CORPORATIONS AND CITIES

THE INTERACTION BETWEEN CORPORATE OFFICE BUILDING AND THE CITY
Corporations and cities

The interaction between the corporate office building and the city

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Ponlawat Trakulwattanakit
Student number: 4940938
Email:

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First mentor: Herman Vande Putte
Second mentor: Yawei Chen
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Personal information

Name: Ponlawat Trakulwattanakit
Student Number: 4940938

Institution Master: Delft University of Technology
Program Master: Architecture, Urbanism and Building Sciences
Track: Management in the Built Environment (MBE)
Graduation Lab: Real Estate Management (REM)

First Mentor: Herman Vande Putte
Second Mentor: Yawei Chen
Abstract

Corporations choose to situate their accommodation in the central business district of the city to gain as many benefits from the location choice. However, annoyance occurs because of the real estate decisions of organisations as they neglect urban planning and context and results in inefficient, inflexible and do not represent companies’ characteristics. The research is a study to acquire a better understanding of assessment regarding the interaction between corporate office buildings and the cities. The research is divided into the empirical part and the design part. The empirical part is conducted through the literature review, case study and in-depth interview with experts while the design part is carried out by using the results from the empirical part to design assessment tool to measure the impacts of the corporate office building to the city. It is expected that the tool will benefit local authorities in the building permit process and real estate managers of corporations in planning real estate strategies.

Keywords: corporations and cities, corporate real estate management, the city, office buildings, interaction, assessment tool,
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1. Introduction

The first chapter of the graduation research thesis introduces the problem statement to identify the gaps that need to be filled and to address the importance of interaction between corporate office buildings and the cities in both scientific and social aspects. It also explains my own motivation to engage the research and how should it be utilised in a practical way and further research. After that, the main research question is identified to focus the path through the processes of the research while several sub-research questions are raised to specify the area of study. Next, sample and research scope explain the relevant aspects of the research and address the main contexts of the research. Cases are briefly introduced in this section. The introduction ends with the research output.

1.1 Theme

“Corporations and Cities” is a research program of the Management in the Built Environment program, Faculty of Architecture and the Built Environment of the Delft University of Technology which this thesis is a part. It is in the theme of Real Estate Management and partly overlaps with Urban Area Development (figure 1.1). It mainly focuses on the study of the interaction between corporate accommodation and urban planning by combining the three concepts: user, context and portfolio (figure 1.2). The concept of the research is to involve relevant stakeholders in the built environment including real estate managers, urban planners, investors, developers, asset managers, facility managers, architects and engineers. It can be said that it includes every profession that connected to the field of this sector (Vande Putte, 2009a). The research clarifies how corporate office buildings interact with the cities and how
they influence each other. In other words, the research is a study of how corporate office building influence the city and how the city contribute to the building as well as finding out the value they can add to each other. Figure 1.3 shows that there are three types of requirement in realising corporate accommodation which are requirements of the corporations, requirements of the city and requirements for the intervention. The research is conducted mainly focusing on the overlapped part of the corporation and the city which were taken into account by the designer.

![Diagram showing the influence of Users, Context, Real estate object, and Portfolio on each other.](image)

**Figure 1.2** Concept of corporations and cities (Vande Putte, 2016).

### 1.2 Problem statement

A corporation is a group of people or organisations working together as a society to achieve certain goals. By gathering together, it is expected that the group would be more efficiency which leads to economies of scale, learning effect, flexibility and synergies (Nadin, 2008). The goal of the corporation is to sustain their competitive advantages in their businesses which results in an increase of productivity and be able to deliver products and services the market demanded (Porter 2004, Singer et al., 2007) Corporations include multi-national organisations, multi-departments of larger organisations, public hold organisations and a mixed of companies.

Activities are concentrated in a certain location within the urban areas, several types of economic agglomerations are acknowledged to be in the city. Corporations have a strong preference to be located in the inner city and urban fabric area in which the particular area is
diverse by activities, well-connected to public transport and a good resource of high-skilled people (McDonald & McMillen, 2011; Jong-Hun, 1993; Dube et al., 2016). Companies position themselves in the cities area to gain benefits and take advantages of gathering resources from the cities. In the meantime, the corporate buildings also contribute and add value back to the city (Vande Putte, 2009a).

![Figure 1.3 The three types of requirement (Vande Putte, 2016).](image)

The great driver for the research is that a great number of office buildings have been built for the past decades and they are getting higher every day. There are many reasons behind the construction of tall buildings, such as economic influence, densification, demands and encouragement to be the landmarks of the cities. However, tall buildings are essential but there is a strong need for tall buildings to be better connected to the cities on the ground plane and contribute to the wider fabric of the cities (Sims, 2016). In other words, buildings should contribute sufficient more public and green spaces, they are meant to be for not only users of the buildings, but also more people in the cities. Apart from the height, plinths are considered to be the most important part of the building from the point of view of people on the street. It is crucial for the people’s experience and attractiveness of the city. The ground floor area is only 10% of the total area of the building, but it defines 90% of the building’s contribution to the city (Karssenberg & Laven, 2016). Annoyance occurs because of the real estate decisions of organisations as they neglect urban planning and context (Vande Putte, 2016) as well as for the plinths. They are overlooked by the owners since the ground floor area does not generate major revenues for office buildings (Vande Putte, 2016; Karssenberg & Laven, 2016). These result in a failure of corporations in which their accommodations do not enhance their business activities as well as becoming inefficient, inflexible and do not represent companies’ characteristics. Moreover, most of the office buildings tend to be introvert and do not provide public access to the building because of their security issues and vulnerability of the
companies (Vande Putte, 2009b). Therefore, overlooked plinths lead to a lack of quality and attractiveness of the area around the building.

There are gaps to be filled within the field of Corporations and Cities. Firstly, there are many theories of corporate real estate strategies and development of cities but lack connection and understanding between the two groups of theories. Secondly, the current building permit criteria does not sufficiently take those issues into account which assessment criteria should be realised to solve the problems. Thirdly, there is a lack of assessment criteria for real estate managers to evaluate and measure their buildings to the extent of how the corporate office buildings should gain benefit and contribute to the city since the relationship between the building and the city can be a win-win situation. New tools would facilitate real estate decision-making processes and encourage companies to contribute to the public as well as gaining benefits from the location.

1.2.1 Goals and Objectives

According to the problems and gaps in the field of Corporations and Cities, the main goal of the research is identified:

*To acquire a better understanding and improve the interaction between the corporate office building and the city*

Apart from the main goal, several objectives are also identified in this study.

- To understand how corporate office buildings interact with the cities
- To identify the value and criteria to be assessed by the relationship.
- To examine how the corporate office buildings are influenced by involved stakeholders in terms of design and connection to the city context.
- To realise the concept of synergy and conflict between the buildings and the cities.

It is expected that the results of the research will bridge the gaps in the field of Corporations and Cities. Important and precise criteria will be taken into consideration while assessing the buildings as well as becoming a guideline for corporate real estate strategies on the accommodation.

1.2.2 Scientific Relevance

The main purpose of “Corporations and Cities” is a study of the relationship between corporate office buildings and cities. Not only companies influence the structure and the form of the cities
but the city context also has impacts on accommodation strategies and location choices regarding economic, political and cultural aspects (Nadin & Rocco, 2008). The corporates consist of large scale organisation, multi-national company, private company and publicity department.

Over the past decade, several pieces of research on the topic of “Corporations and Cities” have been published. It is started by the 3-day conference in Brussels from the collaboration of the Delft University of Technology and the Berlage Insitute (Rotterdam). The conference resulted in the further publication of 11 Corporations and Cities journals (Vande Putte, 2009-2010). Apart from that, the following theses conducted by students are part of Corporations and Cities research.

- Organisations’ location choices. The demand drivers for clustering and dispersal of functions across geographical area (Singh, 2010)
- Benelux location choice in Breda (Dekker, 2011)
- The special economic zone of Batam affected by the global economic crisis (Nita, 2013)
- The effects of controls on corporate housing behaviour of large-scale companies in The Hague (Pors, 2013)
- The history of the accommodation of BNP Paribas in Paris (Georgiadou, 2012) and
- Corporate accommodation of Siemens in The Hague (Scheuerman, 2014).
- And others.

In total, there are five different themes of the study of Corporations and Cities.

- Organisational Strategies and Urban Planning Goals
- The past and the Future
- Agglomeration Strategies and Location Choices
- Image, Branding and Representativeness
- Synergy Management

Therefore, this thesis is a combined exploration of the three themes of “Organisational Strategies and Urban Planning Goals”, “Agglomeration Strategies and Location Choices” and “Synergy Management”. It is expected that this thesis will be added to the research project of Corporations and Cities.

1.2.3 Societal Relevance

Many companies in the world were more “financial” driven which can be seen mostly in annual reports. In 1993, only 12% of the 100 largest companies in the world, according to the KPMG published sustainability reports while it significantly increased to 75% in 2017. However, it is difficult for decision-makers to transcribe those reports into financial. New tools are needed to
measure the costs of the company to the world in order to convert societal impacts into a concrete amount of money (van der Heijden, 2019).

The graduation research explores both the physical and functional relationship of corporate office buildings and the cities to find the extent of what corporate office buildings give and take to the cities, and on the other hand, what the cities give and take from the buildings. Exploration is carried out regarding six added-value from the corporate real estate including exchange value, use value, image value, social value, environmental value and cultural value (Macmillan, 2006).

Insights from the relationship will be used for further analysis of the extent of the synergies and conflicts of accommodation strategies and urban development goals. Many variables are related to physical appearance and public space, such as plinths design, public area, transparency of facade, security, building scale, people activities.

Along with the development of a tool to measure the social impact of the companies by Harvard University (van der Heijden, 2019), it is expected that this research will be part of developing new assessment tools but more focusing on the built environment aspects. Apart from that, the research would draw attention from the public to be more concerned about the interrelation of buildings and cities. Social, environmental and urban impacts would be more taken into consideration by the key stakeholders in the field.

1.2.4 Utilisation

The graduation research observes the relationship of corporate office buildings and the cities and will point out the importance of those synergies and conflicts to address these issues to be more concerned by the public. Design is a challenging issue and a hard decision-making process, this research seeks the reasons behind those decisions on the buildings design and their relation with the urban context. Apart from contributing the research for Corporations and cities, this research will be an interesting topic for many stakeholders in the real estate sector. Firstly, real estate managers gain benefit from the research and can adapt them to guidelines for accommodation strategies. Secondly, public authorities receive more insights idea to the extent of crucial criteria to take into consideration for construction and city development. Thirdly, the research acts as a stimulus tool to encourage designers to take lessons and factors into account in the design processes.
1.2.5 Personal Motivation

I graduated from the Faculty of Architecture, Chulalongkorn University, Bangkok and worked as an architect for 4 years. My frustration and motivation arise because of all the experiences in the design and construction sector. Having seen the only skyscraper next to the river while the rest of the surroundings are either historical or monumental buildings. The question arises whether the building generates any better beneficial effects or destroys the skyline of the city. Some office buildings were built with such a gigantic footprint and did not provide any public space or interact with pedestrians. Moreover, it is difficult to find reasons to support the fact that investors choose to build more department store even though there are so many of them in the city of Bangkok. As an architect, the perspective of the designers is familiar but it is so interesting to investigate from the corporations’ side and the city aspects. These are the reasons for studying the master program of Management in the Built Environment. Especially, the field of corporate real estate management and urban area development would be the answers I have been seeking for. They would greatly expand the overview not only from designers’ side but also other relevant stakeholders in the study.

For my personal aim, it is expected to acquire a better understanding of the relationship between corporate real estate and the city context. Essential influences, factors, values and criteria need to be examined and further developed into the assessment tools for corporate accommodation evaluation. Buildings take some benefits from the cities and give something back to it and, on the other hand, the cities give advantages to the buildings and take something for the public. It is also expected to see office buildings in the future not only submit the building permission but also be assessed the social impacts to the city. Lastly, for this thesis, I want to improve my scientific research skills as I contribute the research for Corporations and Cities. This is the first step of the working environment in the corporate real estate management which would significantly benefit my future career.

1.3 Research Questions

In this section, the main research question and sub-questions for the thesis “The interaction between the corporate office building and the city”. Sub questions are divided into several categories to address a particular area of the research. Following the main research question is defined:

“How can we improve the interaction between a corporate office building and the city by an assessment tool?”
The given research question raises several more sub-questions to build strong background and foundation for the research. They are categorised into the following five different groups.

**Theory sub-questions**

- What are the corporate real estate strategies?
- What are the characteristics of a quality city?
- How do urban planning strategies support and influence corporate office building?
- How does the corporate office building interact with the city?
- What values and criteria are important to be assessed regarding the interaction?
- What approaches can improve the interaction between the building and the city and what are the assessment techniques can be implemented?
- What is the concept of synergy and conflict between the building and the city?

**Core cases sub-questions**

- What was the vision of the corporations when realising the new accommodation?
- Why did the owner of the building decide to initiate the construction of the accommodation and what are the requirements of the accommodation?
- What was the idea of the location choice from the point of view of the owner?
- How did the urban planning of the city develop and were there any major changes in the development?
- What was the idea of the design of the real estate object from the point of view of the architect regarding corporate strategies and urban context?
- Were there any synergy and conflict from the development and how did they have measured the extent of synergy and conflict?
- How do those values, factors and criteria impact on the city and what does the corporation gain from the city?

**Additional case sub-questions**

- How do corporate office buildings interact with their city context?
- What the buildings give and take from the cities, and on the other hand what the cities give and take from the buildings?
- What are the most important criteria variables to be considered from the points of view of corporate, public authority and designer?
Evaluation sub-questions

- What is the relationship between corporate office buildings and the urban contexts in terms of giving and taking?
- What are the differences between corporate office buildings in different cities in terms of the interaction between buildings and the cities?
- What is the lesson learned from the cases?

Assessment tool design sub-questions

- According to the results, what factors, values and criteria should be taken into account for the assessment of corporate accommodation?
- How can the assessment tool be implemented?

1.4 Conceptual model

Figure 1.4 illustrates the conceptual model of the research. It explains the relationship between the research concepts in accordance with the research goal and research questions. The conceptual model acts as a framework to steer the whole research. This thesis needs information from three main sources. Firstly, the extensive literature study is carried out in order to build background knowledge for the author about corporate real estate strategies, urban development strategies, the concept of interaction and assessment technique. Secondly, qualitative research from the core case studies is conducted. This phase includes a documental study and in-depth interviews with stakeholders, such as corporations, designers and public authorities. Thirdly, information is collected from the additional cases quantitatively. Surveys and short interviews are conducted with people from the public area.

After collecting the information, it is analysed to answer sub-research questions of each part. It should explain how the corporate office building interacts with the city while the author should understand the three points of view of the research: user, context and portfolio. Eventually, important factors, values and criteria are carefully collected for the development of an assessment tool to measure impacts of the corporate office building on the city in the next
The assessment tool will be tested on several buildings from the case in order to improve it and design the final outcomes.

Figure 1.4 The conceptual model (own illustration).

1.5 Research arena and sample

The research arena of the thesis is shown in the matrix (figure 1.5). In the matrix, the city is presented in three levels: *polis*, the political arena, *civitas*, the community, *urbs*, physical infrastructure. On the other hand, corporation is introduced in three different meanings as well: *oikos*, the economic, *organisation*, group of people of the firm, *plant/building*, accommodation of the organisation. The research focuses on the organisation and the accommodation on the corporation side, and community and urban infrastructure on the city side. With the crossing over from the two dimensions in the matrix, four highlighted cells in figure 1.5, four interactions are investigated: The interaction between *organisation* and public community, organisation and *urban infrastructure*, accommodation and public community, accommodation and *urban infrastructure* (figure 1.6).
This research is not limited to any particular type of corporations, but it will focus more on the physical and spatial setting of the real estate object. Different types of corporations would be a great variable to compare cases. However, the main criteria the research focus is on buildings in the urban fabric area. Especially, the buildings with the plinth designed to interact with the streets and buildings with a variety of activities for the public. Initially, on the side of the city, the values to be investigated are the impacts the buildings have caused including physical impact, economical impact, socio-cultural impact and environmental impact (Gorter, 2019). For the corporations’ side, it is also important to investigate real estate strategies of corporations, such as core business performance level, real estate strategy level and real estate decision making and operation level. In addition, the added value from corporate real estate management will be considered to support the corporate side (Lindholm & Gibler, 2005). All of this research area will be described in details in chapter 2.

Several cases will be used as samples including cases from The Hague, Rotterdam, Amsterdam and Utrecht. Comparing the cases would acquire different results due to different contexts and conditions. Furthermore, corporations and local authorities in each city may not share the same variable and this could lead to more diverse answers to the research. Initially, the Rijnstraat 8 in the city of the Hague is assigned to be core case of the research while additional cases will be identified in the further stages to add more variables and insights for the study.
1.6 Research Output

In the empirical research part, the answers of the research will be results of the core cases, combined with insights from interviews with organisations, to see how those cases positioned themselves in the city context. It also includes the benefits that the corporates office buildings gained from their location and, on the other hand, what do they contribute to the public in the particular values, factors and criteria. Furthermore, results from additional cases are used to support the lesson learned from the core cases. They are destined to broaden the views of the study to see if the variables changed, the outcomes were proved to be reliable and tangible.

For the design phase, the prototype of the assessment tool to measure the impacts of the corporate office building to the city will be delivered. The tool should be capable to measure if the buildings sufficiently contribute to the public. The criteria should not be too subjective and could be compared by figures and evidence.

In the further stages, the answers and final outcomes of the research are expected to be developed into the assessment criteria or the evaluation standard for the local authorities or the municipalities to evaluate the buildings during the building permit processes. On the other hand, The research aims to draw more social attention on how corporate office building interacts with the city and further develop assessment criteria to study or measure the building by comparing synergy and conflict to the urban context. This tool is aimed at corporates as a target group.

Figure 1.6 The interaction of each level of the corporation and the city (own illustration).
2. Literature review

In this chapter, the literature review is conducted to create background knowledge to support the research. It also provides an overview of theoretical parts of the thesis and identifies the framework to collect the data in the later stage.

Before conducting the literature study, it is important to identify the concept of the literature topic to create more overview and scope of the literature study. It also facilitates the later processes and prevents the research from confusion. Figure 2.1 explains the literature study concept of the thesis.

![Diagram of literature study concepts](image)

**Figure 2.1** The three main literature study concepts (Own illustration).

The matrix from figure 1.5 is used to construct the literature concept. Two levels from both sides are taken to determine the concept, organisation and accommodation for the corporation, public community and urban infrastructure for the city. The literature on the topic of added value by corporate real estate (Lindholm & Levainen, 2006) is in the group of organisation. It mainly demonstrates the strategies for the corporation to enhance its productivity and business performance. On the other hand, corporate real estate strategies...
(Lindholm & Levainen, 2006) and added value of good design (Macmillan, 2006) are categorised in both organisation and accommodation since both of the topics clearly show the connection between architecture and the strategies of the organisation. Moving onto the city side, close encounters with buildings (Gehl, Kaefer & Reigstad, 2006) topic focuses on creating good interaction of the building for the public space, therefore, it falls to the urban infrastructure. Succesful places (Adam & Tiesdell, 2012) and city at eye level (Karssenberg & Laven, 2016) elaborate on the needs of good urban design for the people. Both of them overlap the topic of community and urban infrastructure.

2.1 Corporate side

**Corporate real estate strategies**

In this section, the literature review is conducted to answer the sub-question of “What are the corporate real estate strategies?”. Roulac (2001) introduces eight alternative real estate strategies and their impacts on the competitive advantage. The strategies are minimisation of occupancy costs, an increase of flexibility, promoting human resources objectives, promoting marketing message, promoting sales and selling process, facilitating productions, operations, services & deliveries, facilitating managerial processes, and capturing real estate value creation of business. On the other hand, O’Mara (1999) defines real estate strategies into three main strategies. The theories from O’Mara are chosen since they illustrate a better overview of architectural characteristics related to the strategies.

O’Mara (1999) categorised three real estate strategies for organisations to optimise their real estate to match the overall performance of the business. The three strategies are an incremental strategy, a value-based strategy and a standardisation strategy as shown in table 2.1.

An incremental strategy adds up random various buildings of an organisation because of the uncertainty of the company’s future. The priority of the strategy is to commit to the physical requirement of the business activities while extra facilities and physical aesthetic of the building are less important. Even though the strategy symbolises the flexibility of the company, it does not represent the company’s vision, identity and organisation’s competitive strategy. The style of the organisation’s portfolio has no clear direction and ambiguous (Singer et al., 2007).

A value-based strategy mainly focuses on the values and the strategic direction of the organisation. It uses the design of the building to shape the behaviour of users which is mainly emphasise on both function and symbolic meaning. The value-based strategy steers the portfolio to represent an organisation’s image, identity and objective. The strategy tightens up various types of the user including employers, employees, customers and community. The drawback of a value-based strategy is the high consumption of time and resources, and trading off between functionality and aesthetics (Singer et al., 2007).
Table 2.1 summary of the three real estate strategies, adapted from Singer et al. (2007)

<table>
<thead>
<tr>
<th>Strategy</th>
<th>An Incremental strategy</th>
<th>A value-based strategy</th>
<th>A standardisation strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Visual image</strong></td>
<td><img src="Image" alt="Incremental Strategy" /></td>
<td><img src="Image" alt="Value Based Strategy" /></td>
<td><img src="Image" alt="Standardisation Strategy" /></td>
</tr>
</tbody>
</table>
| **Advantages** | - Emergent development of a real estate portfolio  
- It shortens the forecasting horizon  
- It symbolises a flexible attitude | - A communication of a certain culture and image  
- The use of design and shape behaviour  
- Encourages dialogue about the future | - Control over allocation of resources for objects  
- Economies of scale in real estate portfolio  
- Standard objects reinforce a dominant culture |
| **Disadvantages** | - Location is a long-term commitment  
- Suboptimal financial investment  
- Ambiguous style of building | - Costly in terms of time and resources  
- Trade-offs between functionality and aesthetics | - Standardisation precludes adaptation of objects to new demands  
- Repetition is not always perceived as high quality  
- Standards can symbolise rigidity |

A standardisation strategy focuses on the control of the resources allocation, costs, employees and effectiveness. The standard of the company is set to facilitate the process of decision making and it is used to predict the future use of the facility. This results in the same characteristic of the corporate’s portfolio in every branch. However, these limits the adaptability of the company and the portfolio is not acknowledged as high-quality design (Singer et al., 2007).

**Added-value by corporate real estate**
This section is carried out to answer the sub-questions of “What values and criteria are important to be assessed regarding the interaction?”. The research of Lindholm & Levainen (2006) created the model to measure added-value to the core business by corporate real estate. It combines the strategic management theory, corporate real estate management, business performance, facilities management and workplace performance together and identifies how these strategies are related to the decision making process. Previous research has identified seven real estate strategies that have a substantial impact on the core business and operation of the company. Each company may select from among seven real estate strategies to support two main corporate strategies which are revenue growth and profitability growth. The seven strategies are:
1. Increase value of assets
   The strategy aims to maximise the value of the property and selects the lowest cost scenario regarding short-term and long term view. Valuation of the current facilities is required in order to proceed with the optimisation processes. The processes include location selection, risk management, lease and purchase decision making, redevelopment and realisation of the IT system for property management.

2. Promote marketing and sale
   The strategy focuses on promoting the image of the company and attracting customers by using physical characteristic and accessibility. This affects many decision making at the operation level, such as selecting an attractive location, providing space to attract customers, using the symbolic design of the building and providing brand-supportive workplace.

3. Increase innovations
   In a highly competitive business, the increasing innovations strategies facilitate the company to differentiate other competitors. A workplace that supports innovative working and thinking is needed. The core idea of this strategy is to encourage the participation of the users in the design phase which, in turn, will increase revenues.

4. Increase employee satisfaction
   Employee satisfaction is influenced by the workplace design, amenities and support facilities. By providing pleasant working environment, desired amenities and responding to real estate request, it can be expected an increase of financial return indirectly.

5. Increase productivity
   This strategy leads to better profitability by maintaining accommodated facilities to enhance business activities and providing a working environment that supports productivity.

6. Increase flexibility
   Increasing flexibility strategy includes both physical setting and financial aspects. Financially, the firm may choose to lease the workplace instead of owning it as well as negotiating for short-term leases. This increases the flexibility and ability to change for an uncertain future. Physically, the company provides a flexible workplace and multiple-use facilities.

7. Reduce cost
   Reducing cost is widely acknowledge since it has a direct impact on the financial status of the company. Decision making on the operation level includes minimising operating expenses, minimising acquisition and financing costs, creating economies of scale acquisitions, optimising workplace, balancing between outsourcing and in-house services. Utilising government incentives and workplace standard establishment.

The first three strategies, increasing value of assets, promoting marketing and sale and increasing innovations, are realised to support revenue growth while the last three strategies, increasing productivity, increasing flexibility and costs reduction, affect profitability growth. Only increasing employee satisfaction support both corporate strategies.
**Added-value of good design**

Add-value of good design literature study is conducted to find the answer of two sub-questions:

- How does the corporate office building interact with the city?
- What values and criteria are important to be assessed regarding the interaction?

Rouse (2004) describes that most of the corporate clients understand the architectural value benefits they gained from their investment since these benefits are tangible and easy to be measured, such as traditional cost-benefit. On the other hand, intangible benefits are more difficult to be measured since they cannot be directly compared to cost and investment. The intangible benefits include user satisfaction, human capital and corporate policy.

Macmillan (2006) conducted follow-up research from Rouse’s work in order to explore the valuation of the tangible. These resulted in two key findings, the building impacts on a variety of stakeholders and value created in the built environment.

Firstly, it is explained in his research that each stakeholder in the built environment expects different priorities and outcomes from the real estate. It is categorised into five different groups of stakeholders which are finance, design and construction, occupant organisation, public realm and visitors to buildings. Details of each category are shown in Table 2.2.

**Table 2.2 Stakeholders and the outcomes they value (Macmillan, 2006; Saxon, 2005)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Stakeholders</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance</td>
<td>Financiers, banks, developers, government.</td>
<td>Return on capital, profitability, long term value, letting and selling.</td>
</tr>
<tr>
<td>Design and construction</td>
<td>Architects, engineers, designers, contractors, suppliers, surveyors</td>
<td>Profitability, repeat transactions, awards, prestige</td>
</tr>
<tr>
<td>Occupant organisation</td>
<td>Project directors, marketing managers, human resources managers, facilities managers, general employees, security staffs.</td>
<td>Productivity and profitability, vision, image and identity, branding and reputation, social responsibility, working environment, health and well-being, recruitment and retention, energy, maintenance costs.</td>
</tr>
<tr>
<td>Public realm</td>
<td>Local authority, local community, regional and national community</td>
<td>Regeneration and inward investment, impact on property value, pollution, local health, employment, civic pride, neighbourhood.</td>
</tr>
<tr>
<td>Visitors to building</td>
<td>Hospital patients, hotel guests, retail customers, students, pedestrians, the general public.</td>
<td>Retail footfall, hospital recovery rates, educational attainment level.</td>
</tr>
</tbody>
</table>

The second key finding is emerging of value creation from the real estate in the built environment. In total, there are six types of value created which are exchange value, user value, image value, social value, environmental value and cultural value which is a mix of tangible and intangible values. Intangible impacts, such as social value, image value and
cultural value, there is a need for collaboration with actors from other sectors beyond the built environment. Table 2.3 describes these six values, outcomes and indicators in details.

**Table 2.3** Types of value created in the built environment, and examples of metrics (Macmillan, 2006).

<table>
<thead>
<tr>
<th>Type of value created</th>
<th>Bundle of valued outcomes</th>
<th>Examples of indicators or metrics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exchange value</strong></td>
<td><em>Building as a commodity to be traded</em>, measured by the market price, book value for the owner, return on capital for the developer, letting and disposability.</td>
<td>Book value, rental, return on capital; yield</td>
</tr>
<tr>
<td><strong>Use value</strong></td>
<td><em>Contribution of the building to organisational outcomes</em>: productivity, profitability, competitiveness and repeat business, working environment, well being and job satisfaction, flexibility, teamwork, communication, enhances recruitment and retention while reducing absenteeism.</td>
<td>Measures associated with occupancy, user satisfaction, motivation, teamwork. Measure of productivity and profitability such as healthcare recovery rates, retail footprint, educational achievements, occupant satisfaction.</td>
</tr>
<tr>
<td><strong>Image value</strong></td>
<td><em>Contribution of the building to corporate identity</em>, prestige, vision and reputation, design excellence or innovation, openness and a brand image</td>
<td>Public relation opportunities, brand awareness and prestige, the ‘wow’ factor.</td>
</tr>
<tr>
<td><strong>Social value</strong></td>
<td><em>Buildings and environments that make connections between people</em>, creating or enhancing opportunities for positive social interaction, social identity and civic pride, social inclusion and social health, prosperity, morale, goodwill, neighbourly behaviour, safety and security, reducing vandalism and crime.</td>
<td>Sense of community, civic pride and neighbourly behaviour, Reduced crime and vandalism.</td>
</tr>
<tr>
<td><strong>Environmental value</strong></td>
<td><em>Added value from a concern for intergenerational equity</em>, the protection of biodiversity and the precautionary principle of resources consumption. Adaptability, flexibility, robustness, and low maintenance, whole-life cycle approach, local health, pollution.</td>
<td>Environmental impact, whole life value, ecological footprint.</td>
</tr>
<tr>
<td><strong>Cultural value</strong></td>
<td>Contribution to the rich tapestry of a town or city. Location, context, historical development and a sense of place, cultural value, symbolism, inspiration and aesthetics.</td>
<td>Press coverage - not only in the professional press, but also in the lay press. Critical opinions and reviews.</td>
</tr>
</tbody>
</table>

The last lesson learned from the research (Macmillan, 2006), for designers, the value of good design should be promoted not only in the research community but also by the professional practice and public organisation. The concept is acknowledged as ‘Evidence-based design’.
2.2 The city side

In this section, three groups of the literature are reviewed to answer the following two sub-questions

- What are the characteristics of a quality city?
- How do urban planning strategies support and influence corporate office building?

Successful places

It is widely seen that the development with the visible hand of state power and financial driven thinking have turned into places of exclusiveness. It is important to understand why certain places turn out to be more successful than others in from the perspective of social, economic and environmental (Adam & Tiesdell, 2012). The place is constructed to be occupied by people and characterised by social interactions. Places are differentiated into

- Places of dwelling - places where people live and work. The goal is to integrate and mix different functions (Commercial, residential, social, community and recreational)
- Places of encounter - places where people are attracted for leisure, entertainment, shopping and social interaction. The design task is to attract people from a distance.

Successful places are not about how good of individual pieces of architecture, but overall quality and functions for the people matter more. Adam & Tiesdell (2012) describes five characteristics of the successful places.

1. Places meant for people

Successful places attract people and encourage them to linger and return. In order to achieve this, four essential factors should be considered

- Activity: draws people to places. It is better to have more diverse and complex activities.
- Scale: take human scale into account since places are for humans,
- Safety: places ease the people and encourage them to return.
- Comfort: being inclusive and able to be accessed for everyone. Comfort also includes thermal comfort, light comfort and wind comfort.

2. Well-connected and permeable places

Successful places are able to move in and through them easily either on foot, by bicycle or public transport. In order to achieve urban vitality, connectivity across the city need to be improved. Here are six main points to achieve connectivity and permeable.

- Create a grid to maximise connectivity and promote a more movement across an urban area while reducing the need for zoning and specialised pod which are considered unsustainable.
- Street-oriented urban block creates a dense urban fabric that creates a clear boundary between public and private zone.
- Variety of block sizes balances the large block size demand from the developers and also create more urban vitality through small block size.
- Primary, secondary and tertiary mesh: ‘primary mesh’ (principal movement) with a ‘secondary mesh’ (service lanes or alleys through the centre of the blocks) and sometimes even a ‘tertiary mesh’ (for circulation within the blocks).
- Height of the building blocks should be related to the width of the street.
- Removal of physical barriers and preservation of traditional street pattern are essential factors to improve connectivity and permeability.

3. Places of mixed-use and varied density
The more varied a place, the more active it is likely to be. According to Jane Jacobs (1961): ‘overlapping and interweaving of activities crucially impacts on the vitality of urban neighbourhoods’. To encourage what she calls ‘exuberant diversity’, a district must serve at least two primary functions, of which residential places and employment places are the most important. Here are the benefits of mixed-use development
- socially: to provide greater opportunities for social interaction
- environmentally: cut down on travel, minimize congestion, enable more efficient use of space and buildings, with improved energy efficiency
- economically: make local businesses and services more viable, offering consumers a greater choice of lifestyle, location and building type

There are two ways to change the mono-function development culture. Firstly, making the development process more competitive by opening up opportunities for what Guy et al. (2002) identify as locally based independent developers who can make smaller lot sizes, multiple tenancies and mixed uses work to their advantage. Secondly, implement mixed-use also in the development form, tenure, market segments and density (English Partnerships 2007a)

4. Distinctive places
Because of the fact that real estate development sector is driven by the economy of scale. The initiation of the development is realised from the top-down or national level. However, successful places display a significant distinctive character in which it emphasises local identity and authenticity. Five key components for the distinctive places are presented: paths, edges, districts, nodes and landmarks. Successful place-making is about creating urban experiences to be savoured and remembered, rather than readily forgotten as indistinguishable from the formulaic repetition so beloved of global capital.
5. **Sustainable, resilient and robust places.**

The ten universal principles of sustainable design are presented below.

- promoting diversity and choice through mixing uses and facilitating movement by other than simply car;
- encouraging local distinctiveness;
- designing places at the human scale to meet human needs;
- encouraging more compact urban resource efficiency,
- pollution reduction,
- biotic support,
- self-sufficiency,
- stewardship, (maintenance and management')
- robustness and resilience. (the ability of a place to ‘bounce back’ from unexpected external change, while the latter concerns its internal flexibility to accommodate change without excessive physical disruption. adapt to future change to have better sustainable prospects)

**Close encounters with buildings**

According to Gehl, Kaefer & Reigstad (2006), Ground floor facades or plinth is the component of the building that acts as a bridge to connect buildings and people. Therefore, the ground floor facades should welcome people and interact with people in daily life and the location. Nowadays, many buildings’ facades are closed and self-contained while the people demand transparency, versatile and safe cities. Gehl, Kaefer & Reigstad (2006) divided activities between buildings and pedestrian into four groups: Walking alongside buildings, standing, sitting and engaged in activities. Diversity of functions is also very important for the ground floor since it exchanges experiences between inside and outside which make the city more vibrant (Gehl, Kaefer & Reigstad, 2006; Adam & Tiesdell, 2012). Figure 2.2 demonstrates six types of interaction between inside and outside.

![Figure 2.2](image.png)

**Figure 2.2** From physical interaction between inside and outside (section a and b) to a more or less visual permeability (section c to f). Studies by Tooma’s Gil Lopez (Gehl, Kaefer & Reigstad, 2006).
The research was conducted on seven case studies to identify the relationship between the ground floor facades and public life. The seven case studies are Copenhagen, Madrid, Melbourne, Oslo, Almere, Java Island and Freiburg im Breisgau. Gehl, Kaefer & Reigstad (2006) summarised the lesson learned from the case studies into important factors for the planning process in figure 2.3.

**LIST OF KEY WORDS**

<table>
<thead>
<tr>
<th>SCALE</th>
<th>TRANSANSPIRENCY</th>
<th>FUNCTION</th>
<th>EXT CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>MANY UNITS - VERTICAL DIVISIONS</td>
<td>TRANSPARANITY</td>
<td>EXCHANGE</td>
<td>CLIMATE</td>
</tr>
<tr>
<td>Minimum 10 units per 100 m provides an interesting facade and a vertical facade expression that shortens the perception of distance</td>
<td>Visual contact between inside and outside increases the street space as well as opportunities for interaction with buildings</td>
<td>Function and content with street appeal</td>
<td>Utilise good sun conditions avoid wind problems</td>
</tr>
<tr>
<td>RHYTHM Narrow units, many doors and a wide mix of functions provides a dynamic rhythm in the streetscape</td>
<td>LIGHT IN DARKNESS Night lighting maintains transparency</td>
<td>FUNCTION AND CONTENT Rich variation of functions to create life and a feeling of security at any time of day or night</td>
<td>LIGHTING Good evening and night lighting also in street space</td>
</tr>
<tr>
<td>SPACE SCALE The width of the street relative to surrounding buildings, for example, a scale of 2:1, 1:1 or 1:2</td>
<td>ACTIVE FACADES Interesting window displays Many entrances The opportunity to observe ground floor activities</td>
<td>EDGE ZONES Detailing of the base of buildings Displays and vases on the street Soft edges</td>
<td>TRAFFIC Wide sidewalks have few breaks and are accessible to all user groups</td>
</tr>
<tr>
<td>DESIGN TRANSPARANITY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UNBROKEN FACADES No gaps in the row of facades Keeping the facade in line with the other facades on the street</td>
<td>FAÇADE KLEUR Doorsteps, edges to sit on or stand next to, benches, niches and columns enrich sensory impression and enhance opportunities for stopping and staying</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATERIALS AND DETAILS Wealth of details Quality materials Good sensory experiences</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 2.3** Factors to consider and include in the planning process to create living city streets (Gehl, Kaefer & Reigstad, 2006).

In addition, the guideline for project development has been realised to steer the direction of the ground floor design of buildings (Gehl Architects 1998 & 2000). Main points of the guideline are:

- Respect the facade line of surroundings
- Establish a variety of ground floor functions such as shops, restaurants, cafes and other active amenities.
- Place at least 10 doorways per 100 metre of facade length to create lively street and variation at eye level.
- Design minimum ground floor height of 4 metres to provide sufficient space for the public activities
- Create design requirement for the facades including details, variation and verticality. For example, 60% of the facade surface must be transparent glass, edge zone between 0.7 to 2 metre for stopping and activities, providing good lighting during the night time, shop and food service must have display window at least 80% of the facade plane area.

Apart from the criteria and factors above, it is also important to analyse where the buildings with good plinth can play the role. When the building is planned to build around the places people frequent, important facades of the building should be defined to encounter with people.

**City at eye level**

Karssenberg & Laven (2016) introduces the lessons from the street plinth through many projects and workshops, The lessons are divided into three main categories: software, hardware and orgware. In total, there are 80 lessons from the book, the paper only selects relevant lessons for the research.

1. Software - the most important part among three. It involves the users, the experience of the city, land use, zoning and the programme of the area. The software consists of:
   a. Experience - in order to create a good experience in the city, sense of place and good plinths design are essential. It focuses on the life between buildings, making a distinctive area and improve connectivity. Small shops with open facade should be created.
   b. Pedestrian flows - the buildings should link new plinths to the urban circulation as well as creating accessible open plinths. Entrances of the buildings should be semi-public space and safe from the pedestrian perspective.
   c. Programme - Apart from adding shops on the ground floor area, other functions like small businesses, co-working space, food and restaurants, care, leisure, fashion, schools and housing, should be included as well. There should be a new function every 10 metres on the street since a variety of functions is key.
   d. Market as places - the market is the best places in the city for people to meet and it enhances the experience in the city. It is also important for small-scale vendors and supports the local community.
   e. Placemaking - Buildings are built for everyone, not some groups of people. Public life should rather be prioritised than private interest. It is important to include people in the development phase since the goal is to create street life. At least 10 activities should be included in a good place.
f. Wayfinding - It is the easiest and most effective way to encourage people to the destination. Use of local heritage, personalities, and characteristics of places to design wayfinding symbol helps to enhance the character of the place.

2. Hardware - the physical appearance of the buildings and streets. Implementation of the people-centred approach provides more public space. Consequences of supportive functions on the ground floor of office buildings are blank space on the ground floor that harms area around the building.
   a. Plinths - diversify of facade surfaces, rhythms and functions help to keep eyes’ attention. The ground floor height should be at least 4 metres. Corner plinths should have both high and open facade. There should be minimum of 10 doors per 100 metres of the facade. Sudden setback, large scale columns and closed facade should be avoided. The building should be designed for mixed-use, multi-purposes and non-specific to support many functions over time and encourage flexibility.
   b. Street as places - there should be a balance between fast and slow transport, including pedestrians, motorised and bicycle. Lighting, trees, street furniture and artistic cement paving could create intimate street. Barrier on the ground floor should be re-designed into public space with markets, parks, playground, commercial and cultural plinths.
   c. The hybrid space - it is the space to interact with users. A clear distinction between public and private space is not preferable but purposing blurry edge instead. Shops can consider putting products outside, next to the facade while cafe and restaurant can add some seats and tables outside to create a hybrid area.
   d. Residential plinths - The plinths of houses can be enhanced by veranda feeling space creating a social hybrid zone like courtyard and garden.
   e. The soundscape - great streets should provide good variation, complexity and acoustic balance of sound. Three important principles to design the sound in the public space are absorbance, diffusion and masking. Terrace, workshop, open plinths can generate rich soundscape on the ground floor.

3. Orgware - Not only the design and economic approach helps to enhance the plinths and street quality, but also good management, maintenance and organisation of functions are crucial.
   a. Long-term strategy and quick wins experimental - The four elements of the combination are regulation, stimulation, changing the missing links and a network campaign
   b. Street coalition - Informal self-organised cooperation of the community can enhance the processes, let the community take bigger challenges inviting new
ideas activities and type of management to stimulate the use of human scale, 
variety, high density and flexibility.
c. Reuse vacant plinths - vacant plinths allow the buildings to be tested with the 
new activities in order to find the new availability.
d. Place management - place manager links the places to property owners and is a 
key to the successful place. The strategy should be shifted from the building 
logic to the street logic. Value-added is created by a balance of portfolio through 
three strategies: revenue, quality and image.
e. Costs and benefits - Good plinths design starts with a high upfront cost, but pay 
off better benefits in the long-term. It is important to find partners for the 
pre-investment and make clear that the functions of plinths are aligned with the 
owners’ interests.

2.3 Theoretical framework

In this section, theoretical framework is constructed from the synthesis of the results from the 
literature review. The purpose of the framework is to show which part of theories need to be 
further researched in the empirical and operations phases. The framework is used to answer 
the following two sub-questions:

- What values and criteria are important to be assessed regarding the interaction?
- What approaches can improve the interaction between the building and the city and 
what are the assessment techniques can be implemented?

After collected and studied through the selected literature, the two-dimensional cross 
over model is constructed. According to figure 2.4, theories from the corporate side, including 
corporate strategies, added-value by corporate real estate and added value for good design 
are places on the horizontal alignment. On the other hand, the theories from the city side are 
constructed on vertical alignment. The theories from the city side are close encounters with 
buildings, successful places and city at eye level. Each of the theory is divided into several 
sub-topics depending on the theory. The purpose of the two-dimensional model is to find the 
shared concept, topic, keywords and findings with the theories from two dimensions. The topic 
that shares those components have some theoretical connection over the topics. The result of 
the model is discussed in this section

For corporate strategies, it has ten overlapped topics with the theories from the city 
side, three with encounters with buildings, two with successful places and five with the city at 
eye level. It is noticed that a sub-topic, a standardisation strategy, does not relate to any other
topics from the plinth theories. For the topic of added-value by corporate real estate, the most overlapped sub-topic is increase innovation with six connections, followed by promoting marketing and sales and increase employee satisfaction situated at five overlaps with the topic from the vertical dimension. However, the sub-topics like increase productivity and reduce cost do not have any connection with plinth theories at all. For the added-value of good design topic, sub-topics of social value and use value are the most outstanding topics overlapping with eight and seven sub-topics from the other dimension respectively while the exchange value only overlaps with Orgware from city at eye level.

Moving on to the vertical dimension, sub-topic of function from close encounters with buildings has six connections with the corporate theories. For the successful places, places meant for people connects to six sub-topics from the corporate side. On the other hand, well-connected places and distinctive places only overlap with one sub-topic each, which is social value and cultural value respectively. Lastly, city at eye level has the most overlapped topics among all theories, seven connections for software, nine connections for both hardware and orgware.

After the connection between the topics has been linked, the classification of the level of interaction is identified to distinguish those relationships between the topics into the particular interaction between the corporation and the city. Figure 1.5 and 1.6 from chapter 1 are used as the base model for the classification. As mentioned before, the interaction between the corporation and the city is divided into four main groups: organisation and public community, organisation and urban infrastructure, accommodation and public community, accommodation and urban infrastructure. Figure 2.5 identifies the connection between theories form the two-dimensional model (figure 2.4). Blue stands for the group of interaction between the organisation and public community, yellow represents the interaction between the accommodation and the public community, green illustrates those connections in the group of organisation and urban infrastructure, orange is the group of the interaction between the building and the city infrastructure. The classified connections of the theories are shown in figure 2.6.
Figure 2.4-1: Two-dimensional model of corporate real estate theories and theories for the city (Own illustration).

<table>
<thead>
<tr>
<th>Corporate strategies</th>
<th>Added value by corporate real estate</th>
</tr>
</thead>
<tbody>
<tr>
<td>An incremental strategy</td>
<td>A value-based strategy</td>
</tr>
<tr>
<td>Close encounters with buildings</td>
<td>Scale</td>
</tr>
<tr>
<td></td>
<td>Design transparency</td>
</tr>
<tr>
<td></td>
<td>Function</td>
</tr>
<tr>
<td></td>
<td>Extra condition</td>
</tr>
<tr>
<td>Successful places</td>
<td>Places meant for people</td>
</tr>
<tr>
<td></td>
<td>Well-connected</td>
</tr>
<tr>
<td></td>
<td>Places of mixed-use and varied density</td>
</tr>
<tr>
<td></td>
<td>distinctive places</td>
</tr>
<tr>
<td></td>
<td>Sustainable, resilient and robust places</td>
</tr>
<tr>
<td>City at eye level</td>
<td>Software</td>
</tr>
<tr>
<td></td>
<td>Hardware</td>
</tr>
<tr>
<td></td>
<td>Orgware</td>
</tr>
</tbody>
</table>

(Own illustration)
Figure 2.4.2: Two-dimensional model of corporate real estate theories and theories for the city.
**Figure 2.5** Classification of the interaction between the corporation and the city (Own illustration).
Figure 2.6 An overview of the theoretical framework for the research (Own illustration).

According to figure 2.6, the classification of the two theories are determined in four following categories

**The interaction between organisation and public community**

In order to facilitate the interaction between the organisation and the community, the organisation should be flexible to accommodation change and respond to the requirement of the people from the public’s point of view. The focus on users experiences, users satisfaction, users participation from both communities should be emphasised. The public space facilitates the corporations to be better accessible and interaction. Structure of the relationships is formed such as informal cooperation, place management, place making and street coalition. Vision of the people-centre approach and enhance identity strengthen the level of the interaction. Corporations require high upfront investment cost for better long-term benefits and higher assets value which also affect the area around the corporation as well.
The interaction between organisation and urban infrastructure

This section explains how the corporation at organisation level interact with the city in the urban infrastructure aspect. Location choice is one of the most important factors for the corporate strategy. Area with dense functions, people and connections is preferred by the corporation. The four core visions that help to improve interaction are flexibility, transparency, connectivity and safety which results in flexible and active facades, accessible plinths, cultural plinths integrated with the street and the hybrid zone to share and exchange activities with pedestrians. All of these benefits are integrated with the street and area around the building. Lastly, the organisation should encourage the concept of sense of place, to support the characteristics of the area around the building.

The interaction between accommodation and public community

The interaction at this level focuses on the architecture and public people. To support the interaction, the corporate building should use the physical design of the building to shape people's behaviour. The building should provide a mix-used functions, public space and a variety of activities to attract people to the building. Open facades design improves transparency, safety and accessibility from the public’s perspective. Plinths should be flexible for the uncertainty future change.

The interaction between accommodation and public infrastructure

Lastly, this section explains how the architecture can interact to the urban area. Having a variety of mix-used functions in the building, especially on the ground floor, can diversify the activities on a particular street. For instance, the functions are shops, food, restaurants, health care, leisure, co-working space and schools. Lighting and building climate can provide a good environment for the street as well as offering safety for the pedestrian by design transparent and active facade. The scale of the building, height of the plinths and frequent of door entrances should be optimised for people. The hybrid space is needed in order to support interaction between the semi-private space and semi-public space.
2.4 Research Method

This thesis is divided into two main phases according to table 2.4. The first phase is empirical research with three combination group of data collection. Firstly, the theoretical study by exploring the existing literature. Secondly, case studies analysis from the samples including interviews with experts and document analysis. Thirdly, exploration of assessment techniques is conducted. Combining these three groups, this part of the research aims to create more understanding of the interaction between the corporate office building and the city linking theories and real cases together. The steps of the research can link to figure 2.7 where it starts with problem definition, constructing research design, realising data collecting method, scoping samples, writing a proposal, collecting data and processing the data.

<table>
<thead>
<tr>
<th></th>
<th>Operations Research</th>
<th>Empirical Research</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>Operation-related</td>
<td>Knowledge-related</td>
</tr>
<tr>
<td><strong>Aim</strong></td>
<td>Creating an artefact</td>
<td>Producing knowledge</td>
</tr>
<tr>
<td></td>
<td>Changing situations</td>
<td>Formulating explanations</td>
</tr>
<tr>
<td><strong>Relevance</strong></td>
<td>Operational</td>
<td>Theoretical</td>
</tr>
<tr>
<td><strong>Subject</strong></td>
<td>Future</td>
<td>Past</td>
</tr>
<tr>
<td><strong>Goal</strong></td>
<td>Improvement</td>
<td>Understanding</td>
</tr>
<tr>
<td><strong>Methodology</strong></td>
<td>Prescriptive</td>
<td>Descriptive</td>
</tr>
<tr>
<td><strong>Science</strong></td>
<td>Formal sciences</td>
<td>Empirical sciences</td>
</tr>
</tbody>
</table>

Table 2.4 The distinction between operations research and empirical research (adapted from Barendse et al., 2012).

After the empirical phase, the development of the assessment tool is conducted by using the lessons learned from the results of the first part. This part aims to design the tools for public authorities and corporate real estate manager of corporations. However, this phase is planned to end at the conceptual design only and the tool will be tested with some sample buildings due to the time limit of the research.
Overall, the thesis of corporations and cities contributes new knowledge of the interaction between sample buildings and cities as well as designing the new assessment tool to measure impacts of the corporate office building in the city. The research is important to theoretical knowledge and can also be applied to the operational level. It studies something that already happened in the past and tends to improve the new construction of office buildings in the future. Considered from all factors, it can be concluded that this research is hybrid research.

Figure 2.9 summarises the research process and the overall structure of the report. The report is divided into five chapters. In the first chapter, the problem statement is identified to find the gaps in Corporations and Cities. Research questions are raised to address what will be studied. The research method is realised to state how the research will be conducted. Moving on to chapter 2, the literature review is carried out to build a knowledge foundation for the researcher. This part can be done through an extensive literature study. There are three themes of theories which are Corporate Real Estate Management, Urban Area Development and Assessment Techniques. Chapter 3 is the phase of acquiring insights from the case study and interviews. The case study is divided into core cases and additional cases. Core cases are focused as the main study of the research which all the factors, qualitative focused, values and variables will be investigated while additional cases will be studied to support the core cases and broaden the view of the study, quantitative focused. This step is carried out by studying through documents and archives. For interviews, semi-structured interviews with experts from
the corporations, designers and public authorities will offer great opportunities to collect valuable data from the organisations. Sets of surveys are designed and will be conducted for the sub-cases. According to chapter 1.2, each part of the data collection individually relies on each set of sub-research questions.

In chapter 4, the process of assessment tool design starts here. The results from the collection of data are analysed used for the tool design which should partly answer the research questions. All of the data is analysed by Atlas.ti, the software for labeling codes and link the connection of multiple set and types of documents. The tool design process is influenced by the study of assessment techniques in the literature review. The expected outcome of this chapter is the prototype of the assessment tool to measure the impacts of the corporate office building to the city. Lastly, chapter 5 is about the evaluation & discussion of the whole thesis. This part is expected to answer the research questions and solve the problem of the research. The chapter ends with the conclusion.
2.5.1 Case study selection

In this section, criterion for the case selection is elaborated. By implementing the data from the literature review and theoretical framework, factors from the contexts, organisations, physical conditions and community requirements are taken into account to broaden the area of case study and make the results comparable. The criterion for case study selection is explained in the following section.

**Type of building: Corporate office building**

The research focuses on the investigation of office buildings that are mainly constructed to be occupied by corporations. The main function of the buildings should be office area, although other mixe-used functions are also preferable. Home offices, small offices and offices that are part of the factory or warehouses are not taken into consideration to make sure that the focus of the study is on the track.

**Type of corporations**

Professional corporations, multinational corporations, governmental corporations and non-profit corporations are included in the field of the research. For the additional case, different types of corporations should be selected to get varied results. However, small scale companies are excluded in the research since the buildings’ impacts are insignificant, such as startups, entrepreneurs and small local businesses.

**Context: cities in the Netherlands**

The focused area of the research is big cities in the Netherlands to keep the contextual similarities in the aspects of policy, economics, politics and society. The cities are limited to be in Amsterdam, Rotterdam, The Hague and Utrecht since those cities are concentrated by many office corporations, people, public transport connections and public activities.

**Location choice**

Corporations prefer to be located in the inner city and central business district. Corporate office buildings that are located in the urban fabric area, close to the pedestrian street and public transport system are preferable. Buildings situated individually in the large field, industrial area or outskirts of the city are not chosen because of the fact that they are difficult to be compared and the interaction to the city is unobservable.
**Corporate real estate strategies**

O'Mara (1999) clearly demonstrates concrete examples of building characteristics from the three types of corporate real estate strategies: An incremental strategy, a value-based strategy and a standardisation strategy. However, a standardisation strategy does not have any connection to any theory from the city side. Therefore, it is excluded. The buildings with shape that are matched with an incremental strategy and a value-based strategy are selected.

**Plinths and public space**

Corporate office buildings for the cases should be designed with multi-function plinths and provide public space to the city.
3. Research plan

In this chapter, the research plan for the whole master thesis is explained from the beginning to the end of the research. This includes an explanation of every main task, milestone and deliverable. In total, the research is divided into four different phases using “P” as milestones: conceptual phase, theoretical phase, empirical research phase and operations phase. Every phase ends with the presentation, represented as P1, P2, P3 and P4. At the moment of this section being written, the research is reaching the end of the second phase. Figure 3.1 illustrates the graduation plan with main tasks in accordance with timeframe and milestones.

![Figure 3.1 Graduation plan (own illustration).]

3.1 Phase 1: Conceptual

The first phase starts with a topic selection which takes around a week and later on the topic is realised which could take around a month. In the meantime, relevant literature, related to the topic, is studied to build up the knowledge for the author. This leads to the problem definition, realising research questions and initial research methods in which they are presented on the P1 presentation.

3.2 Phase 2: Theoretical

Moving onto the second phase, contents that were presented in P1 are not finalised yet. Feedbacks from the presentation are taken into account to improve research questions, problem definition and research methods. In this phase, research questions are identified more details including additional sub-research questions. The process of defining research questions ends at the end of November. The aftermath of the problem definition is the knowledge gaps. This leads the research to the process of literature review which is conducted for the whole
phase. Once the literature review has started, the theoretical framework can be developed from that point until the end of this phase. For the methodology, it is not fixed yet and can be revised in accordance with other tasks. The methods are developed for the whole phase. Lastly, since the research needs cases, it is important to define the criteria for case selection in the second half of this phase.

3.3 Phase 3: Empirical research

According to the research proposal presented in P2, this phase focuses on further empirical research following the research proposal. The main task in this phase is together relevant documents, mostly related to the cases and situated cities, and also study through those documents. There are also preparation tasks for the next phase to be done, including interviewees selection, interview protocol drafting and survey form creation. If any surveys or interviews can be carried out in this phase, they should be started around March to spare time in the next phase for analysis. The progress of data collection will be presented for the P3.

3.4 Phase 4: Operations research

For the last phase, the research focuses on the operation part. More than half of interviews, surveys, and documents study should be done at the end of phase 3 although some interviews and surveys still can be conducted at the beginning of this phase. All of the findings start to be analysed while the theoretical part and empirical research are linked together. After the analysis, the assessment tool is developed. Lastly, conclusion and reflection are finalised at the end of this phase and which suppose to answer the research questions and serve the purposes of the research. The outcomes are presented in P4.
4. Reflection

The graduation lab started with an introduction of graduation themes in the first academic week. Within the four main themes, a vast array of topics were presented and the topic needed to be selected as well as the first mentor at the end of the first week. The process went very fast and it became difficult for the topic selection since there were so many interesting topics. As I was an architect before, I am interested in the topic related to architecture, buildings, the city and people as users. My personal goal is to conduct research that helps to improve the quality of buildings from the managerial perspective and steer them to be more responsive to society. I found the research topic of “Corporations and cities” in Real Estate Management theme and felt that this is the topic I had been looking for. Therefore, the topic was selected.

At the beginning of the research, the process went smoothly and I actually enjoyed it. The research problems and the research questions were determined precisely because I knew what I really want to do for the research and had a clear goal for the research. Moreover, several cases were raised in the discussion with my mentors which was too early for the cases to be determined at those stages. However, I experienced that the literature review was the most difficult part of the theoretical phase. There are many theories can be found from both the corporation side and city side but lack of connection between the topics. It was difficult to link them together and steered them with the conceptual framework as well as utilising them for the further steps of the research. Although the difficulties obstructed me in this phase, I still enjoyed studying the topics I am interested in and I am very happy with the current progress of the research.
References


Gorter, M. (2019). Iconic projects as catalysts for brownfield redevelopments - The developers' perspective towards the conditions of iconic projects that incite brownfield redevelopments. (MSc thesis), Delft University of Technology, Delft.


Nita, C. (2013). Next Batam: fostering a resilient growth strategy. A combined transit oriented development and industrial clustering strategy, in order to create new investment opportunities and competitive advantages for the city of Batam, a special economic zone affected by the global crisis. (MSc thesis), Delft University of Technology, Delft.


