The approval phase consists of at least two and in extreme cases three stages of approval. First, the PC, consisting of the Chief Program Officer (chairman), the Chief Executive Officer and all program directors (eight voting members), has to approve the investment proposal by assessing primarily the concept of the project and its programmatic features. Second, the IC, consisting of the Chief Financial Officer (chairman), Chief Investment Officer, Chief Program Officer, director Finance and Control, the financial director of a currently bought program unit, and two commissioners of the shareholders (seven voting members), needs to approve the proposal by assessing the financial features of the project.

The decision rule is that the PC has to approve the proposal before it goes to the IC; the IC has the authority to approve or reject the project. Only in case of internal disagreement or a level of risk exceeding the authority of the IC, is the decision left to the EC. In that case the chairman of the IC sends the investment proposal to the IC. As the IC and the EC meetings are successive, the EC members do not have time to prepare, but a decision is still made instantly. The EC, consisting of the Chief Executive Officer (chairman), Chief Financial Officer, Chief Operations Officer, director Human Resource Management and the commissioners of the shareholders, will reach a final decision. When a final decision is reached, either by the IC or EC, the decision will be related to the responsible project and program manager.
6.1.4 Introduction of the project ‘Omega’

This section introduces project ‘Omega’ that is used to analyse an actual decision making process. During the case study period from November through December 2006, an investment decision about the start of construction took place. The analysis is based on the observation of the decision meetings and on data analysis and interviews regarding the development phase. For reasons of confidentiality, the names of projects, organisations, and municipalities have been changed. The key figures of the project are presented in Table 6.1.

Table 6.1 Key figures ‘Omega’ case

<table>
<thead>
<tr>
<th>Location</th>
<th>‘Datacity’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project type</td>
<td>greenfield development</td>
</tr>
<tr>
<td>Programme</td>
<td>datacenter (ca. 17,000 m² industrial; ca. 1600 m² offices)</td>
</tr>
<tr>
<td>Area</td>
<td>5.25 ha. (18,350 m² footprint)</td>
</tr>
<tr>
<td>Investment volume</td>
<td>ca. € 60,000,000</td>
</tr>
<tr>
<td>Investment period</td>
<td>August 2006 – October 2007</td>
</tr>
<tr>
<td>Construction period</td>
<td>January 2007 – October 2007</td>
</tr>
<tr>
<td>Initiative</td>
<td>housing need by the multinational ‘Omega’</td>
</tr>
</tbody>
</table>
In April 2006, the multinational Omega approached TCN to develop a new data center. Omega had rented space from TCN in the past years and because of its growth ambitions, Omega needed more space. Since Omega was satisfied with the management services and TCN had development experience in the Netherlands, Omega chose TCN to develop a tailor-made building. TCN considered Omega’s need for space as a good development opportunity, so negotiations began on the development of the space and facilities and the provision of services during operation. TCN would not only act as a developer, but also as investor and facility manager.

In August 2006, the negotiations resulted in a concept rental and service agreement. This agreement arranged for TCN to develop, operate and maintain a data center, consisting of office space and operating plants, in ‘Datacity’ according to a program of requirements, with a strong focus on the technical specifications of the building, and that Omega would lease 50% of the data center at a fixed rental price for seven years. A few conditions entered the agreement under pressure of Omega that represented a significant risk for TCN. These conditions are:

- TCN has to deliver the data center on the expected delivery date, 14 months after signing the agreement (effective date), or at the very latest, 19 months after signing the agreement. When the delivery takes place after the expected delivery date TCN has to pay a penalty to Omega not to exceed € 2 million. If the building is not delivered within 19 months of the effective date, but after the ultimate delivery date, the tenant has the right to dissolve the contract and TCN has to pay a penalty of € 0.6 million plus interest over a loan of € 1 million that Omega provides to pre-finance the development costs;
- The lease period is seven years for only 50% of the total rental space; after this period, Omega has the right to extend the term of the lease;
- TCN is liable for a continuous quality of supply of energy and other services;
- TCN provides energy at a fixed price for the first two years.

Before being authorised to sign this agreement and committing TCN to these conditions, the program director must submit an investment proposal for gateway 1 to the Program Committee and the Investment Committee. The project will be part of the program TCN Bytes, that was only recently added to TCN as a result of a takeover. For both the program director, the PC and the IC, it was the first time that an investment proposal for this type of a development project had to be prepared and assessed. After deliberation, the budget request was approved in August 2006, but the budget request was limited due to the risks involved and the restriction to renegotiate the condition regarding the
fixed energy price. Still, the project is regarded as a great opportunity and a possible precedent for similar projects in a growing market.

After budget approval, Omega agreed to drop the condition on the fixed energy price, so TCN and Omega signed the agreement on August 24, 2006. As a consequence, the expected delivery date was set for October 24, 2007. From that moment development activities on the design, the land purchase and the planning application were energetically carried out. As for the lease activities, Omega did not allow TCN to start to attract other tenants, because Omega did not want any publicity about the initiative for competitive reasons. Thus, the vacancy risk could not be reduced. The biggest setback in the process was the cancellation of a cooperation agreement with a contractor, as by cooperating the contractor would have borne the construction costs. This meant TCN had to arrange for external financing. While the development activities regarding the design, land purchase and building permit progressed, and the start of construction was planned mid December 2006, the project developer asked the Assets department to arrange financing in late October 2006. Arranging for financing within six weeks for this type of project would become critical, as financial institutions are not familiar with financing the development of the building by a construction loan and financing the installations in a lease construction.

On November 8, 2006, the IC discussed the project, because construction works had to start in December 2006 to meet the expected delivery date, and to avoid paying a penalty to Omega. However, many other risks are taken if construction started at this moment in the development process. The IC’s handling of this dilemma is described in the case illustrations belonging to the propositions by which the decision making process is analysed. Figure 6.6 presents the timeline with the milestones in the development process.

Figure 6.6 Timeline ‘Omega’ case
6.2 Analysis of the investment decision making process

This section describes how the investment decision making process takes place at TCN. Per proposition is described if the decision activities that are assumed to contribute to knowingly taking risk can be recognised; moreover, per proposition is indicated what management practices are used at TCN to guarantee that these decision activities are carried out. Section 6.3 summarises all propositions, including the total repertoire of management practices and a reflection on the indicators of knowingly taking risk.

In the case description the intentional decision process is differentiated from the actual decision process, since not all actual practices are also intentional and vice versa. The intentional decision procedure is derived from interviews and strategic documents, such as the TCN project manual (2005). The project manual describes the organisational structure and the development protocol. The project manual was released in 2001; after the first edition, the manual was updated in 2005 and approved by the Program Committee, the Investment Committee and the Executive Committee. From the beginning the manual was distributed throughout the organisation and has been applied as the standard way of working. The actual decision process is based on interviews, project documents, and observations of the decision meetings. The analysis concentrates on the approval phase of the decision process as for the observations. However, as the input for the decision meeting is crucial, the preparation and submission phase are described in terms of input for the approval phase.

6.2.1 Determination of risk related decision criteria

Proposition 1
Determining project specific decision criteria regarding the acceptable level of risk contributes to knowingly taking risk.

The decision criteria for a development project are determined in the TCN project manual. These criteria are applied to each development project without adjusting the criteria to the characteristics of a project. Three types of decision criteria on the level of the project are determined: progress criteria, profitability and maximum risk capital, and two types of decision criteria on the level of the programs.

In the first place, the development protocol presents the intentional, desired development strategy in terms of activities to be carried out per development phase (Figure 6.2). The development strategy is translated into progress criteria which are defined in terms of the results of each development phase per development aspect. The progress criteria are the main risk related decision criteria on the project level as they
represent the preferred level of risk at a certain moment in the development process. Progress is booked either by obtaining information or by taking control measures. The level of information and control regarding each of the development aspects is kept on schedule by determining for each decision moment these criteria, thus the risks involved are kept under control. The progress criteria are listed in Table 6.2 for each decision moment per development aspect; this table is an adjustment of the project manual (TCN Property Projects, 2005).

<table>
<thead>
<tr>
<th>Development aspect</th>
<th>Decision moment</th>
<th>Gateway 1</th>
<th>Gateway 2</th>
<th>Gateway 3</th>
<th>Gateway 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land/building</td>
<td>Investigation of owner situation</td>
<td>Letter of intent with owner</td>
<td>Land agreement prepared</td>
<td>Land agreement ready to sign</td>
<td></td>
</tr>
<tr>
<td>Process, permits</td>
<td>A project &amp; concept description</td>
<td>Definite schedule of demands – technical, functional, spatial</td>
<td>Schematic design drawings</td>
<td>Construction drawings</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Schedule of demands</td>
<td>Selection of architect</td>
<td>Estimation time path planning application procedure</td>
<td>Contracting agreement ready to sign</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Description (anticipated) zoning plan – planning procedure</td>
<td>Clarity about requesting building permit</td>
<td>Building permit in possession</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales and marketing</td>
<td>Market analysis</td>
<td>Marketing &amp; sales report Letters of intent with anchors</td>
<td>Updated marketing &amp; sales report 60% leased</td>
<td>Updated marketing &amp; sales report At least 60% must be leased, the goal is 100% leased</td>
<td></td>
</tr>
<tr>
<td>Financing</td>
<td>Financing possibilities</td>
<td>Financing model with letters of intent</td>
<td>Financing prepared</td>
<td>Financing arranged</td>
<td></td>
</tr>
<tr>
<td>Budget</td>
<td>A feasible proforma budget</td>
<td>Investment budget</td>
<td>Fine-tuned investment budget, detailed construction calculations Max. 7% of total development costs</td>
<td>Fine-tuned investment budget with quotations contractors 100% of total development costs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Max. €100,000,—</td>
<td>Max. 2% of total development costs</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6.2 Progress criteria per decision moment (TCN Property Projects, 2005) – case TCN

In the second place, a decision criterion towards the profitability of a project is determined in the project manual. The profitability of a project is based on the expectations of its costs and revenues. This criterion is used to evaluate the upward potential of a project, but does not
consider possible deviations from this expected return. The criteria regarding the profitability are:

- **Return on Costs** (= total net rental income per year/total development costs > 10.5%);
- **Profit rate** (= [capital value – total development costs]/total development costs) > 20% (inclusive overhead).

In the third place, the budget for the upcoming development phase is restricted to a percentage of the total investment budget. This way the total level of investment (and commitments) in a project is limited; the maximum loss in case of a project withdrawal is guaranteed, unless unconditional commitments are made towards the delivery of the project to future users. The criteria are:

- Predevelopment third party costs < €1 mln per project / max 5% of total development costs;
- Predevelopment management costs < €0.5 mln per project;
- Project equity < €2 mln per project / max 30% of total development costs.

In addition to the decision criteria on the project level, two criteria can be distinguished at the organisational or program level. First, at the outset of a project is assessed whether the project fits in one of the development programs. The development programs are part of the long term strategy of the organisation indicating in what (niche) markets T C N is willing to operate. Moreover, there is a practical reason for concentrating on a few programs; it ensures that some expertise is available to develop such a project. Second, the liquidity and solvency of the organisation are conditional for the start and continuation of projects. The latter criteria are less risk specific and are therefore excluded from consideration in the cross case analysis.

### 6.2.2 Timely recognition of the need for an investment decision

**Proposition 2**

*Timely recognition of situations in which the risk profile of a project is about to change significantly contributes to knowingly taking risk.*

The project manager has the responsibility to recognise the need for a decision, and thus to initiate an investment decision process. The project manager has to prepare an investment proposal to request a new budget from the **pc** and **ic** to obtain additional authority to carry out upcoming development activities. The project manager must recognise situations asking for the involvement of the strategic level of the organisation primarily by his or her own expertise in real estate devel-
opment. In practice an investment decision process is initiated either by the project manager or project director. Some measures are taken to support or stimulate the interests of the project manager.

In the first place the project manager needs to be aware of the development protocol, which prescribes when the investment decisions must take place. Moreover, the protocol predefines what criteria must be fulfilled in order to be granted an investment budget for the next phase. Ideally, an investment budget is only requested when all criteria are met. However, in practice not all development aspects might be under control, and a new budget is needed to take an opportunity or prevent more problems. In such a case the project manager will request to deviate from the predetermined development procedure. A deviation implies that the progress of an individual activity will lag behind other activities: for example, the pre-rental percentage is not met when construction is started. In such a case the decision is not straightforward. The way in which the decision makers deal with these budget requests is elaborated on in 6.3.5.

In the second place the project manager’s authority to sign financial commitments is not only limited by the formal organisational structure, but also by the limited budget for each development phase. When the project manager is near the end of his budget, he must apply for a new or extra investment budget. The question is whether enough progress has been made to enter a new phase; an investment decision is still needed. In addition to the responsibility of the project manager, financial control monitors the expenditures of a project: when financial control signals a budget excess, the IC can request an update of the project manager and an investment proposal for an additional (for the current phase) or a new budget (for the next phase).

In the third place the ability of the project manager to act upon the procedure is stimulated by a reward system. This should prevent deliberate postponement of the investment budget request when the point of no return has already passed. Although recognising a decision moment is the primary responsibility of the project manager, the program director and some members of the PC, IC and/or EC who are involved in the project can take their responsibility as they signal the need for an investment decision based on informal interaction with the project manager. Otherwise, the PC and IC learn about the investment budget request from the agenda of the upcoming meeting. The EC members are only informed in case of non-approval by the IC.

In practically all observed decision meetings, the timeliness of the investment proposals was no subject of discussion as time posed no pressure on the decision. In some cases the investment proposals were submitted late, but still a day ahead of the PC decision meeting. A late submission indicates that either the need for a decision was recognised
late, or that the procedures were considered to be not that important. The exact moment of recognition, and thus the time available to prepare an investment proposal, is not explicitly examined: whether enough time was available is proven partly by the quality of the proposals (proposition 3). In general, the management practices described above must provide for a timely recognition.

*Case illustration*

The ‘Omega’ case was exceptional in regard to this proposition in comparison to all other observed investment decisions: the need for the decision ‘start construction’ (gateway 4) was recognised extremely late. The need for the decision comes from the fact that when construction is not started within four weeks, the planning of the construction period will be under great pressure. Running out of schedule involves a severe risk, as each day the completion is delayed a penalty has to be paid to the tenant. This need is very reasonable, however, approving the budget request for the start of construction is not straightforward, as a number of the project criteria are not met: financing is not arranged, the building permit will not be irrevocable within four weeks time, and only 50% of the rentable flour area is pre-rented. The decision makers have to choose between two evils.

The project manager did not make a real assessment of the time needed for arranging financing and the time limit posed on the other development activities by the planning of the construction phase. When he wanted to start the tender procedure, he acknowledged that some crucial progress criteria were not met. At that moment the project manager contacted the CEO who decided to put this decision problem directly on the agenda of the IC – thus leaving out the decision round by the PC. As the decision meeting of the IC was only three days ahead, there was no time left to write an investment proposal to inform the IC in writing.

In this case the project manager might not have been fully aware of the decision protocol (and the decision criteria), because he was relatively new in the organisation. This case can also be seen as ‘bad’ project management, as it is the primary task of the project manager to make a realistic assessment of the duration of the various development activities and plan these activities so they are completed at the same time.
6.2.3 Search for reliable and relevant information

**Proposition 3**
Making use of reliable and relevant information contributes to knowingly taking risk.

A project manager searches for information on and gains control over a project during the development phase. In the preparation phase he describes the main issues in the investment proposal. The aim of the preparation phase is to provide the decision makers with the right information. The project manager aggregates all available information in a structured way so that the decision makers gain insight into the key variables of the project. The main guidance for a project manager is a standard format for an investment proposal and a standardised budgeting model. The following sections are laid down in the format for an investment proposal:

- Memo for budget request: a qualitative project description;
- Investment budget: an up-to-date prognosis of costs and income;
- Budget request form: the formal document to be signed by the decision makers;
- Supplements (optional): conceptual arrangements, market report, etc.

The memo must include a description of the budget request, the features of the project, the history and progress made since the last decision with regard to all development aspects, organisational facts, status per development aspect (including key figures from the investment budget), and a qualitative risk identification. The investment budget is based on an investment budgeting model: the figures for each project are specific. This input comes from the project manager, who supports the key facts and figures by supplements, such as arrangements (in concept), external reports and internal reports.

During the preparation of the proposal the project manager can ask for support from Concepts, Development and Management, as well as from the support staff, legal and finance. Their contributions can be used for the proposal or added as a supplementary memo or report. In the end, the comprehensiveness of the memo depends on the capabilities of the project manager to present the relevant information. This is checked by the program director who has to approve the proposal before submitting it to the pc and ic.

In the submission phase, the pc and ic members have to prepare for the decision meeting by reading the investment proposals. Some of the pc or ic members can be directly involved in the project, but most of them are not, so they have to base their decision on the information and
on their general expertise. Therefore it is crucial is to write a condensed
but comprehensive proposal. One critique of the pc/ic members is that
some proposals lack quality: some relevant information is missing or
redundant. This might result in a denial of approval for the proposal,
but it could also mean that pc/ic members have to add more informa-
tion, especially when time pressure is high.

In the approval phase the investment proposal is discussed in the
pc and ic. The group composition of the pc and the ic can compensate
for the lack of some information in the investment proposal. The pc
consists of the cpo, the ceo and all program directors, who have pro-
grammatic expertise and more than five years of development experi-
ence. Moreover, the responsible program director is directly involved
in the project and can explain the project. The ic consists of members
who are financially oriented, but who have over more than ten years
of experience in (financing) real estate development. Some of them
can be directly involved in the project to arrange financing: questions
about funding can best be answered by this member. However, repre-
sentatives of the shareholders are also ic members: they are not at all
involved in the project, thus are very dependent on and objective about
the investment proposal.

During the group discussions, many questions are asked to check
the reliability of the information in the investment proposal or to
request additional information. In the pc these answers are answered
by the responsible program director. Sometimes, even the project
manager is invited to give a presentation and answer questions. This
way the decision makers do not only obtain more information on the
project, but also gain an impression of the project manager’s confidence
and persuasiveness. In the ic the cpo answers the questions about
project-specific issues and the other ic members about financial issues.
These discussions are quite unstructured and vary in length. Moreover,
this step in the decision process takes place simultaneously with the
identification and analysis of the proposed strategy and the evaluation
of the project, as described in the next sections.

Case illustration
In the ‘Omega’ case the decision process deviates strongly from the in-
tentional procedure, as no investment proposal is written in which the
budget request is presented due to the urgency of the decision prob-
lem: the project manager did not have time to write a comprehensive
proposal. Therefore, the project manager was present at the decision
meeting of the ic to explain the decision problem and provide the ic
members with information on the actual situation of the project. In
addition to the project manager, the cfo was involved in the project to
arrange the funding, thus he was also an important source of informa-
tion.
Next to the absence of the proposal, the PC was also excluded from the approval process for time reasons. This implies that their expertise could not be utilised. As their expertise concerns mainly the programmatic aspects of a project, the contribution of the PC was less relevant as the decision was about the start of construction, when these aspects can hardly be influenced anymore, and how to arrange financing.

6.2.4 Identification and analysis of multiple courses of action

**Proposition 4**

*Identifying and analysing multiple courses of action contributes to knowingly taking risk.*

In the preparation phase of the decision making process the project manager writes an investment proposal. The investment proposal describes the current situation and a planning and investment budget. The budget and planning predict when activities will take place and what the outcome of this course of action is expected to be. In practice, only one course of action is presented to the decision committees for approval.

In the investment proposal a risk identification and/or analysis is optional. Usually the project manager describes the most serious risks; in some cases it is indicated what the expected impact will be and how the risk is to be dealt with. In addition to this risk identification, the asset management department experiments with a spider diagram which shows the total risk profile of a project (Figure 6.7), to support the project managers in improving the quality of the investment proposals. In the spider diagram the actual progress of a project, by development aspect, is compared to the expected progress represented by the decision criteria. Per decision moment the expected progress is represented by a solid line; the outer circle represents the first decision moment and the inner circle the delivery of the project. The actual progress is plotted as a dotted line: a deviation from the expected progress indicates a higher than desirable risk either when the progress is behind or ahead of schedule.

Figure 6.7 represents the ‘Omega’ case at the decision moment ‘start construction’. In this case, the spider diagram was not used in the actual decision process, but produced afterwards by the researcher. The example shows that the financing activities lag behind the other development activities, while the marketing activities run in front. Both imply a risk: no external financing means financing with equity capital if this is available, or not being able to pay for the land and the contractor. The leasing contract puts a time constraint on the planning process because of the fixed delivery date. Neither option is desirable.
The next phase is the submission phase. During this phase the members of the pc and the ic prepare themselves. According to the intentional procedure, the proposal must be submitted five days before the decision meeting to give the decision makers enough time to read the proposals. The actual process of the submission phase is not studied. The result of the individual preparation is a list of questions for the discussion and a preliminary judgment of the proposal.

In the approval phase each investment proposal is discussed in the pc and ic meeting. The meetings follow a standard agenda, but the actual discussion is quite unstructured: the committee members bring in their questions, considerations, evaluations in random order (not necessarily related to the previous question). Topics alternate rapidly. The discussion usually starts with a short description of the project and the budget request given by the program director or the chairman.

Figure 6.7. Example of a spider diagram indicating the risk profile of a project – case TCN

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Expected progress gateway 4

Actual progress

Figure 6.7. Example of a spider diagram indicating the risk profile of a project – case TCN

The next phase is the submission phase. During this phase the members of the pc and the ic prepare themselves. According to the intentional procedure, the proposal must be submitted five days before the decision meeting to give the decision makers enough time to read the proposals. The actual process of the submission phase is not studied. The result of the individual preparation is a list of questions for the discussion and a preliminary judgment of the proposal.

In the approval phase each investment proposal is discussed in the pc and ic meeting. The meetings follow a standard agenda, but the actual discussion is quite unstructured: the committee members bring in their questions, considerations, evaluations in random order (not necessarily related to the previous question). Topics alternate rapidly. The discussion usually starts with a short description of the project and the budget request given by the program director or the chairman.
A discussion round follows in which the following decision activities iteratively take place:

- Search for (reliability of) information;
- Analysis of risks/scenarios and alternative strategies;
- Judgment of proposal – implicitly and sometimes explicitly by using decision criteria.

Most questions in the discussion are intended to check the reliability of the information in the investment proposal and to request additional information about the project or plan of action. In the PC the program director or developer can answer these questions, but in IC meetings one of the IC members does. The answers do not only provide supplemental information, but the decision makers use this information as well to assess the probability of a risk that is implicitly related to the question. For example, the question ‘what is the rate of pre-rental agreements’ explores the market risk of the project and at the same time the answer will be implicitly weighed against the progress criterion on the development aspect ‘marketing’ for the decision moment involved – or the criteria of the committee member.

In addition, many hypothetical questions are asked. For example, ‘what will happen if financing is not arranged before the end of this month’ or ‘what will you do if the zoning plan is not changed into commercial real estate’? Different scenarios and alternative strategies are identified and evaluated. In cases where the committee members have identified a number of high-impact risks, a worst case scenario is identified and analysed. The impact of these scenarios is measured in terms of impact on the risk capital, especially in a worst case scenario.

When identifying and evaluating risks, the term ‘risk’ is hardly mentioned, although almost all questions hint at risks. Only a few times did a committee member explicitly ask for the probability of a risk. For example, a member of the IC was asked: “What is your probability estimate that the investor is not willing to finance the project?” He answered: “A probability of 20% that they cancel the deal, and a probability of 80% that they agree on the term sheet with some minor changes”. Still, this estimation is subjective, but the other committee members trust the expertise of the committee member who answered the question.

**Case illustration**

In the ‘Omega’ case the identification and analysis of possible courses of action take place during the decision meeting of the IC, as no proposal is prepared in which a preferred course of action is indicated. In fact, the IC is asked how to arrange financing for this project instead of approving a single strategy. The project manager advocates starting
construction immediately in order to deliver the project on time, while in the meantime the financing is arranged.

The ic members discuss several financing alternatives: applying to a financial institution and to a private equity investor. As it remains uncertain whether these strategies will succeed, exit strategies are developed. In case a private equity provider wants to join in, but the financial institution is not willing to provide funding, the project can be sold to the equity provider. In case no financing can be arranged at all, the contract with the user must be annulled.

In the end, the success of the project depends on the probability that financing will be arranged and the construction is realised within planning. The cio is asked for his estimate of the probability that the current term sheet will be approved by the financier: he estimates that the probability is 80% that the term sheet will be approved. The project manager is asked for the chances of speeding up the construction process, but all measures to shorten this process have already been taken.

The development of the strategies is an iterative process of identifying a risk, suggesting a solution (alternative strategy), evaluating this solution by estimating the possible consequences and the probability that the strategy will succeed, and either implicitly or explicitly rejecting or approving an alternative. The discussion in this project took about half an hour, which is much more time than average, but the lack of structure is illustrative.

6.2.5 Analytical evaluation

Proposition 5

Evaluating the courses of action on the predefined criteria analytically contributes to knowingly taking risk.

During the approval phase the pc and ic evaluate a project on the decision criteria in order to make a choice. According to the decision procedure the pc judges a project on the commercial aspects, market know-how, project organisation and cooperation with other parties. The criteria to be checked by the pc concern the development aspects
‘land/building’, ‘process, permits’ and ‘sales and marketing’. However, in practice the criteria are not explicitly checked following the criteria per development aspect, although the entire group discusses all development aspects. The criterion used most often is the maximum amount to be budgeted per phase (as a percentage of the total development costs). When the requested budget exceeds the maximum amount or critical problems (risks) are identified, this is expressed in the decision. For example, the budget request is adjusted downwards, or the budget request is earmarked for a specific activity. Usually the condition is added that a renewed proposal must be submitted within a limited period of time.

The IC is supposed to judge the project on the development aspects ‘financing’ and ‘budget’. Next to these progress criteria, the project is evaluated on the expected profit and risk capital. However the IC takes the programmatic aspects into account as the PC determines whether or not the requested budget is in proportion to the risk of the project. Just as in the PC meetings, in the IC meeting the decision criteria are hardly explicitly used to evaluate a proposal. In one case the chairman of the IC explicitly referred to the progress criteria, but did not analytically evaluate all criteria. Only when a committee member is concerned about a proposal not meeting a criterion, is this explicitly discussed. For example, “are the risks compliant with our criteria; in other words does the risk capital not exceed €1 million equity?”

In practice most of the projects do not meet all decision criteria; however, the number of rejections is very low. The only criterion that is a precondition for approval is the risk capital; the other criteria are used as targets from which can be deviated to some extent. The acceptable amount of deviation is implicitly judged by the group based on all information and the subjective estimates of the probability of the risks. In some cases this may lead to conditional approval: ‘no, unless there is an improvement in the deal or a change in circumstances’, or ‘yes, but up to this specific point and budget, then you have to come back’, or ‘yes, but under the following conditions’. The conditions can be regarded as additional risk control measures.

Although the project is evaluated only implicitly during the discussion round, the chairman interprets and summarises the discussion and makes a decision. Depending on the critical questions raised during the discussion, conditions are included. The chairman then asks the PC or IC members for their approval. The decision makers usually agree without any remarks; in one case the conditions were slightly adjusted or some minor disagreement was expressed. In the end all decision makers accept the decision. When no agreement can be reached a decision is transferred to the EC, as in the ‘Omega’ case.
In the ‘Omega’ case it becomes obvious during the discussion round in the 1c meeting that the project did not meet all progress criteria defined for all development aspects. The main problem was the financing, but next to this deviation the building permit was still revocable, the land contract had not been signed, and the pre-lease percentage was lower than required (Table 6.3). All of these topics were raised during the discussion – mainly in terms of questions about the status of these development aspects - however, these criteria were not explicitly mentioned. The criterion that was mentioned was the maximum risk capital: “the risk capital in this project exceeds the internal compliance rules [risk capital < € 2 mln]”.

At the end of the decision round the chairman asks the project manager to summarise the budget request: the question is whether the piling can begin right away. One of the commissioners participating in the 1c, who is most critical of the project, proposes that this is a decision problem for the Executive Committee. All 1c members agree, which shows that the decision makers are aware of the risky situation and that the decision criteria have not been met.

In the ec, which met right after the 1c meeting, the main points of the discussion are repeated: can financing be arranged in the short term and is a private equity provider willing to finance the first term of the

<table>
<thead>
<tr>
<th>Progress criteria gateway 4</th>
<th>'Omega'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land/building</td>
<td>Land owner is willing to sell; moment of purchase depends on financing</td>
</tr>
<tr>
<td>Process, permits</td>
<td>√</td>
</tr>
<tr>
<td>Construction drawings</td>
<td></td>
</tr>
<tr>
<td>Contracting agreement ready to sign</td>
<td>√</td>
</tr>
<tr>
<td>Building permit in possession</td>
<td></td>
</tr>
<tr>
<td>Sales and marketing</td>
<td>√</td>
</tr>
<tr>
<td>Updated Marketing &amp; Sales report</td>
<td></td>
</tr>
<tr>
<td>At least 60% must be leased, the goal is 100% leased</td>
<td></td>
</tr>
<tr>
<td>Financing</td>
<td>Term sheet awaits for approval by financier; extra private equity is required – negotiations started with possible equity provider</td>
</tr>
<tr>
<td>Budget</td>
<td>√</td>
</tr>
<tr>
<td>Fine-tuned Investment Budget with quotations contractors</td>
<td>Request: 100% of total development costs</td>
</tr>
<tr>
<td>Request: 100% of total development costs</td>
<td>Request for total construction budget – Limited to costs for piling</td>
</tr>
</tbody>
</table>

Table 6.3 Ex post evaluation of the ‘Omega’ case against the decision criteria at gateway 4
construction costs? The CEO evaluates both issues: to him the latter is no problem as a private equity provider had verbally promised to invest in the project six days earlier. With regard to the first issue, the CEO considers the probability estimate of 80% that approval will be given on the term sheet is a sufficient guarantee that everything will succeed. He has faith that the CIO’s commitment to financing and the project manager’s commitment to the construction phase will have a good outcome.

The final decision is that the piling activities can start, but that other construction works cannot start until financing has been fully arranged. As the risks in this project might have such a high impact on the organisation, the project manager is requested to give an update of the project in the next two IC meetings. Still, the commissioner emphasises deciding under this time pressure and high level of uncertainty is not the way decisions are to be made. Obviously the risk perceptions and attitudes of the commissioner and the CEO differ; still, the commissioner did not exercise his veto, as this would have implied annulling the development contract with the client and severely damaged TCV’s image.

6.2.6 Authorisation of the decision

**Proposition 6**

*Authorising the decision at the organisational level that is capable of dealing with the involved risk level contributes to knowingly taking risk.*

The intentional procedure prescribes an investment proposal to be approved by a multi-tier process. The decision process takes place in two, and if necessary, in three consecutive decision meetings of the Program Committee (PC), the Investment Committee (IC), and the Executive Committee (EC), as described in 6.1.3. A decision needs to be approved by both the PC and the IC. Only in case of disagreement or the inability to arrive at a decision, is the decision submitted to the EC. Each committee reaches a unanimous decision, which means that in principle each voting member has a veto. In practice, the system works like consensus, but in extreme cases anyone can exercise the veto, which was a demand of the shareholders when buying the shares. When an IC member vetoes a proposal, the proposal is not directly rejected, but discussed in the EC.

The procedure is as follows: an investment proposal is submitted both to the PC and to the IC. The PC can approve or reject the proposal. In case of the latter, the IC does not deal with the proposal. In case of approval the proposal is discussed in the IC, which can also approve or reject the proposal. In case of approval the decision is authorised and the budget is allocated to the project. In case of rejection the project is
totally declined or improvements are requested before approval is possible. In an exceptional situation the IC members can decline to make a decision: this happens when the IC members have an internal disagreement or the level of risk in a project exceeds the authority of the IC. In this case the decision is left to the EC.

The compositions of the PC, IC and EC differ in terms of expertise, the level of experience, and the committee members’ involvement in a project. The PC represents all program directors with expertise in at least one of the programs of TCM and have at least ten years of development experience: they are expected to be able to judge the investment proposals on their programmatic, organisational and process risks. One of the program directors is responsible for an investment proposal, thus is directly involved. The IC members have specific financial expertise and more than ten years of experience in real estate development: they are expected to judge the financial and financing risks of a project. In practice the IC members judge the project integrally on all development aspects. The IC has internal and external members; the internal members can be involved in a project’s financing, whereas the external members represent the shareholders, who are directly involved in the decision making process but not in any project.

The EC members who do not participate in the PC or IC are members without expertise in real estate development. This implies that the CEO, who participates in the PC, has the final say in dialogue with the IC members who also participate in the EC: the CFO, CIO and the commissioners.

In practice the approval procedure follows the intentional procedure with a single exception that proves the rule, as in the illustrated case. The reason for deviating was in this case the high time pressure; to meet a tight deadline the PC was excluded from the decision process and directly referred to the IC meeting. During the decision meetings the decision is actually made: between the submission and the decision meeting little interaction takes place among the committee members in which a decision can be prearranged. Nevertheless, most committee members are involved in the project, and thus apprised of the status of the project. The only committee members who are fully objective are the shareholders’ commissioners.

Case illustration

The authorisation process of the ‘Omega’ case is exceptional in two respects. First, the budget request is directly submitted to the IC instead of to the PC after the project manager consulted the CEO. The main reasons for the exception of the PC are the time pressure and the financially related decision problem at gateway 4 – start of construction. In general, the role of the PC can be questioned at these decision moments.
as its decision can be overruled by the IC and because the IC weighs a project integrally and not merely on the financial aspects.

Second, the IC declined to make a decision because of the extreme risks and submitted the decision to the EC. As the CEO is the only member of the EC with expertise and experience in real estate development and who does not also participate in the IC, the CEO has the last word. As the CEO had been informed first by the project manager about the decision problem and indicated at that moment what his decision would be, the decision of the CEO to continue the project was not surprising. However, the IC did not want to take responsibility for this decision, thus by leaving the decision to the EC and discussing the decision problem again, they made sure they all made the same considerations. In the end the CEO made the decision and one of the commissioners reluctantly agreed.

6.2.7 Limiting the duration of the decision process

Proposition 7
Limiting the duration of the decision making process and gearing it to the urgency of the decision contributes to knowingly taking risk.

The duration of the three phases in an investment decision process varies greatly. The preparation time, which cannot be prescribed, takes approximately two weeks. The submission time is defined by the date of submission and the date of the decision meeting; according to the procedure the submission phase is five days long. The actual approval time is the time spent on the investment proposals during the decision meeting. The PC and IC meetings are two hours long; a proposal is discussed for approximately five to fifteen minutes in each meeting depending on how many questions the committee members have. The number of questions depends on the quality of the proposal and the complexity and riskiness of the project. For each proposal the committee members take as much time as they need. Thus, a discussion usually lasts longer when time pressure and risks are high.

The total time of the submission phase and the approval phase also depends on the frequency and time interval between the decision meetings. The PC meeting takes place every second Monday and the IC and EC meetings take place every second Wednesday. The decision process from submission until authorisation takes eight days. In practice this process can be shortened. The most common way is to submit the proposal after the deadline. Late submission is tolerated – each proposal is discussed, even those that are submitted on the day of the meeting – although the project managers are summoned to submit on time. When time pressure is very high, three other ways (or combinations of
them) to speed up the process are possible: to discuss the project without submitting a written proposal; to convene an extra meeting; or to skip the PC meeting. These options, however, are rarely used.

**Case illustration**

The approval process in the ‘Omega’ case took only six days from the recognition of the decision problem until the first, provisional decision. Since the urgency of the decision was so high, the CEO, after being informed about the problem by the project manager, decided that no investment proposal had to be written and approval by the PC was not necessary. Therefore, the decision was made in the first TC meeting and the following EC meeting. The discussion time on this project took around 30 minutes and was longer than the discussion of other projects because the project manager first had to explain the decision problem and the status of the project and the complexity of the project raised a lot of questions.

The decision was provisional in the sense that the total budget for the construction costs was not allocated in this meeting; the total budget would be allocated when the financing was arranged. Therefore the project was monitored in the next two meetings and by informal interaction with the project manager and the CFO who was responsible for arranging the financing. As soon as the financing was arranged, the budget was granted and construction started ‘as normal’. The total time from recognition until final authorisation of the total budget was nine weeks.

**6.3 Summary and conclusions**

TCN Property Projects is the first of three cases that is analysed to understand the management practices used to guide the risk behaviour of the actors in an investment decision making process. In general it can be concluded that all decision activities as described by the propositions are carried out, indicating that risks are taken knowingly. However, the decision activities related to the propositions 4 and 5 – the analysis and evaluation of courses of action – are carried out less comprehensively and less analytically than was indicated in the proposition. This is in line with the initial notion of this research that real estate developers do not customarily apply formal risk analysis techniques. Instead, decision makers rely on the expert judgments of the project manager, their fellow decision makers, and themselves. In addition, their decision behaviour is guided by the development procedure and the explicit decision criteria. These and other management practices guaranteeing that the decision activities are carried out, are presented in Table 6.4.
As for the first proposition, the determination of risk related decision criteria, T-CN has explicitly determined decision criteria on the project level in a formal procedure. These criteria are applied to each project without adjusting them to its unique characteristics. Multiple decision criteria are directed at risk. The progress criteria per development aspect indicate the level to which the risks in a project must be reduced before a project can be continued; moreover, the risk capital in a project is limited to a maximum. However, no decision criterion on the total risk capital of the development portfolio is made explicit: this means that the total risk capital grows with the number of projects in the portfolio.

As for the second proposition, at T-CN the intentional procedures are directed at a timely recognition by a clear assignment of responsibilities and authorities and by a development protocol (see also proposition 1) in which the decision moments are made explicit; moreover financial control assists the project manager (and the PC/IC) by monitoring the project budgets. However, the responsibility lies predominantly with the project manager, thus the awareness of his responsibilities and the protocol are crucial. Most of these procedures are acted upon, but the threats come from newcomers in the organisation, and from a preoccupation with the project or opportunism of the project manager which puts the decision makers in a situation of having to choose between two evils. The case illustration shows the importance of a timely recognition and observance of the procedures.

As for the third proposition, the search for information takes place during the development phases; this information is communicated to the decision makers through an investment proposal and by informal communication. The quality of the information provided to the decision maker depends on the capabilities of the project manager: the format for a proposal guides what topics should be included, but cannot prescribe what information is relevant and how much is sufficient. In addition to the information provided in writing, the PC and IC members who are directly involved in the project can give project specific information; moreover, each of the PC and IC members has a significant amount of expertise and experience on real estate development which they use to add general information and check the reliability of the information. The ‘Omega’ case shows that when one has to rely on verbal information, the project manager uses the structure of the development aspects to transfer information to the committee members.

As for the fourth proposition, the identification and analysis of multiple courses of action, at T-CN only one strategy is proposed by the project manager for approval by the Program Committee and the Investment Committee. In the investment proposal, a qualitative risk identification is made by the project manager and the total risk profile
of the project is shown in a spider diagram by an asset manager. The budget request is analysed by asking what-if questions and by checking the reliability of information, without explicitly using the term ‘risk’. Based on the results of the analysis, alternative strategies, especially exit strategies, are designed and evaluated in order to decide whether the proposed strategy is acceptable, if it is to be adjusted by the PC or IC, or if it is to be rejected. Thus, multiple courses of action are only designed and analysed in case of major risks. As for the identification of risks, the use of risk analysis techniques is not formalised, but it is the task of the project manager to apply at least a qualitative risk identification; quantitative analyses are made implicitly during the decision meeting.

As for the fifth proposition, analytical evaluation, at T advisers the decision criteria are mainly applied implicitly to evaluate the investment proposal. From the decisions taken it can be concluded that the progress criteria and the profit rate are used as targets from which some deviation is permitted. The extent of deviation is determined by the subjective estimates of the individual decision makers; sometimes the budget request is adjusted downwards so the level of investment – and thus the risk – is limited. Only the maximum risk capital is a precondition: when the risks involved threaten to exceed this limit, this is explicitly discussed. Only the EC is authorised to exceed the risk capital.

As for the sixth proposition, at T the authority to approve an investment proposal is assigned to three groups of decision makers: the PC and the IC, both of whom have to approve a proposal in consecutive formal decision meetings before a budget can be allocated to a project, and the EC, which only comes into play when the risks in a project exceed the decision authority of the IC. The groups are composed of people with high levels of experience, different fields of expertise and varying levels of involvement in projects. This is preferable as the search for and analysis of information depends on expert judgment; however, the PC members do not have sufficient authority to decide upon proposals. Most PC members are peer program directors, who have to judge each others’ proposals: this makes them prone to place to individual interests ahead of the common interest. Moreover, the CEO, who is represented both in the PC and the EC, has the authority to overrule other PC members. In the IC and EC this power disparity is absent, as the shareholders and the CEO are represented in both the IC and the EC. This gives them direct influence in the projects – indicating the importance they attach to the investment decisions. Moreover, the influence of each member is high and each vote is equal, as a decision is based on unanimity.

As for the seventh proposition, limiting duration, at T the frequency of decision meetings is every two weeks. The approval phase takes three days and an investment proposal must be submitted five
days in advance of a meeting. However, the moment of submission is flexible; in an exceptional case, decisions are even made without an investment proposal. In very rare instances the decision process can be speeded up by excluding the pc from the approval process. It is preferable to be flexible when time pressure is very high. However, it should not be necessary to speed up the decision process: this often means that decision moments have not been recognised in a timely manner. Moreover, when the decision procedure is not observed strictly, this interferes with the comprehensiveness of the other decision activities.

In conclusion, these management practices are related to the three indicators of knowingly taking risk, i.e. justifiability, timeliness and accountability.

In chapter 4 is hypothesised that propositions 1, 3, 4 and 5 are positively related to justifiability. From the case descriptions this assumption can be confirmed. First, by determining a set of decision criteria, in terms of profit, risk capital, but especially in the form of a development strategy, a clear framework enables the decision makers to justify their decisions. Moreover, the development strategy plays an important role as the development aspects structure the format of the investment proposal.

Second, to justify a decision, the decision activities ‘search for information’ and ‘identification and analysis’ are carried out in three successive phases: first the project manager writes an investment proposal, then the decision makers assess and analyse the proposal and eventually the pc and the ic arrive at a decision. By these iterations of the different management practices is made use of the expertise and experience of many people. In this way, individual and group biases are reduced by the different decision settings. Thus, the structure for the authorisation of the decision, i.e. the multi-tier approval process and the group compositions, is not only related to the accountability of the decision as is hypothesised, but also to its justifiability. Still, the level of analysing the risks explicitly is low, as was expected at the start of the research.

Finally, in the evaluation the criteria are less analytically applied than expected; at least it remains very implicit and especially in the ‘Omega’ case the criteria are used as targets, except for the risk capital. This makes sense considering the market conditions and unique characteristics of a project, but at the same time it is questionable whether more attention should be paid to determining more project specific decision criteria at the start of the development process.

Propositions 2 and 7 were expected to be positively related to the timeliness of a decision. In the description of the ‘Omega’ case it was clear that especially a timely recognition is crucial for the decision process: when
## Proposition 1: Determination of risk related decision criteria

<table>
<thead>
<tr>
<th>WHEN</th>
<th>WHAT</th>
<th>BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Applying predefined progress criteria in terms of explicit end results for all development aspects per decision moment</td>
<td>Development protocol</td>
</tr>
<tr>
<td>Not applicable</td>
<td>Applying a predefined profit criterion: RoC &gt; 10.5%</td>
<td>Development protocol</td>
</tr>
<tr>
<td>Not applicable</td>
<td>Applying a maximum risk capital on the level of the project in terms of a standardised maximum budget per development phase (&lt; € 2mln / 30% of total investment costs)</td>
<td>Development protocol</td>
</tr>
<tr>
<td>Not applicable</td>
<td>Fit in one of the development programs</td>
<td>Portfolio strategy</td>
</tr>
</tbody>
</table>

## Proposition 2: Timely recognition

<table>
<thead>
<tr>
<th>WHEN</th>
<th>WHAT</th>
<th>BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Trusting on expertise of project manager to foresee problems or opportunities</td>
<td>Organisational culture</td>
</tr>
<tr>
<td>Not applicable</td>
<td>Creating awareness of decision moments by a clear division of responsibilities and authorities</td>
<td>Organisational structure</td>
</tr>
<tr>
<td>Not applicable</td>
<td>Stimulating a project manager to act upon the development procedure by a reward system</td>
<td>Reward system</td>
</tr>
<tr>
<td>Not applicable</td>
<td>Creating awareness of decision moments by standardised development procedure</td>
<td>Development procedure</td>
</tr>
<tr>
<td>Development process</td>
<td>Restricting development authority by granting a limited budget to a project</td>
<td>IC</td>
</tr>
<tr>
<td>Development process</td>
<td>Continuous monitoring a project on cost overruns by financial control</td>
<td>Financial control</td>
</tr>
</tbody>
</table>

## Proposition 3: Search for relevant and reliable information

<table>
<thead>
<tr>
<th>WHEN</th>
<th>WHAT</th>
<th>BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation phase</td>
<td>Preparing an investment proposal as input for the approval phase in which the state of affairs (real time info) is summarised per development aspect...</td>
<td>Project manager</td>
</tr>
<tr>
<td>...by consulting project team members</td>
<td></td>
<td></td>
</tr>
<tr>
<td>...by using a standardised format</td>
<td></td>
<td></td>
</tr>
<tr>
<td>...by adding external sources to the investment proposal, such as contractual arrangements or a market report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preparation phase</td>
<td>Giving authorisation on the investment proposal</td>
<td>Project director</td>
</tr>
<tr>
<td>Submission phase</td>
<td>Assessing the reliability and relevance of the investment proposal individually</td>
<td>Individual PC/IC/EC members</td>
</tr>
<tr>
<td>Approval phase</td>
<td>Questioning the reliability and completeness of the investment proposal</td>
<td>PC/IC/EC</td>
</tr>
<tr>
<td>Approval phase</td>
<td>Inviting a project manager in the decision meeting to give additional information</td>
<td>PC/IC/EC</td>
</tr>
</tbody>
</table>

## Proposition 4: Identification and analysis of multiple courses of action

<table>
<thead>
<tr>
<th>WHEN</th>
<th>WHAT</th>
<th>BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation phase</td>
<td>Preparing an investment proposal in which... a single strategy is designed... risks are identified implicitly by describing the current state of affairs... an explicit, qualitative risk identification is made in a separate risk paragraph – visualized in a spider diagram</td>
<td>Project manager</td>
</tr>
</tbody>
</table>
a decision was not recognised in a timely manner, the decision process had to be accelerated, which may undermine the justifiability of the decision, such as by leaving out the preparation of the investment proposal. On the contrary, measures such as inviting a project manager to the decision meeting has both a positive effect on the timeliness and on the justifiability of the decision.

Proposition 6 is expected to be positively related to the accountability of a decision. At TCN this relation is rather complex, because of the multi-tier approval procedure. First the Program Committee has to approve
an investment proposal but the final authority lies with the Investment Committee and in exceptional cases with the Executive Committee. This is in line with the assumption that an investment decision is made at the strategic level of the organisation. However, two remarks must be made regarding the accountability of the PC. First, the CEO is represented in the Program Committee and in the Executive Committee. When the PC approves, but the IC does not, it seems illogical that the EC will disapprove, as the chairman of the EC has already approved as a representative of the PC. Second, the role of the PC is limited, as shown in the ‘Omega’ case where the PC was left out of the decision procedure for reasons of timeliness. The PC delivers most added value at the beginning of the development process when all program directors use their expertise to optimise the proposal. When the PC should really be regarded as an advisory committee, the absence of representatives of the departments, next to the program directors, is doubtful. These departments could bring in expertise to add to the value of a project, especially in the management phase. In the end, the IC can be regarded as an internal financier: the project manager will remain accountable for the outcome of the project which is in line with the entrepreneurial culture of the organisation. At TCN the multi-tier approval procedure is most remarkable: while the approval procedure is the formal division of decision authorities, it is hard to assign accountability of a decision to a particular person; still, the procedure has a positive effect on justifiability, and only a slight negative impact on the speed of the decision process.
Knowingly taking risk at Johan Matser Projectontwikkeling

This chapter describes Johan Matser Projectontwikkeling (JMP) in terms of knowingly taking risk. JMP is selected for this case study as a best practice based on its top 20 position in the Dutch real estate development industry and because it is one of the first private real estate development organisations in the Netherlands. The company has more than half a century of experience in real estate development. The case study took place in February and March 2007. The decision making process at JMP is examined by the use of interviews, documentary analysis and observations of decision meetings, as described in section 5.2.3. A deeper analysis is made of the decision making process in the project ‘Kappa’. This project is an example of a decision moment at the end of the initiative phase, when a cooperation agreement with the municipality is to be signed. In such an early phase of the process the level of uncertainty is still high, and large financial commitments are being made.

This chapter follows the same outline as chapter 6. Section 7.1 describes JMP in terms of its organisational characteristics, the development process and the decision making process according to the integral model of investment decision making presented in section 4.1. The organisational characteristics give insight in the history, aims and vision, size and structure of JMP. Next the intentional development procedure and the intentional decision procedure are described. On behalf of the case illustrations in the next section, the project ‘Kappa’ is introduced.

Section 7.2 analyses the investment decision making process, using the propositions presented in section 4.2. Per proposition is indicated what management practices are applied to meet this proposition. A management practice is a characteristic of the decision making process that guides the decision behaviour towards risk. The actual behaviour in a decision making process is illustrated by the ‘Kappa’ case.

Section 7.3 summarises the management practices and draws conclusions on the level of the three indicators of knowingly taking risk: justifiability, timeliness and accountability. Final conclusions are drawn to what extent the propositions are met and what is remarkable about the way the decision process is organised in order to guarantee that risks are handled successfully.
7.1 Description of Johan Matser Projectontwikkeling

7.1.1 The organisational characteristics

Johan Matser Projectontwikkeling is a Dutch real estate development company that was founded in 1939. Since 1996 it has been a full subsidiary of tbi Holdings (tbi), but operates independently of the other subsidiaries. tbi supplies a part of its equity to jmp, which can dispose of the money freely, but under supervision of a commissioner of tbi as a 100% shareholder. The turnover of tbi aggregates over €1.7 billion; the yearly turnover of jmp amounts to €100-120 million. The portfolio is of a mix of newly built and redeveloped residential, retail, offices, and industrial space across the Netherlands. Per 01-01-2006, the reference date of the case selection, the development portfolio consists of 8500 residences (internal annual report) and €0.7 - 1.0 billion of commercial real estate (Enk, 2006). With the commercial portfolio jmp has held a top 20 position in the Dutch real estate development industry for many years.

The mission of jmp is to develop real estate solutions whose spatial quality meets the demands of the customer. jmp wants to be a reliable, honourable and engaged partner in the development process with an interest in innovation and sustainability. By focusing on the quality of both product and process, jmp has established a good track record. This is reflected in the acquisition strategy of jmp: projects are entered by a competition, development positions are directly awarded to jmp by a municipality without a competition or tender, or jmp approaches a municipality to start a (re)development. Relatively few development positions are taken through land acquisition.

Over the past years the objective of jmp has been limited growth, both in personnel and in projects, but a steady turnover and pipeline. However, at the start of 2008 the strategy changed sharply, when jmp merged with Hopman Interheem Groep, a subsidiary of tbi Holdings, into Synchroon. The merger was finalised in June 2008. By scaling up, the new organisation aspires to a better competitive position in the Dutch real estate development sector.

At the time of the case study, around 45 employees worked at jmp under the direction of two statutory directors. The development activities are divided into three departments (Figure 7.1): Concepts and Marketing (com), Urban Redevelopment (ur), and Development and Construction (d&c). As both com and ur participate in the same development phase, no distinction is made between them and they are indicated by com. Each department is led by a director who supervises concept developers in com, or real estate developers in d&c. The developers are supported by project managers (under the direction of d&c), marketing and sales managers (under the direction of com and d&c), and financial control.
7.1.2 The development procedure

The development process of JMP is described, as in the previous case, first by the development activities concerning the different development aspects per development phase, and second by the responsibilities and authorities per actor in the development process. This description is a representation of the intended development procedure, based on the quality management manual (Johan Matser Projectontwikkeling, 2005) and 11 interviews. The quality manual is developed in conformance with ISO 9001; since 2000 JMP has an ISO 9001 certification, which is updated annually, and applies the development procedure as described in the manual. The list of interviewees can be found in the Appendix.

Development phases, aspects and activities

JMP divides the real estate development process into five phases: initiative, design, pre-construction, construction, and operation/aftercare. The development aspects are not explicitly used to describe activities or determine decision criteria, but they distinguish financial, commercial, and legal aspects in relation to the site and the spatial and functional design aspects of a project. The activities that follow from realising all these development aspects of a prospect correspond with the framework presented in section 2.1.

The commercial activities correspond with the development aspects ‘sales’ and ‘lease’ which are combined in the description of this case; the financial activities correspond with the aspect ‘financing’ including budgeting and arranging external financing; the legal activities include the building application procedure which correspond with the aspect ‘permits’, but also the supervision of all contracts with external parties; the design activities equal the aspect ‘design’ as all construction
activities equal ‘construction’; and the activities concerning the land purchase correspond with the aspect ‘land development’. In Figure 7.2 the development aspects are related to the development phases by the development activities.

<table>
<thead>
<tr>
<th>Development aspect</th>
<th>Development phase</th>
<th>Design</th>
<th>Pre-construction</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
<td>Initiative</td>
<td>Design</td>
<td>Pre-construction</td>
<td>Construction</td>
</tr>
<tr>
<td></td>
<td>Feasibility land purchase</td>
<td>Land purchase (possible)</td>
<td>Land purchase</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>Functional and spatial feasibility</td>
<td>Commissioning preliminary and final design</td>
<td>Commissioning specifications</td>
<td></td>
</tr>
<tr>
<td>Permits (Legal)</td>
<td>Legal feasibility</td>
<td>Preparing planning procedures</td>
<td>Applying for building permits</td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>Tender</td>
<td>Sign building contract</td>
<td>Management and supervision</td>
<td></td>
</tr>
<tr>
<td>Sales and lease (commercial)</td>
<td>Commercial feasibility</td>
<td>Preparing sale/lease activities</td>
<td>Pre-sale/lease</td>
<td>Sale and lease of the project</td>
</tr>
<tr>
<td>Financing</td>
<td>Financial feasibility</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 7.2 Development activities per development phase and aspect – case JMP

In the initiative phase, the program of requirements is determined and the feasibility of the opportunity is analysed with regard to its financial, legal and commercial prospects. When the project seems feasible, it is refined in the design phase. The result is a final design and the preparation of the building application, a sales and marketing plan, and a financing proposal. In the pre-construction phase the building specifications and drawings are made in order to tender the work, sales activities are started and the building application procedure is followed. The construction phase can start when a contractor’s agreement is signed, building permits are granted and sales activities progress successfully. During the construction phase the project is executed under supervision of the developer and sales activities continue. In the operation and aftercare phase the developer settles complaints about the delivery of the property between the contractor and the users and they take care of the full rental or sale of the project. This phase is left out of consideration in the description of the case as no investment decision is made before this phase.
A project is initiated within the department of Concepts & Marketing (com) or the department of Urban Redevelopment (UR). During the initiative phase a concept developer is responsible for all activities under the supervision of the director of the department. When the concept developer thinks it necessary, he asks for support from a marketing and sales manager, a financial controller, or from the department of Development & Construction (D&C).

At the beginning of the design phase, a project is transferred to D&C, unless a project is part of a large urban area in which multiple projects are (re)developed. In such a case, the coordination remains the UR’s responsibility. The project responsibility is transferred as soon as possible, considering the ease of communicating with external parties and the need for internal expertise of the different departments.

From the design phase a real estate developer works with a project manager under the supervision of the D&C director. The real estate developer has the integral responsibility for the project, but primarily sees to its commercial, legal and financial aspects. The project manager focuses on the technical aspects of the design and construction activities. The developer and project manager are supported by a marketing and sales manager, who supports the contracting process with customers for residential real estate projects, and by a financial controller, who takes care of financial administration and fiscal regulations. The financial director is responsible for the financing of the project.

The statutory directors are formally involved only at the gates between two phases, the decision moments, but their involvement is more frequent. The projects are discussed in a weekly board meeting, attended by the statutory directors and the directors of COM, UR, D&C and F&C. The responsibilities for the different development aspects and authorities in the development phases of each of the development actors are presented in Figure 7.3.

The division of responsibilities is based on the need for different types of expertise and skills during the acquisition and initiative phases, where conceptual and opportunistic thinking are required, and from the moment the objectives are set, and when a goal-oriented and risk management mindset is needed. However, in the daily routine the responsibilities are not so clearly divided. The actual distribution of responsibilities depends on:

- The relationship among concept developer, project developer and project manager (internally) and cooperating outside parties, for example aldermen: transferring responsibilities is not just something that has to happen because of expertise, but it is about group composition. The functioning of a group depends on its personalities, their individual traits and their risk attitudes;
The technical or commercial complexity of a project: when technical expertise is crucial for the success of a project because of the program of requirements or the physical conditions of the site, a project manager might become earlier involved and assume more responsibility during the project. When verbal agreements that were made in the initiative phase have to be committed to paper in the ensuing phases, the concept developer should participate. The responsibility might be transferred when commitments are finalised to prevent having two captains on one ship;

The availability of personnel: responsibilities might shift due to an equal workload over the developers and project managers.

7.1.3 The investment decision procedure
The decision making process of JMP is described by the decision criteria and the decision authorities per decision actor during the decision making process. The decision criteria are partly generic and partly specific per decision moment; the latter criteria, which are defined in terms of the results of each development phase per development aspect, represent the intended development strategy. The description of the decision authorities per actor over the decision phases is a representation of the intentional decision procedure. The decision criteria are derived from the quality management manual and the forms on which the decision is approved and recorded; the decision procedure is derived from the interviews as this procedure is not described in the quality management manual or in any other formal document.
**Investment decision moments**

During the development process four investment decisions are made: the developer is not authorised to take this decision; authorisation is internally needed from the statutory board as well as from the supervisory board. Three of the four decisions correspond to the gates between the phases (Figure 7.4). The first decision moment is at the gate ‘initiative – design’, when the project is transferred from the concept developer to the real estate developer. The feasibility of the project is the main criterion: if the prospect is not favourable, the project is stopped. The second decision moment is at the gate ‘design – pre-construction’ when the final design and its feasibility are assessed. The third decision moment is when the land purchase agreement is signed. This decision is not a fixed moment within the development process: the only constraint is that the land has to be purchased before the fourth decision moment implying that land can also be purchased ‘strategically’ before initiative has started. The fourth decision moment corresponds with the gate ‘pre-construction – construction’ and marks the start of construction.

In summary, the commitments to be made at the investment decision moments are:

- Signing a cooperation agreement with a municipality – ‘transfer project’;
- Preparing the construction phase and starting the sales process – ‘assessment final design’;
- Signing land purchase agreement – ‘land purchase’;
- Signing contractor’s agreement – ‘start construction’.

**Decision procedure**

At JMP an investment decision must be internally approved by the director of the department, the financial director and the statutory directors. When everyone approves, the proposal is submitted to the supervisory board for approval. The intentional decision procedure is briefly described below from initiative until feedback of the decision (Figure 7.5).
The decision making process is initiated by the concept or real estate developer at the moment he wants to make a commitment corresponding with the decision moments indicated in the development process. As a response he must prepare an investment proposal that briefly describes the prospect, the costs and revenues during the development process, and the possible risks. The key figures are presented according to a strict format, but the description is made at one’s own discretion.

Next, the developer submits the investment proposal to the departmental director, the financial director, and the two statutory directors,
each of whom judge the proposal. As no formal, regular decision meetings are held, a proposal can be submitted at any time. In practice, the proposal is submitted first to the director of the department. As there has been a great deal of informal contact between the developer and his director, the proposal rarely needs any explanation. The financial director then decides on the proposal, keeping the financial criteria in mind.

In addition to the investment proposal, a financial controller makes a quantitative analysis to judge the risk, liquidity and solvency criteria. Third, the investment proposal and the quantitative analysis are submitted to the statutory directors, who have to give their approval.

In principle, the director of the responsible department, the financial director and at least one of the statutory directors sign for approval. However, in the end the statutory board can overrule the decision of the other directors. When the statutory board approves, this board submits the proposal to the supervisor of TBI who has to approve the proposal. This decision is sent to the statutory board who then informs the developer and the other parties of the decision.

7.1.4 Introduction of the project ‘Kappa’
This section introduces an actual project that is used to analyse the propositions. During the case study period, in February and March 2007, a meeting took place to transfer the project from the initiative to the design phase. The analysis is based on the observation of this meeting and on data analysis and interviews pertaining to the foregoing development phase. For reasons of confidentiality, names of projects, organisations, and municipalities have been changed. This project is a good example of the consequences of working in a partnership and the transfer of development responsibilities in the decision making process. The project is introduced by a description of the process from entering a development competition until closing the development agreement. The key figures of the project are presented in Table 7.1 and Figure 7.6.

<table>
<thead>
<tr>
<th>Location</th>
<th>Northeastern municipality in the Netherlands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project type</td>
<td>inner-city redevelopment</td>
</tr>
<tr>
<td>Program</td>
<td>170 residences, 550 parking places, 6200 m² retail and leisure</td>
</tr>
<tr>
<td>Area</td>
<td>4.2 ha</td>
</tr>
<tr>
<td>Investment volume</td>
<td>ca. € 46,000,000</td>
</tr>
<tr>
<td>Investment period</td>
<td>August 2006 – …</td>
</tr>
<tr>
<td>Construction period</td>
<td>planning: November 2008 – 2011</td>
</tr>
<tr>
<td>Initiative</td>
<td>competition by municipality</td>
</tr>
</tbody>
</table>

Table 7.1 Key figures ‘Kappa’ case
In January 2006 JMP entered a development competition, called by a middle-sized Dutch municipality, for an inner-city redevelopment of 4.2 hectares in cooperation with two contractors, being subsidiaries of TBI (the cooperation is indicated as JMP). The program consisted of 170 residences, 550 parking places, and 6200 m² retail and leisure. JMP developed an urban plan and made a bid for the land based on the bid book. The bid book contained, among other things, the tendering procedure, the program of requirements and a draft development agreement. The development agreement was offered unilaterally by the municipality and by making a bid the real estate development organisation also had to sign the contract.

The main concern in the development agreement was its penalty clause. This clause says that the developer is responsible for submitting the planning application in time, so as to guarantee that the building permit for the first construction phase would be granted before September 2008. In addition, the developer is responsible for delivering the whole project before November 2011. A penalty, to be paid by the developer, is attached to a delay. Moreover, this could imply that the developer has to start construction before the required presales percentage has been achieved.

The development agreement has been cited as a reason for other real estate development organisations not to enter the development competition. After consideration JMP made a bid and was awarded the project. From that moment, negotiations were opened to modify the development agreement in order to close the final development agreement end of July 2006. Due to intensity of negotiations about the land

![Timeline 'Kappa' case](image-url)
transfer and the penalty clause, the development agreement was not signed until November 2006. Before signing the development agreement, an investment decision ‘land purchase / internal transfer’ had to be made. This decision moment is a combination of ‘land purchase’, as by closing the development agreement the financial commitment to purchase the land is made, and ‘internal transfer’, as from this moment the project is transferred from Concepts & Marketing to Development & Construction. The next section describes this investment decision making process as case illustrations of the propositions.

7.2 **Analysis of the investment decision making process**

This section uses the propositions to describe how the investment decision making process takes place at jmp. Per proposition is described if the decision activities that are assumed to contribute to knowingly taking risk can be recognised; moreover, per proposition is indicated what management practices are used at jmp to guarantee that these decision activities are carried out. Section 7.3 summarises the propositions, including the total repertoire of management practices and a reflection on the indicators of knowingly taking risk.

This case makes a distinction between the intentional and the actual process since not all actual practices are intentional, and vice versa. The intentional procedure is derived from interviews and strategic documents, such as the quality manual (Johan Matser Projectontwikkeling, 2005). The actual process is based on interviews, project documents, and observations of the decision meetings. The focus of the analysis is on the approval phase of the decision process as for the observations. However, as the input for the decision meeting is crucial, the preparation and submission phase are described in terms of input for the approval phase.

7.2.1 **Determination of risk related decision criteria**

**Proposition 1**

Determining project specific decision criteria regarding the acceptable level of risk contributes to knowingly taking risk.

The decision criteria for a development project are partly derived from the organisational objectives of jmp and partly related to the development aspects, the progress criteria. The decision criteria related to the organisational objectives are directed at the influence of a single project on the total portfolio. These criteria can be financial or ‘soft’. The financial criteria are profit, risk capital, solvency and liquidity: these criteria are imposed by the holding on jmp and if possible adjusted to the project level.
The **JMP** quality manual (2005) sets forth the progress criteria on the level of the project and the development aspects. The manual prescribes the activities throughout the development process, the operational responsibilities, and decision authorities. The manual also stipulates the decision moments; however, the decision criteria are not made explicit. From the activities in the preceding phase the results that are required to enter the next development phase can be identified. In Table 7.2 these ‘end results’ or progress criteria are presented per decision moment; moreover, the criteria are categorised following the development aspects determined in chapter 3 although the development aspects are not explicitly used in the **JMP** manual. As the moment of land purchase may vary over the development process, the criteria for the decision ‘land purchase’ are variable. The decision moment ‘internal transfer project’ usually coincides with the decision moment ‘land purchase’ as a consequence of the acquisition strategies of **JMP**. Projects are initiated either by a competition or by negotiations with a

<table>
<thead>
<tr>
<th>Development aspect</th>
<th>Decision moment project</th>
<th>Land purchase</th>
<th>Assessment final design</th>
<th>Start construction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Land</strong></td>
<td>Analysis of site conditions (ownership and technical)</td>
<td>Land agreement ready to sign</td>
<td>Final design Check on building regulations Check on construction aspects</td>
<td>Specifications and building plans are made Health and safety plan</td>
</tr>
<tr>
<td><strong>Design</strong></td>
<td>Detailed program of requirements</td>
<td>Feasibility analysis – functional, spatial</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Permits</strong></td>
<td>Analysis of site conditions (legal procedures – zoning)</td>
<td>Feasibility analysis – legal</td>
<td>Preparation of planning application procedure Positive attitude of municipality and building inspector</td>
<td>Building permit(s) are granted</td>
</tr>
<tr>
<td><strong>Construction</strong></td>
<td>Feasibility analysis – commercial</td>
<td>Feasibility analysis – commercial</td>
<td></td>
<td>Contractor is commissioned</td>
</tr>
<tr>
<td><strong>Sales and lease</strong></td>
<td>Feasibility analysis – commercial</td>
<td></td>
<td>Additional market research</td>
<td>50% is sold/leased</td>
</tr>
<tr>
<td><strong>Financing</strong></td>
<td>Investment budget</td>
<td>Investment budget</td>
<td>Investment budget</td>
<td>Investment and construction budget Financing is arranged</td>
</tr>
</tbody>
</table>

*Table 7.2 Progress criteria per decision moment – case JMP*
municipality on their or JMP’s initiative. In such processes a cooperation agreement is signed with a municipality in which the land purchase is arranged at the end of the initiative phase. The actual land transfer usually takes place at the start of construction under the conditions that the building permit is granted and a pre-sales percentage is reached.

The profit of the organisation is assessed by the Economic Value Added (EVA) = \[(\text{Return on Invested Capital} - \text{Weighted Average Cost of Capital}) \times \text{Invested Capital}\]. The criterion is: \(\text{EVA} > 0; \text{WACC} = 9.1\%\). This criterion does not apply to single projects as the EVA is calculated each year and the development period of a project is longer than a year. For projects a simplified profit criterion is used. The project of the project is assessed by the gross margin on the total investment budget: minimal gross margin (overhead + profit/return) = (total return – investment costs) / investment costs. The criterion is: gross margin > 11\%. This criterion indicates the required minimum upward potential of a project.

In addition to a minimum upward potential, the downward potential is maximised by the total risk capital of all projects in the portfolio. The criterion is: maximum risk capital < \(\text{€29.5 mln}\) (this is the amount of equity allocated by the holding to JMP). The total risk capital is the sum of the risk capital of all individual projects. The risk capital of a project is calculated by using a standardised risk model for all projects. The premise of this model is that per investment variable a maximum percentage is at stake: in a worst case scenario this percentage is the amount of loss. For example, in the model is assumed that 15\% of the land costs contribute to the risk capital: the assumption is that in case of withdrawal of the project the land can be sold for 85\% of the purchase value. This value is regarded the liquidation value. Similarly, the liquidation value of unsold houses is 75\% and of retail 65\%. The maximum percentage for all other costs is fixed at 50\%. Although these percentages are arbitrary, they are fixed for all companies in the holding.

In addition to the profit and the risk capital, the organisation is assessed by its solvency and liquidity. The solvency criterion is: equity capital/total capital > 20\%. This criterion has little influence on the assessment of an individual project, but plays an important role in the financing of projects. The liquidity is measured by the current ratio: current ratio (current assets/current liabilities) > 1.5. In order to keep the liquidity under control, an adequate time and cash flow planning on the level of the project needs to be made. This criterion is not restrictive for the continuation of the project, but some fiscal advantages might result from a smart cash flow planning. A general strategy in cash flow planning, leading to risk reduction on the project level, is to delay costs and advance revenues.
The ‘soft’ criteria on the level of the portfolio are determined by the board of J M P. These criteria are related to the company’s philosophy (image of sustainable partner/enduring engagement, integrity: process quality) and the operational plan (long term strategy) by which the composition of the portfolio is determined. A project is assessed on the operational plan even before acquisition of the project: however, as it becomes increasingly difficult to obtain a development position and continuation of the organisation is the most important criterion, these criteria are not used as hard steering criteria. In every project all contextual variables are taken into account to determine the weight of each decision criterion; the contextual variables are both external market conditions and internal factors such as the composition of the project team.

7.2.2 Timely recognition of the need for an investment decision

Proposition 2

Timely recognition of situations in which the risk profile of a project is about to change significantly contributes to knowingly taking risk.

The operational responsibility to obtain approval for an investment decision is formally assigned to the project manager. Project managers are supposed to recognise the need for an investment decision based on the awareness of their own responsibilities, their limited authority to sign agreements, and their expertise of and experience in real estate development. The limitations of authority are defined in the quality manual; moreover, the two most important decision moments are related to critical development activities in the development process, land purchase and start construction, and are thus easy to recognise. However, the decision moment ‘internal transfer project’ is less straightforward, especially in larger area developments; in some cases it is good for the conceptual developer to stay involved in the project to oversee the details of the design. In such cases the project is formally transferred, but tasks are divided between the conceptual and real estate developer. The decision moment ‘assessment final design’ marks the start of sales activities and the application procedure for the building permit.

Recognising the need for a decision timely in an actual development project also depends on the ability of the project manager to estimate when a contract will be signed and how much time is needed to secure approval. This ability depends on the project manager’s experience in real estate development; J M P makes high demands on new project managers’ abilities, educates them, and strives for a low staff turnover.
In addition to keeping track of the progress in a project, projects are monitored in board meetings. In these weekly meetings the departmental and the statutory directors are represented. Each departmental director gives an update of projects for which he is responsible. The group discusses solutions to whatever problems have arisen, but the action to be taken is the responsibility of the director, unless a statutory director wants to participate in the decision, which will be made outside the board meeting. Although no decisions are made during these meetings, the board remains apprised of the progress of all projects and can intervene when necessary. The statutory directors also remain apprised of the progress of projects by informal contact with the project managers. One of the statutory directors prefers to keep in touch with the projects by observing and talking with the project managers. The small size of the organisation makes this way of managing possible.

As the (statutory) directors are well informed about the projects, the recognition for an investment decision might in practice be initiated just as well by the project manager, the responsible director and the statutory director. When the need is recognised, an investment proposal is prepared: this proposal is submitted ad hoc to the directors who are authorised to sign the proposal. After the proposal is internally authorised, the proposal is submitted to the shareholder who also decides ad hoc, although the shareholder is also informed about upcoming projects in quarterly meetings with the statutory board.

Case illustration

In the ‘Kappa’ case an investment decision had to be made when a development agreement with the municipality was to be signed. This decision moment can be seen as a combination of a ‘land purchase’ and ‘internal transfer project’: the development agreement included the land purchase and marked the moment of completion of the conceptual development of the project and thus the project had to be transferred to the ‘Development & Construction’ department.

The date of signing the contract was first planned by the municipality in the bid book of the development competition in July 2006. During the negotiations on the contract this date was postponed until mid-October. The project manager knew ahead of time that an investment proposal had to be approved by the statutory directors and the shareholder. In accordance with the progress of the negotiations the investment proposal was prepared at the end of September. The contract was finally signed at the beginning of November. Although the need for an investment decision was recognised timely, the shareholder only informally approved the proposal. This is explained in section 7.2.6.
7.2.3 Search for reliable and relevant information

**Proposition 3**

*Making use of reliable and relevant information contributes to knowingly taking risk.*

Taking risks knowingly in a decision making process mandates the use of reliable and relevant information. In the preparation phase, when an investment proposal is written, the developer selects the pieces of information he believes is relevant for the decision makers. Whether or not information is relevant is partly prescribed by the format for the investment proposals. In this format a proposal must consist of:

- An approval/signature form;
- A description of the project including a qualitative risk identification;
- An investment prognosis consisting of:
  - a budget request for specified costs
  - expected turnover and profit
  - overview of expenditures and commitments
  - an investment budget (summarised in key figures)
  - a planning (summarised in key figures).

The description of the project does not follow a particular structure, such as the development aspects identified in the real estate development framework (chapter 5.1), neither are the risks identified in a structured way. The investment prognosis is based on a standardised investment budgeting model; the current model is a simple costs/benefit-model, but it was being improved towards a cash flow approach to deal better with the market dynamics and the planning of receipts and expenditures.

In the actual projects the developers use the format, but the information given in the project description depends on their own views. At least the key items of the product, the process and the (external) project organisation, the milestones in the planning, special financial or fiscal arrangements, and a list of risks are described. During the preparation of the proposal, or even before the decision making process, the developer takes advantage of the specialised expertise and experience of colleagues.

For submission and approval, there is no intentional procedure. At the decision moments ‘land purchase’ and ‘start construction’, when the statutory directors must give their approval, the project is evaluated based on its main features. However, the directors do not only make use of the proposal, but they rely on the information they have gathered during the development process. One of the directors monitors the projects’ progress by informally discussing the projects with the devel-
opers. This way not only are ‘hard data’ gathered, but insight is gained into the relationships between the developers and the other parties and into the functioning of the internal project team. Projects are also monitored in the board meetings: a special occasion is the presentation of the preliminary design.

After the proposal, in some cases a meeting is arranged to discuss the project with the COM, D&C, and F&C directors, the statutory director, and perhaps also the developer. In this meeting each member brings in his own expertise and experience, since most of the directors are involved in the project. The F&C director merely judges the reliability of the figures based on his knowledge of real estate development and his financial, fiscal and legal expertise. When no meeting is arranged, project issues are not discussed, but judged individually; this is more susceptible to biases.

At the moment of ‘internal transfer of a project’, a ‘transfer meeting’ is arranged between the COM director and the D&C director in which a project is discussed more thoroughly. This meeting is not about arriving at a decision about the continuation, but to pass on project information and to delegate responsibility for the project. During this meeting the main issues are discussed, as are all budget and planning estimates. Each item is assessed in terms of its reliability and realism by questions like ‘which parties are involved’, ‘is a market report available’, ‘what problems can occur regarding the construction phase’, ‘what are the contractual conditions and what risks do we take by committing ourselves to this agreement’, ‘when will land be transferred and paid for’, and ‘who is responsible for the planning application procedure’. Despite not having addressed the development aspects in the quality manual, implicitly all aspects are discussed in this transfer meeting.

Case illustration
In the ‘Kappa’ case an investment proposal was prepared for the decision moment ‘land purchase’. The proposal consisted of a general description of the urban plan, an explanation of the acquisition process, the program in m²’s, the phasing and the milestones, the profit shares of the companies in the consortium, the taxability of the land transfer, the risks in the project and the expected financial outcome. Based on this information the supervisory board made the decision. The internal directors had more information because they had all participated in the acquisition process (a development competition). The decision moment ‘land purchase’ coincides with the moment of ‘internal transfer project’: the decision to purchase land is part of the development agreement that was negotiated after winning the development competition. At that moment the conceptual phase of the development process is closed and thus the project is transferred to the department of D&C.
7.2.4 Identification and analysis of multiple courses of action

**Proposition 4**
Identifying and analysing multiple courses of action contributes to knowingly taking risk.

The identification and analysis of multiple courses of action contributes to knowingly taking risk. However, the project developer is not formally required to design and describe multiple strategies in the investment proposal: the format for this proposal only prescribes risk identification. In addition to the project developer writing an investment proposal in the preparation phase, the F&C director is supposed to analyse the impact of the project on the risk capital of the total portfolio. The calculation of the risk capital of the project is the analysis of the impact of a worst case scenario. This calculation takes account of contractual and financial arrangements, such as resolutive conditions and non-recourse financing. These arrangements or control measures together constitute a safety net or exit strategy: the worst case scenario is based on this exit strategy. In fact, two courses of action are determined: the expected strategy is described in the investment proposal and the exit strategy is used to determine the risk capital.

In practice, the developer identifies the most relevant risks in the project regarding the proposed strategy: a risk is relevant when it is regarded as a high risk, such as market/sales risk and the tender risk resulting in higher construction costs, or when a risk is project specific and the impact or probability is high. To determine the relevance, the developer has usually conducted some sensitivity analysis, although this analysis is not explicit in the proposal. In the proposal only a qualitative description is given of the expected probability and its possible consequences (without using the terms ‘probability’ and ‘effect’). Moreover, a mitigation strategy is suggested.

In the approval phase, the individual decision makers base their decision on the investment proposal and their own knowledge about the project and real estate development. Before making a final judge-
ment, the risks are implicitly identified and analysed. The decision makers verify the estimates in the investment budget and the planning; then they determine the worst case scenario per estimate or development aspect. They might ask, ‘what is the probability that the zoning plan is altered and what is the current land value if it is not altered?’ or ‘what is the expected sales price of houses on that location?’ ‘What is the economic resilience of that area?’ ‘What other functions could be developed instead?’ In the end the risks are not added up or weighed integrally except for a worst case scenario, just as in the calculation of the risk capital.

These individual considerations are expected to be similar to the considerations made in a decision meeting except that issues are discussed explicitly and different perceptions are expressed. The first check is whether the estimate is based on the correct sources of information and expertise. When uncertainty exists, different decision makers can have different perceptions of risk: the conceptual developers usually see more opportunities, whereas the technical and financial engineers are much more focused on the downward potential. Moreover, individuals can have different attitudes towards the influencability of risks in the development process, as illustrated in the ‘Kappa’ case.

At JMP decisions are not always made in a group, so the decision depends on the individual risk perceptions of the decision makers and especially of the statutory directors who give the final internal approval. In case of an internal transfer of a project the different perceptions between the COM director and the D&C director are explicitly expressed in the transfer meeting. In such a meeting they might even exaggerate their role as opportunists or pessimists to clarify matters.

Case illustration
In the ‘Kappa’ case the main risk was identified – and evaluated - prior to the decision moment ‘land purchase’: at the moment JMP decided to enter the development competition, thereby accepting the conditions in the development agreement defined by the municipality, the risks were identified. The main risk in the development agreement was the acceptance of the responsibility to deliver the project before a fixed date in October 2011. In order to reach this date, JMP also had to assume responsibility to start up the zoning plan procedure timely to enable the municipality to grant the zoning plan and building permit before August 2007 and August 2008. This obligation to start construction was the reason for other real estate development organisations not to enter the development competition as they thought that the impact of this risk was unacceptable.

The statutory director of also considered the impact of the risk to be unacceptable – without having to explicitly calculate it. How-
ever, he perceived the probability to be very low, given his idea on the influencability of the development process. In the first place he thought the development agreement could be adjusted after winning the competition and before signing it; in the second place modifications in the assignment, such as an extension of the development area, could be reason for renegotiating the development agreement; and in the third place he believes that things are never as black as they seem. For example, the municipality draws as little benefit from a project with a high level of vacancy as the developer, and thus the municipality will be willing to adjust the delivery date.

As they made a master plan and prepared a land price offer, this risk was accepted. Formally, the risk was only accepted when the supervisory board was asked to give its approval for signing the development agreement and purchasing the land. However in the investment proposal, this risk was only mentioned in terms of the ultimate delivery date of the project, but not in the section ‘risk’. In this section several sales/market risks regarding the real estate functions, risk of decontamination, damage due to planning, and a fiscal risk regarding the land purchase were identified. The risk descriptions included the intended control measures; no quantitative analysis was made in the investment proposal.

The approval phase of the decision moment was not observed, as it took place before the case study began. Moreover, the decisions were made in an individual setting, so observations would have not been possible. Nevertheless, the transfer meeting following this decision took place during the case study and was observed.

In preparation for the transfer meeting the real estate developer wrote a report in which the status of the project is described comprehensively by means of a standard list of questions. These questions are an implicit risk analysis: one of the questions is ‘has a soil research been conducted?’ This is a question about the risk of contamination. During the transfer meeting the riskiness of the project is identified in a similar way. The D & C and F & C directors ask critical questions, which the developer and the com director must answer. Other topics are discussed with the focus on the revenues of the project, the possible control measures, exit strategies regarding the delivery date, and the approval procedure. During this discussion it becomes clear that the directors have different risk perceptions of the same issue: the vicinity of a monumental factory is regarded by the com director as an opportunity to improve the design and to increase the profit, while the D & C director does not even consider it because it is not included in the program apart from the extra risks regarding permits and technical problems. In the end they
do not reach consensus on all aspects, but the D & C director needs to be convinced that he has sufficient information to assume the responsibility for the project in the upcoming development phases.

7.2.5 Analytical evaluation

**Proposition 5**

*Evaluating the courses of action on the predefined criteria analytically contributes to knowingly taking risk.*

After the identification and analysis of risks, the project must be evaluated against decision criteria. These criteria are partly determined in the quality manual, as described in proposition 1. The intentional decision procedure does not prescribe by whom and how these criteria must be applied.

In practice, different criteria are used over the different hierarchical levels, the fields of expertise of the directors, and their individual preferences. All directors use the general profit criterion and the criteria regarding the development aspects as far as they are determined for each decision moment. The F & C director focuses on the profit, the risk capital of the project, the financing and the cash flow planning. One of the statutory directors looks primarily at the development aspects, such as the planning procedure, the real estate market in relation to the location, environmental and technical aspects, and the financial and legal engineering of the project. The other statutory director not only considers the facts and figures, but relies on his intuition and focuses on team composition in relation to availability of personnel and the relations with external parties. The supervisory board evaluates a project mainly on the key figures and the financial criteria, total budget request, profit and risk capital. They expect the statutory board to judge whether it is realistic to reach this outcome and keep the statutory board accountable for a good outcome.

The decision criteria are not explicitly or analytically evaluated. Moreover, most of the criteria are used as general targets. Especially, the criteria regarding the development aspects are used as guidelines, but they are always considered in relation to the control measures taken and the actual market conditions. For example, the criterion of 50% pre-sales is adjusted downward when the market conditions are tight and vice versa: this may seem illogical as a tight market means that the sales risk is high and when the pre-sales percentage is lower, even more risk is taken. However, the risk of increasing the pre-sales percentage is that the project cannot be built; this affects the continuation of the company, which is an even greater risk. In a market with little supply the percentage is raised as it should be easy to sell a project quickly: if
this does not happen, this is an indication that the product is not conforming to the market. In the end, decision makers are swayed both by the issues of the day and by the long term strategy.

The profit criterion is also a target, which consists of a percentage for the overhead costs and a percentage for absolute profit. The absolute minimum is the coverage of the overhead costs. In practice a project meets the required profit as the costs and benefits are slightly adjusted: this affects the reliability, and thus the risks, in a project. The only absolute norm that is applied is the risk capital for the total portfolio. This criterion is not very limiting as for the equity position of JMP; however, a few years ago the risk capital reached its limit, but this problem was solved by selling some projects with little prospect on booking progress in the short term.

In the end projects are hardly ever rejected. If so, the statutory board decides to reject or postpone a project in the acquisition or initiative phase. The reason is that once a project has started, continuation is more important than profit and when time passes opportunities are created to optimise the project.

Case illustration
In the ‘Kappa’ case the decision moment ‘land purchase’ takes place early in the development process and coincides with the internal transfer of the project. The decision criteria for these decision moments are shown in Table 7.3. How the project is evaluated against these criteria by the decision makers is not observed during the case study. Therefore, only an ex post analysis is made to determine whether the decision criteria are applied. This analysis concludes that all criteria are met in the sense that all information required in this phase of the development process is available. However, by signing the development agreement some additional commitments are made, e.g. the liability to apply for the building permit and the commitment to the ultimate delivery date. The predetermined criteria cannot deal with these additional arrangements, while they imply an increase of risk in the project as the flexibility in the process is greatly reduced. To exclude this kind of risks, ‘negative’ criteria could have been determined saying that taking on an obligation to build is not accepted; now they are experiential rules. These criteria are not made explicit, while the decision makers are well aware of these risks: as explained in the case illustration at the previous proposition the statutory director considered this risk to be acceptable.

At the end of the transfer meeting the D&C director does not decide to continue the project, but whether or not he takes the responsibility for that project. In theory he might reject a project, but in practice he must
accept this responsibility. Therefore, in a transfer meeting no decision criteria are used as with the decision moments ‘land purchase’ and ‘start construction’, but the meeting is used to acquire insight in the project.

<table>
<thead>
<tr>
<th>Land purchase</th>
<th>‘Kappa’ case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analysis of site conditions</td>
<td>✓</td>
</tr>
<tr>
<td>Land agreement ready to sign</td>
<td>✓</td>
</tr>
<tr>
<td>Feasibility analysis – functional, spatial</td>
<td>✓ PoR-bid book, masterplan/urban design by JMP/architect</td>
</tr>
<tr>
<td>Analysis of legal procedures – zoning</td>
<td>✓ Liability to apply for building permit timely so as to the permit is granted before August 2008</td>
</tr>
<tr>
<td>Design</td>
<td>Permits</td>
</tr>
<tr>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Construction</td>
<td>✓ Ultimate delivery date November 2011</td>
</tr>
<tr>
<td>Sales and lease</td>
<td>Financial</td>
</tr>
<tr>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 7.3: Ex post analysis of the ‘Kappa’ case against the decision criteria at the decision moment ‘land purchase’

### 7.2.6 Authorisation of the decision

**Proposition 6**

Authorising the decision at the organisational level that is capable of dealing with the involved risk level contributes to knowingly taking risk.

The quality manual prescribes per decision moment who has to approve the investment proposal. At the decision moment ‘land purchase’ and ‘start construction’ approval is needed from the responsible **com/D&c** developer, the **com/D&c** director, the **f&c** director, at least one statutory director, and the supervisory board. At these decision moments the proposal is approved by the highest authority. At the decision moment ‘internal transfer project’ approval is to be given by the **com** and **d&c** developers and the **com** and **d&c** directors. At the decision moment, ‘assessment final design’ approval is only needed from the responsible **d&c** developer and director.

The decision procedure is not specified in the quality manual. In practice the developer submits an investment proposal to each decision authority in succession of hierarchy. Thus regarding the decision moment ‘land purchase’ and ‘start construction’ the developer signs the
budget request form as being responsible for the proposal, the com/d&c director signs the request as being responsible for the developer, and the f&c director signs the request after having made an additional risk analysis. The proposal, including the risk analysis, is submitted to the statutory board who has to give the final internal approval. When the statutory directors give their approval they also submit the proposal to the supervisory board. After obtaining the approval of the supervisory board, the land agreement can be signed or construction can begin.

In practice not all decisions are made in an individual setting and in succession. Although only one of the statutory directors needs to sign, the two of them usually discuss each proposal. Sometimes the statutory director meets with the com/d&c director and the f&c director to discuss the proposal in a broader setting. In such a meeting, consensus is usually reached, but in the end the statutory director has the authority to put aside the judgments of the other directors.

Regarding the decision moments ‘internal transfer project’ and ‘assessment final design’ the procedure slightly deviates. In the first place the supervisory board is not involved. In the second place, in addition to the investment proposal, extra information is given. At the moment ‘internal transfer project’ the project developer writes a more extensive memo; the and D&c directors discuss the memo with the developer and the f&c director. Both the current and the new director of the project sign the budget request form. At the moment ‘assessment final design’ the design is presented to the board of directors.

As for the decision moments ‘land purchase’ and ‘start construction’ the major financial commitments in a development process are made. At these moments the decisions are made by the highest authorities: internally by the statutory board and externally by the supervisory board. Although the supervisory board approves the decision, the supervisory board holds the statutory director accountable. The supervisory board never rejects a proposal, which indicates that it accepts the approval of the statutory director. The statutory director also hardly ever rejects a proposal; however, he influences the development process so the project is optimised or put on hold even before an investment proposal is submitted.

In addition to the approval by the highest authority, the preliminary approval by the director of the department and the f&c director is important, as they judge the project on the basis of their expertise. What is surprising in the approval procedure is that the D&c director is not involved in the decision procedure when a project is still in the conceptual phase. When land is purchased, a project is not judged by the more technical aspects of the development.
Case illustration

In the ‘Kappa’ case an investment decision had to be made before the development agreement with the municipality was signed. This decision moment combined a ‘land purchase’ and an ‘internal transfer project’: the development agreement included the land purchase and marked the completion of the conceptual development of the project and thus its transfer to the d&c department. As the decision included the land purchase, approval of the statutory directors and the supervisory board was needed.

The approval procedure in this project was a little more complicated as the project was developed in cooperation with a construction company that is a subsidiary of the same holding as . Still, the approval procedures for both organisations were similar: internal approval by a statutory director and final approval by the supervisory board. One investment proposal was prepared and both the director of jmp and a statutory director of the construction company approved this proposal. At that moment the director contacted directly the supervisory board instead of asking for approval by the f&c director and the statutory director, which is very uncommon at jmp. The reason could have been to speed up the process and to arrange the approval by the supervisory board with one supervisor, although two supervisors deal with the proposals of jmp and the construction company. At the moment approval was needed, the supervisor directing jmp was unavailable and the approval was given by telephone by another supervisor. Based on this approval the development agreement was signed by the director and a statutory director of the construction company in November 2006.

After the development agreement, the project could have been transferred to the d&c director when the conceptual phase was completed. However, for personnel reasons the developer who was responsible for the conceptual phase would remain responsible in the development phase. The development activities continued, and a suitable moment was sought for the transfer meeting. Finally, this meeting took place in March 2007 in which the developer, the director, the director and the f&c director attended. In this meeting the responsibility for the project was transferred to the director, who accepted this responsibility under the condition that the developer submit a renewed proposal, that he totally supports, for formal approval by the statutory and supervisory board.
Limiting the duration of the decision process

7.2.7

Proposition 7

Limiting the duration of the decision making process and gearing it to the urgency of the decision contributes to knowingly taking risk.

The duration of the decision making process at JMP is not prescribed; the approval does not take place during board meetings with a standard frequency nor is there a timeframe for a decision. Moreover, the moment of recognition and the duration of preparing an investment proposal depend on the proactive attitude and expertise of the developer. As the decision making process is very flexible, the duration is variable.

Decisions are made on demand: the time taken for a decision is determined by its urgency. Optional decision meetings are scheduled based on the priority given to a decision. An important factor in being able to respond is the continuous monitoring of the development process by all decision makers. This implies that the need for a comprehensive investment proposal is limited; this saves time in the preparation phase. The decision makers need less time after submission of the proposal to familiarise themselves with the project and thus it takes less time to make a decision.

The decision making process cannot be speeded up by the approval of the supervisory board. The supervisory board is not updated about a project, but the statutory directors keep the board informed about the progress of projects and the expected decision moments. Moreover, since the supervisory board only looks at the key figures of a project, little time is needed for approval.

The decision making process takes an average of a week for the preparation of an investment proposal; a day until a few weeks from submission to approval depending on the urgency of the decision; and the decision makers spend only fifteen minutes up to a few hours in which the project is actually thought over, discussed and authorised.

Case illustration

In the ‘Kappa’ case the decision ‘land purchase’ was recognised well before the development agreement was to be signed. Thus, the developer had enough time to prepare the investment proposal, what took him a few hours over a total period of a week. After the submission of the proposal to the director, the duration of the approval by the supervisory board was very limited, as this did not take place in a formal setting, but was given by a telephone call. The duration of this decision making process was not very relevant as there was enough time to make the decision.
The next decision moment was the internal transfer of the project. A transfer meeting was scheduled for March 2007; however, this meeting was postponed until April 2007. The reason for the postponement was the lack of urgency and the prioritisation of other projects. The meeting was prepared by the developer by means of an additional memo to the investment proposal. This memo was discussed during a 70-minute meeting.

7.3 Summary and conclusions
Johan Matser Projectontwikkeling is the second of the three case studies that is analysed to get insight in the management practices used to guide the risk behaviour of the actors involved in an investment decision making process. In general it can be concluded that each decision activity described in the proposition is carried out and several management practices are applied to guarantee that the proposition is fulfilled. However, in this case it was difficult to grasp which considerations were really made and when a decision was approved, because of the highly flexible and individual decision setting: the investment decision making process takes place informally. Therefore, the management practice of monitoring plays an important role, while the requirements for an investment proposal are rather limited. These and other management practices guaranteeing that the decision activities are carried out, are summarised below and presented in Table 7.4. In conclusion, these management practices are related to the three indicators of knowingly taking risk: justifiability, timeliness and accountability.

As for the first proposition, the determination of risk related decision criteria, JMP has explicitly determined financial criteria, programmatic/portfolio criteria and progress criteria. The financial criteria, which the holding imposes on JMP to assess the performance of the organisation, are adjusted to the project level regarding the profit criterion. The risk capital of a project is assessed in relation to the total risk capital of the portfolio. The progress criteria are implicitly determined in the quality manual in terms of activities per development phase; the quality presents a preferred development strategy indicating the sequence of the development activities. What is remarkable is the flexible moment of land purchase, leaving open land acquisition strategies. In addition to these ‘measurable’ criteria, trust, both in the external parties and in the internal development team, is very important.

As for the second proposition, a timely recognition, at JMP the recognition of the need for an investment decision does not merely depend on the project developer, as projects are continuously monitored both during board meetings and by informal interaction between the statutory directors and the developers. The advantage of monitor-
### MANAGEMENT PRACTICES

<table>
<thead>
<tr>
<th>WHEN</th>
<th>WHAT</th>
<th>BY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Determination of risk related decision criteria</strong></td>
<td>Applying predefined progress criteria in terms of end results for each development phase per development aspect</td>
<td>Development protocol</td>
</tr>
<tr>
<td>not applicable</td>
<td>Applying predefined profit criterion: profit &gt; 11%</td>
<td>Organisational strategy</td>
</tr>
<tr>
<td>not applicable</td>
<td>Applying a maximum risk capital for the portfolio (&lt; € 29.5 mln)</td>
<td>Organisational strategy</td>
</tr>
<tr>
<td>not applicable</td>
<td>Fit in the company’s philosophy and portfolio strategy</td>
<td>Portfolio strategy</td>
</tr>
<tr>
<td>not applicable</td>
<td>Applying ‘soft’ criteria, such as quality in product and process</td>
<td>Acquisition strategy</td>
</tr>
<tr>
<td><strong>2. Timely recognition</strong></td>
<td>Trusting the expertise of project manager to foresee problems or opportunities</td>
<td>Organisational culture</td>
</tr>
<tr>
<td>not applicable</td>
<td>Creating awareness of decision moments by a clear division of responsibilities and authorities</td>
<td>Organisational structure</td>
</tr>
<tr>
<td>not applicable</td>
<td>Creating awareness of decision moments by standardised development procedure</td>
<td>Development protocol</td>
</tr>
<tr>
<td>Development process</td>
<td>Monitoring the progress of a project by informal interaction between the strategic director and project manager</td>
<td>Statutory director(s)</td>
</tr>
<tr>
<td>Development process</td>
<td>Monitoring the progress of a project in board meetings</td>
<td>Statutory director(s)</td>
</tr>
<tr>
<td><strong>3. Search for reliable and relevant information</strong></td>
<td>Preparing an investment proposal in which the state of affairs (real time info) is summarised per development aspect</td>
<td>Project manager</td>
</tr>
<tr>
<td>Preparation phase</td>
<td>Preparing an investment proposal as input for the approval phase in which:</td>
<td>Project manager</td>
</tr>
<tr>
<td></td>
<td>… a single strategy is designed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>… risks are identified implicitly by describing the current state of affairs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>… an explicit, qualitative risk identification is made in a separate risk paragraph</td>
<td></td>
</tr>
<tr>
<td>Submission/Approval phase</td>
<td>Assessing the reliability and relevance of the investment proposal individually</td>
<td>Project, financial, statutory director(s)</td>
</tr>
<tr>
<td>Approval phase: ad hoc decision meeting</td>
<td>Questioning the reliability and completeness of the investment proposal</td>
<td>Project, financial, statutory director(s)</td>
</tr>
<tr>
<td>Approval phase: ad hoc decision meeting</td>
<td>Inviting a project manager to the decision meeting to give additional information</td>
<td>Statutory director(s)</td>
</tr>
<tr>
<td><strong>4. Identification and analysis of multiple courses of action</strong></td>
<td>Preparing an investment proposal in which:</td>
<td>Project manager</td>
</tr>
<tr>
<td>Preparation phase</td>
<td>… a single strategy is designed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>… risks are identified implicitly by describing the current state of affairs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>… an explicit, qualitative risk identification is made in a separate risk paragraph</td>
<td></td>
</tr>
<tr>
<td>Submission phase</td>
<td>Calculating the risk capital of a project by making use of a standardised model</td>
<td>Financial director</td>
</tr>
</tbody>
</table>
Submission/Approval phase: Assessing the risks in a project individually. Project, financial, statutory director(s)

Approval phase (transfer meeting): What if-questioning to identify and assess the impact and probability of risks in the proposed strategy. COM director, D&C director

Approval phase (transfer meeting): Redesigning the proposed strategy to optimise the profit and/or reduce risks. D&C director

5. Analytical evaluation

Approval phase: Evaluating the project integrally, making implicitly use of formal decision criteria and experiential rules. Project, financial, statutory director(s)

Approval phase: Applying progress and profit criteria as targets; minimum profit (that equals overhead costs) as condition. Statutory director(s)

Approval phase: Evaluating the risk capital of the project against the maximum risk capital of the portfolio. Financial director

Approval phase: Judging the project individually. Statutory director(s)

Approval phase: Formulating a decision in terms of go/no go. Statutory director(s)

6. Authorisation of the decision

Approval phase: ad hoc decision meeting: Making a choice based on unanimity in case of ad hoc decision meeting. Project, financial, statutory director(s)

Approval phase (all decision moments): Authorising the decision internally. Project, financial, statutory director(s)

Approval phase (land purchase, start construction): Authorising the decision externally. Supervisory board

7. Limiting duration

Approval phase: Providing an ad hoc decision structure. Organisational structure

Approval phase: Inviting a project manager to the decision meeting to give additional information. Statutory director(s)

Development process: Monitoring the progress of a project by informal interaction between the strategic director and project manager. Statutory director(s)

Development process: Monitoring the progress of a project in board meetings. Statutory director(s)

Approval phase: Continuing the development process without formal authorisation of the shareholder. Project director/manager

| Table 7.4 Repertoire of management practices contributing to knowingly taking risks at JMP |
ing projects is that less information needs to be transferred through an investment proposal, because the decision makers are more closely involved in the projects.

This explains the limited required level of comprehensiveness of investment proposals, which is one of the management practices related to the third proposition, the search for information. In case of a transfer meeting a more comprehensive memo is written in which the estimates are grounded by the sources used in order to increase the reliability of the information. In addition the reliability and relevance of the information is checked by each decision maker by making use of their own expertise and experience. Sometimes a decision meeting is arranged to discuss the project in a group setting and make use of each others expertise.

The ad hoc decision meetings are favorable from the perspective of the fourth proposition, the identification and analysis of courses of action, as in a group discussion a shared risk perception is created, which can be very relevant as the attitudes of the individual decision makers may differ. In general, different attitudes are recognised over the departments com, d&c and financial control. Therefore, development teams are composed in which a conceptual and a real estate developer are represented. The opportunism of a conceptual developer is counterbalanced by the more risk averse attitude of the real estate developer. This should lead to reliable investment proposals. Still, only a single strategy is proposed and a quantitative risk analysis is lacking. The decision makers assess risks implicitly based on their individual judgment before reaching a decision.

As for the fifth proposition, at JMP the evaluation of a project takes place implicitly rather than analytically. As most considerations take place in an individual setting and the decision is merely formulated as a go/no go by signing the investment proposal, there is no need to make these considerations explicit; still the decision makers indicate to use the development aspects for the evaluation. With respect to the decision criteria only the risk capital is used as a condition, but over the years the available equity has not often restricted development opportunities. The other criteria are used as targets: in extreme cases the pre-rental percentage at the moment of start construction is adjusted upwards in times of economic growth and downwards in times of recession or setbacks. In other words, more risk is taken in tight market conditions in order to guarantee continuity.

As for the sixth proposition, authorization of the decision, at JMP the decision makers differ over the decision moments: only at the investment decision ‘land purchase’ and ‘start construction’ the approval of the highest authority is required both internally, by the statutory board, and externally, by the supervisory board. The reason
is that these decisions are related to the largest financial commitments. At the other decision moments, external approval is not needed, but the statutory board still has to approve. At all decision moments the approval of the responsible director and the F&C director is required. The approval is given on an individual basis, although the proposals might be discussed in an ad hoc decision meeting. As some people may think of the approval procedure as a formality – hardly ever a proposal is rejected –, the statutory board insists on the importance of the process as a moment of reflection on the daily course of the development process for the project manager. Moreover, the shareholder holds the statutory board accountable for the outcome of all projects, thus the statutory board wants to maintain control.

As for the seventh proposition, limiting duration, JMP is highly flexible in preparing, submitting and approving an investment proposal due to the decision making on demand and the lack of fixed decision meetings. Moreover, the decision making process can be speeded up internally, because all decision makers remain informed about projects through the development process. As for the approval by the supervisory board, the duration can be less influenced, but still this takes little time.

In conclusion, the level of justifiability is limited by the implicitness of the progress criteria, the comprehensiveness of the investment proposals and the individual decision setting. The search and analysis of information largely depends on the individual expertise and experience of the decision makers. However, this is compensated for by the continuous monitoring of projects, which also contributes to the timeliness of a decision. The timeliness is guaranteed by a highly flexible decision structure due to the individual setting and decision meetings being arranged on demand. From the perspective of the shareholder, the statutory director is directly accountable for the functioning of the organisation: this explains his authoritarian way of deciding and lack of attention to a rational justification of decisions. However, from the perspective of a project, the developer is held responsible for and assumes responsibility for the success of a project. This entrepreneurial culture is stimulated by the belief in the project developers’ ability to influence and control the development process. The prevailing opinion is that the decision process must be flexible and unimpeded, especially regarding time effort, to the development activities.
This chapter describes the real estate development organisation Blauwhoed (bh) in terms of knowingly taking risk. Blauwhoed is selected as a best practice based on its top 20 position in the Dutch real estate development industry and because it is one of the country’s first private real estate development organisations. It weathered the market crises of 1979–1980, 1990 and 2001. The case study took place from March until May 2007. In addition to general interviews, document analysis and observations of meetings, the decision making process in the ‘Gamma’ and ‘Delta’ projects are analysed. These projects are examples of investment decisions on starting the sales activities and construction. Because of changing circumstances the intended strategy could not be followed and other risk measures had to be taken to continue the project with an acceptable level of risk.

The outline of this chapter is similar to those of chapters 6 and 7. Section 8.1 describes the organisational characteristics of Blauwhoed, the development process and the decision making process according to the integral model of investment decision making presented in section 4.1. The organisational characteristics give insight into the history, aims and vision, size and structure of Blauwhoed. Regarding the development process, the intentional development procedure is described; the description of the decision making process is limited to a short introduction of the intentional procedure. A short introduction is given of two related projects: ‘Gamma’ and ‘Delta’.

Section 8.2 analyses the decision making process, by using the propositions in section 4.2. The section describes the management practices to be applied to meet each proposition. A management practice is a characteristic of the decision making process that guides the decision behaviour towards risk. The ‘Gamma’ and ‘Delta’ cases illustrate actual behaviour in a decision making process.

Section 8.3 summarises the management practices and presents the conclusions on the three indicators of knowingly taking risk: justifiability, timeliness and accountability. Final conclusions are drawn as to what extent the propositions are met and what is remarkable about the way the decision process is organised in order to guarantee that risks are handled successfully.
8.1 Description of Blauwhoed

8.1.1 The organisational characteristics

Blauwhoed (bh) is one of the oldest Dutch real estate development companies. It was the first company to open a rental office in the Netherlands in 1965. Since then 70,000 residences, 270,000 m² office space and 40 shopping centres have been developed. The portfolio consists of a mix of residential and commercial real estate, mainly in the Randstad area. The yearly turnover is approximately €180-200 million (year report 2005), 70-80% coming from residential real estate. The commercial development portfolio (projects in pipeline) has a value of €1,0 - 1,5 billion per 01-01-2006 (Enk, 2006).

The objective of bh is to maintain its position in the Dutch development sector, but its shareholders restrict its growth ambitions. Staying competitive in the real estate development sector without scaling up requires a strategy of delivering high quality property for the end users and investing in good relationships with municipalities, contractors and investors. The latter pays off in invitations to enter development competitions, project acquisitions based on reciprocity, and land acquisitions that are partially financed by an investor. In total, about 50% of the projects come from strategic land acquisitions and 50% from competitions that are entered occasionally in cooperation with a contractor or developer.

bh is a privately held organisation with two shareholders, whose interests are represented by a supervisory board; the shareholder with a majority share sits on the supervisory board. bh has about 100 employees in five departments: General Affairs under the Chief Executive Officer (ceo), Economic and Legal Affairs (e&l) under the Chief Financial Officer (cfo), Residential Real Estate (rre) under the ceo, Commercial Real Estate (cre), and Development and Construction (d&r). The heads of these departments constitute the board of directors. The rre department is divided into three working regions, led by a regional director who supervises commercial developers, and a Marketing and a Concepts division. The cre department is divided into three functional divisions, under a divisional director who supervises commercial developers. The department has a project management division (project directors and real estate developers), a construction management division (project coordinators), and a sales management division. The e&l department offers support on financial, legal and ict affairs on both the project and the organisational levels. The Human Resource & Facility Management and Public Relations & Communication departments are directed by the ceo. The organisational structure is presented in Figure 8.1.
8.1.2 The development procedure

The development process of Blauwhoed is described by the phasing of the development process and by the development activities that are carried out in each phase. These activities are related to the development aspects (section 2.1) and used in the integral model of investment decision making (section 4.1). The development process is described from the perspective of the actors, indicating in what phase each actor participates and his responsibilities for the different development aspects. This description of the development process is a representation of the intended development procedure, based on the quality management system (ISO 9001, yearly updated until version 22-10-2004) and interviews with 12 representatives. The list of interviewees can be found in the Appendix.

The quality management system is no longer applied in the sense that BH gets an external written assurance (a certificate) by an independent external body that audits the management systems of organi-
sations to verify that they comply with the standards. The reason for ending the ISO certification is the additional administrative paperwork and regulations on a project. Still, the principles and the decision criteria described in the quality manual are still part of the development procedure.

**Development phases, aspects and activities**

Blauwhoed divides the development process into five phases: acquisition, initiative, development, pre-construction and construction. The activities per development phase are described, but they are not explicitly determined according to different development aspects. The activities can still be related to the development aspects described in section 2.1. The main activities are related to the aspects ‘design’, ‘construction’ and ‘sales/lease’ of the project. In addition to these activities, land must be purchased. All preliminary investigations and planning application procedures must be followed to apply for a building permit, financing is to be arranged and budgeting is an ongoing activity. These activities correspond with, respectively, ‘land development’, ‘permits’, and ‘financing’. The phases and activities are presented in Figure 8.2.

<table>
<thead>
<tr>
<th>Development aspect</th>
<th>Initiative</th>
<th>Design</th>
<th>Pre-construction</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land development</td>
<td>Option land purchase</td>
<td>Price offer land purchase</td>
<td>Land purchase</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>PoR, sketch design</td>
<td>Commissioning final design and specifications</td>
<td>Commissioning specifications</td>
<td></td>
</tr>
<tr>
<td>Permits (Legal)</td>
<td>Preparing planning procedures</td>
<td>Applying for building permits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>Preparing tender</td>
<td>Tender and signing contract</td>
<td>Management and supervision</td>
<td></td>
</tr>
<tr>
<td>Sales/lease</td>
<td>Commercial feasibility</td>
<td>Letter of intent (commercial) Sale brochures (residential)</td>
<td>Leasing contracts Start sale (residential)</td>
<td>Sale and lease of the project</td>
</tr>
<tr>
<td>Financing</td>
<td>Financial feasibility</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Figure 8.2 Development activities per development phase and aspect – case BH*

In the acquisition phase an exclusive right to start a development project is acquired or a bid for a prospect is prepared to enter a competition. In the initiative phase the financial and commercial feasibility is analysed, a program of requirements is made and an option on the site is
acquired. In the development phase a final price offer to purchase land is made, the design is finalized and the planning procedure is prepared. There is a distinction between residential and commercial projects with regard to the sales/lease activities of the project. In a commercial project a letter of intent of the majority of the tenants is required at the end of the development phase. Before construction begins, the project must be pre-leased; in the construction phase the project is sold to an investor. A residential project is directly sold to owner-occupiers, thus the activities are limited to sales: 70% of the project has to be sold before construction starts, either to end users or an investor. Aside from arranging sales or rental agreements, in the pre-construction phase the building permit is applied for and the project is tendered. In the construction phase the construction works are managed and supervised and sales and lease activities are continued until the whole project is sold and the project is closed.

**Development actors, responsibilities and authorities**

A project is acquired either by the department of Commercial Real Estate (CRE) or the department of Residential Real Estate (RRE). During the whole project a regional director in the RRE department (NW/ SW/E) or a director in the CRE department (offices, retail, integral projects) has the end responsibility for a project. During the acquisition phase (and the initiative phase in case of commercial real estate) a commercial developer is responsible for the project under the supervision of a director. During these phases the commercial developer works on a project team consisting of a marketing manager, a conceptual developer, and sometimes a real estate developer or project coordinator, depending on the technical complexity of the project. The marketing advisor and the concept developer are responsible for offering advice on the marketing strategy and the concept. Their participation in the project team is decided on by the board of directors.

After the development phase, the operational responsibility for a project is transferred from the commercial developer to a real estate developer. The real estate developer is supervised by the Development & Construction director, but the regional director retains the integral responsibility for a project. Major changes influencing the profitability, planning or concept of the project need to be approved by the regional or commercial director. The real estate developer becomes responsible for the daily activities; a project coordinator supports the technical aspects of the design, especially during the construction phase. The marketing manager and conceptual developer stay on the project team to respond to market changes and design alterations. In the pre-construction phase, when sales activities start for a residential project, a sales manager supervises the sales activities of (external) sales agents.
From the start of the development process, the department of Economic and Legal (E & L) affairs can be called in to support financial and legal issues. At the start of the initiative phase a financial controller is added to the project team for the financial administration, realistic budgeting and planning, and making a financial analysis of the project. A legal consultant assists in making contractual agreements, partnerships, and legal affairs concerning the planning application procedure. The cfo supervises the financial controllers and the legal consultants. The authorities and responsibilities of the actors are presented in Figure 8.3.

8.1.3 The investment decision making process

This section gives a short description of the intentional decision making procedure. It begins by presenting the investment decision moments, which link the development and the decision making processes. The decision procedure is then described from the perspective of the decision actors, indicating the responsibilities and authorities of each actor in each phase. The decision making process is analysed more extensively in the next section by the propositions on knowingly taking risk.

Investment decision moments

The development process has four moments when the board evaluates a project to make the decide whether or not to continue investing in a project; at these moments both the commercial or real estate developer and the director of the department are not authorised to make further...
financial commitments without the unanimous agreement of the board. These decision moments correspond with the gates between two phases (Figure 8.4).

![Figure 8.4 Investment decision moments – case BH](image)

The first decision moment marks the start of the development process after the acquisition phase. At this moment an investment budget is requested. The budget is based on the first indications of a feasible project and a description of the development strategy. In the following phase the feasibility of the project is investigated with regard to the functional and spatial program, the commercial aspects, the ownership situation of the site and the legal procedures concerning the zoning plan. Based on the feasibility analysis, a more detailed investment budget and adjustments to the development strategy the decision is made to continue with the project to the development phase. At the third decision moment – benchmark 2 - the design must be finalised and the land purchase contract, the planning procedure and the sales process must be prepared so they can be executed in the pre-construction phase. At the end of this phase the decision to start construction is made when the building permit is granted, a contractor’s agreement is signed and a presales or pre-rental percentage is obtained. In summary, an investment decision is needed before:

- Making a bid to enter a competition or selecting an architect to start the sketch design, which are marked by benchmark 0;
- Starting the lease activities in a commercial project or committing an architect for the final design, which are marked by benchmark 1;
- Starting sales activities in a residential project and/or starting technical engineering and the planning procedure, which are marked by benchmark 2;
- Starting construction, which is marked by benchmark 3.

**Intentional decision procedure**

The decision procedure consists of three phases: preparation, submission and approval (Figure 8.5). The first phase is the real estate developer’s acknowledgement of the need of an investment decision and the preparation of an investment proposal. The proposal gives insight into the project and the budget request must be explicit. In this phase the developer can be assisted by his project team: the marketing advisor, the
conceptual developer, the legal advisor, and the project director. The latter must authorise the proposal before submitting it to the decision makers. In addition to the investment proposal, a financial controller has to make a financial analysis and evaluate the project against some strategic financial criteria. On the basis of a positive evaluation, the financial controller signs the proposal for approval.

The second phase is the submission of the proposal to the board of directors, which is authorised to make most investment decisions. The board of directors consists of the CEO, CFO, the Commercial Real Estate director, and the Development & Construction director. Each of the board members prepares a proposal individually before the board meeting in which the investment decision is made.

The third phase is the approval phase in which the project is evalu-
ated, a decision is made and authorised by the board of directors. In these weekly meetings the board discusses strategic issues regarding the functioning of the organisation. The investment proposals are a standard item on the agenda of the board meeting. All submitted proposals are discussed and evaluated against a set of predetermined decision criteria. In the end the chairman proposes a decision and all board members can vote for or against. The decision is based on a majority of votes with at least two-thirds of the members present. In some cases authorisation of the board of commissioners is needed in addition to the approval by the board of directors. In such a case the proposal is submitted to the board of commissioners for approval instead of just for information. Their decision is reported to the board of directors and communicated to the responsible director and developer.

8.1.4 Introduction of the projects ‘Gamma’ and ‘Delta’

This section introduces two actual projects that are used to analyse the propositions. The analysis is based on one project in which an investment decision is made during one of the decision meetings during the case study period at this organisation; further investigations are made on this project with regard to the foregoing development phases and decision moments, and particularly to the decision phases belonging to the decision moment at hand. The analysis is based on observations of decision meetings, interviews with decision actors, and documents, such as investment proposals, contractual documents, a project planning, and investment budgets. For reasons of confidentiality names of projects, organisations, and municipalities have been changed. This project focuses on the investment decision moment ‘start sales’. This project is a good example of the unruliness of practice and how the decision makers dealt with the market dynamics. The intentional procedures represent the ideal situation, but in this project deviations from the procedure are made to proceed with the project without losing touch with the risks and organisational objectives.

In March 2003 a large municipality in the Randstad and a large public institution invited developers to enter a competition for the development of an area enclosed by a railway yard, a dike and a plot with existing property of the public institution. An urban development office designed a master plan with a program consisting of 600 to 700 residences divided over five building blocks; two-thirds of the residences intended for the private market and one-third for the social sector. ВН entered the competition with a proposal for two of the five building blocks and made a price bid for the two plots. In October 2003 ВН was awarded another combination of two other building blocks than they had made offers on. This combination comprised a project for 137 pri-
vate sector and 69 social sector residential units and an underground parking garage and a project for 199 private sector residential units on an overhead garage; the projects are respectively called ‘Gamma’ and ‘Delta’.

The development and construction of the five building blocks was planned in phases for technical and marketing reasons. First the building blocks along the railway yard were to be built as a noise barrier for the other projects. According to the overall project planning at the time of the competition, ‘Gamma’ was to be built first, starting in the first quarter of 2006, and ‘Delta’ would be the fifth and last building to be built, starting a year later, in the first quarter of 2007. The total delivery of the project was planned in mid-2009. Table 8.1 summarises the key figures of projects ‘Gamma’ and ‘Delta’.

<table>
<thead>
<tr>
<th>Location</th>
<th>large municipality in the Randstad area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project type</td>
<td>greenfield area development</td>
</tr>
<tr>
<td>Programme</td>
<td>2 residential buildings making part of an area development consisting of 5 residential buildings</td>
</tr>
<tr>
<td>Size</td>
<td>Gamma: ca. 18.000 m² (206 apartments)</td>
</tr>
<tr>
<td></td>
<td>Delta: ca. 17.500 m² (199 apartments)</td>
</tr>
<tr>
<td>Investment volume</td>
<td>Gamma: ca. € 40.000.000</td>
</tr>
<tr>
<td></td>
<td>Delta: ca. € 45.000.000</td>
</tr>
<tr>
<td>Investment period</td>
<td>May 2004 – …</td>
</tr>
<tr>
<td>Construction period</td>
<td>Gamma: January 2006 – …</td>
</tr>
<tr>
<td>Initiative</td>
<td>competition assigned by the municipality and a large public institution (partly land owner)</td>
</tr>
</tbody>
</table>

Table 8.1 Key figures ‘Gamma’ and ‘Delta’ cases

The milestones in the development process of the ‘Gamma’ and ‘Delta’ cases are described and presented in Figure 8.6. In May 2004 the negotiations over the development agreement with the client were finalised and at B I the investment decision ‘Benchmark 1’ was approved for project ‘Gamma’. After this approval, the development agreement for project ‘Gamma’ was signed in July 2004. The investment decision and the closure of the development agreement for project ‘Delta’ followed, respectively, in January 2005 and April 2004. The large time difference between the investment decision and the closure of the development agreement was attributed to delays in the development process of the five projects.

In the meantime the building permit for ‘Gamma’ was finally granted in October 2005 and the project could be tendered. However, the sales prospects had deteriorated and the possibilities of cooperating with a housing corporation were examined. This resulted in a budget request that deviated from the normal development procedure:
approval was needed to combine the investment decisions ‘start sales’ (benchmark 2) and ‘start construction’ (benchmark 3). Section 8.2 describes the decision making process. The description is retrospective, as it took place before the actual case study period. The budget request was approved and construction started in December 2005.

Following the decision making process in project ‘Gamma’, project ‘Delta’ is described. During the case study period, in May 2007, the project developer was planning to ask for approval for ‘start sales’. However, he was facing a declining housing market similar to the situation in project ‘Gamma’, but also a sharp rise in construction prices. The case illustration of project ‘Delta’ shows the work prior to an actual investment decision.

**Figure 8.6 Timeline of the ‘Gamma’ and ‘Delta’ cases**
8.2 Analysis of the investment decision making process

This section uses the propositions to describe how the investment decision making process takes place at Bh. Per proposition is described if the decision activities that are assumed to contribute to knowingly taking risk can be recognised; moreover, per proposition is indicated what management practices are used at Bh to guarantee that these decision activities are carried out. Section 8.3 summarises all propositions, including the total repertoire of management practices and a reflection on the indicators of knowingly taking risk.

In the case there is a distinction between the intentional and the actual process since not all actual practices are also intentional and vice versa. The intentional procedure is derived from interviews and strategic documents, such as the quality management system. The actual process is based on interviews, project documents, and observations of the decision meetings. The case illustration of project ‘Gamma’ is based on interviews and project documents, especially the investment proposals; the project ‘Delta’ is also based on interviews and the observation of a board meeting in which the project was extensively discussed in preparation for an investment decision making process.

8.2.1 Determination of risk related decision criteria

Proposition 1
Determining project specific decision criteria regarding the acceptable level of risk contributes to knowingly taking risk.

The decision criteria for evaluating an investment decision are determined by the shareholders, represented by the supervisory board, and the board of directors. The supervisory board determines the criteria related to the organisational strategy, whereas the board of directors determines the criteria related to the development aspects. The organisational decision criteria are mentioned in the regulations of the board. The decision criteria on the level of the development aspects were determined in the quality manual.

The organisational criteria are financially related and directed at the total portfolio. The first criterion is the target for the profitability of the organisation; the other criteria are conditions setting the boundaries within which the development projects must be developed.

- The profitability of the organisation is defined as: Return on Equity (net result before taxes/equity capital) > 30%;
- The first condition is that the total risk capital of the portfolio must not exceed the equity capital of the organisation. Over the years the equity capital has been kept constant, limiting the possibilities
of growth unless projects can be developed with less risk capital.
The criterion is defined as: total risk capital < equity (€ 54 mln). In a
simplified form the risk capital can be described as the total of invest-
ments and commitments minus the value of sold property minus the
liquidation value of land and unsold property. In practice the risk
capital is calculated in a sophisticated model in which the phases of
the development process, partnerships, speculative land ownerships,
and accounting rules are assimilated;
• The second condition is the solvency ratio. The criterion is defined
as: solvency (equity capital / total capital) > 25%; this criterion is
determined based on Basel II regulations;
• The third condition is derived from Dutch tax regulations (Wet
Belasting Rechtsverkeer) and is defined as: the share of the property
assets in the balance sheet value < 70%. By means of this condition
the shareholders can sell their shares without having to pay convey-
ance/transfer tax over the property assets.

On the level of the project the general financial criterion is the
profitability of the project. This criterion is defined as: profitability
project = (total revenues – total investment costs) / total investment
costs > 8%, composed by 6% profit + 2% risk premium. In the total
investment costs the overhead costs of 5% are included. This criterion
is, just as the profitability of the organisation, a target for the outcome
of a project that is calculated at each decision moment. Next to this cri-
terion, criteria are determined on the level of the development aspects
per decision moment.

The moment-related or progress criteria are described in the
quality manual in terms of activities per phase: they are not explicitly
defined in terms of end results (per phase) nor are the development
aspects systematically and explicitly used. However, in Table 8.2 the
decision criteria are presented in terms of the development aspects of
the real estate development model (section 4.1), and in terms of end
results (as possible).

In addition to the criteria related to the financial strategy and the
development aspects, a number of other strategic criteria are applied;
whereas the previous criteria are directed at controlling the risk profile
of a project, these criteria determine in advance the risk profile of a
project. These portfolio criteria are:
• Portfolio strategy (including quality standards, geographical spread/
distance from office, spread of functions): a project must not merely
meet process results or financial standards, but must also fit with
a long-term strategy of the organisation. A project can be very
profitable, but when it is on the other side of the country, it is not fea-
sible to develop a project because of the travel required. Conversely, the profitability target of a project can be adjusted slightly downward to improve the quality of the project and thus create a better image and more goodwill for the organisation in the long term;

- Reciprocity: partnerships are very important, especially to share risks. The disadvantage is that sharing risks entails sharing profit. An organisation can enter a partnership under the condition that the partner will bring up a project for developing in a future partnership;
- Availability of expertise: a shortage of employment or lack of specialised expertise might be a reason to develop a project. In practice employment is never a limiting factor; expertise is very much adjusted to the company strategy, thus does not pose a problem.

<table>
<thead>
<tr>
<th>Development aspect</th>
<th>Benchmark 0</th>
<th>Benchmark 1</th>
<th>Benchmark 2</th>
<th>Benchmark 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land development</td>
<td>Option for land purchase</td>
<td>Land purchase contract</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>Fit to policy/ company strategy</td>
<td>PoR</td>
<td>Final design fits with PoR</td>
<td>Construction drawings and specifications</td>
</tr>
<tr>
<td>Description of development strategy</td>
<td>Sketch design (including check PM)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning application</td>
<td>Concept fits with zoning plan</td>
<td>Inventory of planning procedures</td>
<td>Building permit(s) are granted</td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>Price bid contractor</td>
<td>Contractor’s agreement is signed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Sales and lease    | Commercial feasibility analysis | Market report (including check CM) | Advice marketing strategy | Rental agreement (commercial)
|                     |                | Market report (including check F&C) |          | Pre-sales percentage (70% residences) |
| Financing          | Budget request (including check F&C) | Investment budget (including check F&C) | Investment budget (including check F&C) | Planning (construction phase)
|                     |                | Land exploitation | Planning during (construction phase) | Financing is arranged  |

Table 8.2 Progress criteria per decision moment – case BH
8.2.2 Timely recognition of the need for an investment decision

**Proposition 2**
Timely recognition of situations in which the risk profile of a project is about to change significantly contributes to knowingly taking risk.

The need for an investment decision is to be recognized by the project manager, as he has to initiate the preparation phase of an investment decision. This responsibility is not explicitly prescribed, but is part of the responsibilities and authorities of the project manager. The decision authority is limited by a budget that is granted per development phase. At the end of the budget, the need for a decision is obvious. However, not booking any progress could also be an incentive for an investment decision, or at least notifying the board about it. Another incentive is the fact that investment decisions are usually followed by the signing of a contract. As the project manager is not authorised to make these commitments, he must consult the authorised director(s) about the contract by means of an investment proposal.

The actual recognition of the need for an investment decision depends on the ability of the project manager to recognise not only the standard situation of overrunning the budget, but also the situations deviating from the expected scenario. These situations can be recognised as the expected scenario is prescribed in the quality manual in terms of the activities of each development phase and the implicit decision criteria. When these criteria cannot be met within a reasonable timeframe, or within the budget, an investment decision is needed.

The team members can help the project manager to recognise changing market situations, but most of them do not have an integral view on the project, so all they can do is signal part of the need. The project manager must judge whether this signal is the starting point for an investment decision. The F&C department monitors the expenditures of a project, thus it will notice when the project manager exceeds his budget for the development phase and inform the project manager or the project director.

In practice the investment decisions are recognised quickly, giving the project manager enough time to prepare an investment proposal. In almost all projects a complete proposal is submitted to the board of directors for approval.

**Case illustration**
In the ‘Gamma’ case the decision moment ‘start sales’ was planned in the second quarter of 2005. At that moment the project manager thought the start of the sales activities was not viable, as the planning application procedure has been delayed due to objections. Moreover,
the market conditions for this housing segment had deteriorated since the start of the development process. Therefore, in consultation with the project director, the project manager started to look for ways to share the sales risk by entering a partnership. The planning of the project allowed this postponement of the sales activities.

Thus, when the contractual arrangements for the partnership were almost ready at the end of the third quarter of 2005, an investment proposal could have been made for ‘start sales’ in combination with the partnership agreement. However, the project manager saw an opportunity to compensate the profit share by the partnership with a municipal subsidy. The only condition for claiming this subsidy was to start construction before 2006. This meant that the decision moments ‘start sales’ and ‘start construction’ had to be combined; moreover, the project had to meet the decision criteria for ‘start construction’. The project manager recognised the decision problem in time, but the development activities regarding the design process and the tendering of the project came under time pressure, as to start construction before 2006.

The ‘Delta’ case had a similar problem: when the sales activities in this project should have started, the market was still tight. However, time was short: the decision ‘start sales’ could not be postponed without consequences, as the ultimate date for the land purchase was fixed. After this date an extra reservation premium had to be paid, reducing the profitability of the project. On the one hand the project manager was willing to ask for approval for ‘start sales’ or even ‘start construction’: the development activities regarding land and permits required continuation. On the other hand this decision was not viable, because no partnership arrangement had been made to share the sales risks and construction costs had soared, making the project even less profitable. The project manager faced a dilemma: time pressure to continue was high, while approval was improbable according to the progress of some of the development activities. Therefore he arranged a meeting in the board without formally asking for approval, but discussing the possibility to enforce a breakthrough in the development process.

8.2.3 Search for reliable and relevant information

**Proposition 3**

*Making use of reliable and relevant information contributes to knowingly taking risk.*

The use of reliable and relevant information is of major importance to make a good decision and to take risks knowingly. At Blauwhoed the deci-
sion makers receive the project information by an investment proposal which is prepared by the project manager. The proposal follows a standard format and must contain a project description, budget request, and supplements. The project manager must give a full explanation of the status of the project. It is not prescribed what has to be described, but the report usually contains the following information:

- The status of the project, indicating the benchmark under consideration;
- A product description, indicating the functional program and quality level;
- The status of the land purchase and possible bottlenecks (risks);
- The status of the planning procedure, including the responsibilities, environmental aspects, and time schedule;
- A marketing report/plan;
- Cooperating parties: headlines of the contractual agreements (development agreement with municipality, contractor’s agreement, etc.);
- Justification of costs (land, construction, advisors) by adding reports of internal/external experts or financial headlines of contractual arrangements;
- Financing and fiscal remarks;
- Qualitative risk analysis;
- Key figures of the investment budget.

The size of the investment proposal depends on the decision moment, but in general it is quite extensive. At benchmark 0 little information is available, thus the investment proposal is limited to 4-8 pages and a few supplements. At benchmark 1 the longest proposal is written: the concept is worked out in a sketch design, conceptual agreements are prepared and a clear planning and strategy is defined for the coming phases. Many supplements are added. At benchmarks 2 and 3 the project can be described in terms of deviations from the investment proposal at benchmark 1.

The project manager prepares the investment proposal in consultation with the project team during the preparation phase. Together they determine the strategy for the next development phase and each team member supplies the project manager with the latest information. The marketing advisor and the conceptual developer deliver their vision of the market at the time of the decision moment. The legal advisor gives advice on the draft of the contractual arrangement. These pieces of advice are added to the proposal in the supplements. The obligatory supplements are the investment budget and planning; the optional ones are (conceptual) agreements (land purchase/cooperation/contractor), (internal/external) market report, construction costs report, internal
legal advice, zoning plan, program of requirements, urban design, architectural design, etc. In the end the project director and a financial controller check and authorize the final proposal for submission to the board. The financial check also includes a financial risk analysis (see section 8.2.4).

After submission the investment proposal is prepared individually by all members of the board of directors and discussed in the board. The board is composed by the CEO, the CFO, the director Commercial Real Estate, and the director Development & Construction. All have a significant amount of experience within their own field of expertise. This knowledge is used to check the reliability of the information and to add extra, general information. One of the directors (RRE/CRE/D&c) is directly involved in the project as he has the final responsibility over a project, and therefore he can contribute to the discussion by giving project-specific information. In some cases the CEO, the CFO or the D&c director has been involved in a project during the development process to give advice on general, financial, legal, or technical aspects of the project.

During the group discussion in the board meeting only a few questions are asked to obtain additional information next to the proposal or to check the sources of information. Sometimes questions are raised about the decision of previous benchmarks of the project or regarding the financial check by financial control: these questions are directed at checking whether the process of approval has followed the decision procedure. When the board is not satisfied with the quality of the proposal or when the signature of F&C is lacking, the proposal is rejected and sent back to the project manager for improvement. This indicates that the board largely relies on the quality of the proposal delivered by the project manager and financial control. They accept that information can never be complete, but everything that is known must be presented in a clear and straightforward way.

Case illustration
In the ‘Gamma’ case an investment proposal for ‘benchmark 2’ was written in October 2005 with a budget request for contracting the pile driver to start piling in December and to start sales activities in November. The investment proposal consists of a 9-page description of the status of the project including the budget request, and 12 supplements totaling 32 pages. Information was given on the latest decision by the board, the actual status and the expectations about when certainty was reached over the deal/the costs/the revenues and what was expected from the board. The project manager, with the consultation of the marketing advisor and financial control prepared the proposal. The status is described in the following sections:

8. Knowingly taking risk at Blauwhoed
8.2.4 Identification and analysis of multiple courses of action

Proposition 4

Identifying and analysing multiple courses of action contributes to knowingly taking risk.

At an investment decision moment a decision has to be made about the course of action in the next development phase(s). In the preparation phase the project manager is supposed to propose a single course of
action by means of an investment proposal; the format of the invest-
ment proposal also prescribes the identification of the risks in a project.
Aside from the investment proposal a financial controller has to make a
financial risk analysis in which the project contribution on the total risk
capital is calculated in addition to a worst case (or Black Tuesday) sce-
nario. Based on a positive result of this analysis the financial controller
signs the investment proposal for submission to the board.

In practice the risks of a project are identified in the investment
proposal both explicitly and implicitly. As a separate section of the pro-
posal a qualitative risk identification is made either by using a standard
list of risks indicating the magnitude of the risk in terms of high (+++) to
low (– –), or by the description of threats and opportunities. Implicitly,
the risks in a project are addressed in the description of the status of the
development aspects. For example, when the project manager writes
that ‘company x hasn’t guaranteed us yet to buy the residences against
price y, but they have promised verbally to be favourable to this deal’,
this implies a risk that the sales price will be even lower or the deal
will be cancelled. In such a description neither the probability nor the
impact is explicit: this judgment is left to the decision maker.

In some cases the consequences of a risk are made explicit by a sen-
sitivity or scenario analysis. In such an analysis the impact of different
construction costs, sales prices, or sales percentages on the profitability
is quantified. Such an analysis could be combined with the analysis
of different strategies. Usually only one strategy is proposed – and
thus the project manager has decided this is the best strategy – but in
some cases the decision makers are presented with alternatives. The
strategies concern different control measures regarding one or more
development aspects, or even different sets of conditions for a contract.
These analyses are only directed at one or a few risks and/or one or a
few control measures.

Financial control makes a quantitative analysis in which the total
risk capital of a project is analysed by means of a worst case scenario.
The maximum loss of the project is calculated by a standardised,
sophisticated model that is linked to the investment budgets and the
cash flow planning of all projects in portfolio. In this model the execu-
tion values of the land and the unsold property are taken into account.
In fact, the worst case scenario is analysed taking into account all risk
control measures taken to reduce the impact of a risk. Financial and
legal engineering plays an important role in reducing the risk capital of
a project. The aim is to reduce the equity capital in a project to which
the creditors can make no claim. Some examples of these kind of risk
management strategies which are often applied at Bh are:

• Non-recourse financing of projects;
• Off-balance sheet financing by financing a project in a Special
  Purpose Vehicle;
• Entering partnerships under the condition of limited accountability and under the condition of reciprocity;
• A land purchase arrangement in which an investor finances the land and becomes entitled, and BNI gets exclusive development rights (special form of off-balance sheet financing);
• ‘Safety net construction’: arrangement with an investor or housing corporation guaranteeing the purchase of unsold property for a reduced sales price after x months after delivery of the project.

The board of directors read the proposal and are asked to approve this strategy. During the board meeting each proposal is discussed: when the budget request is clear, the proposal gives sufficient insight and the individual board members do not have doubts about the risk profile of the project, they easily reach a decision. However, when more risk is involved or the complexity is high, the board discusses the proposal more comprehensively. In these discussions the CFO is most critical towards projects and he has the most risk avoiding attitude. This can lead to conflict about the perception of risk and the measures to be taken. These conflicts are usually resolved during the board meeting: consensus is reached on a more abstract level and the details are discussed outside the board meeting.

More comprehensive discussions are about the search for possibilities to optimise the proposed strategy in order to increase the profitability, or the exit strategy in order to reduce the risk capital any further. In case of optimisation the questions asked by the board are related to the contractual arrangements: ‘What are the financial commitments?’ ‘Is there a way to resolve the agreement?’ ‘Is there a way to transfer (or share) the financial commitments to (with) another party retaining the development rights?’ ‘Is it possible to reduce or delay the expenditures or increase or advance the incomes?’ These discussions can become quite detailed, while the actual request for approval either has already been granted or must be postponed as the conditions are ambiguous. In the end the decision is formulated as approval or rejection; the possible suggestions for improvement are given outside the meeting and the minutes.

Case illustration
In the ‘Gamma’ case an investment proposal was submitted in October 2005 with a budget request that deviated from the standard requests: the decision moment ‘start sales’ and ‘start construction’ were combined. The project had chosen for this strategy to reduce on the one hand the market/sales risk of the project by entering a partnership and on the other hand to compensate the profit share because of the partnership by taking the opportunity to obtain a subsidy in case
construction would start before the end of 2005. This strategy had been discussed during the development process with the board of directors and it had already approved the partnership agreement. With this investment proposal, approval is asked for starting piling works and the official start of the sales activities to the private customers.

By implicitly describing the status of all the development activities the risks in the project are revealed: the status indicates what is and is not certain, and what will be done to increase certainty. For example, entering the partnership with a housing corporation would imply the conversion of private sector residences into social sector residences. This was in conflict with the development agreement with the client. By changing the strategy, the risk arose that the client would either refuse to approve this strategy, or raise the land price. In the course of the development process to this decision moment, this was discussed with the client and they agreed to approve this conversion with some minor conditions. The outcome of the discussion and the conditions were described in the proposal indicating that a possible risk was mitigated.

Another example of an implicit description of a risk concerns the application of the building permit: during the application procedure objections had been raised, but after hearings the protest was disallowed. Still, the Province had to give its certificate of incorporation: the municipality was pressing them, and the certificate was expected within two weeks. For another five weeks complaints could be made. The project manager offered no opinion on the probability of a delay (and the impact of this delay) in this procedure, but left this to the board members who had to base their own judgment on this information. This is the case for most of the aspects described in the proposal.

However, an explicit analysis of risks is made by presenting three scenarios of sales results: an optimistic scenario with a standard number of social sector residences sold to the housing corporation and all other residences sold to the private sector; a scenario with only 70% of the residences sold to the private sector and the remaining 30% sold as well to the corporation; and a pessimistic scenario where all residences are sold to the corporation. The impact on the profit is calculated indicating the spread in the profit of the project. Still, the term ‘risk’, ‘scenario’, ‘impact’ or similar risk related terminology is not used in this description.

At two locations risk is explicitly used: the first is the section about the risk capital. Risk capital is not influenced by this project which is almost 100% financed by debt equity. The second is the section ‘risk analysis’: the main risks are briefly described. Moreover, no probability or impact is analysed; only the risk event is identified.

The decision makers are asked to approve the proposed strategy that is based on a comprehensive description of the project. The pro-
osal gives a profound insight into the development aspects: the fact that risks are not systematically identified and no explicit probability and impact are assigned is not regarded as a deficiency by the decision makers. The opposite might be true as the question is whether these risks can be objectively analysed and whether this gives more insight into the project and the possibilities to take control measures.

In the ‘Delta’ case the project was discussed in a board meeting during the case study period without preparation of an investment proposal: this meeting was an unofficial decision meeting in preparation of the formal request to start construction. The problem in this project is that the developer has not reached an agreement to enter a similar partnership with the housing corporation as had been done in the project ‘Gamma’: such a deal is necessary to meet the decision criterion on the pre-sales percentage; otherwise construction cannot start.

In the first part of the discussion, directors asked questions to learn about the status of the project, possible problems, commitments made, and under what conditions and in what time period these commitments were to be fulfilled. The risks of the project were implicitly identified. For example, the cfo asked when the land transfer was to take place since the building permit had been granted. The developer replied that the building permit was one of the conditions for the land transfer, next to a pre-sales percentage of 60%. However, when the land had not been transferred before June 2008, BH had to pay the municipality a compensation for the option on the land. It remained unsaid that it was preferable to transfer the land – and start construction – before June because of these extra costs.

In the second part of the discussion different sales strategies were discussed, since the preferred conditions for a cooperation agreement seemed infeasible in the current market. The impact of these strategies on the profit of the project were quickly analysed based on the key figures of the investment budget. Now that the directors had been informed about the project and had insight into the problem, the developer was asked which strategy he proposed and what help he expected from the board of directors. The proposed strategy implies a higher risk profile than is normally accepted according to the progress criteria; the cfo compared this strategy with the exit strategy of cancelling the project. The risk terminology was hardly used, while the whole discussion was directed at dealing with the risk of increasing construction costs and disappointing sales results.
Proposition 5

Evaluating the courses of action on the predefined criteria analytically contributes to knowingly taking risk.

In the preparation phase a project is evaluated by the project director and the financial controller before the investment proposal is submitted to the board of directors. The project director evaluates the proposal on the quality of the proposal, the profitability and by the progress criteria in terms of the development aspects. By doing so he evaluates the viability of the budget request and takes responsibility for the project. The financial controller evaluates the project against all strategic financial criteria, but primarily against the criterion of the risk capital. The signature of the financial controller is a guarantee for the board that the risk capital is under its limit.

Each board member has a different role in the discussion because of his expertise and personality. The CEO has an integral view and is most directed at personnel and portfolio consequences. He has more faith and trust in the future than does the financial director, who is more focused on the financial criteria – financing, profit rate, maximum loss – and the current state of affairs. The Commercial Real Estate director looks at the decision procedure and is less concerned with the details of a project except when it is under his responsibility. The Development & Construction director pays more attention to the planning, the strategy for the development process and the practicalities of the implementation.

During the board meeting the decision criteria are not analytically applied and are mostly implicit. In case a project does not meet the profitability or the progress criteria regarding the development aspects, other criteria are considered. Not meeting these criteria implies that risks are higher than desirable. In such a case other considerations must compensate for a higher risk. In the end the continuity of the company is more important than its profitability: profitability and the progress criteria are used as targets which can be adjusted downward or upward for the sake of image, reciprocity, capacity of personnel. However, strategic financial criteria, such as risk capital, solvency and the percentage of property value on the balance sheet, are preconditions for a development project.

For example, a decision had to be made about the land price offer to enter a competition: according to the project director the chance of winning would largely increase by raising the offer by €200,000; however, the CFO thought that winning this competition with a reduced profitability was not acceptable because of the location. This project
was far away which had a large impact on the capacity of personnel and they had little expertise about the market conditions in that area. The location of a project played the opposite role in another decision; less profitability was accepted as a possibility to increase BHN’s image as a qualified real estate development company. This was important as in the near future the municipality would start developing more locations.

Once started, a project is hardly ever stopped: within the context the project is optimised. The discussions in the board meetings are usually about improving a proposal, not about approving or rejecting a budget request. These detailed discussions are usually about financial or legal arrangements. This level of detail is not necessary to reach a decision about the proposal, especially not as the final decision is formulated as a go or no go. The adjustments or suggestions for improvement are given outside the board meeting directly to the developer. The discussion usually ends either in the approval of a budget request or in the deferment of the proposal. The proposal might have been submitted too late, lacked quality, was not authorised by financial control, or the board members disagreed about the conditions in an arrangement which had to be solved before approval could be given. These proposals are either resubmitted in the next meeting or a final decision is made outside the board meeting.

*Case illustration*

In the ‘Gamma’ case the decision criteria were not rigorously applied to the project. Normally the budget request for the start of construction is only granted when a pre-sales percentage is met and the building permit is irrevocable. However, the pre-sales percentage was not applied, because the sales risk was reduced by the selling of a part of the residences to the corporation (which did not meet the pre-sales percentage and moreover the residences were sold against a reduced price) and by a safety net construction which implied that the unsold residences would be sold to the corporation against the same reduced price. As a result of this risk control measure, the expected profit decreased under the required target, which was slightly compensated by a subsidy. This reduced expected profit in combination with the safety net construction was regarded acceptable and as the best strategy given the changed circumstances in the property market.

In the ‘Delta’ case the decision problem is related to the expected sales rate and the moment of start construction. The decision is tougher as it seems impossible to negotiate the same conditions for the safety net construction with the corporation and no compensation in the form of a subsidy is available; at the same time the construction costs have risen dramatically and it is hard to realise the project in phases due to
the parking garage that has to be constructed in one piece. To reach a decision, not only the pre-sales percentage, the status of the building permit, a reasonable price offer by a contractor, the availability of financing, and of course the expected profit are addressed (see Table 8.3), but also the maximum loss and image damage in case of an exit strategy, and the need to start construction for accounting reasons. They agreed, without saying so, that the strategy of exiting the project is not acceptable; but they did not approve the start of construction at this moment. First, the deal with the corporation must be finalised — either by the project manager or, if he fails, with the help of the CEO.

<table>
<thead>
<tr>
<th>Benchmark 2</th>
<th>Benchmark 3</th>
<th>Benchmark 2/3 – case ‘Delta’</th>
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<tbody>
<tr>
<td><strong>Land development</strong></td>
<td>Land purchase contract</td>
<td>✓</td>
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<td></td>
<td>Delivery of land ‘ready for building’</td>
<td>✓</td>
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<tr>
<td><strong>Design</strong></td>
<td>Final design fits with PoR</td>
<td>✓</td>
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<tr>
<td></td>
<td>Construction drawings and specifications</td>
<td>✓</td>
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<tr>
<td><strong>Planning application</strong></td>
<td>Inventory of planning procedures</td>
<td>±</td>
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<tr>
<td></td>
<td>Building permit(s) are granted</td>
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<tr>
<td><strong>Construction</strong></td>
<td>Price bid contractor</td>
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<td></td>
<td>Contractor’s agreement is signed</td>
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<td><strong>Sales and lease</strong></td>
<td>Advice marketing strategy</td>
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<tr>
<td></td>
<td>Pre-sales percentage (70% residences)</td>
<td>Presale is not started</td>
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<td></td>
<td></td>
<td>Partnership with corporation under negotiation</td>
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<tr>
<td><strong>Financing</strong></td>
<td>Investment budget (including check F&amp;C)</td>
<td>Profit is lower than norm</td>
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<td></td>
<td>Land exploitation</td>
<td>PKR is all right</td>
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<td></td>
<td>Planning (construction phase)</td>
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<tr>
<td></td>
<td>Financing proposal</td>
<td>✓</td>
</tr>
</tbody>
</table>

*Table 8.3 Ex post analysis of the ‘Delta’ case against the decision criteria at the combined decision moment ‘start sales/start construction’*
8.2.6 Authorisation of the decision

Proposition 6
Authorising the decision at the organisational level that is capable of dealing with the involved risk level contributes to knowingly taking risk.

In the board regulations, the decision authority of the board of directors and the decision rules are prescribed. The board of directors can approve investment proposals for each of the investment decision moments with the exceptions of the purchase of land for which the current zoning plan does not allow property development, the purchase of land or start construction in case of major deviations from the decision criteria, and entering a partnership of an exceptional nature or volume. These exceptions have to be submitted to the supervisory board for approval; all other decisions must be presented for their information.

The decision procedure starts with the submission of an investment proposal to the board of directors. In the preparation phase the investment proposal is approved by the project manager, the project director and a financial controller. The proposal is to be submitted four days before a weekly board meeting, giving the directors time to read the proposal and prepare for the meeting. Subsequently, the proposal is discussed in the board meeting and a decision is made.

The board consists of the CEO, the CFO, the Commercial Real Estate director, and the Development and Construction director. The CEO is the chairman; in case of his absence the CFO usually presides over the meeting. During a meeting the proposal is discussed and is approved by voting. The decision is based on a majority of votes with at least two-thirds of the members present. When there is an even split, the chairman casts the deciding vote. When fewer members are present, the decision is postponed: the other members are contacted as soon as possible in another meeting or by telephone.

The decision is usually formulated as a go or a no go. The decisions are recorded by the executive secretary in the minutes which are filed in the archive of the board meetings and in the project archive. A short version of the minutes is accessible for all personnel. The secretary sends the decision to the project managers right after the board meeting. Decisions are also communicated to the supervisory board: either the supervisory board is informed about the decisions taken, or an investment proposal is submitted for approval. Their decision is reported to the board of directors and to the responsible director and developer. The decision process in the supervisory board is beyond the scope of this research.

In practice the decision making processes follow the intentional procedure: the necessity of the board’s approval is commonly under-
stood and observed. In one case the preliminary authorisation by financial control was lacking, which was a reason for the board of directors to defer the proposal immediately. Otherwise the proposal is discussed and normally a decision is reached by consensus; if needed a decision is made on the majority of votes. This is an undesirable situation as the board has only five people, almost all of whom are involved in a project: the disagreement during the development process might undermine the project. In addition to the function of the board meetings to make investment decisions, in an exceptional case the board meeting is used to discuss a project more elaborately to define a desired course of action with the project manager but without reaching a decision.

**Case illustration**

In the ‘Gamma’ case the formal procedure is followed by writing an investment proposal and submitting it for approval by the board of directors. The proposal was discussed in the board meeting and got approved on October 18, 2005. From the investment proposal it can be concluded that the board members were not faced with this project for the first time after the last official decision moment: meanwhile the board was asked for approval on several occasions as the project manager wanted to deviate from the standard development strategy. For these interim decisions no integral investment proposal was written, but only a short memo.

In the ‘Delta’ case a similar interim decision meeting was observed in which the development strategy was discussed and the possibility explored to deviate from the decision criterion of the pre-sales percentage. This meeting was initiated by the project manager as he saw some problems rising which he could not solve without the commitment of the board. In the end no formal decision was made, but they agreed on how to deal with the current problems and arranged an ultimate date for submitting a proposal to the board of directors. In addition the board members explored the need to inform the supervisory board about this project, but they did not think it necessary.

8.2.7 **Limiting the duration of the decision process**

**Proposition 7**

Limiting the duration of the decision making process and gearing it to the urgency of the decision contributes to knowingly taking risk.

The duration of the decision making process is measured in this study from the moment of submission until the moment of authorisation. An
investment proposal must be submitted four days ahead of the board meetings, which take place every Tuesdays. Intentionally, the decision making process takes only four days if the approval of the supervisory board is not necessary. As the frequency of the board meetings is very regularly, the project managers can submit a proposal any time they want. Still, there can be time pressure on the decision making process in case of a deadline, for example when entering a competition or when construction or sales activities have to start before a contractual date. Most time pressure usually is put on the project manager who has to prepare an investment proposal. This takes approximately 2-3 weeks because of the required comprehensiveness of the proposal and all the informal and formal consultations of internal experts.

In practice most proposals are recognised and are submitted in time. However, proposals are occasionally submitted late. Depending on the time pressure and the complexity of the decision problem, the board might be willing to take the proposal into consideration or defer it to the next board meeting. In an urgent case a decision will be made either during the board meeting, if possible, or in a special meeting later that day or week. If not all board members are able to attend this special meeting, they can be contacted by telephone. If a decision is not pressing and the budget request is straightforward – and some directors have already been involved – the proposal is discussed without preparation.

The discussion time of the proposals varies from 2 to 15 minutes depending on the number of questions the directors have and the discussion that follows. A limiting factor could be the available time of the board members and the number of items on the agenda, but in practice time constraints are not a reason to hasten discussions or defer the discussion of proposals.

Case illustration

The board meeting of the ‘Gamma’ case took place before the case study period, so the actual time spent on the discussion was not available. In the ‘Delta’ case a board meeting was observed for which the project was not submitted for approval, but to inform the board about the progress of the project and determine the strategy for the rest of the development phase. The project manager attended to offer an explanation of the project. The total discussion took around 30 minutes, which is much longer than the average discussion for approval of an investment proposal. This time was available because few board members were present and (therefore) few items were on the agenda.

The function of these ‘interim’ meetings towards the duration of the decision process is that by informing the board more often than is prescribed in the procedure and creating commitment during a development phase, the formal decision making process is shorter and
has less chance of deferments. The decision makers need less preparation and discussion to become fully informed about the project so the meetings are shorter; since the board members have already committed themselves to a certain strategy, the meetings are smoother.

8.3 Summary and conclusions
Blauwhoed is the third case that is analysed to understand the management practices that guide the risk behaviour of the actors in an investment decision making process. In general it can be concluded that each decision activity described in the proposition is carried out and management practices are applied to guarantee that the proposition is fulfilled. Most decision activities follow a formal procedure, except for the board discussions: the analysis and evaluation of the projects take place based on expert judgment. The management practices are summarised per proposition and the total repertoire of management practices is presented in Table 8.4. Finally, the contribution of the management practices towards the three indicators of knowingly taking risk, i.e. justifiability, timeliness and accountability, is discussed.

Regarding the first proposition, at Blauwhoed decision criteria are determined at the level of organisational strategy and on the project level; both are directed at profit and risk. The profit criteria (both strategic and project) are targets; however, the financial, strategic criteria directed at risk (total risk capital, solvency) are conditional. The criteria on the level of the development aspects are indirect control measures indicating the preferred level of control at the decision moments: these criteria are derived from the quality manual. A project is expected to fit in the long term strategy, so expertise needs to be available and reciprocity is preferred in a partnership.

Regarding the second proposition, at Blauwhoed the project manager is responsible for recognising the need for the timely recognition of investment decision moments. The project manager is stimulated to recognise these situations by his position in the organisation, by the limitations of his responsibilities and authority, by the limited budget that is granted per development phase, and by the awareness of the quality manual and the corresponding decision criteria. Moreover, the project planning can also serve as reminder for a (planned) decision moment: in combination with the explicit decision criteria the project manager can screen the viability of a budget request. This can contribute to a proactive attitude of the project manager. The need for a decision moment can also be recognised and initiated by one of the project team members. The only board member who is actively involved in the recognition of a decision is the director with the final responsibility for a project: as part of the project team he can also initiate an investment decision.
Regarding the third proposition, it can be concluded that BH is attentive to the provision of relevant and reliable information. The requirements for an investment proposal are high: a comprehensive description of the project must be given and supported by supplements like external and internal reports, a conceptual contract, a planning and the total investment budget. This might even give the decision makers more information than necessary. The reliability of the information is guaranteed by the involvement of other project team members in preparing the proposal and by the financial check by F&C before submission of the proposal for approval. During the approval phase the relevance and reliability is checked again and additional information is provided by the board members: all members have abundant experience in real estate development, but each of them addresses another field of expertise and has a different level of involvement in the project.

As for the fourth proposition, there are four important practices in the identification and analysis of multiple courses of action. First, the investment proposal represents the preferred strategy for the coming development phase. Second, occasionally a scenario or sensitivity analysis is made in a proposal. For example, the impact of various sales scenarios is analysed for multiple sales strategies in order to compare and choose one of the strategies. Third, the risk capital of a project is analysed by making use of a standardised model. Fourth, in the group discussion risks are implicitly identified and alternative strategies or control measures to optimise the project are proposed.

As for the fifth proposition, at BH no analytical evaluation is made, in the sense that all criteria are explicitly evaluated. The only criterion that is explicitly checked, before submission to the board of directors, is the risk capital. Without the confirmation of financial control that the total risk capital does not exceed the equity position, a budget request is not taken into consideration. The other criteria are targets from which deviations are accepted; the reasonableness of a deviation is made in the discussion. Moreover, the board assesses alternatives, but the final decision is formulated in terms of go/no go. The suggestions for optimisation are further discussed and implemented outside the board meeting. A decision is reached by a majority vote, which usually proves to be a unanimous decision. The members of the board of directors are the directors of the five departments of the organisation; one of them has the final responsibility for a project. To remain objective, at least three decision makers must be present to authorise a decision.

As for the sixth proposition, the supervisory board delegates the authority to make investment decisions to the board of directors except for some exceptional budget requests; normally, the supervisory board only needs to be informed about the decisions. The decision is based on an investment proposal which the project manager, the project director,
and financial control need to authorise in the preparation phase. In the approval phase the investment proposal is discussed and authorised in the board meeting.

As for the seventh proposition, the duration of the decision process, Blauwhoed has weekly decision meetings. This frequency hardly asks for flexibility to speed up the decision process when there is an urgent need. The late submission of proposals is not accepted – and therefore it rarely happens. When a proposal is submitted late, it is usually not taken into immediate consideration because the decision makers did not have time to read it and the project is too complicated.

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<th>MANAGEMENT PRACTICES</th>
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<td>WHEN</td>
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<td><strong>1. Determination of risk related decision criteria</strong></td>
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<td><strong>3. Search for relevant and reliable information</strong></td>
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8. Knowingly taking risk at Blauwhoed
4. Identification and analysis of multiple courses of action

Preparation phase Preparing an investment proposal in which:

- a single strategy is designed
- risks are identified implicitly by describing the current state of affairs
- an explicit, qualitative risk identification is made in a separate risk paragraph
- a quantitative risk analysis is made by applying a scenario analysis for multiple (sub)strategies

Preparation phase Calculating the risk capital of a project by making use of a standardised model

Submission phase Assessing the risks in a project individually

Approval phase What if-questioning to identify and assess the impact and probability of risks in the proposed strategy

Approval phase Redesigning the proposed strategy to optimise the profit and/or reduce risks

5. Analytical evaluation

Approval phase Evaluating decision criteria implicitly and explicitly; evaluation of decision procedure

Approval phase Applying progress and profit criteria as targets; risk capital and minimum profit (that equals overhead costs) as condition

Preparation phase Evaluating the risk capital of the project on the maximum risk capital of the portfolio

Approval phase Evaluating possibilities to optimise the proposed strategy

Approval phase Interpreting the discussion and formulating a decision

Approval phase Formulating a decision in terms of go/no go

6. Authorisation of the decision

Preparation phase Giving authorisation on the investment proposal

Preparation phase Giving authorisation on the investment proposal

Approval phase Authorising the decision internally by making a choice based on a majority of votes, but in practice based on consensus

Approval phase Authorising the decision externally

- by informing the shareholders about the decision
- by authorising the internal decision in case of an exceptional budget request

7. Limiting duration

Approval phase Providing a decision structure with a frequency of board meetings every week

Submission phase Accepting late submission of proposals only exceptionally

Development process Informing board members in a board meeting or informally

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Table 8.4 Repertoire of management practices contributing to knowingly taking risks at BH
It can be concluded that most management practices at BH are directed at justifiability; timeliness and accountability are covered by the intentional investment decision procedure. The focus on justifiability could have a negative impact on timeliness. The preparation of the investment proposal takes a considerable amount of time because of the comprehensiveness of the proposals; little flexibility is allowed in the decision process in favor of a well prepared and thoroughly discussed proposal. The members of the board of directors represent different departments, fields of expertise, and levels of involvement in the project. The responsible director participated in the decision process, but cannot make decisions independently: this counterbalances biases, like illusion of control and escalation of commitment, by the more objective views of the other board members. In the end, the decision criteria function 1) as a guideline for the developer based on which he can judge the need for an investment decision; 2) as targets (and conditions) for the board of directors to evaluate a project as a group; and 3) as a set of rules based on which the shareholders have given their mandate to the board of directors and hold them accountable for complying with these rules.
In this chapter the results of the three case studies are analysed to answer the central research question: how do real estate development organisations safeguard that risks are taken knowingly by their investment decision making procedures?

In section 9.1 a cross case analysis is made of TCN Property Projects (TCN), Johan Matser Projectontwikkeling (JMP) and Blauwhoed (BH). The comparison of management practices is made to extract suggested practices based on the similarities between the cases. Moreover, explanations are given why the management practices differ among the organisations making use of the differences in the characteristics of the three organisations and their development procedures.

Section 9.2 answers the central research question. Not only is the concept of knowingly taking risk refined, but the key elements of an investment decision making procedure that guarantee knowingly risk taking behaviour can also be determined. Section 9.2.1 compares the three cases by using the three indicators of knowingly taking risk: justifiability, timeliness and accountability. The different sets of management practices imply that the three organizations have different foci regarding these three indicators. This results in an improved and more complex conceptual model. Section 9.2.2 translates the suggested management practices into a strategy table consisting of a set of key elements of the investment decision making procedure and design options per element.

In section 9.3 the strategy table is tested. The directors of TCN, JMP and BH are asked to use the strategy table to reflect on their decision procedure. The test evaluates the reliability, robustness and applicability of the results.

### 9.1 Cross case comparison of management practices

In the cross case analysis the management practices applied in the three real estate development organisations are compared. The management practices describe the actual and intentional behaviour in a real estate development organisation in relation to the decision activities that are assumed to contribute to knowingly taking risk, as defined in the seven propositions in section 4.1. The comparison results in a set of suggested practices for wider application. If a management practice is applied in all three cases, but differ in their organisational specific application, these differences are explained by organisational characteristics: the generic aspects of the management practice are translated into a sug-
gested practice. If a management practice is only applied in one or two cases, logical reasoning is applied to determine whether this management practice could be of use in the other cases and why this would be additional to the other practices, thus should be regarded as a suggested practice. Moreover, an evaluation of the contribution of the suggested practices to the indicators of knowingly taking risk is made: on the basis of this evaluation and the foregoing analyses, propositions are either confirmed or refined.

The cross case comparison of the cases is described per proposition. First, the suggested practices are presented. These practices are indicated by the number of the proposition and by a letter (e.g. 2b). If a management practice consists of multiple sub practices, an extra number is added (e.g. 3a1). The comparison of the management practices and the suggested practice are presented in a table. The reasoning behind the suggested practices is then given per suggested practice.

9.1.1 Determination of risk related decision criteria

Proposition 1
Determining project specific decision criteria regarding the acceptable level of risk contributes to knowingly taking risk.

From the cross case analysis on proposition 1 it can be concluded that all three organisations apply decision criteria that are defined in either the organisational strategy or the development procedure. For each new project the same criteria are tacitly applied without adjusting them to the specifications of the project or the importance of a project in the portfolio. Although projects differ in size, location, parties involved, and all other variables influencing the risk profile of a project, the decision criteria are not discriminated over the projects. No adjustments are made beforehand, but only during the evaluation of the project, which is described in section 9.1.5. From the cross case comparison four types of criteria are derived that are related to risk. These criteria are:

1a – Progress criteria per development aspect for each decision moment
1b – Profit of the project
1c – A maximum risk capital
1d – The portfolio composition
1e – Quality criteria.

The criteria differ over the cases with respect to actual ‘height’ of the criteria, such as the percentage, portfolio mix, or pre-rental percentage and the way they are calculated. The management practices and the suggested practices are listed in Table 9.1.
The first type of criteria that is applied in all cases is the *progress criteria*. These criteria are determined per decision moment and are related to the development aspects. At TCN the progress criteria are explicitly defined per decision moment in terms of end results per phase and for each of the development aspects. At JMP and BH some of the progress criteria are explicit, while others are implicitly described in the quality manual in terms of the activities performed in a certain development phase. Moreover, the progress criteria for the first decision moments are qualitative, while the criteria for the decision moment ‘start construction’ are quantitative.

The progress criteria intend to guarantee that a certain level of information or control is achieved and thus a certain amount of risk is reduced at each of the investment decision moments. When these criteria are fulfilled, an acceptable level of risk is taken by making new financial commitments. The progress criteria at the decision moments prescribe the ideal development process by relating the activities to each other over time. This intentional development process is the

### Proposition 1: Determination of risk related decision criteria

<table>
<thead>
<tr>
<th>Management practices TCN</th>
<th>Management practices JMP</th>
<th>Management practices BH</th>
<th>Suggested practices</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1A</strong> Applying predefined progress criteria in terms of explicit end results for all development aspects per decision moment</td>
<td>Applying predefined progress criteria in terms of end results for each development phase per development aspect</td>
<td>Applying predefined progress criteria in terms of end results for each development phase per development aspect as target</td>
<td>Applying predefined progress criteria in terms of end results for each development phase in a development strategy</td>
</tr>
<tr>
<td><strong>1B</strong> Applying a predefined profit criterion: RoC &gt; 10.5%</td>
<td>Applying a predefined profit criterion: profit &gt; 11%</td>
<td>Applying a predefined profit criterion: profit &gt; 8%</td>
<td>Applying a predefined profit criterion</td>
</tr>
<tr>
<td><strong>1C</strong> Applying a maximum risk capital on the level of the project in terms of a standardised maximum budget per development phase (&lt; €29.5 mln)</td>
<td>Applying a maximum risk capital for the portfolio (&lt; €54 mln)</td>
<td>Applying a maximum risk capital for the portfolio (&lt; €54 mln)</td>
<td>Applying a maximum risk capital</td>
</tr>
<tr>
<td><strong>1D</strong> Fit in one of the development programs</td>
<td>Fit in the company’s philosophy and portfolio strategy</td>
<td>Fit in the portfolio strategy (functional, location)</td>
<td>Fitting into portfolio strategy</td>
</tr>
<tr>
<td><strong>1E</strong> Focus on product – market combinations</td>
<td>Applying ‘soft’ criteria, such as quality in product and process</td>
<td>Applying ‘soft’ criteria, such as quality in product and process</td>
<td>Applying ‘soft’ criteria, such as image, product quality, process quality</td>
</tr>
</tbody>
</table>

*Table 9.1 Cross case comparison of management practices for the determination of risk related decision criteria*
development strategy. At JMP multiple development strategies are incorporated in the quality manual, since the moment of land purchase is not fixed. At TCN and BH the moment of land purchase is fixed in the project or quality manual, but in practice the moment of land purchase strongly depends on how a project is acquired.

Overall it can be concluded that the determination of a development strategy – criteria on the level of the development aspects per investment decision moment – for a project is a suggested practice. Making criteria explicit for each development aspect per investment decision moment, like TCN, is a point for improvement for the other cases: describing multiple development strategies as standards in a development procedure (project/quality manual) would better reflect the actual development strategies.

Ad 1B The second criterion is profit. The profit criterion at TCN is calculated slightly differently from the criteria at JMP and BH, but they are all based on an investment budgeting model in which costs and revenues are calculated. BH and JMP use a profit, showing the relation between the revenues minus costs and the total costs, of 8% and 11%, respectively. TCN uses a Return on Cost, which represents the proportion net rental income and total development costs, which can be configured to a profit percentage by the gross yield: with a gross yield of 8%, the profit percentage amounts to 20%.

The extent to which the profit margin reflects the level of risk in a project or the risk attitude of the developer cannot be determined based on the empirical data. A higher expected return could indicate that the risk profile of a project is high and thus a higher return is required otherwise one could better invest in projects with a lower risk profile. Among the three cases, the higher expected return of TCN can be partly explained as TCN operates in niche markets. The risk profile of these projects is considered to be higher, as the sales of such projects is often more difficult as investors are not familiar with these products as well as future users. The expected return also depends on the risk attitude of the developer: a profit-driven organisation will set the percentage higher than a more socially or sustainable driven organisation. At JMP and BH one is more willing to hand over a percentage of the profit in return for extra quality of the built environment. JMP and BH are not only trying to increase profits, but also to design and develop sustainable projects. In the end each organisation has to set a profit margin to have a reference point for evaluation; however, it does not directly influence the way risks are managed.

Ad 1C The third risk related decision criterion that is applied is the risk capital defined as the maximum loss in a worst case scenario. At TCN
the risk capital is determined on the project level by maximising the total investment budget for each development phase, while at BH and JMP the risk capital is determined on the portfolio level by maximising the total capital at risk. By maximising the risk capital merely on the level of the project, no insight is given on the impact of a single project on the total risk capital of the portfolio – and whether this jeopardises the survival of the organisation. At TCN it is not part of the decision procedure to determine this portfolio’s impact. Moreover, only evaluating the risk capital on project level allows little spread over the projects – a project with a high capital at risk cannot be compensated by a project with little capital at risk. Another difference between TCN and the other two cases is that at TCN no standardised model is used to calculate the risk capital.

The focus on the risk capital at BH can best be explained by their equity position in relation to their turnover, being the lowest of the three cases. As BH has only a limited equity capital, it strictly observes the criteria in the development strategy and focuses on financial and legal engineering to reduce the risk capital. At JMP the equity position is also stable, but is much higher than at BH, not imposing limitations on the acquisition and development of projects. At TCN the equity position has been growing, but is invested in an asset portfolio; TCN focuses largely on financing with debt capital, thus limiting the required equity.

The determination of the risk capital on the portfolio level is a suggested practice, as this is a guarantee that in a worst case scenario the continuity of the organisation is not jeopardised.

Ad 1D The fourth type of criteria that is used to evaluate projects is the portfolio composition: project variables like size, function, location (in relation to office location) must fit within the long term strategy (BH, JMP) or the different programs (TCN). This criterion is primarily used in the acquisition phase of the project and the first investment decision moment of the development process; once started this criterion is no longer relevant unless the scope of the project changes. The determination of the portfolio strategy in relation to growth ambitions, resources (financial and intellectual) and land positions shapes the risk profile of both the portfolio and the individual project and is a strategic decision.

The formulation of a portfolio strategy is outside the scope of this research, but has much influence on the development strategy. For example, the sales and leasing strategies differ for residential and commercial real estate: private residences can be sold to an end user, while commercial real estate is normally rented first and then sold to an investor. These strategies are described in section 2.2.2. These differences are only slightly reflected in the development strategies described under 1A; nevertheless, multiple development strategies are to be
expected in all three organisations as they all develop multiple types of projects.

The formulation of a portfolio strategy is a suggested practice, but the translation into a development strategy is most important on the project level. As the determination of portfolio strategies is a strategic decision, the process of making these decisions is not examined.

**Ad 1E** The fifth type of criteria that is used to evaluate projects is the quality of both the development process and the project. A good *product–market combination* is essential for the rental or sales of a project in all three organisations: a process can be kept completely under control, but when a project does not sell, a project is not feasible. Thus, the quality criterion is important not in terms of risk, but in terms of profitability. Moreover, both realising high quality projects and being a reliable partner in a development process help the image of a real estate development organisation. JMP in particular profits from a good track record, as municipalities occasionally invited it to enter development cooperations.

**Evaluation of the proposition**

The determination of criteria contributes to the justifiability of a decision, as was expected in chapter 4: determining criteria beforehand reveals what criteria will be used, how the decision can be justified or explained to the decision makers, the project manager and the shareholders. Moreover, the suggested practices show that criteria are determined on the level of the development aspects of a project as well as on the portfolio level of the organisation. An investment decision is to be justified on both levels. From the case analyses in sections 6.3, 7.3 and 8.3 and the cross case comparison, it can be concluded that the proposition can be adjusted as follows: Determining decision criteria on both the project and the organisational level regarding the acceptable level of risk contributes to knowingly taking risk.

9.1.2 Timely recognition

**Proposition 2**

*Timely recognition of situations in which the risk profile of a project is about to change significantly contributes to knowingly taking risk.*

From the comparison of the management practices for the timely recognition of the need for an investment decision, three suggested practices can be extracted:

2a – The reliance on the expertise of the project manager to recognise the decision moments
2B – Creating incentives to act upon the development procedure
2C – The monitoring of the project during the development process.

The motives for trusting the project manager, the different incentives and the different ways of monitoring a project are presented in Table 9.2 and discussed below.

<table>
<thead>
<tr>
<th>Proposition 2: Timely recognition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Management practices</strong></td>
</tr>
<tr>
<td>TCN</td>
</tr>
<tr>
<td>2A Trusting the expertise of project manager to foresee problems or opportunities</td>
</tr>
<tr>
<td>2B Creating awareness of decision moments by a clear division of responsibilities and authorities</td>
</tr>
<tr>
<td>Creating awareness of decision moments by standardised development procedure</td>
</tr>
<tr>
<td>Stimulating a project manager to act upon the development procedure by an individual reward system</td>
</tr>
<tr>
<td>2C Continuous monitoring a project on cost overruns by financial control</td>
</tr>
</tbody>
</table>

*Table 9.2 Cross case comparison of management practices for timely recognition*

Ad 2A The project managers are expected to recognise the need for a decision. At TCN the strategic board assigns this responsibility to the project manager from the idea of stimulating entrepreneurship throughout the organisation. The project manager has the freedom to develop a project at his own discretion, but within the limited budget that is granted at the previous decision moment. Trust plays an important role in the JMP culture. To make sure that few formal procedures
and safety nets are necessary, the project managers must have seniority. This is reflected in the human resources policy: most of the workforce consists of senior managers. At BH the primary responsibility to initiate an investment decision is assigned to project managers, in consultation with the project director. In contrast to the two other organisations, the project manager works more closely with other team members and the recognition is a more shared responsibility. The ‘Gamma’ and ‘Delta’ cases of BH are a good example of the role of the planning, the development procedure and the decision criteria as supportive tools to screen and evaluate the viability of the approval for new budget.

The primary responsibility to recognise the need for an investment decision is attributed to a project manager. Therefore, the strategic board trust the expertise and integrity of a project manager. The organisational culture, and the director’s idea of entrepreneurship, reflects the emphasis that is placed in this suggested practice in relation to the other stimuli.

Ad 2B Several incentives can be regarded as strategies for recognising an investment decision moment timely: the incentives do not directly influence the way the need is recognised, but raises consciousness or willingness to act. The first incentive, found in all three cases, is a clear division of responsibilities and authorities. This division is strongly related both to the hierarchical organisational structure and the structure of the project team for a development project. As project managers are not authorised to sign large financial arrangements and the investment decisions are mostly related to these arrangements, they have to prepare an investment proposal for approval.

The second incentive, also applied in all three cases, is the development procedure: the phasing of, and thus the investment decision moments in, a development process and the related decision criteria. By making all project managers and others involved in a project aware of the intentional development procedure determined in a project or quality manual, a timely recognition is stimulated. At TCN the development procedure is not only spread among the employees in the form of a booklet, but the procedure is summarised on a kind of placemat, is propagated by the CEO and junior employees start in a development program in which they are introduced to the way of working at TCN. At BH and JMP the intentional procedure is less actively spread, but they had it institutionalised by an ISO quality management system. Somewhat contradictorily, the ISO certification is still updated annually at JMP, while they follow procedures less strictly than at BH: the reason for the ISO certification is related to the requirements to enter a development competition rather than to manage internal processes. However, BH cancelled the ISO certification in 2005, seeing it as an extra adminis-
trative burden next to the internal procedures and control systems.

The third incentive is a financial reward system with a performance-dependent part of the salary. Part of the performance is measured by working within time and budget. A timely recognition of changing conditions is crucial in keeping a project under control. This does not imply that the project manager has to solve all problems, but at least to foresee them and call upon assistance from other team members or the decision committees to search for a solution. In all three cases the salary is partly variable, but only at TCN is this really regarded as an incentive, which is characteristic for the more individual-driven culture, which is in line with the entrepreneurial character and trust base described above.

It is a suggested practice to give incentives to the project managers, but the focus between giving the project manager his own responsibility, creating a clear structure within which to work and rewarding the project manager depends on the organisational culture and is related to 2A.

Ad 2C The progress of a project is monitored to recognise the need for a timely decision. The differences in monitoring come from the people who monitor and from what they monitor. TCN’s Assets Department monitors the costs in relation to the budget. In the case of a budget overrun, the financial controller discusses with the Program Committee what actions to take. At JMP the projects are monitored both in the board meetings and by informal interaction between the statutory director and the project managers. In the board meetings the responsible directors describe possible problems or opportunities and the other directors give their advice; a decision is then taken outside the board meeting by the statutory board in consultation with the involved project manager and director. Moreover, the statutory director communicates directly with the project manager about the progress; the verbal and the non-verbal communication gives the director insight in the actual status of the project and whether the project manager is able to solve the problems. The advantage of having people other than the project manager monitor the progress, is that they are not directly involved in the project and are more objective. Moreover, they can take other projects or general market conditions into consideration. The disadvantage of monitoring the expenditures is that they often do not oversee the entire picture, but only the key figures. At BH the monitoring of a project by financial control is not directly related to the recognition of investment decisions and informal communication is not explicitly mentioned as an important factor in the recognition of an investment decision.

Monitoring is a suggested practice to recognise an investment deci-
sion: in all three organisations monitoring takes place, although at TCN and BH it is not explicitly regarded as an important part of risk management. The formal monitoring in all three organisations can be used more explicitly to support the project manager’s supervision of a project and his criticism of its progress. The possibilities of informal monitoring depend more on the director’s management style and the size of the organisation. In a small organisation, like JMP, it is feasible for a director to oversee all projects informally, while at TCN and BH this is more difficult.

**Evaluation of the proposition**

The management practices related to timely recognition logically contribute to the timeliness of a decision. The analysis of this proposition proves that the development procedure in which the development strategy and thus the decision criteria are determined, not only contributes to justifiability (section 9.1.1), but also to timeliness. Moreover, the division of responsibilities, which in the first place is related to the accountability of a decision, also affects the proactive attitude of a manager. Timeliness, accountability and justifiability are more strongly related to each other than expected in chapter 4. From the case analyses (sections 6.3, 7.3 and 8.3) and the cross case comparison, it can be concluded that the proposition is confirmed; and, moreover, that the importance of the proposition is even higher than expected.

9.1.3 Search for reliable and relevant information

**Proposition 3**

*Making use of reliable and relevant information contributes to knowingly taking risk*

The comparison of the management practices shows five suggested practices focused on searching for reliable and relevant information:

2c – Monitoring the project during the development process to gather information (described in 9.1.2)

3a – The preparation of an investment proposal to transfer project information from the project team to the decision makers, who are much less or not at all involved in a project

3b – The assessment of the proposal individually making use of personal knowledge

3c – The assessment of the proposal in a group discussion

3d – Inviting a project manager to the decision meeting to give additional information.
The comprehensiveness of these actions depends on the requirements of the investment proposal and the composition of the decision committees. The differences among the three cases are presented in Table 9.3 and described below.

**Ad 3A** The primary source of information for the decision makers in all three cases is the investment proposal that project managers have to prepare and submit to the decision committee. The investment proposal contains real time information on the project. To make sure all relevant information is presented in the proposal, the project manager follows a format. The main part is the description of the status of the project: in all three formats the project description comprises the development aspects (land development, planning application, design, construction, leasing, sales and financing). Special attention is paid to the cooperation with other parties and the contractual arrangements. In addition, future estimates of the investment budget and planning are provided. The project manager has the final say on what goes into the project description. At TCN, missing or duplicated information are points that need improvement: this stresses the importance of the proposal, but it is hard to determine which details are most pertinent to a specific project.

In addition to the expertise of the project manager, the reliability of the proposal is guaranteed at all three cases by the use of external sources, such as market reports by a real estate agent, construction costs estimates, and soil reports. These reports are gathered during the development process. At BH these reports are added to the investment proposal as supplements, while at TCN and JMP the project manager refers to them in the proposal, but does not add them. The project manager combines the data in the external reports with his own expertise and expectations for a specific project. Too many deviations from the external sources are an indication of an overestimation of the profitability of a project: since these kind of biases are common, the reference to external sources or to other internal experts is recommended.

The internal experts are consulted in different ways in each case. At BH the project manager consults his project team members extensively in order to determine the course of action, to have the latest information on the market, and to check the legal aspects of the underlying arrangements. A market or legal report written by internal consultants are standard supplements to a proposal. At JMP the project team consists only of a conceptual and technical developer and the project director; next to consulting his project team, the responsible developer uses the expertise of colleagues as needed. At TCN the project manager consults his team members in the departments of Concepts, Development and Management during the development process, but not explicitly.
<table>
<thead>
<tr>
<th>Proposition 3: Search of reliable and relevant information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Management practices</strong></td>
</tr>
<tr>
<td><strong>TCN</strong></td>
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<tr>
<td><strong>JMP</strong></td>
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<tr>
<td><strong>BH</strong></td>
</tr>
<tr>
<td><strong>2C</strong></td>
</tr>
<tr>
<td><strong>3A</strong></td>
</tr>
<tr>
<td><strong>3A1</strong></td>
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<tr>
<td><strong>3A2</strong></td>
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<tr>
<td><strong>3A3</strong></td>
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<tr>
<td><strong>3A4</strong></td>
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<tr>
<td><strong>(6A)</strong></td>
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<tr>
<td><strong>3B</strong></td>
</tr>
<tr>
<td><strong>3C</strong></td>
</tr>
</tbody>
</table>

9. Cross case analysis
in preparation of the proposal. Legal and Assets are only occasionally asked for an advice. Since a great deal of expertise is available within the organisation, it can be asked why the contribution of internal experts is not formalised at Tcn and jmp as it is at bh.

As a final check of the quality of the investment proposal, in all three cases the project director must authorise the proposal before submission. By authorising the proposal the project director makes a preliminary evaluation of the project and assesses the probability of approval of the budget request. This commits the project director to the project and assumes some accountability. Moreover, the project director can assist less experienced project managers in writing the proposal. At bh a financial controller checks the reliability and feasibility of the financial aspects of the proposal in addition to the project director. Without authorisation of financial controller on the risk capital criterion, the proposal is not considered by the decision makers. At jmp and tcn the check on the financials takes place during the approval procedure along with the evaluation of the other decision criteria.

**Ad 3B** During the submission phase or as part of the approval phase, each decision maker takes note of the investment proposal. Regardless of the decision making process taking place in an individual (jmp) or a group setting (tcn, bh), the decision makers add information and check the accuracy of the information by tacitly relying on their own knowledge of real estate development. A decision maker might systematically and consciously check the separate development aspects, but when it comes to an integral assessment of the project, intuition comes into play. On the one hand intuition has its positive side, as it is largely based on experience and the decision makers all have seniority in the field of real estate development. On the other hand, an individual can easily be biased. Therefore, in all three cases some level of intersubjectivity is guaranteed.

**Ad 3C** At jmp intersubjectivity is created when a series of decision makers from different fields approve the proposal. Only in case of high complexity is a group discussion arranged to which even the project manager can be invited. What is lacking in the approval procedure for the first decision moment is the involvement of the development director: except for the fact that his expertise is pertinent to this phase of the

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Table 9.3 Cross case comparison of management practices for search of information

<table>
<thead>
<tr>
<th>Inviting a project manager to the PC/IC meeting to give additional information</th>
<th>Inviting a project manager to an ad hoc decision meeting to give additional information</th>
<th>Inviting a project manager to the decision meeting to give additional information</th>
<th>Inviting a project manager to the decision meeting to give additional information</th>
</tr>
</thead>
<tbody>
<tr>
<td>3D</td>
<td>3D</td>
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development process to check the reliability of, for example, the construction costs, he also becomes responsible for the project after this decision and has to live up to the raised expectations.

At BH and TCN the approval takes place in a group setting in which the projects are explicitly discussed to fill in missing information and reach consensus on the estimates in the proposal. The group composition influences the content of the discussion. The decision makers at BH are directors with different fields of expertise; in addition, the responsible project director sits on the decision committee. The other members have little involvement in the project. At TCN there is normally a two-tier approval procedure: the first group of decision makers, the Program Committee, is composed of program directors, including the responsible director, with experience in a specific real estate sector. As the decision of the PC is not the final approval, group members are somewhat reluctant to be very critical of a proposal, as this might result in criticism on their own proposals. The second group, the Investment Committee, is composed of decision makers with a financial background and shareholder representatives. In this committee the members are much more critical of a proposal.

Ad 3D The decision committees of both TCN and JMP sometimes invite the project manager to join the decision meeting to offer extra information. Both the information itself, and the way the project manager presents it give the decision makers extra insight into the project. All the information is used to assess the viability of the project.

Evaluation of the proposition

In general, all practices to search for information contribute to the justifiability of a decision. BH, however, attaches more importance to the writing of a comprehensive investment proposal than do TCN and JMP. In compensation for the lack of comprehensiveness of JMP proposals, its decision maker gathers information on the project during the development process, so when a decision needs to be made, most of the important issues are already known. As explained in the previous section, the statutory director monitors the progress of projects both formally in the board meetings, and informally by direct communication with the project manager. Of course, at BH and TCN some communication takes place between some of the decision makers and the project team members, but the decision primarily depends on the investment proposal.

An important aspect of searching for complete and reliable information in order to justify a decision is assessing the proposals in a group setting. However, to make these group discussions effective, the groups must be composed of people with the right level of accountability. At
The Program Committee has too little authority, while the program directors do have a personal interest in a proposal for which they take responsibility. In contrast, at JMP the director of Development & Construction, who becomes responsible for a project after the initiative phase, is not involved in the first investment decision moment. His expertise is not used to assess the reliability of the budget and planning. From the case analyses (sections 6.3, 7.3 and 8.3) and the cross case comparison, the proposition can be adjusted as follows: Making use of reliable and relevant information, both transferred from a project manager to a decision committee member formally and informally, contributes to knowingly taking risk.

9.1.4 Identification and analysis of multiple courses of action

**Proposition 4**

*Identifying and analysing multiple courses of action contributes to knowingly taking risk.*

The general conclusion that can be drawn from the analysis of each of the three cases is that only a single course of action is taken into serious consideration. This course of action is presented in the investment proposal. Subsequently, several practices are applied to identify and analyse the risks involved in the proposed course of action, and occasionally alternative strategies are designed and assessed. From the cross case analysis the following suggested practices are identified:

4A – Implicit and explicit identification and qualitative analysis of risks in the investment proposal
4B – Analysis of the risk capital
4C – Implicit judgment of the risks by the individual decision makers
4D – Implicit assessment of the risks in a group discussion
4E – Optimizing the proposed strategy during the decision meeting.

The differences among the cases come from the requirements on the investment proposal, the composition of the decision committees, and the focus of attention during the group discussion. The management practices and its differences are presented in Table 9.4 and described below.

Ad 4A In all three cases a project manager writes an investment proposal based on which approval can be given to start a new development phase according to the proposed strategy. The main activities shaping the strategy are the contractual arrangements with the involved parties: the sharing or division of risks is determined as are the resolutive conditions, payment conditions, time schedules and deadlines. In the
### Proposition 4: Identification and analysis of multiple courses of action

<table>
<thead>
<tr>
<th>Management practices</th>
<th>Management practices</th>
<th>Management practices</th>
<th>Suggested practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCN</td>
<td>JMP</td>
<td>BH</td>
<td></td>
</tr>
<tr>
<td><strong>4A</strong> Preparing an investment proposal in which:</td>
<td><strong>4A</strong> Preparing an investment proposal in which:</td>
<td><strong>4A</strong> Preparing an investment proposal in which:</td>
<td>Including a qualitative risk analysis in the investment proposal by:</td>
</tr>
<tr>
<td>...a single strategy is designed</td>
<td>...a single strategy is designed</td>
<td>...a single strategy is designed</td>
<td>...designing a single strategy</td>
</tr>
<tr>
<td>...risks are identified implicitly by describing the current state of affairs</td>
<td>...risks are identified implicitly by describing the current state of affairs</td>
<td>...risks are identified implicitly by describing the current state of affairs</td>
<td>...identifying risks implicitly by describing the current state of affairs</td>
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<tr>
<td>...an explicit, qualitative risk identification is made in a separate risk paragraph – visualised in a spider diagram</td>
<td>...an explicit, qualitative risk identification is made in a separate risk paragraph</td>
<td>...an explicit, qualitative risk identification is made in a separate risk paragraph</td>
<td>...identifying risks explicitly, and analysing them qualitatively, in a separate risk paragraph</td>
</tr>
<tr>
<td>4A4</td>
<td>4B</td>
<td>4C</td>
<td>4D</td>
</tr>
<tr>
<td>Calculating the risk capital of a project by making use of a standardised model</td>
<td>Calculating the risk capital of a project by making use of a standardised model</td>
<td>Calculating the risk capital of a project by making use of a standardised model</td>
<td>Calculating the risk capital of a project by making use of a standardised model</td>
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<tr>
<td>Assessing the risks in a project individually by the project, financial and statutory director(s)</td>
<td>Assessing the risks in a project individually by the project, financial and statutory director(s)</td>
<td>Assessing the risks in a project individually by the project, financial and statutory director(s)</td>
<td>Assessing the risks in a project individually by the project, financial and statutory director(s)</td>
</tr>
<tr>
<td>What if-questioning to identify and assess the impact and probability of risks in alternative strategies in the PC/IC meeting</td>
<td>What if-questioning to identify and assess the impact and probability of risks in the proposed strategy in the board meeting</td>
<td>What if-questioning to identify and assess the impact and probability of risks in the proposed strategy in the board meeting</td>
<td>What if-questioning to identify and assess the impact and probability of risks in the proposed strategy in the board meeting</td>
</tr>
<tr>
<td>4E</td>
<td>4D</td>
<td>4C</td>
<td>4B</td>
</tr>
<tr>
<td>Redesigning the proposed strategy to optimise the profit and/or reduce risks</td>
<td>Redesigning the proposed strategy to optimise the profit and/or reduce risks</td>
<td>Redesigning the proposed strategy to optimise the profit and/or reduce risks</td>
<td>Redesigning the proposed strategy to optimise the profit and/or reduce risks</td>
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</table>

| **Table 9.4** Cross case comparison of management practices for identification and analysis of courses of action | **9. Cross case analysis** |
development phase previous to the investment decision moment these arrangements are negotiated; in fact the strategy is designed during the development process and the decision making process is aimed at formally approving this strategy. In the proposal the project manager presents only the current status of the project, but does not show the considerations he made in shaping the strategy, although this could be convincing especially when the strategy deviates from the intended development strategy. The use of real time information only implicitly identifies the risks. At JMP this description is much less comprehensive than at TCN and BH.

Risks are identified explicitly in a separate section of the proposal at TCN, JMP and BH: in this section the main risks are described in terms of what risk events can occur, but leaving open the assessment of the probability and impact to the decision makers themselves. In fact, the risk identification can be regarded as a summary of the proposal, as all these risks have already been described implicitly in the previous sections. In these descriptions, the project managers rarely even use the risk terminology. Only at BH in some proposals a quantitative analysis of the impact of a few scenarios is made. For example, a scenario analysis is made to determine the expected profit for different proportions of social sector and private sector apartments (different strategies) under varying sales percentages (scenarios), as described in the case illustration in section 8.3.4.

Ad 4B In addition to the investment proposal, at BH and JMP the risk capital is calculated by financial control making use of a standardised model. The risk capital is a quantitative analysis of the impact of a worst case scenario (the cancellation of the project due to inability to change the zoning plan, changing market conditions, inability to purchase the land) taking into account all safety nets and control measures in the current strategy. These control measures determine the exit strategy.

Ad 4C After submission the individual decision makers assess the proposal. At JMP the submission phase and the approval phase can hardly be distinguished as they both take place in an individual setting: the assessment of risks takes place implicitly. The way the decision makers analyse and evaluate the risks and make their judgment is therefore only based on interviews and a transfer meeting. At BH and TCN the individual assessment of risks after submission is not examined.

Ad 4D/E In both the submission and the approval phases of the decision process, the search for information and assessment of the project take place at the same time. During the two decision meetings at TCN, by the Program Committee and the Investment Committee, most of
the time is spent on searching for additional information (previous step) and analysing the risks of a project. By checking the reliability of the information, the probability of the strategy is assessed at the same time. When few risks are identified, the decision makers reach a decision quickly. However, when more risks are identified, the discussion takes longer and takes the form of what-if-questioning. In answering these questions the decision makers look for safety nets in the strategy: based on these control measures the expected loss in case of occurrence of the risk is calculated by heart. These estimates are very rough, but decision makers consider them sufficient to make an investment decision. In assessing the risks, they make use of the experts present in the PC and IC.

At BH less time is spent on searching for additional information and what-if-questioning than at TCN: the project team and financial control performed these reliability checks in the preparation phase. Therefore a decision can be made very quickly, but when a proposal is discussed more comprehensively it is about possibilities to optimise the proposed strategy by adjusting arrangements to reduce the risk even further or for example by increasing the probability of winning a competition. The development process is already focused on financial and legal engineering, but this is also the topic of discussion in the decision meeting.

At JMP most of the analysis during the approval phase is done individually, except when a special decision meeting is arranged and at the transfer meetings between the Concepts and Development directors. During a transfer meeting a quite structured and comprehensive analysis is made of all revenues, costs and planning: the reliability of each estimate is checked and the measures that are taken to ascertain the revenues, costs, and planning as far as applicable in that phase of the process are verified. This analysis is intended to gain insight into the risks and control measures taken, but without using these terms. The discussion is almost a game of question and answer between the two directors who take opposing roles: these roles fit their expertise, phase in the process, their personality but is partly exaggerated in the interest of clarification. However, the goal of this meeting is not to make an investment decision, but to transfer the responsibility of the project internally.

Evaluation of the proposition
The identification and analysis of the courses of action is of major importance to justify a decision, and more importantly the risks that are taken by making the decision. The analysis shows that risks are rarely explicitly identified and analysed, as was expected from the preliminary enquiry described in chapter 1. As for the intentional decision procedure, little direction is given on analysing risks except for a required
qualitative risk identification in the proposal, the calculation of the risk capital, and the provision of a decision setting in which the decision makers are expected to make an adequate risk assessment. Thus, decision makers do not analyse risks in an instrumental way by using risk analysis techniques or other decision aids, but in a more conceptual application of the principles in their line of thinking. The expertise and experience of multiple is considered to be more effective and efficient than risk analysis techniques, as risks in a real estate development project cannot be measured objectively.

The case descriptions also show that only one course of action or strategy is formulated in the investment proposal: before writing a proposal a project manager has screened multiple alternatives on feasibility, but these considerations are not made explicit. In addition, exit strategies are analysed by means of calculating the risk capital; and, in case of major risks or opportunities, alternative strategies are explored during a decision meeting to optimise the proposed strategy. From the case analyses in sections 6.3, 7.3 and 8.3 and the cross case comparison, it can be concluded that the proposition can be adjusted as follows: Identifying and analysing at least a proposed strategy and an exit strategy, contributes to knowingly taking risk.

9.1.5 Analytical evaluation

**Proposition 5**

_Evaluating the courses of action on the predefined criteria analytically contributes to knowingly taking risk._

In all three organisations the investment proposals are implicitly evaluated: an analytical evaluation of each of the criteria is in no single case observed. A decision is reached by applying the following three suggested practices:

5A – By evaluating the project implicitly and explicitly with varying weights of the different decision criteria

5B1 – By interpreting the discussion and seeking consensus for a decision among the decision makers

5B2 – By formulating the decision at least in terms of go/no go, and also in terms of conditions or restrictions.

The differences among the cases can be explained by the decision setting, but also by the importance attached to the decision procedure. The organisation specific management practices are presented in Table 9.5 and described below.
### Proposition 5: Analytical evaluation

<table>
<thead>
<tr>
<th>Management practices</th>
<th>Management practices</th>
<th>Management practices</th>
<th>Suggested practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCN 5A</td>
<td>JMP 5A</td>
<td>BH 5A</td>
<td></td>
</tr>
<tr>
<td>Evaluating decision criteria explicitly only when a committee member has real problems with deviating from a criterion</td>
<td>Evaluating the project integrally, making implicitly use of formal decision criteria and experiential rules by the project, financial and statutory director(s)</td>
<td>Evaluating decision criteria implicitly and explicitly; evaluation of decision procedure by the board of directors</td>
<td></td>
</tr>
<tr>
<td>1A, 1B</td>
<td>1A, 1B</td>
<td>1A, 1B</td>
<td></td>
</tr>
<tr>
<td>Evaluating the programmatic issues of the project in the PC</td>
<td>Applying progress and profit criteria as targets; minimum profit (that equals overhead costs) as condition by the statutory director(s)</td>
<td>Applying progress and profit criteria as targets; risk capital and minimum profit (that equals overhead costs) as condition by the board of directors</td>
<td>...by applying progress and profit criteria as targets</td>
</tr>
<tr>
<td>1C</td>
<td>1C</td>
<td>1C</td>
<td></td>
</tr>
<tr>
<td>Evaluating the financial issues of the project with the risk capital as a condition and the other criteria as targets in the IC</td>
<td>Evaluating the risk capital of the project against the maximum risk capital of the portfolio by the financial director</td>
<td>Evaluating the risk capital of the project on the maximum risk capital of the portfolio by the financial controller</td>
<td>...by applying the risk capital as condition</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Evaluating possibilities to optimise the proposed strategy in the board meeting</td>
</tr>
<tr>
<td>5B</td>
<td>5B</td>
<td>5B</td>
<td></td>
</tr>
<tr>
<td>Interpreting the discussion and formulating a decision by the chairman of the PC/IC</td>
<td>Judging the project individually by the project, financial and statutory director(s)</td>
<td>Interpreting the discussion and formulating a decision by the chairman of the board of directors</td>
<td>Interpreting the discussion and formulating a decision by the chairman of the decision committee</td>
</tr>
<tr>
<td>5B1</td>
<td>5B1</td>
<td>5B1</td>
<td></td>
</tr>
<tr>
<td>Formulating a decision in terms of go/no go, including conditions or directions</td>
<td>Formulating a decision in terms of go/no go by the statutory director(s)</td>
<td>Formulating a decision in terms of go/no go</td>
<td>...in terms of go/no go</td>
</tr>
<tr>
<td>5B2</td>
<td>5B2</td>
<td>5B2</td>
<td>...with additional conditions</td>
</tr>
</tbody>
</table>

**Table 9.5 Cross case comparison of management practices for analytical evaluation**

*Ad 5A* Although all three cases have determined decision criteria explicitly, the decision criteria are hardly mentioned during the approval process. Occasionally, at TCN the chairman of the Investment Committee referred to the progress criteria and in the ‘Omega’ case, described in the case illustration in 6.3.5, the commissioner explicitly mentioned the maximum risk capital. In that case it was clear for the
members that they were going to deviate from the progress criteria, but they were looking for ways to keep the risk capital within limits by granting only partial budgets until sufficient progress had been booked. Still, not all criteria were met, but given the circumstances they thought it was better to continue than to cancel the project and take the loss, both in financial terms and loss of reputation.

At JMP the decision makers evaluate the project individually, thus the considerations remain implicit. They indicate that projects are all evaluated on the basis of the same elements, being the development aspects and the budget and planning, but there is no decision rule for the integral evaluation of all aspects in the unique context of a project. The integral judgment is made intuitively: at that moment it is the individual expertise and experience that counts. Moreover, the statutory directors do not only take the progress criteria into account, but the functioning of the project team as well. It is not just about what the risks are, but whether the project team is capable of dealing with those risks, and whether the project manager is really capable of meeting his own budget and planning.

At BH the risk capital is evaluated before submission to the decision makers; proposals without a positive evaluation are not taken into consideration. In almost all cases the project slightly deviates from the intentional criteria; in such a case some other criteria, such as availability of personnel, distance to location, image, investing before the end of the financial year, can tip the balance. When a project deviates strongly from the intentional decision criteria, a similar level of risk must be guaranteed by other than the standard control measures. Sharing risk with other parties is very suitable to reduce risk, in return for profit, and to control the risk capital and guarantee continuation. This cooperation should preferably lead to reciprocity, which is also beneficial for both continuation and profitability.

The evaluation of investment proposals is to a large extent implicit; still it can be concluded that decisions are justified by using the risk capital as a condition. The other criteria are targets from which some deviation is acceptable.

Ad 5B Although decision criteria are not checked in an analytical way during the group discussion, at the end of the discussion a decision must be made. Both at T CN and BH the chairman of the decision committee interprets and summarises the key points of discussion and formulates a decision. The decision at T CN is formulated either in terms of go or no go, when the decision is straightforward, or in terms of conditions or restrictions when it is not. These conditions indicate what must be improved before the budget request is granted, or under what conditions the project can continue. Sometimes this results in the granting of
a limited budget or the restriction to present the progress of the project in a limited time period. At BH, conditions and optimisation strategies are discussed during the discussion, but they are not formally recorded in the minutes. At JMP the decision is merely formulated in terms of go or no go.

*Evaluation of the proposition*

The evaluation of investment proposals takes place implicitly: the considerations are only made explicit in the formulation of a decision by which the decision can be justified. Because of the nature of the business, this step can hardly be made more explicit or objective. In the end what is most important is whether or not both the decision makers and the project managers are willing to be held accountable for the decision. From the case analyses in sections 6.3, 7.3 and 8.3 and the cross case comparison, the proposition can be adjusted as follows: Evaluating the courses of action on the predefined criteria both analytically and by expert judgment contributes to knowingly taking risk.

9.1.6 Authorisation of the decision

*Proposition 6*

Authorising the decision at the organisational level that is capable of dealing with the involved risk level contributes to knowingly taking risk.

The formal authorisation procedure is important, as responsibility must be taken for the financial commitments in a project and someone can be held accountable for the outcome of the decision. Furthermore, the way in which the authorisation procedure is organised determines which actors, with their own expertise and experience, are involved in the decision phases and thus contribute to the justifiability of the decision. In general, three suggested practices can be extracted from the cross case comparison:

6a – Authorising the investment proposal before submission to the decision committee

6b – Authorising the decision internally

6c – Authorising the decision externally (by the shareholder).

The authorisation procedures differ on the decision authority of the project director, the decision setting, the group composition, and the involvement of the shareholder. These differences can largely be explained by the size and structure of the organisation. These differences are presented in Table 9.6 and described below.
Proposition 6: Authorisation of the decision

<table>
<thead>
<tr>
<th>Management practices</th>
<th>Management practices</th>
<th>Management practices</th>
<th>Suggested practices</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TCN</strong></td>
<td><strong>JMP</strong></td>
<td><strong>BH</strong></td>
<td><strong>JMP</strong></td>
</tr>
<tr>
<td>6A Giving authorisation on the investment proposal by the program director</td>
<td>Authorising the decision internally by the project director</td>
<td>Authorising the decision on the investment proposal by the project director</td>
<td>Giving authorisation on the investment proposal before submission</td>
</tr>
<tr>
<td>6B Authorising the decision internally in a multi-tier approval process by the PC-IC (-EC)</td>
<td>Authorising the decision internally by the board of directors</td>
<td>Authorising the decision internally on the board level of the organisation</td>
<td></td>
</tr>
<tr>
<td>6B1 Seeking consensus among the decision committee members (formal decision rule is unanimity) in the PC/IC</td>
<td>Making a choice based on unanimity in case of an ad hoc decision meeting</td>
<td>Making a choice based on a majority of votes, but in practice based on consensus in the board of directors</td>
<td>…by seeking consensus among the decision makers</td>
</tr>
<tr>
<td>6C Involving the shareholder directly in the decision process by participation in the IC and EC</td>
<td>Getting authorisation from the shareholder by a formal approval of the responsible commissioner</td>
<td>Authorising the decision externally in a shareholders meeting</td>
<td>…by informing the shareholders about the decision</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>…by authorising the internal decision in case of an exceptional budget request</td>
</tr>
</tbody>
</table>

Table 9.6 Cross case comparison of management practices for authorisation

Before describing the actions, the general authorisation procedures are recalled for the three cases. At **TCN** authorisation is given in a multi-tier approval process: the Program Committee (PC) decides on the programmatic issues and the Investment Committee (IC) decides on the financial issues. The Executive Committee comes into play in case of major disagreement or indecisiveness in the IC. At **JMP** authorisation is given successively by the responsible project director, the financial director and the statutory director(s). At **BH** authorisation is given in the board of directors.

Ad 6A The first step precedes the final approval procedure described above. This step ensures that the proposal is authorised by a responsible director on the portfolio or program level before submitting it to
the decision committees on the strategic level of the organisation. At T CN this authorisation is given by the program director who is responsible for all of the projects in this program and who sits on the Program Committee. At B H the project director and a financial controller give their authorisation on the proposal. The project director, who works within the area of responsibility of the departmental director (Residential or Commercial Real Estate), approves the proposal integrally, while the financial controller authorises the proposal only based on the evaluation of the risk capital. Neither the project director nor the financial controller take part in the internal authorisation of the decision. At J MP no clear distinction can be made between the authorisation of the proposal and the decision. The project director and the financial director both have to sign the approval form, but the statutory director(s) make the final decision.

Ad 6B The internal authorisation differs mainly in the number and composition of decision makers. At J MP the project director, the financial director and the two statutory directors make the decision. The first two decision makers represent two out of three departments: either the Concepts department or the Development and Construction department, and the financial department. The statutory directors represent the board. The decision rule at J MP is that the statutory directors have the final say. In practice they reach consensus, but if necessary the chairman of the board has the authority to decide. At B H the board of directors, consisting of the CEO, the CFO, the Commercial Real Estate director and the Development & Construction director makes and authorises the decision. A decision must be reached by a majority of votes. In practice, a decision is reached by consensus among the members of the decision committee. Only occasionally are some remarks made about the formulation of the decision or its follow up. At T CN the decision is made in two steps: first by the PC and then by the IC. The PC consists of all program directors, the head of all program directors, and the CEO. The PC does not have other means to exercise power, such as a hierarchical position or allocation of the financial resources, aside from their expertise and experience. Their role is therefore ambiguous – as described in section 9.1.3 (3c). The Investment Committee evaluates a project on the financial prospect and has the means to allocate budget to the project. The IC members are the CFO, the CIO, the CPO and the commissioners of the shareholders. Each IC member has a veto right, but this right is never exercised.

The differences in the approval procedure can be explained by the stratification and departmentation of the organisational structure. The levels of the organisation are involved in the preliminary authorisation; at B H the preliminary authorisation is given by people lower in the
organisation than at JMP and TCN, which is a logical consequence of the size of the organisation. Still, the size of the organisations ranges from 40-100 employees. The departmentation of the organisation has more impact on the decision procedure. The organisational structure of TCN is a matrix of functional programs and disciplinary departments; however, these programs and the financial department are represented, but the departments of Concepts, Development, and Management are not involved in the approval procedure. Moreover, the participation of the CEO in the PC is remarkable, as he has the highest hierarchical authority in the organisation and is the chairman of the Executive Committee. If a project must be submitted to the EC, after approval by the PC but despite disagreement or indecisiveness in the IC, it seems illogical that the CEO will not reapprove it. At BH the organisation is divided into three departments of which two are functional (Residential and Commercial) one is disciplinary (Development & Construction), and one is supporting (Finance & Legal). All of these departments are represented on the board. At JMP three departments are distinguished: Concepts, Development & Construction and Finance & Control. In the approval procedure either the Concepts director or the Development & Construction director is represented. From the perspectives of accountability and justifiability it is not reasonable to exclude the Development & Construction director as he has complementary expertise. Moreover, he eventually has to take over the responsibility of the project.

Ad 6C The final difference comes from the involvement of the shareholder. At JMP and BH the shareholder is asked for approval after the internal authorisation. At JMP the shareholder’s approval is needed for the investment decisions of land purchase and start construction, whereas at BH the board has a mandate up to a maximum investment. This means that most decisions are submitted to the board of commissioners only for their information; proposals outside the mandate are submitted for approval. In the end the shareholders at BH and JMP hold the board accountable for the project outcomes. At TCN commissioners represent the shareholders in the IC and EC. Next to supervising, they participate directly and contribute to the justifiability with their objective judgment as they are not involved in the project. Moreover, no separate decision meeting of shareholders representatives to approve proposals is necessary; this has a positive impact on the duration of the decision process. However, having more participants makes it harder to determine who is accountable for a decision.

Evaluation of the proposition
The approval procedure is a reflection of the organisational structure and its responsibilities. As an investment decision has a substantial
impact on the organisational objectives, in all three cases the strategic level is involved in this decision. However, it does not directly reflect who is accountable for a decision or a project, especially when decisions are made in a group. At JMP it is clearest, as the shareholders hold the statutory directors accountable for the functioning of the organisation and they reserve the right to make the final decision without interference from other directors. Still, the project manager remains accountable for the development of the project within the conditions set by the plan, budget and planning. At BH the board of directors is accountable for the functioning of the organisation as a group, each with its own expertise. The accountability for the development of a project is more ambiguous, as the project director has the end responsibility, while the project manager is most operational and has to report both to the project director and the Development & Construction director. At TCR the accountability of the PE is very limited and the IC functions takes accountability for the financing of a project, but functions mostly as an advisory committee; the total responsibility for a project falls to the program director.

In addition to organising accountability, the approval procedure prescribes the decision setting, and thus the group composition. In previous propositions it can be concluded that the group composition has a major impact on the content of a discussion, and thus on the justification of a decision. However, from the analysis of the functioning of the PC at TCR it can be concluded that a group of decision makers without sufficient decision authority does not contribute to either accountability or justifiability. From the case analyses in sections 6.3, 7.3 and 8.3 and the cross case comparison, it can be concluded that the proposition can be adjusted as follows: Authorising a decision by those who can oversee both project and organisational objectives, and who can be held, based on its position in the organisation or in the project, accountable for the decision contributes to knowingly taking risk.

9.1.7 Limiting duration

**Proposition 7**

*Limiting the duration of the decision making process and gearing it to the urgency of the decision contributes to knowingly taking risk.*

The duration of the decision process is largely determined by the amount of time it takes to prepare an investment proposal; the time needed ranges from a few days to three weeks depending on the comprehensiveness required. The actual time spent on a project to reach a decision by the decision committee members is limited to the reading of the proposal and the group discussions. Although the actual time is
limited, the duration of these phases is determined by the time between submission and the decision meeting. In a decision procedure the actual duration of the phases cannot be prescribed; the procedure only provides a structure within which to work. From the cross case comparison the following suggested practices can be extracted to influence the duration of the decision process, the first intentionally and the second as a means of speeding up the process:

7A – Providing a decision structure with a high frequency of decision meetings
7B – Creating flexibility in the decision process.

**Proposition 7: Limiting duration**

<table>
<thead>
<tr>
<th>Management practices</th>
<th>Management practices</th>
<th>Management practices</th>
<th>Suggested practices</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TCN</strong></td>
<td><strong>JMP</strong></td>
<td><strong>BH</strong></td>
<td></td>
</tr>
<tr>
<td>7A Providing a decision structure with a frequency of PC/IC/EC meetings every two weeks</td>
<td>Providing an ad hoc decision structure</td>
<td>Providing a decision structure with a frequency of board meetings every week</td>
<td>Providing a decision structure with a high frequency of decision meetings</td>
</tr>
<tr>
<td>7B Creating flexibility in the decision process:</td>
<td>Creating flexibility in the decision process:</td>
<td>Creating flexibility in the decision process:</td>
<td></td>
</tr>
<tr>
<td>7B1 …by accepting late submission of proposals regularly</td>
<td>…by accepting late submission of proposals only exceptionally</td>
<td>…by allowing late submission of the investment proposal</td>
<td></td>
</tr>
<tr>
<td>7B2 …by inviting a project (3E) manager to the PC/IC meeting to give additional information</td>
<td>…by inviting a project manager to an ad hoc decision meeting to give additional information</td>
<td>…by inviting a project manager to the decision meeting to give additional information</td>
<td></td>
</tr>
<tr>
<td>7B3 …by informing PC/IC (2C) members informally by the project manager</td>
<td>…by monitoring the progress of a project by informal interaction between the strategic director and project manager</td>
<td>…by monitoring the project during the development process</td>
<td></td>
</tr>
<tr>
<td>7B4 Reducing the decision process to authorisation by the IC in extreme cases</td>
<td>Continuing the development process without formal authorisation of the shareholder</td>
<td>…by adjusting shareholder’s involvement to the urgency of the decision</td>
<td></td>
</tr>
</tbody>
</table>

*Table 9.7 Cross case comparison of management practices for limiting duration*
The differences in the intentional procedure and the flexibility in living up to the procedure in favour of making speedy decisions are presented in Table 9.7 and described below.

**Ad 7A** In the decision procedures not only is the decision setting determined, but so are the deadline for submission and the frequency of the decision meetings. The frequency of the decision meetings determines the time frame within which a decision can be made. At TCN the decision meetings are held every two weeks, which is the least frequent. Moreover, the authorisation takes place in a multi-tier approval process. To shorten the total duration, these successive meetings are planned, with two days between the PC and IC, and the EC taking place directly after the IC. For both the PC and IC the proposal must be submitted five days in advance. The BH board meets every week and proposals must be submitted four days in advance. At JMP the investment decisions are not made in a formal meeting, thus the decisions are made on demand. If the statutory director thinks it is necessary to arrange a meeting, an ad hoc meeting is scheduled according to the urgency of the decision.

The approval phase takes longer when the shareholders have to approve the decision in a separate meeting. At TCN the shareholders participate in the IC, so no extra time is needed. At JMP the shareholder always needs to approve the decision. This takes some extra time, but in practice a process is not delayed by this extra step. At BH only for some budget requests approval from the supervisory board is required; in these cases the decision process takes some extra time, but if necessary this arranged telephonically.

**Ad 7B** There are several ways to accelerate a decision process. The most common way to save time is to submit the investment proposal late or not at all. When more time is needed to finalise the investment proposal, the effect is limited to the submission phase in which the decision makers prepare the decision meeting. If the reason is urgency due to which the quality of the proposal is lacking, this also has a negative effect on the comprehensiveness of the individual preparation of the decision makers and the comprehensiveness of the discussion as information is lacking. In the latter case, the project manager can be invited to the decision meeting to transfer information verbally in order to guarantee the quality of the decision making process. More comprehensiveness, and thus more flexibility in the decision process, can be guaranteed by more proactive behaviour. An example of proactive behaviour is that a director gathers information during the development process so the investment proposal becomes less important, as described in 9.1.3, or that a project manager informs the board early in
the process and consults them about how to handle in order to prevent that a proposal is rejected, as is illustrated in 8.3.7. The comprehensiveness of the intentional procedure is affected by deviations from the intentional procedure, and depends on the degree to which activities are carried out to compensate for the loss of information. The decision process does not need to be speeded up when the decision need is recognised timely.

Evaluation of the proposition
Limiting the duration of the decision process has a positive impact on timeliness, but when there is deviation from the intentional procedure, it may have a negative impact on justifiability, and in extreme cases even on accountability. Therefore, it is preferable to design a decision making procedure with decision meetings that are held frequently enough to respond accurately to market conditions and to create a culture in which managers attach more importance to a timely recognition of the decision need. From the case analyses in sections 6.3, 7.3 and 8.3 and the cross case comparison, it can be concluded that the proposition can be adjusted as follows: Limiting the duration of the decision making process by means of the intentional decision making procedure in terms of the frequency of decision meetings contributes to knowingly taking risk.

9.2 Conclusions on knowingly taking risk
The cross case analysis resulted in a set of suggested practices per proposition. As these propositions indicate a positive relation between how decisions are made and the way risks are dealt with, it can be concluded that the investment decision making processes in real estate development organisations constitute a procedural rational process in which risks are knowingly taken. Based on these results general conclusions can be drawn on the concept of knowingly taking risk and how real estate development organisations can organise their investment decision making processes in such a way that risks are taken knowingly.

Section 9.2.1 elaborates on the concept of knowingly taking risk. Chapter 4.3 assumes that each proposition contributes to one of the indicators, justifiability, timeliness and accountability, of knowingly taking risk. From the cross case analysis it can be concluded that these relations are more complex due to the intermediating mechanisms of the management practices and that there is no one best way of knowingly taking risk. Therefore, section 9.2.2 presents the main elements of an investment decision making procedure and the possible practices per element in the form of a strategy table that contribute to safeguarding that risks are taken knowingly. The strategy table can be used to support the design or evaluation of an investment decision making procedure.
9.2.1 Refining the concept of knowingly taking risk

Chapter 4 offered a preliminary definition of knowingly taking risk based on the indicators ‘justifiability’, ‘accountability’, and ‘timeliness’; it was assumed that a proposition – a step in a decision making process – had an unambiguous, positive relation with one of those indicators. However, from the cross case analysis it can be concluded that some suggested practices, which are related to the propositions, contribute to multiple indicators; moreover, some suggested practices have a positive contribution to one of the indicators, while negatively influencing one or both of the others. This increased complexity is explained by a few examples of the interrelatedness or the indicators making use of the integral model in section 4.1 in which the real estate development process, the investment decision making process and the organisation are linked. Based on the increased insight in the investment decision making process of real estate development organisations the concept of knowingly taking risk is refined.

Four of the seven propositions are primarily related to the justifiability of a decision. One of the central suggested practices to make a justifiable decision is the writing of an investment proposal. The purpose of an investment proposal is to provide the decision makers with reliable and complete information and with a (risk) analysis of the proposed course of action in order to assess the project on its content described by the development aspects. This practice guarantees to a large extent the comprehensiveness of the investment decision.

One of the ways to improve the quality of an investment proposal – and thus its justifiability – is to gather input from internal marketing, legal, or financial specialists. As a consequence of bringing more actors into this process, the accountability is influenced. While the project manager is primarily accountable for preparing a proposal as part of the investment decision making process, it can be asked whether the project manager can be held accountable for the input of the specialists during the development process.

In the three cases, there are differences in the way that the accountability question is handled with respect to the decision making and the development processes. At bh, where the input of specialists is obligatory, they are held accountable for their input in the development process; the project manager must make sure they make the required contribution. This means that more negotiation within the project team is necessary, than when the input is optional and the project manager is fully accountable in both processes, as in the case of Tcn and jmp. Both options are legitimate, as long as the responsibilities are made very clear. More important might be the effect of the options on the entrepreneurial behaviour of the project manager: too much shared respon-
sibility might cause a loss of commitment, while too much individual responsibility might cause escalation of commitment.

The more comprehensive the proposal is supposed to be, the longer it will take to write an investment proposal. In the cases the increased requirements are a drawback: the BH proposals are more comprehensive than the TCN and JMP proposals, which means that project managers spend about three weeks writing their proposals, while at TCN this only takes one or two weeks and at JMP writing a proposal takes less than a week. There should be a balance between extra comprehensiveness in terms of content and the extra time needed to write a proposal in order not to affect the timeliness of a decision negatively.

A longer preparation phase in the decision process in favour of justifiability does not need to delay the development process, as long as the need for an investment decision is recognised in a timely way. The total duration is largely determined by the duration of the preparation phase; the intentional duration of the submission and approval phases depends on the frequency of decision meetings which is determined in the organisational system and not by an individual project. In practice both a bi-weekly (TCN), a weekly (BH) and an ad hoc (JMP) frequency of the decision meetings appeared sufficient to respond to the decision demand. Thus, a timely recognition is more important than the duration of the decision process.

Recognising the need for an investment decision means knowing at what moments in a development process an investment decision is required. In all three cases the investment decision moments are determined in a development procedure by dividing the development process into phases. Although the project manager is stimulated in various ways to recognise these moments, monitoring projects by financial control and by a board of directors appeared to be a very important suggested practice. JMP regards monitoring not only as an extra control mechanism to recognise investment decision moments, but also as a means to gather information on a project, which reduces the need for a very comprehensive proposal. Thus, monitoring contributed not only to the timeliness of a decision, but also to its justifiability.

When the duration of a decision process still needs to be speeded up, there are consequences for justifiability and the accountability as practices need to be skipped or accelerated. It can be concluded that in favour of timeliness, less comprehensive proposals and a late submission of the proposal which means that the decision makers have less time to read the proposals are accepted, which negatively affect justifiability; to compensate this effect project managers are therefore sometimes invited. This is possible as in each decision phase similar decision activities are iterated, in relation to the propositions ‘search for information’, ‘identification and analysis of courses of action’, and
‘analytical evaluation’, which are primarily related to justifiability. Hardly any concessions are made regarding the authorisation of decisions. A decision needs to be approved at the strategic level of an organisation despite time pressure as the board must be able to account for all investment decisions. In the extreme project illustrations, there are examples of concessions: TCN passed over its Program Committee in the ‘Omega’ case and at JMP the shareholder had not formally approved the commitments that were made in the ‘Kappa’ case. In both cases the trust base between the project director and the board of directors was damaged, but the projects continued. The effects of sacrificing accountability for timeliness might not have a direct effect on the project level, but it can affect someone’s long term position within the organisation.

The final connection can be found between accountability and justifiability. The decision setting, which is based on the hierarchical organisational structure determining who is accountable for what, affects the justifiability of a decision. In all three organisations a decision is made in a group of two (JMP), four (BH), and two groups of four to seven decision actors (TCN). The number of decision actors and the composition of the group is a representation of the organisational position in the hierarchy, but also contributes to the justifiability of a decision as intersubjectivity is obtained by a group decision.

At JMP there is less objectivity because of the small group, but both directors are very experienced and are held directly accountable for the investment decisions by the shareholder; therefore they have a strong incentive to act as rationally as possible in order to justify a decision. TCN has two decision committees, reflecting the matrix structure of the organisation: the idea is that both committees assess a proposal from a more programmatic and financial perspective. However, since the Program Committee is not held accountable, personal interests sometimes overrule the objectivity towards each proposal. More expertise without some level of authority does not appear to be very effective. In the Investment Committee a commissioner of the shareholders participates, which increases the level of objectivity. At BH the board of directors decides; various disciplines are represented, while one board member is directly accountable for an investment decision.

A balanced composition of experienced actors with varying disciplines and levels of involvement appears to be most effective in relation to justifiability. With regard to the accountability both the organisational structure and the culture of entrepreneurship determine the decision setting and group composition. As each project is a business on its own, a project manager should operate as an entrepreneur, but as the project also is part of the organisational business, the division of responsibilities is necessary to assess the prospect of a development...
project in relation to the organisational resources. Therefore, a clear business strategy (including a risk capital criterion) and a development strategy with criteria on the level of the development aspects form the basis of knowingly taking risk.

It can therefore be concluded that multiple management practices contribute to each of the indicators of knowingly taking risk and that several management practices contribute either positively or negatively to knowingly taking risk. The contribution often depends on the management practice chosen by an organisation. Because of the likelihood of conflicting contributions and multiple available management practices, it is not possible to prescribe one best way of knowingly taking risk. Still, knowingly taking risk in the context of real estate development is the making of justifiable, accountable and timely investment decisions: to safeguard knowingly taking risk a real estate development organisation must design an investment decision making procedure by choosing a well-balanced set of management practices.

9.2.2 Designing an investment decision making procedure

In order to assist real estate development organisations to design or evaluate their investment decision making procedures, the management practices are translated into a strategy table, as described in section 5.3.3. A strategy table consists of a set of design elements and a set of design options for each element. Both elements and design options are derived from the management practices. The elements relate to the generic character of the suggested practices, indicated by the number-letter combinations in the previous section (for example 3b), while the options relate to the specific management practices of the case: the specifications are often determined by differences in the decision actors involved, the aspects considered or time elements of a case specific management practice, or by the specifications indicated by a number-letter-number combination (5A1).

One of the suggested practices is the writing of an investment proposal, which is listed under the code 3a in Table 9.3: this generic practice is one element of an investment decision making procedure, which can be found in column e in Table 9.9. To guarantee a certain quality of the investment proposal, different specific management practices are applied, such as prescribing a format, requiring a list of supplements and the obligatory participation of internal specialists. These practices, listed under the codes 3A1-3A3 in Table 9.3, are the design options of the investment decision making procedure, which can be found in column E under the generic element.

The total set of elements is listed in Table 9.8, with the corresponding management practices indicated by the codes used in Table 9.1 to
Table 9.7. The total set of elements and design options of an investment decision making procedure is presented in the strategy table in Table 9.9. The elements are presented in the column headings and the options in the columns per element. The validity and the practical value of the strategy table are evaluated in section 9.3.

<table>
<thead>
<tr>
<th>Column in strategy table</th>
<th>Element of investment decision making procedure</th>
<th>Code of corresponding management practice(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Determination of development strategy</td>
<td>1A</td>
</tr>
<tr>
<td>B</td>
<td>Determination of risk capital</td>
<td>1C</td>
</tr>
<tr>
<td>C</td>
<td>Monitoring a project</td>
<td>2C</td>
</tr>
<tr>
<td>D</td>
<td>Stimulating proactive attitude of project managers</td>
<td>2A, 2B</td>
</tr>
<tr>
<td>E</td>
<td>Guaranteeing the quality of an investment proposal</td>
<td>3A, 6A</td>
</tr>
<tr>
<td>F</td>
<td>Risk analysis</td>
<td>4A, 4B</td>
</tr>
<tr>
<td>G</td>
<td>Decision setting</td>
<td>6B</td>
</tr>
<tr>
<td>H</td>
<td>Group composition</td>
<td>6B</td>
</tr>
<tr>
<td>I</td>
<td>Involvement shareholder in decision process</td>
<td>6C</td>
</tr>
<tr>
<td>J</td>
<td>Involvement project manager in decision meeting</td>
<td>3D</td>
</tr>
<tr>
<td>K</td>
<td>Content discussion</td>
<td>3C, 4D</td>
</tr>
<tr>
<td>L</td>
<td>Evaluating criteria</td>
<td>5A</td>
</tr>
<tr>
<td>M</td>
<td>Application of criteria</td>
<td>5A</td>
</tr>
<tr>
<td>N</td>
<td>Formulation of decision</td>
<td>5B</td>
</tr>
<tr>
<td>O</td>
<td>Decision rule</td>
<td>6B1</td>
</tr>
<tr>
<td>P</td>
<td>Frequency of decision meetings</td>
<td>7A</td>
</tr>
<tr>
<td>Q</td>
<td>Observance of decision procedure</td>
<td>7B</td>
</tr>
</tbody>
</table>

Table 9.8 List of elements of an investment decision making procedure

9.3 Evaluating the results

The outcomes presented in the previous sections are based on three case studies which took place in a relatively short period in comparison to the duration of real estate development processes. Therefore, this section evaluates the results in order to increase their reliability and robustness, thus contributing to the scientific value of the research, and exploring the practical value of the results in order to improve the professionalisation of the real estate development sector. This section applies the strategy table, presented in section 9.2.2, as method of evaluation (section 5.4).

The evaluation took place in July and August of 2008 and was executed with the CEOs of TCN, JLP and BH. The evaluation method consisted of a forecasting of the market conditions in the real estate development sector, described in section 9.3.2, and the redesign of the decision making procedure, described in 9.3.3. In section 9.3.4 conclusions are drawn from the evaluation of the strategy table regarding the reliability, robustness and practical value of the results. Section 9.3.5, presents the final conclusions on knowingly taking risk.
9.3.1 Forecasting the future of real estate development

The aim of forecasting is to understand the changed conditions under which the real estate development organisations must operate now and in the near future. First the changed market conditions are briefly described; then the way each of the organisations, TCN, JMP and BH, perceives these changes and what measures are (going to be) taken are described.

Since the beginning of 2008, real estate development organisations have to deal with the effects of the credit crunch. The credit crunch led to a major downturn of the housing market, putting intense pressure on the sales of real estate development projects, because consumers have difficulties paying their mortgages. JMP and BH have to deal with this effect, because a majority of their portfolio consists of residential real estate. Still, the CEOs expect the demand for qualitative houses in the Netherlands to remain stable. This means that in the coming years it will become more important to focus on the consumers’ wishes and to adjust products to the market demand; in past years every product would sell.

The credit crunch also affects the commercial market: due to the scarcity in credit facilities, the hurdles or financiers become higher and interest rates go upwards, which makes it more difficult and more expensive for both real estate development organisations and investors to find financing. As investors do not easily get debt equity, the number of transactions goes down as do transaction prices. TCN has had difficulty getting financing and selling its projects, especially since the company operates in niche markets. JMP is least affected by financing problems, because it can get financing for projects from the parent company.

At the same time real estate development organisations are facing structural problems on the construction market. The construction costs have risen dramatically in the past year and the CEOs expect construction costs to keep increasing due to high material costs (oil, steel, and plastics) and scarcity in qualified building personnel, while in previous crises construction costs would fall because the production went down. As a result, the CEO of JMP foresees fundamental changes in the procurement of building capacities: projects will no longer be tendered to a single contractor, but multiple sub contractors will be commissioned, and the coordination of building activities will become an in-house expertise again.

Another challenge is the acquisition of new projects. Land acquisitions are becoming more difficult, because the land price has been pressurised as a consequence of both falling incomes and rising costs. Land prices have to drop or other control measures must be taken to keep land acquisitions feasible. Another acquisition strategy is by
<table>
<thead>
<tr>
<th><strong>A</strong> Determination of development strategy</th>
<th><strong>B</strong> Determination of maximum risk capital</th>
<th><strong>C</strong> Monitoring a project</th>
<th><strong>D</strong> Stimulating pro-active attitude of project managers</th>
<th><strong>E</strong> Guaranteeing the quality of an investment proposal</th>
<th><strong>F</strong> Risk analysis</th>
<th><strong>G</strong> Decision setting</th>
<th><strong>H</strong> Group composition</th>
<th><strong>I</strong> Involvement shareholder in decision process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implicitly (= by describing activities per development phase) – Single strategy</td>
<td>Maximum risk capital per project as a percentage of total development costs</td>
<td>Continuous monitoring by financial control</td>
<td>Stimulating entrepreneurship at the level of the project managers by giving much responsibility</td>
<td>Implicitly – description actual status of the project</td>
<td>Implicitly – strategy for next development phase</td>
<td>Individually</td>
<td>CEO</td>
<td>Participation in the decision group</td>
</tr>
<tr>
<td>Implicitly – Multiple development strategies</td>
<td>Maximum risk capital as maximum amount per project</td>
<td>Periodical monitoring of projects (quarterly) by project director</td>
<td>Mutual stimulus by working in project teams</td>
<td>Standardised format of investment proposal</td>
<td>Standardised format of investment proposal including obligatory supplements (market report, contracts, etc.)</td>
<td>In a group</td>
<td>CFO</td>
<td>Every investment decision needs to be approved by shareholders</td>
</tr>
<tr>
<td>Explicitly (= by determining decision criteria in terms of end results of each development aspect per development phase) – Single strategy</td>
<td>Maximum risk capital on portfolio level &lt; equity capital</td>
<td>Monitoring of projects in board meetings</td>
<td>Clear development procedure (project/quality manual)</td>
<td>Qualitative identification and analysis of risks in a separate risk paragraph</td>
<td>Multi-tier approval in an individual setting</td>
<td>Responsible director of department</td>
<td></td>
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</tr>
<tr>
<td>Explicitly – Multiple development strategies</td>
<td>Informal monitoring by directors (‘management by walking around’)</td>
<td>Clear division of responsibilities in organisational structure</td>
<td>Standardised format of investment proposal including obligatory input of specialists (market consultant, jurist, financial controller)</td>
<td>Quantitative analysis of scenarios</td>
<td>Multi-tier approval process in a group setting</td>
<td>Director(s) of staff departments (Concepts, Development, Management)</td>
<td></td>
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</tr>
<tr>
<td>Reward system based on performance of project manager</td>
<td>Standardised format of investment proposal including obligatory input of specialists</td>
<td>Standardised format of worst case scenario/exit strategy (= calculation of risk capital)</td>
<td>Quantitative analysis of scenarios for multiple strategies</td>
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<td>External participants, viz.:</td>
</tr>
<tr>
<td>J</td>
<td>Involvement project manager in decision</td>
<td>K</td>
<td>Content discussion</td>
<td>L</td>
<td>Evaluating criteria</td>
<td>M</td>
<td>Application of criteria</td>
<td>N</td>
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<tr>
<td>Project manager is never involved</td>
<td>Involving each other about progress of a project</td>
<td>Intuitive, integral assessment</td>
<td>Risk capital as condition; other criteria as targets</td>
<td>Advice about quality of the project</td>
<td>Authoritarian</td>
<td>Ad hoc – on initiative of project manager</td>
<td>Strict observance of intentional decision procedure</td>
<td></td>
</tr>
<tr>
<td>Project manager is involved on his own initiative to give additional explanation</td>
<td>Check of completeness and reliability of information</td>
<td>Explicit evaluation of risk capital, other criteria implicitly</td>
<td>Risk capital and profit as condition; other criteria as targets</td>
<td>Go no go, granting total development costs</td>
<td>Majority of votes</td>
<td>Ad hoc – on initiative of decision maker</td>
<td>Observance of procedure is regarded as a formality</td>
<td></td>
</tr>
<tr>
<td>Project manager is involved on invitation of decision makers</td>
<td>Critical evaluation of investment proposal by ‘what if-questioning’, advocacy of the devil and other discussion techniques</td>
<td>Explicit, analytical evaluation of all criteria are assessed</td>
<td>Only qualitative criteria are assessed</td>
<td>Go/no go, granting budget for next development phase</td>
<td>Unanimity after voting</td>
<td>Weekly</td>
<td>Observance of procedure is flexible – adjusted to development process</td>
<td></td>
</tr>
<tr>
<td>Project manager is always involved in decision meeting</td>
<td>Identification and analysis of exit strategy</td>
<td>Only financial criteria are assessed</td>
<td>Go/no go with additional conditions</td>
<td>Consensus</td>
<td>Two-weekly</td>
<td></td>
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<tr>
<td></td>
<td>Optimizing the investment proposal by alternative</td>
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</tbody>
</table>

Table 9.9  Strategy table – elements and options of an investment decision making procedure
entering development competitions. However, the European tendering regulations have resulted in strict entering requirements, such as a minimal turnover, and higher qualifications of people. The challenge is to remain a competitive and sound organisation while guaranteeing a sufficient pipeline of projects.

In reaction to these challenges each of the three organisations are taking measures in its internal organisation as well as in its decision making procedures. At BH the changes are least drastic: existing procedures on both the level of the portfolio (financial and juridical risk management systems) and on the level of the project (operational risk management) are applied even more strictly than before and the responsibilities of the project team members have been clarified by modifying the organisational structure, also affecting the decision making procedure.

JMP has taken drastic measures by merging with a subsidiary company in order to gain a competitive advantage by an increase in scale both in terms of turnover, which is advantageous in the light of development competitions, and in terms of number of personnel, to build an organisation with many in-house disciplines. The official date of the merger is July 1st 2008; at the time of the evaluation many intended organisational changes still have to be implemented. The main differences of the new organisation are its size, which requires more coordination among the departments, and a new combination of statutory directors.

At TGN both the changed market conditions and the untamed growth of the organisation urged the organisation to take measures. More control over the (risks in) real estate development projects is necessary. However, the level of control decreased despite the clear decision criteria and systems: the untamed growth of the organisation in many small programs and the lack of a clear division of responsibilities due to the matrix structure resulted in working too much for the own interest and not living up to the intentional procedure. The currents in the real estate market and the internal flaws have led to a proposal for changes in the organisational structure and in the decision procedure. The basic idea concerning the organisational structure is that the matrix structure is replaced by a division in business units of 10 to 60 people: this number of people in a business unit is necessary to guarantee a body of expertise, continuity, and mutual checks and balances. In September 2008 TGN actually had to discharge people as a result of the credit crunch, before the organisational changes even had been implemented. The impact of the proposed revised organisational structure on the decision procedure is described in the next part.
Redesign of the investment decision making procedures at TCN, JMP and BH

This section describes the main changes in the decision making procedures at TCN, JMP and BH as indicated by the CEOs. The completed strategy tables are presented in Table 9.10. Only those elements of the decision making procedure are discussed that have been changed significantly in the interval between the case study and the evaluation or will be changed in the near future. Remarkably, these elements are similar over the three cases:

- Determination of decision criteria
- Monitoring
- Stimulating proactive behaviour
- Guaranteeing quality of investment proposal
- Decision setting - group composition
- Observance of decision procedure.

Determination of development strategy

All three CEOs insisted on the importance of decision criteria, especially in the current market. They all consider it necessary to determine multiple, explicit development strategies. In addition to the development strategy, the CEO of TCN explicitly mentions the company strategy, which comprises the portfolio strategy, the development strategy and financial benchmarks, such as growth and profit strategy. The other CEOs also think of the development strategies as part of the portfolio strategy: they are made project specific by defining an aspiration level and specific product-market combination. The CEO of BH stresses that in the current decision procedure after the initial decision to start a project, too little attention is paid to the quality of a plan and whether the initial ambition is still recognisable. These qualitative criteria become more important in a buyers market. According to the CEO of JMP, the current market is also characterised by more, smaller fluctuations. This means that the criteria need to be adjusted more frequently.

Monitoring

While only JMP saw monitoring projects as an important element of the decision making process in order to recognise problems and to gather information in both a formal and an informal way, under more pressing market circumstances monitoring also becomes more important at TCN and BH. At TCN projects are formally monitored for the quarterly updates. During these meetings the project manager has to justify the progress of a project on the financial status of the project. Projects are informally monitored by the program director and the CEO; in the future the role of the CFO will shift from giving reactive support on
| A | Determination of development strategy | B | Determination of maximum risk capital | C | Monitoring a project | D | Stimulating pro-active attitude of project managers | E | Guaranteeing the quality of an investment proposal | F | Risk analysis | G | Decision setting | H | Group composition (case specific) | I | Involvement shareholder in decision process |
|---|--------------------------------------|---|--------------------------------------|---|----------------------|---|--------------------------------------|---|--------------------------------------|---|----------------------|---|--------------------------------------|---|--------------------------------------|
| Implicitly (= by describing activities per development phase) – Single strategy | Maximum risk capital per project as a percentage of total development costs | Continuous monitoring by financial control | Stimulating entrepreneurship at the level of the project managers by giving much responsibilities | Quality depends on expertise of the project manager | Implicitly – description actual status of the project | Individually | 1. Project team and director 2. Board of directors | Participation in the decision group |
| Implicitly – Multiple development strategies | Maximum risk capital as maximum amount per project | Periodical monitoring of projects (quarterly) by project director | Mutual stimulus by working in project teams | Standardised format of investment proposal | Implicitly – strategy for next development phase | In a group | CFO, CIO and 3 external members | Every investment decision needs to be approved by shareholders |
| Explicitly (= by determining decision criteria in terms of end results for each development aspect per development phase) – Single strategy | Maximum risk capital on portfolio level < equity capital | Monitoring of projects in board meetings | Clear development procedure (project/ quality manual) | Standardised format of investment proposal including obligatory supplements (market report, contracts, etc.) | Qualitative identification and analysis of risks in a separate risk paragraph | Multi-tier approval in an individual setting | 1. Project director 2. Financial director 3. Statutory directors | Shareholder is informed about investment decision within mandate; investment decisions exceeding mandate needs to be approved by shareholders |
| Explicitly – Multiple development strategies | Informal monitoring by directors (‘management by walking around’) | Clear division of responsibilities in organisational structure | Standardised format of investment proposal including obligatory input of specialists (market consultant, jurist, financial controller) | Quantitative analysis of scenarios | Multi-tier approval process in a group setting | | | Shareholder is informed about investment decisions, but do not need to approve them |

Reward system based on performance of project manager | Standardised format of investment proposal including obligatory supplements and obligatory input of specialists | Quantitative analysis of worst case strategy (exit strategy = calculation of risk capital) | Shareholders are not involved in investment decision making process |

Quantitative analysis of scenarios for multiple strategies
<table>
<thead>
<tr>
<th>J</th>
<th>Involvement project manager in decision</th>
<th>K</th>
<th>Content discussion</th>
<th>L</th>
<th>Evaluating criteria</th>
<th>M</th>
<th>Application of criteria</th>
<th>N</th>
<th>Formulation of decision</th>
<th>O</th>
<th>Decision rule</th>
<th>P</th>
<th>Frequency decision meetings</th>
<th>Q</th>
<th>Observance decision procedure</th>
<th>R</th>
<th>Extra item: ………………</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project manager is never involved</td>
<td>Inquiring each other about progress of a project</td>
<td>Intuitive, integral assessment</td>
<td>Risk capital as condition; other criteria as targets</td>
<td>Advice about quality of the project</td>
<td>Authoritarian</td>
<td>Ad hoc – on initiative of project manager</td>
<td>Strict observance of intentional decision procedure</td>
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</tr>
<tr>
<td>Project manager is involved on his own initiative to give additional explanation</td>
<td>Checking completeness and reliability of information</td>
<td>Explicit evaluation of risk capital, other criteria implicitly</td>
<td>Risk capital and profit as condition; other criteria as targets</td>
<td>Go no go, granting total development costs</td>
<td>Majority of votes</td>
<td>Ad hoc – on initiative of decision maker</td>
<td>Observance of procedure is regarded as a formality</td>
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<td>Weekly</td>
<td>Observance of procedure is flexible – adjusted to development process</td>
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<td>Consensus</td>
<td>Two-weekly</td>
<td>………………</td>
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<tr>
<td>Optimizing the investment proposal by alternative</td>
<td>Other qualitative criteria (such as ambition level)</td>
<td>………………</td>
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<td>………………</td>
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Table 9.10 Strategy table: redesigned investment decision making procedures of TCN, JMP and BH
projects on initiative of project managers to proactively monitoring the implementation of decisions and controlling the observance of the decision procedure.

At BH, financial control continuously monitored projects’ financial progress. BH has recently implemented periodical board meetings in which projects and ‘plan presentations’ are monitored. Plan presentations are multidisciplinary meetings, attended by both board members and project team members, in which the preliminary or final design of a project is presented. These meetings are aimed at evaluating the plan quality, while project control focuses on financial ratios. Aside from these formal meetings, the CEO strives to create a culture in which both board members and project managers inform each other about possible changes on the project level affecting the organisational objectives and vice versa in order to foresee problems and take measures proactively. For example, if the board foresees that the total risk capital will reach its limit and interfere with the continuation of a project, the board should proactively communicate this to project managers and look for ways to reduce the risk capital of a project by dividing it into sub projects.

At JMP the level of informal monitoring will be reduced due to the increase in the scale of the organisation and due to personal characteristics of the directors. The growth of the organisation from 45 to around 100 employees makes it almost impossible for the directors to monitor projects as intensively as they had previously. Moreover, the leadership style will change. The continuous monitoring by financial control will remain; its role will become even more strategic in the sense that it will more closely watch the potential and the risks of projects.

Stimulating proactive behaviour

In all three organisations a balance between a clear division of responsibilities and procedures, working in a project team and a culture of entrepreneurship is sought. While at TCN too much freedom was given to project managers and at JMP the level of entrepreneurship at the level of project managers will reduce, at BH project managers are encouraged to take more individual responsibility.

The CEO of TCN stated that the most important stimulus for a project manager remains the encouragement of entrepreneurship. However, checks and balances are needed to prevent individual developers from becoming susceptible to biases like over optimism and illusion of control. These checks and balance must come from colleagues asking critical questions. Over the years TCN has grown so strongly and many small units developed, that these checks and balances no longer work. Thus, one need a clear organisational structure in the form of larger business units and a clear division of disciplinary responsibilities: the intended result is to create a platform for discussing individual or
discipline specific interests in order to improve the integral solution.

At JMP entrepreneurship is deeply rooted in the organisation down to the operational level. However, due to the increase in scale the CEO foresees that there will be less room for individual freedom in order to keep control over all projects by the board. Moreover, projects become more complex and require more specialised skills. This means that project teams will be composed of more specialists and thus responsibilities become more partial and will be transferred. This means more focus on structures and procedures.

At BH entrepreneurship is stimulated at the project level. The CEO intends to reduce the hierarchical culture and the consensus-seeking culture of project teams. While TCN and JMP stress the importance of working in project teams, the CEO of BH insists that the project manager has to take advice from project team members, oversee the project, and make his own, deliberate, decision about the course of action for which he takes accountability. This requires the right conditions in the form of organisational structures and procedures, but also a different attitude on the part of project managers, project team members, and the board. Both project managers and staff departments are sometimes uncomfortable with their new roles, because project managers cannot longer hide behind the staff departments, while staff departments think that their role is downplayed.

Guaranteeing quality of investment proposal

TCN and JMP will tighten up their requirements for an investment proposal. In these organisations the comprehensiveness of the investment proposal was less than at BH. At TCN this is effectuated by approaching the investment proposal not only as an internal decision document, but also as an application for external financing. This way only one proposal has to be written, which is more efficient and requires less administrative work; moreover, the external purpose must stimulate the awareness and the need to write a good proposal. Internally, it was much easier to give some informal information, or even pressure the decision makers. The future requirements for an investment proposal are a description of the project, a financial analysis, and input from all (relevant) functional disciplines. Especially the need for a ‘signature’ of other disciplines before taking a proposal into consideration is new.

At JMP the basis for a good proposal remains the expertise, knowledge and creative opportunistic behaviour of a developer. In the end the director decides based on a feeling that a project is viable or not. However, the CEO also indicates that the foundations of the proposal must become stricter and more precise: over the past ten years the market was very accommodating of mistakes as the upward price movement of houses outpaced the upward price movement of construction costs.
This has changed significantly. This requires the input of multiple specialised departments, such as a market division, legal consultants, and financial control. In the new organisation, Synchroon, these specialists are accommodated in separate departments. Still, the developer remains responsible for the proposal – the specialists give their advice, but they do not sign the proposal.

While at TCN and JMP the input of other project team members becomes more important, at BH the responsibility of the project manager is made more explicit: the project manager should use the advice of staff departments, but must make and defend his own choices. In the investment proposals these choices must be made transparent, resulting in a deliberate strategy.

**Decision setting – group composition**

Regarding the decision setting, the three organisations differed greatly and those differences will remain despite any changes. The main changes in the decision setting and the group composition will take place at TCN. The multi-tiered approval process will be replaced by a single group composed of two internal and three external decision makers. The former program committee (PC) disappears from the approval process: according to the CEO the committee had a diffuse decision authority and as the participants were peers, it was more an old-boy network than an objective decision committee. Although the content of the discussion should be critical and lead to advice, it was mostly informative and hardly critical. The intended role of the PC, to make constructive criticism on the project is now expected to be fulfilled informally by the project team members.

The new decision committee is similar to the former investment committee (IC): the group members are selected based on their expertise and experience in the real estate development sector, either as a developer or as a financier. The external group members must guarantee a high level of objectivity. Their role is to assess projects, as if being a financier, and to give permission to continue with a project. By giving permission, the requested budget is provided, but in the end the project manager and the program director take accountability for the project.

At JMP few changes are expected in the decision setting despite the merger. A proposal must be approved by the developer, the project director, the statutory board and finally by the board of commissioners of TBI. The statutory board is, and remains, most important in the approval process. The statutory board takes accountability for the development of a project under the current market conditions. The developer is held responsible for the operational activities of the project, but not for changing market conditions, only for dealing with these risks.

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9. Cross case analysis
At BH the approval process does not actually change. However, the CEO of BH aims for a situation in which board approval is only a formality, because the decision is so well prepared that the board hardly has to discuss it. The preparation of an investment proposal must guarantee decision quality. The ideal situation asks for a change in culture: before, an investment proposal was prepared in order to let the board take a decision. In the future, the board formally takes or authorises the decision, but during the process the board members support the project manager with their expertise, like other staff departments. It is the responsibility of the project manager to use all these experts to make sure that his project can continue in the best possible way. The project manager, in consultation with the region director, makes the decision about the course of action.

**Observance of decision procedure**

While TCN and JMP did not always strictly follow the decision procedure, all of the CEOs admitted that a strict observance of the decision procedure is required to keep control over the projects. The CEO of TCN interpreted strict observance to mean, for example, a timely submission of a complete investment proposal to give decision committee members time to read the proposal and make a decision, and to recognise the need for a decision timely – which might also mean informing the decision committee about delays.

The CEO of JMP interprets the observance less strictly in the sense that approval can only be given in formal meetings based on a complete proposal. However, it is important that all decisions made – informally or formally – are transparent: therefore, everything that is decided must be recorded directly or afterwards so decisions can be looked up and traced.

**9.3.3 Evaluation of the results on reliability, robustness and applicability**

This section evaluates the results in two ways. First, the strategy table, thus the set of elements of an investment decision making procedure that make part of the risk management in a real estate development organisation, is evaluated on reliability by using the first three criteria. Second, the practical value of the results is tested by using the latter two criteria. The criteria, which are described in section 5.3, are:

1. Recognisability: are the elements self-explanatory (right level of detail)?
2. Relevance: do these elements of the investment decision making process contribute to manage risks?
3. Completeness: are there any other elements of the investment decision making process that is part of risk management?
4. Robustness: are the identified elements in the period of 2006/2007 still relevant under changed market conditions in 2008?
5. Applicability: is it possible to reflect on the investment decision making process by making use of the strategy table? Do the elements work as a platform for discussion and explanation of the choices?

Reliability
The recognisability of the characteristics of the investment decision making process and the options is measured by the level of explanation that was needed before the CEOs could make a choice. The elements ‘determination of development strategy’ (column A) and ‘determination risk capital’ (column B) needed most explanation. The definitions of development strategy and risk capital appeared to be ambiguous: in the strategy table a ‘development strategy’ is the criteria per investment decision moment. The risk capital is the possible loss in case of a worst case scenario, not the equity capital invested in a project.

The relevance of the characteristics of the investment decision making process to the management of risks is measured by the option ‘not relevant’ per element: none of the CEOs indicated that any of the elements, the columns in the strategy table, was irrelevant. This indicates that each element contributes to risk management.

The completeness of the list of characteristics is checked by asking the CEOs whether an element was missing in the strategy table; an extra column was available in the strategy table to add extra elements. The CEO of TCN added ‘company strategy’ to the list of elements. The company strategy, consisting of the portfolio strategy, financial benchmarks and a generic development strategy, determines the risk profile of the organisation, thus reflecting the risk attitude of the organisation. The CEO of JMP did not explicitly mention the company strategy as a separate item, but regarded the development strategy (column A) as a logical consequence of the mid- to long-term strategy of the organisation. This confusion is due to the ambiguity of the element ‘development strategy’. Another conclusion is that some elements were partly covered by other elements: for example, the role of the shareholder was already discussed in the items decision setting or group composition. Moreover, the authorisation of the investment proposal was only a separate item in the strategy table for TCN; this element was combined with ‘guaranteeing the quality of the investment proposal’ for the next sessions. Regarding the completeness of options, it appeared that it was not possible to select a predefined option from the element of ‘group composition’, as the functions differ over the organisations and it is not feasible to define in advance all possible group compositions. For this element a tailor-made option is necessary.
Robustness
The robustness of the results is tested by doing the evaluation 1 to 1.5 years after the case study period from the end of 2006 to mid-2007. In the intermediate period some significant market conditions have changed, and some major organisational changes were about to take place, which are described in 9.3.3. The main impact of the market changes is that real estate development has become much riskier. Due to these changes the investment decision making process is also subject to change at both TCN, JMP, and BH; still, the elements and the options are adequate to describe the redesign of the decision procedure. Over time the results can be generalised, but as the organisational changes at JMP and TCN are significant it is also an indication that the results can be applied to a larger field.

Applicability
The applicability of the strategy table is measured by the extent to which the strategy table structured the decision procedure and explained the choices for an option. From the evaluation sessions it can be concluded that the CEOs could describe their investment decision making process by using the strategy table. The CEOs were also able to explain their choices: especially when changes had been made in the procedure in relation to the situation in 2006/2007, it was clear why the CEO thought these changes should lead to an improvement in decisions and the way risks are managed. Two important remarks can be made. First, some of the elements proved to be more important than others, such as the determination of decision criteria, monitoring, guaranteeing the quality of a proposal and the decision setting in combination with the group composition. Second, the number of elements was rather high: the limited attention span of the CEOs in combination with less relevant elements sped up the session in the second half of the strategy table. These remarks could improve the strategy table.

9.3.4 Final conclusions on knowingly taking risk
The redesign shows that the investment decision making procedures of TCN, JMP and BH converge as a result of the changed market circumstances. Moreover, the changes, as described in section 9.3.2, are directed at the timeliness, justifiability and accountability of the decision.

Timeliness is stressed by paying more attention to monitoring to guarantee that problems are recognised timely so that alternative courses of action can be developed. Moreover, by continuously aligning the progress of real estate development projects and the financial performance of the organisation, problems can be foreseen and prevented. The result is that the development process becomes interwoven with
the investment decision making process in order to react to the current market dynamics. Criteria are also adjusted to these fluctuations.

Justifiability is increased by paying more attention to the support for and transparency of decisions. As input for an investment proposal a project manager is expected to use the internal expertise of market researchers, legal consultants, financial controllers, and technical experts. Based on all these expert judgments, the project manager must make a deliberate choice for a course of action which must be explained in the investment proposal. When these choices are clearly communicated to a board of directors, they only have to evaluate the proposal against the organisational objectives.

Justifiability is also stimulated by the way the accountability is organised. The division of responsibilities, and thus who is held accountable for what, displays the dilemma of a real estate development organisation: the fact that a real estate development project can be regarded as an enterprise on its own. Entrepreneurship is stimulated at the level of the project manager, but at the same time he cannot be held accountable for the total financial performance of an organisation. In the three cases different organisational structures are applied, but they all try to create a culture of entrepreneurship that results in knowingly taking risk.

In conclusion, the way that decisions should be made in order to handle risk is determined in the decision procedure: this procedure is an important instrument for guaranteeing that a procedurally rational decision is made, and thus for knowingly taking risk. However, despite all procedures and structures, the CEO of JMP remarks that the most important feature of a decision maker is common sense. Knowingly taking risk therefore starts with the expertise and integrity of the real estate developer.
10 Reflections

This chapter presents the findings of and reflections on the research. Section 10.1 describes the main findings and offers reflections concerning the contribution to the fields of decision making, real estate development and risk management. Section 10.2 makes suggestions for further research. Finally, section 10.3 presents the practical implications of the research in order to professionalise the real estate development sector.

10.1 Findings

This research started with the statement that real estate development is knowingly taking risk. The entrepreneurship of real estate development organisations acts on development opportunities to realise real estate development projects. Making investment decisions, and thus taking risks, is the core business of a real estate development organisation. However, risk must not endanger the organisational objectives: risks must be taken knowingly. In response to this, the essence of real estate development is concentrated in the investment decision making process in which the real estate development project is weighed against the objectives of the real estate development organisation.

This research confirms the initial statement that, indeed, real estate development can be regarded as knowingly taking risk. By their decision making procedures, real estate development organisations attempt to make timely, justifiable and accountable investment decisions. Timeliness implies that risks are addressed proactively and the decision making process does not impede the progress of the development process. Justifiability means that the integral level of risk regarding all development aspects of a project can be proven to be reasonable from the perspective of the organisational objectives. Accountability means that a decision is made by someone who can oversee both project and portfolio issues and has decision authority to take these risks.

By examining how real estate developers take risk knowingly the research has produced four main findings:

- An integral model of investment decision making in real estate development;
- A definition of the concept of knowingly taking risk;
- Management practices to knowingly take risk;
- Key elements of an investment decision making procedure represented in a strategy table.
This section summarises each of these findings.

**Integral model of investment decision making in real estate development**
The first research result is an integral model of investment decision in real estate development. Real estate development can be characterised by projects that are regarded as businesses on their own, with their own project organisation, objectives and processes. At the same time these projects are undertaken within a larger real estate development organisation. Investment decisions are about allocating (scarce) organisational resources to a real estate development project. Through the investment decision making process the dynamics of the individual real estate development project is aligned with the well being of the entire the real estate development organisation. To grasp this complexity, an integral model of investment decision making in real estate development is developed.

The integral model of investment decision making in real estate development (section 4.1), shows when investment decisions are made, who is involved in this process and what is decided about. The integral model is developed by making use of a systems approach. The model consists of three hierarchical related systems: the real estate development process, the investment decision making process, and the structure of the real estate development organisation. In the model the connection between project and organisation is made at the investment decision moments, which are determined by the gates between two phases in a real estate development project.

The integral model makes two contributions to the existing theory on real estate development. The first contribution is the modelling of the real estate development process in terms of development phases and development aspects. The second contribution is the application of an organisational perspective on real estate development by looking at the actors and their specific roles in the real estate development project, the investment decision making process and the organisation.

First, the real estate development process is modelled (section 2.2) as seven parallel sub processes related to a standard set of development aspects, which is a refinement of existing linear descriptions of the real estate development process. In addition to descriptions in terms of development phases, the development activities are classified into seven development aspects: land development, entitlement, design, financing, construction, lease and sales. These development aspects are related to the different markets on which the real estate developer operates (section 2.1). Per development aspect activities are carried out in parallel processes during each phase of the development process. In this way, the model provides a complete picture of the activities of
a real estate developer from initiative through completion. The phasing of the process corresponds with other descriptions of real estate development processes; however, the importance of the gates between the development phases is stressed, as these are the investment decision moments when an integral assessment is made including all development aspects of a project and a decision on its future is made.

Modelling the development process in both phases and development aspects emphasises the integral character of real estate development. This results in insight in the mutual interdependencies of the activities of the separate development aspects over time. These interdependencies are of great importance in terms of risk: for example, closing a rental agreement as the start of a real estate development project reduces the market risk, but at the same time it puts a lot of time pressure on the planning application procedure and the construction process, which increases the risk in a project. The model can help to envision the consequences of major decisions regarding individual development aspects and in developing alternative development strategies.

The second innovative aspect of this model is that real estate development is not merely modelled from the perspective of a real estate development project, but that is chosen for an organisational perspective. In the first place, this resulted in considering the real estate development project in relation to the real estate development organisation through the investment decision making process. In the second place, in contrast to most literature in which real estate development is described in terms of activities, this model focuses on the coordination of decision activities amongst the actors in a real estate development organisation. As such, the integral model was an important input for defining the concept of knowingly taking risk.

**Definition of the concept of knowingly taking risk**

The second research result is the definition of the concept of knowingly taking in the context of real estate development: *knowingly taking risk is making timely, justifiable and accountable investment decisions*. In order to examine knowingly taking risk in practice, this concept needed to be defined. Knowingly taking risk is introduced at the start of the research as a synonym for successfully dealing with the risky nature of real estate development under the assumption that risk taking is incorporated into the investment decision making process of real estate development organisations and that a good decision contributes, among other things, to a good project outcome. Based on a literature review on organisational decision making, it is concluded that a procedural rational decision making process will most likely result in effective decisions within the context of a real estate development organisation. Therefore, the decision activities corresponding to a procedural
rational decision process are used to advance a set of seven propositions on knowingly taking risk (section 4.2). These propositions guide the empirical case study.

Based on both the decision activities of a procedural rational decision making process and the integral model of investment decision making, as described in the previous finding, an explanatory framework of knowingly taking risk is developed. The framework hypothesises that ‘knowingly taking risk’ in the context of real estate development is achieved by following a procedural rational decision process, which results in a timely, justifiable and accountable investment decision. These indicators of knowingly taking risk are linked with the phases, aspects, and actors in the integral model of investment decision making.

The framework is innovative in the sense that the definition of knowingly taking risk differs from existing definitions of decision quality. Zakay (1984) distinguished four classes of decision quality: the outcome of the decision, the correctness of the decision process, the importance and ethical value of the decision, and the decision maker’s feelings about the decision. However, in this research decision quality, in terms of knowingly, is defined as qualifications of the decision in terms of the decision process outcome, rather than in steps of a decision process as is implied by Zakay’s interpretation of the correctness of the decision process. This definition is valuable as it does not prescribe one specific way of making a decision, but leaves room for a decision process that is a mixture of perspectives on decision making, such as procedural rationality, politics and power and rule following behaviour.

Management practices to knowingly take risk

The third research result is a description and analysis of the investment decision making processes in three Dutch real estate development organisations, described in chapters 6, 7 and 8. First, the integral model of investment decision making is successfully applied to describe the organisations and their respective development and decision making procedures. Second, the explanatory framework of knowingly taking risk has been examined in practice to gain insight into how real estate development organisations make investment decisions. This multiple case study concludes that each organisation uses an investment decision making procedure that guarantees that a procedural rational decision making process is followed. Moreover these investment decision making procedures differ among the organisations. There is no one best way to organise the investment decision making process in order to take risk knowingly, as these processes came about in response to encompassing organisational characteristics.

From a comparison of the differences in the procedures key ele-
ments of an investment decision making procedure are extracted that should safeguard that timely, justifiable and accountable investment decisions are made. All elements of the investment decision making procedure and its relations with the indicators of knowingly taking risk can be found in chapter 9. In this section the main findings based on the empirical observations are summarised.

Timeliness means that risks are addressed proactively and the decision making process does not impede the development process. In other words, the need for a decision must be recognised in a timely way and the duration of a decision process must be limited. Especially a timely recognition of the need for a decision is conditional for knowingly taking risk by the three real estate development organisations that served as cases. Recognising is primarily the responsibility of a project manager; however, the organisations emphasise the importance of monitoring a project by people other than the project manager. For example, financial controllers monitor the actual expenditures in relation to the project budget; board members monitor projects formally during quarterly update meetings, but also informally.

The duration of the decision making process itself is not seen as an obstacle to responding to project dynamics: the frequency of the decision meetings, with a minimum of one every two weeks, in combination with the limited number of levels in the organisations represented in the authorisation process should create enough flexibility to decide in time. Deviating from the intentional procedure to speed up the decision process, by accepting late submission of investment proposals or no submission at all, occasionally occurs, but negatively affects the other indicators. The need to speed up should be prevented by a timely recognition.

Justifiability means that the integral level of risk regarding all development aspects of a project can be proven to be reasonable from both project and organisational perspectives. To achieve this, in the first place, decision criteria need to be determined. Decision criteria that are directed at risk are determined both on the project and the portfolio levels. The three real estate development organisations studied here determine the decision criteria on the project level in advance of a project in the form of a development strategy, describing criteria per development aspect, such as a pre-rental percentage, a granted building permit or debt financing percentage. These development strategies are formalised in a development procedure or manual; depending on the type of project these criteria are adjusted. The risk specific decision criterion on the portfolio level is the risk capital, which can be defined as the equity invested in a project that can be lost in a worst case scenario.
In the second place, to justify a decision, decision makers use reliable and relevant information by which courses of action are analysed. The search and analysis of information is primarily explicated in an investment proposal: this way the project information is communicated from the project manager to the decision committee. The expertise of the project manager and internal consultants guarantee the quality of an investment proposal as authors and editors. Information is also gathered by the informal and formal monitoring of a project. In an investment proposal at least one course of action is described; in this description risks are often implicitly identified and qualified. In addition to the implicit description of risks, risks are explicitly identified in a separate risk paragraph and occasionally various scenarios are quantified. However, most of the risk analyses are made implicitly by the decision makers when they prepare for a decision meeting or during a discussion in the decision meeting. Decision makers rarely analyse risks in an instrumental way by using risk analysis techniques or other decision aids, but in a more conceptual way by applying similar principles, such as scenarios, in their line of thinking. Reliable information is preferred to a formal risk analysis of the information.

In the third place, the proposed course of action must be evaluated against the decision criteria. The evaluation of a proposal during decision meeting is largely implicit and based on expert judgment. To prevent all kinds of cognitive and social biases, decisions are hardly made in an individual setting. From the cases it emerges that groups should consist of experts with decision authority and some distance from the project. The decision criterion risk capital is conditional – and is sometimes even evaluated in advance by a financial controller or director; other decision criteria are used as targets. In fact the project manager must indicate why it is justifiable to deviate from these criteria: as the criteria are known, the project manager must be able to justify deviations.

Accountability means that a decision is made by someone who can oversee both project and portfolio objectives and who can be held accountable for taking these risks, based on his position in the organisation or in the project. The way the authorisation is organised differs among the three organisations studied in this research; the authorisation process depends on the organisational structure, the shareholder’s involvement and the entrepreneurial culture.

Entrepreneurs are often considered as opportunistic risk takers. It is true that undertaking a new business venture involves considerable risk; however, entrepreneurs are less opportunistic than many people might think. The CEO of Blauwhoed defined entrepreneurship as ‘being aware of the possible risks and reward, making a deliberate choice, taking...
responsibility for the chosen action and being able to justify the decision’. The dilemma that real estate developers are facing is the distribution of entrepreneurship within the organisation: who is considered to be the entrepreneur - the CEO of the real estate development organisation or the project manager of a real estate development project – and thus who takes responsibility for a project.

A CEO or a board of directors, taking all responsibility for a project by making an investment decision is reasonable as organisational objectives come into play. However, as a consequence a project manager might feel less in control which could result in less proactive behaviour and the assumption of less responsibility during the development process. When the accountability is directed at a project team, instead of an individual, this could result in consensus seeking for a certain course of action within a project team either resulting in taking too much or too little risk and leaving important decisions to the board. From the perspective of justifiability on the project level, it is reasonable that the project manager is held accountable, as the project manager has most knowledge about a project and its risks. In this case a CEO or board only has to check the reliability of the investment proposal and the impact of a worst case scenario on the continuity of the organisation. However, it can be questioned to what extent a project manager can be held accountable for changing market conditions. In response, the division of responsibilities is formalised in job descriptions and the organisational structure limiting the project manager’s accountability, while project managers are required to have an entrepreneurial character. The level of entrepreneurship at lower levels in the organisation reflects its organisational culture.

Key elements of an investment decision making procedure represented in a strategy table

The fourth research result is an evaluation of the empirical findings and an exploration of the applicability of the findings. From a managerial point of view the first priority is not knowing how investment decisions are made, but learning about measures that safeguard that investment decisions are made knowingly. To support organisations in evaluating or designing an investment decision making procedure, elements of the investment decision making procedures as well as the different design options are extracted from the case studies that contribute to knowingly taking risk. The elements that turned out to be most important for the organisations are:

- Determination of decision criteria
- Monitoring
- Stimulating proactive behaviour
- Guaranteeing quality of investment proposal
• Decision setting - group composition
• Observance of decision procedure.

The strategy table depicts these elements and their design options. A strategy table is a framework to structure the formulation of a strategy – in this research the formulation of a decision making procedure. The strategy table has not been applied as an intervention tool, but is used for an evaluative redesign of the investment decision making procedures. The evaluation is carried out with the CEOs of the selected organisations for the case study in an individual interactive session with the researcher. This part of the research took place 12 to 18 months after the case study period. By means of this method, both the reliability and the robustness of the case study results are evaluated and the practical applicability of the strategy table is explored. The latter criterion is discussed in section 10.3.

As for the reliability of the results it can be concluded that the elements of the investment decision making procedure were both relevant and complete enough to guarantee that timely, justifiable and accountable decisions are made. As for the robustness of the findings it can be said that all elements of the procedure are still relevant; some elements have even become more important because of the changed market conditions. This indicates that the set of elements maintains its relevance over time.

Moreover, there are indications that under more challenging circumstances the investment decision making procedures converge. In the interval between the case study and the evaluation, the real estate development organisations studied were faced with the consequences of a credit crunch and structural problems on the construction market. This resulted in changes in their investment decision making procedure. These changes entailed a stricter observance of the procedure, more emphasis on monitoring the development process, making more use of internal expertise, and a clearer division of responsibilities. Remarkably, while the market situation becomes more demanding, there has been no perceptible increase in the application of risk analysis techniques. This indicates that the application of formal risk analysis techniques is not a sound measure for the risk awareness in the real estate development sector; on the contrary, risk taking, and risk management in general, is incorporated in the investment decision making process and the daily practice of real estate development organisations by means of development and decision procedures.

10.2 Suggestions for further research
In the literature no prior publications are found describing how investment decisions are made in real estate development organisations. As
the first of its kind, this research has a descriptive, in-depth character, which sets limits to the number of cases that could be examined. To increase the generalisability of the results, further research should increase the number of real estate development organisations under study. This could be done by applying the same research method or by applying a survey making use of the design variables and design options as input for the survey questions.

The advantage of a case study is the number and content of design variables and design options that can be reviewed. This research has resulted in a selected set of key elements for the investment decision making process that is evaluated making use of the strategy table. This evaluation shows that the CEO considered the strategy table complete. So, after checking the completeness of the set of key elements by other in-depth cases, a survey approach could be advantageous. A survey could result in typology of decision procedures based on a large sample of development organisations. Next, differences in the decision procedures could be explained by contextual differences, such as a different size portfolio or a different number of employees, a different development area (regional/national/international) or other types of real estate development organisations, such as organisations related to a financier, investor, or contractor. Finally, in a survey different decision procedures could be related to the success of a real estate development organisation in order to determine which procedure proves to be best.

As the decision making process begins at the start of preparing an investment proposal and ends with the final authorisation, this research has focused on the formal decision making process. Primary sources of data have been the observations of boardroom decision making. Secondary sources are the interviews conducted at all levels of the organisation and document analysis. In order to obtain insight in the role of the project manager and the role of informal communication between the project manager and board members, a longitudinal case study is recommended in which the perspective from the project manager instead of the board is taken to examine the preparation of the investment proposal. Moreover, the longitudinal study could even be extended by following a project manager during the development process. This could result in another definition of the start (and end) of the investment decision making process: the boardroom decision can be regarded as the whole decision process, as the process from preparing a proposal until the authorisation by the board, and as the whole development process from initiative until the authorisation to start construction.

This research has focused on the process of investment decision making and less on the content of the decisions, such as what risks are con-
sidered and what risk control measures are analysed and implemented. Although this research did not search directly for risk control measures, however, the risk specific decision criteria reflect how risks are dealt with. On the portfolio level, the risk capital reflects the financial and legal measures that are taken to limit the risk capital (some measures are presented in section 2.3). On the project level, progress criteria are determined on the level of the development aspects: these criteria represent risk control measures.

A suggestion for further research is to conduct explicit research on risk control measures to acquire insight into the risk control measures that are effectively applied in real estate development. This is especially interesting in increasingly complex projects, such as redevelopment or transformation projects, and area developments: innovative financial and legal engineering is required to realise projects of that size and with that many stakeholders.

10.3 Implications for practice
The findings of the research also have implications for practice. First, the applicability of the last research finding, the strategy table, is discussed. Second, the practical value of describing the real estate development process in development phases and development aspects is the possibility to envision and design multiple development strategies. Finally, a reflection is made on what the findings on risk taking by approaching this problem from a descriptive, organisational perspective means for the applicability of risk analysis techniques.

Applicability of strategy table
In this research a set of elements (or design variables) and variations in management practices (or design options) are identified and applied in a strategy table. The strategy table can be used to evaluate or design the investment decision making process in a real estate development organisation. The strategy table provides a structure and platform for discussion and can be part of a participative intervention supporting the design and revision of a decision procedure. As the structure of the strategy table is complete and relevant, few adjustments need to be made; only specific options for a new organisation might be necessary regarding the functions related to the organisational structure.

The first step of an intervention is to analyse the flaws in a decision making procedure. The second step is to design or revise the investment decision making procedure by selecting design options in the strategy table. This could be done in an individual setting, as the CEOs did in this research; however, the strategy table could also be applied in a group setting in order to discuss and negotiate the investment decision making procedure. The final step is to evaluate the (re)designed
decision procedure or strategy by using the guiding principles of knowingly taking risk: justifiability, accountability, and timeliness.

**Use of multiple development strategies**

An important element of the investment decision making procedure is the determination of the project’s development strategy. A development strategy is the sequence of the main (financial) commitments regarding the development aspects that will be made: for example, at what moment in the development process is land purchased, when are rental activities started, or when is the project sold to an investor. The development strategy can be determined in terms of decision criteria for each investment decision moment. By doing this, the risk profile of a project is determined: for example, when closing a rental agreement at the start of a development process and thereby defining the date of completion, much time pressure is put on the execution of the other development activities.

As the development strategy has an important function in taking risk, it is advantageous for real estate development organisations to make good use of it. At the very least one development strategy must be determined for all development projects in the portfolio. However, it seems favourable in terms of portfolio management to determine multiple development strategies to spread risks. On the project level it is preferable to adjust a development strategy at the start of a project to the specific features of that project. This way it is clear what the criteria are for the investment decision moments; the developer can evaluate by himself whether it is opportune to apply for a budget for the next development phase. At the investment decision moments it is possible to deviate from the intended development strategy: if that is the case, this must be made explicit and new criteria should be applied to justify the decision. Changing the development strategy is not a decision the project manager can make: such a decision must be made during the development process as part of the investment decision at the strategic level of the organisation.

**Application of risk analysis techniques**

This research has uncovered several implicit and explicit ways of dealing with risk by examining the investment decision making process in real estate development from an organisational perspective. Still, the explicit use of risk analysis techniques is low and even under severe market conditions, the application has not been increased. However, this does not imply that making risks explicit by means of quantitative risk analysis techniques could not have a positive contribution to the decision making process.

To implement risk analysis techniques successfully, these techniques
must correspond with the perception and treatment of risk. The review of boardroom decision making resulted in the insight that decision makers implicitly and continuously analyse different scenarios by asking ‘what-if’ questions. They usually do not quantify these scenarios, but in extreme cases they do. In such a case they also look for strategies to minimise the loss. To make this thought process explicit, the application of a scenario analysis, in combination with different strategies, seems most favourable.

Next to this well known, and currently applied method, the real option method (Black and Scholes, 1973) has potential, as it is aimed at valuing the extent a project can be influenced: its flexibility. This method has been developed as a financial instrument, but recently the method has found its way into the real estate development sector (Ford et al., 2002; Vlek and Kuijpers, 2005; Rocha et al., 2007).

This research has discovered that in real estate development both implicit and explicit ways of gaining knowledge about a project in order to justify a decision contribute to knowingly taking risk. Most research focuses on the justification of decisions by looking for methods to improve the search for, analysis, and evaluation of information. However, sometimes a decision just has to be made, regardless of what is known at a certain moment in time. If no decision is made, time will be the greatest risk as prior commitments have been made and no direction is given to the course of action and risk control measures to be taken. Moreover, not everything can be known and objectively justified; therefore it is necessary that someone takes accountability and does everything in his power to influence the future course of action without being too opportunistic and jeopardising the survival of the organisation. This means that making investment decisions in real estate development is a balancing act of justifiability, timeliness and accountability. In other words, the success of real estate development starts with knowingly taking risk.
References


References


Appendix:
List of interviews and observations

Interviews and observations – TCN Property Projects

List of interviews – TCN (function–time–date)
Chief Executive Officer 1 ¼ hrs 03-10-2006
Investment manager 1 hrs 16-11-2006
Technical developer 1 ¼ hrs 21-11-2006
Asset manager ¾ hrs 22-11-2006
Project developer 1 ½ hrs 01-12-2006
Project developer 1 ½ hrs 04-12-2006
Program director 1 hrs 09-12-2006
Executive secretary ½ hrs 11-12-2006
Secretary Investment Committee ½ hrs 12-12-2006
Chief Program Officer ¾ hrs 12-12-2006
Chief Investment Officer ¾ hrs 18-12-2006
Program director ¾ hrs 22-12-2006
Chief Executive Officer ½ hrs 31-01-2007
Shareholder 3 ½ hrs 06-12-2007
Chief Executive Officer 1 hrs 20-12-2007

List of observations – TCN (meeting–time–date)
Program Committee 17:00-19:45 06-11-2006
Investment Committee 10:00-11:30 08-11-2006
Executive Committee 11:30-14:00 08-11-2006
Program Committee 17:00-19:00 20-11-2006
Investment Committee 10:00-11:30 22-11-2006
Program Committee 17:00-19:00 11-12-2006
Investment Committee 10:00-11:30 13-12-2006
## Interviews and observations – Johan Matser Projectontwikkeling

### List of interviews – JMP (function–time–date)

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<td>Real estate developer</td>
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<tr>
<td>Concept developer</td>
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<tr>
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<td>Director Urban Redevelopment</td>
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<tr>
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### List of observations – JMP (meeting–time–date)

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<td>‘Kappa’ case</td>
<td>11:00-12:30</td>
<td>14-03-2007</td>
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Interviews and observations – Blauwhoed

List of interviews – Blauwhoed (function–time–date)
Director Finance & Control ¾ hrs 26-03-2007
Chief Financial Officer ½ hrs 29-03-2007
Financial controller 1 ½ hrs 30-03-2007
Project manager 1 hrs 02-04-2007
Project manager 1 hrs 06-04-2007
Project director 1 hrs 12-04-2007
Director Finance & Control 1 ½ hrs 18-04-2007
Director Commercial Real Estate 1 hrs 18-04-2007
Legal consultant 1 ½ hrs 20-04-2007
Executive secretary 1 hrs 24-04-2007
Financial controller 1 hrs 25-04-2007
Commercial developer 1 hrs 01-05-2007
Commercial developer 1 hrs 01-05-2007
Chief Financial Officer 1 ½ hrs 02-05-2007
Director Finance & Control ¾ hrs 02-05-2007
Chief Financial Officer 1 hrs 10-12-2007
Chief Executive Officer 1 hrs 10-12-2007

List of observations – Blauwhoed (meeting–time–date)
Board meeting – agenda item:
investment proposals 12:40-13:30 03-04-2007
Board meeting – agenda item:
investment proposals 11:55-12:30 17-04-2007
Board meeting – agenda item:
investment proposals 12:10-12:45 24-04-2007
Board meeting – agenda item:
investment proposals 12:00-13:15 01-05-2007
Summary

Knowingly taking risk

Investment decision making in real estate development

Ellen Gehner

Real estate development is the transformation of an idea for new built space into a real property. In order to realise a development opportunity, a real estate development organisation has to take the risk of investing in a project. This study examines how investment decisions in real estate development projects are made. This reveals how real estate development organisations have developed and institutionalised the skills and procedures to deal with the risky nature of the business. In other words, this study explains how they manage to knowingly take risk.

Problem definition

Real estate development is risky because of its inherent complexity and uncertainty. The multidisciplinary character of real estate development, the unique characteristics of a development location, the long duration of development processes, and the long time horizon of real estate all contribute to this complexity and uncertainty. Moreover, projects become more complex and the real estate development sector asks for more transparency of their internal operations and in their relations with external parties. To cope with these challenges, real estate development organisations have come to show an increasing interest in risk management.

Risk management is the process of identifying, analysing, responding to and monitoring project risks. The project management literature has described several risk management methods and risk analysis techniques. However, these methods and techniques are rarely applied in the practice of real estate development. Still, one may expect these organisations to have learned how to manage the inherently risky nature of real estate development. After all, real estate development organisations that have survived several economic cycles over a lifespan of at least two decades, cannot have survived on sheer luck; they have incorporated risk management.

To reveal how real estate development organisations manage their project risks, this study concentrates on how real estate development organisations factor risk into their investment decision making process. This focus is chosen because at the moments large financial commitments are made in a real estate development project, all phases of risk management come together. In these investment decision moments, the real estate development organisation has to find a balance between...
taking and controlling risk. Taking risk is part of the entrepreneurial character of a real estate development organisation; it cannot be excluded, but has to be done knowingly. The objective of this study is therefore to:

Provide insight in the characteristics of the investment decision making process in real estate development organisations that contribute to knowingly taking risk.

The aim of the empirical field study is to describe the investment decision making processes in real estate development organisations and to identify the management practices that are used in order to safeguard that risks are taken knowingly. This results in the following main research question:

How do real estate development organisations safeguard that risks are taken knowingly by means of their investment decision making procedures?

The study consists of a theoretical and an empirical part. The theoretical part reviews the literature in the fields of real estate development and organisational decision making and synthesises the reviews in an explanatory framework of knowingly taking risk. The empirical part consists of a multiple case study and a cross case analysis: this part answers the main research question and reflects on the framework of knowingly taking risk.

**Theoretical framework**

The object of study is the investment decision making process in real estate development. First, the context and content of investment decisions are described by providing insight into the real estate development process. This results in an integral model of investment decision making in real estate development in relation to the organisation and a project. Second, the process of decision making under risk is explored to develop propositions on and to define the concept of knowingly taking risk.

**Integral model of investment decision making in real estate development**

A real estate development organisation is a private firm undertaking real estate development projects by means of operating on the land, ‘design’, ‘planning’, construction, capital, space and asset markets with the aim of realising profit and other non-monetary objectives. During all development phases in a project (e.g. initiation, feasibility, commitment, construction, and management), activities regarding the operations on these markets are carried out simultaneously. These activities are grouped into development aspects: land development, planning application, design, construction, financing, lease, and sale.
By modelling the development process in both phases and development aspects, insight is gained in the mutual interdependencies of the activities of the separate development aspects over time. These interdependencies are of great importance to risk: for example, closing a rental agreement as the start of a real estate development project reduces the market risk, but at the same time it puts a lot of time pressure on the planning application procedure and the construction process, which increases the risk in a project. The model can help in envisioning the consequences of major decisions regarding individual development aspects and in developing alternative development strategies.

During a real estate development project many decisions are made, but only few of these decisions are critical in terms of risk. These investment decisions are made at the transitions between development phases. At these decision moments a real estate development organisation makes large financial commitments based on a specific course of action, including risk control measures, and an expected return. An investment decision creates certainty, but at the same time flexibility is reduced to control the project and thus a certain risk that the project outcome will deviate from the expected return must be accepted. At such a decision moment, all aspects of the project are assessed and integrally weighed on both project and strategic objectives at multiple organisational levels. As the impact might endanger the continuation of the organisation, investment decisions are made at the strategic level of an organisation.

The investment decision making process links a real estate development project, which operates as a business on its own, to the real estate development organisation. These three processes are incorporated into an integral model to describe the investment decision making process of real estate development organisations in practice. This model represents when investment decisions are made (the investment decision moments), who is involved in this process (the decision actors), and the content of the decision (the decision criteria). The need for an investment decision is determined by the transitions between development phases in a project, but the actual decision moment depends on the frequency of decision meetings defined in organisational procedures. The organisational structure prescribes the main decision actors (those who approve or reject an investment proposal), usually the board and (representatives of) the shareholder(s). The project team members have their primary responsibility in the real estate development process, but they also have a role as decision shapers and decision takers. The decision criteria are determined both on the project level by the development aspects and on the organisational level by monetary objectives, such as risk and return, and non-monetary objectives, such as image, quality and continuity.
Explanatory framework of knowingly taking risk

As investment decisions can be categorised as strategic decisions, the second part of the literature review presents insight into the strategic decision making processes. The literature that explains risk behaviour leads to the conclusion that many individual, group and organisational factors influence the decision making process and thus the decision outcome. Biases, groupthink, escalation of commitment, leadership style, and organisational culture are some of these factors. Unfortunately, these explanatory theories of risk behaviour offer little insight into how decisions are actually made. Therefore, the general literature on organisational decision making has been reviewed.

The organisational decision making literature identifies three descriptive perspectives on decision making: rationality and bounded rationality, politics and power, and garbage can. The review of these perspectives resulted in the selection of the procedural rational model within the bounded rationality perspective as the model for this study. This model was chosen for two reasons. First, this model fits the assumption that decision makers in a real estate development organisation act according to the objectives of their organisation. Second, procedural rational processes describe a decision making process that has proven to be more effective than politics and power and garbage can.

The procedural rational decision process follows a set of decision activities. These decision activities, including decision speed as a measure of decision efficiency, are used to advance seven propositions that hypothesise how real estate developers make investment decisions:

1. Determining project specific decision criteria regarding the acceptable level of risk contributes to knowingly taking risk;
2. Timely recognition of situations in which the risk profile of a project is about to change significantly contributes to knowingly taking risk;
3. Making use of reliable and relevant information contributes to knowingly taking risk;
4. Identifying and analysing multiple courses of action contributes to knowingly taking risk;
5. Evaluating the courses of action on the predefined criteria analytically contributes to knowingly taking risk;
6. Authorising the decision at the organisational level that is capable of dealing with the involved risk level contributes to knowingly taking risk;
7. Limiting the duration of the decision making process and gearing it to the urgency of the decision contributes to knowingly taking risk.

On the basis of the integral model of investment decision making and the propositions, a preliminary definition of knowingly taking risk is developed. Investment decision making is a process in which decision ac-
tors carry out a series of decision activities within a certain *timeframe* by applying a set of (project specific) *decision criteria* resulting in a decision about the allocation of organisational resources to a real estate development project. This process is modelled by the aspects of time, actors and content. If we consider the seven propositions, it can be concluded that these propositions are related to these three aspects. Propositions 2 and 7 are related to time; propositions 1, 3, 4 and 5 are related to content; and proposition 6 is related to actors. It can therefore be concluded that the propositions do not contribute to knowingly taking risk directly and in a similar manner, but they do contribute to knowingly taking risk via three indicators: timeliness, justifiability, and accountability. This results in the following definition: *knowingly taking risk in real estate development is making timely, justifiable and accountable investment decisions.*

**Research method**

The integral model of investment decision making and the explanatory framework of knowingly taking risk, consisting of the propositions and the preliminary definition, are used to examine practice. The central research question asks for an in-depth, holistic analysis of the investment decision making process in its natural setting. To study such a behavioural phenomenon the multiple case study approach is selected. Case studies have both a descriptive and a extracting nature: the first uses deductive logic and the second uses inductive logic. This research uses both applications.

The descriptive case study is used to answer the following sub question by testing the propositions:

*Do real estate development organisations carry out the decision activities that are assumed to contribute to knowingly taking risk?*

The extracting case study is used to answer the following sub question:

*What management practices are used in the investment decision making processes of real estate development organisations that contribute to knowingly taking risks?*

Three Dutch real estate development organisations are selected for the multiple case study: **TCN** Property Projects (**TCN**), Johan Matser Projectontwikkeling (**JMP**) and Blauwhoed (**BH**). The organisations are selected based on their positive track record over the past ten years, so they have operated in both a declining and rising economy, and occupied a stable position in the Dutch real estate development sector amongst the top 30 real estate development organisations over the past five years. **TCN**, **JMP** and **BH** are independent, all-round developers.
Each organisation has 40-100 employees in real estate development activities and a portfolio size with an investment value of over €250 million (m² x rental value/m² x gross yield). Their portfolios combine residential, office, retail and/or industrial projects in the Netherlands.

Their investment decision making processes are examined on the basis of interviews, document analysis and board room observations. First, each case is described by making use of the integral model of investment decision making. Second, the investment decision making process is analyzed per proposition. Empirical evidence from the documents, interviews and observations is presented to support or reject the propositions. The evidence is illustrated by narratives of the investment decision making process in the selected project. Third, a reflection is made on the contribution of the management practices to the three indicators of knowingly taking risk.

In the cross case analysis the comparison of management practices results in a refinement of the propositions, a refinement of the definition of knowingly taking risk, and a set of suggested practices per proposition. The suggested practices are used to develop a strategy table. In addition, the research design presents a method for evaluating these research results on recognisability, relevance, completeness, robustness, and applicability. This method consists of backcasting over the past 12 to 18 months and forecasting the near future regarding changes in the internal organisation and the external environment of real estate development, and redesigning the investment decision making procedure by means of the strategy table.

**Empirical findings**

The three selected real estate development organisations are described and analysed. These descriptions lead to the conclusions that the integral model of investment decision making is successfully applied to describe the organisations and their respective development and decision making procedures; and each organisation uses an investment decision making procedure that guarantees that a procedural rational decision making process is followed. Moreover, these investment decision making procedures differ among the organisations.

In the cross case analysis the propositions are validated or refined and per proposition suggested practices are extracted that should safeguard that timely, justifiable and accountable investment decisions are made or, in other words, that risks are taken knowingly. First, the results are summarised per indicator by describing the decision activities in the form of the (refined) propositions related to the indicator, and presenting which suggested practices ensure that each of these decision activities is properly carried out. Second, conclusions are drawn on the definition of knowingly taking risk and the characteristics of an investment decision making procedure are translated into a strategy table.
Management practices for knowingly taking risk

Timeliness – Timeliness means that risks are addressed proactively and the decision making process does not impede the development process. The first decision activity (proposition 2) that contributes to timeliness is the timely recognition of situations in which the risk profile of a project is about to change significantly. The management practices that safeguard that the need for a decision is recognised in a timely way are a clear division of responsibilities, the monitoring of projects, and the use of a development procedure in which phases and decision moments are standardised. Recognising is primarily the responsibility of a project manager; however, the organisations emphasise the importance of monitoring a project by people other than the project manager. For example, financial controllers monitor the actual expenditures in relation to the project budget; board members monitor projects formally during quarterly update meetings, but also informally.

The second decision activity (refined proposition 7) that contributes to timeliness is limiting the duration of the decision making process by means of the intentional decision making procedure in terms of the frequency of decision meetings. The duration of the decision making process itself is not seen as an obstacle to responding to project dynamics: the frequency of the decision meetings, a minimum of one every two weeks, in combination with the limited number of levels in the organisations represented in the authorisation process should create enough flexibility to decide in time. Deviating from the intentional procedure to speed up the decision process, by accepting late submission of investment proposals or no submission at all, occasionally occurs, but negatively affects the other indicators. The need to speed up should be prevented by a timely recognition.

Justifiability – Justifiability means that the integral level of risk regarding all development aspects of a project can be proven to be reasonable from both project and organisational perspectives. The first decision activity (refined proposition 1) that contributes to justifiability is the determination of decision criteria on both the project and the organisational level regarding the acceptable level of risk. The three real estate development organisations determine the decision criteria on the project level in advance of a project in the form of a development strategy, describing criteria per development aspect, such as a pre-rental percentage, a granted building permit or debt financing percentage. These development strategies are formalised in a development procedure or manual; depending on the type of project these criteria are adjusted. The risk specific decision criterion on the portfolio level is the risk capital, which is defined as the equity invested in a project that can be lost in a worst case scenario.

The second decision activity (refined proposition 3) that contrib-
utes to justifiability is making use of reliable and relevant information, both transferred from a project manager to a decision committee member formally and informally. The primary management practice for the search for information is the writing of an investment proposal by the project manager to communicate the project information to the decision committee. The expertise of the project manager and internal consultants should guarantee the quality of an investment proposal as authors and editors; they are directed in their search by a standardised format of an investment proposal. Another management practice is the gathering of information by the informal and formal monitoring of a project. Additionally, the decision committee members bring in their own expertise as a source of information.

The third decision activity (refined proposition 4) that contributes to justifiability is identifying and analysing at least a proposed strategy and an exit strategy. The investment proposal describes at least one course of action; this description often implicitly identifies and qualifies risks. In addition to the implicit description of risks, risks are explicitly identified in a separate risk paragraph and various scenarios are occasionally quantified. However, most of the risk analyses are made implicitly by the decision makers before or during a decision meeting: they prefer reliable information to a formal risk analysis of the information. Decision makers rarely analyse risks in an instrumental way by using risk analysis techniques or other decision aids, but in a more conceptual way by applying similar principles, such as scenarios, in their line of thinking.

The fourth decision activity (refined proposition 5) that contributes to justifiability is evaluating the courses of action on the predefined criteria both analytically and by expert judgment. To prevent cognitive and social biases, decisions are hardly made in an individual setting; making decisions in a group setting is therefore the suggested management practice. From the cases it emerges that groups should consist of experts with decision authority and some distance from the project. As for the content of the evaluation, it is a common management practice to apply the decision criterion ‘risk capital’ as a necessary condition – and it is sometimes even evaluated in advance by a financial controller or director; other decision criteria are often used as targets. Still, the project manager must justify deviating from these criteria.

**Accountability**—Accountability means that someone has the obligation and is willing to accept responsibility for the decision to fund a project. The decision activity (refined proposition 6) that contributes to accountability is authorising a decision by those who can oversee both project and organisational objectives, and who can be held accountable for the decision based on its position in the organisation or in the project. The organisation of the
authorisation process differs among the three organisations examined in this research; the authorisation process depends on the organisational structure, the shareholder’s involvement and the entrepreneurial culture.

The dilemma that real estate developers are facing is the distribution of entrepreneurship versus accountability within the organisation: who is the entrepreneur - the CEO of the real estate development organisation or the project manager of a real estate development project – and thus who assumes responsibility for a project, and who makes the investment decisions. A CEO or a board of directors, taking all responsibility for a project by making an investment decision is reasonable as organisational objectives come into play. As a consequence, a project manager might feel less in control and this could result in less proactive behaviour and the assumption of less responsibility during the development process.

From the perspective of justifiability on the project level, it is reasonable for the project manager to be held accountable, because the project manager has most knowledge about a project and its risks. In this case a CEO or board only has to check the reliability of the investment proposal and the impact of a worst-case scenario on the continuity of the organisation. However, the extent to which a project manager can be held accountable for changing market conditions is open to question. In any case the board has the final responsibility, but the project manager’s sense of responsibility is stimulated by an entrepreneurial culture within the organisation. In addition, other actors participate in the decision process: their decision roles must correspond with their roles in the development project and contribute to the organisation’s culture.

Conclusions on knowingly taking risk
The explanatory framework offered a preliminary definition of knowingly taking risk based on the indicators of ‘justifiability’, ‘accountability’, and ‘timeliness’; it was assumed that a proposition – a decision activity – had an unambiguous, positive relationship with one of those indicators. The propositions and its relations with the indicators are validated. However, when looking at the extracted management practices, it appears that management practices do not always correspond to a single indicator, but to multiple indicators; moreover, some suggested practices make a positive contribution to one of the indicators, while negatively influencing one or both of the others.

A few examples can explain this increased complexity in the explanatory framework. In favour of justifiability, the level of comprehensiveness of an investment proposal can be increased, but at the same time this may increase the duration of the decision process and
thus negatively affects timeliness. Monitoring can contribute to both justifiability and timeliness, as it is favourable for the recognition of the need for a decision and for transferring project information. A group setting is favourable for creating intersubjectivity which contributes to justifiability, but it may negatively affect accountability due to group dynamics or a wrongly composed groups. Some of these multiple relations are part of the intentional decision making procedures, but they also occur in the actual projects owing to circumstances.

Because of the likelihood of conflicting contributions and multiple available management practices, it is not possible to prescribe one best way of knowingly taking risk. Still, knowingly taking risk in the context of real estate development is the making of justifiable, accountable and timely investment decisions. In order to safeguard knowingly taking risk in a real estate development organisation, an investment decision making procedure must be designed by choosing a well-balanced set of – organisation specific – management practices.

To support the design of a decision making procedure, this study developed a strategy table. A strategy table consists of a set of design elements and a set of design options per element. The management practices are translated into general elements of a decision making procedure and the possible options to design or fill in this element. The options vary according to when or how an element is carried out, and by whom. The most important of these elements are:

- Determination of decision criteria
- Monitoring
- Stimulating proactive behaviour
- Guaranteeing quality of investment proposal
- Decision setting - group composition
- Observance of decision procedure.

The decision making procedure can be designed by selecting an option or options per element and checking the consistency of the selected procedure in terms of its justifiability, timeliness and accountability.

Reliability, robustness and applicability of the results
The strategy table is used for an evaluative redesign of the investment decision making procedures of the case study real estate development organisations by their CEOs in an individual interactive session with the researcher. This part of the research took place 12 to 18 months after the case study. By means of this method, the reliability and the robustness of the case study results are evaluated and the practical applicability of the strategy table is explored.

As for the reliability of the results it can be concluded that the elements of the investment decision making procedure were both consid-
ered relevant and complete as to guarantee that timely, justifiable and accountable decisions are made. As for the robustness of the findings it can be said that all elements of the procedure are still relevant after 12 to 18 months; some elements have even become more important due to the changed market conditions. This indicates that the set of elements keeps its relevance over time.

The first exploration of the applicability of the strategy table as a means to support the design of an investment decision making procedure is positive. The CEO’s were able to describe and explain their choices; when changes in the decision making procedure were made in relation to the prior situation, the CEO’s could make clear why these changes should lead to an improvement in decisions and in the way that risks are managed. The fact that the strategy table provides a structure and platform for discussion in combination with the completeness of the elements and options offers good prospects for further practical application.

In addition to the evaluation criteria, some conclusions can be drawn regarding the content of the decision making procedures. Under challenging circumstances, the investment decision making procedures converge. In the period between the case study and the evaluation, the real estate development organisations studied faced the consequences of a credit crunch and a structural increase of construction costs. This resulted in changes in their investment decision making procedure. These changes concern a stricter observance of the procedure, more emphasis on monitoring the development process, more use of internal expertise, and a clearer division of responsibilities. Remarkably, while the market situation has become more demanding, there has been no perceptible increase in the application of risk analysis techniques. This indicates that the application of formal risk analysis techniques is not a sound measure for the risk awareness in the real estate development sector; on the contrary, risk taking, and risk management in general, is incorporated in the investment decision making process and the daily practice of real estate development organisations by means of development and decision procedures.

**Reflections**

This research delivered a set of results: a theoretical, integral model of investment decision making, propositions on knowingly taking risk, and the definition of knowingly taking risk. These propositions are validated in practice; moreover, management practices are extracted that safeguard that risks are taken knowingly. The research question is therefore answered; finally, some reflections for scientists and practitioners are made.
Further research

In addition to the results and conclusions, this study makes some suggestions for further research. First, this research has a descriptive, in-depth character, which limits the number of cases that could be examined. To increase the generalisability of the results, further research should increase the number of real estate development organisations under study. This could be done by applying a survey that uses the strategy table as input for the survey questions. A survey could result in typology of decision procedures based on a large sample of development organisations. Next, differences in the decision procedures could be explained by contextual differences, such as a different size portfolio or a different number of employees, a different development area or other types of real estate development organisations. Finally, in a survey, different decision procedures could be related to the success of a real estate development organisation in order to determine which procedure proves to be best.

Second, this research has examined the formal decision making process by making use of observations of boardroom decision making, interviews and document analysis. In order to obtain insight into the role of the project manager and the role of informal communication between the project manager and board members, a longitudinal case study is recommended in which the perspective of the project manager instead of the board is taken to examine the preparation of the investment proposal. Moreover, the longitudinal study could be extended by following a project manager during the development process. This could redefine the start (and the end) of the investment decision making process: the boardroom decision can be regarded as the whole decision process, as the process from preparing a proposal until the authorisation by the board, and as the whole development process from initiative until the authorisation to start construction.

Third, this research has investigated the process of investment decision making rather than the content of the decisions, such as what risks are considered and what risk control measures are analysed and implemented. A suggestion for further research is to conduct explicit research on risk control measures to acquire insight into the risk control measures that are applied in real estate development, and specifically in highly complex projects, such as redevelopment or transformation projects and area developments.

Implications for practice

The findings of the research also have implications for practice. First, the research resulted in the development of a strategy table that has practical value. The strategy table provides a structure and platform for discussion and can be part of a participative intervention method
supporting the design or revision of an investment decision making procedure. The first step of an intervention is to analyse the flaws in a decision making procedure. The second step is to design or revise the investment decision making procedure by selecting design options in the strategy table. This could be done in an individual setting and in a group setting in order to discuss and negotiate the investment decision making procedure. The final step is to evaluate the (re)designed decision procedure or strategy by using the guiding principles of knowingly taking risk: justifiability, accountability, and timeliness.

Second, the practical value of describing the real estate development process in development phases and development aspects is the possibility to envision and design multiple development strategies. As the development strategy has an important function in taking risk, it is advantageous for real estate development organisations to make good use of it. It seems favourable in terms of portfolio management to determine multiple development strategies to spread risks. At the start of a project a development strategy can even be adjusted to the specific features of that project. At the investment decision moments it is possible to deviate from the intended development strategy: if that is the case, this must be made explicit and new criteria should be applied to justify the decision.

Third, this research has uncovered several implicit and explicit ways of dealing with risk by examining the investment decision making process in real estate development from an organisational perspective. Still, the explicit use of risk analysis techniques is low and even under severe market conditions, the application has not been increased. This does not imply that making risks explicit by means of quantitative risk analysis techniques could not make a positive contribution to the decision making process, but to implement risk analysis techniques successfully, these techniques must correspond to the perception and treatment of risk of the decision makers in real estate development, such as a scenario-strategy analysis or the real option method.

Final reflection
This research has discovered that in real estate development both implicit and explicit ways of gaining knowledge about a project in order to justify a decision contribute to knowingly taking risk. Most research focuses on the justification of decisions by looking for methods to improve the search for, analysis, and evaluation of information. However, sometimes a decision just has to be made, regardless of what is known at a certain moment in time. If no decision is made, time will be the greatest risk as prior commitments have been made and no direction is given to the course of action and risk control measures to be taken. Moreover, not everything can be known and objectively justified; therefore it is
necessary for someone to accept accountability and do everything possible to influence the future course of action without being too opportunistic and jeopardising the survival of the organisation. This means that making investment decisions in real estate development entails a balance of justifiability, timeliness and accountability. In other words, the success of real estate development starts with knowingly taking risk.
Samenvatting

Weloverwogen risico’s aangaan
Onderzoek naar de besluitvorming over het investeren in vastgoedontwikkelingsprojecten
Ellen Gehner

Vastgoedontwikkeling is het transformeren van een idee voor een vastgoedvraag naar een daadwerkelijk gerealiseerd gebouw. Het zien en vervolgens benutten van een ontwikkelkans vraagt om een financiële investering van een vastgoedontwikkelingsorganisatie in een project; het investeren in een project impliceert het nemen van risico. Deze studie onderzoekt hoe investeringsbeslissingen in vastgoedontwikkeling worden genomen. Het onderzoek laat zien welke procedures en vaardigheden vastgoedontwikkelingsorganisaties hebben ontwikkeld en geïnstitutionaliseerd en die hen in staat stellen om te gaan met het risicovolle karakter van vastgoedontwikkeling; in andere woorden, hoe vastgoedontwikkelaars weloverwogen risico’s aangaan.

Probleemstelling

Vastgoedontwikkeling wordt gezien als een risicovolle onderneming vanwege de inherente complexiteit en onzekerheid. Het multidisciplinaire karakter van vastgoedontwikkeling, de unieke karakteristieken van een locatie, de lange duur van een ontwikkelproces, en de lange levensduur van vastgoed zorgen voor deze complexiteit en onzekerheid. Verschillende trends dragen er bovendien toe bij dat projecten nog complexer worden en dat er een grotere vraag naar transparantie is, zowel wat betreft de interne verslaglegging als in de communicatie met externe partijen. Om de toenemende complexiteit en vraag naar transparantie het hoofd te bieden, is de interesse in risicomanagement bij vastgoedontwikkelingsorganisaties de laatste jaren toegenomen.

Risicomanagement is het identificeren en analyseren van risico’s, het formuleren van de risicorespons, het implementeren van beheersmaatregelen en het monitoren van de risico’s. Ter ondersteuning van het risicomanagement zijn in de projectmanagementliteratuur tal van risicomanagementmethoden en risicoanalysetechnieken beschreven. In de praktijk van vastgoedontwikkeling worden deze methoden en technieken echter nauwelijks toegespitst. Toch mag men veronderstellen dat vastgoedontwikkelingsorganisaties die meerdere vastgoedcycli hebben overleefd, hebben geleerd de risico’s die inherent zijn aan vastgoedontwikkeling te managen. De verwachting is dat deze organisaties risicomanagement op enigerlei wijze hebben geïncorporeerd in het ontwikkel- en besluitvormingsproces.
Om inzicht te krijgen in de manier waarop vastgoedontwikkelingsorganisaties risico’s managen, richt dit onderzoek zich op de wijze waarop zij risico’s aangaan bij het nemen van investeringsbeslissingen. Op deze beslismomenten worden grote financiële verplichtingen aangegaan, wat betekent dat zowel risico’s als beheersmaatregelen, impliciet dan wel expliciet, worden geïdentificeerd, geanalyseerd en afgewogen. Hierbij hoeven niet alle risico’s te worden uitgesloten – het aangaan van risico is onderdeel van het ondernemerschap van een vastgoedontwikkelaar – maar er moet een gebalanceerde afweging worden gemaakt tussen welk risico acceptabel is en welk risico beheerst moet worden: het risico moet weloverwogen worden aangegaan. De doelstelling van het onderzoek is dan ook:

Het verschaffen van inzicht in de karakteristieken van de besluitvorming over het investeren in vastgoedontwikkelingsprojecten die bijdragen aan het weloverwogen aangaan van risico’s.

Het doel van het empirisch onderzoek is het besluitvormingsproces over het investeren in vastgoedontwikkelingsprojecten te beschrijven en te identificeren welke managementpraktijken worden uitgeoefend die waarborgen dat risico’s weloverwogen worden aangegaan. Dit leidt tot de volgende onderzoeks vraag:

Hoe waarborgen vastgoedontwikkelingsorganisaties dat risico’s weloverwogen worden aangegaan door middel van hun besluitvormingsprocedures voor het nemen van investeringsbeslissingen?

Het onderzoek is opgedeeld in een theoretisch en een empirisch deel. Het theoretische deel bestaat uit een literatuurstudie naar de theorie van vastgoedontwikkeling en van organisatorische besluitvorming om te komen tot een theoretisch model dat verklaart op welke wijze risico’s weloverwogen worden aangegaan. Het empirische deel bestaat uit een meervoudige case studie en een cross case analyse: in dit deel wordt antwoord gegeven op de onderzoeks vraag en wordt gereflecteerd op het verklarende model.

Theoretisch kader
Het object van onderzoek is het besluitvormingsproces over het investeren in vastgoedontwikkelingsprojecten. Het theoretisch kader geeft in de eerste plaats inzicht in de context en inhoud van investeringsbeslissingen door de theorie van vastgoedontwikkeling te beschrijven. Op basis van dit inzicht is een integraal model van de besluitvorming over het investeren in vastgoedontwikkelingsprojecten ontwikkeld. Daarnaast worden de theorieën over besluitvorming onder risico en organisatorische besluitvorming verkend; hieruit is een besluitvormingstheorie geselecteerd die als basis dient voor het opstellen van proposities.
Integraal model van de besluitvorming over het investeren in vastgoed-ontwikkelingsprojecten

Een vastgoedontwikkelingsorganisatie is een privaat bedrijf dat vastgoedontwikkelingsprojecten onderneemt door te opereren op de grond-, vergunningen-, ‘ontwerp’-, bouw-, kapitaal-, huur/koop-, en vastgoedbeleggingsmarkt met als doel het realiseren van winst en andere, niet-financiële doelstellingen. Gedurende alle ontwikkelingsfasen in een project, zoals initiatief, haalbaarheid, planontwikkeling, realisatie en management, vinden activiteiten op elk van deze markten gelijktijdig plaats. De activiteiten van vastgoedontwikkeling kunnen dan ook worden gecategoriseerd in de volgende ontwikkelaspecten: grondexploitatie, vergunningen, ontwerp, constructie, financiering, verhuur en verkoop.

Door het vastgoedontwikkelingsproces te modelleren in ontwikkelfasen en ontwikkelaspecten kunnen de onderlinge afhankelijkheden van de activiteiten inzichtelijk worden gemaakt. Deze afhankelijkheden bepalen voor een groot deel de risico’s in een project: bijvoorbeeld, het sluiten van een huurovereenkomst in de initiatieffase van een vastgoedontwikkelingsproject reduceert het marktrisico, maar tegelijkertijd wordt in een dergelijke overeenkomst vaak ook een opleveringsdatum vastgesteld, waardoor het effect van vertraging in de vergunningsprocedure of in de realisatie sterk toeneemt. De volgorde waarin de activiteiten ten aanzien van de ontwikkelaspecten onderling worden uitgevoerd is gedefinieerd als een ontwikkelstrategie. Meerdere ontwikkelstrategieën kunnen worden ontwikkeld, die vervolgens dienen als toetsingskader bij het nemen van investeringsbeslissingen.

De investeringsbeslissingen zijn de beslissingen die kritisch zijn in termen van risico. Deze beslismomenten markeren de overgang tussen twee ontwikkelfasen. Op deze momenten neemt een vastgoedontwikkelingsorganisatie een besluit om grote financiële verplichtingen aan te gaan voor een project op basis van het verwachte verloop van het project, inclusief de te nemen beheersmaatregelen en de winstprognose. Door het aangaan van de financiële verplichting wordt tegelijkertijd het risico dat daaraan verbonden is, aangegaan. Een dergelijk besluit wordt genomen op basis van een integrale afweging van de voortgang van alle ontwikkelaspecten tegen de project- en strategische doelstellingen van de organisatie. Aangezien de impact van deze investeringsbesluiten mogelijk het voortbestaan van de organisatie in gevaar kan brengen, worden deze besluiten genomen op het strategisch niveau van de organisatie.

De investeringsbeslissingen zijn de spaarzame momenten dat een
vastgoedontwikkelingsproject, dat kan worden beschouwd als een onderneming op zichzelf, wordt afgewogen in de context van de vastgoedontwikkelingsorganisatie. Het besluitvormingsproces koppelt dan ook het vastgoedontwikkelingsproject aan de vastgoedontwikkelingsorganisatie. Deze drie systemen zijn gemodelleerd in een integraal model. In dit model geven de relaties tussen deze drie systemen aan wanneer investeringsbesluiten worden gemaakt (de beslismomenten), wie er betrokken zijn in het besluitvormingsproces (de beslisactoren), en de inhoud van het besluit (de besliscriteria). De beslismomenten worden in eerste instantie bepaald door de faseovergangen in het vastgoedontwikkelingsproces, maar het moment waarop het besluit daadwerkelijk genomen worden, wordt bepaald door de frequentie van de beslisvergaderingen die is vastgelegd in organisatorische procedures. De organisatiestructuur bepaalt voor iedere functie de rol in het besluitvormingsproces en in het vastgoedontwikkelingsproces; doorgaans is slechts de directie geautoriseerd om investeringsbesluiten goed- of af te keuren. Het projectteam is een organisatie op zichzelf, maar de projectteamleden spelen ieder ook een rol in de voorbereiding en de voorlopige goedkeuring van een besluit. De besliscriteria worden bepaald op projectniveau door voor ieder ontwikkelaspect voortgangscriteria op te stellen, en op organisatorisch niveau in termen van financiële criteria, zoals winst- en risicopercentages, maar ook in termen van kwaliteit en de bijdrage aan imago en continuïteit.

Verklarend model van het weloverwogen aangaan van risico’s
In het spectrum van routinematige en strategische besluiten kunnen investeringsbeslissingen worden gecategoriseerd als gematigd strategische besluiten, waarin risico en onzekerheid een belangrijke rol spelen. Onderzoek naar het risicogedrag van besluitvormers heeft vele individuele, groeps- en organisatorische factoren opgeleverd die het besluitvormingsproces beïnvloeden en verschillen in besluiten verklaren, zoals cognitieve biases, commissie (escalation of commitment), groepsdanken, leiderschapsstijl en organisatiecultuur. Echter, deze verklarende theorieën geven weinig inzicht in het daadwerkelijke proces van besluitvorming. Daartoe zijn de organisatietheorieën over besluitvorming verkend: deze theorieën zijn niet specifiek gericht op de rol van risico in de besluitvorming, maar beschouwt risico als inherent onderdeel van de besluitvorming.

De organisatorische besluitvormingsliteratuur onderscheidt drie perspectieven op besluitvorming: ‘bounded rationality’ (begrensde rationaliteit), ‘politics and power’ (politiek en macht), en ‘garbage can’ (systemische anarchie). Dit onderzoek is uitgevoerd vanuit het perspectief van ‘bounded rationality’. Daarbinnen is gekozen voor het procedurele rationele model om het besluitvormingsproces bij vastgoedont-
wikkeling te beschrijven. Dit model is in de eerste plaats gekozen op basis van de assumptie dat de besluitvormers in een vastgoedontwikkelingsorganisatie de doelstellingen van de organisatie prevaleren boven individuele belangen. Op de tweede plaats is gebleken dat besluiten die zijn genomen volgens een procedureel rationeel model effectiever zijn dan besluiten die het resultaat zijn van een politiek prosed of een anarchistisch model.

Het procedurele rationele model beschrijft een besluitvormingsproces als een set van opeenvolgende beslisactiviteiten. Deze set van beslisactiviteiten, alsmede de snelheid van besluitvorming, zijn gebruikt als basis voor het opstellen van zeven proposities over het besluitvormingsproces over het investeren in vastgoedontwikkelingsprojecten:

1. Het vaststellen van projectspecifieke besliscriteria ten aanzien van het acceptabele risico draagt bij aan het weloverwogen aangaan van risico’s;
2. Het tijdig herkennen van situaties die een significante wijziging in het risicoprofiel teweegbrengen draagt bij aan het weloverwogen aangaan van risico’s;
3. Het gebruik maken van betrouwbare en relevante informatie draagt bij aan het weloverwogen aangaan van risico’s;
4. Het identificeren en analyseren van alternatieve strategieën draagt bij aan het weloverwogen aangaan van risico’s;
5. Het analytisch evalueren van de strategieën tegen de vastgestelde besliscriteria draagt bij aan het weloverwogen aangaan van risico’s;
6. Het autoriseren van het besluit op het niveau in de organisatie waarop men in staat is om het risico te omvatten draagt bij aan het weloverwogen aangaan van risico’s;
7. Het beperken van de duur van het besluitvormingsproces en deze aanpassen aan de urgentie van het besluit draagt bij aan het weloverwogen aangaan van risico’s.

Een synthese van de proposities en het integrale model van de besluitvorming over het investeren in vastgoedontwikkelingsprojecten heeft geleid tot een voorlopige definitie van het concept ‘het weloverwogen nemen van risico’. In het integrale model is het besluitvormingsproces gedefinieerd in de aspecten actoren, tijd en inhoud: de beslisactoren voeren beslisactiviteiten uit in een bepaalde tijdsperiode, daarbij gebruikmakend van een set van besliscriteria, die leiden tot een besluit over de allocatie van financiële middelen aan een vastgoedontwikkelingsproject. De zeven proposities kunnen tevens worden gerelateerd aan deze drie aspecten. De proposities 2 en 7 zijn gerelateerd aan tijd; de proposities 1, 3, 4 en 5 zijn gerelateerd aan de inhoud; en propositie 6 is gerelateerd aan de actoren. Om te verklaren hoe risico’s weloverwogen
worden aangegaan, wordt verondersteld dat de proposities niet direct bijdragen aan het weloverwogen aangaan van risico’s, maar dat zij hieraan bijdragen via drie indicatoren die overeenkomen met de aspecten uit het integrale model. Deze drie indicatoren zijn tijdigheid, rechtvaardiging en toerekenbaarheid. Hieruit volgt de voorlopige definitie: het weloverwogen aangaan van risico’s bij vastgoedontwikkeling is het nemen van investeringsbeslissingen die te rechtvaardigen, tijdig en toerekenbaar zijn.

**Onderzoeksmethode**

Het integrale model van de besluitvorming over het investeren in vastgoedontwikkelingsprojecten en het verklarende model van het weloverwogen aangaan van risico’s, bestaande uit de proposities en de indicatoren, vormen de basis voor het beschrijven en analyseren van de praktijk. Voor het beantwoorden van de centrale onderzoeksvraag is een diepgaande, holistische analyse van de besluitvorming over het investeren in vastgoedontwikkelingsprojecten in de dagelijkse praktijk vereist. De onderzoeksmethode die aan deze eisen voldoet, is een meervoudige casestudie. Casestudies kunnen zowel beschrijvend als extraherend van aard zijn: een beschrijvende casestudie maakt gebruik van deductieve logica en een extraherende casestudie van inductieve logica. In dit onderzoek worden beide vormen toegepast.

De beschrijvende casestudie geeft antwoord op de volgende deelvraag door de proposities te toetsen:

*Voeren vastgoedontwikkelingsorganisaties de beslisactiviteiten waarvan wordt verondersteld dat ze een bijdrage leveren aan het weloverwogen aangaan van risico’s uit?*

De extraherende casestudie geeft antwoord op de volgende deelvraag:

*Welke managementpraktijken worden toegepast in het besluitvormingsproces over het investeren in vastgoedontwikkelingsprojecten die bijdragen aan het weloverwogen aangaan van risico’s?*

Drie Nederlandse vastgoedontwikkelingsorganisaties zijn geselecteerd voor de meervoudige casestudie: tcn Property Projects (tcn), Johan Matser Projectontwikkeling (jmp) en Blauwhoed (bh). De selectiecriteria hebben betrekking op het type ontwikkelaar, de geleverde prestatie, de omvang en de samenstelling van de portefeuille. tcn, jmp en bh zijn alle drie onafhankelijk opererende, all round ontwikkelaars. De prestatie is gemeten in termen van een positief bedrijfsresultaat in de afgelopen tien jaar en een top-30 positie in de lijst van Nederlandse projectontwikkelaars in de afgelopen vijf jaar. Elk van de organisaties heeft 40-100 werknemers werkzaam in vastgoedontwikkelingsactiviteiten en heeft een portefeuille met een investeringswaarde boven
De ontwikkelportefeuilles zijn samengesteld uit een combinatie van woningen, kantoren, winkels, leisure en bedrijfsruimte in Nederland.

De besluitvorming over het investeren in vastgoedontwikkelingsprojecten is onderzocht door middel van interviews, documentanalyse en observaties van directievergaderingen. Per organisatie is een korte beschrijving gegeven van de organisatorische kenmerken, het vastgoedontwikkelingsproces en het besluitvormingsproces aan de hand van het integrale model. Daarnaast is per case een analyse gemaakt van de proposities: de proposities zijn getoetst en managementpraktijken zijn geëxtraheerd. Ter illustratie van de beslisactiviteiten en de managementpraktijken is het besluitvormingsproces van een specifiek project in meer detail beschreven. Ten slotte is per case gereflecteerd op de bijdrage van de managementpraktijken aan de drie indicatoren van het weloverwogen aangaan van risico’s.

In de cross case analyse zijn de managementpraktijken van de drie cases met elkaar vergeleken: dit heeft geresulteerd in de aanpassing van enkele proposities, een set van aanbevolen managementpraktijken, en een aanpassing van het verklarende model van het weloverwogen aangaan van risico’s. De aanbevolen managementpraktijken zijn vervolgens gebruikt om een ‘strategietabel’ te ontwikkelen, waarmee beslisprocedures kunnen worden geëvalueerd of vormgegeven in praktijksituaties. In dit onderzoek is de strategietabel gebruikt om de onderzoekresultaten te evalueren op betrouwbaarheid, robuustheid en toepasbaarheid. De evaluatie bestaat uit een oefening ‘backcasting’ en ‘forecasting’, waarin de CEO’s van de drie geselecteerde organisaties de interne en externe ontwikkelingen van de afgelopen 12-18 maanden en de nabije toekomst beschrijven, en een oefening waarin gevraagd wordt de eigen beslisprocedure opnieuw vorm te geven met behulp van de strategietabel in reactie op de recente en toekomstige ontwikkelingen.

**Empirische onderzoeksresultaten**

De drie geselecteerde vastgoedontwikkelingsorganisaties zijn beschreven en geanalyseerd. Uit de individuele case beschrijvingen kan worden geconcludeerd dat het integrale model van het besluitvormingsproces over het investeren in vastgoedontwikkelingsprojecten geschikt blijkt te zijn om de organisaties, de ontwikkel- en de beslisprocedures te beschrijven, en dat elk van de organisaties een, onderling verschillende, beslisprocedure toepast dat waarborgt dat een procedureel rationeel besluitvormingsproces wordt uitgevoerd. De resultaten van de cross case analyse worden hieronder toegelicht.
Managementpraktijken voor het weloverwogen aangaan van risico’s

De cross case analyse heeft geleid tot een validatie en in sommige gevallen een aanpassing van de proposities, en een set van aanbevolen managementpraktijken per propositie die moeten waarborgen dat tijdige, te rechtvaardigen en toerekenbare besluiten worden genomen, oftewel dat weloverwogen risico’s worden aangegaan. Deze resultaten zijn samengevat per indicator: eerst wordt de, eventueel aangepaste, propositie die aan deze indicator een bijdrage levert, geïntroduceerd en vervolgens worden de bijbehorende managementpraktijken in het kort beschreven.

**Tijdigheid** – Tijdigheid betekent dat risico’s proactief worden geadresseerd en dat het besluitvormingsproces geen hinder vormt voor de voortgang van het vastgoedontwikkelingsproces. De eerste beslisactiviteit (propositie 2) die bijdraagt aan de indicator tijdigheid is *het tijdig herkennen van situaties die een significante wijziging in het risicoprofiel teweegbrengen*. De managementpraktijken die waarborgen dat de noodzaak van een investeringsbesluit tijdig wordt herkend, zijn een heldere verdeling van ontwikkelaar- en beslisverantwoordelijkheden, het monitoren van projecten, en het gebruik van een ontwikkelprocedure waarin ontwikkelfasen en beslismomenten zijn gestandaardiseerd. Het herkennen van de noodzaak van een investeringsbesluit is primair de verantwoordelijkheid van een projectmanager; echter, de organisaties benadrukken het belang van het monitoren van een project door anderen dan de projectmanager in het kader van een tijdige signalering. Naast de projectmanager houden bijvoorbeeld financiële controllers toezicht op de actuele uitgaven in relatie tot het toegekende projectbudget, en houden directieleden de voortgang van een project in de gaten in periodieke overleggen, zoals kwartaalrapportages, en door informele communicatie.

De tweede beslisactiviteit (propositie 7 – aangepast) die bijdraagt aan de indicator tijdigheid is *het beperken van de intentionele duur van het besluitvormingsproces door het vastleggen van een beslisfrequentie in de beslisprocedure*. De duur van een besluitvormingsproces wordt niet gezien als een belemmering om adequaat te kunnen reageren op de dynamiek in een project: de frequentie van beslisvergaderingen (met een minimum van eens per twee weken) in combinatie met de beperkte grootte van de organisaties, en daarmee het beperkt aantal lager in een besluitvormingsproces, dragen zorg voor voldoende flexibiliteit om tijdig te besluiten. Het afwijken van de intentionele beslisprocedure om het besluitvormingsproces te versnellen, door bijvoorbeeld te accepteren dat investeringsvoorstellen te laat of helemaal niet worden ingediend waardoor de besluitvormers zich niet of nauwelijks kunnen voorbereiden, heeft een negatief effect op de rechtvaardiging van een
besluit. Het afwijken van de intentionele beslisprocedure dient te wor-
den voorkomen door een tijdige herkenning van de noodzaak tot een
investeringsbeslissing.

*Rechtvaardiging* – Het rechtvaardigen van een besluit betekent dat het
totaal aan risico’s van alle ontwikkelaspecten logischerwijs kan wor-
den verklaard zowel vanuit project- als organisatiedoelstellingen. De
eerste beslisactiviteit (propositie 1 – aangepast) die bijdraagt aan de
indicator rechtvaardiging is *het vaststellen van besliscriteria ten aanzien
van het acceptabele risico op het niveau van het project en de portefeuille*. De
drie vastgoedontwikkelingsorganisaties stellen besliscriteria vast op
het niveau van het project in de vorm van een ontwikkelstrategie: de
ontwikkelstrategie bestaat uit besliscriteria per ontwikkelaspect voor
eieder beslismoment, zoals een voorverhuurpercentage, een onherroe-
pelijke bouwvergunning en een percentage externe financiering voor
het beslismoment ‘start bouw’. Deze ontwikkelstrategieën zijn geform-
aliseerd in een ontwikkelprocedure; afhankelijk van het type project
wordt de ontwikkelstrategie aangepast bij de start van het ontwikkel-
proces. Het aanbevolen risicospecifieke besliscriterium op het niveau
van de portefeuille is het risicokapitaal dat wordt gedefinieerd als het
totale geïnvesteerde eigen vermogen in projecten dat de organisatie
verliest bij het optreden van een worst case scenario.

De tweede beslisactiviteit (propositie 3 – aangepast) die bijdraagt
aan de indicator rechtvaardiging is *het gebruik maken van betrouwbare
en relevante informatie die zowel formeel als informeel wordt overgedragen
van een projectmanager aan de besluitvormers*. De primaire management-
praktijk voor het overdragen van informatie is het schrijven van een
investeringsvoorstel. Ten behoeve van het waarborgen van de kwaliteit
van het investeringsvoorstel maakt de projectmanager gebruik van een
standaard format voor een investeringsvoorstel en van de expertise van
projectteamleden. Een andere, veelvuldig gebruikte managementprak-
tijk om informatie te vergaren, is het formeel en informeel monitoren
van een project. Aanvullend op de projectspecifieke informatie maken
besluitvormers gebruik van hun eigen kennis van en ervaring in vast-
goedontwikkeling.

De derde beslisactiviteit (propositie 4 – aangepast) die bijdraagt aan
deur de indicator rechtvaardiging is *het identificeren en analyseren van tenmin-
ste een voorkeursstrategie en een exit strategie*. In het investeringsvoorstel
wordt over het algemeen alleen de voorkeursstrategie beschreven;
slechts in extreme gevallen wordt een exit strategie expliciet beschre-
ven. In de beschrijving van het project worden risico’s vaak impliciet
gedefinieerd en gekwalificeerd. Daarnaast worden risico’s expliciet
gedefinieerd in een aparte risicoparagraaf, soms aangevuld met een
kwantitatieve gevoeligheids- of scenarioanalyse. De besluitvormers
prefereren uiteindelijk betrouwbare informatie boven een formele risicoanalyse. Op basis van deze informatie maken de besluitvormers in voorbereiding op of tijdens de beslisvergadering impliciet risico-analyses. Hierbij maken zijn geen gebruik van formele risicoanalyse-technieken, maar wel van gelijksoortige concepten en principes, zoals scenario’s, in hun lijn van denken.

De vierde beslisactiviteit (propositie 5 – aangepast) die bijdraagt aan de indicator rechtsvaardigheid is het evalueren van de strategieën tegen de vastgestelde besliscriteria zowel op analytische wijze als intuitief. Om cognitieve biases te voorkomen is de managementpraktijk dat besluiten in een groep worden genomen; om bovendien sociale biases te voorkomen wordt een groep zorgvuldig samengesteld uit leden met verschillende expertisegebieden, ruime kennis en ervaring, voldoende beslisbevoegdheid en verschillende mate van betrokkenheid bij een project. Bij het maken van een afweging is de algemene managementpraktijk dat het risicokapitaal als noodzakelijke randvoorwaarde wordt toegepast; deze wordt vaak van tevoren getoetst door een financiële controller of directeur en zonder zijn goedkeuring wordt een investeringsvoorstel niet in behandeling genomen. De andere besliscriteria zijn streefwaarden, waarvan kan worden afgeweken. In de praktijk voldoet een project meestal niet aan alle criteria en draait het om de vraag of het gerechtvaardigd is om van de vooraf opgestelde besliscriteria af te wijken.

Toerekenbaarheid – Toerekenbaarheid betekent dat iemand de verantwoording moet en wil opnemen voor het besluit om te investeren in een vastgoedontwikkelingsproject. De beslisactiviteit (propositie 6 – aangepast) die bijdraagt aan de indicator toerekenbaarheid is het autoriseren van het besluit door iemand die zowel de project- als de portefeuilledoelstellingen in overweging kan nemen, en die verantwoordelijk kan worden gesteld voor het besluit op basis van zijn positie in het project of in de organisatie. De autorisatieprocessen in de drie casestudies verschillen sterk van elkaar door verschillen in de organisatiestructuur, de betrokkenheid van de aandeelhouder(s) en de organisatiecultuur, met name ten aanzien van het ondernemerschap.

Het dilemma waar een vastgoedontwikkelingsorganisatie mee te maken heeft is enerzijds het creëren van een gevoel van ondernemerschap in alle lagen van de organisatie en anderzijds het toekennen van beslisbevoegdheden: wie is de ondernemer – de CEO van de vastgoedontwikkelingsorganisatie of de projectmanager van het vastgoedontwikkelingsproject – en dus wie wordt verantwoordelijk gehouden voor het welslagen van een project, en wie heeft de bevoegdheid om investeringsbesluiten te nemen en wordt daarvoor aansprakelijk gesteld.

Het is aannemelijk dat als de directie investeringsbesluiten neemt, omdat hierbij organisatiedoelstellingen in het geding zijn, de CEO of
directie ook de verantwoordelijkheid op zich neemt voor het welslagen van een project. Dit kan echter tot gevolg hebben dat een projectmanager zich minder betrokken voelt, wat kan resulteren in minder proactief gedrag en het nemen van minder verantwoordelijkheid in het ontwikkelingsproces. Vanuit het perspectief van het rechtvaardigen van een besluit op projectniveau, is het aannemelijk dat een investeringsbeslissing toerekenbaar is aan een projectmanager, omdat de projectmanager de meeste kennis heeft over het project en de risico’s. In dit geval ligt het ondernemerschap bij de projectmanager en toetst de CEO of de directie slechts de betrouwbaarheid van een investeringsvoorstel en het risicokapitaal. Echter, het is de vraag in hoeverre een projectmanager verantwoordelijk kan worden gehouden voor algemene marktomstandigheden.

Vanuit het perspectief van de aandeelhouder ligt de laatste verantwoordelijkheid voor de projecten bij de directie, maar het is raadzaam het gevoel van verantwoordelijkheid bij de projectmanager te stimuleren door het ondernemerschap laag te leggen in de organisatie. Daarnaast zijn niet slechts de projectmanager en de directie betrokken bij het ontwikkelproces en het besluitvormingsproces; ook de rollen van de andere projectteamleden in het besluitvormingsproces moeten worden afgestemd met de verantwoordelijkheden in het ontwikkelproces en in overeenstemming zijn met de organisatiecultuur.

**Conclusies over het weloverwogen aangaan van risico**

In het verklarende model is het weloverwogen aangaan van risico’s gedefinieerd op basis van de indicatoren tijdigheid, rechtvaardiging en aansprakelijkheid. De veronderstelling in dit model is dat iedere propositie, of beslisactiviteit, een eenduidige, positieve relatie heeft met één van deze indicatoren. De proposities en de relaties met de indicatoren zijn gevalideerd. Echter, uit de analyse van de managementpraktijken, die waarborgen dat de beslisactiviteiten worden uitgevoerd, kan worden geconcludeerd dat niet alle managementpraktijken slechts een relatie hebben met één van de indicatoren, maar tot meerdere; bovendien, sommige managementpraktijken hebben een positieve relatie met de ene indicator, terwijl ze een negatieve bijdrage leveren aan één of beide andere indicatoren.

Deze toename in complexiteit van het verklarende model kan worden toegelicht met een aantal voorbeelden. Ten behoeve van het rechtvaardigen van een besluit kan de omvang en detailniveau van een investeringsvoorstel worden vergroot, maar tegelijkertijd kost dit tijd waardoor de duur van een besluitvormingsproces wordt verlengd, wat een negatief effect kan hebben op de tijdigheid van de rechtvaardiging. Het monitoren van een project kan bijdragen aan zowel de rechtvaardiging en de tijdigheid van een besluit, aangezien het positief is voor het
herkennen van de noodzaak voor een investeringsbeleid en voor het overdragen van projectinformatie. Een groepssetting draagt bij aan het creëren van intersubjectiviteit wat een positief effect heeft op het rechtvaardigen van een besluit, maar de groepsdynamiek en de samenstelling van een groep kunnen een negatief hebben op de toerekenbaarheid, doordat mensen zich gaan verschuilen achter de groep. Enkele van deze relaties kunnen worden gestimuleerd door de besluitvormingsprocedure, maar kunnen ook optreden als gevolg van de dynamiek van een specifiek project.

Vanwege de mogelijkheid dat meerdere managementpraktijken zowel positief als negatief kunnen bijdragen, is het niet mogelijk om één set van managementpraktijken voor te schrijven die waarborgt dat risico’s weloverwogen worden aangegaan. Voorop blijft staan dat bij het ontwerpen van een besluitvormingsprocedure een set van managementpraktijken moet worden gekozen die als totaal een positieve balans van tijdigheid, rechtvaardiging en aansprakelijkheid laten zien.

Ter ondersteuning van het ontwerpen van een besluitvormingsprocedure zijn de managementpraktijken vertaald in de belangrijkste elementen of karakteristieken van een besluitvormingsprocedure en in de opties om deze elementen vorm te geven. De set van elementen en opties per element vormen een strategietabel. De opties bepalen wanneer, hoe en door wie een beslisactiviteit wordt uitgevoerd. De belangrijkste elementen zijn:

- Vaststellen van besliscriteria
- Monitoren
- Stimuleren van proactief gedrag
- Waarborgen van de kwaliteit van een investeringsvoorstel
- Beslisssetting – groepsamenstelling
- Naleven van de beslispromedure.

De besluitvormingsprocedure wordt ontworpen door de strategietabel in te vullen: dit gebeurt door een selectie te maken per element voor één of meerdere opties en de consistentie van de gekozen besluitvormingsprocedure te evalueren in termen van tijdigheid, rechtvaardiging en toerekenbaarheid.

Samenvatting

Betrouwbaarheid, robuustheid en toepasbaarheid van de onderzoeksresultaten

De strategietabel is in dit onderzoek toegepast als onderdeel van een evaluatie van de betrouwbaarheid en robuustheid van de onderzoeksresultaten; tevens is hiermee de toepasbaarheid van de strategietabel verkend. De CEO’s van de geselecteerde vastgoedontwikkelingsorganisaties is gevraagd om de besluitvormingsprocedures vorm te geven met het oog op de veranderde interne en externe omstandigheden in de afgelopen 12 tot 18 maanden en te vergelijken met de procedure zoals deze werd toegepast ten tijde van de casestudie.
Wat betreft de betrouwbaarheid van de resultaten kan worden geconcludeerd dat de CEO’s de lijst van elementen in de strategietabel compleet en relevant achten voor het waarborgen dat een besluit wordt genomen dat tijdig, te rechtvaardigen en toerekenbaar is. Tevens blijken de resultaten robuust te zijn, aangezien dezelfde elementen 12 tot 18 maanden later, in sterk gewijzigde marktomstandigheden, nog steeds relevant zijn en sommige zelfs belangrijker worden gevonden.

De eerste verkenning van de toepasbaarheid van de strategietabel ter ondersteuning van het (her)ontwerpen van een besluitvormingsprocedure is positief. Binnen het kader van de strategietabel waren de CEO’s in staat de keuzes voor de opties per element te beschrijven en te verklaren; met name wanneer een andere keuze werd gemaakt ten opzichte van de besluitvormingsprocedure ten tijde van de casestudie, werd duidelijk aangegeven op welke wijze deze wijzigingen de besluitvorming en het risicomanagement zouden moeten verbeteren. Dit betekent dat de strategietabel voorziet in een kader en platform voor discussie; in combinatie met de volledigheid van de set van elementen en opties biedt de strategietabel goede mogelijkheden voor verdere toepassing in de praktijk.

In aanvulling op de conclusies ten aanzien van bovengenoemde criteria blijkt dat de nieuwe besluitvormingsprocedures meer gelijkenissen vertonen ten gevolge van de gewijzigde marktomstandigheden. In de periode tussen de casestudie en de evaluatie hebben de vastgoedontwikkelingsorganisaties te maken gekregen met een structurele stijging van de bouwkosten en de effecten van de kredietcrisis. Deze veranderingen hebben in alle drie de organisaties tot aanpassingen van de besluitvormingsprocedures geleid: de procedure dient strikter te worden nageleefd, het belang van het monitoren van een project op verschillende niveaus in de organisatie wordt onderstreept, de interne expertise dient beter te worden gebruikt, en de verantwoordelijkheden zijn gewijzigd en helderder afgebakend. Het is opmerkelijk dat de verslechterde marktomstandigheden en de toegenomen risico’s niet hebben geleid tot een toename in het gebruik van risicoanalysetechnieken. Dit geeft aan dat de mate van toepassing van formele risicoanalysetechnieken geen goede maat is voor het risicobewustzijn in de vastgoedontwikkelingssector: integendeel, uit dit onderzoek kan worden geconcludeerd dat risicomanagement is geïntegreerd in de besluitvormingsprocedures voor het investeren in vastgoedontwikkelingsprojecten en de dagelijkse praktijk van vastgoedontwikkeling.

Reflecties
Dit onderzoek heeft een viertal resultaten opgeleverd. Ten eerste is een integraal model van de besluitvorming over het investeren in vastgoedontwikkelingsprojecten ontwikkeld waarmee drie vastgoedontwikke-
lingsorganisaties zijn beschreven. Ten tweede is een verklarend model van het weloverwogen aangaan van risico’s, bestaande uit een zevental proposities en een drietal indicatoren, opgesteld. Ten derde zijn deze proposities gevalideerd in de praktijk en het verklarende model is aangepast op basis van de aangetoonde complexiteit van de managementpraktijken in relatie tot de indicatoren van het weloverwogen aangaan van risico’s. Ten vierde zijn de managementpraktijken vertaald in een strategietabel. Deze resultaten geven antwoord op de onderzoeksvragen. In aanvulling op deze onderzoeksresultaten worden suggesties voor vervolgonderzoek en aanbevelingen voor de praktijk gedaan.

Vervolgonderzoek

In dit onderzoek is gekozen voor een meervoudige casestudie om een diepgaande analyse te maken van het besluitvormingsproces bij vastgoedontwikkeling. Deze methode heeft echter als beperking dat slechts een beperkt aantal cases kon worden onderzocht. Om de generaliseerbaarheid van de onderzoeksresultaten te vergroten, is het aanbevelingswaardig om onderzoek te doen naar een groter aantal vastgoedontwikkelingsorganisaties middels een survey. Een survey kan resulteren in een typologie van besluitvormingsprocedures en verschillen in procedures kunnen worden verklaard door te kijken naar verschillen in de organisaties, zoals de grootte van de portefeuille, de organisatiestructuur, het type projecten of het type vastgoedontwikkelingsorganisatie. Bovendien kan er een relatie worden gelegd tussen de typen besluitvormingsprocedures en het succes van een vastgoedontwikkelingsorganisatie om te bepalen wat de kritische succesfactoren van het besluitvormingsproces zijn.

De casestudie heeft zich toegespitst op de formele besluitvormingsprocedure en het observeren van de beslisvergaderingen. Om inzicht te krijgen in de rol van de projectmanager en de rol van informele communicatie tussen de projectmanager en de directieleden in het besluitvormingsproces wordt een longitudinale casestudie aanbevolen, waarbij voornamelijk gekeken wordt naar de fase van voorbereiding van een besluit. Aangezien het moeilijk is om te bepalen wanneer deze fase begint, betekent dit in de praktijk dat een projectmanager gedurende het ontwikkelproces wordt gevolgd. Dit zou kunnen leiden tot een herdefinitie van het einds van een besluitvormingsproces. In dit onderzoek worden de fasen voorbereiding, overdracht en goedkeuring worden onderscheiden, maar het besluitvormingsproces zou kunnen worden beperkt tot de beslisactiviteiten van de directie en dus tot de beslisvergadering; tevens kan het gehele ontwikkelproces worden gezien als een besluitvormingsproces dat start met voorbereidingen in de initiatieffase en duurt tot de goedkeuring voor de start bouw.

Het object van dit onderzoek is het proces van besluitvorming,
waardoor aan de inhoud van de besluitvorming slechts beperkt aandacht is geschonken. Om inzicht te krijgen in welke risico’s worden geanalyseerd en welke risicobeheersmaatregelen worden geïmplementeerd is verder onderzoek nodig. Dit onderzoek verdient aanbeveling, omdat de toenemende complexiteit van transformatieopgaven en binnenstedelijke gebiedsontwikkeling met een toenemende veelheid aan actoren vraagt om inzicht in en verbetering van juridische en financiële beheersmaatregelen.

Praktijksuggesties
De strategietabel die is ontwikkeld in dit onderzoek heeft direct praktische waarde voor de praktijk. De strategietabel voorziet in een structuur en platform voor discussie en kan als zodanig worden toegepast als onderdeel van een participatieve methode om het ontwerpen of herzien van een besluitvormingsprocedure te ondersteunen. De eerste stap van een dergelijke interventie is het (h)erkennen van inefficiënties in het huidige besluitvormingsproces ten gevolge van een gewijzigde context. De volgende stap is het invullen van de strategietabel door het selecteren van managementpraktijken voor elk element van een besluitvormingsproces; deze stap kan zowel individueel als in een groep worden uitgevoerd. De laatste stap is het evalueren of de geselecteerde besluitvormingsprocedure een evenredige bijdrage levert aan de indicatoren van het weloverwogen nemen van risico’s, namelijk tijdigheid, rechtvaardiging en toerekenbaarheid.

De praktische waarde van het beschrijven van een vastgoedontwikkelingsproces in ontwikkelfasen en ontwikkelaspecten is dat dit de mogelijkheid biedt om ontwikkelstrategieën inzichtelijk te maken en te ontwerpen. Een ontwikkelstrategie bestaat uit besliscriteria per ontwikkelaspect per beslismoment en bepaalt grotendeels het risicoverloop in een project. Ten behoeve van het spreiden van risico’s wordt aanbevolen om op portefeuilleniveau meerdere ontwikkelstrategieën toe te passen. Op projectniveau dient de ontwikkelstrategie bij de start van een project te worden bepaald, zodat de besliscriteria in principe vastliggen. Tijdens een beslismoment is het mogelijk om op basis van de specifieke karakteristieken van een project of op basis van de marktomstandigheden de ontwikkelstrategie bij te stellen; indien dit gebeurt, dient expliciet te worden gemaakt wat de reden is voor het afwijken van de intentionele ontwikkelstrategie.

Dit onderzoek heeft inzicht opgeleverd in de impliciete en expliciete wijze waarop met risico wordt omgegaan. Hieruit blijkt dat het instrumentele gebruik van risicoanalysetechnieken zeer beperkt is en zelfs niet toeneemt in zeer risicovolle omstandigheden. Deze resultaten sluiten niet uit dat het gebruik van risicoanalysetechnieken een positieve bijdrage kan leveren aan de besluitvorming, maar het verdient sterk
aanbeveling om risicoanalysetechnieken toe te passen die aansluiten bij de perceptie van en denken over risico, willen de risicoanalysetechnieken succesvol worden geïmplementeerd. Hierbij kan worden gedacht aan de scenario-strategie analyse, aangezien deze sterk overeenkomt met het scenariodenken van de besluitvormers, en de reële optiemethode, aangezien deze de flexibiliteit in een ontwikkelproces waardeert.

Eindconclusie

Dit onderzoek heeft aangetoond dat bij het nemen van investeringsbeslissingen in vastgoedontwikkelingsprojecten het vergaren van informatie op expliciete én impliciete wijze bijdraagt aan het rechtvaardigen van een besluit. Het meeste onderzoek is gericht op het zoeken naar methoden en technieken die zijn gericht op het expliciet analyseren en evalueren van informatie om besluiten te kunnen rechtvaardigen en de besluitvorming te verbeteren. Echter, soms moet een besluit worden genomen ongeacht welke informatie er op dat moment beschikbaar is. Als er op dat moment geen besluit wordt genomen, wordt tijd het grootste risico, omdat eerder aangegane verplichtingen moeten worden nagekomen en er geen richting meer wordt gegeven aan de toekomstige loop der gebeurtenissen en de te nemen beheersmaatregelen. Bovendien is niet alles objectief kenbaar en dus volledig rationeel te rechtvaardigen. Binnen die beperkte rationaliteit is het noodzakelijk dat iemand de verantwoordelijkheid op zich neemt voor een besluit en zich volledig zal inzetten om het project te doen slagen zonder te opportunistisch te worden en het voortbestaan van de organisatie in het geding te brengen. Dit betekent dat het nemen van investeringsbeslissingen bij vastgoedontwikkeling draait om het vinden van de juiste balans tussen tijdigheid, rechtvaardiging en toerekenbaarheid. In andere woorden, het succes van vastgoedontwikkeling start met het weloverwogen aangaan van risico’s.

Samenvatting
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Curriculum vitae

Ellen Gehner was born on February 24, 1978 in Heemskerk, the Netherlands. In 1995 she took her final examination (gymnasium) at the Bonhoeffercollege in Castricum. In 2002 she graduated with honourable mention from the Faculty of Architecture, Delft University of Technology. Her master thesis in Real Estate & Housing, Risicoanalyse bij projectontwikkeling (Risk analysis in real estate development – in Dutch), was published by Sun Publishers (2003, second edition 2006). This research presents a risk analysis method that is specifically adjusted to the characteristics of real estate development.

After her graduation she joined the department of Real Estate & Housing at the Faculty of Architecture at the Delft University of Technology and started her PhD research in July 2003. During her PhD research she closely observed three Dutch real estate development companies over a period of two months each. From 2003 to 2008 she wrote several conference papers and articles and she took courses on research methodology, presenting, and scientific writing. She was part of the educational program of Real Estate & Housing, supervising master theses and tutoring in the MSc. track ‘Urban development game’. She has contributed to postgraduate Master of Real Estate and MBA programmes as lecturer on risk management and as a supervisor of master theses.