Office vacancy in Amsterdam
Opportunities for investors in Southeast

Date 15 April 2010

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© Front cover - Image of Amsterdam Southeast office area
1 Preface

This Master Thesis is the final result of my Master degree at the Real Estate & Housing department of Delft University of Technology. At the same time it marks the end of my studies at the faculty of Architecture.

During the graduation process I have received guidance and help from several people. I would therefore like to take the opportunity here to thank them. First of all I would like to thank Hilde Remøy and Jo Soeter for their great support and guidance through the entire process. Secondly I would like to thank the small team at UBS for the endless conversations about the office vacancy and other related matters and Diederik Bakker in special for his critical comments and questions to establish an optimal result. Finally I would like to thank my parents for giving me so many opportunities during my years at university.

My curiosity after what can be done with the office space in Amsterdam Southeast has been the driver for committing myself to find the best answer to this question. Although I found many reasons for the vacancy I still believe after a full year of research there are often better solutions than leaving an office vacant. I would like to invite you to take notice of my findings and use your abilities to establish the recommendations to make Amsterdam Southeast a healthy office market!

Jurrien de Koning
April 2010
2 Abstract
The problem of vacant office space has been rising since the start of the millennium. In Amsterdam, the city with most office space in the Netherlands, this problem is most apparent. The Amsterdam office market is characterised by different office areas. In Amsterdam Southeast the vacancy rate is among the highest and is therefore an interesting area for this research.

In this Master thesis an answer will be given to the question what owners of vacant office space can do to lease the office space out again. The objective is to prove whether there is a way to optimize the office market in Amsterdam Southeast.

The office vacancy in Amsterdam Southeast started to develop at the start of the millennium. The low finance costs where a strong incentive to develop new office space. Many developments started even without having a tenant to lease the space. In Amsterdam Southeast this process has led to an oversupply of 258,000 square metres of office space as at January 2010.

During 2009 another 7,000 square metres of office space was added to the supply. Although an economic recovery should lead to a gradual decrease of the supply of office space it is not expected that the supply in Amsterdam Southeast will fall below 250,000 square metres in the next few years. This is caused by an expected grow in supply in 2010, a new development of 26,000 square metres and some major tenants who are leaving Amsterdam Southeast.

The offices in Amsterdam Southeast that face high vacancy rates are characterised by certain specifications. Research is conducted on 104 offices in Amsterdam Southeast in relation to eight characteristics.

1. Train accessibility
2. Car accessibility
3. Visibility of the office
4. Façade appearance
5. Parking ratio
6. Construction year
7. Interior daylight
8. Presence of a restaurant in the office

Out of the eight characteristics, the first six proved to have significant influence on the vacancy of offices in Amsterdam Southeast. The presence of a restaurant only has a minor influence and the interior daylight did not prove to have any influence on the vacancy of office space in Amsterdam Southeast. Literature describes three other important characteristics that influence the vacancy of office space; interior appearance, flexibility and efficiency. (Remoy, Koppels, & Jonge, 2009)
The vacant offices are mostly in the ownership of institutional investors. Their goal is to make a profit by exploiting the offices. The high vacancy rate in Amsterdam Southeast has a negative effect on the return that the owners make on their investments. The financial performance of many offices in the area is under pressure. However there also exist opportunities in the office market of Amsterdam Southeast. Vacant offices are bought and after renovation works and/or financial adjustments the office is sometimes leased out in a relatively short period leading to high returns on the investment. However Amsterdam Southeast is more often characterised by less successful investments.

Out of the total supply of 258,000 square metres of office space as at January 2010 there is 103,780 square metres of office space located in 12 completely vacant offices in Amsterdam Southeast. Based on the characteristics that affect the office vacancy in Amsterdam Southeast, five offices do not suit an office function. In addition the owners of these five offices also prove to benefit financially from a transformations. In two cases a hotel transformation is the best opportunity while the other two offices prove to be most profitable by a transformation to housing. These transformation could result in 32,210 square metres of office space to be transformed in Amsterdam Southeast. This would reduce the total supply to 225,790 square metres of office space. The result is a significant improvement. Nevertheless there will still remain a huge oversupply. Renovation of outdated office space and rent reductions should lead to an increasing take up of office space. In the end there is still an expected 15 years needed after these actions for Amsterdam Southeast to become a “healthy” office market. A stop to new developments is a necessity to achieve this goal.
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3 Introduction

3.1 Motivation
The 12% of current national vacant office space (DTZ Zadelhoff, 2009) intrigued me to start this research. A first investigation shows that there are even worse regional areas where vacancy rates surpass 25%. Due to the current recession the problem only grows larger. Vacant office has not been such a contemporary subjects since the start of the millennium.

Much research has already been conducted regarding vacancy of offices (Geraedts & Van der Voordt, 2003) (Kamps & de Wit, 2009) (Meulenberg, 2008) (Muller, 2008) (Remoy & Koppels, 2009) (Van der Voordt, Geraedts, Remoy, & Oudijk, 2007). However, many gaps still remain in the knowledge about vacant office space. Literature describes the possibility of transformation and the constraints which relate to reducing vacancy. The options from the owner’s perspectives in literature are concise. The question is whether owners are able to benefit from a transformation or other alternative solutions with their vacant office space in Amsterdam Southeast.

The answer to this question will start with analysing building and location characteristics causing the vacancy and identifying the exact situation on the Amsterdam Southeast office market. Based on these results, financial calculation will determine what the options for the owners are.

3.2 Problem analysis
The vacancy of office space in Amsterdam is estimated at 15.3% or 1.249.000 m2 (DTZ, 2009) while a normal vacancy should be between 5% and 6% (van Boom, 2005). This situation is stimulated by a replacement market where office space is added while the stock-in-use remains the same. New buildings are being built that apply better to the demands of office owners. Because these new buildings are often more efficient and better located it is attractive to change from an old office building to a newly developed one. (Geraedts & Van der Voordt, 2003)

The vacant office space mostly consists of office space left behind by tenants moving to newly developed office space (van Boom, 2005). The presence of vacant old office space has a negative effect on the environment and occupation of other offices in the surroundings. (DTZ, Zadelhoff, 2005) In this case it becomes a social problem and not only the owner will experience negative (financial) consequences of the vacancy but also the stakeholders in the surroundings such as other real estate owners, users of real estate and the municipality/local government.
Figure 1 below shows the vacancy in Amsterdam since 1982. The figure shows that until 1990 the vacancy was "normal". During the beginning of the nineties the first real oversupply was formed. In the middle of the nineties the vacancy started to decrease and with little new office space being developed the oversupply changed to a shortage of office space at the end of the nineties. As a reaction to this shortage and with the cheap availability of money at the beginning of the new millennium a large amount of office space was developed. This process was slowed down by the attacks on the World Trade Centre on 11 September 2001 which strengthened a developing recession. However, the damage had already been done; new offices were under construction and the huge amount of new office space caused oversupply. Many square metres of office space have been vacant ever since.

These developments have had their impact on the yields of institutionalised investors. Figure 2 below shows the yields that institutionalised investors have made over the last years on the Dutch office market on their real estate investments. The graph shows a relatively stable but decreasing direct yield since 1995. The direct yield is the percentage of the rental income in a year compared to the investment. The indirect yield is the value growth or shrinkage compared to the investment. The indirect yield is less stable and fluctuates more together with the economy as a whole. The total yield is both yields combined. Because of the direct yield being very stable the total yield displays a similar graph as the indirect yield but higher.
Vacant office space has a poor outcome on the total yield of an office investment and is therefore problematic for the owners. There is no direct income of vacant office space and also the indirect income, the value of the building, falls due to vacancy. Schiltz (2005) explains this process very clear: A rented property is valued at market value. As the expiry date of the lease is drawing closer the value will drop. Until the property is vacant. The valuation of a vacant property would be constant when depreciation and changing markets are left out of consideration. However after the building has been leased out again the value will instantly increase to market value at lease start as displayed in figure 3.

This value increase, shortly explains the interest of investors in vacant offices. This opportunistic behaviour can however also result in less profitable outcomes. When no tenants are found for a vacant office, it can result in structural vacancy leaving the owner with continuous costs and the depreciation of the property. Structural vacancy is often described as office space that has been vacant for at least three consecutive years on a row. (Muller, Remoy, & Soeter, 2009) However the three years is just an indication as it does not refer to any quality of the building. To determine whether office space that has been vacant for three consecutive years is really structurally vacant, should be decided based on the building characteristics.
Introduction | Office vacancy in Amsterdam Southeast

The vacancy differs greatly over the different office districts in Amsterdam. Table 1 shows this difference. The office area of Amsterdam Southeast shows the highest vacancy rate. With only 19.3% of the total stock, it covers about a third of the total supply. The vacant office space is often owned by investors with the initial idea to make promising yields in a distressed market. However, the downturn of the economy, competitors in Southeast and other upcoming competing areas cause many offices to remain vacant resulting in low or even negative total yields.

### 3.3 Research questions

The problem analysis describes the level of vacancy and how it has impact on investors. The situation in Southeast is dramatic. Nearly one out of four offices is vacant and in the few years before 2009 with a strong economy and no new developments the vacancy has only decreased a few percent.

This is a problematic outlook for investors in Southeast. Politically the problem is also recognised. The Amsterdam municipality has started initiatives to decrease the vacancy in Amsterdam Southeast. For example the “Kantorenloods” has been set up to look at alternatives for offices. Initiatives to transform offices into housing or hotels are plenty but are often abandoned on financial grounds. Nevertheless investors are willing to look at alternatives.

The above description results in the following problem on which this research is based:

A large amount of office space is vacant in Amsterdam Southeast. Many offices have been vacant for a long period. However investors still hope to find tenants for their vacant offices. The supply of 258,000 square metres as at January 2010 is not expected to disappear in a few years.

How do owners of vacant office space deal with this situation and what can realistically be expected to happen with their vacant office space? What are the solutions when an office is expected to remain vacant?
The following question is central to this research:

**What opportunities do investors have for dealing with structurally vacant office space and what influence will their actions have on the office market?**

Theoretical review
- 1. How does the real estate investment market work?
- 2. How are offices valued?
- 3. What is the financial performance of offices?
- 4. How does vacancy affect this financial performance?
- 5. How have vacancy rates been able to rise to this extremely high level?
- 6. What factors influence the office vacancy?
- 7. How is the municipality involved in the Amsterdam Southeast office market?
- 8. How does the recession affect the Southeast office market?
- 9. How much are capital and ownership costs of vacant offices?

Interviews
- 10. What type of investors have (vacant) properties in Amsterdam Southeast?
- 11. Why do investors have offices in Amsterdam Southeast?
- 12. What time period is their perspective focused?

Statistics
- 13. How has the office market in Amsterdam Southeast developed?
- 14. What factors are important in relation to the vacancy in Amsterdam Southeast?
- 15. What are the problematic areas within Amsterdam Southeast?
- 16. What will happen with the Amsterdam Southeast office area?

Case study
- 17. What are the main reasons for the building's vacancy?
- 18. What can be expected of the Amsterdam Southeast office market?
- 19. What will be the influence on the Amsterdam Southeast office market when investors will use their opportunities optimally?

**3.4 Objective of research**

In the past, reports like Muller's (2008) have suggested transformation as a solution to the oversupply of vacant office space. Other reports (Dienst Ruimtelijke Ordening Amsterdam, 2008) suggest that transformation would be the best solution but investors have too many constraints withholding them from transformation. However, investors have the objective of making the highest return possible. If there are such profitable alternative solutions for investors, why would they then not be willing to undertake them? To answer this question this report will focus on the opportunities of the investors. The objective is to give an overview of the financial impact of a range of options applicable for vacant office space and whether optimisation is possible.
3.5 Defining the research

This research will focus on offices in Amsterdam Southeast. Nevertheless relations to other office areas will also be discussed. Within Amsterdam Southeast, a dense office district can be identified. This office district is bordered by the “Burgemeester Stramanweg” on the north, the “Meibergdreef” in the South, the “Muntbergweg” and “Holterbergweg” on the west and the railway on the east. This area can be separated into several sub-areas based on characteristics of the offices. The final result of the report will consist of recommendations and conclusions in relation to these sub-areas.

As the title already reveals, this report will focus on the investors with their financial perspective on vacant offices space in Amsterdam Southeast as the main focus. The outcome should result in an overview of their opportunities regarding vacant office space in Amsterdam Southeast.

3.6 Research design

Figure 4 below shows the set-up of this research. The input for this research will take place through five sources:

- Internal research at UBS Global Asset Management
- Literature study
- Statistical research
- Interviews
- Case studies

The office market will be described through four stages. First the Amsterdam office market as a whole will be analysed and in particular the vacancy. The second phase will focus on the offices that have a strong need for change and have potential to do so. The third phase will describe the options that would be most feasible as a change for the vacant offices. The last phase will describe what effect this suggested change would have on the office market of Amsterdam Southeast. As a final result a recommendation will be made for investors on the potential optimization of their offices.
3.7 Reader's guide

This report has been structured in the chronological order of the research. Firstly the theoretical framework is explained. During the second stage, research is conducted on the vacancy of office space in Amsterdam Southeast. Based on these findings several case studies are described and investigated in the third stage. As a final result conclusions and recommendations will be made.

For the sake of the readability of this report, much information has been excluded from the main report. However to understand the data as well as possible it is recommended to check the appendices regularly. The table of content will provide the information on where to search for which data.
4 Theoretical framework

4.1 The reasoning behind office vacancy

The vacancy of office space is a result of the mismatch between demand and supply. The supply has increased drastically over the previous decade while the demand grew gradually but slower. Normally the market mechanism stops this process when new developments are added to the supply. In Amsterdam during the last years however this was not the case due to a changing demand: new developments matched the demands better than the current offices and tenants often moved from older to new developed buildings. This process was stimulated by the cheap availability of money since the start of this century. (Geraedts & Van der Voordt, 2003).

The oversupply of office space is caused by a disequilibrium on the office market. Figure 5 below shows a perfect equilibrium.

![Diagram showing equilibrium on all markets](image)

Figure 5 – equilibrium state on all markets (DiPasquale, 1996) adjusted by RE&H department TU Delft

This equilibrium shows that one adjustment in the asset market, space market, development market or addition to stock should have influence on all. A growing demand for instance will not only lead to higher rents but also to higher asset prices and increasing developments, resulting in a larger stock. Afterwards
the situation should stabilise as the stock should have adjusted to the demand. Figure 6 below shows the result of lower interest rates. This is a good explanation for the process that took place at the start of the millennium when interest rates were extremely low. It caused the gross initial yields to drop and the developments to increase. However the adjustment of the stock did not suit the demand function and a large disequilibrium was created.

![Diagram](image)

**Figure 6 – effect of a changing interest rate**  (DiPasquale, 1996) adjusted by RE&H department TU Delft

Avoiding a disequilibrium on the real estate market is very tough or even impossible due to the volatility of the market. Developers will have to predict a few years ahead of the market as the building process normally takes up a few years. When construction has started there is no way back and a change in markets or an incorrect prediction will lead to a disequilibrium. The time to adjust to this equilibrium will then take again a long period due to the in-volatility.

The municipality should be willing to interfere in this process as it has the responsibility of creating a good living environment for its inhabitants. The main concern of the municipality is the image and degradation of areas with high vacancy rates. On the other hand there are the revenues of sold land for developments which are important for the municipality’s income stream.

Each year the Amsterdam municipality decides on the new land price policy. Amsterdam conducts a functional land price policy, where the value of the land is related to the predestined development. With
this policy, land prices derive from the market for commercial real estate; they are determined on the basis of the residual value method.

The commercial value of the predestined function is based on the market rent. The commercial value is determined by the initial yield that applies on a project or location. Subsequently the building and additional costs are deducted after which the land value remains.

Price differentiation within a location is the consequence of quality differences between areas within a location. This can result in wide bandwidths of the land prices. Land owned by the Amsterdam municipality is not sold, but issued in leasehold.

<table>
<thead>
<tr>
<th>Location</th>
<th>Land price per m² GFA, excl. tax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zuidas</td>
<td>€ 1,089 – € 1,792</td>
</tr>
<tr>
<td>Riekerpolder</td>
<td>€ 817 – € 1,452</td>
</tr>
<tr>
<td>Amsterdam Zuid Oost (Amstel III)</td>
<td>€ 658 – € 1,134</td>
</tr>
<tr>
<td>IJ-oever</td>
<td>€ 635 – € 1,180</td>
</tr>
<tr>
<td>Teleport</td>
<td>€ 499 – € 1,066</td>
</tr>
<tr>
<td>Kenniscentrum Amsterdam</td>
<td>€ 545 – € 1,044</td>
</tr>
<tr>
<td>Amsterdam Noord</td>
<td>€ 318 – € 590</td>
</tr>
</tbody>
</table>

Table 2 – indication of land prices main office areas in Amsterdam per 1st of January 2005 (Gemeente Amsterdam Ontwikkelingsbedrijf, 2005)

Example

Say a 5000 m² development will take place at the IJ-oever with a land price of € 800 per m². The revenues for the municipality would be in this case: € 800 per m² * 5000 m² = € 4 million.

However there are costs involved as well. About 80% of the costs are finance costs. However large profits have still been made over the last years as figure 7 indicates.

In Amsterdam 1.282.200 m² office space is vacant (Dynamis, 2008). Some of this space will probably never be used as office space any more. These depreciated offices cause financial problems because of the value depreciation, continuous maintenance costs and income loss.
In addition to the financial problems, vacancy causes a poor image of the building and its environment which has an effect on commercial parties as well as public parties. For Amsterdam the vacancy is also a social problem. With a shortage of living space, schools, social facilities and creative companies the balance of supply and demand is disturbed. The municipality tries to stimulate transformation. An organization called the "Kantorenloods" (Office pilot) has therefore been installed by the municipality to stimulate transformations. This organization tries to support commercial parties to initiate transformations. A larger organisation deals with the total spatial development of the city, the “Dienst Ruimtelijke Ordening” (DRO). The DRO of Amsterdam implies that 30% of vacant offices are suitable for transformation. (Dienst Ruimtelijke Ordening Amsterdam, 2008) However some argue that this amount is much smaller and the solution of transformation is highly overestimated. (Huizinga, 2006).

The municipality can influence the supply of vacant office space in three ways:

1. Constrain new building locations
   a. Stop on new development locations
   b. Increasing land prices
2. Committing new developments to have a tenant for the new developed space
3. Extracting buildings from the market
   a. Change function
   b. Demolish

Demolishing a building is not for the municipality to decide. This has to come from the owner, who will most probably not demolish his building as this would imply a great capital loss. In this case the municipality would have to buy the building, after which they would be able to demolish it. This is a very costly operation.

Changing the function is an attractive option for the municipality as this process is mainly conducted by market parties and solves two problems at the same time. However, as mentioned before not many offices are suitable for transformation or are not financially feasible to transform.

Rental-commitments for issuing land will only result in new buildings not being vacant. However that is not the main problem. It is the older segment that mostly faces the structural vacancy. Bringing new buildings onto the market will only stimulate the process in which new buildings drive out bad buildings. (Geraedts & Van der Voordt, 2003). The most effective measure the municipality can take is to increase land prices or stop new developments. This would however decrease their income stream.

4.2 Factors affecting office vacancy

Many factors affect office vacancy. Generally they can be divided into three main groups: market, location, and building factors.
4.2.1 Market factors

Market factors can be described on different scales like a global, national or regional scale. To show how they influence Amsterdam Southeast they will be discussed along with examples in Amsterdam Southeast.

A shrinking economy, which can be witnessed since December 2008, causes a reduction in the total number of employed people. Less employed people results in less office space needed. Logically a company that has reduced in size will, at the end of its lease contract, suggest to rent less square metres. The amount of take up is also expected to decline. In Amsterdam Southeast the take up has decreased from 82,087 m² in 2008 to 41,209 m² in 2009. The number of deals has dropped from 44 to 26. It is hard to prove that this drop is completely related to the economical downturn, but because the indicators are generally the same in other markets it is a reliable assumption. (Knight Frank, 2009) After a recession a standard ratio of 18 months of economic growth are needed for a leasing market to recover after a recession.

A strong competitive position, is important in all markets. Initially Southeast was a prime office area in Amsterdam. This position was taken over by the South axis. Some renowned headquarters like ABN AMRO and ING left Southeast to move to the Southaxis. However with the development of new offices at Plaza Arena and the redevelopment of the station Bijlmer Arena for over 130 million euros, Southeast has improved its position. It retrieved some, less renowned, headquarters like Reebok and de Bijenkorf. Nevertheless it is still a B-office location and will have to focus on a different market and user since the Southaxis emerged.

In the period from 1996 until 2006 finance costs were very low, with the exception of 2000 and 2001. With the cheap availability of money, developers were able to offer high quality offices at cheap prices. In combination with a strong demand this pushed up new developments. These developments started to come onto the market from 1998. In the period from 1998 to 2006 about 450,000 square metres were added to the existing 850,000 square metres in Amsterdam Southeast and the vacancy rate went up from 2.91% to 21.79%.

High risk developments are developments started without having a tenant to lease the developing space beforehand. These developments are started with the assumption to find a tenant during the building process. However when the demand is not sufficient these developments may not find a tenant. This is for instance the case for some offices of the plaza arena complex. The recently completed (2007) office “Miro” of 15.000 square metres so far remains vacant as no tenant has yet been found.

Demographic changes are influential for the whole economy. Demographic changes can be important to the office demand. Populations worldwide have been growing rapidly over the years. However a period
with little growth or even shrinking populations is about to start: “In that new demographic situation, either the supply of office space will have to adjust to the new demand situation, or prices of office space will fall.” (Brounen & Eicholtz, 2004). Office employment can still grow, due to an increasing percentage of employment, during a declining population. However in the Netherlands the employment growth has stagnated from the start of the century to 2005.

![Office jobs (2002=100)](image)

**Figure 9 – office jobs in the Netherlands (Vastgoedkennis, 2010) adjusted**

The *working space per employee* is changing; more and more companies move towards an atmosphere where employees work together. This leads to less space consuming, private offices. The development of technology decreases the size of office tools. Laptops and flat screens have resulted in a drastic decrease in space usage.

The increasing prices for real estate make companies more conscious about the use of space, therefore they try to compress the area per working space by using space more efficient. Recent research showed that the average working space dropped in Europe from 12.8 to 12.4 square metres per employee. (Vastgoedmarkt, 2009)

### 4.2.2 Location factors

“Quality in real estate must be connected to a location or building.” (Baum, 1993, p. 543).

Remoy & Koppels found in their Delphi approach several location and building factors that influence the value of a building (Remoy & Koppels, 2009). The ones significantly apparent in Southeast will be discussed.

The *accessibility by car* in Amsterdam Southeast is excellent. The area is accessible by the A2 (Utrecht-Amsterdam), A9 (Amstelveen-Haarlem) and the A10. From the highway junction any office within Amsterdam Southeast is accessible within six minutes.

The *accessibility by public transport* differs within Amsterdam Southeast. This has to do with the distance to the stations but also with the accessibility of the station. At the northern end of the area is the station
Amsterdam Bijlmer Arena. This station is the fourth largest train station in the Netherlands and has won architectural prices for its design.

At the southern end of the area is station Holendrecht. This is a small station where the accessibility is slightly less than Bijlmer Arena Station. Both stations also have a subway connection. In between the two train stations, in the middle of Amsterdam Southeast, there is another subway station called Bullewijk. Walking distance from the train stations to offices in Amsterdam Southeast differ from two to twenty minutes.

The facilities in Amsterdam Southeast are limited to the Northern part. The Amsterdam Arena Stadium, Pathé cinema, Heineken Music Hall and lunch shops offer facilities to the surrounding offices. However this area is hardly accessible by foot for offices more to the South.

In one of the interviews, an investor indicated that some tenants in Southeast complain about the safety in the area. Mostly this is related to the monotonous office area. Outside working hours the area is dead and becomes unsafe. This is probably related to the high crime rates in the surrounding living areas, where many crimes have been reported over the last years.

The status of the area is another important feature for tenants. Although Amsterdam Southeast has lost status compared to the time after the initiation it is hard to tell where Amsterdam Southeast stands at the moment. The issue is quite subjective and therefore hard to measure. However an important change has been the development of the Southaxis which took over their image of being an A-office location.

4.2.3 Building factors

Building facilities can add value to an office, especially when few facilities are in the surrounding area. In Amsterdam Southeast several restaurants have been installed in buildings to attract tenants such as in Atlas Arena and Apollo. Both restaurants are used intensively and receive positive feedback from the tenants. In the market the presence of a restaurant is used to distinguish an office from its competitors.

The building period reveals a great part of the identity of an office building. It withholds generally several features due the development of the building industry. Many aspects have changed over time like architectural style, floor span, climate installation and insulation. It is therefore a good criteria to distinguish different offices. In Amsterdam Southeast the first developments date back to 1981. For current developments this would result in a difference in building period of nearly thirty years.

Car parking rates show a great variety in Amsterdam Southeast. The rates range from one parking space for every 40 m² lettable floor area ("LFA") to one for every 125 m² LFA. The older buildings from the eighties often have rates of 1/50 but the municipality wants to decrease the amount of car spaces and now
a rate of 1/125 is common. Due to the good accessibility by car in Amsterdam Southeast the amount of parking places is for many companies an important factor. Although older buildings face strong competition of the newer developments, this is a great advantage which still makes them interesting offices. Even after renovation the parking rate will remain. A renovated office like Atlas Arena or Centrepoint offering nearly similar qualities as new developments will therefore have a great advantage.

There can be great varieties between the layout flexibility in office buildings. Although the layout flexibility has increased over time (Veenstra, 2008) there are still reasonably modern developments with little flexibility like the office Vogelstruys, developed in 1998. Four recently interested tenants in Vogelstruys who left comments on the building all pointed at the weak floor layout.

Space efficiency is often an important factor for tenants. This is easy to explain: the more efficient a building can be used the less square metres a tenant has to lease. The efficiency does however not solely depend on the building but has also to do with the demands of the tenant. Normally tenants will draw the future working situation in the offered space. The amount of square meters per working space determines the efficiency.

The Technical state of the buildings in Southeast has a great variance. As already mentioned the building age can nearly be 30 years apart from each other. In this period the level of maintenance and renovations will determine the current technical state. The same reasoning could be applied to other building factors like: Comfort, Commodities logistic, Energy performance, Exterior appearance, Interior appearance.

### 4.3 Real estate investment market

The organisation of the real estate investment market can be separated into two divisions. On the investment side there are different kinds of real estate investors. These real estate investors have clients like pension funds or insurance companies. Other types of investors usually consist of direct shareholders. On the managing side there are the real estate managers. The real estate managers invest the real estate investor's allocations in real estate assets like offices and take care of the management of these assets. The real estate management profits are made by management fees paid by the investor.

![Organisational structure of the real estate investment market](image-url)

**Figure 10 – Organisational structure of the real estate investment market**

The assets might be bundled to form a fund. A fund is usually built up by a characteristic type of assets like high quality offices. Other funds could hold more risky investments like offices with high vacancy but also potential high yields.
Funds can basically consist of two structures: open ended funds and closed end funds. Open ended funds provide more flexibility for the investors as they can participate and leave at any given moment. However when unforeseen events happen, like the current credit crunch, the fund managers have the ability to close the fund for a certain time period. This period can run up to three years. Most open ended funds have closed after the moment when Lehman Brothers went bankrupt.

Closed end funds foresee a certain running period of the fund. The investors commit themselves to the fund for the entire running period from acquisition until disposition. Although the running period has still got some flexibility relating to the expected returns the investors cannot terminate their contract during the running period.

Besides funds being ordered by closed- or open ended funds, they are often characterised by the expected financial performance or risk profile.

The financial performance of an office is expressed by investors in different sorts of yields. The gross initial yield is calculated by dividing the gross operating income by the purchase price. The gross exit yield is calculated by dividing the gross operating income by the (estimated) sales proceeds. Both yields express the value of the building compared to the operating income. The internal rate of return ("IRR") is an expression of the return on investment. The IRR is the rate on the invested capital when the net present value ("NPV") of the investment is zero. The objective of real estate investments is at least to beat the yield on risk free bonds. Aiming at a higher yield normally involves a higher risk. Operating high risk investments is very different from reliable low risk investments. This is very important in relation to this research as the objectives of a high risk investment cannot be compared to a low risk investment. Generally three risk profiles can be distinguished.

1. **Core**
   - IRR-target: 5-10%
   - Leverage: 30-50%
   Core investors have a portfolio that is leased on a long term basis to tenants with a low roll over concentration. The financing is done with relatively little leverage. It is characterised by reliable income streams and low financial risks.
   Core investors are characterised by a risk averse behaviour.

2. **Value-added**
   - IRR-target: 10-15%
   - Leverage: 50-65%
   This management style has the objective to add value to the real estate. Buildings become of interest when underlying leas contracts are ending or acquisitions can be made at a low price. After the value has been added the aim is to sell the real estate. The risk profile is considerably higher than with core investments due to the high leverage and uncertainty of closing new lease contracts.
Value-add investors are characterised by a risk-neutral behaviour.

3. **Opportunistic**

<table>
<thead>
<tr>
<th>IRR-target</th>
<th>15-20%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leverage</td>
<td>65-85%</td>
</tr>
</tbody>
</table>

Different management methods are used within this risk-profile such as buying assets of companies in financial unstable situations, buying large portfolios and selling the buildings individually or developing real estate on personal risk. All methods are characterised by high risk.

Opportunistic investors are characterised by a risk-seeking behaviour. (Beyerle, 2007)

With high risk investments high yields are expected to be made in a relatively short time. Due to the short running period and high volatility of these funds a closed end fund structure is most common. The assets and funds are respectively managed by asset and fund managers.

Real estate as a physical asset is ‘local business’. Local expertise is needed to acquire the right assets and manage them well. This has led to real estate investors limiting their real estate investments to their home countries. This was in contrast with the trend seen in the equity and bond investment industry to invest increasingly internationally already from the mid-nineties. However since the end of the nineties and start of this century there has been a similar shift in the real estate industry. (Macke, 2006) This has caused many global investors to invest in local markets like Amsterdam Southeast.

### 4.4 Valuation of offices

The value of offices is important in relationship to this research as the value is the starting point of any negotiation concerning the financial future of an office.

A phenomenon in the Netherlands that has to be explained first is the “incentive”. Incentives are closely related to vacancy. Incentives in the real estate investment environment are understood as rent free periods for tenants at the start of the lease. Many different variations exist like a cash incentive, where the tenant receives a certain period of months rent in cash up front or a distribution of rent free months like 5 months in year one; five in year two; and five in year three. The latter is normally applied when the tenant is financially unreliable. The distribution of months prevent the tenant from having free occupation for 15 months and afterwards going bankrupt, leaving the owner with no income at all.

Incentive is defined as follows: “Something such as fear or punishment or the expectation of reward, that induces action or motivates effort.” (End, 2008) This is exactly what the incentive is used for; to motivate tenants to rent. Obviously with a high vacancy and many competitors the motivation for tenants needs to be higher than in a seller’s market. This explains why incentives go up when vacancy rates in a market or building go up.
When valuating an office this incentive should be taken into account. There are a couple of ways to do this:

- **Net present value method**

  In the net present value method incentives are converted to net present value and deducted from the value. The value is a capitalisation of the future cash flow.

- **Top/Core slice method**

  In the Top/Core slice method, periods with no income stream (vacancy and incentives) are capitalized with a low capitalization rate and non‐vacancy is capitalized with a higher capitalization rate.

In both methods the incentive will theoretically be completely integrated in the valuation. However the incentives make the calculation more complex and therefore harder to understand for outsiders. As a result the understanding of the value of an office is decreased by the incentive structure.

The valuation of offices is executed based on the income stream, the cost schedule and a capitalisation rate. The income stream is capitalised with a certain capitalisation rate. The cap rate is one divided by the gross initial yield ("**GIY**"). The GIY is the yield when costs have not been deducted from the revenues. In case the costs have been deducted a net initial yield ("**NIY**") applies.

The GIY is of great influence. On a two million cash flow for instance a difference of 20 basis points from 7.0% to 7.2% would result in nearly 800.000 difference on a total of about 28 million. The GIY is affected by many factors. Some important ones are the economical climate, location, credit worthiness of the tenants, term of the lease contracts and break options in the contracts. Figure 11 below shows that the GIY‐rates in B‐locations in “the randstad”, for instance “Southeast”, have been declining mostly since 1992 besides some periods with a weak economical climate like in 2001.

However the GIY is rising since the start of the current recession. “With the decreasing demand it was inevitably that the gross initial yields would rise in 2008. This is being strengthened by the rising costs of financing due to the higher risks financiers charge. Additionally investors see more risks in real estate.” (DTZ Zadelhoff, 2009, p. 2)

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1 “The randstad” is a conurbation in the Netherlands. It consists of the four largest Dutch cities, Amsterdam, Rotterdam, The Hague and Utrecht, and the surrounding areas.
In a basic valuation the income of the office is calculated. This is the amount of square metres times the rent per square metre. The total non-recoverable costs related to the offices are subtracted from this amount. This results in the total profit of the building. The NIY of the building is transformed to a cap rate. Finally the total profit times the cap rate will result in the valuation. The calculation of the NIY is left out of consideration here, as this has no direct relationship with the objective of this research. As long as the NIY is in line with the market the results should be the same.

Another method to valuate an office is by a discounted cash flow calculation. In this model all expenses and revenues related to the office are set out over the running period. These expenses and revenues are summed forming a cash flow. To be able to catch the future value of money at present the cash flow is discounted with the opportunity costs. When all expenses and revenues are included in the model a positive net present value indicates a positive result.

### 4.5 How office vacancy affects the financial performance

Office vacancy is basically an unwanted effect for everyone involved. Financially there are several significant changes that take place when space becomes vacant:

**Costs change**

When an office becomes vacant less energy will be used. Additionally the write off of the fit out will decrease. However this will definitely not indicate that the costs decrease for the owner. This is explained by the recoverable costs that will not be recoverable as soon as the tenant leaves.

**Recoverable costs become non-recoverable costs**

The above mentioned positive effect does normally not result in less costs for the owner. Usually the service costs made by tenants are also paid by the tenants. Tenants also have the obligation to maintain their space in a proper condition. However when the space becomes vacant these recoverable costs...
become non-recoverable costs. Although the total costs of the building might decrease the costs for the owner will normally increase.

*Rental value becomes estimated rental value ("ERV")*

The rental value of the building is not a fixed amount when vacant. The rental value will have to be estimated and according to the condition of the market, location and building this value will be higher or lower than the rent received from the former tenant. Usually this rent drops as the building will depreciate over time.

*Vacancy period*

A vacancy period before the start of new lease will have to be taken into account. In this period the space will produce no income. This effect puts negative pressure on the current value. If for instance the vacancy period is estimated at 18 months, the value of 18 months of rent will be calculated in net present value and taken off the valuation.

*Capital expenditures*

In some cases the future exploitation of an office might be under pressure. In this case it might be necessary to undertake a renovation or a transformation. This can be on a large scale or on a small scale. However capital expenditures put negative pressure on the internal rate of return ("IRR") because the expenses will have to be deducted from the profit.

*Capital value drops*

The capitalisation rate will decrease due to the uncertainty of income. This has great effect on the capital value of the building as explained in the valuation of offices.

## 5 Methods

The foundation of this research consists of five subjects that will be analysed:

1. Analysis of the investors in Southeast
2. Analysis explaining the Southeast office market
3. Geographical analysis of Southeast
4. Analysis of factors in Amsterdam Southeast affecting the vacancy of office space
5. Analysis of two case studies.

### 5.1 Analysis of investors in Southeast

The analysis of investors in Southeast started with six interviews. One interview was completed over the telephone, and the remainder were in person. The interview consisted of 27 questions, of which only two were closed end questions and 25 questions were open end. Using mainly open end questions gave the

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2 Appendix 11.4 – Interview questions
respondents the opportunity to go beyond providing a single answer. Giving them this opportunity supported the objective of the interviews to understand the investor’s perspective on vacant office space.

Additionally a seven month internship during this research at UBS Global Asset Management allowed me the opportunity to analyse one of the investors with offices in Amsterdam Southeast internally.

5.2 Market analysis of Amsterdam Southeast
The market analysis has been carried out on several important office market indicators;
1. Number and size of transactions
2. Take up, supply, stock and vacancy numbers
3. The business segment of the tenants
4. Movement of the tenants in the Amsterdam Southeast office market

5.2.1 Number and size of transactions
A transaction is described as: “settling a piece of business” (West, 1976). In the remainder of this report a transaction will be referred to as the settlement of a lease agreement of office space, between a tenant and the owner.

The “Strabo”3 database, provided by Cushman & Wakefield includes all the transactions of leased office space in Amsterdam since 1985. From this large database the number of transactions in Southeast were extracted, as well as the size of the transactions. Additionally all transactions were related to their year which made it possible to indicate the development of the number and size of the transactions over time.4

5.2.2 Take up, supply, stock and vacancy numbers
The take up, supply, stock and vacancy were analysed based on a datasheet called “BASIC and HISTORIC figures Dutch Amsterdam Office Market”5 provided by Cushman & Wakefield. This datasheet has recorded all take up, supply, stock and vacancy over the years since 1981.

5.2.3 The business segment of the tenants leasing office space
The “Strabo” database includes the business segment of the tenant per transaction. Linking these to the year and size of transaction resulted in the total size of each business sector that has leased office space in Amsterdam Southeast.

5.2.4 Movement of tenants in the Amsterdam Southeast office market
The movement of the tenants can be monitored. The “Strabo” database also includes the name of the tenant. Finding this name twice or more indicates the tenant has rented additional space or moved within

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3 Strabo is a database registering all transactions in Amsterdam and their characteristics.
4 Appendix 1.18 – Characteristics of transactions in Amsterdam Southeast.
5 This database records all take up and supply in the four largest cities in the Netherlands: Amsterdam, Rotterdam, The Hague and Utrecht.
the area. This figure shows the orientation of tenants in the area. Although the data was available for the entire region of Amsterdam, only the Amsterdam Southeast office market has been analysed to reduce the complexity.

5.3 Geographical analysis Southeast

The geographical analysis was set up by translating the addresses of the offices to a location on the map of Amsterdam Southeast. 104 offices were numbered on the map in order that the characteristics of each office could be interconnected to the relevant number. The following details have been geographically structured: construction year, rent level, parking ratio, vacancy and transactions in each year from 1998 to June 2009.6

5.4 Vacancy factor analysis

The research department of Cushman & Wakefield provided data of 104 offices in Amsterdam Southeast. The data included the name of the office, the address details and the total floor area of the office. The floor area of these 104 offices totalled 813,202 square metres. Compared to the total stock of 1,249,000 square metres of office space in Amsterdam Southeast, this is 65%.

Additionally research has been conducted on eight characteristics, which could affect the office vacancy, of each of the 104 offices. The eight characteristics have been identified based on related research (Remoy & Koppels, 2009):

1. Parking ratio (square metres of lettable floor area per parking spot)
2. Accessibility by car (in minutes from the nearest highway junction)
3. Presence of a restaurant (whether a restaurant is present in the office)
4. Year of construction (year in which the office has been constructed)
5. Light admittance in the building (estimation of light admittance in the building)
6. Accessibility by train (in minutes walking from the nearest train station)
7. Visibility (the visibility of the office from the road)
8. Façade appearance (combination of technical state of the façade and architectural quality)

The parking ratios are extracted from “REALNEXT”7 and are expressed by the amount of square metres of lettable floor area for each parking space. For example, a parking ratio of 65 implies that for every 65 square metres of lettable floor area there is one parking place.

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6 Appendix 11.7 – Geographical maps.
7 “REALNEXT” is the independent information platform for commercial real estate to which CB Richard Allis is affiliated, along with almost 400 other commercial real estate agents. RealNext's search engine shows you the current properties offered by all affiliated estate agents. (CB Richard Ellis, 2009)
The accessibility by car is constructed by entering the address of the nearest highway junction and the address of the office in the route planner of “Google maps”. This results in driving times of the 104 offices ranging from one to six minutes.

The presence of a restaurant is identified by observation. The presence of a restaurant has been marked yes or no.

The year of construction is part of the data provided by the research department of Cushman&Wakefield. The construction year starts in 1979 when the first office was developed and the data goes up to the latest construction in 2007.

The light admittance of each office is identified by observation. Each office is given a score between one (very little light admittance) and ten (a lot of light admittance).

The accessibility by train is identified by entering the address of the nearest train station and the address of each office in the route planner of “Google maps”. For the 104 offices this results in walking times ranging from 1 to 22 minutes.

The visibility of the office has been identified by observation. Each office is given a score ranging between one (only visible to a few people) and ten (visible to many people).

The façade appearance has been identified by observation. This has been carried out by observing two aspects: the architectural quality and the technical state. Both aspects have been given a score: 1-bad, 2-weak, 3-average, 4-good, 5-excellent. This results in a score of two being the worst façade in Amsterdam Southeast and a score of ten being the best façade.

A correlation analysis describes the correlation between real vacancy and each of the eight characteristics mentioned above. Hypothetically each characteristic will have some influence on the vacancy. To test the influence on the vacancy, each of the eight characteristics is compared to the real vacancy. This is completed by comparing the characteristics’ scores of the 104 offices to the vacancy of each of the 104 offices. The vacancy is expressed in a percentage of the total square metres of office space of the building.

A positive correlation between the two series will imply that a higher score from the characteristics leads to a higher vacancy percentage. This correlation is graphically displayed in scatter plots and is calculated in Excel with the correlation function. The distribution of the correlation, through which the non-directional significance is calculated, is determined by the following formula where $t=\text{distribution}$, $r=\text{observed value}$, $N=\text{size of the sample}$:

$$t = \frac{r}{\sqrt{(1-r^2)/(N-2)}}$$
The results of the correlation and significant tests can be found in appendix 11.6.

A second analysis has been performed based on office mutations. R.L. Bak, renowned for his reports "Kantoren in cijfers", keeps track of all office mutations in Amsterdam Southeast. A mutation can either be a tenant leaving an office or a tenant leasing new office space, respectively supply or take up. All mutations of the 104 offices have been identified in the period between 1998 to 2007. Hypothetically it is expected that there is move from old to new office space and from the southern area of Amsterdam Southeast to the northern area.

The performed analysis derives from the mutation data and the characteristic construction year. The movement in areas is monitored according to six areas identified in the geographical analysis. Each score per characteristics is linked to the mutation that took place in all offices representing that score over the years 1998-2007.

<table>
<thead>
<tr>
<th>Year of Construction</th>
<th>98-’99</th>
<th>’99 -’00</th>
<th>00 -’01</th>
<th>01 -’02</th>
<th>02 -’03</th>
<th>03 -’04</th>
<th>04 -’05</th>
<th>05 -’06</th>
<th>06 -’07</th>
<th>Total Mutation</th>
<th>Total Stock</th>
<th>Stock/stock</th>
<th>Mutation/stock</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-2007</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-3,600</td>
<td>1,530</td>
<td>40,745</td>
<td>37,425</td>
<td>11,775</td>
<td>8,380</td>
<td>96,255</td>
<td>150,709</td>
<td>64%</td>
<td></td>
</tr>
<tr>
<td>1994-2000</td>
<td>0</td>
<td>900</td>
<td>14,785</td>
<td>-1,930</td>
<td>-6,530</td>
<td>16,840</td>
<td>-8,690</td>
<td>-14,470</td>
<td>4,985</td>
<td>5,880</td>
<td>138,766</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>1982-1988</td>
<td>1,530</td>
<td>-115</td>
<td>-8,100</td>
<td>-30,408</td>
<td>-2,097</td>
<td>-3,825</td>
<td>-28,080</td>
<td>-20,125</td>
<td>8,396</td>
<td>-81,824</td>
<td>175,490</td>
<td>-47%</td>
<td></td>
</tr>
</tbody>
</table>

Figure 12 – Mutations for each year 1998-2007 and total mutation compared to total stock of related score

Each score per characteristic represents a certain amount of square office metres. The total amount of square office metres ("stock") of a construction year between 1994 and 2000 is for instance 198,766 square metres.

The mutation of a score per characteristic should therefore be placed in context of its total stock. The significance of the mutation is expressed in a percentage of the total stock of a score. Hypothetically good scores of the characteristics will show positive percentages.

A positive percentage implies that offices with this score have decreased their vacancy.

The numbers are more negative than they are in reality though. Adding up the mutation would result in a negative total mutation. However the stock in use has grown about 200,000 square metres in the period 1998-2007. This inequality in caused because the new preleased developments are not included in this data. This prevents inconsistency because the preleased developments of before 1998 were also not included.
6 Results

6.1 Analysis of investors in Southeast

The area of Amsterdam Southeast is the largest contiguous office district in the Netherlands. It faces high vacancy rates and although it has regained some of its reputation, Amsterdam Southeast is not the high end office location it used to be. The vacant office space is a great problem for investors; while investors still have to pay large sums of money on maintenance, tax, management fees and the underlying loan of the property, there is no income stream.

However with large investments from the municipality to upgrade the area and an upcoming retail district, the area of Southeast still holds opportunities. The supply has since the completion of Bijlmer Arena train station decreased significantly and some buildings have been fully leased out after becoming vacant. In the last decade, the area has taken the interest of many institutional investors. The “Strabo” database consists of 755 transactions in Amsterdam Southeast since 1985. Table 3 displays the type of investor related to each transaction.

The most active player by far is the institutional investor. Nearly 70% of all transactions in Southeast have taken place in relation to offices owned by institutional investors.

As explained in paragraph 4.3, institutional investors normally work with different funds based on the risks involved. With rising vacancy the risk of real estate investments increase. Although there are still core investors who own office in Amsterdam Southeast, the amount of core offices has drastically decreased since the start of the millennium, if not totally disappeared. Most new investments will therefore be value-add or opportunistic orientated investments. Core investors in Southeast can simply be defined as being in the wrong area because all investments include a great amount of risk.

Seven investors in Southeast were interviewed for this research. All except one were value-add investors; one was a core investor. During the interview the core investor pointed out that he had two offices in Amsterdam Southeast of which one was completely vacant and one was about to become vacant. These offices did not fit in his portfolio and were at the top of his list to be sold.

Besides that the offices did not fit in the portfolio, core investors usually are not organised to run value-add or opportunistic office investments. The management of core offices is very different. Core investors run high quality offices which require only little management. The profit is made by the rental income of the tenants. Core investors aim at steady long-term income streams and therefore invest in offices with long term lease contracts.
In contradiction, value-add offices are bought with short lease contracts and more risk of finding new tenants. Leasing out value-add offices will therefore need much more management. Many time consuming management activities are performed, such as renovations, adding facilities, improving signage, approaching possible tenants and providing promotion materials. As soon as the office is leased out, it will be tried to sell the building. All in all the value-add orientated investments are short term based and value is created by active management.

The main problems caused by vacancy are related to the continuing maintenance costs, no income, falling book values and financing. Due to these problems the urgency to lease out vacant office space is very high although the influence of one office on a total portfolio is normally marginal.

Although some investors point out that book values decrease due to vacancy, others indicate that decreasing rent values and thus book values have no effect in the Dutch real estate market due to the incentives. Instead of decreasing the real rent the same effect can be achieved by increasing the amount of incentives.

In relation to the possibilities in Amsterdam Southeast, five investors pointed out this is an office location which offers good quality offices at a low price. Similar quality offices in other locations of Amsterdam can have much higher rental values. Nevertheless Amsterdam Southeast offers some good characteristics like the accessibility by car which is the best of Amsterdam, the Bijlmer Arena train station and a growing number of facilities.

Investors explain the vacancy by factors such as market, location and competition. The building itself was not mentioned as a criteria. However this can be explained by the fact that the building is one of the factors that can be influenced or upgraded by the manager.

In response to the question on what can be done to decrease the vacancy resulted in a unanimous answer: a stop to the new developments.

6.2 Market analysis

The market analysis will be constructed by combining two perspectives; the market from a leasing perspective and the market from the investor's perspective.

6.2.1 Leasing market

A strong leasing market will result in more leased space. This will not only increase the direct income but will also have a positive influence on the indirect income or capital growth. The capital growth increases when the office generates more income.
Figure 13 – Take up in Southeast in square metres

Figure 13 above displays the take up in Amsterdam Southeast. Although there is not a clear trend line, the peaks show a maximum of about 100,000 square metres per year and this drops to a minimum of about 20,000 square metres a year. This would imply an average of 60,000 square metres per year. However as the graph already indicates the average is lower; exactly 54,545 square metres per year. The graph clearly shows there is not a long term increasing demand over the last 24 years. This does not imply however that the total stock in use is not able to grow. The stock in use would grow from 54,545 square metres if no lease contracts would be terminated.

Figure 14 – Developed square metres in Amsterdam Southeast

The growth of the office stock in Amsterdam Southeast is displayed in figure 15. Over the total period the average growth of the stock was 39,805 square metres per year. However at the start of the millennium there is a clear increase in developed square metres of office space which is also displayed in figure 14.
Figure 16 – Supply development in Amsterdam Southeast

Figure 16 displays the supply and take up developments in Amsterdam Southeast. Clearly the developments at the start of the millennium caused an oversupply. There is a very strong increase in supply. Figure 17 below supports this statement. The vacancy as a percentage of the total stock displays the same trend as the supply curve: an indication of too much supply in relation to the total stock.

Figure 17 – Vacant office space in percentage of the total stock in Amsterdam Southeast

Figure 14 indicates that after 2004 the developments flattened out. As a result the supply decreased and so did the vacancy. With a stop on developments the new supply will only consist of tenants ending lease contracts. As long as this amount is lower than new contracts that are commencing, the vacancy will drop.

As at January 2010 the total supply is 258.000 square metres. With 1.300.000 square metres of stock a healthy office market should have a supply of about 80.000 square metres (6,5% of total stock). Taking this into account the oversupply is 178.000 square metres (258.000-80.000). In the period from 2004 to 2008 only the new office development "Miro" came onto the market with a total office space of 15.000 square metres. In five years only 15.000 square metres were developed During this period the supply decreased with 42.000 square metres. The new office was developed without being preleased and is still vacant. Including this development means the supply decreased by 57.000 square metres over a period of five years. The effective yearly take up during this period was 11.400 (57.000/5) square metres.

The real take up over these years was on average 67.000 square metres, indicating that 67.000 – 11.400 = 55.600 square metres of office space was terminated yearly during the period from 2004 to 2008.
Taking into account all conditions would remain similar, approximately another 20 years would be needed to reach a healthy office market, as indicated in figure 18 below.

![Figure 18 – Display of the trend of decreasing supply before the crisis](image)

However the office stock is not homogeneous and in addition market conditions have drastically changed. The trend in figure 18 will surely not continue as it has done, as the take up numbers for this year already indicate. The take up number for 2009 was 42,000 square metres. Based on the average termination of lease contracts a rise in supply of 55,600-42,000 = 13,600 square metres was expected. The real increase for 2009 is 7,000 square metres, making the total terminated lease contracts 49,000 square metres instead of 55,600 square metres.

Due to the recession the economy has shrunk for four quarters from January 2009 to January 2010. As a result the number of people employed in the Netherlands has decreased over this period as figure 19 shows. Decreasing job numbers will also affect the number of office jobs. A decreasing number of office employees will result in a decrease of required office space.

![Figure 19 – Total number of people employed (Centraal Bureau Statistiek, 2010)](image)

Many markets show an increasing supply. It is very likely this increasing supply will continue for at least a few more quarters due to the illiquidity of the real estate market. Two of the largest offices in Southeast will be added to the supply in the near future. Price Waterhouse Coopers will leave 19,000 square metres in the “Entree 201” and ABN Amro will leave 20,000 square metres in the opposite office. In addition a new development of 26,000 square metres in the Arena Plaza has began being constructed in December 2009. This development will be finished within two years. All together these three developments only cause 65,000 square metres to be added to the supply in the next two years. Adding this amount to the current total supply will set the office market of Amsterdam Southeast back to the situation of 2002. At this time the office vacancy was at its highest rate ever. Figure 20 & 21 below show the development of
the office market of Amsterdam Southeast within the next three years taking the above considerations into account.

![Expected supply and take up development in the next three years in Amsterdam Southeast](image1)

**Figure 20 – Expected supply and take up development in the next three years in Amsterdam Southeast**

![Expected stock development during the next three years in Amsterdam Southeast](image2)

**Figure 21 – Expected stock development during the next three years in Amsterdam Southeast**

So far only the quantitative demand has been discussed. However, what type of tenants are expected to lease space in Amsterdam Southeast? Figure 22 shows what sector the tenants come from and the percentage of square metres they have leased. About a quarter of all leased space belongs to bank and insurance companies. 29% is leased by business service related companies. Another 21% is leased by computer companies. Finance related companies other than the ones mentioned before have leased another 13%.

![Segmentation of businesses in % of total transaction volume 1985-2009](image3)

**Figure 22 – Segmentation of businesses in % of total transaction volume 1985-2009**

Two important changes are taking place in the tenant compilation in Amsterdam Southeast. Firstly, bank and insurance companies have not signed any new leases since 2007 while they are a very important segment. Secondly, the computer companies have only showed a boost in demand during the end of the nineties and start of
the millennium. This demand has triggered the huge developments during this period but did not prove to be sustainable.

Moreover it is interesting to see the behaviour of the current tenants in Southeast. In the last 10 years, 33% of the leased space in Amsterdam Southeast was leased by tenants already present in the area.

### 6.2.2 Investor’s market

Investors obviously rely on the leasing market as it is this market that will affect the leasing of their office space. However when the building is sold, other factors affect the sale price. These factors relate to the position of the potential buyers. The higher the number of buyers the higher the sales proceeds will be.

Currently there is not much capital available to investors. This is related to the decreasing value of portfolios that have worsened the liquidity position. In addition the availability of credit has decreased and interests have increased.

The GIY is related to the investor’s market. Low GIYs indicate a small margin on the investment. As soon as borrowing money becomes more expensive this margin will further decrease with the result that the GIY will have to increase.

<table>
<thead>
<tr>
<th>Leasing behaviour current tenants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Period</strong></td>
</tr>
<tr>
<td><strong>Total leased space by current tenants</strong></td>
</tr>
<tr>
<td><strong>Total leased space</strong></td>
</tr>
<tr>
<td><strong>In percentage</strong></td>
</tr>
</tbody>
</table>

Figure 24 – leasing of current tenants

![Figure 24](image-url)

Figure 25 above displays the realized prime GIY in the Amsterdam Southeast office market from 1980 onwards. The prime GIYs are the best GIYs that are realized at transactions and are therefore not representative for the entire market. However it does indicate the development of all GIYs.

Since 1980 the prime GIY has, most of the time, been between 7% and 8%. During the recession in the eighties it increased and during the cheap availability of money in the new millennium it decreased to an unprecedented level in Amsterdam Southeast.
All the measures are taken at December each year. This is why the GIY for 2008 displays 7% while in March 2008 it was still 6.25%. A prime GIY in Amsterdam Southeast of 6.25% is extremely low and may be caused by a special transaction. Nevertheless in the period over 2005, 2006 and 2007 historically low GIY were realized. The recession has had a dramatic effect on the realized GIY’s as the yield is an indication of the value of properties. A decreasing value of a property results in an increasing loan-to-value ratio which will result in though renegotiations with the bank. Higher loan-to-value ratios result in a higher risk for the bank and higher interest rates will be charged.

Example

A 5,000 square metre office in Amsterdam Southeast with a rental income of € 200/m² will have a yearly income stream of € 1,000,000.

In March 2008 the value of this office would be about 1,000,000/0.0625= € 16 million. In October 2009 this same office should be valued 1,000,000/0.075= € 13 million.

Although in reality the value will not fluctuate this much the expected GIY does indicate how much the value has decreased or might still have to decrease.

6.3 Geographical analysis Southeast

The geographical analysis of Southeast has been carried out to be able to identify which locations have certain characteristics. Through the use of numbers, influences related to a location are hard to capture. This report will give recommendations for offices in a certain area. Without thorough understanding of this location, recommendations are not reliable. The characteristics with a strong relation to their location have been geographically analysed.

6.3.1 Year of construction

Amsterdam Southeast has mostly been developed in stages. At Bijlmer station the complex Atlas Arena was the first development in 1981. At the same time a few offices were developed near Holendrecht station. Throughout the remainder of the eighties many developments took place directly south of Atlas Arena. In addition, developments continued in the area next to Holendrecht station. At the end of the eighties the first developments started directly north of the Hoogoorddreef; some mayor projects were constructed here until 1993. During the nineties relatively few developments took place. Only an area near Bullewijk subway

Figure 26 – Segmentation of construction years
station was developed. With the shortage of office space at the end of the nineties many developments took place at the start of the millennium. South of the Bullewijk subway station a new area was developed, as well as north of the Bijlmer station. In addition, to the South of the A9, next to Holendrecht station, many developments were added to the existing stock.

These developments have resulted in a clear segmented map when looking at construction years. Only the area near Holendrecht centre has mixed developments over the period. As the construction period is such an important factor for the type of development and the current quality of the building, it is a strong determining factor in the segmentation of the map.

6.3.2 Parking ratio

It is expected that there is a correlation between parking and construction year. The geographical analysis confirms this statement clearly. In the areas with young construction years, the parking ratios decrease significantly. Generally the same areas used for construction year could be applied for the parking ratios.8

“The Amsterdam parking policy is aiming at a better accessibility of the city for necessary transport and to improve the liveability and air quality by repulsing the unnecessary car traffic.” (Gemeente Amsterdam, 2009, p. 1)

The policy of driving away the traffic in Amsterdam has only become stronger during the development of Amsterdam Southeast which is translated in the parking ratios. There is a linear decrease of parking ratios over time.

6.3.3 Rent level

There seems to be a correlation between construction year and rent price. However as the rental price includes all characteristics there are exceptions, like Atlas Arena where the rent prices are significantly higher than other offices dating from 1981. This could be explained by the good location within Amsterdam Southeast. The complex is next to the Bijlmer Arena train station and in a diversified area. However although there many other factors affecting the rental value there is a clear segmentation like with the other factors parking ratio and construction year. Taking all the factors into account the area can be segmented in six different areas:

---

8 Appendix 11.7.4 – Parking ratios
1. The area above the Hoogoorddreef
2. Plaza ArenA
3. Atlas Arena
4. The area in between Atlas Arena and the Karspeldreef
5. The area between Karspeldreef and the A9
6. The area below the A9

6.3.4 *Transactions*

The transactions have been displayed per year. Each year the transaction is presented with a green dot. The larger the dot the larger the transaction. By analysing all transactions during nine years, a few conclusions can be made. The middle part of Amsterdam Southeast shows small transactions. In the bottom part a few larger transactions took place. However the top part shows many large transactions over 2000 square metres.

In 2006 Ping Properties bought Atlas Arena. Ping properties spent many resources on improving this property. From then on many large transaction have been taking place in Atlas Arena. From a nearly total vacant complex of 74,000 square metres in 2006 the office has gone to a vacancy of only 21,000 square metres at the end of 2009.

Another area with a high density of transactions is Plaza Arena which shows many large transactions from 2004. This is when the first developments were finished to form a new complex. Analyzing all transactions per year is a good way to understand which areas were favourable to be leased out over time.

6.3.5 *Movement of tenants*

As with the vacancy factor analysis already described above, there is a strong relationship between the age of the building and movement of tenants. Many tenants leave old office space while new office space is leased as figure 29 below describes. How is this movement geographically explained?
Based on the vacancy factor analysis and the location characteristics the research area has been divided into six sub-areas. The six sub-areas have certain characteristics specific to that sub-area. A strong factor for determining this segmentation of the sub-areas is the construction year of the offices. Due to the segmentation the influence of location characteristics have strongly been decreased because the sub-areas are that small that the location characteristics are very similar for all offices in each sub-area.

For each of the 104 offices a sub-area has been identified. Table 4 displays the total mutation. To place this in perspective it is also expressed in percentage of the total stock in that area. The numbers are negative because the new pre-leased developments have not been taken into account.

Area 2 is the newly developed office area “Plaza Arena”. This is the only area with a positive number indicating a take up. Area 1 shows an increase in supply of 14,000 square metres, 10% of the total stock in that area. Area 3 is “Atlas Arena”. This is a development from 1981, the oldest development in the research area. This area added 45,000 square metres to the supply in the period from 1998 to 2007. This is 62% of the total stock in that area. However times have changed for this area. In 2006 Ping Properties bought this property and have already been able to lease out about 40,000 square metres. This is made possible by giving high incentives to tenants in rent-free months, renovating the building and improving the reputation with very active management.

The largest addition to the supply is found in areas 4 and 5. Area 4 has added 35,000 square metres to the supply which is 40% of the total stock in area 4. Area 5 has added 50,000 square metres to the supply,
which is 57% of the total stock in area 5. Area 6 added 27,000 square metres to the supply, which is 24% of the total stock in area 6.

6.4 Vacancy factor analysis

The comparison of vacancy with each factor is supported by the correlation table. The 104 offices have been compared. The percentage of vacant office space is shown for each office. This vacancy is compared to each of the eight characteristics described in paragraph 5.4. From now reference will be made to these tables as correlation tables.

6.4.1 Accessibility by car

Amsterdam Southeast is one of the best office locations in the Amsterdam region in terms of accessibility by car. Amsterdam Southeast is outside the centre of the city and two main highways border the office district. Within the district there is not a huge difference in accessibility between the offices. The largest difference is five minutes, as the shortest drive from the highway junction is one minute and the longest is six minutes.

However the scatter chart in figure 30 shows that accessibility by car and vacancy are still correlated. The figure shows the correlation is strong: 0.216. This is supported by looking at the averages of all 0% vacant properties and all 100% vacant properties. The average of all 100% vacant properties is 4.7 minutes and the average of all 0% vacant properties is 3.875 minutes.

6.4.2 Accessibility by train

The influence of the accessibility by train presumably has an influence on the vacancy in buildings. A better accessibility should correspond with less vacancy according to literature. (Graaf, Rietveld, & Debrizion, 2007)

This notion is supported by the scatter plot in figure 31. The average performance of the 100% vacant properties is 12-13 minutes walking from the train station, in comparison to the average performance of the non-vacant properties which is 7-8
minutes walking. The correlation between vacancy and distance to the train station for all 104 offices is found to be -0.179, which reveals that a longer distance to a train station leads to higher vacancy rates.

6.4.3 Construction year

The expectation is that a younger construction year should have a positive effect on the leasing of buildings. Table 5 shows a clear positive relationship between take up and construction year. Because newly developed buildings can only have positive mutations this outcome was expected. However table 5 clearly shows that there is an increasing supply in the older stock. Tenants are moving from the older stock to the new stock. This does not necessarily mean that the vacancy in the older stock is higher than in the new stock.

When the vacancy is compared to the construction year a correlation is found of -0.135 which implies that a higher vacancy is correlated to an older building. Buildings which have been constructed since 1991 have an average vacancy of 30%, buildings constructed before 1991 have an average vacancy of 38%. However the correlation is not as strong as the mutation table would expect. There are still many old buildings which have been leased and many newly developed square metres remain vacant.

6.4.4 Parking ratio

A good parking ratio is expected to have a positive influence on the ability of a property to be leased. However figure 33 shows a negative correlation; a good parking ratio corresponds with properties that have a high vacancy.

There is a good explanation for this. The parking ratio is strongly correlated to the year of construction. Figure 34 compares the parking ratio with the year of construction. There is a clear increase in parking ratio towards a more recent construction year. The correlation between those two figures is -0.63 with a non-directional significance.
of <0.0000001, stating that a correlation is very strong. The conclusion is that the year of construction has such a strong effect on the parking ratio that it blurs the relation of parking ratio and vacancy.

To avoid the misleading influence of the construction year, in comparing vacancy with parking ratios, the vacancy for parking ratios should be compared for each year separately.

The parking is sorted for each year separately and split in two groups\(^9\). One half with the best parking ratios and one half with the worst parking ratios. The offices in the best half of parking ratios show a better average vacancy percentage than the offices in the halve with the worse parking ratio. In year one and year ten all parking ratios are the same, so these are excluded from consideration. If all the best halves are summarised and all the worst halves are summarised, the vacancies are as follows:
- Best half: 32% vacancy
- Worst half: 40% vacancy

These figures prove there is a positive correlation between a better parking ratio and less vacancy in Amsterdam Southeast.

### 6.4.5 Visibility

The visibility of the offices has been measured by observation. The more people who pass or see the building, the higher the score. The expectation is that a better visibility would have a positive influence on the building’s lease ability.

In relation to the vacancy per building there is a strong correlation between visibility and vacancy: -0.188. The first 36 offices in figure 35 have a visibility score of 1. The average vacancy of these offices is 48.4%. The first 36 offices counted from the other end have an average vacancy of 28.3%. This is a dramatic difference. The expectation that a better visibility would have a positive influence on the building’s lease ability is correct.

---

\(^9\) Appendix 11.2 - Correlation parking/vacancy
6.4.6 Restaurant
A restaurant in an office is expected to have a positive influence on the leasing of the building. Figure 36 shows a small correlation of -0.032 between lower vacancy and a restaurant. The average vacancy in offices with a restaurant is 31.4% while offices without restaurants have a vacancy of 35.9%.

A restaurant in the office is shown therefore to have a positive influence on offices in Amsterdam Southeast.

6.4.7 Light admittance
The light admittance in buildings has also been analyzed. It was expected that a better light admittance would have positive influence on the lease ability of offices. However in both the mutation table as the correlation table no indications were found that point to a relationship.

6.4.8 Façade appearance
The appearance of the façades has been analysed. This has been carried out on two aspects; the technical quality and the architectural quality. The outcome of the observation was significant with the strongest correlation of all factors: -0.31.
Eight characteristics have been analyzed. Six characteristics have been shown to have a significant influence on the office vacancy in Amsterdam Southeast:

1. Car accessibility
2. Proximity of train station
3. Visibility of the office
4. Construction year
5. Parking ratio
6. Façade appearance

The presence of a restaurant showed to only have a weak influence on the office vacancy and the light admittance did not show to have any effect on the office vacancy.

Besides the eight characteristics that have been analysed, Remøy, Koppels & de Jonge (2009) describe three other important characteristics:

1. Space efficiency
2. Layout flexibility
3. Interior appearance

These characteristics were not part of the research as they were too hard to measure within the set timeframe. Nevertheless they have been proven to have a strong influence on the vacancy of offices. It is therefore expected that offices with good results in relation to the combined nine scores are fully leased while offices with poor scores on the characteristics will have a lot of vacancy.

Being able to improve the above characteristics of a vacant office would therefore increase the lease ability. However out of the nine characteristics, there are seven characteristics which are not or hardly possible to improve:

1. Car accessibility
2. Proximity to the train station
3. Visibility of the office
4. Parking ratio
5. Space efficiency
6. Layout flexibility
7. Construction year
The two other characteristics can be improved by renovation: interior- and exterior appearance. Because offices depreciate over time the interior- and exterior appearance could also be part of the characteristic construction year. From this point of view the construction year would be a characteristic which is possible to upgrade by renovation.

Based on the above conclusion the opportunities of vacant offices can be segmented in different groups:

**Consolidation**
Vacant offices having an overall good result on the characteristics including interior- and exterior appearance are expected to have a good chance of being leased out. The only variable to increase the lease ability is the rental price.

**Renovation**
Vacant offices with good results on the seven ‘fixed’ characteristics and poor results on interior- and exterior appearance offer good opportunities for improvement by renovation. When the exterior appearance is bad considerably higher renovation costs should be taken into account though.

**Transformation**
Vacant offices having an overall poor result on the characteristics are expected to be more difficult to lease out. The owners of these offices could benefit from a transformation to a different function which better suit their characteristics. This will however depend on the demands of the new function.

**Demolish**
In case the offices in the above group do not have any chance of a profitable transformation or renovation, demolishment could offer the most interesting solution. Demolishment is especially interesting when the building specific characteristics; layout flexibility, space efficiency, interior- and exterior appearance, are very poor. In this case a new building could be an improvement at the same location.
7 Analysis of the case studies

7.1 Constructing strategies

The case studies are carried out to prioritise more detail with regards to specific building characteristics and establish whether the vacant offices can really be optimised according to the above mentioned opportunities. Therefore the financial implications of the three most influential issues, vacancy period; revenues and expenditures, are monitored. Calculations will be performed based on the standard ratios that will be discussed in paragraph 7.1.1 to 7.1.5.

The calculated exploitation period runs from January 2010 to the moment the building is fully leased out or to the final date of December 2015. The five year lease contracts which started in 2010 can be terminated in 2015. Taking the period 2010 to 2015 exactly a cycle is captured of a five year lease. In addition predicting further ahead in the future would increase the uncertainty.

During the period January 2010 to December 2015 the inflation will be taken into account. The Dutch “Centraal Plan Bureau” has made an estimate for the period from 2010 to 2015. They estimate 1.5% inflation on average over this period. (Centraal Planbureau, 2010)

The expenditures of refurbishments and transformation works are based on research of Mackay (2008). In the calculations the works take place in January 2010. Therefore an indexation of the construction costs over the period 2008-Jan 2010 should be applied. However as table 6 indicates the price index of 2008 and January 2010 are exactly similar due to the recession. (Centraal Bureau Statistiek, 2010) The same prices used in 2008 can be applied for January 2010.

All the results are expressed in values as at January 2010. To establish a reliable comparison between results made at different moments in time the results will be discounted to January 2010. An indication of the discount rate has been established by using the weighted average costs of capital (“WACC”). The WACC is a blend of the cost of equity and cost of debt in relation to their applied proportion. The cost of equity is calculated according to the Capital Asset Pricing Model where:

\[
\text{Cost of Equity (Re)} = R_f + \beta (R_m - R_f)
\]

Rf= Risk free rate
Beta=Risk of the security
Rm=Expected market return

The risk of the security will be compared to a general market risk and set at one. The 10-year Dutch government bond as at April 1st 2010 is 3.2% (FD, 2010) and will be used as the risk free rate. The expected market return of the value add-fund profile of 10% will be used as the expected market return. These input figures result in the following indication of the cost of equity:

<table>
<thead>
<tr>
<th>Period</th>
<th>Construction costs total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>100</td>
</tr>
<tr>
<td>2006</td>
<td>103.2</td>
</tr>
<tr>
<td>2007</td>
<td>107.4</td>
</tr>
<tr>
<td>2008</td>
<td>112.0</td>
</tr>
<tr>
<td>2009 januari</td>
<td>113.2</td>
</tr>
<tr>
<td>2009 februari</td>
<td>113.4</td>
</tr>
<tr>
<td>2009 maart</td>
<td>113.2</td>
</tr>
<tr>
<td>2009 april</td>
<td>112.6</td>
</tr>
<tr>
<td>2009 mei</td>
<td>112.6</td>
</tr>
<tr>
<td>2009 juni</td>
<td>112.5</td>
</tr>
<tr>
<td>2009 juli</td>
<td>112.1</td>
</tr>
<tr>
<td>2009 augustus</td>
<td>112.2</td>
</tr>
<tr>
<td>2009 september*</td>
<td>112.3</td>
</tr>
<tr>
<td>2009 oktober</td>
<td>111.4</td>
</tr>
<tr>
<td>2009 november</td>
<td>111.4</td>
</tr>
<tr>
<td>2009 december*</td>
<td>111.4</td>
</tr>
<tr>
<td>2009*</td>
<td>112.3</td>
</tr>
<tr>
<td>2010 januari*</td>
<td>112.0</td>
</tr>
<tr>
<td>2010 februari*</td>
<td>112.1</td>
</tr>
</tbody>
</table>
Cost of Equity = 3.2\% + 1\{(10\% - 3.2\%)\} = 10\%

The Cost of Debt will be assumed at 5.25\%. “overall it seems unlikely that the cost of new debt finance will [...] differ significantly from the 5.25\% rate.” (NERA economic consulting, 2009, p. 3)

The leverage of value-add funds has been described before and is determined at 60\% resulting in the following WACC:

\[
\begin{align*}
10\% & \times 0.4 = 4.0\% \\
5.25\% & \times 0.6 = 3.15\%
\end{align*}
\]

Discount rate 7.15\%

Because the exploitation over the past is not taken into account nearly all the results are positive. However, the acquisition costs are not taken into account as well as all the other results of the past exploitation because these are unknown. A positive result of the calculations in this report does therefore not suggest that it has been a successful investment.

### 7.1.1 Consolidation

**Vacancy period**

The expected vacancy period can theoretically be calculated. Dividing the total supply by the yearly take up results in an estimate of the time needed to take up the current supply. This is only true for offices with no lease contracts ending during this time. Vacant offices have no lease contract and as leases are usually signed for at least five years this is not a concern over an analysed period of five years. In cases where lease contracts will end within five years the future vacancy should be taken into account.

These vacancy assumption would only be entirely correct if the real estate market was homogeneous. However there are location and building characteristics that differentiate buildings from others. Therefore the sub-areas will be used which have been described in the geographical analysis in section 6.3.

By using the sub-areas the differences in location characteristics are decreased. Accessibility of public transport, construction year, parking ratio, visibility and car accessibility are comparable within the sub-areas. For each sub-area the expected period needed to lease out the current vacant space is displayed in table 7; supply/take up. The number indicates the years needed to lease out the entire building. A building with five floors that is expected to take five years to lease out will for instance lease out the first floor in year one, the second floor in year two and so on, until the entire building is leased.

### Revenues

With a consolidation the expected revenues conform to the market standard. This means that the ERV will be used as the expected rental income. The ERV can either be constructed by comparing reference offices or it can be obtained from

### Table 7 - Take up, supply and supply/take up in sub-areas

<table>
<thead>
<tr>
<th>Subarea</th>
<th>5-y average take up m²</th>
<th>Current supply m²</th>
<th>Supply/take up</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5,956</td>
<td>44,992</td>
<td>7.6</td>
</tr>
<tr>
<td>2</td>
<td>7,715</td>
<td>27,986</td>
<td>3.6</td>
</tr>
<tr>
<td>3</td>
<td>11,388</td>
<td>31,783</td>
<td>2.8</td>
</tr>
<tr>
<td>4</td>
<td>10,714</td>
<td>53,201</td>
<td>5.0</td>
</tr>
<tr>
<td>5</td>
<td>7,662</td>
<td>38,528</td>
<td>5.0</td>
</tr>
<tr>
<td>6</td>
<td>3,647</td>
<td>64,123</td>
<td>17.6</td>
</tr>
</tbody>
</table>

### Table 8 - Average rental values

<table>
<thead>
<tr>
<th>Subarea</th>
<th>Average rental value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>€ 164.44</td>
</tr>
<tr>
<td>2</td>
<td>€ 197.00</td>
</tr>
<tr>
<td>3</td>
<td>€ 175.00</td>
</tr>
<tr>
<td>4</td>
<td>€ 139.28</td>
</tr>
<tr>
<td>5</td>
<td>€ 158.00</td>
</tr>
<tr>
<td>6</td>
<td>€ 147.67</td>
</tr>
</tbody>
</table>
the valuator who in the end does the same. As offices in the sub-areas are comparable the average rental values of the sub-areas in table 8 can also be used as a reference.

**Expenditures**

Other than standard expenditures consolidation has the advantage of no capital expenditures. On the other hand consolidating a structural vacant office will not result in any revenues.

### 7.1.2 Renovation

**Vacancy period**

The vacancy period after a renovation is hard to predict. Renovating an office is expensive. In case the office is not leased after a renovation the money is lost. Moreover a renovation hardly or has no influence on the valuation of an office in Amsterdam Southeast. Therefore undertaking a renovation is a risk for the owner. As a consequence many vacant offices are offered for renovation when a lease is signed. To get an idea of the vacancy period four offices, that have been renovated in Amsterdam Southeast before a lease was signed, have been analysed. The features of all four offices are set out below. A green characteristic indicates the score is above the Amsterdam Southeast average and a red characteristic indicates it is below the Amsterdam Southeast average.

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Sq.m.</th>
<th>Renovated</th>
<th>First lease</th>
<th>Months vacant after renovation</th>
<th>Façade appearance (1-10)</th>
<th>Parking ratio (1/x)</th>
<th>Car accessibility (min. To highway)</th>
<th>Construction year</th>
<th>Train accessibility (min. To train)</th>
<th>Visibility (1-10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlas Arena</td>
<td>hoogoorddreef 11</td>
<td>74,000</td>
<td>Apr'07</td>
<td>Nov'07</td>
<td>7</td>
<td>7</td>
<td>50</td>
<td>3</td>
<td>1981</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Centerpoint</td>
<td>hoogoorddreef 60</td>
<td>9,100</td>
<td>Dec'07</td>
<td>Apr'08</td>
<td>4</td>
<td>8</td>
<td>51</td>
<td>3</td>
<td>1985</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>East Park Tower</td>
<td>karspeldreef 8</td>
<td>5,700</td>
<td>Dec'08</td>
<td>Jun'09</td>
<td>6</td>
<td>6</td>
<td>50</td>
<td>3</td>
<td>1990</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>Paasheuvelweg</td>
<td>paasheuvelweg 5</td>
<td>3,200</td>
<td>Oct'17</td>
<td>Nov'08</td>
<td>24</td>
<td>4</td>
<td>56</td>
<td>4</td>
<td>1986</td>
<td>10</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 9 shows that all four offices are more than 20 years old. After a certain period offices have depreciated so far that a renovation or upgrade is necessary to bring it back in line with other products on the market. In Dutch this process is described with the so called “zaagtandmodel” displayed in figure 38. These offices that have depreciated below the acceptance limit will sooner or later need a renovation to be leased out. Without a renovation the vacancy period will be endless in these cases.

Atlas Arena and Centerpoint are both close to the train station, have a good visibility, a good façade appearance and an excellent parking ratio. Although they have good overall characteristics their construction years are over 25 years old and their interior has become outdated. Although East Park Tower has a public transport disadvantage the other characteristics are still strong. These three offices therefore seem to have the right characteristics to achieve a benefit by renovation for the owners. This is confirmed by the period needed to sign a first lease. All three offices were leased within eight
months which is significantly less than the estimated period based on the 5-year average take up. Paasheuvelweg 5 is a more problematic office as the façade appearance is weak and also the car accessibility and visibility are below average. Paasheuvelweg 5 took considerably longer than the other three offices to be leased. This could be expected based on the office characteristics. But nevertheless, two years is still far below the five-year average take up period in area six.

To conclude, there are only a small number of examples to test the influence of a renovation on the lease ability in Amsterdam Southeast but all cases confirm the scenario of renovation described at the end of the former chapter. When offices have poor results on interior and/or exterior appearance but good results on the other characteristics these offices will benefit from a renovation.

**Revenues**

As already mentioned, the valuation does not increase by a renovation; there is no capital growth. The renovation is carried out as a way to differentiate from direct competitors. Therefore the rental value is also kept at the same level. Increasing the rental value would dismiss the advantage of the renovation. The four projects above confirm this strategy.

The revenues will be in line with the ERV before the renovation. The expected revenues of the renovation are made in the shorter vacancy period.

**Expenditures**

The expenses of a renovation can be very different depending on the specific case. In case of only an interior renovation the costs will be significantly lower than in case where both interior and exterior are renovated. The costs are based on research Mackay (2008) did on renovation costs of vacant offices. The numbers in table 10 are the average of 12 projects. For each case will be analysed which parts will need to be renovated. However the ventilation, air conditioning and water installations ("W-installations") and electricity installations ("E-installations") will need a technical examination to determine whether or not they will need renovated. Therefore these installations have been taken into account in the bandwidth of the calculations.

### 7.1.3 Transformation to housing

**Vacancy period**

Based on the tight housing market in Amsterdam (Dynamis, 2010) the vacancy period after completion is expected to be zero because the houses will be pre-sold. However there will be a vacancy period for the procedural time needed to claim a building permit. Moreover

<table>
<thead>
<tr>
<th>Renovation part</th>
<th>€/m² GFA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation</td>
<td>16.0</td>
</tr>
<tr>
<td>Structure</td>
<td>64.1</td>
</tr>
<tr>
<td>Roof</td>
<td>17.2</td>
</tr>
<tr>
<td>Facade</td>
<td>151.6</td>
</tr>
<tr>
<td>Internal walls</td>
<td>121.9</td>
</tr>
<tr>
<td>Floors</td>
<td>36.9</td>
</tr>
<tr>
<td>Stairs and slopes</td>
<td>29.2</td>
</tr>
<tr>
<td>Ceiling</td>
<td>29.8</td>
</tr>
<tr>
<td>Elevator and transport</td>
<td>19.7</td>
</tr>
<tr>
<td>Terrain</td>
<td>1.7</td>
</tr>
<tr>
<td>W-installations</td>
<td>82.2</td>
</tr>
<tr>
<td>E-installations</td>
<td>44.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>615</strong></td>
</tr>
</tbody>
</table>

Table 10 - renovation costs (Mackay, 2008)

**Table 11 - demand side aspects for housing locations (Rouwers, 2003)**
there will be a construction period. The fastest track to obtain a building permit at the municipality of Amsterdam will take up to at least one year for an office transformation. (Twynstra Gudde, 2005) Afterwards the construction period will require at least another six months. Together the total vacancy period is at least 1.5 years.

Although the possibility of transformation to housing is approached from the supply side some references are made to research conducted by Rouwers (2003) in relation to demand characteristics of a housing location which are displayed in table 11.

Revenues

The possible revenues produced by a transformation to housing are based on the selling prices of houses in the close surroundings. The image on the right shows eight houses marked by orange dots for sale next to the office district which is marked with a black line. The prices and sizes have been extracted from the broker’s site funda.nl. The average square metre price for the eight houses is € 1,736/m². The lowest square metre price is € 1,626/m² and the highest € 1,902/m².

Expenditures

Mackay (2008) describes the costs involved with the transformation of vacant offices to houses in relation to 12 case studies.

<table>
<thead>
<tr>
<th>Case</th>
<th>Costs €/m² GFA</th>
<th>Deviation from average €/m² GFA</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilhelminastaete</td>
<td>786</td>
<td>24</td>
<td>high quality finishing</td>
</tr>
<tr>
<td>Churchill toren</td>
<td>662</td>
<td>-100</td>
<td>basic certification</td>
</tr>
<tr>
<td>PDV gebouw</td>
<td>539</td>
<td>-223</td>
<td>low budget approach, low quality finishing</td>
</tr>
<tr>
<td>Rijkwaterstaat</td>
<td>591</td>
<td>-171</td>
<td>basic certification</td>
</tr>
<tr>
<td>AKZO gebouw</td>
<td>538</td>
<td>-224</td>
<td>public space delivered in hull state</td>
</tr>
<tr>
<td>Bodelgrave</td>
<td>810</td>
<td>48</td>
<td>high quality finishing</td>
</tr>
<tr>
<td>Van Markenlaan</td>
<td>737</td>
<td>-25</td>
<td>basic certification</td>
</tr>
<tr>
<td>GAK kantoor</td>
<td>668</td>
<td>-94</td>
<td>low quality finishing</td>
</tr>
<tr>
<td>Putgraaf</td>
<td>734</td>
<td>-28</td>
<td>basic certification</td>
</tr>
<tr>
<td>Roos &amp; Doorn</td>
<td>1232</td>
<td>470</td>
<td>very complex implementation, high quality finishing</td>
</tr>
<tr>
<td>Labdik</td>
<td>1016</td>
<td>254</td>
<td>high quality finishing</td>
</tr>
<tr>
<td>Bakenmonde</td>
<td>936</td>
<td>174</td>
<td>high quality finishing, other functions</td>
</tr>
</tbody>
</table>

Table 12 - Transformation costs of 12 case studies and explanation for deviation from average (Mackay, 2008)

The average transformation costs, found by Mackay, are € 762/m². After analysing the 12 case studies a conclusion can be established in relation to the costs of Roos & Doorn. They are not in line with the other cases due to a complex situation, high quality finishing and adding space. Once Roos & Doorn is left out of consideration the maximum transformation costs are € 1016/m² GFA and the minimum transformation costs € 538/m² GFA. These costs are taken into consideration in relation to the bandwidth of the calculations.

Major costs for any transformation are related to the façade as well as to the interior walls and installations. In relation to project specific characteristics the finishing quality has great influence on the
transformation costs. Mackay has found this influence to be € 150/m². Another characteristic identified by Mackay is the shape of the floor plan. Square shapes have a positive influence on the transformation costs.

### 7.1.4 Transformation to hotel

#### Vacancy period

The vacancy period when transforming to a hotel is comparable to the transformation to housing. The hotel owner will start renting as soon as the transformation is completed. The same twelve month legal procedure will have to be completed. The construction period depends on the method used to build the hotel. Some concepts have proven that they can be installed relatively easy. Examples of these concepts are CitizenM, Qbic hotels or Holiday Inn express where pre-fabricated rooms are quickly installed against a relatively low price. The fact that pre-fabricated units are used makes the concept interesting for transformations and as Amsterdam Southeast is not a high end location, these low budget concepts suit the location. The installation of these units requires less work than traditional transformations and can be done in an estimated three months.

In relation to the characteristics that have a positive influence for a hotel development Lawson (1999) describes the characteristics in table 13 as being important. In the analysis of the case studies references will be made to these characteristics.

#### Revenues

The revenues from a hotel transformation rely on the contract that is used: a purchase contract, lease contract, management contract or franchise contract. The lease contract offers the least possible risk for the office owner. In this way the hotel owner acquires the right to use the premises for his hotel but will be paying a structured sum per square metre. (CB Richard Ellis, 2008) In this case a rent of € 125/m² is achievable. However in contradiction to the office market there are no incentives involved, which has a great positive effect on the result.

A brief calculation will validate the expected rental value of € 125/m² based on the following rates:

- The average room rate for the greater area of Amsterdam in 2008 was: € 92 (Horwath, 2009)
- The average occupancy rate for the greater area of Amsterdam in 2008 was: 75,3% (Horwath, 2009)
- The expectation is built on 96 rooms taking up 3100 m²
- The occupancy costs for hotels in relation to the total turnover should be 15,6%. (Horwath, 2009)

€ 92 * 75,3% * 96 rooms * 365 days = € 2,427,431
3100 m² * € 125 = 387,500
387,500 / 2,427,431 = 15.96% - occupancy costs in relation to turnover

The calculated occupancy costs in relation to the turnover only shows a small deviation from the expected percentage of Horwath (2009). A verification has showed the rent of € 125 does exactly fit in the expectations based on the occupancy costs in relation to the turnover.

**Expenditures**

For 96 rooms taking up 3100 square metres the total costs for the office owner are € 1,562,000. This is equal to € 503/m².10

### 7.1.5 Demolishment

**Vacancy period**

The time needed to demolish an office depends on variables like materials, location and legal issues. Based on reference projects such as the Bacinol building and the Architecture faculty in Delft, the GAK towers in Utrecht and the soap factory in Zwolle an average demolition period of four months will be taken into account.

**Revenues**

The revenues of demolition depend on the future function of the plot. Due to the large oversupply of office space the development of new office space will include too much risk. A short calculation will validate this statement:

A new construction could offer office space at a top rent in Amsterdam Southeast. The highest rent currently is € 195/m². However at least 30% of incentives are given resulting in a real rent of 195*0.7= € 136.5/m². Applying the expected best yield in Amsterdam Southeast of 7.5% (DTZ Zadelhoff, 2010) on this investment will result in a square metre price of 136.5/0.075 = € 1727/m². This amount is considerably lower than the top revenues of € 1901/m² which can be established with housing.

As a residential function the development will be according to the current standards and demands and will therefore be valued at the highest value of the reference projects. The commercial value of € 1,902/m² will be used.

In literature different standard rates for building costs can be found. Archidex (2010) estimates the costs at € 1400/m². Muller (2008) estimates the costs at € 1600/m². These standard rates will be used as the minimum and maximum values of the bandwidth. The average of € 1500/m² will be used as the expected standard building costs.

Based on the residual value method the revenues will be: 1,902-1,500= € 502/m².

**Expenditures**

---

10 Appendix 11.11 – Expected transformation costs
The costs of a demolition are estimated at € 80/m². (Muller, 2008)

### 7.1.6 Results

Based on the above analysis of the different strategies table 14 displays the standard rates that are adjusted for the different scenarios ranging from worst to best case.

The consolidation strategy has two variables: the exit yield and the incentive. The exit yield and incentive are determined based on an interview with a valuation expert, experience within UBS and competitor analyses. The deviation of 50 basis points ("BPS") is relatively high but is based on the uncertainty of the future tenant and economic developments. The incentive of 40% is currently a standard in the market in Amsterdam Southeast. Although the incentive structure is not very transparent a maximum of 50% and minimum of 30% can be described as the largest deviation.

The variables of the transformation to housing have already been discussed. The deviations are large. However the chance of these maximum deviations to occur is small. Moreover because higher refurbishment costs will usually have a positive influence on the quality of the building and therefore on the selling price.

The transformation to hotel consists of three variables: the refurbishment costs, the ERV and exit yield. Because of the limited information on these refurbishment costs a large deviation of 20% has been applied. The ERV has been adjusted in the different scenarios due to the lack of examples in the area. The exit yield is treated similar to the consolidation scenario.

After demolition the revenues are calculated with a residual value method. Therefore two variable will need to be determined: the building costs and sales proceeds. The building costs and deviations have been determined at € 1400 per square metre up to € 1600 square metre. The sales proceeds have been set at an expected € 1902 per square metre based on nearby houses currently for sale. The lowest sales prices for houses were recorded in Osdorp at € 1888 per square metre while the average house price in Amsterdam Southeast at this moment was € 2050 per square metre. (Dynamis, 2010)

As the new development would take place in an office area instead of a housing environment the revenues are not expected to exceed the average house price but at the same time a new development is not expected to sell far below the lowest house prices in Amsterdam, even though it is in an office.
environment. Therefore the lowest boundary has been set at € 1802 per square metre while the highest sale price has been set at € 2002 per square metre.

7.2 Selection of the cases
From a study of 104 offices, vacancy characteristics have been analysed. Out of the 104 offices there are 12 completely vacant. Although most offices have changed ownership over time they all have been vacant for at least two years and some up to nearly eight years. All 12 offices combined have 103,780 square metres of vacant office space. This is about 2/5 of the total supply in Amsterdam Southeast. The 12 selected offices will be discussed along with the strategies described in the former paragraph.

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Area Sq.m</th>
<th>Sq. m.</th>
<th>vacancy</th>
<th>vacancy (months)</th>
<th>Facade appearance (1-10)</th>
<th>Parking ratio (1/x)</th>
<th>Car accessibility (min. To highway)</th>
<th>Construction year</th>
<th>Train accessibility (min. To train)</th>
<th>Visibility (1-10)</th>
<th>Grade</th>
<th>Parking ratio (1/x)</th>
<th>Car accessibility (min. To highway)</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miro herikerbergweg 2</td>
<td>15,644</td>
<td>15,644</td>
<td>100%</td>
<td>26</td>
<td>114</td>
<td>3</td>
<td>2005</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arena towers</td>
<td>hoogoorddreef 66-68</td>
<td>16,774</td>
<td>16,774</td>
<td>100%</td>
<td>66</td>
<td>4</td>
<td>38</td>
<td>3</td>
<td>1987</td>
<td>64</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Margriet tower</td>
<td>haaksbergweg 75</td>
<td>8,852</td>
<td>8,852</td>
<td>100%</td>
<td>24</td>
<td>7</td>
<td>42</td>
<td>5</td>
<td>1998</td>
<td>23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marguerite</td>
<td>haaksbergweg 200</td>
<td>7,405</td>
<td>7,405</td>
<td>100%</td>
<td>40</td>
<td>7</td>
<td>42</td>
<td>5</td>
<td>1998</td>
<td>23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>De Lier</td>
<td>hoogthofweg 11</td>
<td>2,519</td>
<td>2,519</td>
<td>100%</td>
<td>54</td>
<td>3</td>
<td>27</td>
<td>5</td>
<td>1987</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>De Rijn</td>
<td>hoogthofweg 11</td>
<td>4,180</td>
<td>4,180</td>
<td>100%</td>
<td>52</td>
<td>3</td>
<td>45</td>
<td>5</td>
<td>1988</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father</td>
<td>hoogthofweg 15</td>
<td>1,981</td>
<td>1,981</td>
<td>100%</td>
<td>30</td>
<td>3</td>
<td>35</td>
<td>5</td>
<td>1987</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>De Vrouwen</td>
<td>hoogthofweg 19</td>
<td>13,150</td>
<td>13,155</td>
<td>100%</td>
<td>103</td>
<td>7</td>
<td>100</td>
<td>6</td>
<td>1988</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amsterdam</td>
<td>hoogthofweg 20</td>
<td>3,155</td>
<td>3,155</td>
<td>100%</td>
<td>50</td>
<td>5</td>
<td>72</td>
<td>5</td>
<td>1988</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amsterdam</td>
<td>hoogthofweg 21</td>
<td>1,500</td>
<td>1,500</td>
<td>100%</td>
<td>56</td>
<td>4</td>
<td>47</td>
<td>5</td>
<td>1985</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amsterdam</td>
<td>hoogthofweg 13</td>
<td>2,000</td>
<td>2,000</td>
<td>100%</td>
<td>63</td>
<td>4</td>
<td>58</td>
<td>4</td>
<td>1987</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amsterdam</td>
<td>hoogthofweg 8</td>
<td>26,655</td>
<td>26,655</td>
<td>100%</td>
<td>50</td>
<td>7</td>
<td>94</td>
<td>5</td>
<td>1988</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 15 – Details and characteristics of the case studies
Consolidation is among the strategies discussed above. However this strategy should be reconsidered for structural vacancy. Eight of the above offices show that they have been vacant for more than 36 months, indicating their structural vacancy. Besides this, structural vacancy can also be found in offices that are not completely vacant but these are not included in this table. After three consecutive years of vacancy, offices have proven to be of no interest in their current state. In addition they have depreciated three more years, compared to their original state.

When the vacancy period becomes larger the expected chance to lease out the office declines based on the historic performance. However a more realistic approach of the future behaviour can be established by also looking at the characteristics that have caused this vacancy and the characteristics that have a positive influence on the ability to lease out the office. Table 15 above indicates that many characteristics, marked in red, are below the average of office space in Amsterdam Southeast. Improving these characteristics will change the quality of the building and therewith the chance to lease out office space.

The analysis of the Amsterdam Southeast office market has proven that the next few years will show an increase in supply. In other words, competition will be growing and chances to find a tenant for the structural vacant offices will decrease. If opportunities for leasing out the vacant office space before the crisis were slim they have now become nil. Therefore pure consolidation is not an option for most of the vacant office space in table 15.

In relation to the state of the building and the rental value, the office will need renovating and a decrease in rental value to become part of the stock that has a chance of being leased out.
7.3 Discussion of the cases

7.3.1 Vogelstruys

<table>
<thead>
<tr>
<th>Vogelstruys - Hullenbergweg 278</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Construction year</strong></td>
</tr>
<tr>
<td><strong>Size</strong></td>
</tr>
<tr>
<td><strong>Offered space</strong></td>
</tr>
<tr>
<td><strong>Rent level</strong></td>
</tr>
<tr>
<td><strong>Parking ratio</strong></td>
</tr>
<tr>
<td><strong>Public transport</strong></td>
</tr>
<tr>
<td><strong>Visibility</strong></td>
</tr>
<tr>
<td><strong>Car accessibility</strong></td>
</tr>
<tr>
<td><strong>Facade appearance</strong></td>
</tr>
<tr>
<td><strong>Interior appearance</strong></td>
</tr>
<tr>
<td><strong>Flexibility</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Adress</th>
<th>Area</th>
<th>Sq.m</th>
<th>sqm vacancy</th>
<th>vacancy</th>
<th>vacancy (months)</th>
<th>facade appearance (1-10)</th>
<th>parking ratio (1/x)</th>
<th>Car accessibility min. to highway</th>
<th>Construction year</th>
<th>Facade accessibility min. to Metro</th>
<th>Visibility (1-10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vogelstruys</td>
<td>Hullenbergweg 300</td>
<td>5</td>
<td>7,400</td>
<td>7,405</td>
<td>100%</td>
<td>40</td>
<td>7</td>
<td>86</td>
<td>5</td>
<td>1998</td>
<td>23</td>
<td>2</td>
</tr>
</tbody>
</table>

Consolidation

Vogelstruys has been vacant for 40 months. Therefore it is indicated structurally vacant. This has been caused by a few significant problems:

- The rental value is high compared to the surrounding competitors\(^{11}\)
- The efficiency and flexibility are limited due to the layout. The building consists of two different parts and in one part the core is in the center of the floor as displayed in figure 41.
- Although the façade is in a good technical state the appearance is average
- The visibility is weak
- The train station is far away
- The interior is outdated

The competitor analysis shows many competing offices have a rental value of € 155/m² or below. To bring Vogelstruys in line with its competitors the rental value will have to be decreased to € 155/m².

The appearance of the façade is rated as average, mainly at the entrance area where many different and outdated colours are used. Additionally the building seems to consist of two different buildings due to the different materials and colours and the situation of the two parts. The façade can only be improved by some paintwork when large renovation costs are to be avoided.

Although in a good technical state, the interior is outdated and the old fit out is still in the building which will not be possible to re-use. The fit out will have to be removed and ceilings and floor will need a renovation.

\(^{11}\) Appendix 11.9 – Competitor analysis Vogelstruys
The lack of visibility and the relatively long distance to a train station are comparable with the competition and are therefore not such significant disadvantages. The flexibility and efficiency cannot be improved.

Vogelstruys will need to decrease the level of rent from €175/m² to €155/m² and carry out a renovation. The parts that need to be renovated and the involved costs are displayed in Table 16.

The costs for the paintworks will only be several thousand euro’s and are included in the amount of €239.2/m² for the renovation. The expected period to lease out the entire building after the works, is according to the expectations explained in the former paragraph: five years.

*Transformation to housing*

Vogelstruys could be considered as a possible transformation to housing as it is right next to the housing area on the opposite side of the railway and the floor size, with a depth of 14.4 meters, offers potential for a corridor lay out. In case of this transformation the standard transformation costs of €762/m² should be taken into account (Mackay, 2008) as well as the vacancy period of 1.5 years.

*Transformation to hotel*

Vogelstruys has an appearance that can suit a hotel function. Also the layout with a corridor and small size rooms on each side suits a hotel. The transformation costs are estimated at €503/m². With the possible re-use of the current fit out for a hotel the costs could prove to be lower. This depends on the concept and will therefore not be taken into account. The vacancy period for this transformation is estimated at one year and three months.

*Demolishment*

Demolishment seems unnecessary for a 12 year old building. Moreover because the building is in a good technical state and offers other opportunities.

<table>
<thead>
<tr>
<th>Renovation part</th>
<th>€/m² GFA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal walls</td>
<td>121.9</td>
</tr>
<tr>
<td>Floors</td>
<td>36.9</td>
</tr>
<tr>
<td>Stairs and slopes</td>
<td>29.2</td>
</tr>
<tr>
<td>Ceiling</td>
<td>29.8</td>
</tr>
<tr>
<td>Elevator and transport</td>
<td>19.7</td>
</tr>
<tr>
<td>Terrain</td>
<td>1.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>239.2</strong></td>
</tr>
</tbody>
</table>

Table 16 – renovation parts and costs
<table>
<thead>
<tr>
<th>Strategy</th>
<th>Expected</th>
<th>Worst case</th>
<th>Best case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consolidate</td>
<td>€5,174,685</td>
<td>€3,485,605</td>
<td>€7,054,142</td>
</tr>
<tr>
<td>Housing</td>
<td>€4,327,288</td>
<td>€2,239,845</td>
<td>€6,756,103</td>
</tr>
<tr>
<td>hotel</td>
<td>€5,674,450</td>
<td>€4,170,004</td>
<td>€7,273,211</td>
</tr>
<tr>
<td>Demolish</td>
<td>€2,160,777</td>
<td>€764,926</td>
<td>€3,556,627</td>
</tr>
</tbody>
</table>

Table 17 – Financial results of the different investment alternatives of Vogelstruys

Conclusion

The financial results point at a transformation to a hotel as most profitable option for Vogelstruys. The characteristics of Vogelstruys suit a transformation to a hotel. The fact that it is right on a metro station is not such a great advantage for an office function, as the metro only covers the city centre of Amsterdam. However tourist and backpackers visiting the centre of Amsterdam will have an easy and fast (15 min.) connection with the hotel. Also the parking ratio which is just below average will not be a disadvantage any more as this will be sufficient for a hotel function.

The interior is outdated as office function because the floor layout of office space has changed over the last years and tenants would like to define their own layout. (Mandema, 2000) The function of hotel however would allow the rooms to be used as hotel rooms making replacement unnecessary. This could be a great profit and would increase the feasibility.

The financial results in table 17 show that for Vogelstruys a hotel conversion will be the most profitable solution for the owner. The characteristics of Vogelstruys indicate that an office function is problematic to consolidate
### 7.3.2 Miro

#### Miro - Herikerbergweg

<table>
<thead>
<tr>
<th>Construction year</th>
<th>Size</th>
<th>Offered space</th>
<th>Rent level</th>
<th>Parking ratio</th>
<th>Public transport</th>
<th>Visibility</th>
<th>Car accessibility</th>
<th>Facade appearance</th>
<th>Interior appearance</th>
<th>Flexibility</th>
<th>Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>15,644 m²</td>
<td>15,644 m²</td>
<td>195 €/m²</td>
<td>1:115</td>
<td>Bijlmer station 6 minute walk</td>
<td>Visible from main road in front of office</td>
<td>Three minutes from highway</td>
<td>Excellent technical and architectural facade</td>
<td>Excellent interior finishing</td>
<td>Unit size fully adjustable on 1.8 m windowgrid</td>
<td>Entirely open floor plan with few columns</td>
</tr>
</tbody>
</table>

**Consolidation**

Miro has been vacant since construction was completed in 2007. Miro will officially become structurally vacant in January 2011 if no leases will be signed. The vacancy is hard to understand in relation to the location and building characteristics. The only negative point is the parking ratio. The problem is mainly caused by the strong competition in the direct surroundings. Atlas arena, which is next to Miro, offers space at a much cheaper price with a better parking ratio for instance. Additionally there are seven similar offices in direct proximity of which 12,000 square metres of vacant office space. Currently another office with the exact same characteristics is being build of 26,000 square metres. When this office is completed at the end of 2011 the vacancy in sub-area 2 doubles.

However over the last five years, 35,000 square metres have been leased in this sub-area in offices with the same characteristics for the same price. Although the competition is though, Miro offers the same product. A rent reduction to € 185 will be applied to stimulate the demand, however no renovation is required.

**Transformation to housing**

Miro is not situated in a diversified area. All surrounding buildings consist of only offices. It is therefore not a preferred location for housing. (Rouwers, 2003)

Although the floor layout with a depth of 14.4 metres is suitable for a transformation, the view from the houses will be average especially from the courtyard side. Moreover does the façade not have easy possibilities to connect separation walls. A transformation to housing will include some significant problems.

---

12 Appendix 11.10 – Competitor analysis Miro
Transformation to hotel

A transformation to a hotel is another opportunity for Miro. Hotels benefit from the presence of offices (Lawson, 1999) while housing needs more diversification. (Rouwers, 2003) Hotels on the Southaxis for instance have the highest occupancy rates in Amsterdam. Technically, the office will face similar problems with the façade as explained in the transformation to housing. Additionally the complete layout will have to be installed while some offices offer the opportunity to use the current layout.

Demolishment

Miro is the youngest building in Amsterdam Southeast and is an office with overall good characteristics. Although vacant, it holds a considerable value in relation to the state of the building and characteristics it offers. Demolishment is therefore not a realistic alternative.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Expected</th>
<th>Worst case</th>
<th>Best case</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Consolidate</td>
<td>€ 21,384,420</td>
<td>€ 17,699,639</td>
<td>€ 27,990,859</td>
</tr>
<tr>
<td>2. Housing</td>
<td>€ 9,065,064</td>
<td>€ 4,717,262</td>
<td>€ 14,127,995</td>
</tr>
<tr>
<td>3. Hotel</td>
<td>€ 12,672,636</td>
<td>€ 9,573,629</td>
<td>€ 15,951,186</td>
</tr>
<tr>
<td>4. Demolish</td>
<td>€ 4,526,526</td>
<td>€ 1,602,413</td>
<td>€ 7,450,638</td>
</tr>
</tbody>
</table>

Table 18 – Financial results of the different investment alternatives for Miro

Conclusion

Financially there is great gap between consolidation and the three other alternatives. This is mainly caused by the fact that it is a new building and has hardly depreciated technically. Renovations will not be able to result in great improvements to the office. The vacancy is expected to be solved in four years time without any investments. The other alternatives will therefore not only be a greater risk but also result in a less profitable outcome due to the additional investments.

Besides the parking all the characteristics are above average. The train station is nearby, the façade has an excellent appearance and so does the interior. It is expected that Miro will be leased out in the future.

The financial results in table 18 show that for Miro consolidation will be financially the most profitable solution for the owner.

Based on the office characteristics the office can be consolidated as office space perspectives.
7.3.3 Arena Towers

Consolidation

Arena towers has been vacant for over five years now. The interior is outdated and did not have any maintenance for five years. The façade is architecturally average. However the main problem is the technical state. The façade seems to have had no maintenance. Windows are missing and there is rust on the frames.

Arena towers faces another significant problem which is its efficiency. The shape of the building limits the layout flexibility and because the building is split up in two parts the size of the floors is small which has a negative effect on the efficiency.

Consolidating the building as office will necessitate a large renovation as displayed in table 19. But even after a renovation it is unsure whether the building will find interest from tenants. In the worst case the two floors will have to be combined to consolidate the building as an office which will significantly increase the renovation costs. Additionally the take up numbers in this area are very low; resulting in approximately eight years that will be needed to fill up the building afterwards.

Transformation to housing

Arena Towers is in the centre of all different sorts of facilities and offers a good location for a residential tower according to the characteristics described by Rouwers (2003).

The construction of both towers consists of concrete columns and for the stability two additional load bearing cores. In a longitudinal direction the columns are placed in a grid of 5.4 metres. In a transverse direction the columns are placed in a grid of 5.4 and 7.2 metres resulting in offices of 5.4 meters and a corridor of 1.8 metres. The grid of the façade of 0.9 metres offers much flexibility. (Ontwikkelingsbedrijf Gemeente Amsterdam, 2008) These construction characteristics make it suitable to transform the floor layout to a housing layout with a corridor. In this case five apartments per floor of 90 m² could be constructed, resulting in a total of 90 apartments.
Transformation to hotel

The visibility of the office and the public transport connection are above average which are positive characteristics for a hotel (Lawson, 1999). On top of this the location and building comply with many other characteristics described by Lawson (1999) in table 13. However the façade is in a bad technical state and is also not representative for a hotel; it will have to be replaced. This puts negative pressure on the feasibility. Also the size of the tower is problematic as it could hold approximately 600 hotel rooms. It will be doubtful whether there is such a large demand on a single location.

Demolishment

Arena towers fits perfectly in the scenario of demolition as described in the former chapter. The office has great location characteristics but all the building characteristics are below average: the layout flexibility, the façade appearance, the interior appearance and the construction year.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Expected</th>
<th>Worst case</th>
<th>Best case</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Consolidate</td>
<td>€9,318,657</td>
<td>€6,225,127</td>
<td>€14,578,830</td>
</tr>
<tr>
<td>2. Housing</td>
<td>€10,521,385</td>
<td>€5,491,480</td>
<td>€14,606,183</td>
</tr>
<tr>
<td>3. Hotel</td>
<td>€10,563,436</td>
<td>€6,873,312</td>
<td>€14,467,350</td>
</tr>
<tr>
<td>4. Demolish</td>
<td>€4,035,662</td>
<td>€994,463</td>
<td>€7,076,862</td>
</tr>
</tbody>
</table>

Table 20 – Financial results of the different investment alternative for Arena Towers

![Graphical display of the results of the investment alternative for Arena Towers](image)

Conclusion

The characteristics of the location offer good opportunities. However the building is in a bad technical state and also the layout is a disadvantage. To improve all these characteristics will require a large investment. The investments that have to be made also result in consolidation not being the most profitable solution for Arena Towers. A transformation to housing or hotel will fit in the current floor layout and is therefore a great alternative based on the characteristics. Financially a transformation to hotel has the best perspective.

The financial results in table 20 show that for Arena Towers transformation to hotel will be the most profitable solution for the owner.

Based on the characteristics Arena Towers will be very problematic to consolidate as office space.
7.3.4 Holendrecht Centre

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Area</th>
<th>Sq. m</th>
<th>sqm vacancy</th>
<th>vacancy</th>
<th>vacancy (months)</th>
<th>Parking ratio</th>
<th>Car accessibility</th>
<th>Construction year</th>
<th>Terrain accessibility</th>
<th>Visibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holendrecht centre</td>
<td>Paalbergweg 9</td>
<td>6</td>
<td>26.655</td>
<td>26.655</td>
<td>100%</td>
<td>50</td>
<td>1:40</td>
<td>5 minutes from highway</td>
<td>1981</td>
<td>5%</td>
<td>6.3</td>
</tr>
</tbody>
</table>

Consolidation

Holendrecht Centre is situated in the worst area of Amsterdam Southeast when it comes to the 5-year average take up; just over 3,647 square metres while the supply is 64,123 square metres. Leasing out an office is expected to take 17.6 years on average based on historic take up figures.

Nevertheless Holendrecht Centre is one of the few buildings in this sub-area with a visibility that is above average and the accessibility is far above average. The parking ratio of 1 on 40 is the best in the whole of Amsterdam Southeast and the façade is above average. Therefore the probability of the best case scenario of the financial results in table 22 be will higher than the worst case scenario.

Holendrecht Centre consists of two buildings, each with a core in the center. The core contains: entrance, pantries, toilets, elevators and reception. The core also leads to the different office wings. The office wings are 14.4 metres wide, divided by a row of columns. Depending on which side of the columns the hallway is, the office will have a depth of 7.2 or 5.4 metres. On the ground and first floor the offices are much wider and an open floor plan can be applied.

The technical state of the building is good. The concrete façade elements and columns are in a good state. However due to the age of the building it does not comply with the latest insulation standards. The columns in the façade are directly visible inside creating significant cold-bridges. Also the window frames will need additional insulation. The interior walls are still in the building but will need to be replaced. A consolidation of the office will require a large renovation of the parts displayed in table 21.

Transformation to housing

Holendrecht centre has become outdated and will need a large renovation to be consolidated. Afterwards there is still a great vacancy period expected. A transformation can therefore potentially be an advantage. The first two floors are large floor areas with only little light entering the centre. The center area will

<table>
<thead>
<tr>
<th>Renovation part</th>
<th>€/m² GFA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure</td>
<td>64.1</td>
</tr>
<tr>
<td>Roof</td>
<td>17.2</td>
</tr>
<tr>
<td>Internal walls</td>
<td>121.9</td>
</tr>
<tr>
<td>Floors</td>
<td>36.9</td>
</tr>
<tr>
<td>Stairs and slopes</td>
<td>29.2</td>
</tr>
<tr>
<td>Ceiling</td>
<td>29.8</td>
</tr>
<tr>
<td>Elevator and transport</td>
<td>19.7</td>
</tr>
<tr>
<td>Terrain</td>
<td>1.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>320.5</strong></td>
</tr>
</tbody>
</table>

Table 21 - Renovation parts and costs
therefore need a different function from housing. Storage area could be a solution. The upper floors offer a corridor layout with 5.4 metre and 7.2 metre on each side.

The situation of the office is close to the housing on the other side of the train tracks and on the border of the office area. Moreover the office is surrounded by water and in a relatively green area, increasing the quality of living. (Rouwers, 2003)

**Transformation to hotel**

A transformation to a hotel could work in combination with the AMC hospital. However the building is too large for just one hotel. Because it will be more profitable than an office function it can be combined with a housing function.

**Demolishment**

Although the building is one of the oldest in Amsterdam Southeast it is still in a good condition. The building as a whole, shows many similarities with Atlas Arena which has been turned into a successful project. Arena Towers started in 2006 as nearly completely vacant while in 2010 it is nearly fully leased. However Atlas Arena is in a location with better characteristics. As an office function Holendrecht Centre faces a tough market because of the huge supply/take up ratio and many other competitors offering higher quality office space. Demolishment of Holendrecht Centre could be an option if no other opportunities remain next to the office function.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Expected</th>
<th>Worst case</th>
<th>Best case</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Housing</td>
<td>€15,445,492</td>
<td>€7,989,384</td>
<td>€24,120,072</td>
</tr>
<tr>
<td>3. Hotel</td>
<td>€21,592,246</td>
<td>€16,312,010</td>
<td>€29,132,893</td>
</tr>
<tr>
<td>4. Demolish</td>
<td>€7,712,512</td>
<td>€2,730,269</td>
<td>€12,694,755</td>
</tr>
</tbody>
</table>

Table 22 - The financial results of the different investment alternatives for Holendrecht Centre

**Conclusion**

Holendrecht Centre has some good office characteristics but has become outdated and will need a large renovation. However the market in this area is very though and even after a renovation a long vacancy period is expected. This makes the office function not the most profitable solution. A transformation to
hotel will be the most profitable solution. However in this scenario the building is expected to be completely leased to a hotel owner. This is unrealistic as the building is too large for one hotel. Partly the building could be leased out as hotel space. The AMC hospital next to Holendrecht could offer potential visitors. A transformation to housing seems more realistic. The volume of the building is positive in this situation as it will be lively due to the many people, even though it is in an office district. Financially housing is still preferred over the office function and therefore offers a good opportunity.

The final results in table 22 show that for Holendrecht Centre transformation to a hotel will be the most profitable solution for the owner

The characteristics of Holendrecht Centre show that an office function still has opportunities
7.3.5 Margriet Toren

<table>
<thead>
<tr>
<th>Margriet toren - Haaksbergweg 75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction year</td>
</tr>
<tr>
<td>Size (m²)</td>
</tr>
<tr>
<td>Offered space (m²)</td>
</tr>
<tr>
<td>Rent level (€/m²)</td>
</tr>
<tr>
<td>Parking ratio</td>
</tr>
<tr>
<td>Public transport</td>
</tr>
<tr>
<td>Visibility</td>
</tr>
<tr>
<td>Car accessibility</td>
</tr>
<tr>
<td>Facade appearance</td>
</tr>
<tr>
<td>Interior appearance</td>
</tr>
<tr>
<td>Flexibility</td>
</tr>
<tr>
<td>Efficiency</td>
</tr>
<tr>
<td><strong>Facade appearance (1-10)</strong></td>
</tr>
<tr>
<td><strong>Parking ratio (1/x)</strong></td>
</tr>
<tr>
<td><strong>Car accessibility (min. To highway)</strong></td>
</tr>
<tr>
<td><strong>Construction year</strong></td>
</tr>
<tr>
<td><strong>Visibility (1-10)</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Area (m²)</th>
<th>sq.m vacancy</th>
<th>vacancy</th>
<th>vacancy (months)</th>
<th>Facade appearance (1-10)</th>
<th>Parking ratio (1/x)</th>
<th>Car accessibility (min. To highway)</th>
<th>Construction year</th>
<th>Visibility (1-10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Margriet</td>
<td>Haaksbergweg 75</td>
<td>9104</td>
<td>8532</td>
<td>8532</td>
<td>100%</td>
<td>7</td>
<td>501</td>
<td>7</td>
<td>1993</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 23 - Renovation parts and costs

<table>
<thead>
<tr>
<th>Renovation part</th>
<th>€/m² GFA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floors</td>
<td>36.9</td>
</tr>
<tr>
<td>Stairs and slopes</td>
<td>29.2</td>
</tr>
<tr>
<td>Ceiling</td>
<td>29.8</td>
</tr>
<tr>
<td>Terrain</td>
<td>1.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>97.6</strong></td>
</tr>
</tbody>
</table>

Consolidation

Consolidation in this area is a great risk due to the estimated time to lease out the building of nearly eight years. Additionally this year, Price Waterhouse Coopers is leaving de Entrée 201, next to the Margriet Toren, and another 17,000 square metres will come onto the market. This will only increase the time needed to lease out the building. The flexibility and efficiency are main problems because the building is split up in two small floors of about 280 square metres per level.

The Margriet Toren has a façade in a good technical state and the interior will only need a small renovation. The office is only 15 years old and the materials are technically up to date. All partitioning walls have already been removed with open floor plans as a result. The works and costs as displayed in table 23 will have to be taken into account.

Transformation to housing

The façade of the Margriet Toren is in a good state and could suit other functions. Additionally all the location characteristics but parking are above average. The disadvantages of the building are the small floors and little flexibility. However when transforming the office these characteristics will not be of influence as the unit size of houses or hotel rooms is much smaller.

With a depth of 14.4 and a central core the office has good potential to transform to a corridor layout with apartments on each side.

Transformation to hotel

Transforming the Margriet Toren into a hotel will also solve the flexibility problem. Additionally the façade will not need a large transformation which has a positive effect on the expenses.
Demolishment

The office is still in a good state and has good overall characteristic. There is no clear incentive to demolish the Margriet Toren.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Expected</th>
<th>Worst case</th>
<th>Best case</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Consolidate</td>
<td>€ 8,585,188</td>
<td>€ 6,952,963</td>
<td>€ 11,371,937</td>
</tr>
<tr>
<td>2. Housing</td>
<td>€ 5,139,822</td>
<td>€ 2,695,463</td>
<td>€ 7,972,952</td>
</tr>
<tr>
<td>3. Hotel</td>
<td>€ 6,917,725</td>
<td>€ 5,083,654</td>
<td>€ 8,866,777</td>
</tr>
<tr>
<td>4. Demolish</td>
<td>€ 1,972,336</td>
<td>€ 486,021</td>
<td>€ 3,458,651</td>
</tr>
</tbody>
</table>

Table 24 - The results of the different investment alternatives for Margriet Toren

The financial results in table 24 show that for Margriet Toren consolidation will be the most profitable solution for the owner. The characteristics of the Margriet Toren show consolidation is a good option but housing or hotel would offer a great alternative as soon as it does not function as office space any more.

Conclusion

The Margriet toren has been constructed in 1996 and is still in a good condition. Only the interior will need a small scale renovation. The location of the office offers many opportunities due to its diversity. Nevertheless take up of office space takes on average eight years because of the large oversupply and though competition of bordering sub-areas. Even though it will take eight years, consolidation will still be the most profitable solution. This is mainly because the office is still in a good condition and will therefore only need a little investment to be consolidated. In case of a transformation the large investment puts pressure on the feasibility.
7.3.6 Saturnus

Saturnus - Hogehilweg 5

<table>
<thead>
<tr>
<th>Name</th>
<th>Adress</th>
<th>Area</th>
<th>Sq.m.</th>
<th>sqm vacancy</th>
<th>vacancy</th>
<th>vacancy (months)</th>
<th>Facade appearance (1-10)</th>
<th>Parking ratio (1-10)</th>
<th>Car accessibility (min. to highway)</th>
<th>Construction year</th>
<th>Train accessibility (min. to train)</th>
<th>Visibility (1-10)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saturnus</td>
<td>Hogehilweg 5</td>
<td>4</td>
<td>3,530</td>
<td>3,530</td>
<td>100%</td>
<td>54</td>
<td>2</td>
<td>7</td>
<td>4</td>
<td>1981</td>
<td>1</td>
<td>1</td>
<td>472.1</td>
</tr>
</tbody>
</table>

Consolidation

Saturnus has been vacant for 54 months. The long vacancy period already indicates that in the current state the chance of finding a new tenant are nil. The façade is outdated and in a poor technical state. In addition the interior is outdated. The internal walls will need to be removed. Technically there are many issues. Table 25 describes the works that need to be completed and their costs.

All in all, the office will need a large renovation to become up to date again. In addition the rent price will need to decrease to the expected rental value in this area of € 140 as described in paragraph 7.1.1.

Transformation to housing

The characteristics defining good office space are all below average. The option of transformation becomes therefore interesting.

The office is relatively small and could be transformed into one apartment block. In this case four or five apartments per floor can be established.

Transformation to hotel

When transforming the office into a hotel a few problems arise. The façade is not representative for a hotel and the public transport is below average. Moreover the visibility is bad, so advertising on the building will be ineffective. For a hotel transformation the façade will have to be replaced like with a transformation to housing. This generates extra costs compared to some other buildings that are more suitable for a hotel transformation.
Demolishment

Saturnus scores below average on all the investigated characteristics that influence vacancy. Demolishment can therefore be a serious option although the location characteristics will not change after a new construction.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Expected</th>
<th>Worst case</th>
<th>Best case</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Consolidate</td>
<td>€ 1,537,142</td>
<td>€ 885,114</td>
<td>€ 2,392,703</td>
</tr>
<tr>
<td>2. Housing</td>
<td>€ 2,045,492</td>
<td>€ 1,058,664</td>
<td>€ 3,193,686</td>
</tr>
<tr>
<td>3. Hotel</td>
<td>€ 1,648,304</td>
<td>€ 952,273</td>
<td>€ 2,387,187</td>
</tr>
<tr>
<td>4. Demolish</td>
<td>€ 1,351,297</td>
<td>€ 691,484</td>
<td>€ 1,681,204</td>
</tr>
</tbody>
</table>

Table 26 – Results of the different investment alternative for Saturnus

![Graphical display of the results of the investment alternative for Saturnus](image)

Conclusion

Saturnus is an outdated office which has been vacant for over four years. To bring it in line with its competitors Saturnus will need a large and expensive renovation. Additionally the rental value will have to be decreased. But even with these measurements the time to lease out the entire office will take approximately five years as explained in paragraph 7.1.1. Due to the great expenses that will have to be made to consolidate, alternative options become more attractive. Transforming to housing will be the most profitable solution for Saturnus. The important characteristics to lease out office space in Amsterdam Southeast are all below average. A transformation to a different function is therefore a serious option.

The financial results in table 26 show that for Saturnus transformation to housing will be the most profitable solution for the owner.
The characteristics of the office show that a consolidation as office function is very problematic.
7.3.7 Texas

Texas, located at Hogehilweg 19, is an office building with a size of 2915 m². The offered space is also 2915 m². The rent level is 125 €/m². The building was constructed in 1987, and it offers parking for 1:65. The visibility from the building is only visible from within the sub-area. The car accessibility time from the highway is 5 minutes. The facade appearance is technically bad, and the architecture is weak. The interior appearance is outdated and in bad technical state.

The characteristics of Texas are all far below average except the parking ratio. To become part of the stock that has a chance to be leased out, the office will require many renovation works as displayed in Table 27.

### Consolidation

Texas is a 23-year-old office. The exterior as well as the interior have become outdated. On top of this, a part of the building has been considerably damaged by a fire. The state of the building is very poor. The characteristics of the office are all far below average except the parking ratio.

### Transformation to housing

Texas is build up of a 5.4 metre grid. Around the core 10.8 metres remain. After deducting a hallway of 1.80 metres the offices have a depth of 9.0 metres around the core. The core is not a perfect square which causes one side to have a depth of 7.80 metres.

Although the depth of 9.0 metres can result in apartments with little daylight, the layout has a good possibility to create four or five apartments around the core per level. The square shape has a positive influence on the transformation costs (Mackay, 2008) and allows apartments to cover two façades at corners which will increase the interior daylight.

### Transformation to hotel

The floor layout is problematic to create hotel rooms. The rooms will approximately be three metres wide which result in narrow and deep rooms. In addition, the location is not optimal as the public transport connection is bad as well as the visibility.
Demolishment

Because Texas is in a very bad state demolition is an option. However as an office function the location characteristics do not offer much potential. Demolishment will therefore mean a different function will be rebuild. In this case transformation can offer a cheaper solution. Demolishment will therefore only be an option if transformation is found to be technically impossible.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Expected</th>
<th>Worst case</th>
<th>Best case</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Consolidation</td>
<td>€ 1,078,783</td>
<td>€ 685,911</td>
<td>€ 1,559,671</td>
</tr>
<tr>
<td>2. Transformation housing</td>
<td>€ 1,689,124</td>
<td>€ 1,018,734</td>
<td>€ 2,492,768</td>
</tr>
<tr>
<td>3. Transformation hotel</td>
<td>€ 1,371,187</td>
<td>€ 915,976</td>
<td>€ 1,831,835</td>
</tr>
<tr>
<td>4. Demolishment</td>
<td>€ 571,013</td>
<td>€ 26,153</td>
<td>€ 1,115,873</td>
</tr>
</tbody>
</table>

Table 28 – Results of the different investment alternatives of Texas

![Graphical display of the results of the investment alternative for Texas](image)

Figure 50 - Graphical display of the results of the investment alternative for Texas

Conclusion

Texas is in a bad technical state and the characteristics for a successful office building are far below average. Consolidation will not only require a large investment but afterwards the office will still face significant problems with its visibility, accessibility and flexibility.

Because the façade will need to be replaced, a transformation to hotel will not be the most feasible solution and additionally the layout is problematic for a hotel concept.

The housing alternative is the best solution from a financial point of view. Also the characteristics point at a different function as being more appropriate at this location.

In case a transformation turns out to be technically too problematic the same result can be established by demolition and rebuild. However financially this will not be the most profitable solution unless the intensity of the building program can be increased.

The financial results in table 28 show that for Texas a transformation to housing will be the most profitable solution for the owner.

The characteristics of Texas show that consolidation as office function is very problematic.
7.3.8 Paasheuvelweg 8

Consolidation

Consolidating Paasheuvelweg 8 requires a large renovation. The façade shows technical problems and the interior has become outdated. Renovation works as displayed in table 29 will need to be completed.

Consolidating will still include a large risk because of the low 5-year average take up. It is expected to take 17.4 years to lease out the entire office based on historic take up figures. Executing the renovation is expensive and increases the risk because of the invested capital expenditures.

Transformation to housing

The office is situated right in the centre of the sub-area which only consists of offices. A housing function of this small scale is not expected to get much interest. Additionally the floor layout is very problematic. Because the entrance and transport area are located at the façade there is a large central area with only little daylight. The depth is unsuitable for a housing function.

Transformation to hotel

A transformation to hotel faces similar problems in relation to the floor layout as the transformation to housing. The location is also problematic due to its visibility and public transport accessibility. Also the potential number of visitors at this location is low.

Demolishment

Demolishment is the last alternative after the other three alternatives have found to be unsuitable. However after demolishment, reconstructing a new development is problematic as the location offers only little potential.
## Conclusion

Paasheuvelweg 8 is facing a problematic future. As an office function it is expected to result just above breakeven from now onwards. The financial results of a transformation to hotel or houses is much brighter. However the building and location characteristics do not suit a transformation.

The financial results in table 30 show that for Paasheuvelweg 8 a transformation to hotel will be the most profitable solution for the owner. The characteristics of Paasheuvelweg show consolidating the office function will be very problematic.

### Table 30 – Results of the different investment alternatives for Paasheuvelweg 8

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Expected</th>
<th>Worst case</th>
<th>Best case</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Consolidate</td>
<td>€ 416,596</td>
<td>€ 315,186</td>
<td>€ 766,129</td>
</tr>
<tr>
<td>2. Housing</td>
<td>€ 1,506,595</td>
<td>€ 776,047</td>
<td>€ 2,355,995</td>
</tr>
<tr>
<td>3. Hotel</td>
<td>€ 2,103,736</td>
<td>€ 1,588,687</td>
<td>€ 2,648,624</td>
</tr>
<tr>
<td>4. Demolish</td>
<td>€ 332,543</td>
<td>-€ 91,932</td>
<td>€ 757,018</td>
</tr>
</tbody>
</table>

Figure 51 - Graphical display of the results of the investment alternative for Paasheuvelweg 8
7.4 Case study results

Eight cases have been selected to analyse out of 12 completely vacant offices in Amsterdam Southeast. Because these offices are completely vacant they are the most problematic offices for the owners. They are therefore expected to have the highest potential of improvement.

Only Miro and Margriet Toren are expected to have the highest return when consolidation as office space will be carried out. Miro will not require any adjustments and Margriet Toren will need an internal renovation. Although the Margriet Toren has potential to be transformed in the future the owners of both the Margriet Toren and Miro face an easy decision. A change of function in the near future is not a realistic option.

Transforming Vogelstruys into a hotel only has a financial advantage of €500,000 compared to consolidating the building as office space. However the characteristics as office function are very problematic for Vogelstruys. Although the office needs a renovation it is in a reasonable state. Nevertheless there has hardly been any interest in the building over the last three years. As hotel function the characteristics offer more potential. The public transport to the touristic centre of Amsterdam is excellent, the parking ratio is of less importance and the flexibility is no disadvantage any more. In addition there is also a financial advantage.

It is important to realise that for Vogelstruys there are too many poor characteristics that cannot be improved. A transformation will offer a structural improvement while investing in consolidation will include a similar risk while the main problems cannot be solved.

Paasheuvelweg 8 faces a different problem. The area offers hardly any opportunities. The hotel function is financially the most interesting solution. However the characteristics of the area do also not support this function. On the short term the building should be offered at a real bottom market price to be able to attract a possible tenant; whatever function is chosen. On the long term the entire area below the A9 will need diversification and upgrading. This is a responsibility for the municipality because the owners of individual buildings will not have sufficient influence to establish a result on this scale. The municipality could for instance stimulate the development of other functions in the area and upgrade public facilities like the train station.

Holendrecht Centre has a greater opportunity of success after transformation. The large scale of the building and location in the sub-area make it possible to create a suitable living environment. Moreover because the two buildings are surrounded with relatively a lot of green and on the other side of the railway the housing area borders the plot. It is close to the train station and it has a good façade appearance.

Figure 52 – Holendrecht Centre and close surroundings
The sub-area has experienced dramatic take up figures over the last five years and the vacancy is a large problem. Many new developed offices face high vacancy rates in the sub-area while offering better office characteristics. Especially the flexibility, efficiency and interior appearance are problematic. The office function is therefore expected to be problematic to consolidate. However also the housing and hotel function have a high risk profile due to the problematic area characteristics. To decrease the risk a diversification with a mixture of functions could be a solution. Moreover because technically not all levels allow a housing or hotel function while an office function on these levels could still work. The layout of the two buildings offer a good possibility to apply such a mixture.

Arena Towers is located in a diversified area with good location characteristics. However the office function will not be able to consolidate. Even after large investments the chance on success will remain slim. Both the housing and hotel alternative offer better financial solutions. But also the characteristics of the building will suit these alternative functions better because of the problematic layout as office function. The small unit size of houses or hotel rooms offers a more efficient fit out.

Financially a hotel offers the best alternative. Looking at the demand characteristics of housing and hotel functions both alternatives offer potential in this case. The area has a representative image with different functions and a lively character. Many facilities can be found in the close surroundings and the accessibility with public transport is excellent. The accessibility by car of four minutes from the highway is also a positive point. Taking all the considerations into account the transformation potential of Arena Towers is very high; either to hotel or housing.

Texas and Saturnus both prove to be financially most feasible to transform to housing. In addition the office function is very problematic to consolidate. Even after a large investment consolidation will remain problematic due to several characteristics that cannot be improved.

A main problem for a possible housing function is that a transformation of a single office does not have a high chance of success. It would be surrounded by a monotonous office area. However the scale of this area and surrounding facilities offer an opportunity for the owners to create an environment in which housing could work. Facilities such as a cinema, Heineken Music hall, restaurant, shopping mall and the Amsterdam Arena are accessible by a several minute walk. As office function the facilities are either not of interest or the distance is just too far for a lunch break while for a housing function they offer additional quality. Some other qualities for a housing function are:

- The proximity of a metro line which connects the area in 15 minutes with the centre of Amsterdam.
- The bordering housing area on the other side of the railway
- 4th largest train station of the Netherlands in ten minutes walk
- Large amount of green and water in the close surroundings

Five offices are completely vacant in the area and many others show a high percentage of vacancy. The area is depreciating. Façades of offices have burned down, squatters are camping in offices, windows are cracked, panels of façades are loose and rusty and the gardening is overdue. The increasing vacancy which is currently taking place in this area should trigger the owners to initiate a change. A collaborative attitude of the municipality in the legal process and in the physical improvement of public space could establish a successful public-private partnership. A starting point could be the top seven offices in figure 54 of which three are completely vacant and the other four for a large part. This will not only result in a profitable outcome for the owners but will also be a great improvement for the Amsterdam Southeast area. A successful transformation of the nearby located Arena Towers will take away some uncertainties and could trigger the start of the transformation of this area.

Out of the eight offices which have been discussed above 18,759 square metres of office space is expected to be transformable into housing. 22,939 square metres is expected to be transformable into a hotel function. In total 42,938 square metres are therefore expected to have good opportunities to be transformed.

Out of the other four completely vacant offices, Hogehilweg 22 and La Reine have similar characteristics as the other offices on the Hogehilweg and are therefore also expected to be possible to transform to housing. In this case the total office space that could be transformed will be 59,278 square metres. Paasheuvelweg 8 and 31 could increase this number but will not be taken into account due to the uncertainty. Prismarium is currently renovated to consolidate as office space.
8 Conclusion

The developments at the start of the millennium have put the office market of Amsterdam Southeast in a tough situation. The developments have been a reaction to the low finance costs at that time. Other market factors also played a part in creating the large oversupply. The competitive position has become worse due to other office districts that have been developed in Amsterdam and office space is being used more effectively which decreases the need of office space.

As at January 2010 the total supply of office space in Amsterdam Southeast is 258,000 square metres; 20 percent of the total stock. The take up of office space in Amsterdam Southeast over 2009 was 41,000 square metres. The average office space added to the supply in Amsterdam Southeast is 55,600 square metres. For next year the take up is again expected to be lower than the addition to the supply, resulting in more vacant office space.

As soon as the leasing market has recovered the supply should able to decrease again. However some large tenants are leaving Amsterdam Southeast in the next few years and a new development is taking place. Therefore the supply of office space in Amsterdam Southeast is not expected to fall below 250,000 square metres in the next few years.

Six characteristics have proven to have significant influence on the office vacancy in Amsterdam Southeast;

1. Car accessibility
2. Proximity of train station
3. Visibility of the office
4. Construction year
5. Parking ratio
6. Façade appearance

In addition, layout flexibility, efficiency and interior appearance can be added as important factors. (Remoy, Koppels, & Jonge, 2009) In cases where only the façade and interior appearance have poor results a renovation is expected to have a positive effect on the ability to lease out the office. In cases where the overall characteristics have poor results a transformation could offer the best solution.

The vacant office space in Amsterdam Southeast needs a reconsideration before defining a strategy to lease it out. There are three important factors that need to be reviewed:

1. A realistic estimated vacancy period of the office. The 5-year average take up of the sub-area can offer a credible estimation combined with the competitiveness of the office.
2. The rental value of the property. A competitor analysis will give an expectation of the ERV. However when comparing to other vacant offices, the fact that these offices might be overprices should be considered.
3. The quality of the office; at some point the quality does not meet the acceptance limit any more as described in the “zaagtand model”. In this case the office will need a renovation.
In cases where these required actions become too expensive, transformation could offer a solution. Transformation to housing has not been carried out in Amsterdam Southeast yet. Without a reference project the risks are hard to predict. The main problem is the monotonous office appearance of the area. Therefore transformation should be applied on a larger scale. Two offices on the “Hogehilweg” have proven to be financially attractive to transform into housing. Other offices in the proximity have similar characteristics and will be problematic to lease out when they become vacant. More vacancy will increase the urgency to reduce the vacancy and this area seems to have potential to be transformed into a residential environment, which has also been described by Schalekamp (2009).

In order to create a sustainable decrease in supply, no new offices should be developed within Amsterdam Southeast. New developments have a direct increase of the supply as a result. Moreover the new developments will decrease the opportunities of the older office stock and it will therefore discourage the owners to undertake renovations.

In the theoretical framework the two most effective measures for the municipality to decrease developments have been identified: 1. A stop to new building permits 2. Increase of land prices. In Amsterdam Southeast many vacant square metres of office space can still be found in offices with overall good characteristics. Amsterdam Southeast therefore shows a clear oversupply. A stop to new developments will in this case be appropriate as there is no clear demand for new office space. In areas where this oversupply is less apparent a stop to new developments is less realistic. However constructing new office space elsewhere in Amsterdam with characteristics competing with office space in Southeast is useless. This office space is already available. Increasing land prices would increase the competitiveness of existing office space compared to new developed office space and is therefore an effective method for the municipality to prevent increasing vacancies.

However the reality has not seem to have hit the owners yet. The current situation of high vacancy rates is built up out of hope instead of knowledge. Hoping on a tenant that will lease office space in one of the vacant offices is useless as long as there are better alternatives available on the market. Owners of office space in Amsterdam Southeast will need to reconsider the position of their office space in relation to the competition and undertake the required actions to bring it back in line again.

After the actions which are described above are taken, the office stock in Amsterdam Southeast will have a better position. 59,278 square metres of vacant office space can be transformed, after which 198,722 square metres of vacant office space remains. 80,000 square metres of office space can be described as “normal” vacancy, leaving 118,722 square metres of oversupply. 39,586 square metres of vacant office space should be renovated. In addition the renovated space should be offered at market rent. As a result the offered stock in Amsterdam Southeast will overall become of much higher quality.

With the improved office stock in Amsterdam Southeast and the expected recovery of the leasing market Amsterdam Southeast will be facing a much brighter future. However there is still 118,722 square metres of vacant office space remaining. In case the recovery is identical to the situation before the crisis another 11 years will be needed to bring Amsterdam Southeast back to a healthy office market.

There is a long road to recovery ahead but to achieve a better office market in Amsterdam Southeast renovation and transformation are a necessity!
9 Recommendations

9.1 Future policy of vacant office space

The huge oversupply in Amsterdam Southeast has the potential to further depreciate until no value is left in many office buildings with a completely obsolete area as a result. To prevent this situation the competitive position of Amsterdam Southeast will have to improve. There are several measurements that are necessary to take to accomplish an improved position of Amsterdam Southeast.

1. The municipality should put a stop to new office developments in Amsterdam Southeast. The area is already facing a huge oversupply. A new development will only add more vacant office space. As owner of vacant office space a renovation becomes more feasible when the expected vacancy period afterwards becomes shorter. With the current proportion of oversupply this risk is already significant. Therefore new developments are expected to decrease the willingness of owners to start a renovation. In addition it has a negative effect on the confidence of owners in the municipality's willingness to improve the area of Amsterdam Southeast. As a result cooperation between public and private parties will be harder to establish. In relation to the entire city of Amsterdam new developments should be discouraged in office segments that face high vacancy rates by increasing land prices in these segments.

2. Owners of vacant office space in Amsterdam Southeast should be more realistic about the quality of their office space. As soon as the quality of office space falls below the acceptance limit it is not expected to be leased out any more. During the case studies several examples have been discussed where the office space required significant renovation. Owners will have to realise that the renovation is a necessity to lease out their depreciated offices and is not an option. Offering the office space to be renovated when a lease is signed, is an option to reduce the risk. However when selling a vacant office is not an option it has only a delaying effect. In addition some examples of renovated office space in Amsterdam Southeast have proven that a renovation has a significant positive influence on the ability to lease out office space. Regardless of which choice is made in relation to renovating office space, the capital expenditures that are related to the renovation should be taken into account when the financial results of consolidating the building as an office are calculated.

3. Owners of vacant office space in Amsterdam Southeast should be more realistic about the expected vacancy period of the office. Although there is a wide deviation in the vacancy period of offices in Amsterdam Southeast, an expectation of the vacancy period built on facts is the best way to achieve the most reliable expectation. The financial results of consolidating an office should be based on this reliable expectation instead of hope.
### 9.2 Future research

1. Schalekamp (2009) discussed the potential redevelopment of the “Hogehilweg area”, which is the same area as the part right of the Hondsrugweg of sub-area four in this research. Two case studies have been analysed on the Hogehilweg and both proved to be most feasible to transform into housing. Three other offices on the Hogehilweg are structurally and completely vacant. They are also expected to have potential to transform into housing.

   Schalekamp pointed at the sense of urgency which was not high enough, as the most important factor for a redevelopment of the area. This research has proven the sense of urgency should be high enough and will hopefully also convince the owners.

   The area seems to have high potential to be redeveloped, both confirmed by Schalekamp (2009) and this research. To take the next step a research after how the potential redevelopment could look like and how a mixture of offices and houses in this area could work can be the last incentive to push the owners to the actual redevelopment.

2. Sub-area 6, the Area South of the A9, is very problematic. There is an extremely low 5-year average take up. The location characteristics visibility, car accessibility and train accessibility are poor compared to the averages of Amsterdam Southeast. Nevertheless there are still several newly developed offices but also these offices show high vacancy rates. As long as the 5-year average take up stays at its current level of just over 3,000 square metres the area is heading towards total depreciation.

   Transformations would be an outcome but how can an environment be created to support these transformations in this area?

3. The incentives on the leasing market of office space in the Netherlands has a large negative effect on the transparency. Rents are kept high while the incentives increase. However when a transformation is calculated it is often compared to the rents of the office where the incentive is not included. Going back to real rents would increase the transparency and would increase the possibility to compare alternatives for the owners. However how could a process look like to go back to this real rent and which parties can and should start this process?
10 Works Cited


