

THE OFFICE COMMUNE

A research into financial feasibility and real estate development models for flexible office concepts

Jeroen Ketting 4168860

Msc Real Estate & Housing, Afdeling REM

Technische Universiteit Delft, faculteit bouwkunde

16 September 2013, P2 rapport v2



Colofon.



Graduate

Name: Jeroen Roderick Ketting
Adress: Pluymptot 15
2611LX Delft
E-mail: jeroen.r.ketting@gmail.com
St. E-mail: j.r.ketting@student.tudelft.nl
St. Nummer: 4168860
Document: P2 report
Date: 16 September 2013

Mentors

1st mentor: Dr. Ir. H.T. Remøy
mailadress: H.t.remoy@tudelft.nl
2nd mentor: Ing. P. De Jong
mailadress: P.dejong@tudelft.nl

Graduation company
CODUM BV,

Technical University Delft

Faculty: Architecture
Academic department: Real Estate & Housing
Graduation Lab: Real Estate Management
Lab coördinator: Dr. Ir. D.J.M. Van der Voordt
Adress: Julianalaan 134
2628 BL, Delft
Postadress: Postbus 5043, 2600 GA, Delft
Telephone: +31 (0) 15 2789 111
Website: <http://www.tudelft.nl/>

Keywords

Transformation, Freelancers, Creative class, Vacancy, Feasibility,
Exploitation costs, Multi-tenant concepts, Flexible office concepts,
New ways of working

Preface.

This p2 report is written as a research proposal to graduation within the Real Estate Management lab. This lab is part of the department of Real Estate and Housing at the Faculty of Architecture at TU Delft.

This report contains the proposal of the research that will be performed in the final semester. The second reference moment (P2) serves as a the final go / no go of the graduation route. This report is intended for my supervisors, for people interested in this phenomenon to give them insight in what I am going to examine and to demonstrate the academic relevance. A clear image for professional parties who want a deeper insight into the emergence of office commune's, and finally for myself to clearly define what I want to explore.

My gratitude goes out to dr. Ir. H.T. Remøy, ing. P. De Jong, Dr. Ir. D.J.M. Van der Voordt for their supervision and guidance. I would also like to thank ir. P. Koppels, ir. G. Zielstra, P. Groenen, ir. M. Fernhout en ir. R. Arkenbout for their input.

Summary.

Introduction

The way we work is changing, where it once was normal to work from 9:00 to 17:00 each day in the same office for years on end, the new generation now job-hops every 3 or 4 years and are productive when we plan work ourselves. Currently this new way of working is manifesting itself through the emergence of 'third workplaces' in the city, such as: Starbucks and Coffee Company.

On the other hand you have the decline of predominant economic sectors leaving behind the monuments of their era, in this case, office buildings. Currently 7,8 million square meters are vacant (CBRE, 2013), this amount is expected to double in just a few years time. These circumstances call for a new way of working and functioning of office buildings.

New developments are trying to regain a grip on where people work. What could be an office typology that stimulates organisations to work together in the network organisations of tomorrow and what will it look like?

In this process we are shifting from an supply driven market to a demand orientated market, but how can developers facilitate in defining a building suited for multiple small users each having their own demands?

Main research question

The main research question of this thesis is: "How can real estate developers generate a positive cash flow with the transformation of vacant buildings into an office commune, can you make a tool to test financial feasibility in the initiative phase?"

Methods

The main approach in this research will be inductive research. To gain specific insights in new office commune concepts I am going to perform 3 qualitative oriented case-studies. The data will be gathered with, literature reviews, interviews, document analysis, observations and in the end an (expert) focus group to validate the findings. The interviews will be geared towards important stakeholders linked to the inception of the case (development of the project). The document analysis will consist of financial data, operating- and building characteristics linked to each case. The

observations will be performed inside the cases themselves and are to find operating and building use. The final focus group discussion will be with stakeholders from within the academic field and in practice. The discussion is about the real estate development of office commune's and a feedback of findings brought on by this thesis.

Theoretical input

In order to answer these questions literature will be sought from a Corporate Real Estate Management and asset management perspective. The theoretical framework of this research currently consists of,

1. Facility management literature based on the functioning of flexible office concepts.
2. Literature on user preferences.
3. Building Transformation & conversion literature.
4. Building economics literature based on willingness to pay, investment & development costs.
5. Literature on feasibility studies and pre-contractual studies.
6. Literature on investment analysis of real estate development projects.

The chapters each receive theoretical and empirical input. these are combined in the global layout of the thesis. The subquestions form the base of chapter development in the thesis, they consist of.

- A. Office communes
- B. User preferences
- C. Development models
- D. Feasibility
- E. Tool: Transformation potential to office commune

Cases

There will be a total of 3 case-studies. 2 cases are, the Schieblock and de Kauwgomballenfabriek, I am still searching for the last one. Cases have the same overarching flexible-multi tenant theme but are very different, they are selected for these differences.

Final result

The final result will be a tool to test transformation potential of a vacant office building to an office commune. This thesis will add knowledge to feasibility studies and will aid decision-makers in transformation projects to office communes.

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1. Introduction.

1.1 Research introduction

1.1.1. Motivation

Personal motivation

After my graduation as a bachelor of the built environment at the Hanzehogeschool in Groningen I was still left with a great deal of questions. During my internships I came into contact with Jan-Willem Andriessen (Redres BV) and later with Roderik Mackay (Office-Up BV), both passionate with transforming the built environment and unhappy with 'traditional' ways of property development. I became infected with their enthusiasm. My choice to follow-up in Delft was to learn more about the arguments behind the phenomenon of transformation.

The goal was simple, learn more about transformation. Meanwhile in Delft more and more questions about this subject rose and I came to learn that transformation had a multitude of aspects and causes. Where I previously thought the office market was the first one dealing with problems of vacancy it became clear that vacancy is seen throughout time. In doing this master thesis the hardest thing for me was that a lot of choices have to be made, will I focus on transformation of the housing stock, vacant offices or cultural heritage? I decided to find out more about the transformation of work, meaning, the ways of working as we know it. Macro economists are raving on about 'the rise of new creative class' and facility managers about 'new ways of working', I am curious to find out how much of this is true and what part I can play in the future developments of work.

Learning aims

The purpose of this research is providing insight into flexible multi-tenant business collective concepts. I hope to find out more about the financial feasibility of transformation developments, after all, money serves as the 'reality check' if a plan is feasible or not. In addition to the financial feasibility, of utmost importance are the buildings themselves. Educated as a structural engineer my added value (and with it the added value of this thesis) will be in the field of property management and development.

1.1.2. Research domain, scale and scope

This graduation proposal is written from the perspective of Real Estate Management (REM). Corporate and public real estate management is the management of a real estate portfolio by aligning the portfolio and related services to the objectives of the organization, the needs of the real estate users and other stakeholders (REM, 2013).

Within the domain of real estate management a distinction is made between Public Real Estate

Management (PREM) and Corporate Real Estate Management (CREM), the difference being that public steered by public organizations and Corporate by private parties. These public and corporate counterparts have different goals based on the context in which they operate. Corporations get their income mostly from consumers willing to pay for the services provided; governments usually are funded by the elaborate tax-system in the Netherlands. Corporation are also subjected to a competitive environment. Within the domain of Corporate Real Estate Management the subject of office commune's is located, this implies that the development and management of office commune's are subjected to the same restraints as similar corporate led real estate.

Different approaches to Real Estate Management are possible by owner, location or function. This thesis is written with a predetermined function in mind, a corporate function subjected to market conditions. Within CREM there is the office, retail, housing and leisure- market. This thesis focusses on transformation to flexible office concepts, so the office market, employing people from the tertiary and quaternary sector. The studying of office markets can help real estate decisions, from an owners perspective as well as a location perspective (REM Dictaat, 2004).

Definition of an office commune

The supply of 'new flexible office concepts' is growing, besides free-lancers also employed people increasingly work outside of the office. A concept range is starting to crystallize ranging from anti-squatting budget friendly and temporary office communities, cooperation spaces designed for free-lancers to business centers like regus & the world trade centers, and then there are com-

panies with a general oversupply in square meters looking for tenants in the flexible outer shell of their building (Betlem, 2013).

To determine what is going to be researched a definition is necessary. Note that, this is not an ideal translation but will guide this research by providing common grounds for argument. The metaphor of commune is based on the notion that: "A commune is an intentional community of people living together, sharing com-

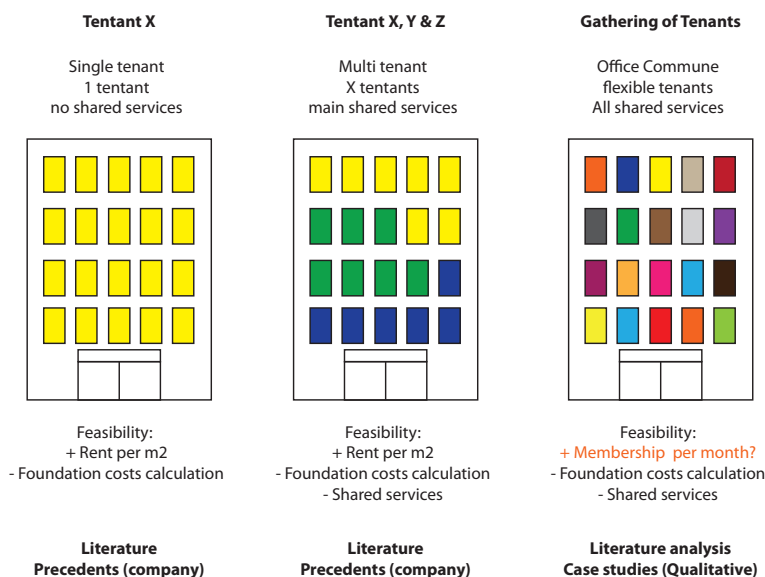


figure: 1. Differentiation between single-, multi- and commune office concepts. (own. il.)

mon interests, property, possessions, resources, and, in some communes, work and income". With this in mind the community is not that people live together but that they work together and (to some extent) share the benefits brought by sharing of coming resources.

The definition in terms of this research therefore is: *"A multi tenant collective concept designed to provide office-space for payment to free-lancers and micro business"*. In figure: 1 the differences between the forms of tenancy are depicted. This research will focus on the latter concept, the office commune.

1.1.3. Problem analysis

Property development as we know it is based on economic growth and bluntly put: creating new buildings. Since the reconstruction period that started post world war 2 there has been an explosion of population in the Netherlands, 8.879.000 people in 1940 versus 16.615.000 in 2010 (CBS, 2013). The population almost doubled and traditional development was geared towards suiting the needs of these people in terms of housing, working and recreating. Current prospects estimate an increase in population in 2050 of 1 million. This means roughly 1 million people more in 40 years time versus the previous growth of 8 million in 70 years time. This is a drastic deceleration and will fundamentally change the way we (should) think about real estate development. The time of drawing board planning, the megalomaniac building models, building on final images and the thought that everything was manufacturable has come to a halt. Since the 90s the government financed spatial development, after the privatization of social housing companies in 1994 we leaned more on investments of large private companies like investors, developers, social housing corporation and constructors. They borrowed money on the basis of an almost certain increase in value, this mechanism has stopped working (van Poelgeest, 2013).

Societies change throughout time, the last twenty to thirty years we have seen a dramatic transformation in the economic, social, and land-use structure of many major Western cities as a consequence of deindustrialisation, changes in transport and communications technology, the rise of business & financial service economy and the creative industries (Hamnett & Whitelegg, 2005). This transformation is partly fueled by the change in demand for space brought about by emerging forms of business services, a shift from industrial production to cultural production and consumption, and the associated changes in occupational structure. This basically implies that change is initiated by a derogation of the predominant economic engine. The time of deindustrialisation was accompanied by large-scale closure and abandonment of old factories and associated decline of the 19th century transport infrastructure. Real estate that had lost its function.

So the current real estate crisis is part cyclical and part fundamental. Cyclical because the western globalized world is dealing with a financial crisis which has a direct impact on the real estate markets, but fundamental because of a number of societal changes. This 'perfect storm' of conditions forced real estate developments to a standstill, however, some new concepts are thriving and beating the status quo. Among these concepts are office commune's, facilitating flexible office space for an entire range of professionals.

Flexibilisation

The current process of Flexibilisation is two fold, on the one hand the type (on a mesoeconomic level) of work that is valued is changing, on the other hand the conditions of office use are shifting to 'the new ways of working'. Both aspects are influenced by the digitalization of our society. This Flexibilisation is partly directly attributed to the increase of Free-lancers, but also employees in wage labor are working more and more outside of the office. This new flexible workforce consisting of Free-lancers and flexible employee's is looking for new concepts outside of the office or their garret (Betlem, 2013). In this process the need for 'traditional' office space is changing rapidly.

Modern life is increasingly defined by contingent commitments. We progress from job to job with amazingly little concern or effort. In virtually every aspect of life, weak ties have replaced the stronger bonds that once gave structure to society. Rather than live in one town for decades, we now move about and it seems that flux and uncertainty themselves seem to be part of the everyday norm (Florida 2004 pp 7). We traded job security for autonomy.

The conditions of a workplace have changed greatly over the years. The impact of communications media has made us to work more independently and flexibly, where it wasn't possible to work anywhere but your desk today you are always connected and online, even in say a park. This method is frequently dubbed as "the new way of working". This generic term however has no single definition. Important consequences of this are that employees are judged on results rather than presence, in turn labor relations become more flexible, the office serves as a meeting and there is room to work on a 'third place' (Arkenbout, 2012).

Ray Oldenburg, a sociologist, wrote in 1989 about the places between office and home. Gradually we see that firms established provisions to recognize these places. These places Oldenburg called 'third' places. The third place is a social, diverse, synergistic environment with a multidisciplinary character (Oldenburg, 1989).

In addition to being fairly compensated for the work we do and the skills we bring, we want the ability to learn and grow, shape the content of our work, control our own schedules and express our identities through work. And companies of all types, including large established ones, are adapting to this change by striving to create new workplaces that are more amenable to creative work. (Florida, 2004)

Digital /creative revolution

Today, many of the world's cities are thus facing agonising periods of transition. Old industries are disappearing - value added in cities is created less through what we manufacture and more through the application of new knowledge to products, processes and services. The factors that once shaped City development - transport, rivers, proximity of raw materials - have become less relevant (Verwijnen, 1999).

As we approach the 21st century there is a widespread understanding that it will be the creativity and inventiveness of our cities that will determine the future success of Europe and elsewhere. But surprisingly little is known about the conditions for creativity and innovation to emerge. This is a complex crisis that cannot be solved by traditional urban planning and policy. The actors in the new cultural industries generally consist of a multitude of small offices and studios that increasingly operate with multimedia content, rely on the information technology and are heavily networked (Verwijnen, 1999).

Transformation & Vacancy

Present day offices are becoming increasingly vacant in the Netherlands. Current (measured) vacancy consists of approximately 7,8 million square meters (CBRE, 2013), this number is expected to rise to an astonishing 14,8 million square meters in 2016 says managing director Bert Rietmeijer of CBRE. The vacancy will rise to a total of 30% of the total office stock in 2016. Possibilities lie in transformation to new functions, these dramatic changes in land use do not happen of their own volition, of course. There has to be a demand for new uses and, when the private sector is concerned, they have to be profitable. It is suggested that the underpinnings of the demand for new uses has come from a growth of business, financial, and creative service employment and the associated change in occupational class structure of major cities (Hamnett & Whitelegg, 2005).

The current office market is characterized by a growing disbalance between 'a-locations and b-locations'. Vacant office buildings in a good location have a decent chance of being rented or sold

in the market. The problematic vacancy occurs mainly in peripheral and mono functional business locations. Investors hold these vacant offices on their balance sheet for an unrealistically high amount.

A complicating factor is the dynamics of society and organizations, whereas buildings are rather static. It often occurs that even before a building is finished the organization and processes that have to be accommodated have changed already drastically. Clients, designers and real estate managers have to cope with many uncertainties.

In 2012 there has been larger than ever share of redeveloped offices. In 2009 PropertyNL registered a measly 8.000 square meters of office space that was redeveloped, in the recent years this amount grew steadily to the 175.000 square meters redevelopment in 2012 (Boiten & Wessels, 2013). Amsterdam is the absolute leader in withdrawal of unused office space with 90.000 m². Important thing to note is that the gap between courant and non-courant offices is growing, the underprivileged offices will not spontaneously become courant with rent incentives or lower rents.

Emergence free-lancers / privatisation (Network organisations)

Nicole Moreno, director of the Neprom called for a targeted approach and called providers of real estate for mapping the DNA of the tenant and can really move the customer needs (Vastgoedmarkt, 2013). A recent survey of the Rotterdam Chamber of Commerce shows that roughly 37.5% of their respondents (Free-lancers) is looking for suitable premises outdoors. The number of self-employed has increased significantly over the past decade, from 500,000 in 2002 to over 750,000 in 2011 (KvK, 2013). Due to the rapidly growing number of these free-lancers the economic importance is growing.

Anno 2013 unemployment is rising and we also see a shift from 'large' companies to Freelance structures and flexible working arrangements, partly because of the current economic times but it also has a structural nature. In tracing these economic shifts, our economy is moving from an older corporate-centered system defined by large companies to a more people-driven one. This view should not be confused with the unfounded and silly notion that big companies are dying off. But the golden years of the rampant development and building of office buildings (2000-2007) are over and a large part of the stock which we left behind is once developed for mono-functional use to suit said 'large companies'. The office stock showed an explosive increase while uptake remained stagnant. In this world it is no longer the organizations we work for, churches, neighborhoods or even family that ties us. Instead, we do this ourselves, defining our identities along the

varied dimensions of our creativity (Florida, 2004).

The study 'all flex, is that a mismatch' of the Chamber of Commerce Rotterdam and Panteia research shows that more than half of the self-employed in the business services sector would like space outside office. Three quarters of them have not found this space. The regular office programs do not fit their wishes, this is a serious mismatch.

This year, for the first time, Dynamis mapped out small transactions (0-500 m²). In the big cities of 250-500 m² office space were examined in the rest of the Netherlands under 250 m². This number shows a steady development. The industry with the most number of let square meters (of small office) is 'ICT and telecom' by 16%. In 14% of cases it is a tenant of the branch "Legal services, accountancy, tax advice and holdings.

Dynamis typifies the market of 2012 as difficult, despite the current market can be characterized by an increasing demand for both flexible office space and flexible leases. (Dynamic, 2013) So opportunities for office owners that respond to these trends.

Summary

There is an increasing demand for a notion of potential and open-ended solutions with a high degree of flexibility, which property developers -in a traditional sense- cannot provide. Buildings that can readily adapt to different and changing programmes and scenarios become necessary to meet the demands of a changing workforce and societal standards (Kelly 1994, pp 448).

Thus, property development may have to abandon its linear approach and extend towards facilitating more service oriented concepts capable of providing said flexibility. This involves stepping outside of the boundaries of traditional property development and taking on more tasks likely to fall under the facility manager. These concepts are emerging and claim to be the answer to societal changes, but is this really the case or are they just advocating old concepts with slight adjustments?

1.1.4. Research questions

Main research question

The main research question of this research will be the following:

“How can real estate developers generate a positive cash flow with the transformation of vacant buildings into an office commune, can you make a tool to test financial feasibility in the initiative phase?”

Sub research questions

This thesis examines transformation to office commune as a possible strategy to cope with vacancy, and to which extent this transformation is an answer to a possible change in demand and the current status quo on the office market. To answer the main research question it has been broken down into smaller answerable sub questions.

A. The office commune

- A1. What are office communes, can you give a clear definition of their functioning?
- A2. How have office communes evolved throughout time?
- A3. Can I make a classification system for office communes based on the different concepts, occupiers, tenant structure and degree of flexibility?
- A4. What are the advantages of working in an office commune?

B. User preferences

- B1. Which professions rent in an office commune?
- B2. What are the push, pull and keep factors of these professions on the scale of location, building and workspace?
- B3. How many people do these professions represent in the total Dutch office market and can a prediction be made about their development in the Dutch market?

C. Development models

C1. In real estate development, what different type of development models are there? Which ones are used in the transformation to office communes?

C2. In real estate transformation projects to office communes, what stakeholder relationship models are there from the perspective of the Real Estate Developer?

D. Feasibility

D1. How do real estate developers conduct feasibility analysis in transformation projects. Of what components do these feasibility analysis consist?

D2. How do real estate developers calculate financial feasibility in development to office commune?

D3. What feasibility factors are important in transformation to an office commune?

E. Tool 'Transformation to office commune'

E1. Can you create a tool which can test vacant office buildings on their potential to be transformed to office commune?

1.1.5. Research objective

Objective

With this research I have two goals. The first goal is to research the financial performance and development model of an office commune by analysing 3 case studies. It is my assumption that a majority of investors and developers simply do not know what the expected operational profits and costs of an office commune can be. By analysing these case studies on their financial performance a realistic depiction of their earning potential can be constructed. By revealing hard numbers on financial performance of an office commune a better insight will help decision-makers in stimulating and initiating similar projects. My goal is to clarify financial performance of office communes. For general office development an extensive amount of empirical evidence is available to base feasibility upon, for office communes there is not. The second goal is to create a tool for 'transformation potential to office commune' with which building owners, developers and other entrepreneurs can quickly test a vacant building on transformation potential.

The tool

The 'transformation potential to office commune' tool will serve as a quick scan with which, building owners, property developers, municipalities and other initiators can test a vacant building on redevelopment potential to office commune. The mapping of the financial functioning (and with that the value) and an analysis of building, location and facility provision will help decision-makers in their initiation process.

As input for the tool I will conduct interviews with developers of office commune's, perform case studies, analyse documents and literature. The final result will be a spreadsheet for the financial feasibility in excel and a checklist towards 'a transformation potential score'.

1.1.6. Scientific relevance & originality

Scientific

In previous years there has been an extensive research on the office building and office work by Gunst & Jong, 1989; Van Meel 2000; Reuser et al., 2005; Arkenbout, 2012. These offices are the result of the industrial revolution, and focussed mainly on performing administrative tasks. The ideas on what office work is have changed, with mobile phones, lap tops, internet and e-mail the employee is not bound to it's cubicle. This research adds empirically to new concepts of office

work and what they could function like. By examining the places the creative class, micro businesses and free-lancers work examples can be generated for future (flexible) office interpretation.

This research follows up on the dissertation 'out of office' by H. Remøy in 2010. It examines transformation as a way of coping with vacant building. In the past numerous transformation tools have been developed, the most relevant ones regarding property developers are listed below.

1. De leegstandsrisicometer (Gereadts & v/d Voordt, 2007)
2. De transformatiepotentiometer (Gereadts & v/d Voordt, 2007)
3. Transformatiemeter voor kerkgebouwen (N. van der Vlist, 2004)
4. INKOS (Bijleveld, 2007)
5. De transformatiemeter: kantoor naar woonzorggebouw (Remøy & v/d Voordt, 2011)
6. Transformatiemeter creatieve industrie (Arkenbout, 2012)

These tools mainly focus on the technical, functional and architectural problem aspects and little to none on the financial, fiscal, juridical and organisational problem aspects. Of this list the INKOS (instrument for costs and profit simulation) scores high on the financial checklist according to Fikse's thesis in which he analyses transformation tools (Transformatietools uncovered, 2008). This thesis will add to the line of tools and have a deeper understanding of the fiscal and financial aspects of transformation to office commune's.

For user preferences research has been conducted for office location in the form of push, pull and keep factors. Classical push- and pull- factors voor the office market are, expansion possibilities, accessibility and exterior representativeness (Louw, 1996; Buck consultants, 1998; Korteweg; 2002, Pellenbarg, 2005; NVB, 2006). In 2010 Remøy researched using a Delphi study these factors for transformation projects. In 2012 Arkenbout has uncovered the user preferences in business accommodation of the creative class in the Netherlands. This thesis will review and use these user preferences and implement them in the transformation potential to office commune tool.

The real estate development industry is the engine of entrepreneurial activity that assembles and applies the financial and physical resources to construct new built space (including the major rehabilitation or conversion of existing buildings). The investment analysis theory of real estate development projects (Graaskamp, 1981; Geltner & Miller, 2007; Ashworth, 2008; Neprom, 2008; gehner, 2011) will be analysed and re-adjusted to test -specifically- transformation to office commune's.

Societal

In the Netherlands there is a high amount of office vacancy, on the other hand the government is diminishing its size and offering more vacant square meters onto the property market. In the same period new ways of working are finding their way into our daily lives and making us work ever more scattered. The 'office-top' stressed the urgency of solving this vacant office-building problem. It is expected that the vacancy in the office market will continue to grow due to above reasons.

Interestingly, the need for space in the small and medium enterprises (SMEs) and self-employed is rising, while on the other hand larger organizations are trying to lower their square meters and rent efficiently. There is a clear mismatch in supply and demand from this point of view; the existing stock does not provide the services required by the creative class, micro businesses and freelancers. The case analysis will collect data that can then be transformed into a transformation potential tool for developers. This tool will clarify financial performance and inform decision makers.

Research into thriving new concepts is essential to inform decision-makers and to facilitate in their search to provide flexible space for the creative class and entrepreneurs. This thesis will encourage key players to take initiatives to transform vacant offices and have part in helping solving not only the vacancy problem but also the mismatch in space required by creatives, micro-businesses and entrepreneurs.

Final result

The final result will be a tool to be used by practice. The tool will provide a quickscan in testing a vacant building on transformation potential to office commune. The tool consists of a financial feasibility model and a quickscan in testing location and building on a possible transformation. Building owners, developers, real estate agents and other entrepreneurs can quickly test a vacant building on transformation potential. This thesis will also provide an exploration of the concept of 'office communes'. For further research the conclusions and recommendations of this thesis can be used. The cases provide an insight in alternate ways of development and flexible tenant structures.

1.2. Research Methodology

1.2.1. Research design

Approach

This thesis will consist of 3 case studies, cases being buildings. To follow a type of approach I have chosen to follow Glaser & Strauss (1967; 1976) grounded theory. The theory develops in phases deriving from multiple sources of data and constant comparison and integration of empirical material. A rough outline of qualitative research of this approach is in the following cycle (Braster, 2000) :

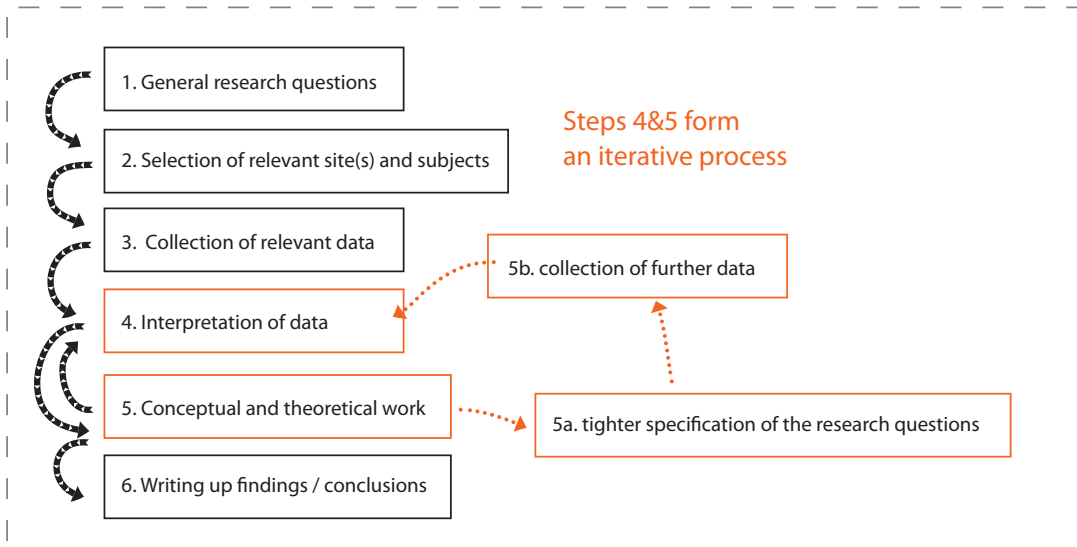


figure: 2. An outline of the main steps of qualitative research

1. Exploration: discovering guiding term ("sensitizing concepts") by approaching a social phenomenon as openly as possible with multiple methodological means.
2. Specification: developing concepts by repeatedly passing through the data collection cycle, analysis and reflection until no new data is found or collected.
3. Reduction: assigning the main concepts that are central to the sought after social phenomenon by searching for coherence between previous found concepts.
4. Integration: the elaboration of the theory by finding interrelationships between the main concepts.

An outline of the main steps of qualitative research are shown in figure: 2. Steps 4 & 5 depict the iterative process and constant readjustment and specification of the empirical generalisations (Bryman, 2012). The outline of this research follows a basic set of rules.

Research methods

In figure: 3 a depiction of the research setup is given. The research model is empty to give an overview of the chapters. figure: 4 shows the completed research model with phases and step by step formulation of the products. The following types of data review and collection will be used.

1. Literature review

The literature review serves to investigate the previous mentions of flexible renting and office commune like structures. There are many approaches to property development and its fundamentals are essential to understand when writing about success factors. The way in which feasibility studies are conducted is also an important to investigate before conducting an own version in respects to transformation. It also seeks to uncover previous approaches property developers had to transformation of vacant buildings in reviewing the literature. Literature review is conducted to catch up to speed on the current state of affairs and set a baseline for empirical conclusions.

2. Case studies

Case studies will be performed in the form a best practice analyses. Observations will be conducted in the different buildings, observation of the facilities and use of the building. The concept will be analysed and how the building is used. From the cases a lot of information will be available. I will collect the facility operations, development costs and building documents. These will be analyzed in a generic way for each building. The information sought after in rough lines consists of the building costs, the costs of purchase or the rent per year, operation costs per year, operational profits per year (rental income) and the occupancy rates and type of tenant.

According to Yin in case-studies the element of inductive statistics is replaced with what he calls 'analytic generalization', in this approach cases aren't the subject of research but is an experiment in the tradition of the laboratory psychology: a case study is an experiment to test a theory (Swanborn, 1996). 'The case-study investigator's goal is not to demonstrate the validity of an argument

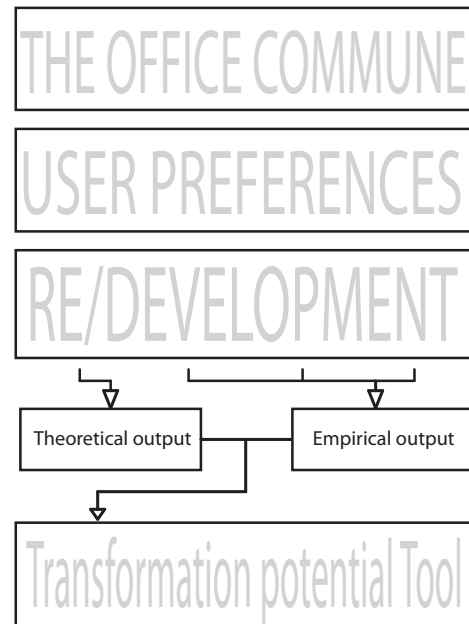


figure: 3. The empty research model (own il.)

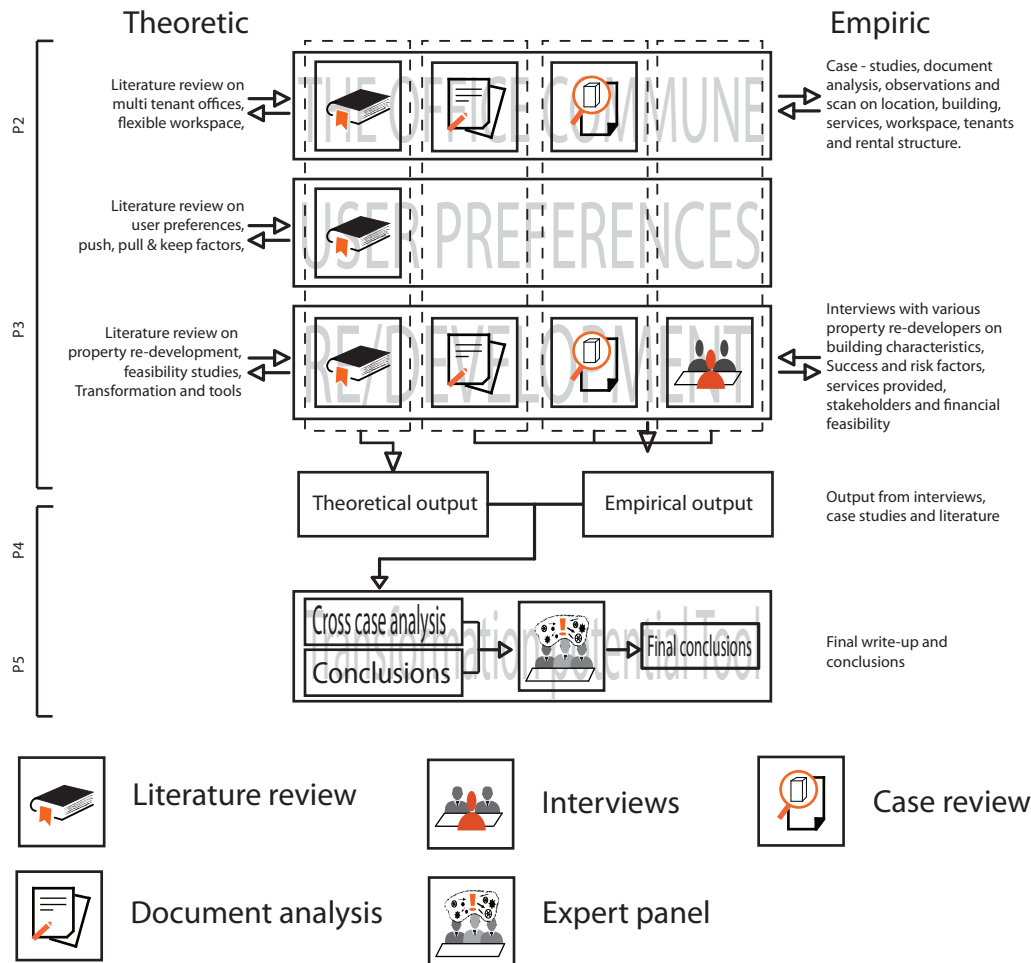
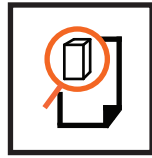


figure: 4. The research model and phasing (own il.)

for statistical populations or universes. Rather, he aims to create and expand rich theoretical frameworks that should be useful in analyzing cases (Niederkofler, 1991).

How developers generate cash flow is often sensitive, private information guarded by developers and advisors. The office commune concepts this research is focussing on are relatively new, this causes the availability of in-depth databases on the earnings model to be lacking. The case studies will be performed ex-post, after the fact, the fact in this case being a transformation to an office commune concept. The office commune concepts themselves however are still running, so there is not a complete ex-post analysis possible. Ex-ante data will have to serve as a assumption for future operations. The cases will therefor be analysed qualitatively and compared in a cross-case analysis.

“Sometimes we simply have to keep our eyes open and look carefully at individual cases - not in the hope of proving anything, but rather in the hope of learning something!” (Eysenck, 1976)



Case data collection

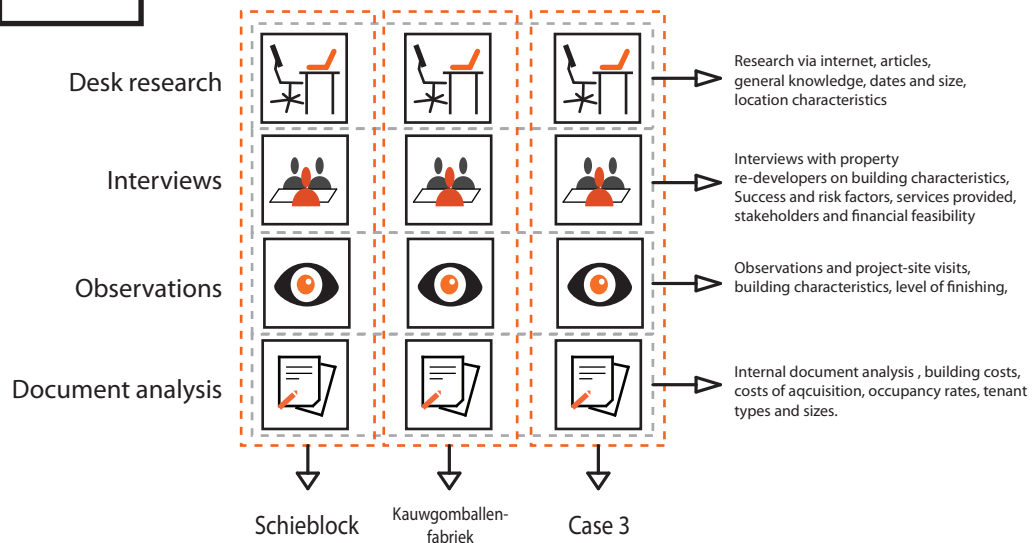


figure: 5. The content of each case and the method of collecting data (own il.)

The write-up for each case consists of, 1. Location assessment, 2. Building information, 3. Tenants and occupancy 4. Facilities provided, 5. Workspaces provided, 6. Contractual form, 7. Financial data,

Case selection

The final selection of cases is based on their expected contribution in answering the research questions. From these interviews with teachers, co-students and professionals 3 cases are selected. These cases all have in common that they are a transformation of a previous function to a multi tenant office concept. The office in this case not restricting it self to 'traditional' use of office space but providing workspace for a whole range of users, creative and otherwise.

The buildings vary in terms of size, location, use, concept and many more aspects. These places are vibrant and seemingly successful while operating under totally different conditions. The variation in cases was selected to acquire this range in professionalism, status, services provided, operational costs, investment costs and types of users. I specifically chose cases different from each other to find the full range in service provision. I expect to find totally different operating concepts and development models.

3. Interviews

The interviews are conducted with property developers of flexible office concepts. The over arch-

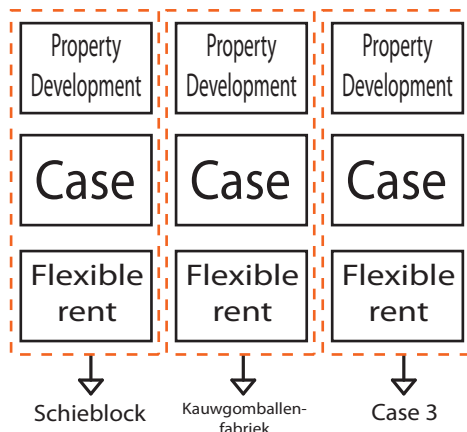
ing theme is the feasibility regarding flexible office concepts. The interviews will have open-ended and semi-structured components. The main questions are in light of (presumed) added role of the property developer, portfolio managerial tasks. The information gathered is set on 3 levels. The first level are questions about their tasks as property redeveloper, do they even consider themselves property developers? What changes are there in stakeholder engagement? Did they have extensive financial feasibility calculations or did they act on gut? The second level of questions is about



Interviews with
property Re/developers



Per case there will be
interviews with the developer



Questions asked to the developers

1. Property Re/redevelopment
 - Motivation / type of developer
 - Stakeholder relationships
 - Feasibility -> financial feasibility
 - Success- and risk factors
2. The case
 - Building choice
 - Location choice
 - Services provided
 - Costs, construction / aquisition
 - Current / expected tenants
3. Flexible renting
 - Co-working
 - Office communes

figure: 6. Interview questions and rough outline (own il.)

the cases themselves regarding choices the developers made. Did they search for a building or for a location? How much services do they provide in the office commune, is it better to let people contribute their own facilities or do they want to be unburdened? The last level is on the notion of flexible renting, are the tenants in the building co-working? Does the concept of office-commune work and why is it working?

4. Expert panel discussion

The panel discussion is between experts to verify the findings and to have a live discussion. Among the experts are consultants, municipal parties, professors and providers of company collective buildings. A tool is created to test flexible the feasibility, this tool is based on empirical and theoretical research. Theory and practice can discuss the relevance and conclusions of the research and

also to test the feasibility of a test case. This is a test case with some 'sliders', like a likert scale with two extremes. The experts can, together, find the optimal development program for the vacant building. One issue, for example, can be: 'how many facilities do you offer in the company collective building'? The answer ranges from, no services provided to full service provided. The final theme's will surface in the research phase. The final product will be a completed feasibility analysis of the vacant building. In the panel discussion next to the end result the argumentation is the most informative. The aim is to gather 8-10 professionals for this expert panel.

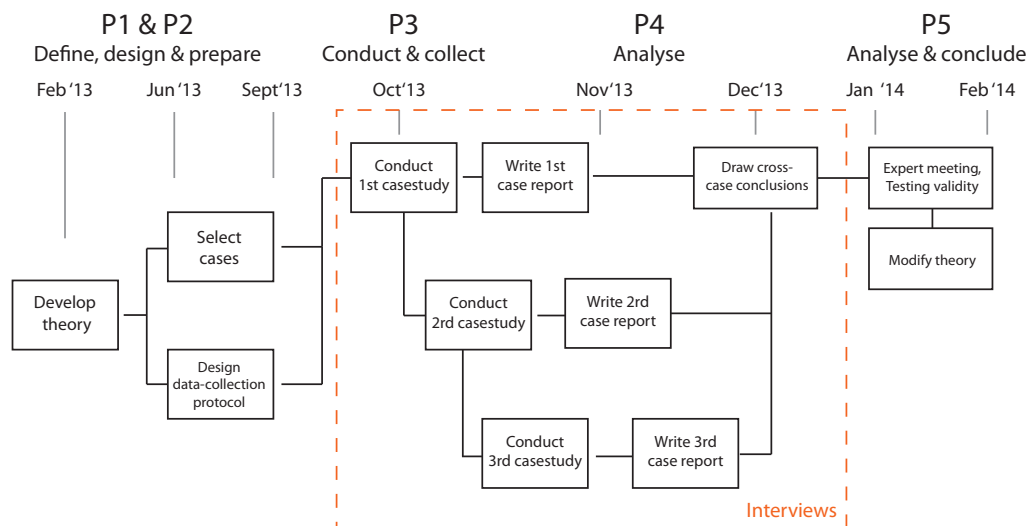


figure: 7. Depiction of the research phases (own il.)

Planning & conceptual model

In traditional research processes there is a linear and logical research model, first you come up with a problem statement and a conceptual model, then drafting the research subject, collecting data, analysing data and finalizing with a report. This thesis will dive deep into case studies with a main focus on determining the financial feasibility, from there a theory will be developed and tested. The overall planning is shown in figure: 7, a more detailed planning is found on "Appendix 3. P3-P5 planning" on page 50. The final conceptual model and how the main research question will be answered is depicted figure: 8.

1.2.2. Graduation companies

The companies are the result of the selected cases. The logic is that the developers hold the key information about the business model as they have once concluded that the project is feasible. The building is now in use and managed by that same developer, so in this initiation the developer now has a reality check if the costs of operation are as he expected. I will be staying for a maximum

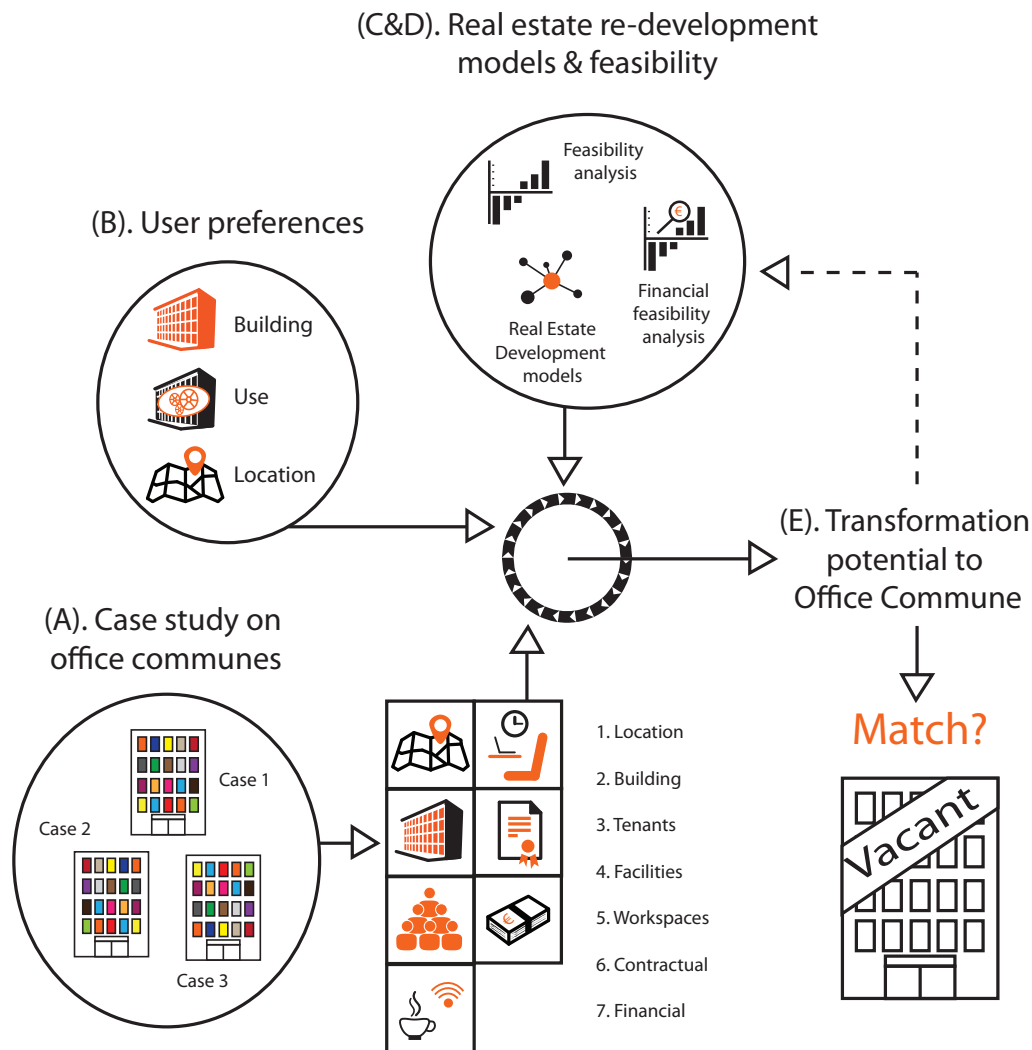


figure: 8. Conceptual model (own il.)

of 1 month per company.

Real Estate Developers

Codum is developer behind 'the Schieblock' in Rotterdam. The conversations have ended and I can write my thesis in 'the Schieblock'. During this period I have access to the financial exploitation data, initial investment data, costs of realisation, direct communication with the stakeholders, building information documents and the ability to make multiple observations.

Lingotto is the developer that realised the Kauwgomballen Fabriek in Amsterdam. I have scheduled 2 interviews with a real estate developer tied to the case. I won't be staying a month in the kauw-

gomballenfabriek but I hope to conduct the same inquiries as in 'the schieblok'.

The last real estate developer and case is not yet found, I am aiming for an interview with a developer tied to a true open floor plan office commune like Seats2Meet or BounceSpaces.

Answering the research questions

With Codum I have a very good start of this research, they have allowed me to look into all the financial data surrounding their Schieblock. They however lack an accountant so a bit of ordering will be necessary. I hope to be able to acquire the same type of data retrieval with the other 2 companies. There is a realistic risk of not being allowed to gather the same type of (sensitive) data. This is the largest threat to my current research proposal. How the research questions will be answered is shown in figure: 9.

	Literature	Case-study	Interviews	Panel discussion
A. The office commune				
A1. What are office communes, can you give a clear definition of their functioning?				
A2. How have office communes evolved through time?				
A3. Can I make a classification system for office communes based on the different concepts, occupiers, tenant structure and degree of flexibility?				
A4. What are the advantages of working in an office commune?				
B. User preferences				
B1. Which professions rent in an office commune?				
B2. What are the push, pull and keep factors of these professions on the scale of location, building and workspace?				
B3. How many people do these professions represent in the total Dutch office market and can a prediction be made about their development in the Dutch market?				
C. Development models				
C1. In real estate development, what different type of development models are there? Which ones are used in the transformation to office communes?				
C2. In real estate development to office communes, what stakeholder relationship models are there?				
D. Feasibility				
D1. How do real estate developers conduct feasibility analysis in transformation projects. Of what components do these feasibility analysis consist?				
D2. How do real estate developers calculate financial feasibility in development to office commune?				
D3. What feasibility factors are important in transformation to an office commune?				
E. Tool 'Transformation to office commune'				
E1. Can you create a tool which can test vacant office buildings on their potential to be transformed to office commune?				

figure: 9. Answering the research question and with which means (own il.)

2. Theoretical and empirical input.

2.1. Theoretical framework

The theoretical framework consists of the subjects to be researched in this thesis. This is the 'plan of approach' if you will. How can I answer the research questions. The actual drawing up of the master thesis will have one clear focus. The focus is on real estate management, Asset management and Building economics. The research has been divided into 6 sources of information to answer the research questions, they will be derived from the following themes:

1. Facility management literature based on the functioning of flexible office concepts.
2. Literature on user preferences (push, pull & keep factors).
3. Building Transformation & conversion literature.
4. Building economics literature based on willingness to pay, investment & development costs.
5. Literature on feasibility studies and pre-contractual studies.
6. Literature on investment analysis of real estate development projects.

Below I will try to classify how each sub question will be answered and with what literature. A differentiation will follow between theoretical and empirical evidence.

2.1.1 Answering the research questions

A1. What are office communes, can you give a clear definition of their functioning?

This question will be answered using theoretical input. Companies clustered together aren't a new phenomenon, throughout time many like-minded companies have clustered together ranging from a bazaar where merchants cluster together to attract the customer, to World Trade Centers where businesses conglomerate to do business on a global level.

A2. How have office communes evolved throughout time?

This question will be answered using theoretical input. Interesting to see is what type of agglomeration of functions we have seen in buildings throughout time and where that puts the current (possible) conglomeration of free lancers, creatives and micro companies.

A3. Can I make a classification system for office communes based on the different concepts, occupiers, tenant structure and degree of flexibility?

This question will be answered with theoretical input and empirical observations. This section leans heavily on the Facility management. The classification system will focus on finding the typology of the office commune. The approach can be a tight provision of certain functions or a more laissez-faire approach and let the community run their own facilities. The classification system will be founded on a few pillars, i.e. the user typology. Will the users of the commune be a specific target group or are they random? Are they free-lancers or micro companies?

A4. What are the advantages of working in an office commune?

This question will be answered using theoretical input and empirical evidence. The literature will be from agglomeration economies and economies of scale & scope are main resources to find evidence for advantages.

Economies of scope & scale

At a macro economic level there are two types of production economies by individual firms in any industry. There are economies of scale, which are associated with firm size, and there are economies of scope, which relate to the joint production of two or more products. Economies of scale exist if the average production costs decline as output rises and economies of scope arise if two or more products can be jointly produced at lower cost than is incurred in their independent production. In The logic behind this is that if a Self-Employed professional seeks a place in an office commune he is actively creating an economy of scope. By reducing his production time & co-creating

with other people in this commune, the joint production will result in a lower cost than is incurred in independent production. This lower cost could be in the sharing of information, less time doing arbitrary actions because they are facilitated by the commune and overall gain in efficiency.

Sources of agglomeration economies

The first mention of agglomeration economies was in the book 'the theory of the location of industries' by Weber (1929). He divided the location factors into regional factors and agglomeration factors, discussed the factors of industrial agglomeration, quantified the formation rules of agglomeration, and brought forward the concept of agglomeration economies for the first time.

Several researchers have identified many sources of agglomeration economies such as Ottiviano and Thisse (2002), Capello (2009). Rosenthal and Strange, in their paper 'Evidence on the nature and source of agglomeration economies (2002), reviewed the available literature on agglomeration economies and gave seven categories, of what they called the micro foundations, or sources of agglomeration economies. For this research, an eighth source of 'infrastructure sharing' offered by Ottiviano and Thisse (2002) has been added. A short description of each of the eight sources is given below. While Rosenthal and Strange discussed the external economies, an adaptation of these sources to internal economies is also given. (Porter M., 1998, p. 78). (Rosenthal and Strange, 2002). Glaeser et al (2001). Marshall (1920, p. 269, cited in Rosenthal and Strange (2002), p. 24) also had considered this effect.

The approach to agglomeration economies refers to the different dimensions across which they should be measured to make it a comprehensive analysis. This has been elaborated by mainly two studies – Rosenthal and Strange (2002) and Roberta Capello (2008). Both the authors have reviewed the available literature on agglomeration economies and have proposed an approach to understand the existence of agglomeration economies. While Rosenthal and Strange have used four such dimensions which they refer to as 'scope', Capello uses three.

Indivisibilities occur when the scale of agglomeration activities adds to productivity by causing shifts in a firm's production or cost curve, namely, more output for a given input, or lower input costs for a given output (Rosenthal & Strange 2001; Cohen & Morrison 2009, cited in Capello 2009, p. 146)

Jan Gehl uses principles for creating the physical arena of "life between buildings", this also seems applicable to the design of physical environments in creative innovative businesses (Larsen et al.,

2011). The principles of spatial design of activities are:

1. Assemble activities instead of disperse them
2. Integrate instead of segregate
3. Invite instead of repel
4. Open up instead of closing in

These “third places” for social encounters are advocated by Leonard and Swap (2005, p 151).

Moreover, ... one of the [many] jobs you didn't you signed up for when you became a manager is to enable serendipity. By definition, serendipity involves unexpected connections - between people, between events, between ideas. To enable more unexpected connections among people, we need to have more unplanned communication. Such communication depends on (1) who is around and (2) how easy it is for that communication to take place (hence the need to attention enabling rather than hindering unplanned communication).

While the networking form of social organizations has existed in other times and spaces, the new information technology paradigm provides the material basis for its pervasive expansion throughout the entire social structure. Furthermore, i would argue that this networking logic induces a social determination of a higher level than that of the specific social interests expressed through the networks: the power of flows takes precedence over the flows of power (Castells 1996, p 469). In other words the fact that networks exist and tend to function bottom-up becomes more powerful and important than the existing modes of top-down decision-making. The network morphology reorganises the power relationships, and presence or absence in the network becomes a critical source of change in our society.

If we follow Castells, the impact of the transformation of work and employment by new information technologies is twofold: the individualisation of work and the fragmentation of societies. The new social and economic organisation based on information technologies aims at decentralised management, individualising work, and customising markets, thereby segmenting work and fragmenting societies. New information technologies allow at the same time for the decentralisation of work tasks and for their coordination in an interactive network of communication in real time, be it between continents or between floors of the same building (Castells 1996, p 265). At the same time we realise that culture becomes the main content of these new information and communication structures: Cultures are made up of communication processes. And all forms of communication, as Roland Barthes and Jean Baudrillard taught us many years ago, are based on the production and consumption of signs. ... In all societies humankind has existed in and acted through a symbolic environment. (Castells 1996, p372).

Worhington 2005, Raymond 1997, Veldhoen 2005, Morgan 2006, Van meel 2011, Reemers 2003

B1. Which professions rent in an office commune?

This question will be answered theoretically and analysing documents from the cases.

From the chamber of commerce I received the data set relating to all free-lancers in the Netherlands currently registered and their branch. In identifying the current tenants in the office commune's and comparing them with the trendline of rising mesoeconomic branches. GOC 2009, Kusters 2009, pleijster 2007, Vroomhof 2009, KVK.

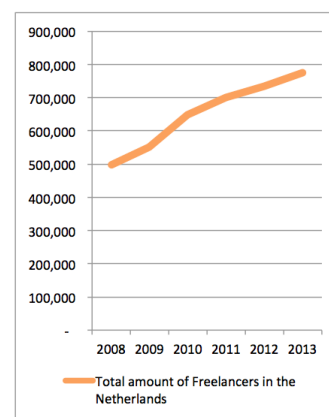


figure: 10. Total freelancers in the Netherlands from 2008 to 2013

B2. What are the push, pull and keep factors of these professions on the scale of location, building and workspace?

This part will be answered theoretically. The preferences of the creative class have been measured in a study by Robbert Arkenbout (2012). The study 'Alles flex, is dat een mismatch' reveals the implicit preferences of free-lancers for external workspace.

B3. How many people do these professions represent in the total Dutch office market and can a prediction be made about their development in the Dutch market?

The rise of Free-lancers and the rise of the creative class can both found in literature, these will be backed up with number from CBS and the KVK. It describes the current rise of creative economic activity and the need for adequate facilities required for these people. In previous studies the ideology behind the 'rise of the creative class' has been revealed. This question proves that there is a need for suitable working solutions needed in the near future and tries to grip a hold of how buildings should to look like. Numbers from the kvk show a clear rise from 497,832 in 2008 to 774,049 in 2013. This is a rise of 55.5% in only 5 years time (KvK, 2013). Of this group of advice, research and other specialised business services is the largest with 181,412 free-lancers in 2013, this group has risen with 62,46% since 2008. The groups which grew the largest are the health- and well-being sector with 377,25% since 2008 (13,897 to 63,241 people) followed by the culture, sport and education sector with 188,01% since 2008 (17,897 to 51,546 people).

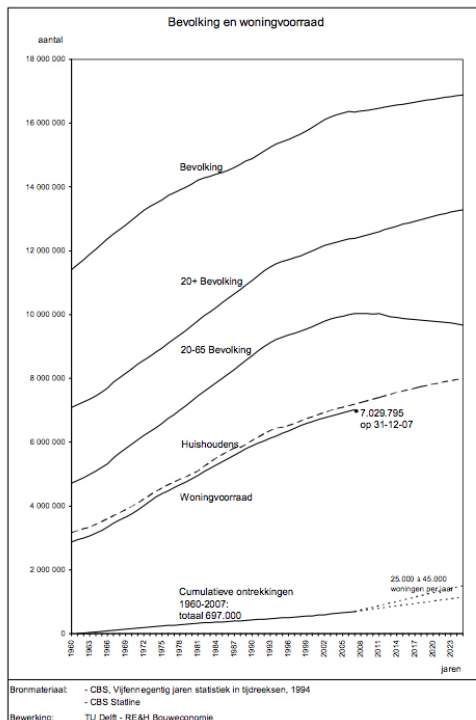


figure: 11. Population estimates of the Netherlands (Soeter, 2010)

figure: 11 describes the population expectancy in the Netherlands. As we can see the total labor force is dropping from 2005 onwards while the 20+ age group is rising.

The Nomura institute in Japan classifies four eras of economic activity: agricultural, industry, information - and a fourth - creativity. They argue that it is the natural evolution of rich information environments. The flows of creative interaction in groupware, inter- and intranets, makes something new, and once this interaction emerges information in itself ceases to be very interesting. It is only the unexpected, the unpredictable, the combinations that makes something new that count (Mulgan, 1999).

C1. In real estate development, what different type of development models are there? Which ones are used in the transformation to office communes?

In theory the large distinctions made between developers by Nozeman (2008) are the following:

1. The largest group consists of property development companies that have spawned from construction companies, they have relatively low rates of return (2 - 3%).
2. The second group is in absolute numbers the largest group and consists of independent developers. The market is constantly spawning new small developers that -so it seems- if successful are bought by the larger financial- or construction companies.
3. The third group of developers is affiliated with institutionalized investors. These parties primarily develop for their own investment portfolio.
4. Finally there are those property developers that have a different core-business. Parties include companies such as, NS poort, Schiphol and Ahold.

Project development means the adding of value to a location by initiating, developing and realising new buildings or via function change of existing real estate (Nozeman, 2012). Some definitions of property development:

- (1) Project development brings ideas, management, labor, capital, land and possibly buildings to realise a new real estate product (van Gool, e.a. 2007).
- (2) On personal initiative - without an intention to exploit or with the certainty of a customer, realise one or more building projects for the market. Via integration and coordination of the required knowledge and expertise, aligned to the requirements of a specifically targeted target group or customer, or user. Whereas the commitment extends to the phase of commissioning, or shorter, if the project is sold earlier (Keerls, 2001).
- (3) Project development is to initiate, develop and realise of real estate on risk (Kohnstamm & Regterschot, 1994).
- (4) Real estate development is the continual reconfiguration of the built environment to meet society's needs (Miles et al., 2007).
- (5) Property development is a process that involves changing or intensifying the use of land to produce buildings for occupations (Wilkinson et al., 2008).

C2. In real estate transformation projects to office communes, what stakeholder relationship models are there from the perspective of the Real Estate Developer?

This question is two fold. The first question to ask: is the exploitation phase part of the development process? The second question is what kind of cooperation models are used in actual construction? After this analysis the empirical findings can verify findings or come up with new stakeholder relationships.

The exploitation phase as part of development

If you assume that there is a strict separation between the real estate developer, the investor and the owner-tenant, one could claim that this phase can be disregarded. The main portion of the activities of the developer are done and the final product is sold. In the Netherlands this was a common model in development, in Anglo-Saxon countries this is not, 'The proof of the pie is in the eating' (Affourtit & Nozeman, 2008). With the development of office communes I expect a prominent role for the portfolio manager. Portfolio management is focussed on complex policy (rental policy, maintenance and services) and relationship management to current and future tenants.

Cooperation models

In present times the client does not always have enough financial means to take (noteworthy) initiatives. A public-private cooperation or a private-private partnership can offer relief. In literature the most important cooperation models are named (neprom, 2008).

1. The traditional model of cooperation
2. Construction project management
3. Construction team
4. Construction price ceiling guaranty
5. Turnkey / Design & Build
6. Bridging
7. Fast tracking / Construction management
8. All engineering / General contracting
9. Performance contracts
10. Build operate transfer / Partnering / Alliances

During my short internships at the 3 developers I hope to have access to the different stakeholders involved in conception of the plan. These interviews along with the final focus group panel will be the final data on stakeholder relationships.

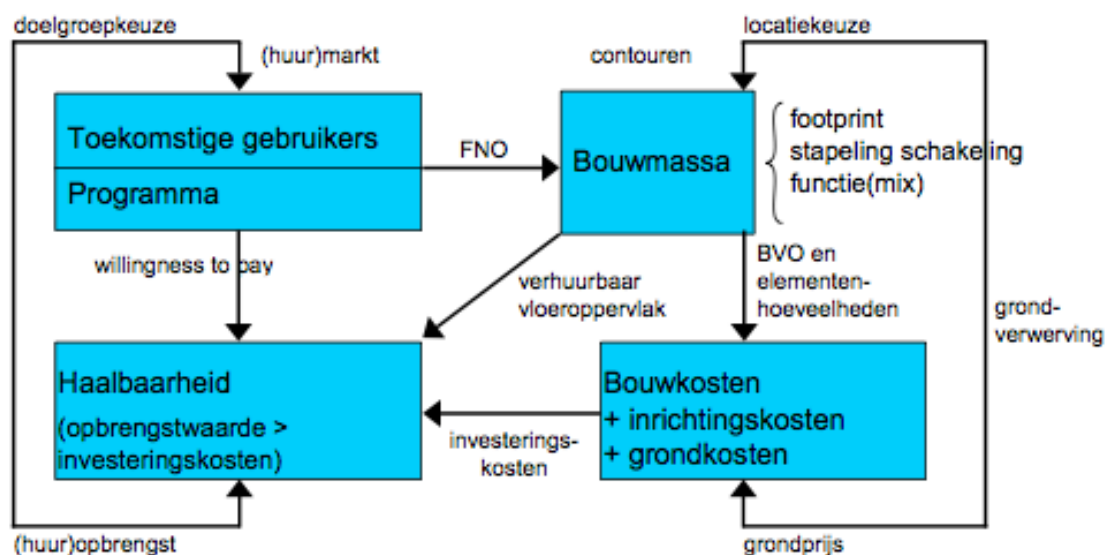


figure: 12. Consideration framework in developing buildings (Soeter, 2002)

D1. How do real estate developers conduct feasibility analysis in transformation projects. Of what components do these feasibility analysis consist?

Feasibility analysis is a generic term which groups a variety of pre development studies by generalists and specialists in a systematic philosophy of inquiry to determine facts that are reliable, assumptions about the future that are consistent with past experience and tactics which will mini-

mise the variance between objectives and realisation (Graaskamp, 1980; Messner, Boyce, Trimble and Ward, 1977). The sequencing of analysis depends on the problem, and ultimately there are only three types of real estate feasibility problems: (1) the search for the most fitting site for a use, (2) the search for the most fitting use for a specific site, (3) the search for the most suitable investment by investors. (Graaskamp, 1981).

Strategy study	Selection of objectives, tactics and decision criteria
Market study	Economic base studies or other related aggregate data review
Merchandising study	Consumer surveys, competitive property analysis, marketability evaluations, etc
Legal studies	Opinion on potential legal constraints, model contracts or forms of organisation and political briefs
Physical design studies	Engineering, lang planning and architectural studies
Compatibility studies	Impact analysis of project on community planning, environmental quality, fiscal solvency or other public policies
Financial studies	Economic modelling, capital budgets, present value and discounted cash flow forecasts, rate of return analysis and financial packages

Table: 1. Report type categories within general category of feasibility analysis, modified from work of Graaskamp (1980)

D2. How do real estate developers calculate financial feasibility in development to office commune?

The starting point for a real estate developer when realising property is realising the highest possible rental income versus the lowest possible costs. This will cause the Gross Initial to rise. An investor will however also look at the internal rate of return, the so called IRR calculation. In other words, for an investor to become interested, an object requires not a 1 to 5 year rate of return but 20 to 30 years.

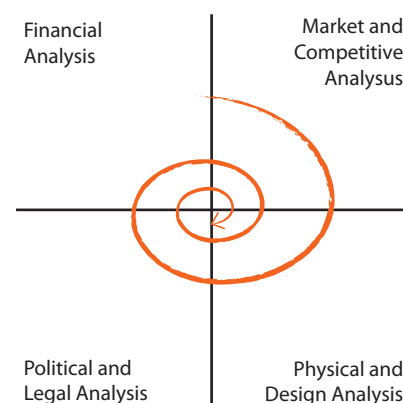


figure: 13. Iterative, Multidisciplinary Process of Real Estate Development Decision Making (Geltner, 2007)

To understand what drives investment decisions we need a closer look on the different development strategies. Ellen Gehner describes a few 'ideal' strategies, now that the market is shrinking and the prospects are negative, interesting is to find out which have success (Gehner, 2011).

1. Location Driven: a strategic land acquisition related to the land process ("Ground seeking an interpretation").
2. Concept Driven: the development of a concept related to the design process ("Draft looking for a location").
3. Competition-driven: the development is related to the licensing process.
4. Tenant Driven: development is related to a part of the marketing process, namely the rent to a user.
5. Investment Driven: development related to either a part of the marketing process, namely the sale to an investor.

In the real estate market there are a few different returns. It is important to make a distinction between Gross & Net Initial Yields (GIY & NIY) which are used to calculate the market value and the Total Rate of Return (TRR) & Internal Rate of Return (IRR) which are used to calculate performance. The GIY is commonly used for sales between real estate developers and investors. The GIY is also used as a benchmark for investors (Salemi, 2008).

The exploitation phase

The exploitation phase is the longest phase and can range -depending on the type of investor- up to 50 years. It consists of 4 important cash flows;

1. Rental income with a yearly indexation for rental increase
2. Yearly exploitation costs
3. Large maintenance costs
4. Residual value

Based on the estimates in the 4 expected future cash flows, an investor can calculate what he finds the property to be worth present day. This sum is equal to the Net Present Value (NPV) and is calculated with a Discounted Cash Flow (DCF-calculation).

Often it is sought that construction economy is about the costs of construction, but actually the potential benefits are central (den Heijer & de Jonge, 2004). Of the most importance in the construction economy is that it tries to provide in requirements. Soeters designed a framework that takes into account all the considerations necessary when developing buildings.

In the real estate business there are different standards to determine if an investment is financial-economically justifiable. The financial feasibility depends on the requirement the developer sets

to the degree to which the net gains compensate the initial investments. In literature (Blommaert en Blommaert, 1999; Brealey en Myers, 1988; Gruis, 2000; Ruegg en Marshall, 1990; Rust e.a., 1997; Seijffert, 1999 en Soeter, 1999) there is mention of a lot of yield calculations. The most relevant are:

1. the payback time method,
2. the gross/net initial yield calculations,
3. the net present value calculation,
4. the internal rate of return calculation and;
5. the Benefit-to-Cost ratio.

D3. What feasibility factors are important in transformation to an office commune?

This question will be answered theoretically and empirically.

Adding (extra) flexibility to the real estate stock requires reserving or creating space for change: (1) space on the property, (2) space in the buildings and building services, (3) space in the finance or (4) space at the time. By analogy, we can distinguish four types of flexibility (den Heijer & de Jonge, 2004):

- (1) Spatial flexibility: the spatial and legal possibilities to cultivate, to increase the density and expand vertically and horizontally buildings nearby intensive.
- (2) Technical flexibility: the constructive and installation technical possibilities for the building shape and layout to best fit.
- (3) Legal and financial flexibility: the ability to reduce real estate costs quickly or to increase with changes in the quantitative space requirements, for example by renting part of the building stock through short (fast cancelable) leases or by the property benefits in ownership of current buildings, which can be sold or rented in the property market relatively quickly. It should also include the flexibility in the legal structures of lease, rental and lease contracts.
- (4) Organisational flexibility: the extent to which the organization is able to adapt itself and thereby to fill the available space more efficiently in the course of time and use.

E1. Can you create a tool which can test vacant office buildings on their potential to be transformed to office commune?

This research follows up on the dissertation 'out of office' by H. Remøy in 2010. It examines trans-

formation as a way of coping with vacant building. In the past numerous transformation tools have been developed, the most relevant ones regarding property developers are listed below.

1. De leegstandsrisicometer (Gereadts & v/d Voordt, 2007)
2. De transformatiepotentiometer (Gereadts & v/d Voordt, 2007)
3. Transformatiemeter voor kerkgebouwen (N. van der Vlist, 2004)
4. INKOS (Bijleveld, 2007)
5. De transformatiemeter: kantoor naar woonzorggebouw (Remøy & v/d Voordt, 2011)
6. Transformatiemeter creatieve industrie (Arkenbout, 2012)

These tools mainly focus on the technical, functional and architectural problem aspects and little to none on the financial, fiscal, juridical and organisational problem aspects. Of this list the INKOS (instrument for costs and profit simulation) scores high on the financial checklist according to Fikse's thesis in which he analyses transformation tools (Transformatietools uncovered, 2008).

Most of these tools are found in the bundle 'Transformatie van kantoorgebouwen'.

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Appendix 1. KVK

ZZP'ers SBI Branches	Jaar					
	2008	2009	2010	2011	2012	2013
A - Landbouw, bosbouw en visserij	10,365	11,712	26,102	30,464	30,958	31,441
B - Winning van delfstoffen	113	122	132	141	155	178
C - Industrie	22,491	23,752	24,642	25,709	26,296	27,295
D - Productie en distributie van en handel in elektriciteit, aardgas, stoom en gekoelde lucht	155	183	212	239	245	260
E - Winning en distributie van water; afval- en afvalwaterbeheer en sanering	400	404	429	464	507	550
F - Bouwnijverheid	83,353	93,900	95,329	97,804	101,462	104,060
G1 - Handel, reparatie van auto's, motoren etc.	13,168	13,876	14,337	14,950	15,073	15,733
G2 - Groothandel	39,087	39,787	40,704	41,168	40,116	40,758
G3 - Detailhandel	41,513	42,805	44,981	47,626	48,809	49,582
H - Vervoer en opslag	14,768	15,635	16,115	16,898	17,391	18,645
I - Logies-, maaltijd- en drankverstreking	12,558	13,054	13,809	14,543	15,033	16,002
J - Informatie en communicatie	30,226	33,378	37,241	40,389	42,162	44,801
K - Financiële instellingen	8,458	8,816	9,058	9,239	9,220	9,176
L - Verhuur van en handel in onroerend goed	4,873	5,069	5,263	5,344	5,305	5,466
M - Advisering, onderzoek en overige specialistische zakelijke dienstverlening	111,663	127,293	147,576	160,405	169,758	181,412
N - Verhuur van roerende goederen en overige zakelijke dienstverlening	24,100	26,509	29,014	31,515	33,173	35,238
O - Openbaar bestuur, overheidsdiensten en verplichte sociale verzekeringen	37	46	54	67	69	72
P - Onderwijs	16,631	18,871	23,706	27,344	30,306	33,381
Q - Gezondheids- en welzijnszorg	13,251	19,698	41,633	50,769	57,491	63,241
R - Cultuur, sport en recreatie	17,897	21,428	38,705	45,012	48,319	51,546
S - Overige dienstverlening	32,725	35,134	38,285	40,861	43,196	45,212
Grand Total	497,832	551,472	647,327	700,951	735,044	774,049

Afbakening Creatieve sector

Creatieve zakelijke dienstverlening

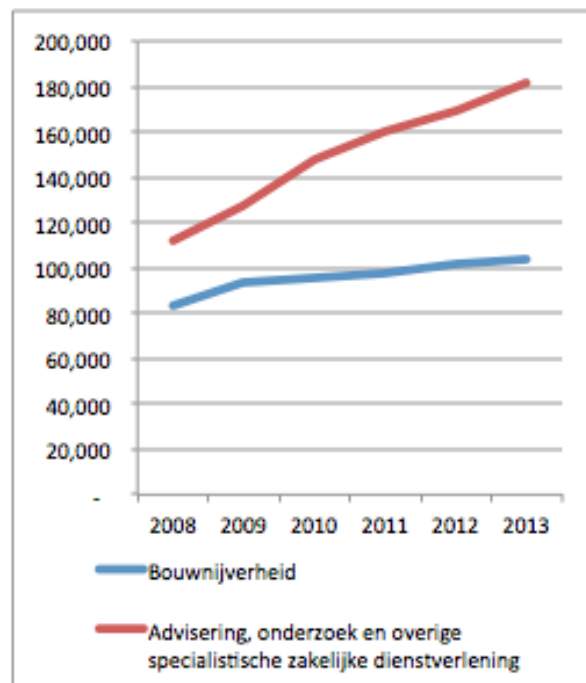
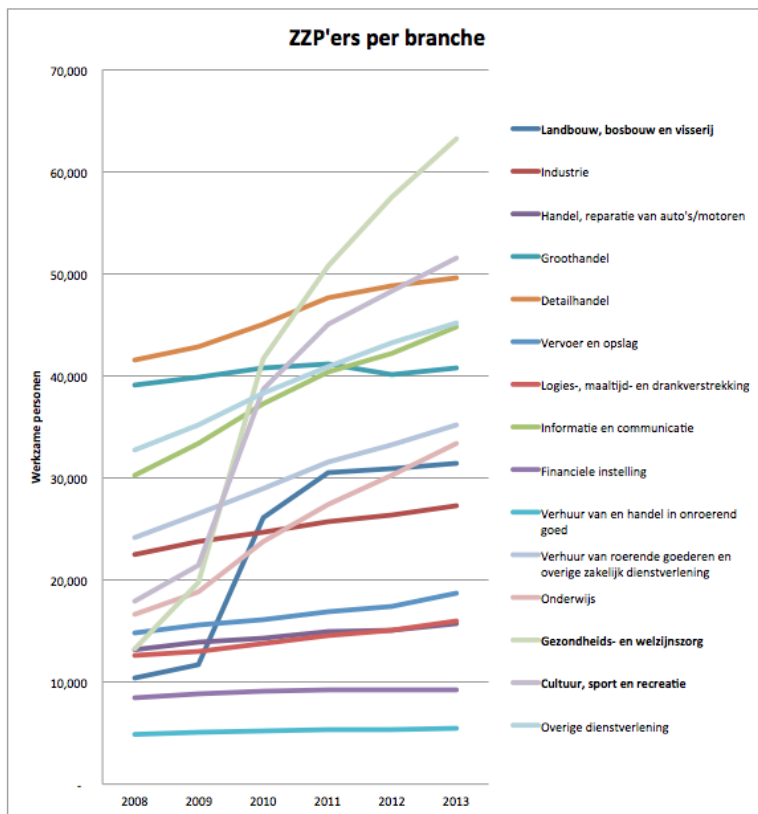
7021 - Public relationsbureaus
 7111 - Architecten
 71111 - Architecten (geen interieurarchitecten)
 71112 - Interieurarchitecten
 7312 - Handel in advertentieruimte en -tijdschriften
 731102 - Overige reclamediensden
 731101 - Reclame-ontwerp- en -adviesbureaus
 74101 - Communicatie- en grafisch ontwerp
 74102 - Industrieel en productontwerp
 7410 - Industrieel ontwerp en vormgeving
 74103 - Interieur- en ruimtelijk ontwerp
 8230 - Organiseren van congressen en beurzen

Media en entertainment industrie

581101 - Uitgeverijen van boeken
 581102 - Databanken (geen webportals)
 5813 - Uitgeverijen van kranten
 5814 - Uitgeverijen van tijdschriften
 5819 - Overige uitgeverijen (niet van software)
 5821 - Uitgeverijen van computerspellen
 5829 - Overige uitgeverijen van software
 59111 - Prod. films (geen televisiefilms)
 59112 - Productie van televisieprogramma's
 591201 - Exploitatie van filmstudio's
 591202 - Exploitatie van televisiestudio's
 591203 - Facilitaire activ. voor film-/videoprod.
 591204 - Facilitaire activiteiten voor tv-prod.
 591302 - Distributie van televisieprogramma's
 5914 - Bioscopen
 592001 - Productie van radioprogramma's
 592002 - Productie van geluidsopnamen
 592004 - Exploitatie geluidstudio's (geen radio)
 592009 - Maken geluidsopn./uitgeven muziekopnamen
 6010 - Radio-omroepen
 6020 - Televisie-omroepen
 6321 - Persagentschappen
 6329 - Ov. dienstv. activ. opgv informatie neg
 742011 - Persfotografie
 742012 - Fotografie (geen persfotografie)
 90013 - Circus en variété
 93211 - Pret- en themaparken
 93212 - Kermisattracties

Kunst en cultureel erfgoed

799001 - Informatieverstreking ohgv toerisme
 799002 - Boekings- en besprekingsbureaus
 90011 - Beoefening van podiumkunst
 90012 - Producenten van podiumkunst
 9002 - Dienstverlening voor uitvoerende kunst
 900301 - Journalistiek
 900302 - Scheppende kunst/documentaire schrijvers
 90041 - Theaters en schouwburgen
 91011 - Openbare bibliotheken
 91012 - Kunstuitlenencentra
 91019 - Ov. cult. uitlenencentra en openb. arch.
 91021 - Musea
 91022 - Kunstgalerieën en -expositieruimten
 9103 - Monumentenzorg
 94993 - Steunfondsen (niet ohgv welzijnszorg)
 94994 - Vriendenkringen ohgv cultuur / fanclubs



Appendix 2. Case studies

Case studies

Various sources are going to be used for this thesis, the predominant approach is that of the case-study. To support the case studies a multitude of sources are used to form a valid claim to any theories comming forth of the thesis.

As with every social scientific method the case studies are tested on (1) construction of validity, (2) internal validity, (3) external validity and (4) reliability (Yin, 1994). Coping with theses tests a few strategies have been included in the case-studies:

1. Constructing validity will be supported by using multiple sources of evidence, establishing a chain of evidence and have key informants review draft case study reports. (Data collection)
2. Internal validity will be supported by doing pattern matching and doing explanation-building, testing the multitude of cases by the same standards. (Data analysis)
3. External validity is in the use of replication logic in multiple-case studies (research design).
4. Reliability is found in the use of case study protocol and developing a case study database (data collection).

In defense of the claims that case-studies cannot provide 'generalizable data' the following is important. First, the case study produces the type of context-dependent knowledge that research on learning shows to be necessary to allow people to develop from rule-based beginners to virtuoso experts. Second, in the study of human affairs, there appears to exist only context-dependent knowledge, which, thus, presently rules out the possibility of epistemic theoretical construction. Context-dependent knowledge and experience are at the very heart of expert activity. Such knowledge and expertise also lie at the center of the case study as a research and teaching method or to put it more generally still, as a method of learning (Flyvberg, 2006). For this research the closeness of the case study to real-life situations and its multiple wealth of details are important in two respects. First, to develop a nuanced view of reality (and all its aspects) and second for my personal own learning processes in developing the skills needed to do good research.

One can often generalize on the basis of a single case, and the case study may be central to scientific development via generalization as supplement or alternative to other methods. But formal generalization is overvaluated as a source of scientific development, whereas "the force of example" is underestimated. This research will focus on "the force of example" not for sake of proving

anything but for sake of learning something.

To maximize the utility of information from small samples and single cases. Cases are selected on the basis of expectations about their information content. All cases selected will have an different exploitation model and different setup of stakeholders. The cases selected in this sense will be part of the 'extreme/deviant cases'.

Locating a critical case requires experience, and no universal methodological principles exist by which one can with certainty identify a critical case. Also no standard exists for a paradigmatic case because it sets the standard. It is a big problem in a democratic society where people are supposed to justify what their intuitions are. In fact, nobody really can justify what their intuition is. So you have to make up reasons, but it wont be the real reasons (Flyvbjerg p 232). Besides the strategic choice of case, the execution of the case study will certainly play a role, as will the reactions to the study by the research community, the group studied, and possibly, a broader public. The value of the case study will depend on the validity claims that researchers can place on their study and the status these claims obtain in dialogue with other validity claims in the discourse to which the study is a contribution. Like other good craftspeople, all that researchers can do is use their experience and intuition to assess whether they believe a given case is interesting in a paradigmatic context and whether they can provide collectively acceptable reasons for the coice of case.

The advantage of the case study is that it can "close in" on real-life situations and test views directly in relation to phenomena as they unfold in practice. When N's are large, there are few opportunities for revising a chasing [the delimitation of a case].

To conclude it must be noted that even with embedded multiple-case studies the results of such studies cannot be pooled, rather, the data will be part of the findings for each individual building, or case (Yin, 1994). The obtainment of this data however should follow a replicable process to obtain even results, the interpretation of these results however cannot be compared because the context of each case and the richness of their content is completely different.

"sometimes we simply have to keep our eyes open and look carefully at individual cases - not in the hope of proving anything, but rather in the hope of learning something!"

Appendix 3. P3-P5 planning

P3 to P5 planning graduation of Jeroen ketting	Week 36 2-sep.	Week 37 9-sep.	Week 38 16-sep.	Week 39 23-sep.	Week 40 30-sep.	Week 41 7-okt.	Week 42 14-okt.	Week 43 21-okt.	Week 44 28-okt.	Week 45 4-nov.	Week 46 11-nov.	Week 47 18-nov.
Deadlines & presentations												
P2 Deadline			X									
P3 Deadline									X	X	X	
P4 Deadline												
P5 Deadline												
Critical To Do's												
Finding Case study 3			X	X								
Preparing case collection protocol			X	X								
Preparing Interview protocol					X							
Preparing panel discussion												
Chapter progression												
The office commune	X	X	X			X				X		X
User Preferences				X	X							
Feasibility studies					X	X						
Development models							X	X				
Reviewing previous tools				X								
Creating tool					X	X		X				X
Final write-up												
Empirical Data collection												
Case study 1					X	X	X	X				
Case study 2									X	X		
Case study 3											X	X
Conducting the interviews					X	X	X	X	X	X	X	X
Panel discussion												

P3 to P5 planning graduation of Jeroen ketting	Week 48 25-nov.	Week 49 2-dec.	Week 50 9-dec.	Week 51 16-dec.	Week 52 23-dec.	Week 1 30-dec.	Week 2 6-jan.	Week 3 13-jan.	Week 4 20-jan.	Week 5 27-jan.
Deadlines & presentations										
P2 Deadline										
P3 Deadline										
P4 Deadline		X	X							
P5 Deadline									X	X
Critical To Do's										
Finding Case study 3										
Preparing case collection protocol										
Preparing Interview protocol										
Preparing panel discussion	X									
Chapter progression										
The office commune										
User Preferences										
Feasibility studies										
Development models										
Reviewing previous tools										
Creating tool	X			X	X					
Final write-up						X	X			
Empirical Data collection										
Case study 1										
Case study 2										
Case study 3										
Conducting the interviews										
Panel discussion		X								

