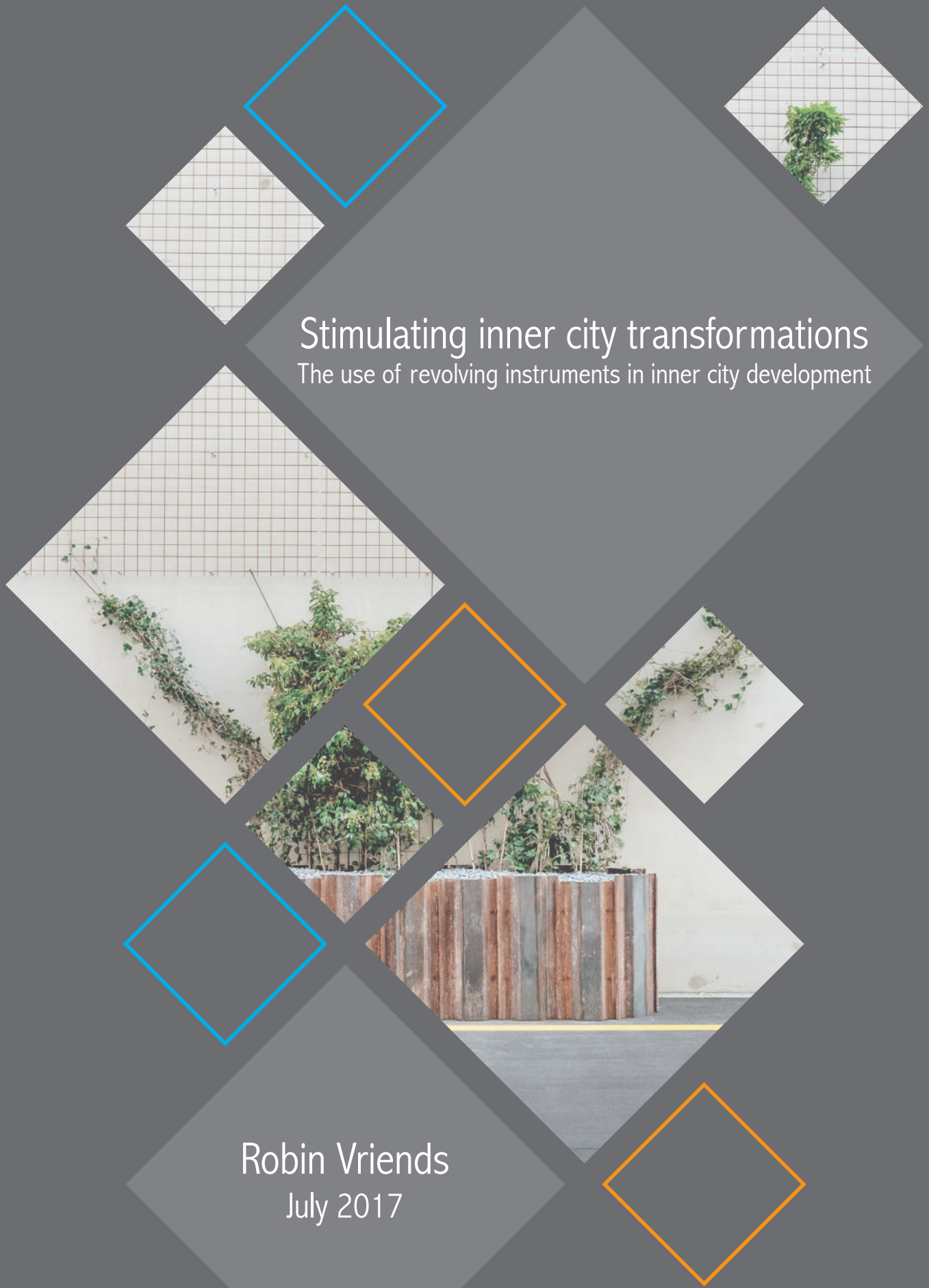
Stimulating inner city transformations

The use of revolving instruments in inner city development



Robin Vriends

July 2017

Graduation Report

Robin Vriends

July 2017

Research institution
Faculty of Architecture and the Built Environment, Delft University of Technology
Master Management in the Built Environment
Chair of Urban Development Management

Mentors

1st mentor	Dr. W.J. Verheul – Research fellow and lecturer at Delft University of Technology
2nd mentor	Dr. Mr. F.A.M. Hobma – Associate professor at Delft University of Technology
1st external examiner	Dr. Ir. W.J. Quist – Lecturer at Delft University of Technology
2nd external examiner	Dr. J.S.C.M. Hoekstra – Senior Researcher at Delft University of Technology

Internship company
Fakton - Consultancy Department

1st mentor	Aeisso Boelman MSc – Director Consultancy
2nd mentor	Erwin Daalhuisen MSc – Senior Consultant

Contact information
R.P. Vriends
rpvriends@gmail.com

All recordings and summaries of the interviews conducted for this thesis can be requested at the author. The use of quotes in this report is incorporated to underline certain important aspects relevant in this thesis. The responsibility of the translation of these quotes fully lies with the author.

Foreword

This thesis constitutes the final report of the graduation project as part of the master Management in the Built Environment at the Delft University of Technology, called 'Stimulating inner city transformations – The use of revolving funds in urban development. Between September 2016 and July 2017, I have been working on this thesis. At the end of February 2017, I started an internship at Fakton in Rotterdam which has helped me getting into contact with actors and acquiring relevant information.

The topic of this thesis is inner city development and the potential use of revolving funds. The demand for dwellings in many Dutch cities is high, but the production of new supply is not in line with the demand resulting in a mismatch. As a consequence, together with other factors, house prices in cities have risen rapidly over the recent years leading to societal problems such as decreased affordability of housing, segregation and some urban areas are afflicted by vacancy and deterioration. I want to add to the body of knowledge in the field of urban development and do my part in providing insight in the development process.

In the first phase of the graduation project, I was involved in the Next Generation Waterfront Laboratory at the TU Delft led by Tom Daamen. In this stage, I defined the scope of my research which proved to be quite tough. Tom has helped sharpening the research by asking the right questions and triggering valuable discussions. When the research scope was partially defined, Wouter Jan Verheul and Fred Hobma became my first and second mentor. Their supervision and feedback helped me going from a broad research approach towards a manageable research topic. During the writing of my thesis, I was simultaneously working with Wouter Jan, Fred, Tom and Erwin Heurkens on another research project. The involvement in this project has provided many insights and has helped me tremendously in getting a feel with the relevant topics and issues in the field of urban development. I am aware of the advantage this has given me.

Starting my internship at Fakton has proven to be the right step. Working with Aeisso Boelman and Erwin Daalhuisen, my two internship mentors, has led to many fruitful discussions and talks which have improved my thesis. Additionally, I have been working on a project for Fakton with Anne van Eldonk and Pieter-Bart Visscher regarding the operationalisation of a revolving fund. The concurrence of this project, the research project at the TU Delft and the feedback of my four supervisors have been very helpful for this thesis.

I want to thank my supervisors Wouter Jan, Fred, Aeisso and Erwin for the pleasant cooperation, supervision and support during the writing of this thesis. I want to thank Wido Quist for his feedback. I want to thank Tom and Erwin for their feedback in the early phase of my research. I want to thank Anne and Pieter-Bart for the great collaboration and their valuable insights which have helped me writing this thesis. I want to thank my colleagues at Fakton for their help when I had specific questions. I want to thank all the professionals with which I have had the pleasure of interviewing. Finally, I want to thank all who have attended the workshop I have organized on the 9th of June together with Aeisso and Wouter Jan.

On a personal note, I want to thank my wonderful girlfriend Milou for her patience and support during my thesis adventure. She had to cope with all my ups and downs during this research project. I want to thank John, Josien, Evelien, Mariëlle, Nico, Jeannine, Alice and Jeroen for their sincere interest and support. Finally, I want to thank my fellow students with whom I have shared the privilege and burden of studying at the department of Management in the Built Environment.

After two and a half years at the Delft University of Technology, I am at the end of the final phase of my student career. My education started with a year in Delft where I followed the bachelor *Technische Bestuurskunde,* through *HBO Bouwkunde* in Alkmaar, a premaster in Delft, finally towards the master Management in the Built Environment. It has been quite a trip, but I have enjoyed every moment along the way. Every step in my student life has added up to where I am now: an engineer from a technical university with an interesting job at a real estate consultancy firm.

I hope you find this report enjoyable and informative.

Robin Vriends

Management summary

In this management summary, the approach and outcomes of the graduation project "Stimulating inner city transformations – The use of revolving funds in urban development" are described.

Abstract

Context – Within the Netherlands, an urgent mismatch between supply and demand in the residential sector results in adverse effects such as high house prices and reduced affordability. This mismatch is anticipated to grow further due to an increasing number of households (between 300,000 and 1,000,000 until 2040) and the many barriers in the development process of inner city locations. The Dutch residential development sector stands for a great challenge.

Objective – The objective of this thesis is to explore the functioning and possibilities of revolving funds for inner city development. The hypothesis of the research is therefore that a revolving fund provides a solution towards overcoming (some of) the barriers in urban development, particularly in the inner city.

Methods – The research is divided in three components: literature review, empirical study through a comparative case study, and the translation from the case study towards a revolving fund design for residential development in inner city locations.

Results – The case study has established that there are six structural elements that characterize revolving funds: goal focus, goal limitation, size of the fund organisation, distance to the responsible governmental body, risk acceptance and steering ability. A variant study shows different possibilities of the design of a revolving fund with different characteristics in regard to the six structural elements.

Conclusion - In general, the results imply that the use of a revolving fund can stimulate certain residential development projects that experience financing issues. The study has also established that there is a support base for a revolving fund in inner city development, both from a public and private of view. A revolving fund for inner city development should have an equal focus on societal and financial yield (goal focus) and should have a medium goal limitation. In terms of organisation, the fund should have a rather small organisation in relation to the fund volume and should be sufficiently distanced from the responsible governmental body. Regarding the financial structure, the risk acceptance should be relatively high to carry out the predefined tasks of the revolving fund. This results in a revolving fund through which governmental objectives can be carried out with high steering ability.

Keywords: inner city development, revolving fund, planning instruments, comparative case study

Introduction

One of the major issues in the Dutch residential sector is the mismatch between supply and demand, leading to adverse effects such as increasing house prices and reducing affordability. A policy study by PBL shows two scenarios for the demand for dwellings in the Netherlands. The low scenario indicates a demand for 300,000 dwellings towards 2040, the high scenario 1,000,000 dwellings (Van Duinen, Rijken, & Buitelaar, 2016). The notion that dwelling production is not in line with demand is true for almost every area in the Netherlands. Three main questions that rise are: How large is the growing number of households? Where can we house them? And what is the role of the government?

Growing number of households

Regarding the first question, a recent research by Brink and BPD is highly indicative (see Brink, 2017). The research focussed on ascertaining the potential development volume of dwellings in urban areas throughout the Netherlands, which was done based on data provided by PBL. The research concludes that with the current policy and development practice, approximately 9% of the demand for dwellings can be developed in existing urban areas (which translates to developing 90,000 dwellings with a demand for 1,000,000 dwellings until 2030). When a subsidy granting €25,000 per dwelling (which totals €3,6 billion up until 2030), compaction of dwellings by 35% and speeding up the development process is added to the equation, at best one third of the demand for dwellings can be developed in existing urban areas (Brink, 2017). The outcomes of the research should be interpreted with care; the outcomes are based on numerous assumptions and estimates, and the number of 1 million dwellings needed until 2030 is considered a high estimate. Not all demand for dwellings can be absorbed by the Dutch cities; if the actual demand resembles that of PBL's high scenario, other ways of developing dwellings need to be incorporated to be able to match new supply with the demand. In that sense, besides transforming and developing in the Dutch cities, greenfield locations will have to be developed as well.

Housing the growing number of households

Another important aspect is the area in which development may take place. A clear distinction needs to be made, as there is a large difference between greenfield developments and brownfield developments in terms of land development costs. Particular areas, such as old harbour sites and abandoned industrial estates bring about higher costs when developed than well-connected agricultural locations. The main reasons are the relatively high costs for land acquisition, demolition and remediation. This provides difficulties in terms of financing. In addition, the amount of greenfield locations in various urban areas is declining (e.g. Amsterdam, The Hague), which indirectly means that more brownfield locations in these locations need to be developed in order to provide supply for the growing demand in the area. Within the boundaries of Dutch cities, the (larger) greenfield development areas (*uitleggebieden*) are scarce and the focus is more drawn towards urban compaction (*stedelijke verdichting*), city edge transformation and brownfield development areas (Boelman, Visscher, Sassen, & Vlek, 2016). The greenfield developments in Dutch cities are starting to belong to the past and urban transition is becoming more and more predominant.

Role of the government

Both from a public law perspective and from a financial perspective, the Dutch government has tried to facilitate, stimulate and ease the urban development process. Countless laws and regulations tried to do so, from the 1980s until now. In addition, several mayor tranches of financial support have stimulated the process as well, from the 1970s until 2014. In 2014, the subsidy called *Investeringsbudget Stedelijke Vernieuwing* (ISV) was stopped. New policy is in the making, but it is uncertain what kind of financial support the state will supply in the future.

Problem statement

To summarize, I) the amount of greenfield locations in Dutch cities is declining, II) there is a large mismatch between the supply and demand for urban living environments due to a growing population and urbanization, and III) development of brownfield locations is quite difficult. These issues pose the problem Dutch cities are facing: in many urban areas, there are numerous barriers to overcome to realize urban development.

Hypothesis and main research question

There are many possible solutions or measures that can be thought of, such as subsidies, fiscal instruments and other types of stimulating instruments. Planners may employ numerous instruments that are either shaping, regulating, stimulating or contribute to capacity building. The hypothesis in this graduation project is that a revolving instrument such as a revolving fund provides a solution towards overcoming (some of) the barriers experienced in inner city development projects. The main problem as outlined in the preceding section results in a main research question:

> *How could a revolving instrument stimulate inner city development and how does this influence the decision-making of real estate developers in inner city development projects?*

Research methods

In the thesis, three research components are distinguished:

1. Analysis of Dutch urban development context
2. Empirical case study
3. Translating research outcomes into a design

Each component has three sub-components which are analysed along the lines of predefined research methods, described in table 1.

#	Research component	Research method(s)
1.1	Dutch policy in urban development	Literature study
1.2	Dutch practice: cooperation of actors in urban development processes	Literature study
1.3	Gaining overview of planning instruments, and specifically rev. funds	Literature study
2.1	Analysing the use of revolving funds currently used in practice	Literature study Comparative case study Semi-structured interviewing
2.2	Analysing good and bad practices of revolving funds currently used in practice	Comparative case study Semi-structured interviewing
2.3	Deducting the structuring elements of a revolving fund according to the comparative case study	Comparative case study Semi-structured interviewing
3.1	Analysing the possible designs of a revolving fund	Comparative case study Semi-structured interviewing
3.2	Designing a revolving fund for inner city development	Comparative case study Semi-structured interviewing market challenge
3.3	Analysing the influence of a revolving fund on the decision-making of real estate developers	Comparative case study Semi-structured interviewing market challenge

Table 1: Research components and accompanying research methods

The literature review provides answers to the first three research components. The focus is defining important concepts which are mentioned in the research questions, complemented with an in-depth literature study regarding the context in which urban development takes place. The comparative case study focusses on three existing revolving instruments currently used in practice which are selected using four case selection criteria. The revolving instrument should:

- be initially funded by public resources on a revolving basis,
- have involvement of a governmental body (local, regional, national, international),
- offer financing to private actors (and possibly also public actors),
- be used to stimulate development (stimulation here is defined in the broader sense, for example stimulation through financial, operational, regulatory, and/or organisational factors).

The case selection results in three relevant types of revolving instruments, which are:

- JESSICIA Initiative (EU programme) with SOFIE, ED and FRED (three Dutch revolving funds)
- Dutch National Restoration Fund, a large revolving fund focussed on monuments.
- Provincial Restructuring Agencies, with the focus on three examples: OMU, HMO and BHB

The comparative case study (i.e. empirical study) provides the building blocks for the design of a revolving fund in the urban development practice. Semi-structured interviewing is used to enrich the case study by acquiring data and insights from professionals. The interviews are held making use of an interview protocol which ensures that important themes/topics are discussed.

Internship

The graduation project is combined with an internship at Fakton in Rotterdam. The internship will help getting into contact with parties relevant to the research (network) and internal knowledge can be used. This knowledge is consulted for better financial understanding and to come to a useful design of a revolving instrument.

Market challenge

In the later stages of the graduation project, a market challenge is held to “test” the outcomes of the comparative case study. A mix of various actors (e.g. real estate developers, investors, financiers, public actors) is brought together to trigger a discussion regarding the outcomes of the thesis in a workshop-like environment. The discussion provides insight in the support base for a revolving fund for inner city development and indicates how a revolving fund influences the decision-making of real estate developers.

Main research outcomes

The three main research components of the thesis relate to the literature study, the comparative case study and the interpretation of the outcomes to design a revolving fund for inner city development. These three components represent the main research outcomes which are discussed in this section.

Literature study

Adams and Tiesdell (2012) describe the process of real estate development quite thoroughly as they provide several models (e.g. models by Healey and Gore, and Nicholson). They indicate three main sets of events, which are: I) establishing of a clear development concept, II) establishing of a firm commitment towards the envisioned development, and III) the actual implementation (or construction) of the development. According to Tom Daamen, urban development "refers to a framework of concrete material interventions inside a geographically distinct urban area." (Daamen, 2010, p. 18).

Cooperation in urban development is the final theoretical concept. One of the most common forms is the use of public-private partnership (PPP). Involved actors usually sign two agreements: a declaration of intent and a partnership agreement. These agreements are signed between a governmental body, in most cases a municipality, and private companies, mostly developers or investors (Hobma, 2011). Reasons to set up a PPP may evolve around land ownership when it is separated/divided between the parties, the spreading of development risks, financing issues, etc.

The role of project developers is important in the thesis. According to Patsy Healey, the project developer is 'the key coordinator and catalyst for development.' (Healey, 1991). According to Adams and Tiesdell (2012), project developers can play up to four roles in the urban development process: master developer (also: land developer), infrastructure provider, parcel developer, and/or building contractor.

Another important theoretical concept is decision-making, which is a commonly used term but requires some explanation. The main problem in decision-making is that it usually takes place in a context with several actors, all pursuing their objectives with or without regard to other actor's objectives and their influences (Saaty, 1990). Translating this to the urban development process, there usually are numerous actors involved from the public side (e.g. municipalities, provinces, central government), private side (e.g. project developers, architects, contractors, consultants, etc.), and other stakeholders (e.g. residents, action groups, etc.). This leads to complex decision-making due to the various public, private, societal and other objectives, values and influences. Taking all these into account is difficult, thus creating a successful decision in the urban development process can prove to be quite hard sometimes. When talking about decision-making specifically for project developers, the decision-making is largely based on financial aspects (Ramselaar & Keeris, 2011). Non-financial aspects play a role as well in the decision-making of project developers, but they are not as structured and well-described as financial aspects, according to Ramselaar and Keeris (2011).

Important policy and planning culture have an influence on the development process as well, mainly through the planning culture (see: Friedmann & Sanyal, 2005; Hobma, 2011; Sanyal, 2005; Taylor, 2013), the planning system (see: Buitelaar & Bregman, 2016; Loozeman, Gans, Groeneveld, & Ros, 2016; Rooijen, 2016), public law (see: Hobma & Jong, 2015) and private law (see: Hobma, 2011; Hobma & Jong, 2015).

Stimulating, financial instruments relate to instruments that might be employed to stimulate certain action in the urban development process. Stimulating constitutes one of four roles urban planners may employ, according to David Adams (Adams & Tiesdell, 2012; Heurkens, Adams, & Hobma, 2015). Planners can employ four types of planning instruments: shaping, regulating, stimulating and capacity building instruments. It provides possibilities for planners to incorporate public objectives in urban development processes (Heurkens et al., 2015). One of the stimulating instruments that is assumed to have high potential is the use of a revolving fund.

Other important aspects in the thesis are the use of subsidies, the (scientific) debate regarding greenfield versus brownfield development and the use of revolving funds. Each year, approximately €6 billion is granted in subsidies. Authorities are increasingly exploring other ways of financing. Most policy domains are experimenting with different types of financing options, such as (revolving) fund schemes, crowdfunding, matchfunding and social impact bonds (Ouden & Brink, 2016). The common notion is that

society demands that public funding for societal projects is handled with care and that financing decisions (either subsidies or otherwise) are well-informed decisions. As Ouden and Van den Brink (2016) suggest, each case of public funding for societal projects need to have a form of democratic legitimation, transparency in the implementation process, legal equality and protection for applicants, and public accountability for the effectiveness of the policy.

Regarding the debate on greenfield versus brownfield development, two dominant frameworks can be distinguished. PBL has performed desk research to construct these two frameworks (see Van Duinen et al., 2016). These two frameworks are I) "new greenfield locations", and II) "transformation of the existing city". As the names suggest, the first advocates a quick response to the mismatch of supply and demand and thus focusses on quick and easier development in greenfield locations. The second advocates an approach in which the transformation of the existing city is dominant. The debate relates to the so-called Highest and Best Use (HBU) of a location. The HBU indicates which usage/functionality of a location results in the most productivity. This means that in theory each site is used in the way that is most productive (Geltner, Miller, Clayton, & Eichholtz, 2001).

The final part of the literature study relates to the use of revolving funds, an instrument that grants financing to actors or projects. Granting financing may be realised through a (subordinated) loan, granting guarantees, or participation. Principal and interest repayments (in case of a loan) and dividends (in case of participation) flow back to fund, which provides the ability to reinvest the revolving fund's resources (Holt, Van Ginkel, Van Aart, & Van Den Bungelaar, 2013). The structure of a typical revolving fund is visualized in figure 1.

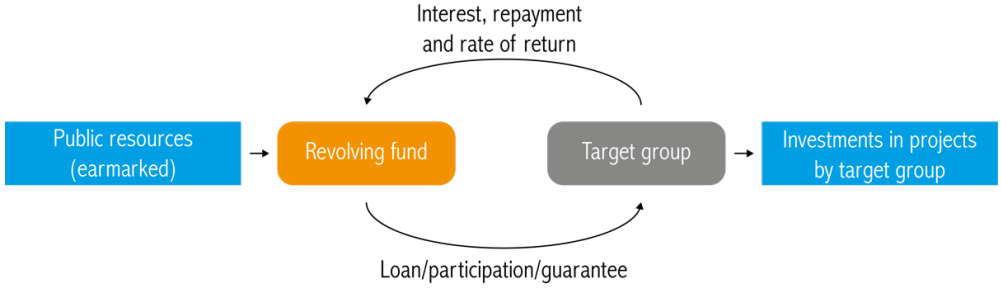


Figure 1: Typical structure of a revolving fund (Adapted from Spenkelink & Willigenburg, 2016).

A revolving fund may employ four types of financial instruments, each having their own risk-profile and steering ability: guarantees, loans, participation and development. The subsidy instrument is not employed from a revolving fund. The typical financial instruments are visualized in figure 2.

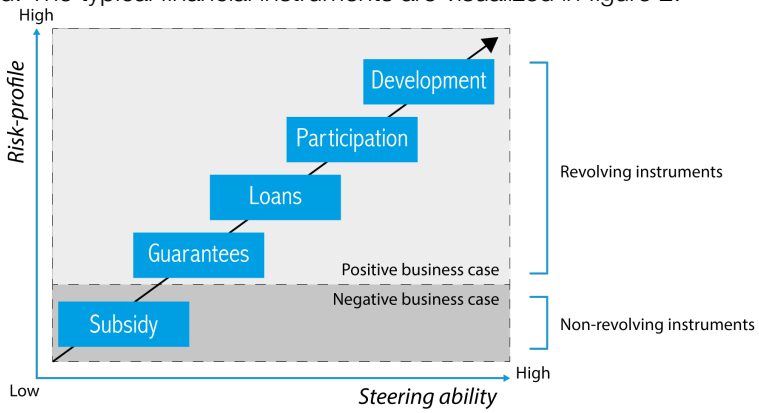


Figure 2: Financial instruments in terms of risk and steering ability.

For a fund to be revolving, the financing needs to be (partly) recoverable. Here, the three main conditions for a revolving fund to be logical are listed.

- Projects that are financed through a revolving fund must have a positive business case/yield potential.
- The projects that acquire financing from a revolving fund set up by a governmental body (and thus funded by public financial resources) must achieve social benefits/goals.
- There needs to be clear market failure: projects or companies must have trouble acquiring regular financing at the capital market.

The difficulty of the term 'positive business case'
The first and foremost condition for a revolving fund is that the project in question must have a positive business case. However, the fact that a project's positive business case is a prerequisite for a loan from a revolving fund may come across as rather odd. One may argue that when a project has a positive business case, the market should be able to carry out the development at hand on its own. In that sense, a revolving fund with public resources should not be necessary. However, projects that are not able to acquire financing from the market may in fact have a positive business case. This needs further explanation. There is a difference between projects that clearly show a positive business case (financially speaking) in a rather certain timespan and projects that show a positive business case that is rather uncertain due to external factors. These factors may relate to the timespan of the project and the complexity in terms of ownership, technicalities, etc. The latter type of projects may show yield potential, however due to the external factors the height and timing of that yield may be influenced. These uncertainties may result in banks and other financial institutions being reluctant to finance these types of projects. It is this type of projects that a revolving fund should aim at: projects that show financial and societal yield, usually on the long-term, but due to complexity and uncertainty are not able to acquire regular financing (e.g. from a commercial bank).

Comparative case study

To make the switch from literature to the empirical case study, a case study analysis framework has been developed, based on the four main themes that are important when analysing or setting up a revolving fund: goal, organisational structure, financial structure and type of projects.

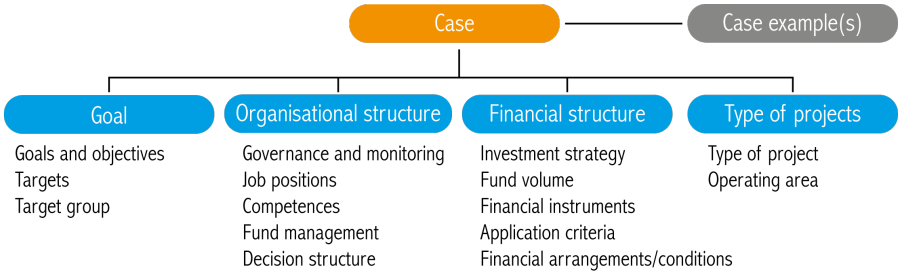


Figure 3: Case study analysis framework; important aspects of stimulating funds

Using the analysis framework, visualized in figure 3, the three cases have been analysed. In the thesis, the case conclusions and all perceived good and bad practices for each theme and sub-theme are listed. The overall conclusion of the three cases is that a clear understanding of the goal, targets and target group is needed. When a revolving fund does not have a clear goal, applications may be arbitrarily assessed and potential applicants may have difficulties finding the fund. In terms of the organisational structure, there are various possibilities. However, in general it is perceived to be an advantage if a revolving fund is distanced from political decision-making. According to the interviews and the workshop, market parties perceive political decision-making to be potentially uncertain. Therefore, most revolving funds are distanced from the governmental body in question in a separate legal entity. The governance and monitoring needs to be carried out by experienced professionals. A side-effect is that the market receives a quick answer to their financing questions. The organisation should be relatively small related to the fund volume. This contributes to the revolving nature of the fund (less operational costs) and ensures personal contact with the market. It is essential to have the core competences (e.g. process management, investment management, financial knowledge, technical knowledge) in-house or to have the ability to acquire incidentally needed knowledge through contracting external professionals. Regarding the financial structure, flexibility is the magic word. Flexibility in the fund volume (starting relatively small, with the possibility to scale-up), in the financial instruments (not only focussing on one), and the financial arrangements (interest rates, repayment schemes) is essential. External factors and uncertainties result in changing circumstances. Setting up a revolving fund that is not able to cope with these changes is relatively useless. The investment strategy and the application criteria directly translate policy objectives in the operations of the revolving fund. In relation to the type of projects, the scope of the revolving fund is essential. For instance, a revolving fund may be employed to only finance certain projects (e.g. office transformations) or with a much wider scope (restructuring of business areas, office locations and inner city locations). Also here, flexibility is important: if a revolving fund is only aimed at one type of project, but the amount of eligible projects is limited, then the fund would not acquire enough projects and the fund volume would then be "stuck" in the fund. Finally, a distinction needs to be between the building/plot level which requires mainly stimulation through financing, and the area-level which requires stimulation through actual development of the first plot(s) of the area to create commitment.

Interpreting the outcomes to design a revolving fund

Looking at the case studies' highlights, main conclusions, and the policy documents regarding the analysed revolving funds (see: NV OMU, 2013, 2015, 2016; Provincie Noord-Brabant, 2005, 2012; Provincie Overijssel, 2008; Provincie Overijssel, 2016), several structuring elements (or main considerations) can be distinguished when considering a revolving instrument/fund. Since these structuring elements are discovered in each of the cases, it is assumed that they are distinguishable for revolving funds in general. For each of the four main themes of the analysis framework, one or two structuring elements can be distinguished:

Goal

- *Goal focus*: the governmental body setting up a revolving fund has to determine whether the fund should focus more on its societal goals or on the return on investment (e.g. ERR versus IRR). This has implications for the way projects are assessed and the 'revolvingness' of the fund. Furthermore, it relates to the societal urgency the governmental body expresses regarding the goal of the fund (e.g. if a certain issue has high societal urgency, the ERR could be dominant over the IRR in project assessment).
- *Goal limitation*: the description of a revolving fund's goals/objectives may be set out as quite broad or more strict. For instance, a revolving fund may aim at only one type of project whereas a fund may also aim at several types of projects.

Organisational structure

- *Distance*: how much does a governmental body wish to be involved in achieving its societal objectives and how far is it willing to distance a revolving fund from the own governmental organisation? Does it possess the relevant competences? This translates to the "distancing" of a revolving fund from the funding governmental body. A revolving fund may act as an entirely autonomous legal entity or might act as a governmental instrument similar to a civil servant managing a bank account of the governmental body in question. This consideration is in line with the steering ability, but translates more to the governmental ability and competences to carry out activities which are part of the day-to-day operations of a revolving fund and the governance structure. These activities relate to the (development) project, acquisition/PR, project assessment, issuing of financial resources and contract management.
- *Organisation size*: a revolving fund's organisation may be set out as an entity with a rather large, institutionalized organisation or with a smaller, lean and mean organisation.

Financial structure

- *Risk acceptance*: how much risk is a governmental body willing to accept to achieve its societal objectives? This translates virtually directly to the financial instruments a revolving fund has at its disposal. The governmental body setting up the revolving fund dictates which instruments are statutory permitted and can thus be employed to achieve the predefined societal objectives the revolving fund wishes to achieve.
- *Steering ability*: how much steering ability does a governmental body wish to have at its disposal regarding the projects and objectives that are pursued? This consideration is directly in line with the risk acceptance level, regarding the steering possibilities for each financial instrument that may be employed.

Type of projects

- *Market demand for revolving instruments*: based on the interviews and market challenges, it is clear that there is market demand for a revolving fund/revolving instrument for certain projects that experience financing problems. However, since the exact demand for financing through a revolving instrument is not clear, the degree of flexibility in terms of financial instruments, upscaling during growth, and the financial arrangements needs to be high. This is rather a prerequisite or recommendation than a structuring element.

The structural elements (except the market demand for revolving instruments) can be plotted in horizontal lines with ranges regarding the choices one must make when setting up a revolving fund or employing a revolving instrument. Each of the analysed cases is thoroughly analysed and can therefore be placed in the horizontal lines, visualized in figure 4. The elaboration on this figure is presented in section 7.2.

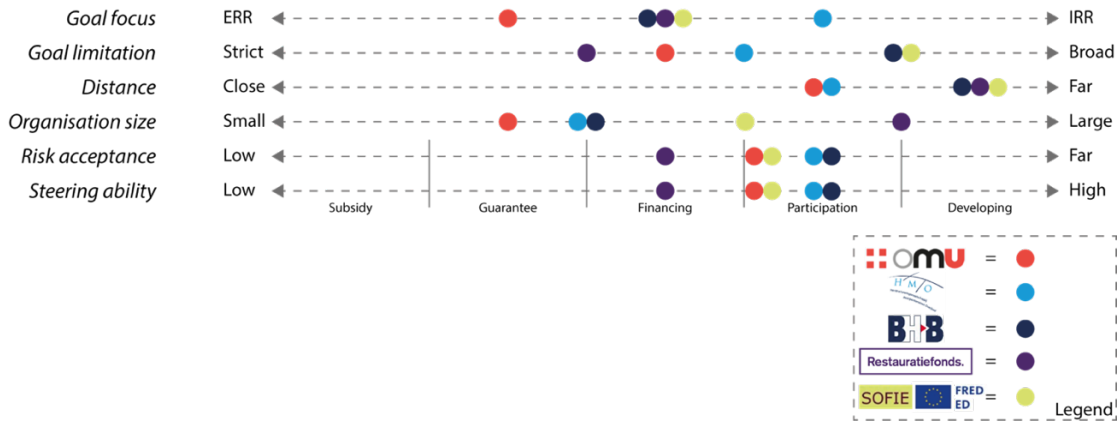


Figure 4: Existing revolving funds plotted in the ranges of the structuring elements.

Based on the outcomes of the case study and the conclusion that there are six main structural elements regarding revolving funds, a variant study has been conducted to demonstrate the impact of the six structural elements on the setup of a revolving fund. Four variants are drawn in figure 5 with varying characteristics, ranging from left to right on the six axes. A further explanation is provided in section 7.3.

1. Subsidy+
2. Revolving fund-light
3. Full-fletched revolving fund
4. Development agency

Figure 5: Four variants of a revolving fund with different characteristics.

Conclusions and recommendations

The thesis leads to six main conclusions and the answer to the main research question.

1. Clear market failure is apparent

Based on the literature study, the interviews and the two market challenges of the 9th and 29the of June, the main conclusion is that particular inner city development projects experience market failure. The main causes of this market failure are the prolonged time-span of projects, complex ownership, difficulty in coupling subprojects with a positive and negative business case, uncertain commitment from a political and market point of view and the reluctance of commercial financiers to provide financing in the earlier phases of inner city development projects.

2. A revolving fund stimulates certain development projects

The case study shows that revolving funds successfully stimulate development projects in the built environment. By providing guarantees, loans, participations and strategic purchase of real estate, they stimulate development which would not have occurred without the intervention of a revolving fund. Three criteria always legitimate the intervention of a revolving fund:

1. Projects that are financed through a revolving fund must have a positive business case/yield potential.
2. The projects that acquire financing from a revolving fund set up by a governmental body (and thus funded by public financial resources) must achieve social benefits/goals.
3. There needs to be clear market failure: projects or companies must have trouble acquiring regular financing at the capital market.

3. The conditions for a successful revolving fund for inner city development

Setting up a revolving fund is quite complex, since many choices and considerations need to be weighed. These considerations relate to the goal, the organisational structure, financial structure and type of projects of the revolving fund. The main conditions for a revolving fund to be successful lie in organisational and financial flexibility and adaptability to changing circumstances. Clear goals, targets and objectives should be defined, making it clear for potential applicants what the revolving fund is about. The revolving fund should be set up in a separate legal entity to ensure prolonged political commitment. A solid governance and mandate structure accompanied with an unambiguous investment strategy should incorporate the public policy goals. The fund's employees should have adequate business case knowledge and essential knowledge (e.g. commercial/development, financial, technical, juridical, management competences). Finally, evaluation and updating the investment strategy is highly recommendable. Finally, in relation to the type of projects the revolving fund should focus on, there are two main types. The first relates to projects on the building/plot-level; in this case, the focus should be on financing through the revolving fund. The second relates to projects that are part of a larger inner city development area (area-level). In this case it could make sense to develop (a first) part of the development to unlock other developments in the area carried out by other developers.

4. A preferred variant that fits best

A preferred variant is established that fits best with the circumstances in inner city development (see figure 6). Note that the outlined preferred variant is based on perceived good practices of other revolving funds, interviews and the market challenges. It is therefore not a blueprint for a successful revolving fund in general. It is an operationalisation of the variant that fits best in the inner city development practice, based on the outcomes of the case study. The preferred variant incorporates the outlined conditions for a successful revolving fund. Finally, the operational level should be the Provincial or Metropolitan region level. The main reasons are to have an adequate pipeline of projects, but the fund managers still need to know the state-of-play.

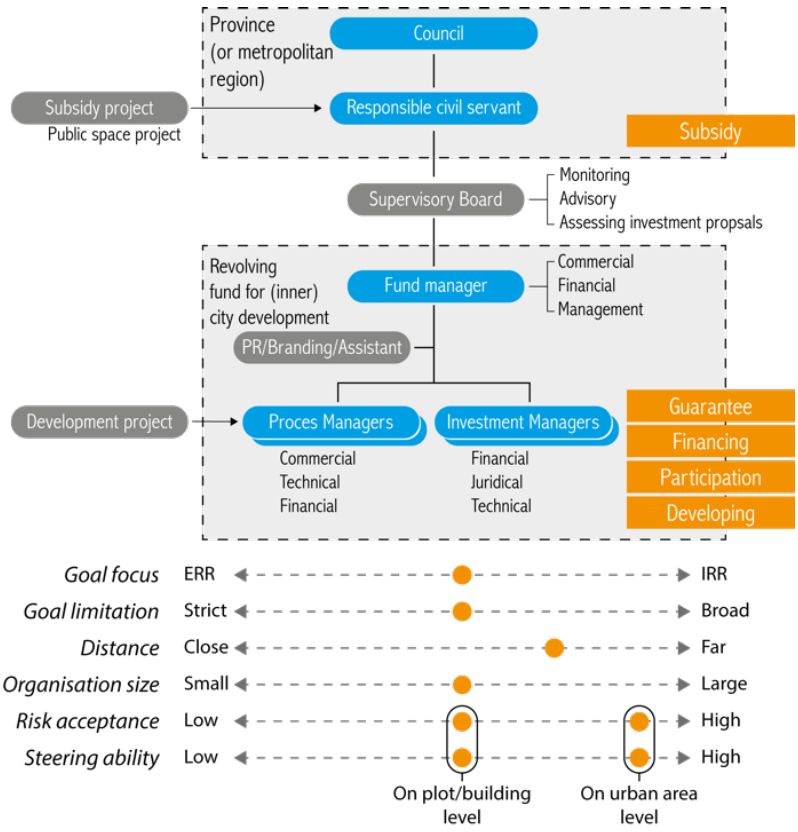


Figure 6: The preferred variant of a revolving fund for inner city development.

The complexity of 'blueprint-thinking'
The designing of a preferred variant for a revolving fund may come across as rather arbitrary and resembles a somewhat binary approach, referred to here as 'blueprint thinking'. The urban development practice is not helped with a binary approach to planning instruments, as it takes place in a highly dynamic and complex environment. Therefore, the preferred variant does not aim at providing a blueprint for a revolving fund in the development process. Every situation demands another design of a revolving fund. The aim of the variant study and the preferred variant is therefore to demonstrate the impact of choices made regarding the main considerations, not to design a one-size-fits-all solution for the development process. The preferred variant is the outcome of the case study analysis in which the good aspects of the existing revolving funds are assessed to see whether they could be of added value for a revolving fund in inner city development. Due to the complex nature of urban area development, the emphasis is on flexibility.

5. Political and market support is apparent

For a revolving fund to be useful, a clear support base is essential. The study concludes that there is support from a political and market point of view. A revolving fund provides a partial alternative for subsidies, which means policy goals can be partially achieved by employing revolving instruments instead of non-revolving instruments. This results in lower public expenditure. The support from a market perspective is apparent as well. Developers express a positive stance towards a revolving fund: when developers want to invest in certain projects that show yield potential but financing is not available, a revolving fund might fill this gap. However, several conditions are put forward. The fund should be committed to a project for a longer period of time, the interest rate should be affordable due to the prolonged lead time, and due to the complex nature of the projects, financial customization is essential. Other conditions relate to the application criteria which need to be clear and not too exhaustive. The revolving fund should have clear (societal) goals, it should be independent of political decision-making (distancing), the fund manager needs to have enough autonomy to find creative solutions, and the fund volume should have critical mass (at least ten pilot projects at the start).

The paradox of flexibility versus policy goals
A revolving fund aims at achieving policy goals by issuing its financial resources to projects that contribute to the fund's societal objectives. However, as we saw above, the urban development practice is under a constant influence of change and complexity. To cope with this, a revolving fund should be flexible. This constitutes a paradox, as on the one hand a revolving fund that is distanced from its responsible governmental body must have a clear investment strategy and clearly defined objectives. On the other, it should be flexible to cope with changes. A balance needs to be incorporated, which means that the investment strategy and policy goals must be adaptable.

6. The influence of a revolving fund on real estate developer's decision-making

Theoretically speaking, the role of real estate developers is to bring together capital, labour and rights in land to create the right product in the right place at the right time. Decision-making lies at the heart of this process. Real estate developers' choices are largely based on financial decision criteria. Revolving funds mainly influence the financial feasibility of projects, therefore dominantly impacting developers' decision-making. From a practical point of view the conclusion is the same. Real estate developers show willingness to make use of a revolving fund under certain conditions. These are outlined in main conclusion three and five.

How could a revolving instrument stimulate inner city development and how does this influence the decision-making of project developers in inner city development projects?

The main research question, outlined above, can now be answered. The main research question is build up in two components. The first relates to how a revolving instrument could stimulate inner city development. The short answer is by setting up a legal entity or reserving financial resources within a governmental body that can employ financial instruments that influence inner city development. The longer answer is that the variant study shows many different ways of structuring a revolving instrument. The variation lies in the six main structuring elements: goal focus, goal limitation, distance to governmental body, organisation size, risk acceptance and steering ability. This indicates that there are many ways of stimulating inner city development through the use of a revolving instrument. The variant study has presented a preferred variant, which is structured as a revolving fund, founded as a separate legal entity that can employ guarantees and loans in case of development projects on the building/plot-level. In case of larger-scale projects on the urban level, the entity may develop independently to unlock further development by other actors. The case study, and specifically the market challenge, shows that real estate developers are willing to make use of revolving fund under certain conditions, described in conclusion six. Therefore, the financially driven decision-making of real estate developers is influenced by a revolving fund through the employment of financial instruments making certain developments feasible that were initially unfeasible.

Table of contents

Inner city development: an introducing narrative

A fund for the redevelopment of Rotterdam's Stadshavens area

Rotterdam is a harbour city. Historically, many harbour-related activities took place along the shores of the *Nieuwe Maas* river in the city centre. However in recent times, most of the activities are relocated to the *Maastvlakte* outside the city. This leaves most of the old harbour areas in the city obsolete, which means redevelopment of these locations is needed.

Figure 7: The Stadshavens area in Rotterdam (see: www.stadshavensrotterdam.nl)

Together with the European Commission and *Kansen voor West*, the municipality has established a fund to redevelop the harbour area called *Stadshavens* and to stimulate initiatives in the area. The fund is called **SOFIE**, which stands for *Stadshavens Ontwikkellfonds voor Innovatie en Economie*. Two projects that are financed through the fund are the *RET-remise* and *Speelstad Rotterdam.* The first comprises a project in which a former tramway depot is transformed to a living and working environment. Unemployed citizens of Rotterdam South carry out the transformation works. *Speelstad Rotterdam* is a project which entails the transformation of a waste processing terrain to an amusement park. Both projects show that in some cases projects that are not able to acquire financing from commercial banks can be stimulated with a public fund. Both projects have received a loan from the fund which made it possible to carry out both initiatives.

SOFIE is set up with financial resources from Europe and the municipality, with the idea to issue these resources to developers and entrepreneurs through loans, guarantees and in some case participations. What makes it unique is that the financial resources are recovered over time and not issued with a one-off nature as is traditionally the case with subsidies. In that sense, the fund can be recognized as a **revolving fund**, which means that when a loan is issued, the receiver of the loan pays repays it with interest. This means that the fund is able to reinvest its resources over an extended period of time.

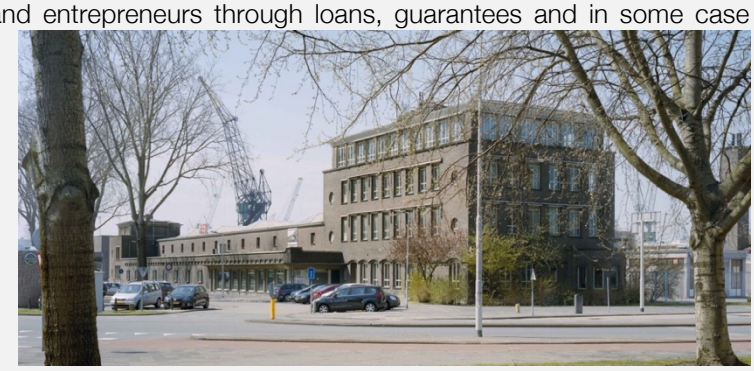


Figure 8: The RET Remise (see www.stichtinghandelscompagniasluisjesdijk.nl)

In this thesis, the concept of a revolving fund in the urban development process is central. A study is conducted to uncover whether or not a revolving fund is of added value in inner city development.

1. Research introduction

Can a revolving fund stimulate inner city development and would real estate developers perceive such an instrument as a potential source of financing? With that question in mind, the research in this report is carried out. This first chapter of the thesis 'Stimulating inner city transformations – The use of revolving funds in urban development' constitutes the introduction to the graduation report. The research scope is outlined, a summarized theoretical framework is provided, followed by the research objective, scientific and societal relevance, and finally a reader's guide.

1.1 Positioning the thesis

This first section describes a short introduction to the topic that will be researched as part of the graduation project. This thesis is the outcome of the graduation research project at the master Management in the Built Environment - Urban Development Management chair at the TU Delft.

The research that is introduced in this report is focussed on the field of real estate development in the residential sector. One of the main issues is that the demand for dwellings in Dutch cities is not in line with production, as is underlined by several researchers (see for instance: Brink, 2017; Netwerk Zuidelijke Randstad, 2015; PBL, 2015). The research takes a closer look on Dutch cities, with one of the starting points being the *Gebiedstransformaties: Ruimte voor Durf en Diversiteit* research that is recently finished (June 2017). This research has been simultaneously conducted with a team of lecturers within the UDM section of TU Delft (see Verheul, Daamen, Hobma, Heurkens, & Vriends, 2017). It will provide insight in the possible approaches parties from both the public and private side can take to stimulate urban development. The main research questions focus on possible instruments to stimulate urban development and the way public and private parties collaborate in development processes. Furthermore, a way forward in terms of policy will be analysed.

The focus of this thesis lies on the public and private side and their roles in inner city development. Research questions relate to the roles actors have in urban development, how relevant policy and culture influences the urban development process, what the current debate is regarding the mismatch between supply and demand of dwellings, and how revolving instruments influence the decision-making of private actors.

1.2 Introducing the research problem

This section introduces the research problem central in this thesis. The research problem is approached from a practical perspective, followed by a more theoretical perspective. Additional background information with several illustrative figures is provided in appendix 1.

1.2.1 Dutch inner city development practice: then and now

As history shows, the Dutch government has introduced numerous regulatory and financial arrangements to stimulate (inner city) development. From a public law viewpoint, it can be concluded that from the 1980s up until now, the main tendency is that the focus was always on accelerating and simplifying development (See: De Zeeuw, 2014; Korthals Altes, 2013). From a financial viewpoint, it is clear that from the 1970s until 2014, the Dutch government financially stimulated Dutch inner city development in numerous ways, through for example *Stadsvernieuwingsgelden*, *Locatiesubsidies* and *Investeringsbudget Stedelijke Vernieuwing* (ISV) (See: Priemus, 2003; Teule, Heeger, & Hilkhuysen, 1991). Thus, both from a public law and financial perspective, the focus was always on simplifying, stimulating and accelerating urban development; the Dutch government has provided and approved numerous subsidies, funds, tax exemptions such as tax increment financing, property tax raises (See: Krabben, Lenferink, Martens, Portier, & Stoep, 2013; Root, Krabben, & Spit, 2015), and other types of financial incentives to stimulate inner city development. The latest main source of financing however, the ISV, was abolished in 2014. This has implications for the current practice of inner city development in the Netherlands. The question that rises is whether the Dutch government is willing to provide a subsidy or fund again to stimulate inner city development as the last one was abolished end 2014.

1.2.2 Demand for urban living

Within the Netherlands the demand for urban living areas is high on both the short and long term (Koning, 2015). People have been drawn towards the cities, especially Amsterdam, The Hague, and Utrecht. To a lesser extent Groningen, Rotterdam, Arnhem and Eindhoven have experienced population growth between 2000 and 2014 (PBL, 2015), as shown in figure 9. It is expected that cities will grow further and the areas around cities (surrounding countryside) as well, albeit to a lesser extent. The other areas' population will decline or remain stable (PBL, 2015).

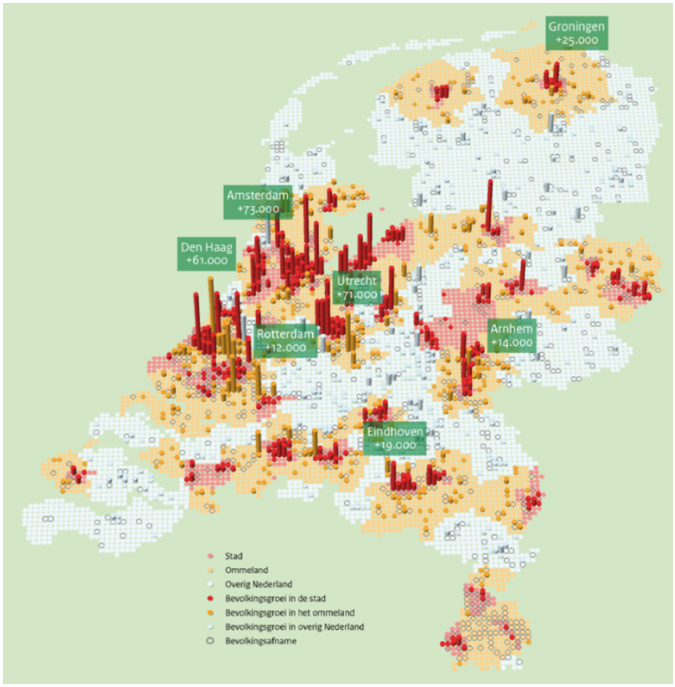


Figure 9: Overview of population growth of Dutch cities between 2000 and 2014 (PBL, 2015)

A policy study by PBL shows two scenarios for the demand for dwellings in the Netherlands. The low scenario indicates a demand for 300,000 dwellings towards 2040, the high scenario 1,000,000 dwellings (Van Duinen et al., 2016). This shows a large bandwidth due to numerous uncertainties in the calculations, such as financial-economic, demographic and geopolitical issues. These issues directly influence the demand for dwellings and therefore it is rather hard to predict the actual future demand (Van Duinen et al., 2016). Another example from a calculation made by *Netwerk Zuidelijke Randstad*: until 2030, a demand of 230,000 dwellings in the Southern Randstad is expected, however with the current developments this amount of newly added dwellings will not be achieved by a long shot (Netwerk Zuidelijke Randstad, 2015). The notion that dwelling production is not in line with demand is true for almost every area in the Netherlands.

Within the boundaries of Dutch cities, the (larger) greenfield development areas (*uitleggebieden*) are scarce and the focus is more drawn towards urban compaction (*stedelijke verdichting*), city edge transformation and brownfield development areas (Boelman et al., 2016). The greenfield developments in Dutch cities are starting to belong to the past and urban transition is becoming more and more predominant.

1.2.3 Problem description

Some development projects are started, some are not. Drivers and barriers influence the decision-making processes for public and private actors whether to invest in inner city development or not. One important factor is that the urban area development practice (UAD) in the Netherlands is in a transition due to numerous changes in the socio-cultural and economic context. These changes relate to for example urban growth, congestion, structural urban stagnation, demographic changes, climate change and globalization (Stumpel, 2014). Due to these changes, certain barriers impact the UAD practice, as Friso de Zeeuw signalled in a publication in Real Estate Magazine in 2012. He stated that urban development should be "more demand-driven, cheaper, more flexible and quicker, otherwise the urban renewal [in Dutch cities] will be completely stalled." (De Zeeuw, 2012, p. 31).

He continues with saying that urban development will only work when there is much more focus on efficiency and when there is a clear image of what the end-user demands; cheaper and more demand-driven are the key elements in the essential innovation within the inner city development market (De Zeeuw, 2012). However, the view taken on inner city development in this publication by De Zeeuw (2012) is rather traditional in the sense that it focusses mainly on the financial aspects of developing. The financial aspects are of great importance to get urban development going. However, other aspects like collaboration, legal aspects and social aspects (e.g. civic interests) are important as well. Other academics pose different approaches and ways to think about inner city development to overcome these barriers and cope with the changing circumstances. Stumpel and Heurkens (2014) summarized this discussion, as they describe that commonly discussed approaches are alternative collaboration models, alternative revenue models and juridical instruments. Heurkens (2012) proposes to further research and consider the use of (private) financing instruments that are commonly used in private-led urban development projects in Anglo-Saxon countries. Another line of thought proposed by Peek (2012) is looking at new investment approaches aimed at sustainable, integral and demand-driven development wherein area management and exploitation are central. This is in line with the proposition from De Zeeuw (2012), connecting to the barriers currently experienced in urban development.

Perhaps the most important barrier is the typically high development costs experienced in urban areas in the Netherlands. *Economisch Instituut voor de Bouw* (EIB), a Dutch research institute focused on the construction industry, concluded in 2011 that the land development of inner city dwellings on brownfield locations easily reaches a €40,000 shortage per dwelling (Van Hoek, Koning, & Mulder, 2011). In greenfield locations this is not the case, as another research shows that in the province of North Holland the land development of newly built inner city dwellings in the more difficult areas has an average shortage of €16,000 per dwelling whereas there is a surplus in greenfield locations of €7,000 per dwelling (Meulen, Mulder, Verwoerd, & Willems, 2013). This mainly has to do with the acquisition of the location, demolition of existing real estate and remediation of the grounds, as another study by EIB shows (Mulder, Saitua, Schep, & Verwoerd, 2014). These factors increase the costs of the land development. The study by Mulder et al., which focussed on the Amersfoort region, and a study by Dubbeling, showed that the land development costs in "difficult inner city locations" (i.e. brownfields with factories, industrial areas, (vacant) offices, etc.) are 2.5 higher than developments at greenfield locations (see Dubbeling, 2014; Mulder et al., 2014). These land development costs consist of acquisition, demolition, remediation, site preparation, plan costs and other costs (mainly interest costs). A specification of the land development costs in greenfield locations, "easy" brownfields and "difficult" brownfields is shown in figure 10 for the Amersfoort region.

Land development costs in greenfields, easy brownfields and difficult brownfields (per dwelling and per square meter)

	Greenfield locations		Easy brownfield locations		Difficult brownfield locations	
	Per dwelling	Per m2	Per dwelling	Per m2	Per dwelling	Per m2
Acquisition, demolition remediation	13,200	95	22,700	240	46,600	500
Site preparation	32,300	110	20,300	240	18,900	170
Plan costs	8,100	30	10,400	130	11,500	60
Other costs (e.g. interest costs)	14,200	85	8,000	90	9,100	115
Total costs	67,700	320	61,400	700	86,100	845

Figure 10: Land development costs in greenfield and brownfield locations in region of Amersfoort (adapted from Mulder et al., 2014).

The main difference is visible in the acquisition, demolition and remediation, as shown above in the first line (€13,200 vs. €46,600 per dwelling). The other costs are either similar or even lower for difficult inner city development (in this particular region).

Other relevant research has been carried out by Brink in close collaboration with BDP (Brink, 2017). The research focussed on ascertaining the potential development volume of dwellings in urban areas throughout the Netherlands, which was done based on data provided by PBL. The research concludes that with the current policy and development practice, approximately 9% of the demand for dwellings can be developed in existing urban areas (which translates to developing 90,000 dwellings with a demand for 1,000,000 dwellings until 2030). If a subsidy granting €25,000 per dwelling (which totals €3.6 billion up until 2030), compaction of dwellings by 35% and speeding up the development process is added to the equation, at best one third of the demand for dwellings can be developed in existing urban areas (Brink, 2017). The outcomes of the research should be interpreted with care; the outcomes are based on numerous assumptions and estimates, and the number of 1 million dwellings needed until 2030 is considered a high estimate (PBL's high scenario). However, the research is a good attempt at estimating the actual possibilities and potential of development in urban areas in the Netherlands. Therefore, the outcomes clearly indicate that not all demand for dwellings can be absorbed by the Dutch cities; if the actual demand resembles that of PBL's high scenario, other ways of developing dwellings need to be incorporated to match (new) supply with demand. In that sense, besides transforming and developing in the Dutch cities, greenfield locations will have to be developed as well.

So far, the analysis within this report has focussed on supply and demand of urban dwellings and the financial costs of urban development. However, urban development obviously has a societal side as well. People preferably want to live in pleasant living environments with accompanying public space (Van Hoek et al., 2011). However, the emphasis in the discussion is mostly on the economic value of development, while social-cultural value is also important to consider. The Triple P-approach (established by Elkington under the name "Triple Bottom Line"), visualized in figure 11, summarizes the fact that inner city development is both important from financial (profit) and societal (people) point of view. However, also sustainability (planet) is of high importance. Creating a "win-win-win situation" in the people-planet- profit dimensions will result in a more integral, long-term oriented and demand-driven approach in the UAD practice (Stumpel, 2014). It is important to keep in mind that inner city development is not only dependant on a solid business case.

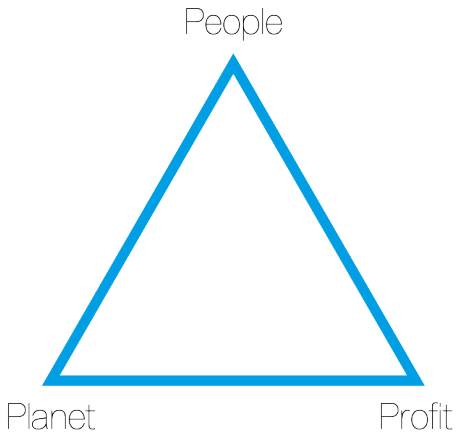


Figure 11: The 3P triangle (Based on Elkington, 1997)

1.2.4 A redundancy of instruments?

There is a vast amount of possible instruments to shape, regulate, stimulate urban development, also adding to the mix capacity building, as described by Heurkens et al. (2015). They describe this as the four quadrants, reflecting the four types of planning roles that urban planners may employ. Several researchers already indicated particular instruments that could be of added value in the urban development process (see e.g. Boelman et al., 2016; Krabben et al., 2013; Van Heijningen, Holt, & Dekker, 2013). These analyses simultaneously indicate that there is a wide array of possible instruments at the disposal of planners. The question rises whether planners are well-enough equipped to grasp the vast number of instruments. As Verheul et al. (2017) signal, this is not the case for many planners and having the expertise to grasp the effects and implications of planning instruments requires expertise and strategic attention. Providing insight and knowledge on the application of planning instruments is one of the conclusions Verheul et al. (2017) derive at.

The focus in this thesis is on instruments that stimulate urban development, corresponding with the stimulating planning role. In this role, many different types of stimulating instruments are recognizable: funds, subsidies, fiscal instruments, area-related measures, and other types of instruments, visualized in figure 12.

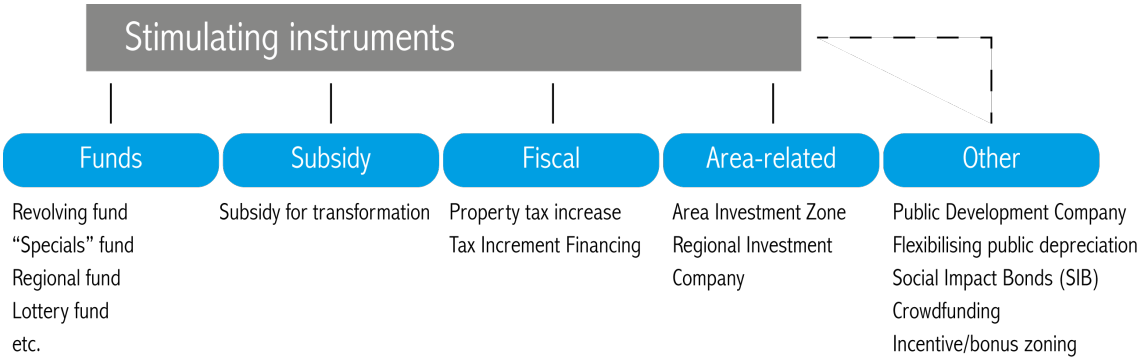


Figure 12: Different types of stimulating instruments

One commonly mentioned stimulating instrument is the use of revolving instruments (or more specifically, the use of a revolving fund). This thesis focuses on revolving instruments because this type of instrument has been described in various research as promising (e.g. Boelman et al., 2016; Krabben et al., 2013), but has not been researched thoroughly yet. A revolving fund is a stimulating instrument which has the possibility to grant financing towards projects or third parties. Granting financing may be realised through a (subordinated) loan, granting guarantees, or participation. Principal and interest repayments (in case of a loan or guarantee) and dividends (in case of participation) flow back to fund, which provides the ability to reinvest the revolving fund's resources. A revolving fund differs from usual loans in the sense that the resources are "earmarked", which means that the resources are to be reinvested with the same purpose. Public actors are increasingly interested in setting up revolving funds, as the revolving principle distinguishes a revolving fund from a subsidy (which has a one-off nature). However, revolving funds are not without risk: it is never certain that outstanding resources will be repaid, especially since revolving funds are normally deployed when the market (e.g. banks) is reluctant to invest (Holt et al., 2013). The structure of a typical revolving fund is visualized in figure 13. A full elaboration on this type of instrument is provided in section 3.3.

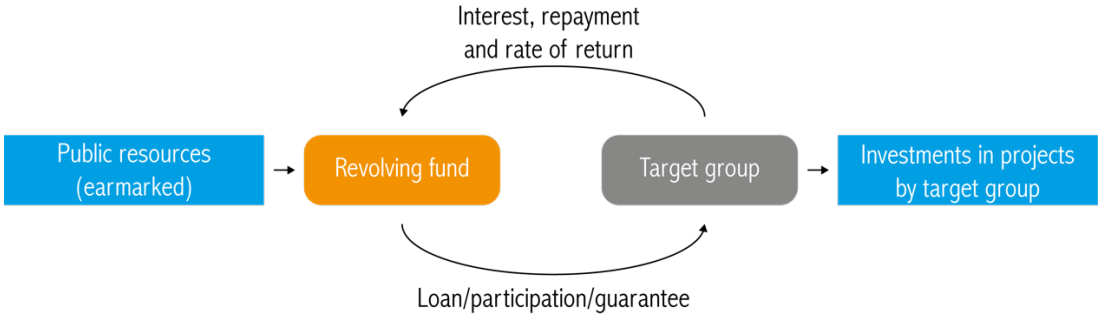


Figure 13: Typical structure of a revolving fund (Adapted from Spenkelink & Willigenburg, 2016).

1.2.5 Main problem statement and hypothesis

To summarize the outlined issues:

- there is high demand for urban living environments due to a growing population and urbanization but supply is not in line (mismatch)
- the amount of greenfield locations in Dutch cities is declining
- urban development of brownfield locations is rather difficult
- there is a large number of instruments available and additional knowledge is needed

This poses the problem Dutch cities are facing: **in many urban areas, there are numerous barriers to overcome to realize urban development**.

The starting point of this thesis is that revolving instruments provide a solution towards overcoming (some of) the barriers in urban development outlined in the problem statement. Particular urban development projects experience (financial) difficulties that can be mitigated by the use of revolving instruments, more specifically a revolving fund. In short, the hypothesis can be described as: **particular inner city development projects that experience (financial) difficulties can be stimulated by the use of a revolving fund.**

1.3 Research objectives and final product

Objectives of the research
The overall objective of the graduation project is to develop insight in the use of revolving instruments in Dutch urban development processes. The idea is that a revolving instrument might provide a solution towards urban development projects in inner cities that require high upfront investments and therefore experience difficulties at the earlier phases. As the problem analysis described, promising inner city areas are left undeveloped due to difficulties in financing.

Literature review
By researching the policy, roles of public and private actors in the urban development process, and the existing instruments used in the process, the objective is to gain a clear understanding of the regulatory environment the urban development process takes place, and what kind of instruments are used to either shape, regulate, stimulate, or facilitate this process. Furthermore, the literature review focusses on the phenomenon of subsidies, the current scientific and political debate on urban development, the mismatch between supply and demand in the residential sector and the theory of revolving funds.

Empirical study
The objective of the case studies is to gather knowledge on the use of revolving instruments in (real estate) development processes. This analysis is continued by researching in what way a revolving fund could overcome some of the barriers described in the problem analysis. This knowledge is used to develop a design for a revolving fund for the Dutch inner city development process. The final objective is to analyse whether there is a support base for a revolving fund and how it influences the decision-making of real estate developers.

Final product
The final product in this thesis is a thorough analysis of the use of revolving funds in practice resulting in main themes that are important when setting up a revolving fund. These themes are used to conduct a variant study. Based on good and bad practices of existing revolving funds, a preferred variant can be designed for the Dutch urban development process. This final product constitutes an instrument that has the potential to accelerate development of the more difficult areas that are currently left undeveloped.

1.4 Scientific and societal relevance

This thesis is both scientifically and societally relevant, as is summarized below:

- Providing an overview of stimulating instruments in urban development using a scientific framework (4-quadrant model: shaping, regulating, stimulating, capacity building (Heurkens et al., 2015)).
- Lack of in-depth (scientific) analysis of revolving instruments in urban development.
- Indication of and contribution to the debate on the growing mismatch between supply and demand in the residential sector.
- Analysis and possible design of a revolving instrument which could stimulate the urban development practice and decrease the mismatch of supply and demand in the residential sector.
- Analysis of a potential alternative for subsidies used for certain urban development projects, which has consequences for public stewardship.
- Analysis of political and market support base for a revolving instrument in inner city development.
- Analysis of influence of a revolving instrument on decision-making of developers.
- The research outcome provides insight in the effect of the use of stimulating instruments in urban development, thus operating as a planning instrument in the stimulating quadrant in the 4-quadrant model. This provides a better understanding for actors involved in urban development processes of the available instruments and their actual effects, leading to a better application of the instrument.
- The use of a revolving instrument stimulates and enhances urban development, leading to new/more developments that are carried out. This reduces the mismatch between supply and the growing demand for dwellings.
- The use of a revolving instrument decreases deterioration and vacancy in urban areas by unlocking certain deadlocked developments. It also enhances sustainability of the built environment if redevelopment or transformation takes place.

- When more developments are carried out using a revolving instrument, this has positive socio-economic effects: it increases employment opportunities and promotes economic development of urban areas.

1.5 Reader's Guide

As the final part of the introduction, this reader's guide provides the structure of this report: After this introduction, chapter two describes the research design including the research questions, methods and case selection. Chapter three involves the theoretical framework including the literature review, the conceptual model and a connection between the literature review and the case study. Chapter four includes the first case study focussed on the JESSICIA Initiave's Urban Development Fund. Chapter five involves the case study focussed on the Dutch National Fund for Cultural Heritage. The final case study is described in chapter six, describing the Regional Development Fund. Chapter seven focusses on the case comparison, highlighting the perceived good and bad practices of the cases, the structuring elements of a revolving fund, and a variant study. Chapter eight describes the design principles for a revolving fund and a preferred variant that fits best in the inner city development practice. Chapter nine assesses the political and market support base for a revolving fund for inner city development. Chapter ten describes the thesis' conclusions and recommendations. Finally, chapter eleven includes the reflection and discussion of this thesis.

2. Research design

This chapter continuous on the introduction of the research in chapter one, as it constitutes the research design, which includes the research questions and methods.

2.1 Research questions

The main problem as outlined in the preceding chapter results in several research questions. To provide a solution to the main problem, several research questions are established which add up to a main research question.

1. *What is the Dutch planning culture and what are important policies for urban development?*
2. *What is the role of public and private actors in the Dutch urban development practice?*
3. *What type of instruments is available that could promote inner city development?*
4. *Which ways of thinking are recognizable in the debate on urban development and the mismatch between supply and demand in the residential sector?*
5. *How are revolving instruments currently used in practice and in what way do they stimulate urban development processes?*
6. *What are the perceived good and bad practices from the revolving instruments currently used in practice?*
7. *What are possible designs for a revolving instrument for inner city development?*
8. *Which of the possible designs fits best as a revolving instrument for inner city development?*
9. *Is there support for a revolving fund for inner city development and how would it influence the decision-making of real estate developers in inner city development?*

The main research question, with the theoretical concepts in bold, can be stated as:

> *How could a **revolving instrument** stimulate **inner city development** and how does this influence the **decision-making** of real estate developers in **inner city development projects**?*

The theoretical concepts mentioned in the research questions are discussed in the theoretical framework in chapter 3.

2.2 Research methods

In this section, the research strategy is outlined. Overall, the thesis is built up in three research components, described subsequently. Each of the components is characterized by their respective research methods.

Research strategy
The research in this proposal has a qualitative research strategy. The principal orientation to the role of theory in relation to the proposed research is that it is inductive rather than deductive. A new type of stimulating instrument will be analysed and designed, therefore adding to the existing theories in the field of urban development.

The research design is characterized as a case study, since the research focusses on the possible use of a revolving fund. Robson (2002, p. 178) states that “case study is a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real-life context using multiple sources of evidence.”. The contemporary phenomenon in this case is the use of a revolving instrument which is analysed in the real-life context of the urban development field. The multiple sources of evidence are the literature study, semi-structured interviewing and the market challenges. The research is a combined ex-post research and ex-ante research. The analysis of existing, comparable revolving instruments is an ex-post analysis, since these funds are already in place and therefore they can be analysed ex-post. The analysis regarding the support base, application, effectivity and design of a revolving fund for the urban development process is part of an ex-ante research, since the fund does not exist yet.

Research components
This section describes the research design proposed to achieve the objective of the research as outlined above. The research can be outlined in three components:

1. Analysis of Dutch urban development context
2. Empirical case study
3. Translating research outcomes into a design for a revolving instrument

Each component has three sub-components which are analysed along the lines of predefined research methods, described below in table 2.

#	Research component	Research method(s)
1.1	Dutch policy in urban development	Literature study
1.2	Dutch practice: cooperation of actors in urban development processes	Literature study
1.3	Gaining overview of planning instruments, and specifically rev. funds	Literature study
2.1	Analysing the use of revolving funds currently used in practice	Literature study Comparative case study Semi-structured interviewing
2.2	Analysing good and bad practices of revolving funds currently used in practice	Comparative case study Semi-structured interviewing
2.3	Deducting the structuring elements of a revolving fund according to the comparative case study	Comparative case study Semi-structured interviewing
3.1	Analysing the possible designs of a revolving fund	Comparative case study Semi-structured interviewing
3.2	Designing a revolving fund for inner city development	Comparative case study Semi-structured interviewing Market challenge
3.3	Analysing the influence of a revolving fund on the decision-making of real estate developers	Comparative case study Semi-structured interviewing Market challenge

Table 2: Research components and accompanying research method(s)

Literature study
The literature study provides answers to the first four research components in table 2, which translate directly with the first four research questions. As Bryman (2012) indicates, the search for literature is guided by the research questions while simultaneously the literature study is a means of showing why the research questions are important. The focus is defining important concepts which are mentioned in the research questions, complemented with an in-depth literature study regarding the context in which urban development takes place. Additionally, the case study is further strengthened using literature to support the outcomes.

Comparative case study
The comparative case study focusses on three cases. As Bryman (2012) indicates, the selection of units (referred to here as cases) in qualitative research revolves around the notion of purposive sampling. This type of sampling indicates that the units of analysis (i.e. cases) have direct reference to research questions, which means that the research questions should give an indication of what units need to be sampled. Furthermore, purposive sampling dictates that the sample is selected on a random basis, but rather in a more strategic way. In this thesis, criterion sampling is chosen as the purposive sampling approach, which means that cases are selected that comply to the predefined criteria. A four-criteria case selection is outlined in section 2.3 in which the role of public and private actors is incorporated, as well as the process of financing, and the connotation of stimulating development. The case study (i.e. empirical study) provides the building blocks for the design of a revolving fund in the urban development practice. The cases are analysed using the structure of an analysis framework introduced in section 3.4. The framework is used to structure the semi-structured interviews, to interpret the case study outcomes, and to finally set up a potential design for a revolving fund for inner city development. In that sense, all important aspects of the case study (analysis, outcomes, good and bad practices) and the subsequent designing of a revolving fund are structured using the same framework, increasing the comprehensibility and readability of the thesis.

Semi-structured interviewing

Semi-structured interviewing is used to enrich the case study by acquiring data and insights from professionals. These professionals are selected based on their role they carry out or the job activities they are involved in. For each of the cases, at least one interviewee is selected that can provide information that relates to all the topics incorporated in the analysis framework. These interviewees may be the initiator of the respective revolving fund, the fund manager or an applicant who has been granted a loan from the fund. In order to have clear understanding of the critical (financial) aspects of revolving funds, three interviewees have been selected based on research they have carried out that is relevant or based on their financial knowledge. Finally, in order to answer the final research question regarding the decision-making of real estate developers, a real estate developer and a representative of Dutch real estate developers is selected. This has led to the selection of interviewees presented in table 3.

Name	Company/authority	Function	Date
Critical (financial) knowledge			
Erwin van der Krabben	Radboud Universiteit	Hoogleraar planologie	18-jan-17
Edwin Netjes	KplusV	Adviseur en partner	16-mrt-17
Thimmo van Garderen	BNG	Senior Manager Business Development	14-mrt-17
Jimmy Kools	Fakton	Partner, Capital	31-mrt-17
Robert van Ieperen	Fakton	Partner, Valuation	12-apr-17
Revolving funds			
Michiel van Keulen	Gemeente Rotterdam	Beleidscoordinator investeringen bij stadsontwikkelin	16-mrt-17
Richard Luigjes	SVn	Manager Fondsontwikkeling, Klant & Markt	17-mrt-17
Barend Jan Schrieken	Nationaal Restauratiefonds	Ontwikkeling & Strategie	15-mrt-17
Janbart van Ginkel	AT Osborn	Adviseur	14-mrt-17
Cees Busscher + Frank Hazeleger	OMU	Directeur + Investment Manager	18-04-17
Roy Besselink	HMO	Bureau Coordinator	25-04-17
Jeroen Krijgsman	BHB	Investment Manager	25-04-17
Private actors			
Jan Fokkema	Neprom	Directeur	22-05-17
Pike Fabriek	Pike Vastgoed	Eigenaar	03-05-17

Table 3: Overview of interviewees and corresponding company/authority

The interviews are held making use of interview protocols based on the analysis framework which ensures that important themes/topics are discussed and that interviewees are asked about the same topics. Each interview is recorded and summarized. The summary is sent to the interviewee for revision. The outcomes of the interviews are validated against literature.

Market challenge

In the later stages of the graduation project, a market challenge is held to “test” the outcomes of the comparative case study. A mix of various actors (e.g. real estate developers, investors, financiers, public actors) is brought together to trigger a discussion regarding the outcomes of the thesis in a workshop-like environment. The discussion provides insight in the support base for a revolving fund for inner city development and indicates how a revolving fund influences the decision-making of real estate developers. In addition, the outcomes of a second market challenge held in regard to a research project of Fakton for the Province of Gelderland are used to test the conclusions from the case study.

2.3 Case selection

In chapter four, five and six, three examples of revolving instruments are described. These instruments are selected and constitute the "cases that are studied in the comparative case study. The cases, or revolving instruments for that matter, need to be properly selected. Therefore, selection criteria are used to select appropriate cases. Appropriate in this sense means that the revolving instrument should have similarities with the revolving fund design that constitutes the final outcome of this graduation project. The cumulative selection criteria are such that the revolving instrument should:

- be initially funded by public resources on a revolving basis,
- have involvement of a governmental body (local, regional, national, international),
- offer financing to private actors (and possibly also public actors),
- be used to stimulate development (stimulation here is defined in the broader sense, for example stimulation through financial, operational, regulatory, and/or organisational factors).

The selection has resulted in three types of revolving instruments that are analysed in the case study. The first case is the Urban Development Fund as part of the JESSICA Initiative, a European programme. In this programme, three municipal revolving funds are set up in Rotterdam and The Hague. The second case is the Dutch National Restoration Fund (*Nationaal Restauratiefonds*), a revolving fund set up to assist in restoration, preservation and transformation of monuments and other cultural heritage. The third case is the *Regionale Ontwikkelings Maatschappij* or *ROM*, which can be translated as Regional Development Company. This entity has the goal of stimulating regional development by stimulating/facilitating business development, acquisition of (foreign) businesses in the region, and providing of (venture) capital. The most relevant ROMs are Provincial Restructuring Agencies (*Provinciale Herstructureringsmaatschappijen*) as they aim to improve the built environment. A fourth promising stimulating instrument is the Business Improvement District. Despite the fact that it is not part of this thesis, a short explanation is added as appendix two, as the instrument shows similarities to the three selected cases but differs in the sense that it is an instrument that is geographically-driven, not objective-driven.

The reason to execute a case study with these three selected cases is fourfold:

- Ascertaining the principles of existing revolving instruments and the considerations to set up a revolving instrument, the way to set up a revolving instrument and considerations regarding involvement of actors (Why, how and who).
- Discovering different types of revolving instruments that are currently active in practice.
- Uncovering good and bad practices of the revolving instruments that are currently active in practice.
- Three reasons above provide insight in how to design a revolving instrument for real estate development in (inner city) urban areas.

By approaching the revolving instruments in the comparative case study to ascertain the issues described above, the following research questions (no. 5, 6 and 7) are answered:

- *How are revolving instruments currently used in practice and in what way do they stimulate urban development processes?*
- *What are the perceived good and bad practices from the revolving instruments currently used in practice?*
- *What is are possible designs for a stimulating fund for inner city development and which is the preferred variant?*

At the start of the P3 period, an interview with Erwin van der Krabben, Professor of Planning and Property Development in the Department of Planning at the Radboud University, was held. Erwin has extended knowledge on the use of planning instruments and the use of funds in the development field. His knowledge was used at the start of the case studies to finalize the selection of the cases/funds that are analysed.

3. The use of revolving funds - A literature study

In this chapter, the relevant theory regarding the use of revolving funds in the urban development practice is described. The context of urban development is discussed, followed by the answers to the first four research questions in the literature study and the explanation of revolving funds. Finally, the conceptual model is described.

The idea here is not to describe the theoretical concepts as definitive concepts, but more as sensitizing concepts, as described by Udo Kelle (Kelle, Bryant, & Charmaz, 2010). Sensitizing concepts can be used in empirical studies when concepts (or categories) are hard to operationalize, which is the case in the research outlined above. Actors involved in urban development processes all have their own framework through which they observe the process. Therefore, Kelle (2010) suggests that a sensible way is not to develop hypotheses which can be empirically tested, but rather employ less strictly-defined concepts as a conceptual frame which help to understand empirical phenomena found in the research. In addition, the semi-structured interviews serve as a tool which further explore and define the concepts, as actors from different backgrounds put forward different views towards them.

3.1 The context of urban development

In this section, the context of urban development is discussed. The concepts urban development, real estate developers and decision-making are elaborated upon to provide a clear starting point for the literature study.

3.1.1 What is urban development?

This research can be placed within the urban area development practice, referred to in this thesis as urban development. Adams and Tiesdell (2012) describe the process of real estate development quite thoroughly as they provide several models (e.g. models by Healey and Gore, and Nicholson). These models reflect the broader notion of what real estate development entails, they are not specific for urban development processes. Adams and Tiesdell (2012) divide the process of real estate development in three main sets of events, visualized in a triangle. The three main sets of events are listed below:

- The first main set of events involve the establishing of a clear development concept. This is done by assessing current supply, opportunities, aspirations and intentions. A site is searched and selected.
- The second main set of events involve the establishing of a firm commitment towards the envisioned development. The development's feasibility is assessed in terms of ownership (ground, existing real estate), regulation, physical suitability, marketability and financial viability. Prior to making this commitment, parties may want to revise or abandon the development.
- The third main set of events reflect the actual implementation (or construction) of the development.

To make the concept of urban development slightly more concrete, a definition is found, described by Daamen (2010) in his dissertation. The definition he uses for an urban development project is that it "refers to a framework of concrete material interventions inside a geographically distinct urban area." (Daamen, 2010, p. 18). This definition is characterized by the fact that it entails a "neutral connotation" and "contextual equivalence", as described by Heurkens (2012). This neutral connotation entails that while looking at the concept of an urban development project, one is not dealing with a specific phenomenon of urban development projects, and not underlining a specific feature, like for instance researching "urban mega projects" (see for instance: Baud et al., 2014) or "organic urban development" (see for instance: Hobma, 2014; Sorel, Tennekes, & Galle, 2014). As described in the introduction, the concept of urban development is looked at from different perspectives as the actors involved all have different backgrounds (e.g. public, private, developing, financing, regulating, etc.). Therefore, this concept will not be strictly defined, but the definition described by Daamen and Heurkens will be used as a sensitizing concept, as it still leaves room for different perspectives.

3.1.2 Real estate developers

According to Patsy Healey, the real estate developer is 'the key coordinator and catalyst for development.' (Healey, 1991). According to Adams and Tiesdell (2012), real estate developers can play up to four roles in the urban development process: master developer (also: land developer), infrastructure provider, parcel developer, and/or building contractor. Whether these roles are played by one and the same actor or carried out by different actors depends on the situation:

- The size/scale of the development project usually dictates whether there is one master developer or that there are separate parcel developers.
- The roles of master developer, infrastructure provider and parcel developer might be played by one or different actors.
- The roles of parcel developer and building contractor might be played by one or different actors.
- The involvement of the state might differ per project; in some cases, they play the role of master developer, infrastructure provider, sometimes as parcel developer or even as building contractor.

Regarding the involvement of the state, a distinction needs to be made, since the situation is different in the UK and the Netherlands as Heurkens (2012) describes. The economic and political principles are different. In the Netherlands, the Rhineland model is dominant whereas in the UK, the Anglo-Saxon model is dominant. This entails that the role of the State differs, as this role is more passive and relatively less powerful in Anglo-Saxon countries and active and powerful in countries with the Rhineland model. The way the market is regulated is more in a collaborative manner in the Netherlands, whereas in the Anglo-Saxon countries this is more based on competition (Heurkens, 2012).

Adams and Tiesdell (2012) describe that real estate developers are mainly active in the private sector and occasionally in the public sector. Their main expertise is to spot a development opportunity (location), to know what the market demands (product) and to make it happen (timing) (Adams & Tiesdell, 2012). According to Ross-Goobey (1992), developers orchestrate the development performance by bringing capital, labour and rights in land together to create the right product in the right place at the right time. The ten traits a successful real estate developer should have are listed by Millington (2000). The first four related to the urban development process are thorough knowledge and understanding of markets, construction knowledge, finance knowledge and management abilities. The other six are relatable to an individual's personality, which are optimism, imagination, practical vision, judgement, decision-making ability, courage, and a "thick skin" (Millington, 2000).

3.1.3 Decision-making in urban development

Decision-making is a commonly used term, but requires some explanation. In the context of this research, especially the decision-making of real estate developers is important.

Decision-making was seen as an art in earlier days, nowadays it is seen as a science. The main problem in decision-making is that it usually takes place in a context with several actors, all pursuing their objectives with or without regard to other actor's objectives and their influences (Saaty, 1990). A decision is successful when the actors' interests and objectives are taken into account. These interests and objectives are commonly not in line, or even in conflict with each other. As Saaty (1990) describes, the predicting of outcomes of such decisions is vital. In order to do so, the decision can be decomposed into separate structures which involve benefits, costs, opportunities and risks (Saaty, 1990). Translating this to the urban development process, there usually are numerous actors involved from the public side (e.g. municipalities, provinces, central government), private side (e.g. project developers, architects, contractors, consultants, etc.), and other stakeholders (e.g. residents, action groups, etc.). This leads to complex decision-making due to the various public, private and other objectives, values and their influences. Taking all these into account is difficult, thus creating a successful decision in the urban development process can prove to be very difficult at times. In addition, the urban development process can be a lengthy process with circumstances that change overtime. These circumstances can be for instance economic, political, social, demographic, technological, cultural or environmental (Adams & Tiesdell, 2012).

When talking about decision-making specifically for project developers, the decision-making is largely based on financial aspects (Ramselaar & Keeris, 2011). Especially when project developers decide about which investment project they should undertake, financial aspects play a dominant role. The assessment

framework project developers use is thus underlined by financial decision criteria. However, also non-financial aspects play an important role in development processes, as these type of aspects might influence or even frustrate the process, since the (urban) development environment can be characterized as complex and dynamic (Ramselaar & Keeris, 2011). Non-financial aspects play a role in the decision-making of project developers, but they are not as structured and well-described as financial aspects, according to Ramselaar and Keeris (2011). They are incorporated in the investment decision-making, but more subconsciously. Sometimes, developers describe non-financial aspects in a "qualitative section", but in many cases the assessment is based on gut-feeling (Ramselaar & Keeris, 2011). The idea that developers largely base their decisions on financial aspects is underlined by Hennerbyerry et al. (Henneberry, Lange, Moore, Morgan, & Zhao, 2011), as they describe that developers act according to the mainstream economics paradigm. This ideology assumes that "developers aim to take utility-maximising decisions that are as informed and rational as possible" (Henneberry et al., 2011, p. 220). In this sense, utility is expressed as financial return relative to risk adjustment.

3.2 Policy, roles, instruments and the urban planning debate

This section provides the answers to the first four research questions, relating to policy and planning culture, roles of public and private actors, planning roles and instruments, and the current debate on urban planning in The Netherlands.

3.2.1 Dutch policy and planning culture in relation to urban development

There is a wide array of policy that relates to the urban development practice. Another important factor that relates to policy is the planning culture that varies from country to country. The concepts of policy and planning culture are elaborated upon here, thus answering research question one: *What is the Dutch planning culture and what are important policies for urban development?*

Planning culture

According to Taylor (2013), planning culture is imbedded in the wider national institutional context, which means that it is characterised by history, attitudes, beliefs, values, political and legal traditions, concepts of justice, and so on. This phenomenon explains why countries have different planning cultures and adjust their policy towards this culture. As Sanyal (2005, p. 13) puts it: planning culture is a reflection of the "larger social culture in which it is embedded.". Friedmann (2005, p. 184) also recognises this, defining planning culture as "the ways, both formal and informal, that spatial planning in a given multi-national region, country or city is conceived, institutionalized, and enacted'. The Dutch planning culture can be described as quite market-oriented. Dutch municipalities have quite some room to manoeuvre compared to their Anglo-Saxon colleagues (see section 3.1.2). As Hobma (2011) states, Dutch municipalities have a rather broad "freedom of action", as they have the possibility to buy land with the idea to prepare it and then sell it to developers, called active land policy. This way of working is in line with the idea of Adams and Tiesdell (2012) about planners being market actors, as the selling and buying of land can be seen as market behaviour (Hobma, 2011). In addition, municipalities can cooperate with market parties in typical cooperation models like a public-private partnership or joint venture (see section 2.4.6). This indicates that the role of municipalities is a rather market-oriented and liberal role within the Dutch planning culture.

Actively land policy is one of the three pillars Dutch planning culture is originally based on, according to Buitelaar and Bregman (2016). The other two are comprehensiveness and integration. Comprehensiveness relates to scale of developments. The Netherlands show a history of relatively large-scale developments (Buitelaar & Bregman, 2016). The reasons for this are the aim of Dutch authorities to acquire spatial order and to generate "economies of scale" in the process of land preparation. The mid-1990s Vinex programme is a good example of this second pillar. Integration, the third pillar, is related to the scale of the developments, in which the integration of policy sectors and land-uses is important. The integration of public and private actors, and the integration of financial resources relate to the third pillar as well. The use of PPPs directly shows the integrative nature of (urban) development in the Netherlands. However, Buitelaar and Bregman (2016) conclude that the three pillars are trembling, as the Dutch planning culture has recently started to shift from integrated, large-scale urban development towards more "organic" urban development. The main reason for this is the outbreak of the crisis in 2008 and the subsequent decline of property prices, which led to decreasing demand and thus revisions of existing plans. The active land policy

has become less appealing and feasible for municipalities, as the crisis led to many projects becoming unfeasible and book values on land had to be written off (Buitelaar & Bregman, 2016). In terms of the comprehensiveness and integration of area developments, the crisis has had its impact as well, as especially the large-scale developments are vulnerable to fluctuations of the property markets. The result of all this is that municipalities are adopting a more facilitative approach, resembling the approach of Anglo-Saxon countries. The question is, will this shift towards smaller-scale, organic development be a permanent change or will the planning culture return to the classic large-scale, integrated urban development approach, now that the Dutch economy (and property markets) are performing at pre-crisis levels?

Planning system

The term planning culture is not the same as planning system, as the latter revolves around the formal juridical framework in which planning takes place (Buitelaar & Bregman, 2016). The planning system that is currently used in the Netherlands is posited as the *Wet Ruimtelijke Ordening* (Wro), a law from 2008. It is assumed that in 2019, a new law will be implemented, called the *Omgevingswet* (Rooijen, 2016). This new law, labelled a system revision, is characterized by a reduction of administrative burden, enhanced cooperation between the layers of government and supply chain partners, more administrative room for decision and more possibilities for customization (Loozeman et al., 2016).

Public law

The important aspects of public law in relation to urban development are planning and property rights, the environmental permit and statutory spatial plans (Hobma & Jong, 2015). In the discourse about public law and regulation in urban development, some researchers advocate a more flexible approach whereas others succumb to a strict approach. For instance, Buijze (2014) discussed the effects of (strict) regulation on urban development processes. She recognized that *adaptive governance* might provide a more flexible approach with legal certainty in urban development projects, and she describes that the current Dutch regulation is flexible enough. There is enough room for interpretation in most regulation concerning urban development. However, this flexibility is sometimes still lost due to strict norms but also due to actors not willing to bear the risk of a more creative solution with a less strict interpretation of the regulation.

Private law

An important, distinctive characteristic of the Dutch planning culture is the active land policy that municipalities can exercise. This entails that Dutch municipalities are not limited to purchase land that is designated for public land-use objectives only (e.g. roads, parks, squares, public schools, etc.). They may also purchase land intended for private land-use objectives (e.g. offices, houses, other commercial functions) with the idea to sell the land to (private) developers when the land is prepared for construction by the municipality (Hobma, 2011; Hobma & Jong, 2015). The municipality does not construct these private land-use objectives itself. The active land policy is a way to make substantial financial profits for municipalities (Hobma, 2011; Hobma & Jong, 2015). Active land policy is characterized by these steps in case of undeveloped land:

- Municipal acquisition of undeveloped land
- Preparing the land for construction (both physical preparation and legal/planning preparation)
- Sale or issue land under ground lease by municipality to developers or housing associations

The policy may also be pursued when there is developed land (Hobma, 2011):

- Acquisition of developed land and structures on it
- Demolition of (some or all) structures, decontamination of land, relocation of companies, reallocation of land
- Sale of land and structures (or issue under ground lease) by municipality to developers or housing associations

It is noteworthy to mention that municipalities may opt to exercise active land policy, since they also may adopt passive or facilitating land policy (Hobma, 2011; Hobma & Jong, 2015). In this scenario, the municipality does not actively buy and sell land, but imposes a public law framework for developers. The most important planning tool in passive land policy is the land-use plan. Another example of private law used by governmental bodies to achieve their planning objectives is the use of public-private partnership

(PPP) agreements (Hobma, 2011; Hobma & Jong, 2015). More on this and other types of cooperation in the following section.

To summarize the active and passive/facilitating land policy, the following step can be discerned:

	Active	**Facilitating**
Step 1	Setting up urban vision	Setting up urban vision
Step 2	Setting up area plans	Setting up area plans
Step 3	Acquisition, land development and issuing land	Facilitating development, cost recovery

3.2.2 Role of (semi)public and private actors

This section relates to the role of public, semi-public and private actors in the urban development practice, thereby answering the second research question: *What is the role of public and private actors in the Dutch urban area development practice?*

Traditionally, the term urban renewal (*stadsvernieuwing*) was used for urban development. The traditional way of urban renewal, which showed a dominant planning role for municipalities on the urban level and project level, was halted between 1985 and the early 1990s (Schaar, 2005). Previous to that moment, municipalities on a large scale acquired real estate, issued projects to, in particular, housing associations, and arranged (partial) funding for projects, mostly from large subsidies from the State (Schaar, 2005). However, this changed, mainly due to the privatization of the housing associations in the Netherlands. The steering ability of the State on investment behaviour has declined in that period. Additionally, the State's subsidies for urban renewal were shortened, as illustrated earlier in the problem analysis. This all led to municipalities taking a more facilitative role instead of an active role.

The housing associations were privatised during the early 1990s, with the goal to realise governmental budget cuts and to let the market be responsible for the development of dwellings. Financial ties between the housing associations and the State were cut and the housing associations were required to operate independently (Jong, 2006). The housing corporations owned a large amount of real estate, had sufficient financial resources for their investments, and they were firmly embedded in the local policy networks (Schaar, 2005). This provided them with quite a dominant role in the urban development process. However, the role of housing associations has been curtailed recently due to several reasons. The course set by Minister Blok is that of contraction and more liberalisation of the housing market, and this will continue in the coming years (Ouwehand & Rohde, 2015). The role of the housing associations is not the main focus of this thesis, since housing associations have the possibility of attracting relatively cheap financing for their investments through the *Waarborgfonds Sociale Woningbouw* (WSW), a fund specially aimed at financing projects for housing associations under sub-market conditions. This means that a revolving fund for inner city development would compete with the WSW if housing associations would apply for financing.

Private actors, or the commercial market parties (e.g. real estate developers, institutional investors, etc.), are more focussed on their returns on investment (IRR). They may or may not have a position through their ownership of real estate, but they seem to be outside the local policy networks (Schaar, 2005). This is changing as well, according to Heurkens (2012); the role of private/market actors is based on a structurally strengthened position of the private sector as a whole.

Overall, it can be said that the relationship between private and public actors in the urban development practice has been changing throughout the years, and it still is. Whereas the roles were formerly based on a hierarchical relationship, this has shifted towards a network-oriented relationship (Heurkens, 2012). It can be concluded that the role for public actors is decreasing in power, whereas it is increasing for private and civic actors. Additionally, as De Jonge (2007) describes, a fundamental shift of societal values has also occurred in the recent past. This means that the society has grown towards being more individualistic, access to services is selective and there is more inequality. This fundamental shift of power and societal values in the context of Dutch urban development is captured in figure 14.

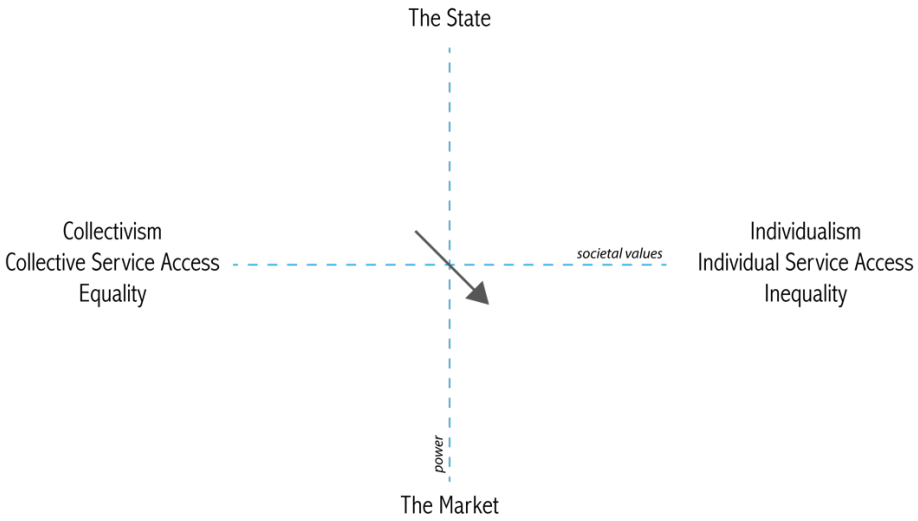


Figure 14: The fundamental shift of power and societal values in the context of Dutch urban development (Adapted from De Jonge, 2007).

Even though the figure is from before the 2008 crisis, it is still accurate today, as the power and societal values are still shifting as visualized above. This is directly visible in urban development projects in Rotterdam and The Hague. The report by Fakton (see Boelman et al., 2016) shows that in both cities, the number of projects directed by private actors has grown significantly between 2007 and 2015. In Rotterdam, around 28% of the urban development projects were directed by private parties in 2007. This has risen to 68% in 2015, an increase of 40%. For The Hague, the increase of private-led projects between 2007 and 2015 is approximately 23% (30% in 2007 and 53% in 2015). These examples from practice show the shift in role division between public and private parties.

3.2.3 Planning roles and instruments

This section describes planning roles urban planners may employ and corresponding instruments planners have at their disposal. In this section, the third research question is answered: *What type of instruments is available that could promote inner city development?*

Planning roles

David Adams sees urban planners working in, or for, the public sector as market actors within urban development processes (Adams & Tiesdell, 2012). In the Netherlands, local authorities increasingly rely on private actors, such as real estate developers and investors, to implement public planning policies (Heurkens & Hobma, 2014). Heurkens, Adams and Hobma (2015) signal that planners can employ four roles. These roles impact the decision-making of development actors as they have market impact, making the planning roles important in the development process. The four types of roles are shaping, regulating, stimulating and capacity building (Heurkens et al., 2015). By effectively connecting these roles by planning actions, the effectiveness and nature of other roles is affected. It provides possibilities for planners to incorporate public objectives in urban development processes (Heurkens et al., 2015). Figure 15 visualizes the four roles and provides a short explanation.

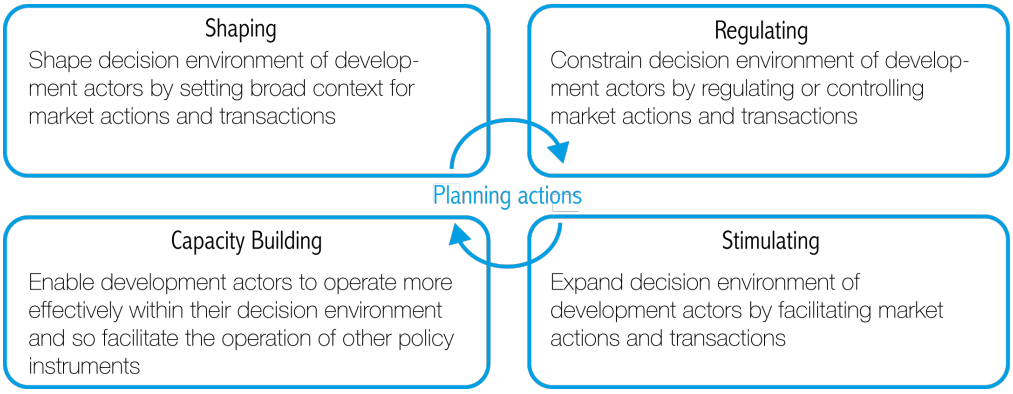


Figure 15: Classification of the four roles of urban planners (Based on Heurkens et al., 2015)

The emphasis in this thesis is on the stimulating quadrant. Stimulating instruments expand the decision environment of the developing actors and they directly impact financial appraisals (Heurkens et al., 2015). Within the stimulating quadrant, there are direct and indirect stimulating activities that can be employed by planners to encourage development. Examples of direct actions are direct state action by eliminating physical, infrastructural or ownership constraints. Indirect actions are employed by planners to change the pattern of incentives to stimulate locations or types of developments in which the market actors are mostly interested. Planners employ indirect stimulating actions to change the outcome of calculations by the market actors to stimulate development in projects or locations they aim to be developed (as this might achieve specific societal objectives). Examples of indirect action are price-adjusting, risk-reducing and capital-raising (Heurkens et al., 2015). Examples of financial stimulating instruments are public subsidies such as tax reliefs, investment zones, but also funds. As described, funds are the focus point in this thesis. This type of instrument is further analysed in the third section and subsequent case study.

The use of planning instruments

As described in the introduction, there is a great variety of planning instruments that can be applied in urban development by either public or private actors (instrument redundancy).

An overview regarding the possible instruments is set up, using on the four-quadrant model as described by Heurkens et al. (2015), visualized in figure 16. The instruments listed in the figure are deducted from research by Fakton, Rebel Group, MIRT and research by the UDM chair of the TU Delft. Verheul et al. (2017) have added two axes to further explain the four planning roles and corresponding instruments.

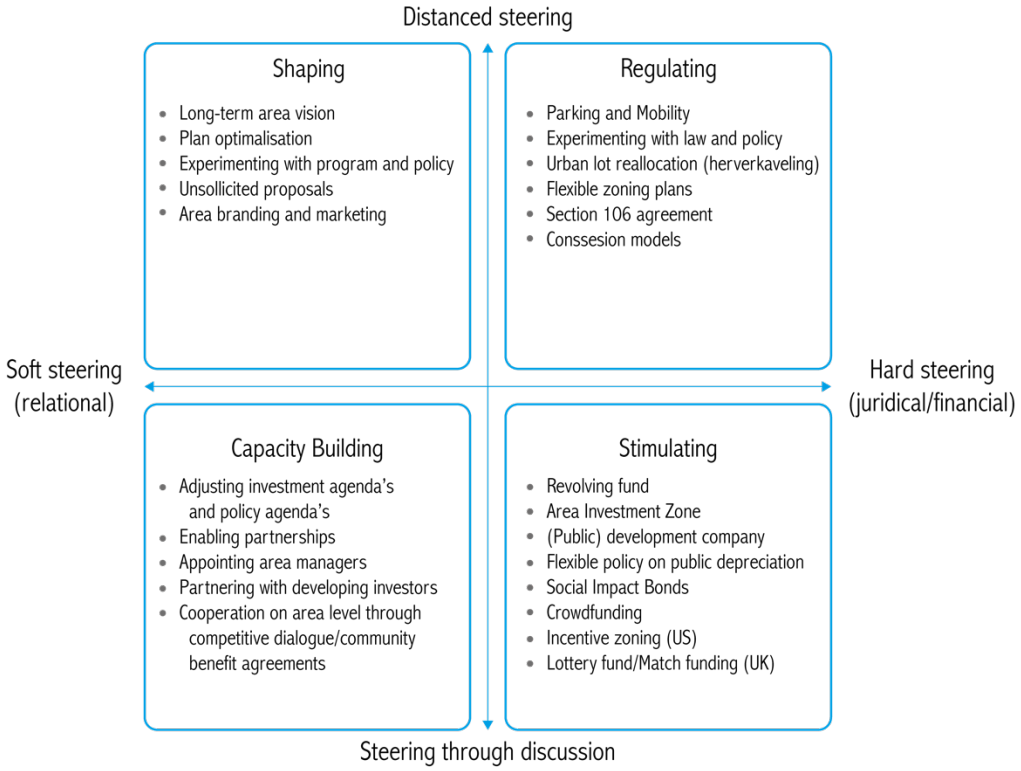


Figure 16: The four planning roles with a selection of corresponding instruments (Verheul et al., 2017)

As seen in figure 16, the research provides many different types of instruments in each quadrant. The question that arises is: if there are so many instruments (one being further implemented in practice than the other), why would revolving fund deserve this much attention? The report by Fakton (see Boelman et al., 2016) regarding the use of planning instruments in the Metropolitan area of Rotterdam The Hague (MRDH) concludes that without the use of a variety of instruments, the financial shortage per developed dwelling in this area is on average €28.500. This is based on calculations of the real estate development's revenues and costs, the residual value, and the land development costs. This results in a final balance (i.e. the revenue or shortage that the development of the dwelling produces). The research distinguishes several housing types. As indicated, different types of subsidy have been issued over the years. Between 2000 and 2014,

in Rotterdam and The Hague, the ISV subsidy (*Investeringsbudget Stedelijke Vernieuwing*) has granted an average of €32.000 and €22.000 per dwelling respectively (Boelman et al., 2016). As we know, this subsidy has been suspended. Boelman et al. (2016) advocate the use of six main planning instruments to reduce the shortage per dwelling (i.e. acceleration of development plans, flexibility of parking policy, risk reduction, use of a revolving fund, etc.). According to the report the use of these planning instruments should reduce the shortage to approximately €15.000 per dwelling. Another report by Rebel Group (2016), based on seven cases in cities in South Holland, shows that only 30% of the projects will get started if the basic conditions of the projects are well-established. Another 20% will get started if certain public measures (e.g. informed choices regarding parking norms, substantiated considerations regarding programming, etc.) are taken. The last 50% of the project will only get started when the projects receive public financial stimulation (Rebel Group, 2016). The Rebel Group also indicates the potential use of a revolving fund to reduce the shortage, something which is underlined in the *Manifest Binnenstedelijke Transformatie* as well. This underlines the connotation that a revolving fund positively influences the urban development process.

Subsidies starting to belong to the past?
One of the stimulating planning instruments is the use of subsidies. In recent years, approximately €6 billion of subsidies is granted on a yearly basis by the Ministries of the Dutch central government (municipal, provincial and other types of subsidies excluded) (Dijsselbloem, 2014). However, authorities are increasingly exploring other ways of financing. Most policy domains are experimenting with different types of financing options, such as (revolving) fund schemes, crowdfunding, matchfunding and social impact bonds. The main difference between subsidies and the other types is that the first is characterized by its one-off nature, the latter by its revolving nature. A trend is visible that governmental bodies are forming their policy towards financing through revolving instruments where possible instead of granting subsidies (Ouden & Brink, 2016). This is part of the wider trend of the government moving towards the background and providing room for initiatives that arise from society. A top-down approach and unilateral choices do not fit with this trend, acting as a facilitating government, stimulating bottom-up initiatives does (Ouden & Brink, 2016). This does not mean that subsidies will slowly disappear, as there will always be projects and initiatives that require public funding which achieve societal benefits, but which are not suitable for financing through revolving instruments. The common notion is that society demands that public funding for societal projects is handled with care and that financing decisions (either subsidies or otherwise) are well-informed decisions. As Ouden and Van den Brink (2016) suggest, each case of public funding for societal projects need to have a form of democratic legitimation, transparency in the implementation process, legal equality and protection for applicants, and public accountability for the effectiveness of the policy.

3.2.4 The current debate: two dominant perspectives

When in 2013 reports from PBL and CBS signalled that until 2040 the number of households in the Netherlands would grow with another 1 million households (Ritsema van Eck, van Dam, De Groot, & De Jong, 2013), the debate on how and where to house this growing number of households grew. PBL has performed desk research to construct two frameworks they recognized to be dominant within the debate (Van Duinen et al., 2016). These two frameworks are:

1. New greenfield locations
2. Transformation of the existing city

This section answers the fourth research question: *Which ways of thinking are recognizable in the debate on urban development and the mismatch between supply and demand of the residential sector?*

New greenfield locations
The first framework recognizes that on a yearly basis until 2040, some 80,000 dwellings should be newly built (Van Duinen et al., 2016). It is not possible to construct all dwellings in the (existing) urban domain, and therefore the dwelling production needs to expand towards greenfield locations, outside or located next to the city. The transformation of existing buildings within the city is an opportunity to offer some additional supply towards the enormous demand, but is does not provide enough, both in quantitative and qualitative terms (Van Duinen et al., 2016). In addition, the aspect of time plays a dominant role within this framework. The production needs to be started fast, now that the crisis is (partially) over. Urban development, and especially inner city locations, is complex and time-consuming, due to fragmented ownership of real estate and land, public consultation issues, and other complexities. It is vital that the

production of dwellings keeps in line with the growing demand, also to prevent further overheating of the house prices in particular areas (e.g. Amsterdam, Utrecht) (Van Duinen et al., 2016). The idea is that slow production will lead to tensions on the housing market, especially in urban areas. The costs of infrastructure are higher in greenfield locations, but the acquisition, remediation and construction in (inner) city locations is higher (Van Duinen et al., 2016). This also gives the possibility to offer more supply in line with the qualitative demand (e.g. most Dutch people want a dwelling with a garden). A visualization of this line of thinking is provided in figure 17.

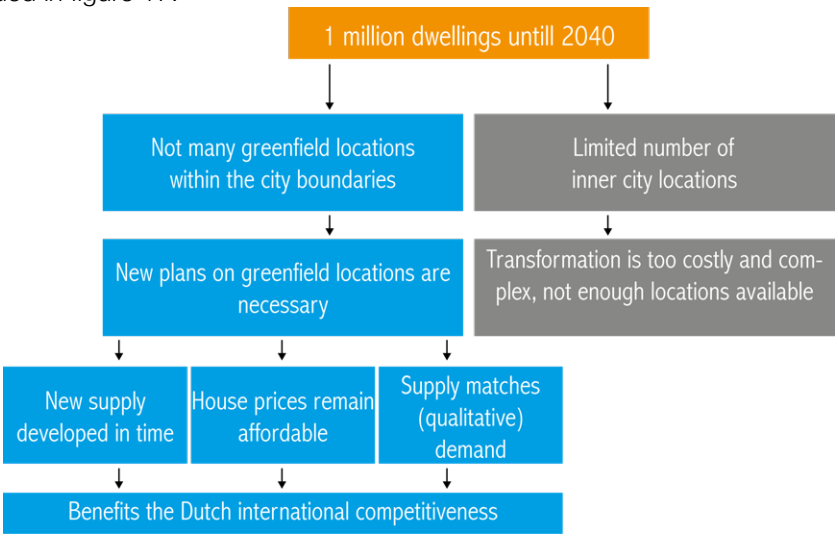


Figure 17: The new greenfield locations framework summarized (based on Van Duinen et al., 2016)

Transformation of the existing city

The second framework advocates that the high demand for dwellings can be accommodated in the existing urban areas in the Netherlands. By transforming vacant buildings (e.g. offices and societal property such as schools, hospitals, nursing homes), (a large part of) the demand can be matched with new supply of dwellings. In addition, brownfield locations (e.g. old harbour areas, run-down business areas) can provide room for transformation (Van Duinen et al., 2016). Existing dilapidated areas become neighbourhoods that are used again, increasing the urban density of the city, leading to more agglomeration effects (Van Duinen et al., 2016). Investments that are already made (e.g. infrastructure) are better utilized, greenfield locations are preserved and unnecessary land use is prevented. This would all lead to a better living environment with a higher sustainability due to the use of existing property (Van Duinen et al., 2016). In order to stimulate the way of thinking in this framework, the policy needs to aim at facilitating transformation and reducing the number of planned dwellings and other functions in master plans that are not highly necessary (Van Duinen et al., 2016). Municipalities should allocate areas in which the planned functions are future proof, reducing vacancy and oversupply. Transformation needs to have priority, even when this means that municipalities or developers need to take a loss on the property or land they own. Greenfield locations should only be developed when the transformation of existing property does not suffice on the long-term (Van Duinen et al., 2016). This line of thinking is visualized in figure 18.

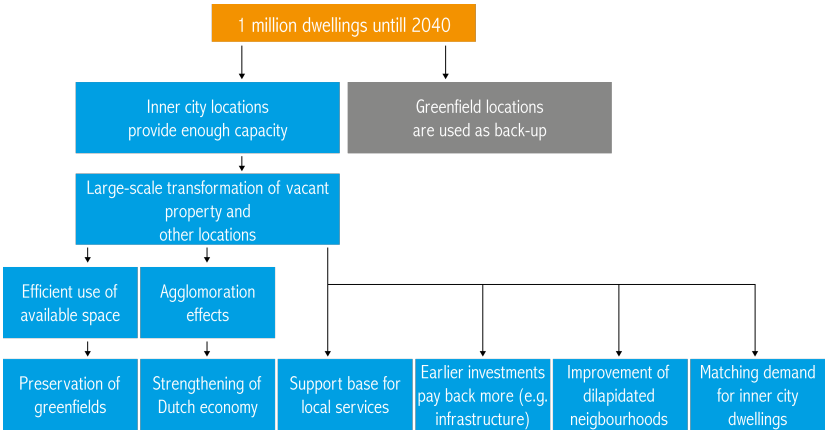


Figure 18: Transformation of the existing city framework summarized (based on Van Duinen et al., 2016)

The discussion is not black and white
Both frameworks seem rather focussed on one solution, whereas the answer to the issue probably lies in pursuing a balanced combination of both ways of thinking. As indicated earlier by the BPD/Brink research (see: Brink, 2017), not all demand can be matched with new or transformed supply of dwellings in existing urban areas. This is recognized by *Manifest Binnenstedelijke Gebiedstransformaties*, which underlines the second framework: transformation of the existing city. The goal of the manifest is to address the issue further and put it on the political agenda. The claim is that demand for dwellings keeps increasing and that transforming inner city areas increases the economical position/potential. The manifest shows the willingness of the signatories to transform inner city areas. The aim of the manifest is to engage the government in the discussion and establishing a joint program in which the market parties start working together with the local and national governments, and civil society organisations. One of the fundamental cornerstones of this proposed program is the use of area development funds. The central government is asked to (partially) finance the unprofitable aspects of inner city development (e.g. costly infrastructure, public transport, etc.). The market will then jump in and develop the real estate at these complex, inner city locations (Manifest binnenstedelijke transformaties, 2017).

Relating the debate to the HBU theory
The debate relates to the so-called Highest and Best Use (HBU) of a location. The HBU indicates which usage/functionality of a location results in the most productivity. This means that in theory each site is used in the way that is most productive (Geltner et al., 2001). Relating the HBU to the residential market, the HBU residential value differs from location to location, which is mostly influenced by transportation costs. Being located in spot A with low transportation costs results in a higher land value than spot B with high transportation costs. This phenomenon relates a key concept in classical urban economics called the bid-rent curve, in which the bid-rent is the amount a potential user is willing to pay for a certain location. Each potential user has their own bid-rent curve which describes the user's bid-rent in relation to the location's distance to a central point (e.g. city centre or CBD). A this central point, the transportation costs are minimized for that use which means the residual value (or bid-rent) is optimized (Geltner et al., 2001). Relating this to the debate, it can be said that if the city centre of a particular city is the central point, residual values are highest within the city centre and slowly diminishes when moving away from that central point. It can thus be said that transformation of inner city locations should be most profitable according to the theory, due to the high residual value at these locations. Therefore, a logical assumption would be that the framework focussed on the transformation of the existing city would be the dominant one. However, logically other factors play a dominant role in inner city development, such as complex land ownership relations, relatively high demolishing, remediation and site preparation costs, and costs due to complex logistics. The factor time perhaps is most important, as especially the framework which focusses on new greenfield locations uses this factor as their main argument: the growing number of households should be quickly accommodated with new supply, thus developing greenfield locations is preferable.

3.3 Revolving funds

The concept revolving fund is central in this thesis. This section therefore provides a thorough explanation on what a revolving fund is and when and how it is useful to employ a revolving fund in urban development.

3.3.1 What is a revolving fund?

In general, funds can be different in terms of investment volume, application area, application level (urban level, regional level, national level), financial structure, organisational structure, type of projects, and participants. This results in numerous types of funds. In this research, the focus lies on funds that stimulate development by applying revolving resources.

An overarching example is the area fund, which can be described as a business model in which different types of investors (e.g. public authorities, private parties and civil society organisations) cooperate and combine their means to facilitate financing for the development and management of an area, both on the short and long term (Stumpel, 2014). Examples are the Business Improvement District (BID, see appendix 2), *Gebieds Investerings Zone* (GIZ), and *Bedrijfs Investerings Zone* (BIZ).

According to Van Heijningen, Holt and Dekker (2013), the main considerations behind area funds are:

1. Linking costs and benefits within an area on the long-term (e.g. linking land development costs with the real estate exploitation benefits), thus the equalization between moment of expenditure and earnings.
2. Linking costs and benefits from different functions and cash flows in an area (e.g. linking the real estate exploitation with energy, parking, etc.), thus the equalization between profitable and loss-making activities and elements
3. Keeping costs and benefits within one area to structure the fund as a revolving fund.

It is crucial that the parties involved in the area, applying the area fund, exceed the normal situation of a private law agreement between several parties or a PPP-structure (Van Heijningen et al., 2013). Basically, it comes down to organising financing for projects and other initiatives that matter for the area and from which the proceeds benefit the area as a whole (Van Heijningen et al., 2013).

The financial structure and organisational structure of (stimulating) funds is very important. One common structure is that of a **revolving fund**, shortly introduced in the first chapter. As stated, a revolving fund can grant financing for projects or third parties, through (subordinated) loans, guarantees and participations. Resources flow back to the fund, providing the ability to reinvest the returned resources in similar projects or third parties. This is called earmarking of the fund's financial resources, which means resources are to be reinvested with the same purpose.

Additionally, funds may be characterised in terms of its goal, targets and target group. When a fund is established with the goal to manage and reinvest financial resources, one is talking about either a holding fund or an equity fund. When a fund is aimed at generating both social and financial return (both External Rate of Return and Internal Rate of Return), in most cases one may be talking about a revolving fund with a social character. In general, revolving funds are not aimed at financial growth of the fund itself, as the fund consciously invests in projects with social return and financial return. Another type of revolving fund may be one where the goal is commercial return (IRR is leading). Many private funds fall under this typology (e.g. investment funds).

The way funds are financially structured and the way they invest their financial resources also varies; as stated, a fund may grant financing through various financial instruments. Whereas one fund may for instance be set up to only grant loans, the other fund may grant all types of financing. Additionally, funds vary in the way they are organized and the way the governance is set up. This is essential in the way funds are perceived by actors that cooperate with these funds. Another important consideration relates to the legal aspect of granting governmental resources. A fund in itself is not a legal form, and financial stimulation through financial instruments can be set out as subsidy according to public law (*art. 4:21 Algemene wet bestuursrecht*) or no subsidy which means an agreement is set up under private law. This is an important distinction.

Finally, it can be summarized that there are four important themes when analysing a revolving instrument:

1. Goal
2. Organisational structure
3. Financial structure
4. Type of projects

A public fund – IRR versus ERR

The revolving funds that are relevant to this thesis are socially-oriented revolving funds, funded by public resources. These public funds usually focus on the ERR (i.e. the achieving of policy goals) and to a lesser extent to the IRR. This has implications for the 'revolvingness' of the fund, since it is unlikely that all invested resources flow back to the fund when the focus is mainly on the ERR. However, on the project level a revolving fund should always aim to be 100% revolving.

3.3.2 A revolving fund: why and when?

Not every occasion demands a revolving fund, in many cases other (financial) instruments may serve as better solutions. This section explains which main financial products are available and in which circumstances a revolving fund is the best solution to provide financial support.

> *"A fund should not always be an end, it can be a means to an end."*
> *Edwin Netjes – Partner/Owner at KplusV*

Financial instruments

There is a range of financial instruments that can be applied by a revolving fund, mainly characterized by their risk profile, (governmental) steering ability and effectiveness in different phases of a project or product development. The main options are subsidy, guarantee, loan, participation and actual development. In terms of risk profile and steering ability, the five options can be distinguished as shown in figure 19. Another important distinction is that a subsidy is granted when a project does not have yield potential (negative business case). The other four instruments only make sense when the company or project that seeks financing has yield potential (positive business case).

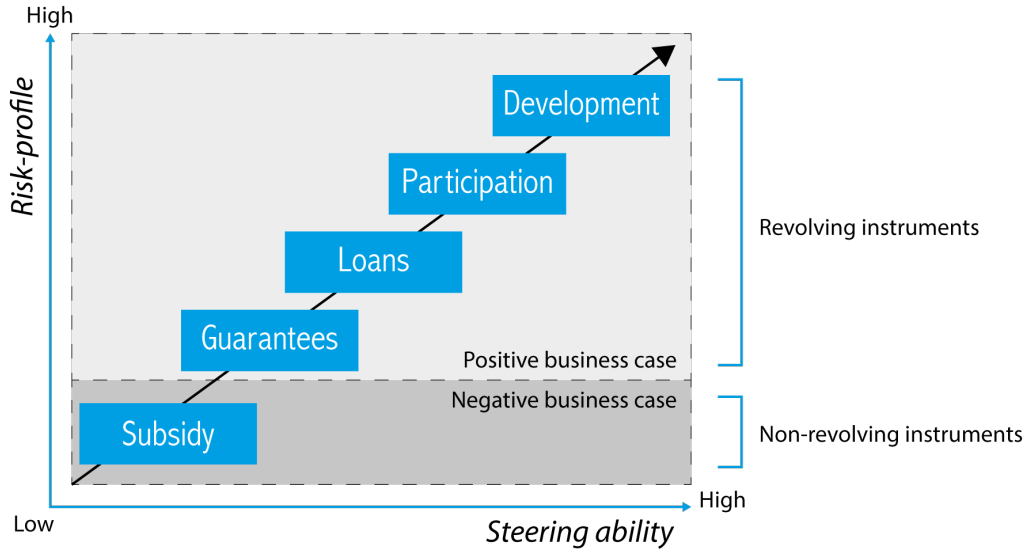


Figure 19: Financial instruments in terms of risk and steering ability.

Subsidy

In the case of a subsidy, public actors can allocate financial resources towards individuals or organizations with the goal to stimulate certain behaviour or to steer towards certain social goals. Subsidy is a one-way financial stimulus, the financial resources will not flow back to the government. The risk of subsidies is low, since it is intended that there will be no revenue and this is certain. The government decides to which parties a subsidy is allocated. However, this also leads to lower steering ability, as granting subsidies does not provide the government with a position to directly influence the project or product in question. They do have steering ability due to the conditions the government can set for the granting of subsidies. Subsidies in relation to urban development are used to cover the financial gap (Dutch: *onrendabele top*) that may occur in certain projects (due to a negative business case). As it is hard to calculate the financial gap in urban development projects, some subsidies are allocated with the concept of "benefit sharing" or "clawback-transactions", which means that when the project in the end generates revenues, the subsidy recipient must repay (part) of the subsidy. The subsidies affect/lower the building costs. Issuing subsidies is the cheapest financial instrument in terms of transaction costs, as the costs only revolve around assessing applications and it usually does not require setting up a specific department (Dekker, Bongers, Holt, & Krikke, 2016).

Guarantees
When a revolving fund grants a guarantee, it then acts as a financial guarantor for the repayment of a loan, the fulfilment of an agreement or compensation for damages due to certain (uninsurable) risks. The idea behind a guarantee is that the guarantee provides certainty to third parties (e.g. banks and other financiers) who might want to finance certain projects that show yield potential (positive business case). In that sense, the revolving fund stimulates growth and development possibilities for companies or institutions that experience problems with acquiring (debt) financing from the regular capital markets. The idea is that when a guarantee is granted by the fund, banks and other financial institutions are more willing to grant (debt) financing to the project. Issuing a guarantee means that the fund must reserve financial resources, locking up financial resources. The beneficiary pays a certain percentage over the guarantee to the guarantor, which makes the instrument revolving. The guarantee may reduce over time as the debt is being repaid by the beneficiary of the loan. A guarantee makes sense when it provides the bank with so much certainty that it lowers its interest rate in such a way that it becomes viable to use this financial instrument; the guarantee costs and interest costs must not exceed regular financing costs (Dekker et al., 2016).

Loans
A revolving fund can issue a loan when companies or institutions experience problems with acquiring (debt) financing through the regular capital market (e.g. through banks and other financial institutions). The goal is to stimulate development and growth possibilities for the companies and institutions. The revolving fund may steer upon its issued loans by setting conditions, such as duration, repayment and interest rates. In some cases, the revolving fund may want to stimulate certain projects by granting loans with particular conditions (e.g. customized repayment schedules, subordinated loans, flexible repayment terms, etc.). The execution costs of issuing loans from a fund range between 2-4% of the fund's volume. A government may decide to manage a fund that issues loans by itself or to set up a different entity managed by an external fund manager. Revolving funds that grant loans can have different levels of "*revolvingness*"; some funds may choose to accept lower amounts of money than initially granted through loans flowing back to the fund (e.g. 70% revolving means that when €1 million is granted in loans, €700k returns to the fund). This might be the case when the fund finances projects with a very high risk profile. Other funds may want to achieve a positive return on the loans which means that the fund grows over time (e.g. loans with a 10% interest rate increase the fund volume over time). The "*revolvingness"* of the instrument is calculated as:

repayment + interest payments – execution costs

Granting loans has a considerable risk profile, as companies and projects may or may not be able to repay its loan with the relevant interest rate. In terms of steering ability, this instruments is above subsidy and guarantees, as the issuing party may decide what types of companies and projects it wants to finance (Dekker et al., 2016).

Participation
Participation is the second most far-reaching financial instrument, in which the revolving fund (as a separate legal entity) acquires shares (or equity stake) in a company or project. Companies with a high risk profile (e.g. start-ups) usually experience problems with acquiring (debt) financing through the regular capital market. The revolving fund may participate in such companies, thus granting equity, with the goal to stimulate growth, innovation and competitiveness. Participation not only entails financial stimulation but also the contribution of knowledge and expertise. A secondary effect might be that banks or other financial institutions may now dare to co-finance. When a public body has set up a revolving fund, the public body itself usually does not participate, but the revolving fund as an external legal entity usually does, which is called indirect participation. The public body may also opt to participate directly, which means that the government may acquire shares directly without intervention of a fund or investment vehicle. This is called venture capital, which has the highest risk profile. Execution costs are usually higher than granting loans. Participation is revolving in the sense that the revolving fund (or public body in the case of direct venture capital) receives dividend payments and may sell off its shares in a later phase, making this instrument potentially more revolving than other instruments. However, the risk for the participant is considerably higher than the other instruments. However, participation leads to a high degree of steering ability as it the revolving fund is directly involved in the company's or project organization through the acquisition of shares (Dekker et al., 2016).

Development
In relation to the built environment, the final (financial) instrument is actively developing a project. This is quite uncommon for a government to do, but when for instance a separate legal entity is funded by a governmental body, this entity can carry out development. This is the most far-reaching instrument in terms of risk-profile and steering ability. With this instrument, the governmental body/separate legal entity carries out a development for own accountability and risk.

Overall, it can be said that the five instruments all have the same goal: stimulating growth and development of companies or projects. However, subsidies are used in the case of a negative business case (where banks will not provide financing). The other four instruments are only used in the case of a positive business case. Execution costs are strongly correlated with the volume/scale of the instrument: the higher volume, the lower the (relative) execution costs. In the case of loans and participation, these costs will range between 2 to 4% of the fund's volume. The costs of using equity financing are usually slightly higher over a longer period. Overall, the costs of a fund using the various instruments, will be higher in the earlier phases. In these phases, the fund needs to be established and set up the investment strategy and business plan. It must find and receive relevant applications for the fund (acquisition), assess and accept early applications, due diligence, and closing of the financing deal. When the first projects have been financed by the fund, the focus shifts towards managing the outstanding financing and administration. This phase entails less hours spent in general, however it should not be underestimated, as it is still required to closely manage the loans, guarantees and participations.

The management and administration of outstanding loans and especially participations is sometimes underestimated.
Richard Luigjes – Manager Fund Development at SVn

The difficulty of assessing the business case of a project or initiative
This section made a destinction between non-revolving and revolving instruments. Although this theoretical distinction is easily made, in practice is difficult to assess whether a project's business case has yield potential or not, especially in an early stage of the project. This assessment requires thorough real estate, financial and technical knowledge. Some projects have a rather obvious negative business case, for instance when extensive remediation is necessary. Other projects may have a clearly obvious positive business case, for instance when a rather straightforward residential development takes place in a location characterized by high market pressure (e.g. Amsterdam, Utrecht). However, other projects may be still in a phase where costs and benefits are not easily assessed and there are many uncertainties. Assessing whether this project has yield potential may then be very difficult. Therefore, actor that assesses the projects that apply for financing from a revolving fund must have the necessary competences and knowledge to do so.

The difficulty of the term 'positive business case'
The first and foremost condition for a revolving fund is that the project in question must have a positive business case. However, the fact that a project's positive business case is a prerequisite for a loan from a revolving fund may come across as rather odd. One may argue that when a project has a positive business case, the market should be able to carry out the development at hand on its own. In that sense, a revolving fund with public resources should not be necessary. However, projects that are not able to acquire financing from the market may in fact have a positive business case. This needs further explanation. There is a difference between projects that clearly show a positive business case (financially speaking) in a rather certain timespan and projects that show a positive business case that is rather uncertain due to external factors. These factors may relate to the timespan of the project and the complexity in terms of ownership, technicalities, etc. The latter type of projects may show yield potential, however due to the external factors the height and timing of that yield may be influenced. These uncertainties may result in banks and other financial institutions being reluctant to finance these types of projects. It is this type of projects that a revolving fund should aim at: projects that show financial and societal yield, usually on the long-term, but due to complexity and uncertainty are not able to acquire regular financing (e.g. from a commercial bank).

Revolving funds: why and when?

As stated earlier, not every situation is benefited by a revolving fund. There are several conditions that need to be met for a revolving fund to be useful. The foremost issue has been indicated earlier: applications for a revolving fund need to have yield potential; if a fund finances projects from which it is certain from the start that it will not achieve any financial return, the fund is granting subsidies. For a fund to be revolving, the financing needs to be (partly) recoverable. Here, the three main conditions as discussed during several interviews[1] for a revolving fund to be logical are listed.

- Projects that are financed through a revolving fund must have a positive business case/yield potential.
- The projects that acquire financing from a revolving fund set up by a governmental body (and thus funded by public financial resources) must achieve social benefits/goals.
- There needs to be clear market failure: projects or companies must have trouble acquiring regular financing at the capital market.

Looking at the third condition, this was especially the case during the financial crisis; banks became reluctant to finance certain companies and projects with a higher risk profile (also due to increased regulation, e.g. Basel III). Mainly in the feasibility and development phases of project or product development, this financing issue is predominant, visualized in figure 20. During the feasibility phase, the project's social, technical, financial and planning viability is assessed. This phase is not very costly, contrary to the development phase in which the first major investments need to be made (e.g. acquisition of land and real estate, land-use plan changes, acquiring financing, setting up program of requirements, etc.). In these stages, there are still many uncertainties and risks, which contribute to the reluctance of bank financing.

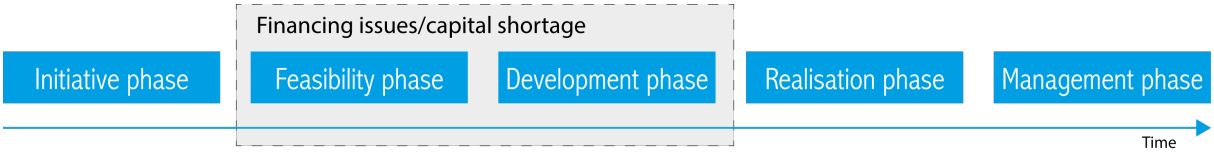


Figure 20: Financing issues occur mostly in feasibility and development phase (Adapted from Dekker et al., 2016)

The market failure gap arises from both banks/financial institutions being reluctant to finance due to their Internal Rate of Return (IRR) requirements, and governmental bodies being reluctant to finance due to their External Rate of Return (ERR) requirements. The IRR indicates the required return on the banks' investments. The ERR indicates the social benefits the government tries to achieve. If projects do not comply with either IRR or ERR requirements, the banks and government will not finance, resulting in market failure, shown in figure 21. This IRR/ERR gap, or market failure gap, is where a revolving fund could be of added value.

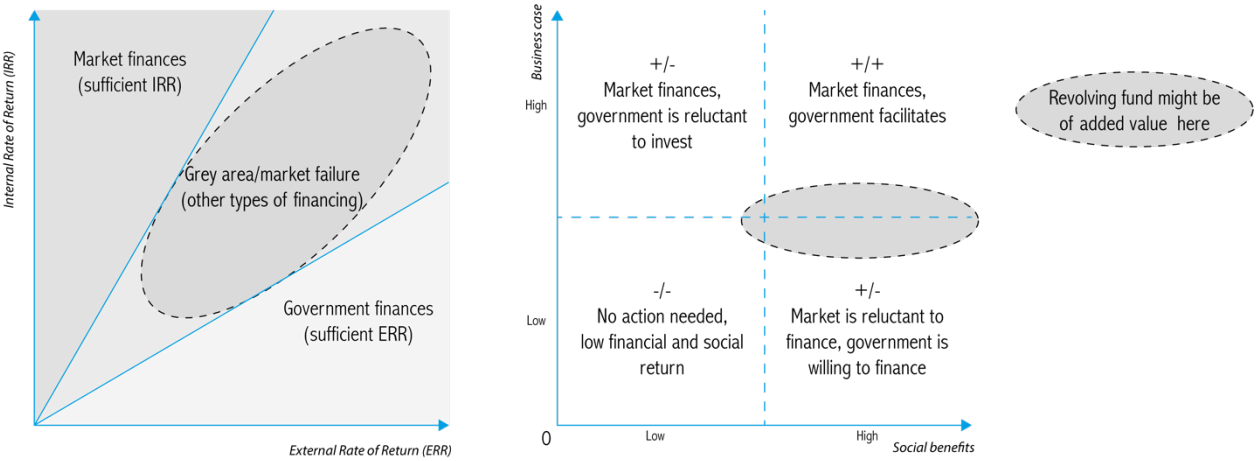


Figure 21: The IRR/ERR gap leading to market failure and reluctance of market financing and government financing (Adapted from Van Aart & Van de Ven, 2015, p. 5)

[1] J. van Ginkel, personal communication, March 14th, 2017, T. van Garderen, personal communication, March 14th, 2017, E. Netjes, personal communication, March 16th, 2017.

Necessity of revolving funds in the Dutch urban development practice

The hypothesis of this thesis is that a revolving fund positively influences the Dutch urban development practice. This section already addressed the possibilities, financial instruments and preconditions needed for such a revolving fund to be logical and of added value. This final sub-section assesses whether such preconditions can be met in the Dutch situation and whether there is a necessity for a revolving fund in the urban development practice. This is done based on several interviews with real estate and financial professionals and a recently completed study by research institute Rebel (see Dekker et al., 2016).

The study carried out by Rebel shows that the demand for revolving means is quite high. Their study focused on eight practical cases in Gelderland and the view of real estate professionals and users of other municipal and provincial revolving funds. The study assessed the capital shortage and market failure in urban real estate development projects. One of the main conclusions was that there is a capital shortage for real estate development projects in the Netherlands, especially in the feasibility and development phases. This is also the case for projects with a positive business case on the short or long term. The projects in the study range from relatively simple projects to complex, integrated urban development projects. Especially the latter experience capital shortfalls due to the elongated lead time and high level of uncertainty. Reasons for this are that banks must reserve higher buffers and thus they are reluctant to finance complex and lengthy (real estate) projects. Developing parties are obliged to reduce their borrowing capacity, reducing their equity capital. Developments must thus be financed more and more by the (limited) equity of developers, leading to less projects that are carried out. The study recognizes that the capital market is flourishing after years of financial crisis. However, many initiators of real estate projects still experience difficulty in attracting (debt) financing. All in all, the study finishes with the notion that there is a relatively extensive demand for capital and (financial) knowledge in real estate projects (Dekker et al., 2016).

This notion is underlined in an evaluation of the possibilities of the JESSICA initiative in the Netherlands, carried out by Ecorys (see Van Ginkel, Holt, & Koppert, 2010). It is stated that, especially during the financial crisis since 2008, financial institutions became reluctant to finance urban development projects (Van Ginkel et al., 2010). A study from ASRE Research Center (see Mackaaij & Nozeman, 2014) comes to the same conclusion. In pre-crisis times, banks had the possibilities to grant loans with high LTV-ratio's and low interest rates. However, this changed dramatically. The gross amount of loans has decreased with approximately 80% in the real estate capital market between 2008 and mid 2013, mainly due to the three large real estate banks (i.e. FGH Bank, ABN Amro REF, ING REF) reducing their real estate activities in that period. Additionally, the Basel III regulations, which involve tightening of capital and liquidity requirements, result in an additional impact on bank's willingness to finance real estate projects (Mackaaij & Nozeman, 2014).

An exploratory study by TU Delft, Deloitte and BPD (Franzen, Ten Have, Uitzetter, & De Zeeuw, 2017) underlines this issue. The exploratory study recognizes seven misconceptions regarding urban development, one of them being the connotation that there is a "wall of money" and financing is easy to arrange: I) developers and contractors are not able to bear the risks and early financing of complex projects, and II) financiers (e.g. banks and other external financiers) are reluctant to finance urban development projects due to the high risk profile, which mainly has to do with a project's program (functions), planning and future value creation (Dutch: *waardesprong*). As stated, the risk profile changes dramatically in each phase of urban development (Franzen et al., 2017). Next to the financing gap, there is another (financial) gap that is relevant in urban development projects; the unprofitable top margin (Dutch: *onrendabele top*). Due to high early investments and a high risk profile (especially in complex inner city developments) the business case is not positive in many cases (Franzen et al., 2017).

As stated, difficulties mainly arise in the feasibility and development phases. The initiative phase generally can be financed from initiators' equity, but this is not the case when for example land positions and existing real estate need to be purchased in subsequent phases. As illustrated, banks are reluctant to finance when risk and uncertainty is high, which is exactly the case in the feasibility and development phases. To reduce the risks and uncertainties of the projects, large expenses must first be made. Revenues are generally to be expected (much) later in the process. This leads to market failure, as banks are not willing to finance this type of projects. Another factor is that a loan is usually based on the current value of the real estate and land, thus the loan is not in line with the investment that needs to be made, since the future value after building/transformation is in most cases higher (Dekker et al., 2016). When looking at the type of projects,

especially transformation, redevelopment and demolition-newly built projects experience capital shortages. The risk perception for these type of projects is high; banks adjust their loan to value (LTV) regulation. LTV indicates the relation between the value of the collateral and the value of the loan. This relates to the issue about the current value of land in relation to the future value (at the end of the project). Since the current value is used to assess the height of the loan and not the final value, usually loans are relatively small.

Another conclusion of the Rebel study (Dekker et al., 2016) is that the project's segment (housing, offices, retail, etc.) and region (inner city location, greenfield location, etc.) is of less influence on the issues regarding capital shortage (Dekker et al., 2016). However, it is good to indicate that during the interviews with real estate and financial professionals, it is indicated that it is easier to attract financing for housing developments than for retail or office developments. Some interviewees[2] stated during the TU Delft research (Verheul et al., 2017) that there is enough liquidity in the market, a "wall of money".

Based on the Rebel study (Dekker et al., 2016), which indicates a demand for revolving capital for the Province of Gelderland, and the interviews regarding this thesis, it can be concluded that the prerequisites for a revolving fund have been met for particular real estate development projects in the Netherlands. Especially complex, long term projects that encompass relatively high risks and uncertainties, show demand for revolving capital, especially in the feasibility and development phase. This is underlined by most interviewees. However, one interviewee holds the opinion that capital shortages are not directly a product of market failure, but it might be the case that the capital issues relate to developers choosing easier greenfield locations over complex, inner city locations.

> *"As long as developers are still able to earn double-digit revenues in greenfield locations, inner city development will not flourish."*
> *Richard Luigjes – Manager Fund Development at SVn*

Another important aspect is that some professionals indicate the usefulness of a new type of subsidy along the lines of ISV. For instance, the research by Brink and BPD (see Brink, 2017) as discussed earlier in the problem analysis, and the study by Franzen et al. (2017) both state that a new form of subsidy, like the ISV, will attract private financing and strongly stimulate urban development. Another point in the study is that a national investment fund might also fill the financing gap in the early phases (Franzen et al., 2017). The question remains; how feasible is a new subsidy and is the Dutch political opinion positive towards another subsidy.

[2] E. van Veenhuizen, personal communication, November 18th, 2016, R. Vollebregt, personal communication, December 8th, 2016.

3.4 Conceptual model

All the important concepts and theory is described in the previous sections. The question now rises how these concepts relate to one another. This is visualized in the conceptual model in figure 22, which describes the relations between the concepts within the urban development process. The urban development process as described by Adams and Tiesdell (2012) is used as the basis of the model, as this process is in the centre of the research. Additional aspects that are not mentioned yet, but that are important in the urban development process according to Adams and Tiesdell (2012), are the development location and external factors (e.g. economic, political, social-demographic, technological, cultural, environmental).

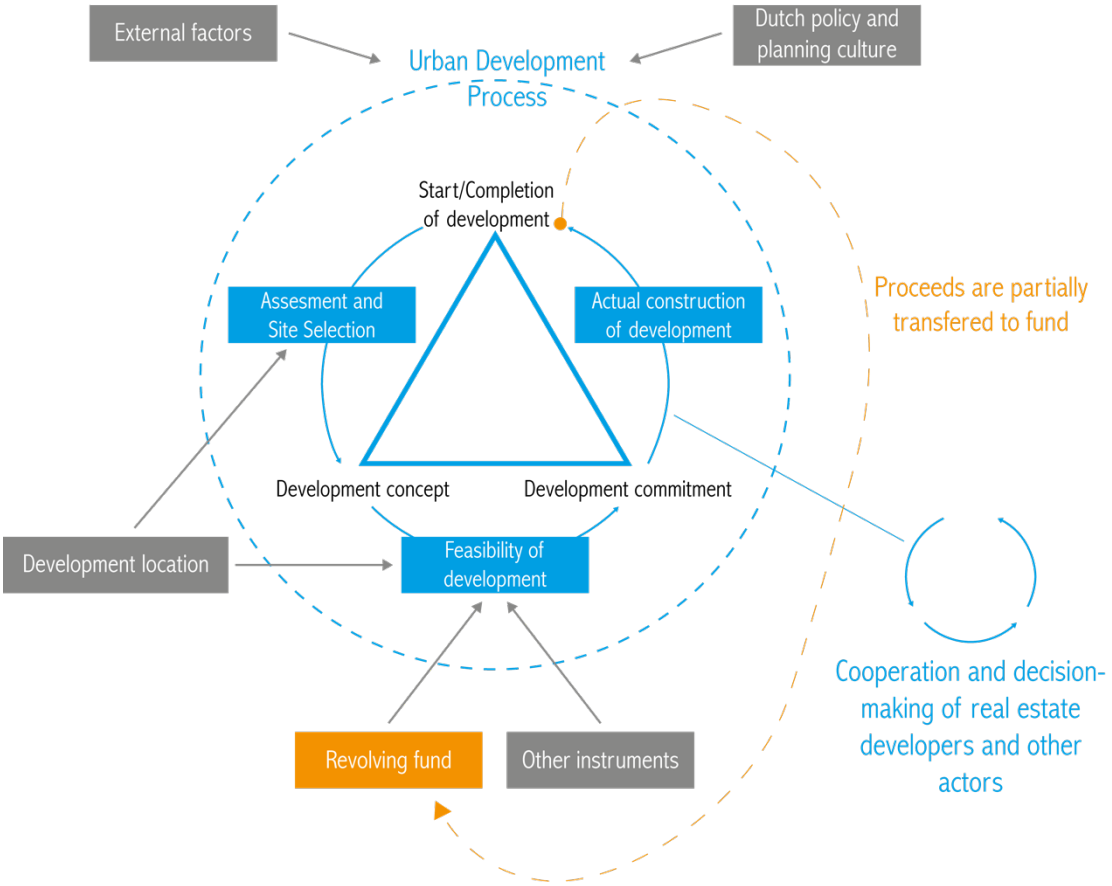


Figure 22: The conceptual model used in this thesis

At the heart lies the urban development process. The external factors and the Dutch policy and planning culture directly influence this process, for instance through the economic and political situation. For example, in economic upturn more development takes off as it usually is easier to finance developments in these situations. Dutch policy can steer towards more or less development in particular areas. The development location directly influences the assessment of a site and the selection of an area for development. It also has a significant influence on the feasibility, as developing in the one area is much costlier than another area (for instance aforementioned difference between greenfield and brownfield areas). The employment of planning instruments (in figure 23 particularly focussed on a revolving fund) generally improve the feasibility of a development. The instruments are used to spur the development process. The inner circle (blue arrows) reflects the cooperation between the actors throughout the development process, together with their decision-making. This lies at the core of the process. When the process is completed, proceeds of the development may be transferred back to the revolving fund, making it possible to reinvest elsewhere.

3.5 From theory to practice

This section forms the connection between the previous theoretical chapters and the empirical case study. It is essential to connect these components to make use of the theoretical findings to support the approach of the case study. Central to this thesis is the hypothesis that a revolving fund poses as a solution to particular (re)development projects in Dutch inner cities that experience problems. Therefore, a framework is established in this section to guide the case study and to test this hypothesis.

To summarize, there are several developments and trends that indicate that urban development is changing and the Dutch government is searching for new ways to stimulate urban development. Firstly, the ISV subsidy has been discontinued and public actors are searching for new ways of stimulating development without resorting to subsidies. A driving force in urban development is the growing demand for dwellings and the mismatch of (new) supply. To combine these two developments, a (revolving) fund has been mentioned in research at several occasions as a possible instrument to solve particular problems in the urban development practice. Furthermore, the ongoing debate on where to focus the development of new dwellings (in short brownfield vs. greenfield developments) shows that the issue is high on the agenda in the urban development practice. To connect this to the hypothesis, the use of existing revolving funds is analysed in the comparative case study. As concluded earlier, there are four themes that form the basis of revolving funds, based on theory and interviews with professionals[3]:

- Goal
- Organisational structure
- Financial structure
- Type of projects

These four themes are used in the comparative case study as the levels of analysis and form a central part in the interviews with the actors involved in the cases/funds. This is translated to an analysis framework which is used to guide the case study and to connect theory and practice, visualized in figure 23.

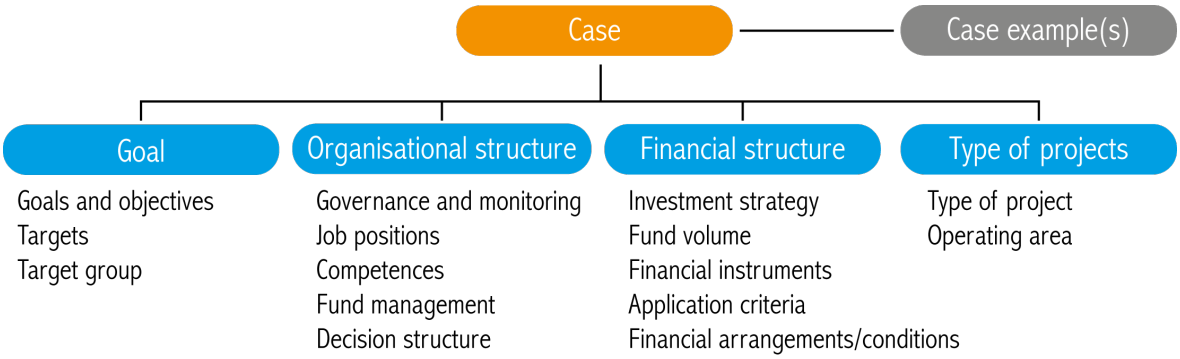


Figure 23: Case study analysis framework; important aspects of stimulating funds

In the analysis framework, several revolving funds (the cases) represent the core aspect of the case study. The aspects in blue represent the four main themes relevant to revolving instruments. Underneath the four themes, relevant aspects are listed. Each case study starts with a short introduction, followed by an in-depth analysis along the lines of the analysis framework divided across the four themes. A case example or typical project types are described to indicate the projects that the revolving instruments aim at. Finally, the case analysis is ended with an overall conclusion. The first part of each case study is descriptive, followed by good and bad practices that relate more to findings/experiences.

The institutional level on which the funds/cases operate differ, which has implications for the analysis. The first case, which is the JESSICA initiative differs from the other three in the sense that the programme level is relevant to analyse as well. In the programme, many aspects are described regarding the set-up of the funds at fund level. This provides valuable insights. The three other cases do not have such a clearly described programme level, but operate more autonomously. These levels, on which the case studies focus, are visualized in figure 24.

[3] E. Netjes, personal communication, March 16th, 2017; E. van der Krabbe, personal communication, January 18th, 2017

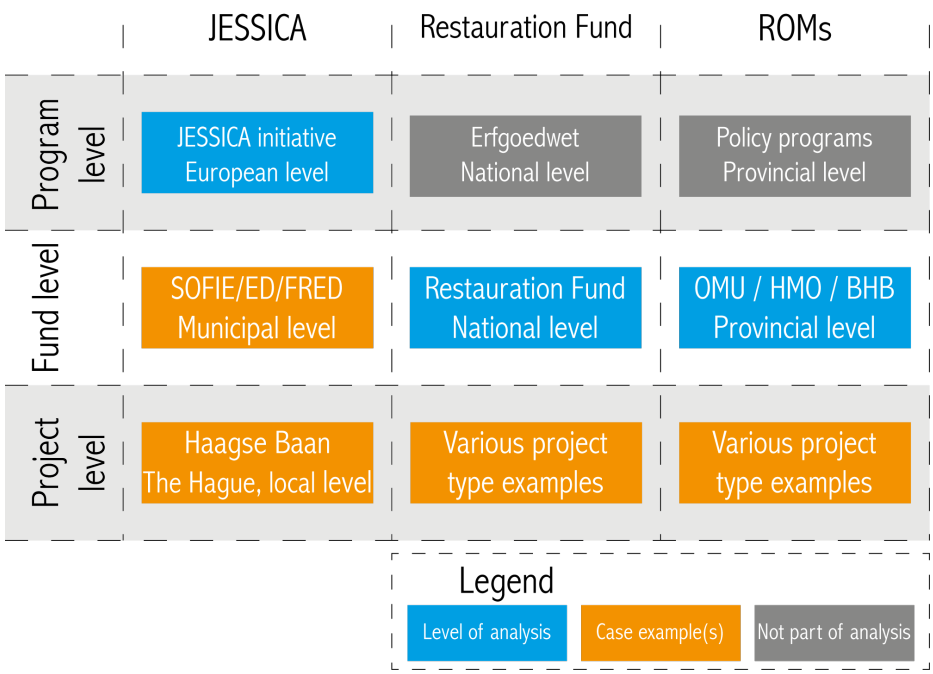


Figure 24: Levels of analysis of the three selected cases.

In order to come to useful conclusions, the following approach is handled in the case study; at the end of each case study chapter, the overall case conclusions will be listed. Additionally, good and bad practices are described which lead to an overview of which approaches/aspects are useful to consider in the design of a revolving fund for inner city development and which not. In chapter eight, all cases are compared based on the case study analysis framework. This chapter summarizes the most essential good and bad practices following the analysis framework, which makes the transition from the case study outcomes towards a fund design possible.

4. Case study: JESSICA Initiative Urban Development Fund

In this chapter, the Urban Development Fund (UDF) as part of the JESSICA Initiative is analysed based on the predefined analysis framework. This ensures the possibility to analyse this case and the other cases similarly. The chapters four, five, six and seven provide the answer to research question five and six related to revolving funds in practice and the perceived good and bad practices that can be observed:

- *How are revolving instruments currently used in practice and in what way do they stimulate urban development processes?*
- *What are the perceived good and bad practices from the revolving instruments currently used in practice?*

4.1 Introduction

Breuer and Brueser (2012) and Dąbrowski (2014) describe JESSICA, which is a programme that stimulated sustainable urban developments between 2007 and 2013, as well as energy efficiency and renewable energy investments in cities through financial engineering instruments such as loans that are granted by so called Urban Development Funds (UDFs). The European Regional Development Fund (ERDF) holds money, which then was distributed across the UDFs or a Holding Fund (HF), which invested in several UDFs (Breuer & Brueser, 2012). The UDFs worked on a revolving basis, which meant that the assistance is based on repayable funding instead of subsidy or grant-based assistance (i.e. “evergreen” funds) (Dąbrowski, 2014). JESSICA stands for Joint European Support for Sustainable Investments in City Areas (Breuer & Brueser, 2012; Dąbrowski, 2014; European Commission, 2014c). It was an initiative developed by the European Commission in cooperation with the European Investment Bank (EIB) and the Council of Europe Development Bank (CEB). It supported sustainable urban development and urban regenerations by applying financial engineering instruments (European Commission, 2014c).

The JESSICA initiative was issued between 2007 and 2013 and has provided many UDFs with financing. The initiative was evaluated and recommendations were formulated. The JESSICA Initiative itself was discontinued, but due to the revolving nature, most of the revolving funds are still in place. Additionally, the aid from the European Regional Development Fund is operational. However, the focus has shifted towards four other themes: Innovation and research, The Digital Agenda, Support for small and medium-sized enterprises, and The low-carbon economy (European Commission, 2014a). Urban issues are transferred to the Cohesion Fund (as part of the Cohesion Policy), which partially aims to foster sustainable urban development, granting more than 50% of its financial resources to urban areas (European Commission, 2016). New financing instruments are introduced through so-called “Integrated Territorial Investments”, within the context of the Cohesion Policy (European Commission, 2014b).

Additional information regarding the organisational structure, financial instruments, and application criteria of the JESSICA Initiative is added to the report as appendix 3.

4.2 Goal

The main goal of the EC when they set up the JESSICA initiative was to support revenue-generating, sustainable urban regeneration projects, together with energy efficiency and renewable energy investment in cities (Dąbrowski, 2014). The idea was that support would enhance investments in urban areas which were considered necessary due to the urbanisation of European cities (Breuer & Brueser, 2012). Essentially, the goal is to support “sustainable urban development and regeneration through financial engineering mechanisms” and the investment of structural fund allocations from EU countries in revolving funds “to help recycle financial resources to accelerate investment in Europe’s urban areas” (European Commission, 2014c). More specifically, this relates to supporting projects in the areas of urban infrastructure, heritage or cultural sites, redevelopment of brownfield sites, creation of new commercial floor space, university buildings, and energy efficiency improvements (European Commission, 2014d). On a more institutional level, JESSICA was also created to include new actors in the policy process, which would create room for a change in the governance of the cohesion policy of the EU (Dąbrowski, 2014). For each UDF, separate targets are defined by the relevant authorities. For instance, SOFIE had the target of achieving a return equal to the inflation rate (resulting in no loss of resources over time).

Target group

This aspect can be viewed at two levels: the JESSICA programme level and the UDF level. At the programme level, the target group is member states or regions within the EU. These actors may set up a UDF from which financing can be allocated towards projects. The UDF may be set up at either the national, regional and city/metropolitan level. At the UDF level, the target group is the actual urban project initiator who seeks (additional) financing for their project. These project initiators may be eligible to receive funding from a UDF.

4.3 Organisational structure

The JESSICA initiative is a joint policy initiative by the EC, EIB and CEB. The EC, and in particular the Directorate-General for Regional and Urban Policy (DG Regio), is the founding institution of the initiative. The EIB and CEB joined the initiative, and agreed with the EC to carry out the following tasks (based on Memorandum of Understanding, see: Hübner, Maystadt, & Alomar, 2006; Taskforce JESSICA, 2008):

- Provision of advice and assistance to regional and local authorities in implementing JESSICA
- Promotion of urban renewal plans and best practices across Europe
- Fulfilling the role of Holding Fund (HF) at the request of member states or Managing Authorities (MAs)
- Programming the Structural Funds, Planning and monitoring integrated urban renewal and development plans and actions
- Financing of social housing projects
- Coordination with Commission initiatives
- Providing complementary financial resources

The organisation of the JESSICA initiative is visualized in figure 25.

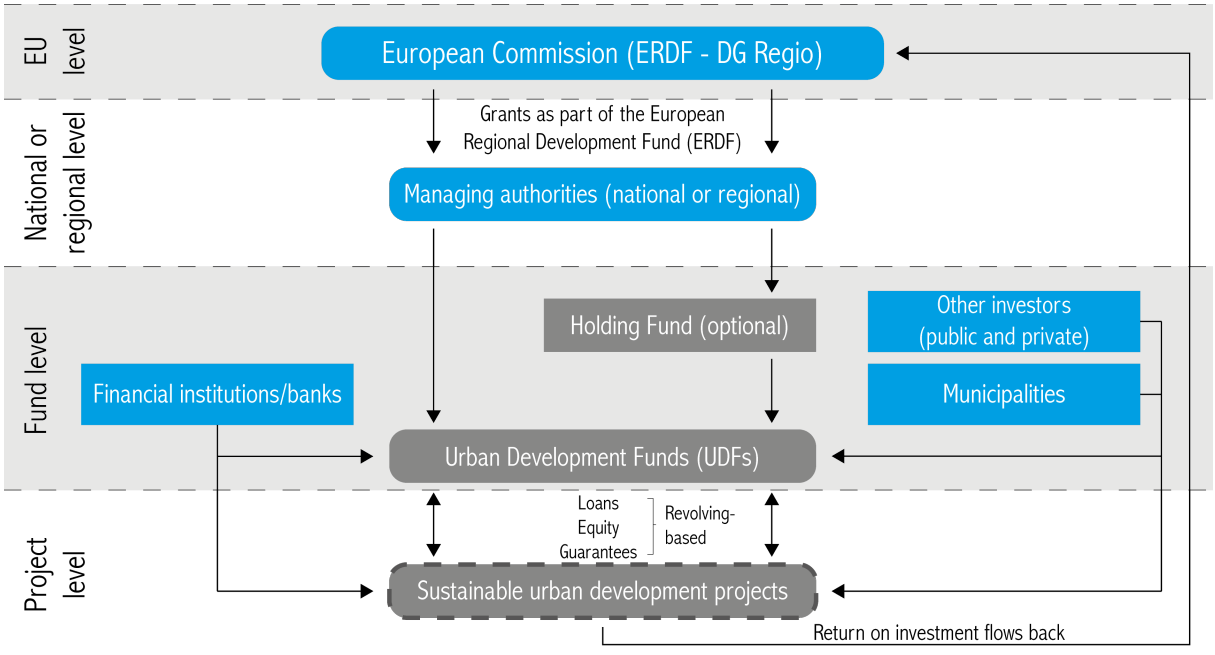


Figure 25: The implementation structure of JESSICA (Adapted from Dąbrowski, 2014; European Commission, 2014c)

The UDFs are based on three key dimensions: the business strategy, the financial products and beneficiaries and the governance structure (Kreuz & Nadler, 2011). These key dimensions should be established in a chronological order; first, the UDF needs to set up a proper business plan, then the range of financial products (guarantees, loans, mezzanine, equity, see financial structure) and beneficiaries. Finally, the governance structure should be defined clearly. These three dimensions are requirements from the EC which need to be met before a UDF is permitted to support projects. The way the UDF is managed/organised is as follows: the EC issues grants towards the MAs who manage the UDFs (or in particular cases the Holding Fund). These grants flow from the ERDF. In addition, financial institutions, like banks, municipalities, and other investors (both from public and private backgrounds) finance the UDFs.

From the UDFs, the proposed urban development projects are (partially) financed by so-called Financial Engineering Instruments (FEIs), such as loans, equity or guarantees. The FEIs have a revolving character. The idea is that these revolving-based FEIs allow for the establishment of funds to support public investment, especially in times of economic downturn and crisis, as at these times public and commercial sources of funding are typically quite restricted (Dąbrowski, 2014). In addition, a catalytic side effect, called the multiplier effect, is achieved: public investment leads to the unlocking of public and private capital (Dąbrowski, 2014). Finally, the urban development projects are to be implemented by public investors or in public-private partnerships (Dąbrowski, 2014). A prerequisite is that the investors pay back the assistance they received from the fund. However, they need to generate profits to be able to do so. Another prerequisite is that the project has generated positive externalities for the local society, in line with the policy objectives that were defined in the operational programmes and urban development plans (Dąbrowski, 2014). Each member state of the EU has been allocated financial resources since 1988 by the European Union under the Structural Funds Programme (Becker, Egger, & Von Ehrlich, 2010).

Many actors have been involved in the UDFs set up under the JESSICA initiative. This is summarized in table 4.

Actor overview	
Initial and additional investors	**Initial investors** European Commission (through ERDF) Council of Europe Development Bank **Additional investors** Financial institutions/banks Municipalities Other public/private investors
Ownership	European Commission European Investment Bank Council of Europe Development Bank (Joint policy initiative by EC, EIB and CEB)
Management	So-called Management Authorities (MAs): typically financial institutions that dispose of fund management skills (at national or regional level)
Target Group/Applicant	Member State of EU (national) Regions (regional) Cities (city-level)
Supervision/inspection	Monitoring Committee (National level Investment Committee (Fund level)

Table 4: Actor overview of the JESSICA Initiative

Management
The actors who are responsible for the management of the UDFs are called the Managing Authorities (MAs). These MAs can be either working at the national or regional level, depending on the situation (in the case of a national fund or regional fund). Typically, the MAs are financial institutions that dispose of fund management skills. The MAs can directly appoint UDFs, or MAs may use their option to organize financial engineering instruments through the intermediary of a Holding Fund (HF). Although setting up a HF is not mandatory, it might provide advantages (e.g. HFs provide MAs with infrastructure and human capital to manage lending operations, equity investments, etc.) (for more info see the JESSICA - Holding Fund Handbook: PWC, 2010).

Supervision/inspection
A Monitoring Committee operating at programme level, responsible for supervision assistance on Structural Funds and carrying out monitoring activities, is appointed by the Member State. The Monitoring Committee checks whether the MAs manage the programmes, ensuring compliance with guidelines, rules and evaluations defined at European level. The Investment Committee, operating UDF level, is normally responsible for supervision, guidance and approval of investment proposals at the fund level. Usually, an Investment Committee is established in accordance with the provisions of a Funding Agreement (European Commission & European Investment Bank, 2012)

4.4 Financial structure

Financial resources within the ERDF, reserved by the EC, EIB and CEB, are transferred to UDFs from the MAs, and in some cases via the HFs. The UDFs then acquire additional financial resources from public and private investors and other financial institutions (e.g. from municipalities, banks, and other public and private investors). Finally, the UDFs allocate financial resources to sustainable urban development projects, based on guarantees, loans, mezzanine and/or equity (either venture capitalist or late-stage equity). The financial structure is visualised in figure 26.

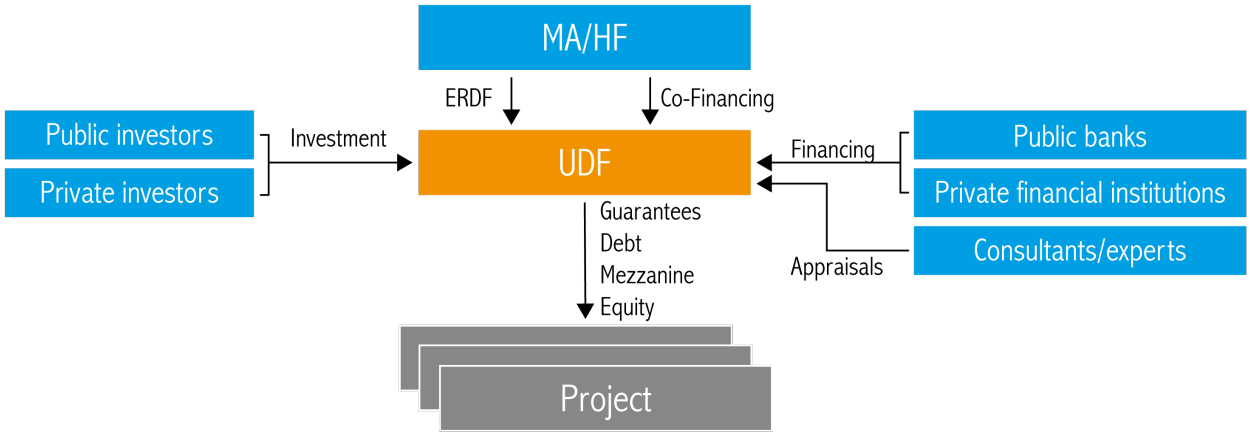


Figure 26: Financial structure of the UDFs (Adapted from European Commission & European Investment Bank, 2012)

As stated, the allocation of resources from the UDFs can be structured by applying four different financial products. Structured in order of increasing importance for the individual projects and increasing risk profile of the financial instruments (see figure 27). An elaborated explanation on the four types of financial products is provided in appendix 4.

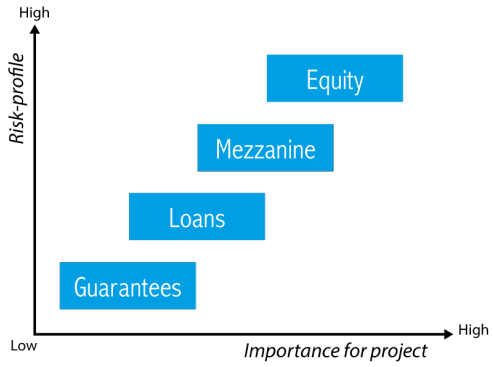


Figure 27: Financial products in terms of importance for the project and risk profile (Adapted from European Commission & European Investment Bank, 2012)

Fund volume

The last evaluation of the JESSICA initiative was finalized and presented in June 2012. This evaluation showed that the total amount of money invested in the UDFs was €1.25 billion at Q2 of 2012. The amount invested in HFs at that moment was €1.75 billion. This totals the amount of investment potential at €3 billion between Q1 2009 and Q2 2012 (Leanza, 2012). Looking at the continuation of the fund, the European Commission has budgeted €277 billion for investments between 2014-2020 from the European Regional Development Fund (European Commission, 2017). The focus of this fund is on Research and Innovation, the Digital Economy, SME competitiveness and the Low Carbon Economy. According to the policy documents regarding the Cohesion Fund, which is part of the Cohesion Policy, at least 50% of the fund will be invested in urban areas (European Commission, 2016).

Application criteria

As the application criteria can be elaborated upon quite extensively, an in-depth analysis is provided in appendix 4. Here, the application criteria are shortly described.

Application criteria regarding the JESSICA initiative are assessed in two instances/on two levels:

- UDFs must comply with criteria to acquire State aid from EC
- Urban projects must comply with criteria to acquire financing from UDF

UDF level

Firstly, the State aid assessment takes place when a UDF is planned. There are several criteria that need to be met by UDFs applying for state aid through the JESSICA initiative. They are listed below in four categories, directly derived from the Urban Development Funds Handbook (see European Commission & European Investment Bank, 2012).

1. *Urban Project/IPSUD assessment criteria*: In short, the project must lie in a predefined area, it needs urban socio-economic and environmental needs assessment, it must be managed by a local authority, it must likely support Eligible Expenditure (payment in accordance with EU regulations), and it must assess the nature of likely beneficiaries.
2. *Fair rate of return*: UDFs may not require a higher return than the market return (Fair Rate of Return < Market rate).
3. *Co-Investment*: A UDF must seek (private) co-investment and not solely finance urban projects.
4. *Urban Project selection by UDFs*: The UDF's project selection and publicising calls for projects must be open and transparent, while assessing socio-economic values of projects as well.

Project level

Secondly, the urban projects applying for financing from the UDF must meet certain criteria as well. In this context, the process of setting up a UDF is important. This process is described in appendix 4. At the end of the process, urban project initiators may start applying for financing from the UDF. At this point, the application criteria will be used to assess the projects that apply for financing. The application criteria used are categorized in three main topics which are as follows (see European Commission & European Investment Bank, 2012, pp. 64-65):

1. *Financial viability*: An Urban Project must generate revenue or assess enhancement that can repay investors.
2. *Strategic fit*: The Urban Project is eligible to be supported by the Operational Programme resources.
3. *Deliverability*: An Urban Project must be delivered in a reasonable timescale so as not to leave the UDF with uninvested resources for an extended period of time.

4.5 Type of projects

The type of projects varies widely, as the spread of UDFs is huge and their goals are widely defined. To indicate the type of projects, three UDFs in the Netherlands are taken as example (SOFIE, FRED and ED) and summarized in table 5.

SOFIE (Rotterdam)	ED (The Hague)	FRED (The Hague)
Stadshavens Ontwikkelingsfonds	*Energiefonds Den Haag*	*Fonds Ruimte en Economie Den Haag*
Floating Farm → a loan was granted and a participation was undertaken in this floating dairy farm concept.	H.V.V. Laakkwartier → a loan was granted towards this local football club to install a Triple Solar Roof.	De Haagse Baan → a loan was granted towards a developer for this multitenant business space development project.
Warmtebedrijf Rotterdam → a loan was granted towards the research of supply chain optimisation in Stadshavengebied.	Nature's Heat → a loan was granted towards nine horticultural firms to finance a geothermal heating project.	Urban Farmers → a loan was granted and a participation was undertaken in this urban farming project.
Rainmaker → a loan was granted towards this company to develop a part of the production hall for innovative windmills.	Ampyx Power → a loan was granted towards this company to develop the PowerPlane, a sustainable energy measure.	NAÏF → a loan was granted towards the development of business space for this baby care company.
Maskerade → a loan was granted towards a building company developing a building method with bio-based materials.	Vogelaer → a loan was granted and a participation was undertaken in this geothermal heating project.	De Werkfabriek → a loan was granted towards the creation of this coworking space.

Table 5: Overview of illustrative projects financed by SOFIE, ED and FRED.

4.6 Case example: SOFIE, Stadshavens Rotterdam

In the Netherlands, several UDFs have been set up in cities like Enschede, Maastricht, The Hague and Rotterdam. One of these UDFs is the SOFIE (*Stadshavens OntwikkelingsFonds voor Innovatie en Economie*), officially set up on July 19th, 2013 by the municipality of Rotterdam. This moment was preceded by viability studies, the decision on the amount of funding from Europe, and the actual operationalisation of the fund (a process between 2010 and the end of 2013). The case example will be briefly analysed, partly along the lines of the analysis framework presented earlier. In addition, interviews with the municipality of Rotterdam, the fund manager and applicant of the fund will be held to further analyse the application of the fund and experiences of its users.

Goal and targets

The goal of SOFIE is to stimulate and support the transformation of the area between the Erasmus bridge and Beneluxtunnel. This area is characterized by its history of harbour activity. Nowadays, many of these activities are transferred to the *Eerste Maasvlakte* and *Tweede Maasvlakte* outside the city, which results in the area being in transition. The municipality and *Havenbedrijf Rotterdam N.V.* (the harbour company) therefore aim at making the area attractive for new types of companies and entrepreneurship, innovation and sustainability (SVn, n.d.). The municipality's main goal is the revitalization of the city's harbour areas, which has resulted in several initiatives and projects (e.g. Rotterdam Science Tower, recreational functions such as *Dakpark Rotterdam*). However, right at the start there were not many applications for SOFIE. Therefore, the area was enlarged (including Rijnhavengebied) and applications not directly located in the area but with effects on the harbour area were also considered (Van Aart & Van de Ven, 2015), as visualized in figure 28.

Figure 28: Operating area of SOFIE (adapted from Google Maps)

The idea is that revitalization leads to higher employment rates in the region. Projects and initiatives that contribute to this goal are eligible for financial support from SOFIE. The total amount for 2014 and 2015 was €6,25 million (SVn, n.d.). SVn may use loans, guarantees and participation as financial products. SOFIE aims at projects that are "sub-commercial", which in this context means that there is market failure: projects that require quite large early-stage investments with prospected adequate returns on the long-term are not started. Additionally, the project must incorporate social added value (Van Aart & Van de Ven, 2015). SOFIE functioned as a pilot for the use of JESSICA initiative in the Netherlands, as it was the first fund established under the flag of the European programme. The municipalities of The Hague and Rotterdam jointly set up this first JESSICA-pilot, from which SOFIE is a part of. Both municipalities teamed up and set up the pilot in close cooperation with MA *Kansen voor West* and EIB (Van Aart & Van de Ven, 2015). The initial anticipated number of projects was 5 to 10, the anticipated (social) effects were €1,75 million of private investment and 65 created jobs. The fund management fee is at least 2,2% of the fund's volume on a yearly basis; this may increase up to 3%. The idea was that after 2015, the management fee should be paid from the revolving capital of the fund (Van Aart & Van de Ven, 2015).

Organisational structure

SOFIE is part of the JESSICA initiative, which means that a (mandatory) MA is in place, together with the standard initial investors: the fund is financed by EC, EIB and CEB money through the ERDF. The fund is co-financed by the municipality of Rotterdam. Initiator of the fund was the Alderman of Harbour, Transport and Regional Economy, Jeannette Baljeu of the municipality of Rotterdam. The fund manager, *Stichting Volkshuisvesting Nederland* (SVn), was appointed through a European tender. SVn is an independent foundation focussed on sustainable financing with the aim to increase social added value. Besides managing the fund and making all final decisions in terms of concrete investment propositions, SVn also

established the SOFIE foundation and the limited partnership SOFIE CV (*commanditaire vennootschap*). The SOFIE foundation is the managing partner of the CV. The Investment Committee, set up to monitor the investments granted by the foundation, established the investment strategy (part of JESSICA's mandatory business plan) end December 2013 which meant that the fund was officially operational from January 1st, 2014 (Van Aart & Van de Ven, 2015). The MA, directly cooperating with the EC, is called *Kansen voor West*, a collaboration between provinces North Holland, South Holland, Utrecht and Flevoland and the cities Amsterdam, Den Haag, Rotterdam and Utrecht. *Kansen voor West* is a programme financed by the ERDF and co-financed by the municipality. This programme ran between 2007 and 2013. For the new period between 2014 and 2020, a new programme called *Kansen voor West II* is set up, which has a budget of €33 million, also acquired from the ERDF (Kansen voor West II, 2015). Finally, an advisory commission is put in place by the SOFIE foundation, which advices SVn regarding the CV and the foundation and possible conflicts of interest. However, SVn makes the final decisions (Van Aart & Van de Ven, 2015). The organisational structure is drawn out in figure 29.

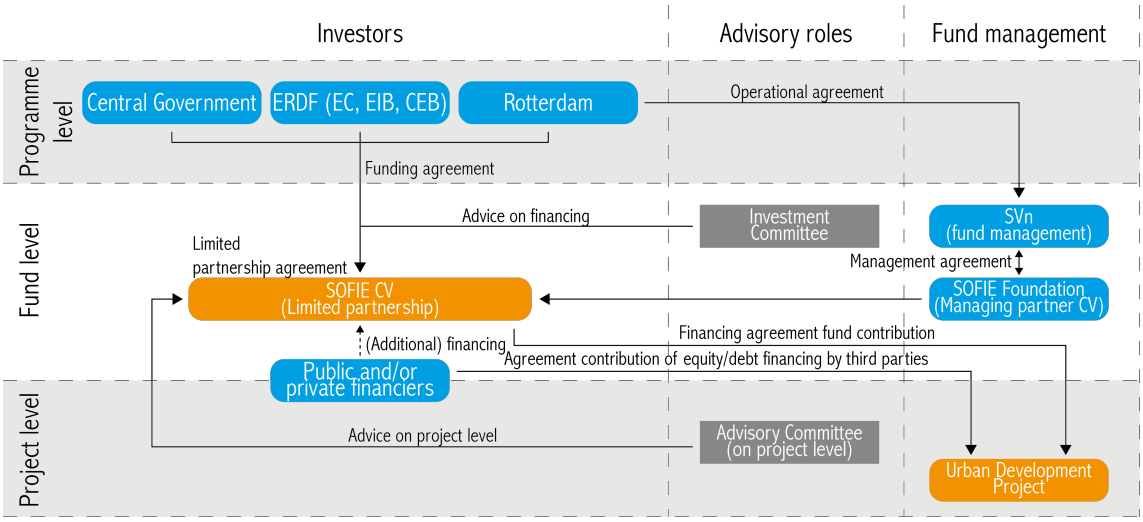


Figure 29: Organisational structure of SOFIE (Adapted from Van Aart & Van de Ven, 2015)

Financial structure

SOFIE is set out as a revolving fund, as this is mandatory being part of the JESSICA initiative. The fund is financed by money from the ERDF and co-investment from the municipality of Rotterdam and the central government. Initially, private participation in the fund was envisioned, but due to the financial crisis, these private commitments were revoked (Van Aart & Van de Ven, 2015). Financial support for projects that apply is granted in the form of loans, based on a monthly repayment clause. On average, the loans have a 15-year term with an interest rate at market level. Repayment and interest payments flow back to the fund. Broadly speaking, the applicants (e.g. entrepreneurs, project developers) that want to acquire financial support from SOFIE must meet the following application criteria (SVn, n.d.):

- The project must have evidently visible effects in the harbour area;
- The applicant must prove that he/she has undertaken reasonable efforts to acquire maximum financing against market conditions, but this proved to be impossible (due to market failure);
- Social added value is demonstrable, such as increased employment or reduction of greenhouse gasses emissions, and
- The project has demonstrable financial return and yield potential. Additionally, the applicant must prove he is able to repay the loan.

Public participation is limited to 20% of the project's financing. Guarantees may be granted which cover up to 75% of the investment. Loans may be granted up to 50% of the investment (SVn, n.d.). Each application runs through a uniform application process. Firstly, the applicant negotiates with the Investment Committee. If this phase succeeds, a preliminary credit analysis is carried out and an advisory application is presented to the Advisory Committee. If the advice of the Committee is positive, the fund manager sends an offer to the applicant. The applicant then decides on the offer. Finally, the application will be formally completed (Van Aart & Van de Ven, 2015).

Conclusion case example

Using the four main themes from the analysis framework, the conclusions related to the case example of SOFIE (and to a lesser extent FRED and ED) are listed.

Goal

- The goal is to enlarge the fund over time and additional private investors are welcome next to the public investments.
- If resources are left in the fund at the maturation date of the respective JESSICA period, these resources flow back to the EU. This provides the incentive to actively search for eligible projects. Downside is that projects may be arbitrarily assessed.

Organisational structure

- Distance to politics; using a construction in which the governmental actor (municipality) is initiator and the daily operations of the fund are transferred to a fund manager. This ensures a quick response rate, since the fund manager is able to quickly react whereas a municipal actor would require more time to require the necessary political support base.
- Managing outstanding loans requires capacity, which is sometimes underestimated. Especially in a-typical, higher-risk projects that yet need to proof themselves, this aspect is important.
- The monitoring agency which monitors the operations of the UDFs is mainly focussed on the procedural aspects and less on the outcome. Occasionally, this hampers the fund's operations.
- The use of a Holding Fund increases flexibility (in case of enlarging an existing fund or setting up a new fund), but requires additional (mostly administrative) resources that are extracted from the fund's resources.
- Advisory role of fund manager improves the projects' business cases. This role (see capacity building, see section 2.5.1) is of added value in the daily practice of SOFIE, ED and FRED.
- Use of external fund manager is of added value for the municipality. Municipality has coordinative role and has contracted a manager with the necessary knowledge.

Financial structure

- A clear investment strategy is vital; it provides certainty for the initiators of the UDF, the fund manager (and the assessment of applications) and the applicants. The investment strategy should be clearly translated in application criteria and these should be communicated clearly to potential applicants. Additionally, the clear demarcation/application area of SOFIE provides clarity for both applicants and fund managers and initiators. However, an entrepreneur located 50 meters outside the demarcation cannot apply for support from SOFIE. This may be experienced as harsh by the entrepreneurs.
- A fund like SOFIE benefits from having several financial instruments at its disposal. The ability to grant loans, guarantees and participation provides the necessary flexibility.
- Interest rates follow the market rate. When a project has a high risk profile, the interest rates may be raised. The financial arrangement is flexible which benefits the applicants (for instance starting repayment after five years).
- The fund volume is relatively small in relation to the pipeline of projects. Ecorys has concluded a fund should have a minimum volume of €20-€25 million.
- The issue of State Aid (*Staatssteunnotificatie*) is important to consider when setting up a revolving fund. Clear motivation on which market failure/market gap the fund is aiming is vital. The market failure should be demonstrated clearly. Additionally, SOFIE shows that using market rates for its loans helps; the fund is not competing with the market.
- Applications are assessed based on financial assessment criteria (similar to banks), social benefit assessment and the use of "common sense".
- Gained knowledge in the starting phase leads to insight in how to acquire additional funding from EU/EIB and other sources of funding.

Type of projects

- SOFIE is mainly contacted in the case of atypical projects with a high risk profile.
- Compared to other revolving funds, SOFIE is involved in rather various projects. This may provide uncertainty for potential applicants. However, due to the various nature, risks are more spread due to the portfolio structure.

4.7 Project example: Haagse Baan

One of the projects in the Netherlands which received a loan through the JESSICA initiative is Haagse Baan, a development in The Hague by Pike Vastgoed. The project involves the development of relatively small business units. The interview with the developer, Pike Fabriek, forms the basis for this section[4].

During the financial crisis, Pike Vastgoed had plans of developing various business units in Laakhaven, The Hague. The municipality had interest in quick development of the area and thus redirected Pike Vastgoed to FRED, the municipal revolving fund aimed at improving the local economy and business climate of The Hague. Pike Vastgoed presented the plan for Haagse Baan and the underlying business case. Additionally, Pike Vastgoed needed to show that financing from regular banks was not possible. Also, the contribution to the societal objectives of the fund was important but did not pose as financing criteria. Eventually, the conditions were met and Pike Vastgoed arranged a financing agreement with SVn, the fund manager. The loan had an interest rate slightly above the market rate and a duration of three years. Eventually, sales of the business units were very successful and the loan was not called off, which means the loan actually functioned as a guarantee. If sales would drop, the loan could be used to cover costs.

Figure 30: Haagse Baan under construction (see: www.haagsebaan.nl)

The process of acquiring a loan from a revolving fund under the JESSICA initiative proved to be quite easy in the case of Pike Vastgoed. However, the criterion to prove that regular bank financing is not possible is understandable but does not provide clear added value since proving that a regular bank is not willing to finance is relatively easy. The outcome of the interview is that perhaps assessing the contribution of the project to societal goals could replace the regular bank issue. Also, an overall connotation of the interview is that a revolving fund should start relatively small initially.

> *Think small! Do not think too big.*
> *Pike Fabriek – Owner at Pike Vastgoed*

4.8 Overall case conclusion

This case conclusion focusses on the benefits and disadvantages of the UDF structure as established by the JESSICA initiative. The overall case conclusion is largely based on the case example as this has provided most insight in perceived good and bad practices.

Time path

The setting up of SOFIE took 2,5 years. In 2010, an updated evaluation of the usefulness of JESSICA in the Netherlands concluded that financing for development projects became hard to come by (due to e.g. Basel III) and Stadshavens Rotterdam could be a good pilot case for a UDF. The actual establishing of SOFIE took between 2011 and 2013, which proved to be a tough and lengthy process. In 2011, research showed that there were ERDF-resources left that could be used for the pilot, through the MA *Kansen voor West*; FRED, ED (The Hague) and SOFIE (Rotterdam) were initiated. The starting phase towards actual establishment of the UDF proved to be the quite tedious. The 100% co-financing norm (for every ERDF euro, another municipal euro needed to be invested in the fund) was hard to achieve as initially there was no adequate support base for a revolving fund within the municipality. When the financing was arranged, it was necessary to provide argumentation that the fund would not provide State Support (Dutch: *Staatssteun*). An impartial fund manager was appointed through a European tender. The SOFIE foundation was set up and this foundation submitted the subsidy application for the EFRO-resources. Finally, the UDF was operational on January 1st, 2014.

[4] P. Fabriek, personal communication, May 3rd, 2017.

Benefits of UDFs

The reason why the JESSICA initiave has a revolving character is that it is widely anticipated that revolving assistance, instead of the more traditional ways of assistance (e.g. subsidies and grants), provides a more sustainable alternative, with sustainable meaning that the fund finances itself over time due to the revolving character. It creates stronger incentives for successful implementation by institutions that receive the assistance (Dąbrowski, 2014). Another benefit of the JESSICA initiative is that it provides the possibility of choosing the financial instrument that fits best (e.g. equity, debt, mezzanine or guarantee investments), together with the higher flexibility the implementation system offers compared to the traditional distribution through subsidy/grants (Dąbrowski, 2014). A third benefit is that the system allows for adding additional public and private finance as leverage on top of the provided assistance from the UDFs (Dąbrowski, 2014). Finally, it is anticipated that bringing together on the one hand regional and local authorities and on the other hand financial institutions and private investors, will lead to a better use of expertise and the building of new kinds of cooperation (Dąbrowski, 2014).

Disadvantages of UDFs

However, several policy reports (See e.g. Kreuz & Nadler, 2011) and evaluative studies (See e.g. Kalvet, Vanags, & Maniokas, 2012; Michie & Wishlade, 2011) have shown that reaping the benefits described above may be quite challenging, as there is still a lack of experience with instruments such as UDFs. Furthermore, there are uncertainties about the rules regarding the application of UDFs and other instruments. As Dąbrowski (2014) explains, the UDF instrument does provide the possibility and scope for extending participation and the creation of unprecedented partnerships between planning authorities, financial and private actors. However, as promising as the UDF instrument is, there are a number of obstacles still in the way, hampering the use of this new instrument (Dąbrowski, 2014). The two case studies (Wielkopolskie and Andalusia) carried out by Dąbrowski show that taking advantage of the possibilities that come along with the UDF from the JESSICA Initiative proved far from easy (Dąbrowski, 2014). The process in both cases has been lenghty and the actors involved were confronted with uncertainties, information gaps and capacity challenges. This mainly had to do with the high complexity and the fact that the instrument is new (Dąbrowski, 2014). Additionaly, tensions were apparent during the appraisal and implementation of the projects, leading to misunderstandings and conflict between the local authorities and private investors. The conclusion of the case study by Dąbrowski is that the instrument is very promising, but it still has major barriers for wider application of this kind of instrument (Dąbrowski, 2014).

Good and bad practices based on case study

ERAC, a consultancy firm, has carried out an interim evaluation of the SOFIE. The evaluation concludes that at the end of 2014, SOFIE received 27 applications, from which two already were accepted at that time: the transformation of the RET tramway depot and *Maskerade prototype*. Currently, there are seven projects that received financing which together acquired the total amount of the initial investment volume. The interviews with both the municipality of Rotterdam and SVn show that SOFIE is quite successful, as innovative projects have been successfully aided with funding, the returns are promising and SOFIE II is in the making.

Especially the good and bad practices of SOFIE are relevant for this case study. In relation to the goal, the predefined goals of SOFIE, ED and FRED are rather flexible. For instance, the use of the term “innovation” in the objectives of a fund results in a wide variety of projects that may eligible for funding. This may lead to arbitrary assessment of projects. One of the success factors relates to the organisation; the structure with a Limited partnership, separately appointed fund manager and a foundation as managing partner works very well according to both the municipality and fund manager[5]. This organisation ensures a “distance” between the fund and municipal politics, thus reserving/earmarking financial resources over a longer time span and ensuring quick response without lengthy processes due to political decision-making. Social objectives are anchored in the investment strategy, which forms the basis for the fund manager’s decision-making. A downside may be the reduced steering ability for the municipality by transferring the fund management to SVn. Regarding the financial structure of SOFIE, both interviewees are very satisfied. The investment strategy states that loans, participation and guarantees are possible financial instruments, resulting in the possibility of customized solutions per case. Additionally, the assessment of the ERR is quite flexible, thus projects that contribute to social objectives in different ways have the possibility of acquiring

[5] M. van Keulen, personal communication, March 16th, 2017; R. Luigjes, personal communication, March 17th, 2017.

financing from SOFIE. The financial application criteria are similar to that of banks assessing investment projects. Additionally, common sense is used to value the projects. This combination of assessment criteria (financial and social benefits, and common sense) has resulted in a portfolio of rather atypical, high-risk projects, but with a yield of 5,5% [6], whereas the goal was to achieve yields at the inflation rate. This mainly has to do with the fund participating in high-risk projects with high yields, and being able to finance several projects, thus creating a distribution of risk (portfolio risk distribution, *zoet-zuur benadering*). Another critical success factor is that SVn has taken an advisory role towards project initiators, which provides the possibility to improve the business case of the projects that apply for financing. The clear demarcation of the fund has also proven to be helpful, as it provides a clear podium in which the fund operates. Finally, the clear structure provided by the JESSCIA initiative has led to a clear structure and functioned as a clear guidance. In relation to Haagse Baan, it is clear that the process of acquiring a loan from a revolving fund under the JESSICA initiative is quite smooth and understandable.

"The investment strategy should be clear: a revolving fund does not provide free money."
Michiel van Keulen – Policy Coordinator Investments at Municipality of Rotterdam

Room for improvement lies in the ability to attract private funding. Both the municipality and fund manager would like to expand the fund with private resources, but private actors are still reluctant to invest in a fund that finances atypical projects with a high risk profile. Also, the initial fund volume is relatively small. Another improvement issue relates to the organisational structure. Especially from the point of view of the municipality, it would be of added value if a Holding Fund was put into place (as was done in The Hague with the ED and FRED funds). New initiatives or funds and expansion of existing funds can be easily organised from this HF, whereas in the case of SOFIE all organisational steps need to be taken again now that the fund will be increased in terms of investment volume (SOFIE II). A downside is that the HF requires additional resources (mostly administrative capacity) and this must be paid from the fund itself or by the municipality. Additionally, the organisational structure without a HF and an external fund manager creates the situation in which a reinvestment needs another State Aid (*Staatssteun*) assessment. This is a lengthy process and could have been circumvented if a HF structure were used or a Limited Company (*naamloze vennootschap*) structure was set up. In relation to Haagse Baan, a conclusion is that proving that financing at a general bank is not possible is perhaps not of added value. Assessing the contribution to societal benefits could be further incorporated in the participation criteria.

[6] M. van Keulen, personal communication, March 16th, 2017.

5. Case study: Dutch National Fund for Cultural Heritage

5.1 Introduction

In the Netherlands, a national fund has been established in 1985 specifically focussed on preservation and renovation of cultural heritage. The idea of a fund came from minister Elco Brinkman (Minister of Welfare, Health and Culture), which resulted in a shift from traditional subsidies towards loans with low interest rates. Initially, the idea behind the fund was to replace the subsidy system which did not function properly. It was decided that it should be replaced by two financial facilities: (I) a cheap restoration mortgage, and (II) pre-financing during restorations (Bierenbroodspot-Rudolph, 1984). The aim was that the fund, funded by starting capital from the State, should invest its resources as efficiently and effectively as possible in the form of a revolving fund while focussing on preservation and restoration of monuments. The reason why the government intervened in the market was that there was an increasing impoverishment of monuments at the time and financing was hard to come by (Smit, Gijp, Boer, & Schrieken, 2015). Currently, every Euro that was invested in the fund in 1985 has been invested ("recycled") for the third time since the fund celebrated its 30th anniversary (Restauratiefonds, n.d.-b; Smit et al., 2015). The case study regarding the Dutch National Fund for Cultural Heritage (in short referred to as Restoration Fund) is based on desk research and an interview with Barend Jan Schrieken[7], strategy and development manager at the Restoration Fund.

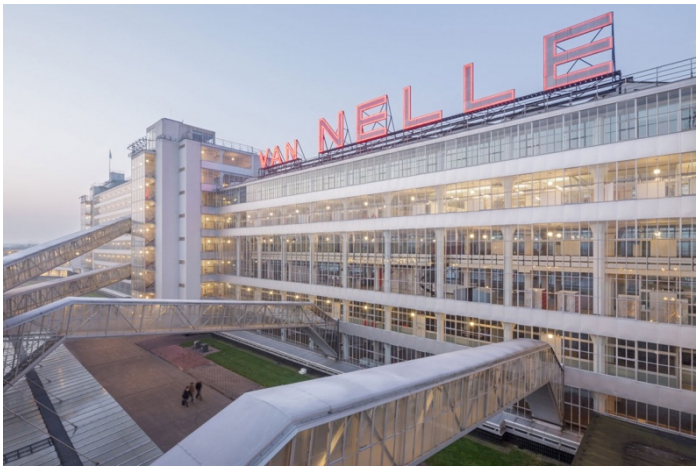


Figure 31: Van Nelle Fabriek in Rotterdam, transformed with an annuity loan from the Restoration Fund (see www.urbanguides.nl)

5.2 Goal

In the Restoration Fund's early days, the main goal was to catch up with overdue maintenance of monuments. Around 2008, this goal was achieved as more than 90% of the monuments no longer had overdue maintenance to carry out. This led to a second goal with an accompanying revolving fund: in 2012, the goal was set to finance extensive restoration projects and transform monuments with a non-residential function (Nationaal Restauratiefonds, 2015). Another goal is the provision of advice to the Restoration Fund's clients. It is clear that over the years, the Restoration Fund has been successful which is underlined by the expansion of its goals and ambitions.

Target group/applicant

The type of actors that the Restoration Fund deals with are both public and private; the public actors (e.g. municipalities and provinces) are considered strategic partners. Some public actors have the ambition to set up a revolving fund on their own, for instance municipal revolving funds. The Restoration Fund advices and manages these kinds of funds. The actual target group (or clients for that matter) are private actors, either companies or private individuals with the aim of maintaining or transforming cultural heritage/monuments. These private actors are able to acquire a loan through the restoration fund if they comply with the application criteria outlined in section 5.4.

5.3 Organisational structure

The ownership of the fund is in the hands of *Stichting Nationaal Restauratiefonds*. It is part of *Fondsenbeheer Nederland B.V* (FBNL) together with *Groenfonds*. FBNL is a shared service centre, which means that both *Restauratiefonds* and *Groenfonds* make use of the provided services. *Fondsenbeheer Nederland BV*, a private company, is the overarching holding organisation from which the Restoration Fund

[7] B.J. Schrieken, personal communication, March 15th, 2017.

is a part. The Restoration Fund is a foundation. The holding is a shared service centre, which provides services to its two funds and to other funds and fund managers (e.g. SVn uses its ICT services). Personnel is formally under contract to the holding, from which both the National Restoration Fund and Green Fund own the shares. The shareholders pose as the supervisory board for the holding. The National Restoration Fund has four departments: Strategy and Development (acquisition, relations, product development), Marketing and Communication, Advisory and Finance, and Back Office (managing outstanding loans). The Restoration Fund has its own investment managers who coordinate outstanding loans. The main activities concerning acquisition, assessing projects (e.g. assessing business case, assessing societal impacts, assessing project feasibility, etc.) and investment/contract management is all carried out by the fund's personnel in-house. The organisational structure is visualized in figure 32.

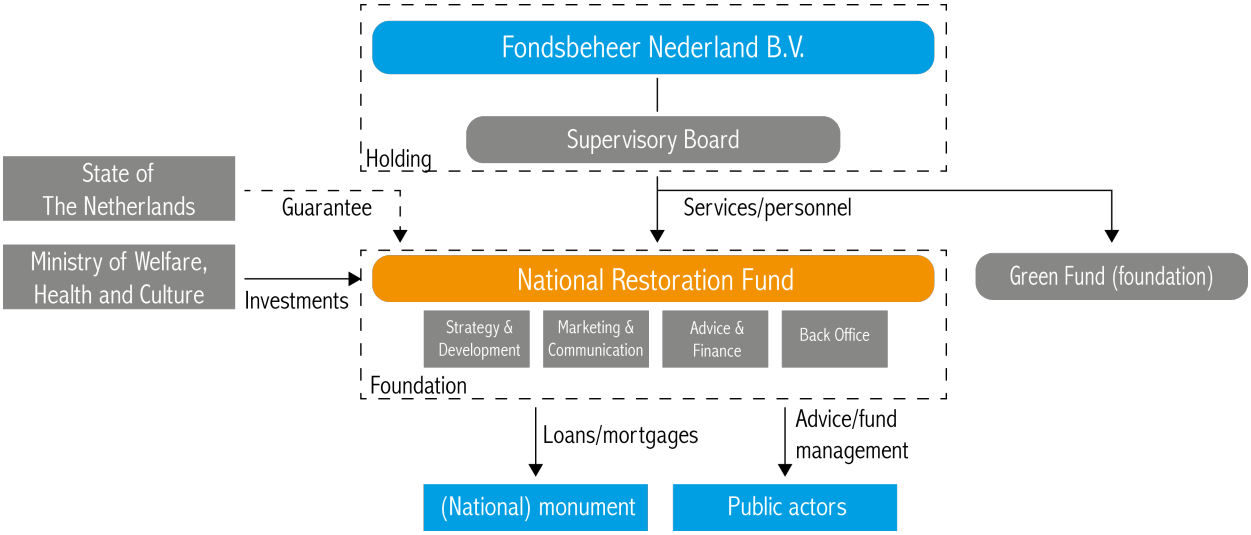


Figure 32: Organisational structure National Restoration Fund.

5.4 Financial structure

In 1986, the *Nota Monumenten* (a policy document regarding monuments) led to a subsidy on a long-term basis in the Netherlands focussed on monuments, initiated by Elco Brinkman. The *Nota Monumenten* also shifted the responsibility for monuments from State level to the municipal level. The necessary foundation that could acquire the subsidies was already established in 1985: *Stichting Nationaal Restauratiefonds* (Foundation National Restoration Fund). As stated in the introduction, the idea to only grant subsidies was replaced by providing financing through a revolving fund next to the regular subsidies (on a 50/50 basis). The initial investment in 1985 was done by the Dutch Government on behalf of the Ministry of Welfare, Health and Culture.

Fund volume

In the 2015 annual report of the fund, the total of the portfolio of financing (the revolving fund's production) was €746,983,000. This was respectively €673,391,000 and €714,774,000 for 2013 and 2014, which indicates the portfolio is growing (Nationaal Restauratiefonds, 2015). The amount that could be extracted from the revolving fund in 2015 was €459,639,000, of which €408,522,000 actually was granted; €51,117,000 was the remainder that was not invested in 2015 (Nationaal Restauratiefonds, 2015).

Financial instruments

The financial instruments used by the Restoration Fund are mostly mortgages with sub-commercial conditions. The *Restauratiefonds-hypotheek* is an annuity loan for restorations of national monuments. The interest rate is calculated at 5% under the market interest rate, with a minimum of 1,5%. The interest rate is fixed for ten years and in most cases the interest is tax-deductible. The duration of the loans is usually 30 years. The amount of the loan is based on the costs of the restoration at hand, assessed by the Monumental Affairs department at the tax authority, deducted by other subsidies or insurance coverings (Restauratiefonds, n.d.-a). These conditions make the mortgage quite advantageous. The reason why the Restoration Fund is able to provide loans with these conditions is that the State of the Netherlands has issued a guarantee for part of the (financing) activities of the Restoration Fund. In 1997, the State and

Restoration Fund signed a *Achterborg-regeling*, a treaty that ensures the guarantee (Dutch: *borgstelling*). Through this guarantee, the Restoration Fund is able to attract cheap loans on the capital market. The State's equity capital in the form of the revolving fund provides the basis of the guarantee. Through the guarantee, the fund's volume has increased over the years, leading to additional interest earnings that flow back to the fund (Smit et al., 2015). Next to the financing of restoration activities, the Restoration Fund has gradually incorporated the possibility of financing additional expenses related to a restoration or transformation of a monument. For instance, the fund can arrange financing for the monument's acquisition. These financing activities are arranged with market level conditions. Some of the examples of projects in section 5.5 have acquired additional financing. The idea behind these possibilities is to position the fund as a "one-stop-shop" for financing in relation to monuments.

Application criteria

One must comply to eight conditions before being able to apply for a mortgage through the Restoration Fund. These eight criteria are:

1. The applicant must be owner of a national monument;
2. The applicant has the intention of restoring, but has not started restoration activities yet;
3. The applicant has a statement for the restoration costs;
4. The applicant has not applied for a subsidy for the restoration;
5. The loan/mortgage has a minimum of €10,000;
6. The applicant must have an insurance for damage through fire, lightning and storm, and against damage incurred during the restoration;
7. The applicant must have an environmental permit;
8. The applicant's credit rating is positive.

The financial assessment at the eighth criterion is aimed at Loan to Income (LTI) and Loan to Value (LTV). This indicates whether or not the applicant has enough income to carry the loan and the ratio of the current value of the monument in relation to the loan.

5.5 Type of projects

As indicated, the type of projects that receive financing through the Restoration Fund vary from privately held monumental dwellings to large public real estate assets, and from National to Municipal monuments. The table below provides insight in the type of projects the Restoration Fund provides financing to. The examples in table 6 are presented in a report dedicated to the thirtieth anniversary of the Restoration Fund (see Smit et al., 2015).

Project	Activities	Financial instrument
Huis van Bewaring, Almelo *National monument*	Transformation from prison function to a hotel function.	Annuity Loan (*Restauratiefonds-hypotheek)* and an additional loan
Kommisjewei 34, Opeinde *National monument*	Major maintenance of a farm	Annuity Loan (*Restauratiefonds-hypotheek)* which was the first of its kind in 2002
Van Nelle Fabriek, Rotterdam *National monument, UNESCO World Heritage Site*	Transformation from factory building to office and event spaces	Annuity Loan (*Restauratiefonds-hypotheek)* which was the first Limited-Partnership financing (*CV-constructie*)
Kruisherencomplex, Maastricht *National monument*	Transformation of a monastery to a design hotel	Subsidy and an additional loan
GeoFort, Herwijnen *National monument*	Transformation of a fort to an educative attraction/museum	Annuity Loan (*Restauratiefonds-hypotheek)* and an additional loan
De IJsselstroom, Zutphen *Municipal monument*	Transformation of a steam laundry facility to a house, office, bed-n-breakfast and meeting space	Subsidy and an additional loan
Kerk in Haarlo, Haarlo *Municipal monument*	Restoration of former church which is currently a dwelling	Annuity loan (*Cultuurfonds-hypotheek*)

Spa Gouda, Gouda *Municipal monument*	Transformation of a former bathhouse to a wellness	Annuity loan (*Cultuurfonds-hypotheek*) and an additional loan
De Westergasfabriek, Amsterdam *National monument*	Transformation of former gas factory to a place with catering industry and creative/innovative industry meeting places	Annuity loan (*Restauratie-hypotheek*)
Olympisch Stadion, Amsteram *National monument*	Restoration of the Olympic Stadium	Annuity loan (*Restauratie-hypotheek*)

Table 6: Ten examples of projects financed by the Restoration Fund (Adapted from Smit et al., 2015)

Operating area
The operating area of the fund is the whole Kingdom of the Netherlands. The main focus lies on The Netherlands, but several revolving funds are set up in the Dutch Caribbean area as well (e.g. Aruba, Curacao).

5.6 Overall case conclusion

In general, it can be said that the Restoration Funds functions very well, based on the interview with Barend Jan Schrieken[8], a report describing the ten success factors of the fund, and the annual report of 2015. The main conclusions, good practices and bad practices are described below using the four main themes of the analysis framework:

Goal

- Focus on financing instead of subsidy, which is cheaper in terms of public spending and it avoids possible adverse effects related to subsidies (e.g. reducing entrepreneurship, unnecessarily supporting projects, etc.).
- The product or process a revolving fund stimulates should always be in line with the main goal of the fund. Some pilots with different types of revolving funds outside the core business (real estate) show that focussing on the core business usually is more beneficial. The Restoration Fund and its products aim at projects that are in line with its purpose: the activities and clients need to be in line with the revolving fund. This is shown in the success of the Restoration Fund's revolving fund and the less successful examples of smaller (revolving) funds managed by the Restoration Fund.
- Greatest threat of the fund is reputational damage; pursuing a spotless track record and positioning the fund as a trustworthy partner is essential for the fund's reputation and performance.
- The revolving nature of the Restoration Fund is sustained over more than 30 years, resulting in a growing fund and the third round of investments of the initial resources provided to the fund in 1985.
- Fund management by the Restoration Fund has a lower boundary in terms of minimal fund volume, since an external (revolving) fund needs to have a considerable fund volume to make management by the Restoration Fund feasible.

Organisational structure

- The organisational structure is sound and logical; the fund performs well and fulfils its statutory function, with its accountability towards the Ministry of Education, Culture and Science.
- A part of the applicants for monumental subsidies eventually decide to contact the Restoration Fund to apply for a mortgage (so-called "switchers"). The main reason is the quick response rate (the fund has a shorter application procedure). The applicant acquires certainty regarding the financing in a shorter period than applying for a subsidy.
- The four departments (Strategy & Development, Marketing & Communication, Advice & Financing, and the Back Office) provides a robust organisation that houses all necessary competences to finance monumental projects. This contributes to the "one-stop-shop" approach, with a focus on financing and related advice.
- Additionally, the account managers of the Restoration Fund differ from account managers from banks in the sense that they do not provide financial advice but focus on "execution only" advice

[8] B.J. Schrieken, personal communication, March 15th, 2017.

for monuments. This means that the fund's account managers guide initiators of monumental projects by providing advice, financing and connecting the initiators with other relevant actors.
- The application process for financing is rather easy and applicants receive quick response, resulting in certainty for applicants in need of financing. Additionally, the account managers of the fund provide additional advice to the applicants and putting them in liaison with relevant parties.

Financial structure
- The guarantee by the State is vital in the operations of the Restoration Fund; the guarantee ensures the fund with financial backing which enables the fund to supply loans with sub-commercial conditions. It is important to notice the unique nature of such a State guarantee resulting in sub-commercial conditions. This cannot be directly translated to a revolving fund for urban development.
- The Restoration Fund attracts most of its borrowed capital through BNG and the Waterschapsbank, which are familiar with the State's guarantee. Other (regular) banks are usually not familiar with such a guarantee. Cooperating with BNG and Waterschapsbank is beneficial.
- For private individuals, the mortgage is granted after assessment similar to that of regular banks; LTI and LTV ratios are assessed. For companies, the assessment criteria are slightly less strict but also include the societal goal of the project and the business case of the project. Usually, the duration of the loans is 30 years for private individuals. For companies, this is usually shorter.
- The involvement of the Restoration Fund reduces risk for regular banks. If the fund provides a mortgage for a part of the total costs, other banks are more inclined to co-finance. The fund's mortgage usually covers the tail risk (i.e. the fund provides a mortgage that is usually last in line, thus being a second, third, or higher mortgage).
- The fund has no yield requirements, but every project's business case is assessed to define the probability of repayment of the mortgage.
- The ability to provide sub-commercial loans for restoration and transformation has contributed to the success of the fund. The possibility of financing additional costs (e.g. for the purchase of land or real estate) makes the fund a so-called "one-stop-shop".
- Since the fund has a large portfolio of projects that acquired financing, a risk spreading effect reduces (*zoet-zuur benadering*) the risk of overall default. Projects with a higher risk profile are compensated by more conventional projects with a lower risk profile.

Keep it simple! Provide financing without too much bells and whistles.
Barend Jan Schrieken – Manager Strategy & Development at National Restoration Fund

Type of projects
- The usual type of projects is straightforward: projects that involve monumental buildings, either national, provincial or municipal monuments.
- As stated, the Restoration Fund aims at its core business. For instance, applying a revolving fund for mobile or sailing heritage (e.g. antique cars or boats) is usually not beneficial as it is not commonplace for these types of assets to apply for a mortgage/loan whereas this is very common for real estate.

6. Case study: Regional Development Company

6.1 Introduction

In the Netherlands, there are several Regional Development Companies, or in Dutch: *Regionale Ontwikkelingsmaatschappijen* (ROM). The abbreviation used here is ROMs. Well-known Dutch ROMs are:

- NOM → *Noordelijke Ontwikkelingsmaatschappij* (Area: Friesland, Groningen, Drenthe provinces)
- Oost NV (Area: Gelderland, Overijssel provinces)
- BOM → *Brabantse Ontwikkelingsmaatschappij* (Area: Noord-Brabant province)
- LIOF → *Limburgs Instituut voor Ontwikkelingsfinanciering* (Area: Limburg province)
- IQ → Innovation Quarter (Area: Zuid-Holland province)
- GOM → *Gelderse Ontwikkelingsmaatschappij* (Area: Gelderland province)
- OOM → *Overijsselse Ontwikkelingsmaatschappij* (Area: Overijssel province)

ROMs are semi-public entities, commissioned by the Provinces and in some cases the Ministry of Economic Affairs (Nooijer, 2010). The ROMs are established with the goal to make the region they are active in an attractive business location (Ondernemersplein, 2016). Some of the ROMs in the Netherlands have a goal to be in the top 20 of European innovative regions. In general, the ROMs are build up in two separate companies, one being the development company and the other being the participation company (Verdult, Hulsker, Meurs, Kelder, & Zon, 2016). The ROMs as a whole can be seen as a public party with a private executing role (Nooijer, 2010). ROMs have three core tasks (Verdult et al., 2016); the development company of the ROM has two of them:

- *Business Development* → searching for innovative developments, boosting innovation, stimulating (new) partnerships
- *Acquisition* → Attracting (foreign) companies to the region, matchmaking between national and international companies

The participation company of the ROM has one core task:

- *Providing risk capital* → Active financing of innovative start-ups and rapidly growing companies in their early stage. (Capital is mainly supplied through the Ministry of Economic affairs and the provinces)

Market failure: the role of the Government

As Joseph Schumpeter already explained in 1942 in his book Capitalism, Socialism and Democracy, innovation is important to improve the economic welfare in a region (Schumpeter, 2013). It is widely acknowledged that innovation generates productivity growth and stimulates economic growth (Verdult et al., 2016). Economic growth is a central goal of the government, and therefore stimulating innovation is high on the list. This explains the reasoning behind, and legitimates the involvement, of the Dutch government in the ROMs. A prerequisite for economic growth by innovation is the sharing of knowledge. This is the main reason why there are many policy initiatives towards the establishment of knowledge networks (Verdult et al., 2016), especially with the involvement of public, private and knowledge institutions like universities. These types of networks are labelled “triple helix” as explained by Etzkowitz & Leydesdorff (1998) in their study on knowledge-based economic development.

However, individual knowledge and interests of companies might provide a bottleneck for knowledge networks, as companies might not want to share specific knowledge to other (rivalling) companies (Verdult et al., 2016). Another market failure is that in some case the innovation is still in such an early stage that there is no market yet for this innovation, or the market is very hard to define (Verdult et al., 2016). This entails that the innovation in many cases has an unfeasible business case, leading to private parties and venture capitalists being hesitant in providing financing (OECD, 2015; Verdult et al., 2016).

The role of the government could be to intervene when market failure occurs by:

- Establishing or strengthening knowledge networks
- Financing and initiating Research & Development (R&D) and innovations
- Attracting (foreign) companies

The 2010-2015 evaluation of the ROMs by Ecorys (Verdult et al., 2016) shows that in the earlier years, there was less involvement of the Ministry of Economic Affairs within the ROMs, leading to lower financial support. This changed as the regional economy attracted a higher priority in the policy, leading to more involvement and higher financial support through performance indicators assessed by the Ministry. The performance indicators are not highly restrictive in nature, leaving room for interpretation (Verdult et al., 2016). At the same time, the provinces received the task of regional economic development. This entailed that the Ministry focussed more on the national policy, whereas the provinces focussed on regional policy (Verdult et al., 2016). This is the current standing of the structure of the ROMs in general. Another conclusion from the evaluation relates to the participation and financial support of the Ministry of Economic Affairs. The Ministry is not involved in all ROMs, as some choose to operate in a smaller organisation than others. For example, *Impuls Zeeland* is a ROM operating without financial support from the Ministry. This example shows that it can operate adequately within the own region, but a downside is that the national policy is less strongly advocated within the ROM. Additionally, the survey by Ecorys shows that *Impuls Zeeland* has less power in terms of robustness and ability to fully carry out their goals, compared to other ROMs that do have financial support by the Ministry (e.g. Innovation Quarter and BOM). The main reason is that *Impuls Zeeland* has less capital to finance (Verdult et al., 2016). This conclusion shows that the involvement of the Ministry of Economic Affairs in the ROMs is of added value in terms of financial power of the ROMs and the application of the national policy.

Case study focus
In this case study, three ROMs are considered highly relevant, as they are set up to finance projects that relate to transformation and restructuring of real estate and urban areas. These ROMs are:

- OntwikkelingsMaatschappij Utrecht (OMU)
- HerstructureringsMaatschappij Overijssel (HMO)
- Brabanste Herstructureringsmaatschappij Bedrijventerreinen (BHB)

The case study will focus on these three ROMs, as (most of) the other ROMs do not focus on the built environment and are therefore less relevant in this research. Additionally, the three ROMs are set up as revolving funds, but vary in scope, organisational structure and financial structure. The case study is based on a literature study (business plans, annual reports, provincial reports, ex ante research) and semi-structured interviews with OMU, HMO and BHB[9]. This case is structured slightly different, as three ROMs are studied. Each ROM is described separately based on the analysis framework, which means the following three sections describe OMU, HMO and BHB respectively.

6.2 OMU – Ontwikkelings Maatschappij Utrecht

OMU is a ROM set up by the province of Utrecht with the aim of restructuring, redeveloping and improving business areas and (vacant) office properties. Set up in 2011, €15 million was reserved towards achieving this goal with a term of 10 years.

6.2.1 Goal

Restructuring old, run down business areas and transformation of (vacant) office buildings is the **overall goal**. This overall goal will lead to thorough, efficient and sustainable use of the existing space and contributes to a good business climate for the province of Utrecht (NV OMU, 2013, 2017a). In the business plan, eight **main goals** are defined for OMU (Beerlage, de Graaf, & Hamdi, 2010):

[9] OMU: C. Busscher & F. Hazeleger, personal communication, April 18th, 2017; HMO: R. Besselink, personal communication, April 25th, 2017; BHB: J. Krijgsman, personal communication, April 25th, 2017

- OMU aims at restructuring private property on existing business areas where the economical function is maintained for the future;
- OMU handles restructuring projects in cooperation with private and/or municipal partners. The employment of provincial resources stimulates companies and municipalities to jointly produce plans and carry out investments;
- OMU aims at consortia through which public and private partners are stimulated to co-invest in projects;
- OMU aims at business areas in municipalities with which the province has signed a cooperative covenant;
- OMU aims at business areas which are associated with PHP Utrecht[10];
- OMU aims at recovering the invested resources, either fully or partially. OMU has a revolving character;
- OMU participates in restructuring projects on suitable terrains of which the public space is of adequate quality or terrains where the municipality is carrying out a restructuring project;
- OMU is the knowledge centre for restructuring in the province of Utrecht. From this position, OMU supports municipalities by helping them setting up masterplans for restructuring projects.

To realise the outlined goals, OMU carries out two main **tasks** (Beerlage et al., 2010):

- Process management → OMU supports municipalities with plan preparation of restructuring projects. OMU delivers personal capacity with relevant knowledge and expertise to jointly establish action plans and masterplans for the restructuring of business areas;
- OMU carries out strategic interventions in privately held obsolete spaces in business areas. Together with public and/or private partners, obsolete property on business areas is acquired, redeveloped and marketed (either leasing or selling of the property).

OMU's **targets** are (NV OMU, 2013, 2015):

- Restructuring 50 hectares of private business area before 2022;
- Achieving a return on investment of 5% on project level;
- Helping to set up masterplans and plan preparation. For this last target, €1 million has been reserved;
- When OMU buys property (i.e. land and/or real estate), redevelops it and sells it on the market, the target is an average return on investment of 6%.

OMU states no targets relating to a multiplier[11] (Dutch: *hefboom*) or the amount of resources that need to flow back to the fund (i.e. "revolvingness") (Munter, 2014).

6.2.2 Organisational structure

The organisation of OMU is set out as a limited company (Dutch: *naamloze vennootschap*) with the province of Utrecht as sole shareholder. The reason is that the province wants to achieve full control over its investments. In the case of additional shareholders, the steering ability is reduced, as the other shareholders also get a seat in the shareholder meetings (Beerlage et al., 2010; NV OMU, 2017a).The reason to set up a limited company, instead of creating a division/department within the province itself, is to establish an organisation which has the possibility of operating quickly, professionally and effectively (Beerlage et al., 2010; Havenaar, 2010). A governmental (and thus politically committed) body would be less quick and effective, since a private body is not politically committed and is able to react more quickly to the market. Additionally, the activities OMU undertakes are mostly private affairs (e.g. buying and selling land/real estate, participations in other companies, contractual cooperation). Another reason is that the market parties perceive a limited company less as a subsidy desk then when it would be a provincial department. Finally, a limited company has the ability to extract returns from their operations and other (private) parties may co-invest in the fund if desired (Havenaar, 2010).

There are four roles that are important for the organisational structure (or governance) of OMU, described in the business plan (see Beerlage et al., 2010). Each of these roles are carried out by (departments of) the province.

[10] PHP is the provincial restructuring plan (Dutch: *Provinciaal HerstructureringsPlan*), an overarching provincial plan.
[11] The multiplier (Dutch: *hefboom*) indicates the ratio between investments carried out by a ROM and private co-investment. For instance: a multiplier of 4 indicates that each Euro invested by OMU or HMO attracts four Euros of (private) co-investment.

- Shareholder (*aandeelhouder*) → Carried out by Provincial Council (Dutch: *Provinciale* Staten) and Provincial Executives (Dutch: *Gedeputeerde* Staten). Defining budgets, role as financier at strategic level. Province steers towards defining the budget it wants to invest in the ROM, appointing and dismissing the board of the ROM, approving or rejecting annual accounts, and granting discharge to the Supervisory Board and the Management Board.
- Client (*opdrachtgever*) → Carried out by Provincial Executives (Dutch: *Gedeputeerde* Staten) and accompanying civil servants. Policy assessors at the tactical level.
- Supervisors (*toezichthouders*) → Carried out by Supervisory Board (Dutch: *Raad van Commissarisen*). Supervisory and advisory role of the revolving fund at the operational level. Substantial investment decisions need approval of the Supervisory Board.
- Management Board (*directie*) → Determining the day to day operations of the ROM at operational level. The Management Board is determined by the shareholder and nominated by the Supervisory Board.

The three roles carried out by OMU are:

- Connecting → OMU functions as a connecting actor, bringing together entrepreneurs, real estate owners, municipality, etc.
- Knowledge transfer → Informing, being involved in projects and thinking along with entrepreneurs, real estate owners, municipalities, etc. OMU provides certain knowledge other actors may not have themselves.
- Financing → If necessary, OMU can employ its financial instruments.

The organisational structure is visualized in figure 33.

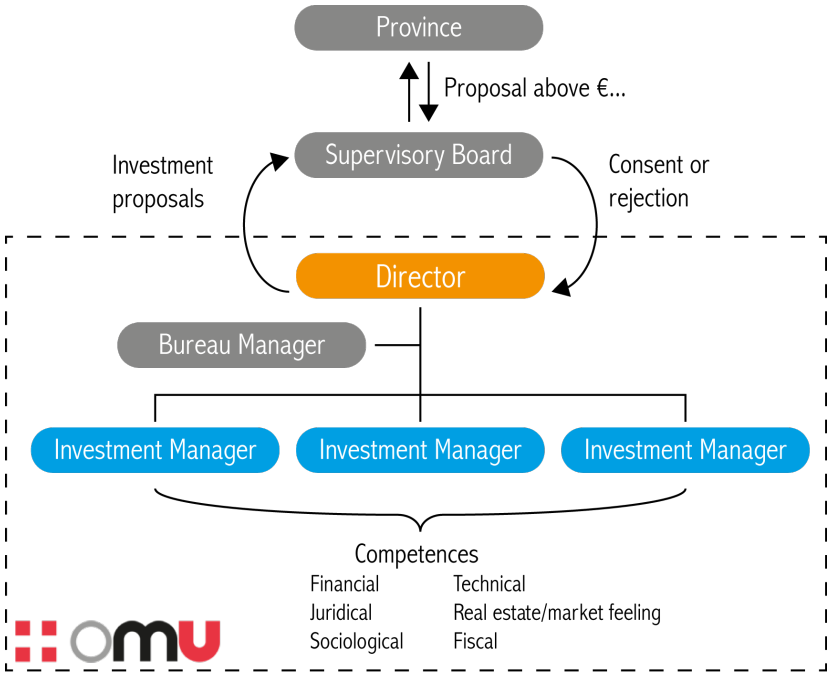


Figure 33: Organisational structure of OMU

The figure shows that one director leads the day to day operations of OMU with three investment managers with several competences. A bureau manager assists the director and investment managers. The director sets up investment proposals for eligible projects, presents these to the supervisory board, which in its turn decides on the investment proposal. Making use of external expertise (e.g. traffic planning, urban planning, in case of disputes) is allowed without intervention of the supervisory board. When the supervisory board grants approval, the director is allowed to grant financing according to the proposal. Employees of OMU have no direct formal contact with civil servants, the supervisory board poses the connection between the shareholder and OMU. Fund management is carried out in-house, since the organisation is able to handle this itself and the amount of projects OMU finances allows this.

6.2.3 Financial structure

In 2011, OMU was established with the goal to restructure 50 hectares of (obsolete) business area between 2011 and 2022. The fund volume reserved for this goal was €15 million (NV OMU, 2013). OMU's financial structure is characterized by the variety of financial instruments and operational instruments it can employ to achieve its goals. The financial instruments are (NV OMU, 2015):

- Financing through loans (interest rate between 6 and 10%)
- Participation (venture capital) (minority stake between 20 and 50%)
- Acquisition of property and resale
- Contribution for project costs

In most cases, OMU grants short term financing through loans. Even though participation is statutory approved, OMU is reluctant to apply it, based on capacity considerations. However, it provides a certain signal to market parties that OMU is willing to cooperate. Acquisition of property and resale is used occasionally if certain securities are provided to do so (e.g. agreed conditions with proposed purchaser). This instruments entails more risk than financing.

Additionally, operational instruments that can be employed are (NV OMU, 2016):

- Promoting allotment trade (Dutch: *ruilverkaveling*) aimed at a more efficient spatial layout
- Temporary exploitation of acquired real estate or property rights
- Granting advice towards (other) public authorities and third parties

Initially, OMU granted full financing for projects (100% financing, no banks involved). These loans had statutory terms of four to five years, with a maximum of six years. More recently, OMU aims at co-financing from banks which is successful: several projects have been co-financed with banks with a 60-40 ratio (OMU finances 60% and banks the additional 40%). The bank then gets the right of issuing the first mortgage[12]. OMU issues loans with a maximum of €2 million, with interest rates between 6% and 10%, depending on the business case (e.g. risk profile, duration of the project, cash flow estimates, etc.). With every loan, a development agreement is signed with the applicant, regarding the program, activities and planning. If the applicant does not comply, even though he repays the loan according to plan, OMU may revoke the loan.

In practice, the terms of the issued loans are usually shorter than the maximum of six years, since banks are more willing to take over the loan (when risk profile is reduced). The reason this happens is that banks at this stage are usually able to provide financing with a slightly lower interest rate. The consequence is that less repayments flow back to the revolving fund, thus slightly lowering OMU's returns on investment (Dekker et al., 2016). Costs incurred by OMU such as plan costs and pre-investments are reasonably offset in the project exploitations, so that these costs are (partially) compensated when the project is successful. When a project is realised, OMU shares in the profits and losses in proportion to the amount it has invested (NV OMU, 2013).

Figure 34: The Prodent Factory in Amersfoort, redeveloped with a loan from OMU (see: www.destadamersfoort.nl)

Application criteria

OMU uses a rather exhaustive list of application criteria (see NV OMU, 2015), which relates to location, contribution to the goals of OMU, financing problems/market failure, societal spin-off effects, maximum financing/participation amounts, etc. In general, the main considerations relate to the financial assessment and a societal cost-benefit assessment of applications. In addition, a solid (business) plan must underline the application regarding commercial, technical, juridical, planning, and environmental feasibility (i.e. an

[12] The right of issuing the first mortgage provides certainty for banks; when the project fails, the bank is the first creditor. OMU in this case comes after the bank as the second creditor, which entails more risk for OMU. However, the risk is obviously less as opposed to a full financing (100%).

elaborate due diligence regarding the overall feasibility of the application). OMU currently is working on a method to better quantify the societal impact (e.g. sustainability, employment and spin-off for the neighbourhood). The bottom-line always is the overall contribution of the plan towards OMU's main goal of reducing vacancy in the province of Utrecht.

Mandates
The director has mandate up to €100,000, which means he may autonomously decide on investments up to the mandate amount. Between €100,000 and €2 million, the supervisory board needs to approve the financing or investment proposal. Above €2 million, besides the supervisory board, the shareholder (Province) needs to approve the financing or investment proposal.

6.2.4 Type of projects

OMU's website provides a list with projects that are carried out. What stands out is that projects usually involve restructuring, transforming or redeveloping vacant property, either business, factory or office buildings. Example projects are listed in the table 7.

Project	Activities	Financial instrument
Eendrachtslaan, Utrecht *Business park*	Redevelopment of vacant industrial building. Approximately 9400 m²	Financing for purchase of real estate Support/advice for redevelopment
Prodentfabriek, Amersfoort *Business park*	Redevelopment of vacant factory building to multi-purpose business building. Approximately 2 hectares	Financing for purchase of real estate
Kobaltweg, Utrecht *Business park*	Redevelopment of vacant business building to a distribution centre. Approximately 12,700 m²	Financing for purchase of real estate Support/advice for redevelopment
Hyperonenweg, Utrecht *Business park*	Redevelopment of vacant business building (demolishing and newly built). Approximately 18,800 m²	Financing for purchase of real estate Support/advice for redevelopment
Wattbaan, Nieuwegein *Office building*	Transformation of vacant office building to dwellings. Approximately 4600 m²	Facilitating transforming parties. No financial contribution
Plotterweg, Amersfoort *Office building*	Transformation of vacant office building to innovative office concept. Approximately 5000 m²	Financing for purchase of real estate
Planetenbaan, Maarssen *Office buildings*	Transformation of two vacant office buildings to dwellings. Approximately 4100 m²	Financing for purchase of real estate Financing for transformation

Table 7: Overview of projects stimulated by OMU (adapted from NV OMU, 2017b)

OMU's operating area is clearly demarcated: the boundaries of the province of Utrecht demarcate the operating area of OMU. The target group of OMU is private actors who want to restructure or transform existing (vacant) business locations (e.g. industrial real estate, offices, business parks). OMU focusses on building level, whereas other ROMs (e.g. HMO) focus on improvements at the area level (Beerlage et al., 2010). OMU aims at cooperation with private actors (e.g. real estate owners and developers) who seek to restructure, transform or redevelop their property (NV OMU, 2017a).

6.2.5 Case conclusions

The case conclusions regarding OMU are described below along the lines of the four main themes of the analysis framework.

Goal

- Clear objectives and approach guide the investment managers and director and provides clarity for applicants.

- The reservation of €1 million for master plans and plan preparation has proved to be unnecessary. The investment in master plans has not resulted in actual contribution towards OMU's objectives. These plans remained too abstract for the market.
- OMU is 75% revolving, which means that the fund volume is decreasing over time. This is not necessarily a downside, since the 75% is a consequence of OMU's societal approach and focus on its societal objectives. However, it means that OMU's financial resources slowly vaporize.
- OMU's branding could be improved. Brand awareness is a point of concern to ensure relevant projects resort to OMU for financing or advice.

Organisational structure

- Relatively small organisation in relation to fund volume, making OMU act effectively (in relation to revolving nature) and a relevant party for private actors.
- Public limited company (NV) puts OMU at a "distance" from the province. OMU is therefore perceived as a relevant market party and not as a provincial agency.
- Clear governance structure with an experienced and involved supervisory board. This leads to fast responses from the supervisory board to OMU, resulting in fast decision-making. Due to OMU's six-year existence, financing proposals become easier to set up.
- The mandate structure works well, since the mandates translate to OMU's activities (outsourcing autonomously decided on by director, financing and large investments always need approval of the supervisory board and in most cases also the shareholder).
- Most activities are carried out in-house by experienced investment managers and director. Knowledge and experience of OMU's professionals are complementary. Outsourcing is minimized. Due to the managers' real estate, financial, juridical, technical and fiscal knowledge, projects can be quickly assessed and (financial) impacts can be defined quickly.

Financial structure

- Financing and to a lesser extent strategic real estate purchase are the predominant financial instruments, as this entails short involvement and less capacity than for instance participation. Participation belongs statutory-speaking to the possibilities but is not employed. However, stating that even participation might be possibility promotes the cooperative stance of OMU towards the market.
- The financial arrangements (e.g. interest rates, loan duration, repayment structure, etc.) provide a high level of flexibility in contrast to regular banks. This enables OMU to provide financial customization per project.
- Short-term financing (thus with a relatively high interest rate between 8-10%) results in resources flowing back quickly to the fund. This enables a swift flow of projects that can be stimulated with a loan from OMU.
- Unlawful State Aid is no issue due to the high interest rates that are applied. Clear market failure leads to involvement of OMU. The public limited company (NV) structure provides no problem if additional funding for OMU is wanted, in contrast to for instance SOFIE.
- Due to the short-term financing, a relatively high interest rate between 8% to 10% is used. In particular cases, this high percentage is no issue, for instance when a developer needs additional financing for a short period. However, when an entrepreneur needs financing for a longer period of time, a loan by OMU can become quite expensive. This reduces the applicability for certain types of projects that require a longer loan duration.
- Another downside of short-term financing is that the borrower usually repays its loan much quicker than the intended term. This results in less (repayment) income and thus decreases the revolving nature of the fund.

Type of projects

- The type of projects OMU finances is described clearly in the relevant documents and website which provides clarity for both applicants and Province whether a project should be handled by OMU or elsewhere.
- Recently, office locations are added to the scope of OMU resulting in more projects being eligible for financing by OMU.

6.3 HMO – Herstructurerings Maatschappij Overijssel

HMO is a very similar ROM as OMU, set up by the province of Overijssel in 2009 as the follow-up to the province's project *Vitale Bedrijventerreinen* which ended in 2008, with starting capital of €7.5 million. One of the recommendations was to set up a ROM aimed at restructuring business areas. HMO's main goal is restructuring obsolete business areas.

6.3.1 Goal

Initially the main goals of HMO were described as follows (Munter, 2014):

- HMO aims at business areas where the economical function is maintained for the future;
- HMO always searches for partners within projects;
- HMO initially solely aims at redevelopment of issuable land (land ready for development);
- HMO employs an integral approach for the business areas to ensure an acceleration of the execution of the project and uses public resources to do so;
- HMO becomes a knowledge centre;
- HMO focusses at projects in the whole of Overijssel.

In August 2016, the scope of HMO was expanded in reaction on the successful first period between 2009 and 2015. Initially, the scope was focussed on obsolete business areas, whereas in 2016 it was decided to start focussing on all types of work locations, which included office locations and inner cities (Provincie Overijssel, 2016).

HMO's **tasks** as described by the province (see Provincie Overijssel, 2016) are:

- Ascertaining investment motives of (private) parties;
- Jointly defining a clear area profile with entrepreneurs, municipalities and/or the province for areas that are important from a provincial point of view;
- Supporting municipalities and/or the province in analysing the need for restructuring and/or combatting of vacancy of business areas;
- Supporting the establishment of a business case for (re)development/restructuring/ transforming a business area;
- Financing investment projects based on valid commercial reasons;
- Stimulating that business areas aim at maintaining and increasing their value, if possible by the means of (park) management;
- Ensuring additional private and/or public investments in the area in which HMO arranged financing (i.e. ensuring a spatial multiplier, see below).

The **targets** set out for HMO, described by the province (see Provincie Overijssel, 2016), are:

- Achieving a financial multiplier of 4; each Euro invested by HMO should attract four Euros of private co-investment.
- Achieving a spatial multiplier of 4; each hectare redeveloped/restructured by HMO should lead to redevelopment/restructuring of four hectares by private actors.
- The amount of FTE's per €100,000 invested should be at least 2 for maintained jobs and 1 for newly created jobs[13].

6.3.2 Organisational structure

Initially, HMO was set out to achieve its goals by applying a method similar to active land policy (i.e. acquiring land position, demolishing, remediation, land servicing, selling of land). However, the approach became more client-focussed and every plan or proposal needed to be properly assessed and underlined by a solid business case. Whereas HMO started with three employees, currently HMO is growing towards eight employees due to the enlarged scope.

HMO is distanced from the province of Overijssel: a public limited company (NV) and two private companies (BV) were set up to provide the organisational structure for HMO, with the province being 100% owner. One private company for investment and financing and another for advice and consultancy. However, in

[13] In the period 2009-2015, HMO achieved 5 maintained jobs and 2,5 newly created jobs for each €100,000 invested.

practice the share of projects relating to advice and consultancy was marginal. Currently, the investment and financing company (*HMO Investeringen BV*) is the company from which all activities are carried out. Personell are under contract of the public limited company (*HMO NV*) and all resources are transferred there. The supervisory board, put in place by the shareholder (i.e. the province of Overijssel), assesses the investment proposals submitted by the director. Besides the monitoring function, the supervisory board also poses as the investment committee providing advice. The supervisory board has full mandate and decides without informing the shareholder. However, due to the recent enlargement of HMO's scope, new investment regulations are put in place. Proposals above 15% of the fund volume need to have consent of the Provincial-Executive (*GS*) (Provincie Overijssel, 2016).

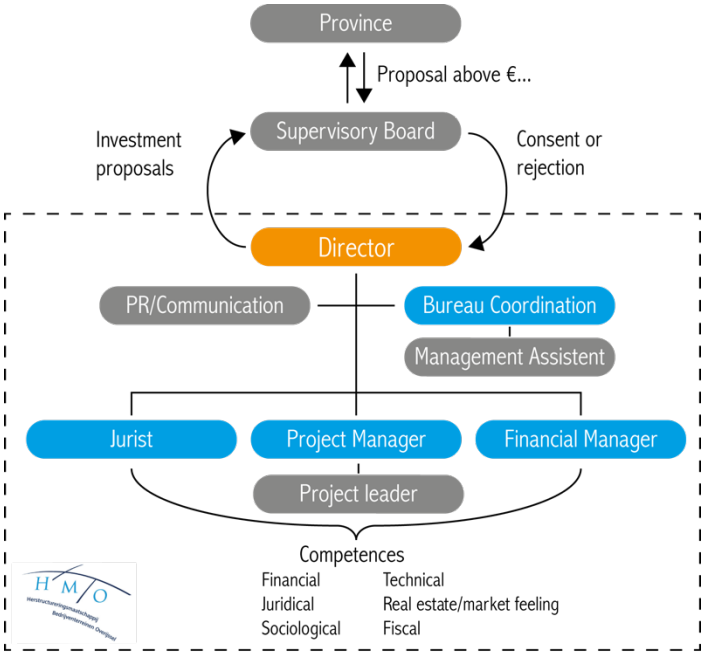


Figure 35: HMO's organisational structure.

Looking at the roles within the organisation in figure 35, the director leads the day-to-day operations. The bureau coordinator is responsible for (internal) operational management, supported by a management assistant. PR and communication is carried out, relating to HMO's website, exposure, communication to target group, etc. A jurist is responsible for setting up contract documents. The project manager is responsible for all projects, supported by a project leader. The financial manager is responsible for HMO's financial affairs. Most of the activities are carried out internally, but when it comes to disputes an external jurist is contracted. Also, very specific activities are outsourced (e.g. terrestrial measuring).

6.3.3 Financial structure

As stated, HMO started with a fond volume of €7.5 million, but this was enlarged to €22.5 million and recently, due to the enlargement of HMO's scope, set at €50 million.

Statutory, the financial instruments at HMO's disposal are (Provincie Overijssel, 2016):

- Loans
- Strategic acquisition of real estate
- Convertible loans (no repayments during loan duration)
- (Share) participation in (developing/managing) private company
- Guarantee

However, in practice HMO does not participate in the operational management of private companies, but will always invest in real estate and/or land, and finance projects. Guarantees are not frequently used, but in some cases it provides the right alternative. In some cases, land is bought by HMO and together with several companies a project team is set up when the individual companies are reluctant to buy the location themselves. Investment by HMO then functions as a kickstart. In these cases, HMO negotiates several certainties such as cashflow certainty through lease contracts and an informed exit strategy. The advisory

role of the supervisory board is highly important in these endeavours. HMO will not develop on its own, HMO's role is to facilitate and support private and public initiatives that contribute to the goals (Provincie Overijssel, 2008, 2016).

HMO applies market terms, which means interest rates are similar to those available on the (capital) market and Euribor rates, and rental prices equal to taxation reports. Usually, HMO chooses to demand interest rates and rental prices on the lower side of the market bandwidth due to its societal approach and objectives. The exact interest rate for loans depends on duration, purpose of the loan, and risk profile. The proposed interest rate is always benchmarked against market interest rates to prevent state aid issues. Duration varies per project, but has a statutory maximum of eight years, with the aim of a maximum of five years (Provincie Overijssel, 2008, 2016).

Looking at the performance of HMO, it can be noted that loans and investments are almost 100% revolving, which means that almost all of the invested and outstanding resources return. When including the organisational costs (*apparaatskosten*), this amount is slightly lower. However, all organisational costs are recovered by the yields of the loans and investments. HMO's goal is to be 75% revolving (Provincie Overijssel, 2016).

Application criteria

In the Provincial decree (Dutch: *Statenvoorstel*) that provides the legal basis for the continuation of HMO and the enlargement of its scope, the application criteria for investments are mentioned. Most of the criteria relate to the establishing of the business case, which needs to have yield potential, together with municipalities and companies. Societal benefits are important as well as willingness of other actors to co-finance. Market failure needs to be clearly apparent and the investment duration has a maximum of five years or in extreme cases eight years. In the case of strategic acquisition, a maximum of 10% of the fund volume may be invested in total. Investments in business areas are only allowed if the area is larger than 1 ha and must preserve or create at least 50 jobs (Provincie Overijssel, 2016).

Figure 36: Thales building on the High Tech Systems Park in Hengelo, partially developed with investment from HMO (see: gebouwvanhetjaar.nl)

In general, both the financial and societal benefits are important and thus assessed. However, societal benefits are not directly translated into application criteria. The application criteria are fully focussed on financial feasibility and contribution to HMO's objectives. Additionally, the performance of companies or entrepreneurs that apply for a loan or investment is part of the assessment. In this sense, HMO differs from OMU; HMO is more focussed on the financial feasibility of projects than OMU, since the latter focusses more on the societal impacts of its projects. The consequence is that OMU is less revolving than HMO.

6.3.4 Type of projects

HMO'S website provides a list with projects that are carried out. What stands out is that most projects are not stimulated financially, but knowledge and advice is employed. This underlines the societal character of HMO; when projects contribute to the objectives and financial support is not necessary, HMO will provide knowledge and advice, and connect actors. Another thing that stands out is that projects usually involve restructuring, transforming or redeveloping vacant property, either business, factory or office buildings. Example projects are listed in table 8.

Project	Activities	Financial instrument(s)
Voorst A, Zwolle *Business park*	Redevelopment of contaminated unused land for large-scale retail. Approximately 4 hectares	Financing for purchase of real estate new owner Guarantee for previous owner
De Vrolijkheid, Zwolle *Business park*	Development of six new buildings for businesses and industry. Approximately 1 hectare	Investment in construction of a building Investment in final finishing of a building
Zwartewater, Hasselt *Business park*	Redevelopment of unused land for industry and logistics. Approximately 14 hectares	Strategic acquisition of land Remediation of land Development of traffic access
Binnenhaven, Enschede *Harbour area*	Redevelopment of harbour area. Approximately 3 hectares	Strategic acquisition of land
High Tech Systems Park, Hengelo *Business park*	Development of business park. Approximately 20 hectares	Investment in the High Tech Systems Park
Turfkade, Almelo *Business park*	Demolishing of a vacant factory to make redevelopment possible for new owner. Approximately 1,8 hectares	Strategic acquisition of land Demolishing and remediation Resale to new owner
MBI terrain, Raalte *Business park*	Redevelopment of structurally vacant factory. Approximately 4,5 hectares	Demolishing and remediation of land

Table 8: An overview of typical projects HMO is involved in (Adapted from NV HMO, n.d.).

6.3.5. Case conclusions

The conclusions regarding HMO's approach are described below using the four analysis themes:

Goal

- Approach is location-oriented and each project needs to be supported by a solid business case. This ensures a customized approach for each project, searching for specific solutions for each problem, contrary to the initially anticipated approach (i.e. demolishing, remediation, site preparation and selling off) which would not lead to customized solutions per project.
- Initially, HMO's scope was business areas. Recently, this has been enlarged to office locations and inner city locations.

Organisational structure

- Similar to OMU, the organisational structure with a limited private company and two private companies creates a certain distance between HMO and the province. This distance ensures that the market perceives HMO as a relevant market party.
- Initially, a limited public company (NV) was set up below which two private companies (BV) were founded. However, the private company focussed on advice and consultancy proved to be marginally used. Setting up this private company would not have been necessary.
- Upscaling of HMO's scope has led to upscaling of the organisation as well. However, an organisation of eight people is still relatively small in relation to a fund volume of €50 million. This benefits the revolving nature of the fund.
- The province initially considered to designate the revolving fund to PPM Oost, a fund management company active in Overijssel and Gelderland. Finally, the shareholder decided to set up a separate limited public company with supervisory board, mainly due to effectivity reasoning, since PPM Oost is a larger, institutionalized company. Another difference is that PPM Oost's approach is entrepreneur-centred whereas HMO focusses more on the location rather than individual entrepreneurs.
- The experience and competences of the director, project manager and bureau coordinator supplement each other and contribute to the success of HMO. Many activities are carried out in-house and a fixed group of external professionals are consulted when necessary.
- The supervisory board has full mandate up until financing or investments of 15% of the fund volume. Besides a monitoring function, the supervisory board functions as an investment committee providing advice to improve financing and investment proposals by providing feedback. This improves the business cases of projects, and helps reducing certain risks (e.g. by optimizing a project's exit strategy). This entails that the supervisory board's role is valuable.

Financial structure

- The shareholder has decided to provide additional funding based on the success of HMO's approach towards business parks. The scope currently is on business parks, office locations and inner city locations. Initially, the idea was to end HMO's operations in 2018.
- The flexibility in employing different financial instruments is of added value. Each project requires a different approach, which is made possible by being flexible in the instruments HMO uses and the conditions under which financing or investment is granted.
- Investments and loans by HMO are virtually 100% revolving, which is significantly higher than HMO's siblings OMU and BHB. However, it is important to not measure the ROMs' success based on the level of the ROM's revolving nature. The approach and focus (financially-driven versus more socially-driven) dictate the performance.
- Even though HMO's investments and loans are virtually 100% revolving, the interest rates are similar to the market rates' bandwidth, and usually on the lower side of the bandwidth.
- Even though HMO is focussed on social issues in relation to for instance vacancy and degradation, the approach is still quite financially-driven compared to OMU and BHB. HMO stands out in this sense.

Type of projects

- As stated earlier, the type of projects HMO aims at were initially business areas but recently office and inner city areas have been added to the scope. This requires additional expertise, as for instance a local retail location in the inner city of Zwolle may now be a potential location for HMO to get involved in.

6.4 BHB Capital – Brabantse Herstructureringsmaatschappij Bedrijventerreinen

BHB Capital is a ROM founded in 2005, similar to OMU and HMO. It is funded by the province of Noord-Brabant and BOM. BOM Holding is the provincial ROM. In the early 2000s, BOM received the task to set up a business plan for its fourth main task: restructuring business parks. This has resulted in the setting up of BHB Capital. Currently, the fund is in the final completion phase, which means the fund virtually stopped investing and financing.

6.4.1 Goal

BHB Capital's goal is to restructure business parks. Restructuring business park leads to a more attractive business location for companies and other businesses and it improves the competitiveness of the area towards new business parks. BHB capital's mission is to stimulate, support and contribute to the realisation of restructuring projects within business parks in the province. The goal is to achieve careful use of (business) space and to establish a competitive economic climate for entrepreneurs in a sustainable way, all in collaboration with public and private parties (Provincie Noord-Brabant, 2005). Initially, BHB Capital cooperated mostly with municipalities. In the later phases, BHB decided to finance and participate directly with companies and entrepreneurs.

The **tasks** carried out by BHB are related to four project phases (NV BOM, 2004):

1. Initiative phase → BHB operates as proactive project leader, connecting stakeholders and creating commitment. Process managers are leading in this phase.
2. Planning phase → Creating a feasible and executable restructuring plan, including a financial model and budget. Process managers are leading in this phase.
3. Realisation phase → Possible financing or investment by BHB Capital. The business case is thoroughly assessed by investment managers.
4. Management phase → No explicit role for BHB. Park management for business parks is essential. In the case of financing or participation, BHB ensures that adequate park management is in place or set up.

The **targets** were to restructure 1000 hectares in 2011 and 1975 hectares in 2015 (BHB BV, 2008; NV BOM, 2013). In 2012, approximately 1485 hectares were restructured whereas 1400 hectares were prognosed (NV BOM, 2013). The aim was to be 100% revolving, however BHB Capital achieved approximately 72% (excluding the depreciation of the local and municipal funds, which will push the percentage down).

6.4.2 Organisational structure

Initially, BHB Capital was set ups as a private company (BV) funded as a joint venture by the Province of Noord-Brabant and BOM NV (a limited company). The Province provided €30 million, available in three tranches of €10 million, BOM NV provided €4,5 million. The reason to set up a private company was to ensure an effective approach with public-private participation through CV/BV approaches (similar to the SOFIE approach). Being an independent legal entity, financial and administrative responsibility lies with the fund, distancing the shareholders. The province and BOM NV influence the fund through their role as shareholders. BOM NV has the province of Noord-Brabant and the Ministry of Economic Affairs as its two shareholders (BHB BV, 2008; NV BOM, 2004).

In October 2012, the proposal to convert BOM NV to a Holding structure was put forward (Provincie Noord-Brabant, 2012). All existing and new funds below BOM NV became affiliate funds under the newly formed BOM Holding company. Initially, all separate funds, including BHB Capital, had their own supervisory boards. Under the new Holding structure one supervisory board was appointed to reduce organisational overlap. This supervisory board is not involved in individual investment proposals from the affiliate funds; each affiliate fund received its own Investment Committee (IC) replacing the initial supervisory boards. This organisational change implied autonomous decision-making for the affiliate funds in consultation with their corresponding ICs. Main reason for the organisational change was to increase BOM's efficiency and its affiliate funds, and to ensure that the provincial resources (largely acquired by the sale of Essent shares) remained within the province and would not flow to the central government.

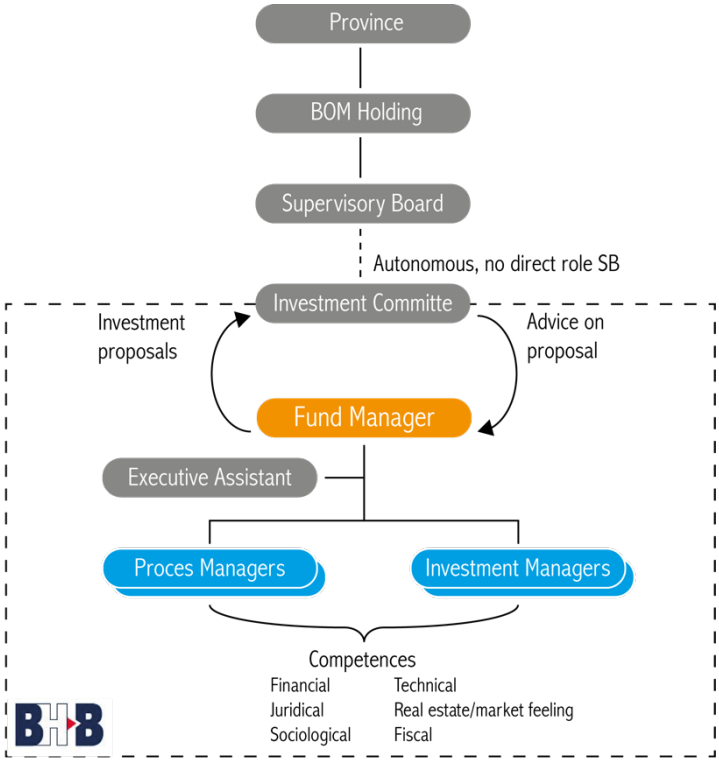


Figure 37: BHB's organisational structure.

The organisational structure of BHB Capital itself, visualized in figure 37, is characterized by the separation of activities in relation to the process. The process managers are responsible for the initial activities (e.g. initial contact with municipalities, companies and other stakeholders, defining project scope, etc.) until demand for financing is clear. Investment managers then take over to set up the business case and finally an investment proposal. The reason to separate these activities is to ensure objectivity of the viability of projects and to prepare unbiased and transparent investment proposals. Then, the fund manager decides on the investment proposal in consultation with the investment committee (previously with consent of supervisory board).

The process managers and investment managers carry out most of the activities in-house. Legal, notarial and technical matters are usually outsourced. Especially (local) market knowledge, process and investment management, and connecting stakeholders are competences BHB's employees possess. Both hard and soft skills proved to be essential in the operation of the revolving fund. Operational costs (*apparaatskosten*) were largely covered by a provincial subsidy. Some of the costs incurred by the investment managers were recovered from the projects BHB invested in.

6.4.3 Financial structure

As stated, the initial fund volume was provided by the province (€30 million) and BOM NV (€4.5 million), resulting in a fund volume of €34.5 million. Finally, the fund volume was approximately €53 million, partly due to additional funding through governmental programs (e.g. NIMBY and resources to battle the crisis). Finally, not all resources labelled for investment by BHB were transferred to the fund due to a declining amount of applications. The resources provided by BOM NV were never used due to stricter conditions compared to provincial resources. After BOM NV became a holding, also no resources were transferred to BHB.

In terms of financial instruments, BHB's focus is on participation. Participation is employed in conjunction with public actors (mainly municipalities) and private actors. In most cases, a Special Purpose Vehicle (SPV) is set up in which both BHB and one or more public and/or private actors are committed. BHB aims at participating 50% on average within SPVs, thus looking for co-financing. Participation here mainly means strategic purchase of land and real estate, mainly together with municipalities. Some projects are less eligible for participation, which may result in BHB granting a loan to a municipality or entrepreneur. Financing companies or investing in companies was initially not planned, but occurred occasionally in the later stages of BHB Capital's operation. However, direct investment/participation is always focussed on real estate and land and not at operations of companies or entrepreneurs.

Figure 38: Hanger in Aviolanda business park in Woensdrecht, redeveloped with help from BHB. (see: www.aviolanda.nl)

Participations in SPVs or otherwise usually entailed a 50% participation for BHB, but in certain projects with higher anticipated yields BHB had the opportunity to participate for 100%. Duration of the participations was set at six to seven years, but many projects have had a longer timespan due to the occurrence of the financial crisis which led to land and real estate being difficult to sell.

Application criteria

The criteria for participations are (NV BOM, 2004):

- Project needs to be within province of Noord-Brabant
- Project involves restructuring while retaining the same economical function
- Project needs to be indicated as a restructuring project by the relevant municipality
- Project involves an integral approach
- Project contributes to the BHB's mission, objectives and approach
- Project is in accordance with policy of the shareholders
- Project contributes to the economic development of Noord-Brabant
- Project entails a reasonable forecast of spin-off for the surroundings (spatial multiplier)
- Project has potential of attracting private actors for participation (financial multiplier)

Projects are assessed in terms of financial feasibility and societal benefits. Both the financial impacts and societal benefits are quantified as much as possible in order to create an informed business case. The focus on the financial and societal assessment is even; if a project complies to the participation criteria, it is eligible for participation.

6.4.4 Type of projects

BHB does not have a website which provides a list with projects that are carried out. However, a due diligence report by Fakton has assessed the risk profiles of the projects in which BHB has played a role. What stands out is that most of the projects have been stimulated by participation by BHB. Several loans and guarantees have been provided as well. Table 9 provides an overview of example projects in which BHB has been involved.

Project	Activities	Financial instrument(s)
De Krogten/Emer-Hintelaken, Breda *Business park*	Local fund for restructuring business park. Approximately 120 hectares	Participation in local restructuring fund
Deurnese bedrijventerreinen, Deurne *Business park*	Local fund for restructuring business park. Approximately 112 hectares	Participation in local restructuring fund
De Rietvelden/De Vutter-Ertveld, Den Bosch *Business park*	Restructuring of business park. Approximately 27 hectares	Guarantee for municipality
De Terp, Den Bosch *Business park*	Redevelopment of business location. Approximately 3,3 hectares	Participation
Tilburgse bedrijventerreinen, Tilburg *Business park*	Local fund for restructuring business park. Approximately 11 hectares	Participation in local restructuring fund
Aviolanda, Woensdrecht *Airport area*	Redevelopment of local airport. Approximately 29 hectares	Participation in PPP Loan
Majoppeveld, Roosendaal *Business park*	Setting up integral strategy and development of a new building. Approximately 0,4 hectares	Loan

Table 9: An overview of typical projects BHB is involved in (adapted from Provincie Noord-Brabant, 2011; Werkgroep werken Midden Brabant, 2013).

6.4.5 Case conclusions

BHB Capital's case study analysis provided various conclusions which are described below along the lines of the four main themes of the analysis framework:

Goal

- The fund's goals have been achieved; 1200 hectares of business parks and business areas have been restructured as a result of the use of the revolving fund.
- Initially, the scope, objectives, target area and target group for the revolving fund were not clearly demarcated, which provided BHB the possibility to search for the most appropriate approach and corresponding instruments: tailor-made solutions
- Vintage-approach: defining the expected number and type of projects for each year that need financing/investment. A solid forecast of the expected project pipeline was essential.

Organisational structure

- The fund was "distanced" from the Province by setting up a private company (BV), similar to OMU and HMO. The private company has two shareholders: the province of Noord-Brabant and BOM.
- The reorganisation of BOM from a limited private company (NV) to a holding structure indicates that the former organisational structure was not optimal. Having different supervisory boards for each fund resulted in overlap of activities.
- After the reorganisation, the BOM Holding structure made it easy to set up other (local) funds and special purpose vehicles (SPVs). Additionally, having one supervisory board increased clarity regarding the governance structure and improved efficiency.
- Having two shareholders may result in disagreement regarding operations of the fund. However, both the province and BOM had similar interests which ensures little/no disagreement.

Financial structure

- Flexibility related to co-financing; initially, BHB only co-invested or co-financed with municipalities. In later stages, co-investment with companies occurred as well.
- The fund started with a relatively large fund volume compared to other funds, which made it possible to participate in various projects which had relatively large financing needs.
- The preconceived structure of financial tranches provided BHB with the ability to call off financial resources when they were needed. In this sense, not the whole fund volume was fixed in one place but made available when needed.
- Combination of participation and loan with *Topper Subsidie*; the unprofitable part of most projects was covered with this subsidy. This made a wider range of projects applicable for restructuring.
- In case of investment/participation, BHB handled an investment maximum of 50%. This reduced the risk for BHB.
- Financial and societal aspects were equally important when assessing projects.
- Financial objectivity by separating process management and investment management. The process managers were responsible for the first stages of a project, until the financing need was defined. At that moment, the investment managers took over the project.
- Organisational costs (*apparaatskosten*) were largely covered by a provincial subsidy. Part of the personnel costs were recovered from the projects. This slightly improved the revolving nature of the fund.
- BHB is approximately 70% revolving, excluding the oppressive effects of the local/municipal funds. This is quite low compared to other ROMs. The main reason is that many locations were acquired (usually with co-investment of municipalities) pre-crisis, with the consequence that the value of these locations dropped rapidly due to the financial crisis.
- Not all resources that were reserved for BHB were eventually invested or employed in loans (final provincial tranche and BOM resources were not called off). This is not necessarily a disadvantage, but it indicates that the caseload/pipeline was misconceived to be higher.
- Financially speaking, the instruments provided enough flexibility. Perseverance-wise, the participations provided not enough persuasive power in complex projects; integral area developments with several land owners are difficult when one or more of the owners are not willing to cooperate in the development. This may frustrate the process and the participating parties do not have enough persuasive power to force progress.

Type of projects

- Due to the close cooperation with municipalities, BHB had no trouble acquiring projects.
- BHB participated in several projects with quite a high risk profile; in some cases, it was clear from the start that the project would likely not lead to yields.

6.5 Overall case conclusion

Even though the three restructuring companies are quite similar in terms of their goals and ambitions, each ROM's approach is quite different. In this final section, the overall conclusions for this case are described.

The main similarities of the ROMs are the initial approach and goals. Every ROM initially had the goal of restructuring business parks/areas through the employment of financial instruments from a revolving fund. In relation to the targets regarding the amount of business parks that need to be restructured, BHB clearly has the biggest target: 180 hectares, against 23 hectares and 50 hectares for HMO and OMU respectively. This is directly visible in the fund volume that has initially been reserved at the start: €15 million for OMU, €7,5 million for HMO and €34,5 million for BHB. Main difference is that OMU and HMO are set up by the province (both 100% shareholder) and BHB is set up in conjunction with the province and BOM (both shareholder, with Ministry of Economic Affairs providing main financial resources towards BOM). The investment strategy for all three ROMs is quite similar when looking at the statutory possibilities in terms of financial instruments. However, in practice a clear difference is that OMU acts more risk-averse than the other two: OMU mostly issues loans, whereas HMO and BHB are mainly focussed on participation and strategic acquisition. This is an important distinction in relation to risk acceptance and steering ability. Another important distinction relates to the financing conditions. OMU stands out by demanding interest rates above market rates, whereas HMO and BHB apply rates at the market rate and where possible on the lower side of the bandwidth. Related to the organisational structure, each is slightly different, as shown in figure 39.

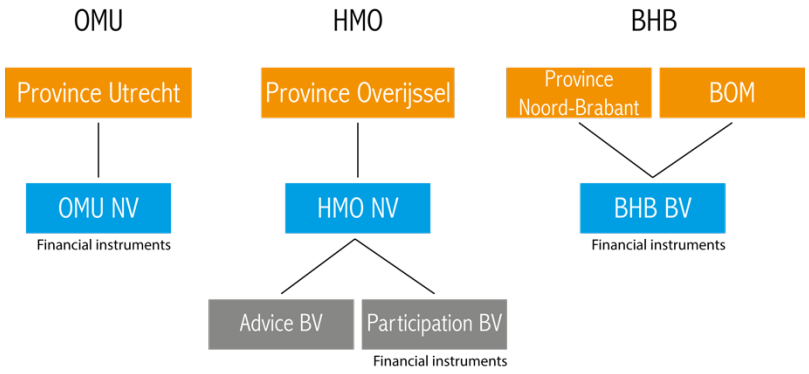


Figure 39: Simplified organisational structures of OMU, HMO and BHB.

Another important distinction is the focus used in project assessments. In this sense, HMO stands out as the main focus is the financial assessment (business case). OMU relates projects mostly to the contribution it makes to its objectives and societal benefits that the project achieves (e.g. reduction of vacancy, creation/conservation of jobs, sustainability). The financial assessment however still remains important, as the target is to achieve 100% cost coverage on project level. For BHB, financial and societal yields are equally important in the project assessment. Presumably, these approaches are reflected in the performance in terms of the revolving nature: OMU achieves 75%, HMO approximately 95% and BHB currently is at 70% but this will eventually drop due to resources that are transferred to municipal funds.

Table 10 provides a clear summary of the main differences between the three revolving funds.

	OMU	HMO	BHB
Targets	50 hectares in 10 years Rate of return of 5%	23 hectares in 10 years	180 hectares 100% revolving
Fund volume	€15 million	€7,5 million	€34,5 million
Financial instruments used in practice	Loans	Loans Participation Strategic acquisition	Guarantees Loans Participations Strategic acquisition
Business case assessment focus	Contribution towards societal goals is guiding, business case needs have yield potential	Financial assessment is leading, societal goals are positive externality	Financial and societal assessment are equally important
Financing conditions	Above market rate (between 6% and 10%)	Similar to market rate, where possible slightly lower	Similar to market rate, where possible slightly lower
Shareholders	Province of Utrecht	Province of Overijssel	Province of Noord-Brabant and BOM
Legal entity	NV: Limited private company	NV: Limited private company	BV: Private company
Revolvingness	Approximately 75%	Approximately 95%	Below 70%

Table 10: Summary of similarities and differences between OMU, HMO and BHB.

7. Case comparison: input for a revolving fund design

This chapter uses the conclusions together with the perceived good and bad practices of the three cases as input for a design for a revolving fund that can be applied in the Dutch urban development practice. The first section relates to the most important good and bad practices discovered in the comparative case study, using the analysis framework. This section gives the answer to research question six:

What are the perceived good and bad practices from the revolving instruments currently used in practice?

The second section of the chapter uses these insights to draw several variants of revolving fund design, thereby answering research question seven:

What are possible designs for a revolving instrument for inner city development?

7.1 Highlights of the perceived good and bad practices

In this section, the most important conclusions and the perceived good and bad practices of each case are shortly summarized along the lines of the four main themes: goal, organisational structure, financial structure and type of projects. For each theme, a separate table is set up to structure the highlights (see table 11 until 14).

Perceived good and bad practices
Since the good and bad practices are mainly based on interviews and to a lesser extent on the desk research, the term "perceived" is used. Choices and approaches may or may not work well for the particular revolving fund in question; however, these choices and approaches may be specific for that particular revolving fund and may be less transferrable to other funds in other circumstances. However, in this section, all perceived good and bad practices are listed in the four tables below. In section 8.1, the design principles of a revolving fund for inner city development are established. Here, the transferability of the perceived good and bad practices is discussed.

Goal

	Good practices	Bad practices
JESSICIA initiative	• Rather broad goal, projects are easily eligible • Clear demarcation is leading (SOFIE) • Challenging, yet realistic targets • By broader goal, different projects thus risk spread (portfolio-spread) • Goal is to enlarge fund by public and private resources	• A (too) flexible goal and pressure to issue all resources may lead to arbitrary assessment • Demarcation may be experienced by potential applicants as harsh • Adverse incentive: if resources in a UDF are left over after fund's maturation date, resources flow back to EC.
Restoration Fund	• Clear focus on financing rather than subsidy leading to reduction of public spending and adverse effects related to subsidies • Protecting clear reputation leads to position as trustworthy partner • Revolving nature as goal has proven itself: growing fund and third round of investment	• Pilots with revolving funds outside core business prove that sticking to core business is more beneficial • Managing revolving funds that are too small are not feasible
OMU	• Clear objectives and approach provide clarity for investment managers, director and applicants • Clearly described and realistic targets provide clarity for investment managers, director and applicants • Office locations added to scope	• Goal to develop master plans and plan preparation (€1 million reservation) remained too abstract and did not contribute to OMU's goals • Approximately 75% revolving, resources vaporizing over time • Branding/findability could be improved

HMO	• Location-oriented approach with solid, underlying business case for each project: customized approach • Office locations and inner city locations added to scope • Virtually 100% revolving	
BHB	• Predefined goals have been achieved: restructuring of 1200 hectares • Flexible approach as scope, objectives, and target groups were not clear: customized approach • Vintage-approach: forecasting project pipeline was essential	• Unclear predefined scope, objectives and target groups may lead to uncertainty for applicants and fund itself

Table 11: Highlights of case studies' good and bad practices in relation to their goal.

Organisational structure

	Good practices	Bad practices
JESSICIA initiative	• Clearly predefined organisational structure by JESSICA programme • Fund distanced from politics • External fund manager: municipality contracted necessary knowledge while remaining the coordinator • Advisory role of experienced fund manager is of added value and improves individual business cases • Gained experience leads to optimization of organisational structure and potential additional funding	• SOFIE lacks the benefits of a Holding Fund • Relatively less steering ability for municipality due to external fund manager • Organisational structure not directly suitable for refunding (no holding) • Unlawful State Aid is a difficult issue • Monitoring agency mainly focussed on procedural aspects, which occasionally hampers fund's operations. • JESSICA is rather new: still rather complex.
Restoration Fund	• Sound and logical organisational structure: fund as foundation and limited company as shareholder and shared service centre works well • All relevant competences in-house incorporated in four departments: one-stop-shop approach • Account managers focus on "execution only": advising, financing, connecting • Easy and clear application process: Applicants receive quick response granting certainty	• As the organisation has grown, managing smaller (revolving) funds became unfeasible
OMU	• Relatively small organisation in relation to fund volume increases effectivity • Distanced from (provincial) politics (NV) • Clear governance structure with experienced and involved supervisory board with clear mandate structure • Activities and relevant competences in-house: experienced director and investment managers with complementary knowledge	
HMO	• Distanced from (provincial) politics • Upscaling scope led to upscaling organisation. However, organisation still relatively small and not institutionalized related to fund volume • Most activities are carried out in-house, competences supplement each other and fixed group of external professionals is consulted when necessary • Clear mandate structure with valuable supervisory board	• Setting up limited public company for advice/consultancy was unnecessary

	• Experienced and involved supervisory board has monitoring and advisory role resulting in improvement of business cases and reducing risks	
BHB	• Distanced from (provincial) politics • Reorganisation to Holding structure provided more flexibility • One supervisory board for all funds under BOM Holding improved efficiency and clarity regarding governance • Both shareholders had similar interests	• Initial organisation was less efficient and provided less flexibility • Having two shareholders increases risk of disagreement regarding operations

Table 12: Highlights of case studies' good and bad practices in relation to their organisational structure.

Financial structure

	Good practices	Bad practices
JESSICIA initiative	• Clear rules on co-financing • Flexible use of financial instruments: loans and participation (guarantee possible, not yet employed) • Clear investment strategy: guidance for municipality, fund manager and applicants • Investment strategy anchored social objectives. ERR is defined wide enough • Searching for additional fund volume through public and private co-investment seems promising • Thorough project selection through financial assessment, societal assessment and use of common sense • SOFIE, FRED and ED received more application requests than they could finance. Additional funding is being arranged • Flexible financial arrangements (e.g. repayment after 5 years) benefit applicants	• Rather small fund volume in relation to project caseload • The initial co-financing norm of 100% was hard to achieve due to a lacking municipal support base. • Even though searching for private co-investment seems promising, it remains difficult to find private parties that are willing to co-invest • Contracting an external fund manager may lead to higher costs than organizing fund management internally. However, for SOFIE, ED and FRED, it is not possible to assess whether this is the case or not based on the case study.
Restoration Fund	• State guarantee provides financial backing/certainty resulting in sub-commercial loans for applicants • BNG and Waterschapsbank are accustomed to the State guarantee and provide debt financing • Involvement of Restoration Fund reduces risk for (co-financing) banks in projects • Possibility to finance additional costs besides restoration/transformation costs contributes to “one-stop-shop” concept • Large portfolio of projects reduces risk the overall risk of default	• The State’s guarantee is unique, thus sub-commercial loan conditions would otherwise not be possible. Obviously not necessarily a bad practice, but the Restoration Fund stands out in this sense.
OMU	• Focus on financing/loans and to lesser extent strategic purchase as financial instruments: shorter duration and demands less capacity • Statutory possibility of participation expresses cooperative nature of OMU • High level of financial flexibility in terms of loan conditions enables financial customization for each project • Short-term financing ensures resources quickly flowing back to the fund and ready to be employed in other projects	• Short-term financing reduces revolving nature • High interest rates may render particular business cases unfeasible
HMO	• Additional funding has been provided due to enlarged scope	• Approach is more financially-driven than OMU and BHB: less societal assessment. This relates to

	• Financial flexibility is essential: financial customization • Virtually 100% revolving due to financially-focussed approach • Despite 100% revolving financial conditions still at lower side of market rate	policy/approach and is not necessarily a bad practice. However, HMO stands out in this sense
BHB	• Flexibility regarding co-financing on project level: initially solely with municipalities, later also with companies/entrepreneurs • Relatively large fund volume compared to other funds • Preconceived structure with tranches: resources made available when needed and not "fixed" in a fund • Combination of financing/investing and *Topper Subsidie* made more projects eligible • Investment maximum of 50%, reducing risk • Financial and societal aspects equally important in project assessment • Integrated financial objectivity by separating process management and investment management • Organisational costs partly covered by provincial subsidy, increasing revolving nature • Financial flexibility regarding financial instruments	• Lower than 70% revolving, which is relatively low • Not all earmarked resources were called off, indicating misconceived project pipeline • Focus on strategic purchases increased risk profile of portfolio. Due to the crisis, many acquired locations' value dropped

Table 13: Highlights of case studies' good and bad practices in relation to their financial structure.

Type of projects

	Good practices	Bad practices
JESSICIA initiative	• Various projects lead to risk-spread due to portfolio structure.	• Compared to other revolving funds, the type of project varies much more. Usually atypical projects with high risk profile
Restoration Fund	• Large portfolio of projects involving national, provincial or municipal monuments (*zoet-zuur benadering*)	• Projects (or specially designated funds) outside the core business is not recommendable
OMU	• Clearly described which type of projects OMU focusses on, providing clarity for applicants • Recent widening of scope: office locations are added	
HMO	• Recent widening of scope: office and inner city locations are added	
BHB	• Close cooperation with municipalities ensuring direct acquisition of projects	• Participation in type of projects with high risk profile. In some cases, participation in projects with preconceived unfeasible business case

Table 14: Highlights of case studies' good and bad practices in relation to their types of projects.

7.2 Designing a revolving fund: structuring elements

Looking at the case studies' highlights and main conclusions, and the policy documents regarding the analysed revolving funds (see: NV OMU, 2013, 2015, 2016; Provincie Noord-Brabant, 2005, 2012; Provincie Overijssel, 2008; Provincie Overijssel, 2016), several structuring elements (or main considerations) can be distinguished when considering a revolving instrument/fund. For each of the four main themes of the analysis framework, one or two structuring elements can be distinguished:

Goal

- *Goal focus*: the governmental body setting up a revolving fund has to determine whether the fund should focus more on its societal goals or on the return on investment (e.g. ERR versus IRR). This has implications for the way projects are assessed and the 'revolvingness' of the fund. Furthermore, it relates to the societal urgency the governmental body expresses regarding the goal of the fund (e.g. if a certain issue has high societal urgency, the ERR could be dominant over the IRR in project assessment).
- *Goal limitation*: the description of revolving fund's goals/objectives may be set out as quite broad or stricter. For instance, a revolving fund may aim at only one type of project whereas a fund may also aim at several types of projects.

Organisational structure

- *Distance*: how much does a governmental body wish to be involved in achieving its societal objectives and how far is it willing to distance a revolving fund from the own governmental organisation? and does it possess the relevant competences? This translates to the "distancing" of a revolving fund from the funding governmental body. A revolving fund may act as an entirely autonomous legal entity or might act as a governmental instrument similar to a civil servant managing a bank account of the governmental body in question. This consideration is in line with the steering ability, but translates more to the governmental ability and competences to carry out activities which are part of the day-to-day operations of a revolving fund and the governance structure. These activities relate to the (development) project, acquisition/PR, project assessment, issuing of financial resources and contract management.
- *Organisation size*: a revolving fund's organisation may be set out as an entity with a large, institutionalized organisation or with a small, lean and mean organisation, and everything in-between.

Financial structure

- *Risk acceptance*: how much risk is a governmental body willing to accept to achieve its societal objectives? This translates virtually directly to the financial instruments a revolving fund has at its disposal. The governmental body setting up the revolving fund dictates which instruments are statutory permitted and can thus be employed to achieve the predefined societal objectives the revolving fund wishes to achieve.
- *Steering ability*: how much steering ability does a governmental body wish to have at its disposal regarding the projects and objectives that are pursued? This consideration is directly in line with the risk acceptance level, as indicated earlier in section 3.3.7 regarding the steering possibilities for each financial instrument that may be employed.

Type of projects

- *Market demand for revolving instruments*: the market demand for a revolving fund/revolving instruments is not clearly demarcated. However, according to the interviews with fund managers and other professionals, there is demand for revolving instruments for certain projects. However, since the exact demand for financing through a revolving instrument is not clear, the degree of flexibility in terms of financial instruments, upscaling during growth, and the financial arrangements needs to be fairly high. This is rather a prerequisite/recommendation than a consideration.

The structural elements (except the market demand for revolving instruments) can be plotted in horizontal lines with ranges regarding the choices one must make when setting up a revolving fund or employing a revolving instrument. Each of the analysed cases is thoroughly analysed and can therefore be placed in the horizontal lines, visualized in figure 40. Note however that the placement is not exact; the revolving funds analysed in the case study cannot be pinpointed exactly on the scales in figure 40. However, the cases can be compared to one another. For example, OMU is more focussed on achieving its societal goal (reducing vacant space) than on financial yield, whereas for HMO the financial yield is more important. This example shows on the first axe in figure 40. The placing of the goal limitation is based on the described goals of each case. For instance, the goals of the Restoration Fund are quite strict as the focus lies on monuments only. The goals of SOFIE are much more broad, since a project that contributes to the transformation of Stadshavens rather easily complies with the application criteria. The distance axe shows the least spread, as all cases are quite distanced from their respective public bodies. In regard to the organisation size, OMU has the smallest organisation whereas the Restoration Fund has the largest.

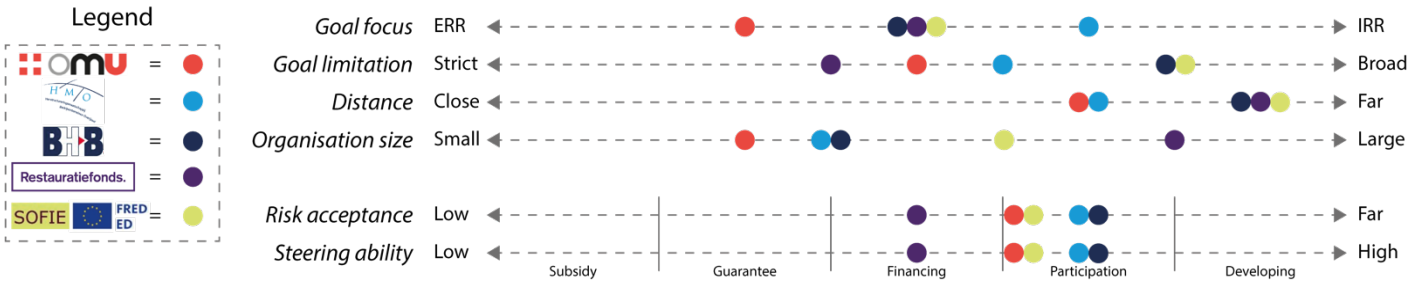


Figure 40: Existing revolving funds plotted in the ranges of the structuring elements.

As shown, the cases vary on all scales. There is no direct correlation with the structuring elements. However, there is one exception. As indicated earlier, the structuring elements *risk acceptance* and *steering ability* are directly correlated. The financial instrument employed by the revolving funds indicate the *risk acceptance* and *steering ability.* The Restoration Fund (purple) is only involved in financing, whereas SOFIE, ED, FRED and OMU (green and red) focus mainly on financing but also participate in certain circumstances. HMO (light blue) and BHB (dark blue) both go as far as participation (strategic purchase and participation in ground exploitation). These two structural elements show least variance compared to the other four elements. The six main structuring elements are highly important as they constitute the main considerations a governmental body must address when setting up a revolving instrument. Logically, the following variant study in the next section is based on the six structuring elements.

Two main types of projects that require revolving instruments

Based on the case study and the market challenges, two main types of projects can be discerned:

1. Transformation on plot/building level → in some cases, a single plot or building may be transformed in the inner city but this does not happen (market failure). In many cases, a loan suffices to help the market to transform the plot or building.
2. Transformation on area level → some projects relate to larger urban areas. In this case a loan usually does not suffice. A more active role is necessary, for instance through the development of the first plot(s) in the area to unlock further development by the market.

7.3 Designing a fund: variant study

The six main structuring elements form the basis of the variant study that follows. Four variants will be drawn out to illustrate four different possible manifestations of a revolving fund. Many more variants are conceivable.

1. Subsidy+ → a separate entity is purely set up to issue subsidies and guarantees for rather broadly predefined projects (high ERR focus and moderate goal limitation). The responsible civil servant coordinates and assesses relevant projects. No active acquisition takes place. A fund manager is responsible for issuing the resources and contract management and is in directly delegated by the responsible civil servant (closely distanced and small organisation). Due to the employment of only subsidies and guarantees, the risk acceptance and steering ability is low. This fund variant can be partly seen as a revolving fund, since subsidies are not revolving whereas guarantees are.

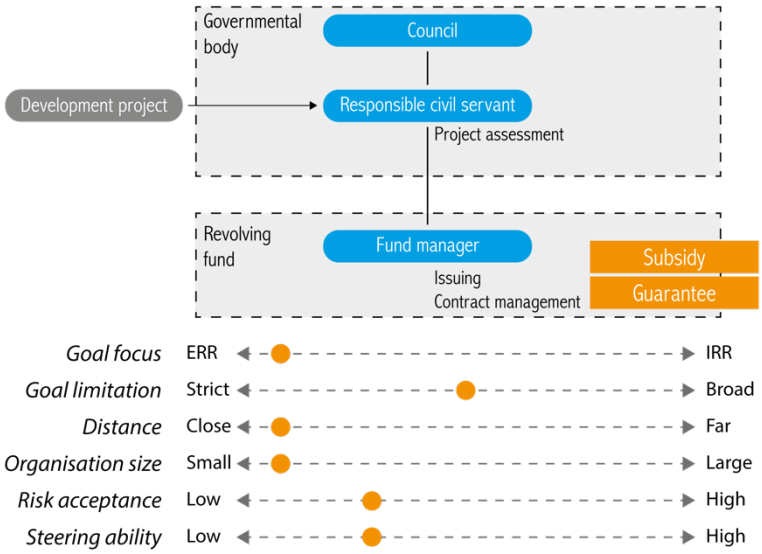


Figure 41: The Subsidy+ variant

2. Revolving fund-light → a separate entity is set up to issue guarantees and loans, whereas the responsible civil servant issues subsidies. IRR and ERR of the guarantees and loans are equally important and predefined target projects are strictly described (equal ERR and IRR focus, strict goal limitation). The fund manager is responsible for attracting relevant projects with a positive business case, assessing the relevant projects, issuing resources when the supervisory board agrees, and contract management. The supervisory board must consult with the responsible civil servant regarding each investment proposal (rather small organisation, rather closely distanced from governmental body). In this variant, risk acceptance and steering ability are slightly higher than the subsidy+ variant due to the adding of a financing instrument.

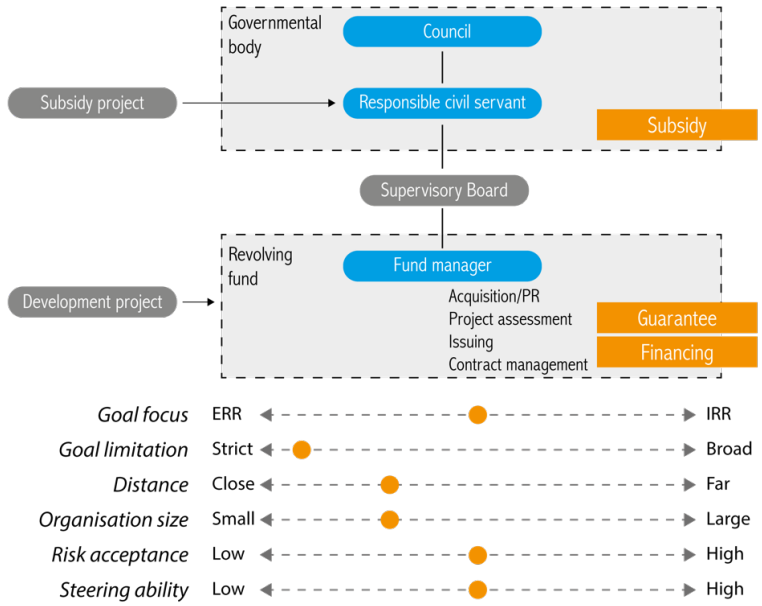


Figure 42: Revolving fund-light variant

3. Full-fletched revolving fund → a separate entity is set up to issue guarantees, loans and participation (e.g. strategic purchase) for several predefined project types. The assessment is focussed mainly on financial return (Focus on IRR, medium goal limitation). The shareholder (i.e. the relevant governmental body) appoints a supervisory board, which has full mandate up until a certain percentage of the fund volume (e.g. 15%). The fund manager is responsible for project assessment, issuing the resources and contract management. The supervisory board needs to approve all financing proposals and reports to the responsible civil servant (medium distance to governmental body). The process managers are responsible for acquisition/PR activities to attract (development) projects to the fund and to carry out process management (rather small, lean and mean organisation). The governmental body employs subsidy for particular projects with a negative business case. In this variant, risk acceptance and steering ability are rather high as participation may be employed.

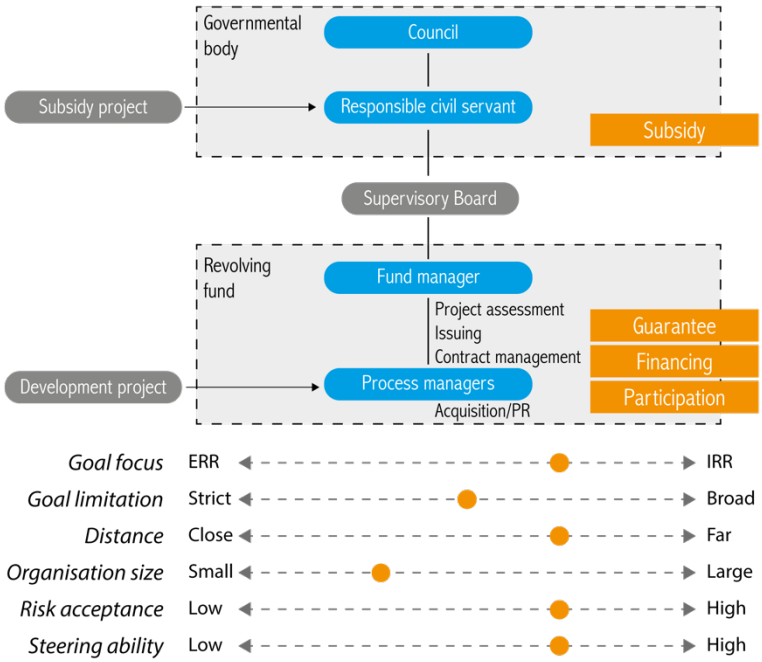


Figure 43: Full-fletched revolving fund variant

4. Development agency → a separate entity is set up to employ participations and to actively develop land and real estate, bearing development risks. Financial yield is the main focus and the project types are virtually undefined (focus on IRR and broad goal limitation). The shareholder sets up an Investment Committee which reports to the responsible civil servant. The revolving fund has full mandate and may autonomously decide on project applications, consulting the investment committee which has an advisory status (greatly distanced from governmental body). The fund manager is responsible for issuing the resources. The process managers are responsible for attracting relevant (development) projects and carries out a preliminary assessment: if the project results in a financing demand, the investment managers take over and carries out a full financial and societal assessment. The investment manager is also responsible for contract management (rather large organisation). The governmental body does not provide subsidies for (urban) development projects and aims at fully employing their resources on a revolving basis. In this variant, risk acceptance and steering ability is high.

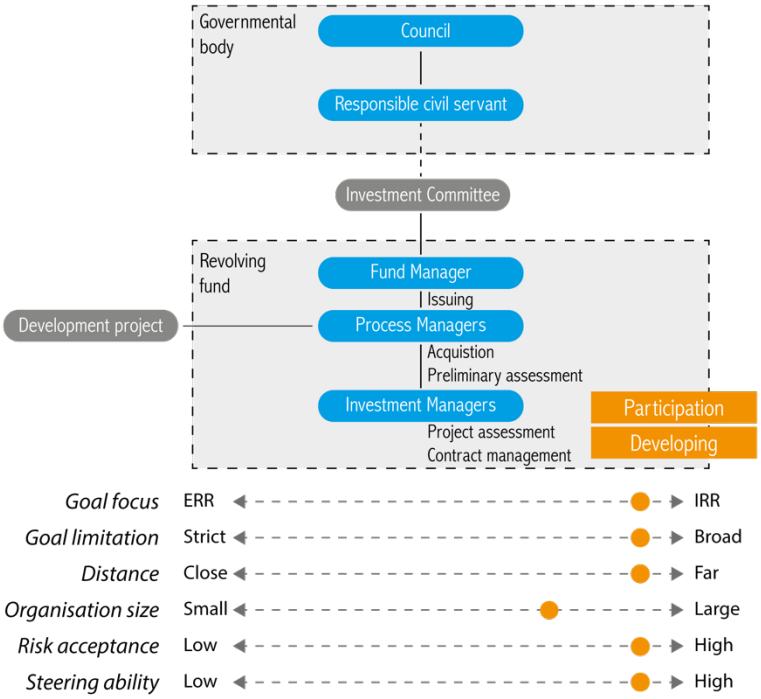


Figure 44: Development agency variant

The variant study provides insight in different aspects that can be tweaked and changed. This chapter has provided the answer to research question six and partially to research question seven. In chapter eight, the final design for a revolving fund for urban development is described, based on the outcomes and especially the good practices of the case studies.

The complexity of variant studies

The four variants outlined in this section show four possible designs for a revolving fund. These variants are not Mutually Exclusive and Collectively Exhaustive (MECE). Many more variants are conceivable and may or may not overlap with other variants. Two important notions:

1. The examples provided here are to show the impact of choices one can make related to the six structuring elements. For instance, a revolving fund initiator may have a broad outline in mind regarding the goals and targets the fund should achieve. However, if he has not given any thought about the other structuring elements, the revolving fund might not be operating efficiently and according to the expectations.
2. Every situation requires other considerations regarding the structuring elements; the four variants cannot be seen as blueprints for certain situations. They merely show four possible designs.

8. A revolving fund for inner city development

In this chapter, the proposed design for a revolving fund for inner city development is outlined, thereby answering research question eight: *Which of the possible designs fits best as a revolving instrument for inner city development?*

8.1 Design principles for a preferred variant

To determine which is the preferred variant, the design principles of a revolving instrument for inner city development need to be defined. The individual themes and sub-themes of the analysis framework are used to structure these. Each design principle is filled with perceived good practices from the case study with the respective revolving instrument that underlines that design principle.

Design principles based on other research
In addition to the good practices, a research report by ERAC provides an ex-ante assessment of the operationalization of FRED II in which many design principles are described to successfully implement FRED II (Panjer, Aart, Bungelaar, & Smeets, 2016). The most important design principles are substantive and instrumental flexibility, flexible fund construction for adding additional funds or refunding, searching for co-financing, clear, ambitious objectives without being too limitative, define/quantify ERR/societal return, substantial technical and financial knowledge, concrete and clear investment strategy, applying vintage-approach/early filling of project pipeline, advisory role to improve business cases, four-eyes principle, quick lead time, periodical evaluation, searching for co-financing on project level. These findings are completely underlined by the outcomes of the case study analysis carried out in this thesis. Other relevant research is conducted by Rekenkamer Oost-Nederland which focussed on existing revolving funds in Gelderland and Overijssel (Spenkelink & Willigenburg, 2017a, 2017b). Main outcomes are that each of the different existing revolving funds should be organised in the same manner to increase clarity and transparency for the responsible provincial executives, to formulate/quantify ERR further, evaluation and reporting should be linked to provincial goals, and evaluation and reporting should include utilisation, “revolvingness” and societal accomplishments of revolving funds. These outcomes are largely underlined by the case study.

The operational level of a revolving fund for inner city development
Another important design principle is the public level on which the revolving fund should be incorporated. According to the interviews in relation to the existing funds and with professionals, a fund needs to have an adequate operating area, but the fund managers still need to know the state-of-play in the areas in which the fund is active. The main conclusion is that at State level, fund managers will not have the needed feeling with locations. The municipal level has potential, although an adequate project pipeline and fund volume is needed to have a successful revolving fund. Small(er) municipalities are therefore not sufficiently equipped to set up a revolving fund. The most logical level is the provincial level or larger metropole areas such as *Metropool Regio Amsterdam* (MRA) and *Metropool Regio Den Haag Rotterdam* (MRDH).

Input from the market challenge to the design principles
For this thesis, a market challenge is held with various actors active in inner city development (e.g. financiers, developers, public actors, investors, etc.), mainly to assess the support base for a revolving fund in inner city development (see chapter 9). Additionally, the workshop produced several critical success factors of a revolving fund:

1. Prolonged timeframe → the fund should be committed for a longer period of time
2. Market conformity → in prolonged processes, the interest rate should be affordable
3. Customization → due to the complex nature, (financial) customization is essential
4. Do not act like a bank → be more flexible in regard to the application criteria
5. Clear goals and objectives → Be clear but not too limited in regard to the fund’s goals
6. Distanced → independent of political decision-making, long-term commitment
7. Autonomy of fund manager → Fund manager should be free in day-to-day operations
8. Critical mass fund volume → fund volume should be enough to take on ten projects
9. Not every project will succeed! → Some plots or areas will remain undeveloped

The following four tables (table 15 until 18) describe the design principles along the lines of the analysis framework. The design principles, tailored to the inner city development practice, are based on the literature study, case studies, market challenges and studies by ERAC and Rekenkamer Oost.

Goal	Based on
Goals and objectives	
• Clear objectives and aims, but not too limitative and/or abstract	• All/Market Chall.
• Clear focussing on financing and investing instead of subsidy	• RF[14]
• Stick to core-business (real estate development)	• RF/HMO/OMU
• Location-oriented with customized approach for each project	• HMO
• Vintage-approach, ex-ante project pipeline and financing gap to ensure quick filling of project pipeline	• BHB
• Ability to scale-up	• HMO/OMU
• Aim at the long-term, inner city projects need long-term commitment	• Market challenge
Targets and target group	
• Aim at 75%-80% revolving, with focus on societal effects	• OMU/BHB
• Prerequisite is 100% revolving on project level	• All
• Aim at (professional) real estate developers and (bottom-up) initiatives	• OMU/HMO
• Spatial multiplier of 2,5x (inner city space is restricted)	• HMO
• Financial multiplier of 4x	• HMO

Table 15: Design principles related to the goal for a revolving instrument design.

Organisational structure	Based on
Governance	
• Set up involved and experienced Supervisory Board	• HMO/OMU/BHB
• Monitoring and advisory role for Supervisory Board	• HMO/OMU/BHB
• Set up simple structure which is easy to scale-up and adding funds	• All, except SOFIE
• Set up external entity (e.g. NV/BV) distanced from governmental body	• All/Market Chall.
• Provide clear mandate structure	• HMO/OMU/BHB
• Provide periodic, substantive evaluation to shareholder	• RekenkamerOost
Job positions	
• Hire process managers who attract projects, who know the current state-of-play, and who advice, connect and optimize	• HMO/OMU/BHB
• Hire investment managers who carefully assess each project/business case and define financing/investment-needs	• HMO/OMU/BHB
• Hire experienced fund manager/fund director who keeps close contact with Supervisory Board	• HMO/OMU/BHB
• Keep organisation lean and mean: do not institutionalize	• HMO/OMU/BHB
• Hire PR/branding capacity to communicate and attract	• All
Competences	
• Competences are preferably supplementary	• HMO/OMU
• Process managers need mainly commercial/development, financial, technical knowledge	• HMO/OMU/BHB /RF
• Investment managers need mainly financial, juridical and technical knowledge	• HMO/OMU/BHB /RF
• Fund manager/fund director needs mainly management, commercial/development and financial knowledge	• HMO/OMU/BHB /RF
• Preferably most activities are carried out in-house, fixed group of external professionals for support	• HMO
Fund management	
• In-house fund management, not externally contracted. Carried out by fund manager/director who periodically informs shareholder	• HMO/OMU/BHB /RF
• Fund management and operational costs covered from fund volume. Provides incentive to increase “revolvingness”	• OMU
Decision structure	
• Fund manager needs enough autonomy. Expenses above 15% of fund volume needs approval from Supervisory Board	• HMO/OMU/BHB • Market challenge
• Clear decision structure to ensure quick response from Supervisory Board and fund to market	• HMO/OMU/BHB /RF

Table 16: Design principles related to the organisational structure for a revolving instrument design.

[14] RF = Restoration Fund

Financial structure	Based on
Investment strategy	
• Clear rules for operations of fund from shareholder's goal and objectives, targets, regarding decision structure, application criteria and assessment, use of financial instruments, targets, vintage-approach, etc.	• All
• Adaptability is essential, since circumstances may change over time. The investment strategy should be periodically updated.	• All/ Market Chall.
Fund volume	
• Use of vintage-approach to define project pipeline and needed fund volume	• HMO/BHB
• Start-up phase with enough fund volume for pilot period (e.g. resources for 10 projects)	• HMO/OMU/SOFIE Market challenge
• Use tranches: when fund is successful, additional funding. Do not stall money in a fund	• HMO/BHB/SOFIE
• Make scaling-up possible	• All
Financial instruments	
• Make subsidy less appealing and use it only for public space	• HMO/OMU
• Use of guarantee only when fund volume can be enlarged (do not stall money without revenue)	• BHB
• Use of financing where possible (mostly used instrument for projects on plot/building level)	• All
• When necessary use of participation or even development, mainly when this stimulates the development on the urban area level	• HMO
• Secure financial customization	• All/Market Chall.
Application criteria	
• Apply IRR/financial assessment, but not as exhaustive as banks	• All/Market Chall.
• Apply ERR/societal assessment and quantify as much as possible	• OMU/BHB/SOFIE
• IRR and ERR assessment are equally important	• OMU/BHB/SOFIE
• Search for minimum of 50% co-investment/co-financing on project level from (private) actors, reducing financial risk	• All
Financial arrangements/conditions	
• Interest rates at market rate, lower side of bandwidth. Make long-term commitment possible	• HMO/BHB/SOFIE • Market challenge
• Ensure flexibility in arrangements/conditions to provide financial customization	• All
• Duration of loans/investments in relation to project and phasing of the project.	• All
• Define clear exit strategy	• All

Table 17: Design principles related to the financial structure for a revolving instrument design.

Type of projects	Based on
Type of project	
• Only get involved in projects that contribute to goal and objectives: projects that contribute to societal benefits in (inner) city areas	• All
• Acquire projects that vary in scope and phasing to spread risk through portfolio structure	• SOFIE
• Clearly described which type of projects are eligible	• All
• Collaborate with other public actors to acquire eligible projects	• All
Operating area	
• Focus on (inner) city areas that experience vacancy, decay or other societally negative effects	• All
• Focus on (inner) city areas that demonstrable contribute to goals and objectives when (re)developed	• All

Table 18: Design principles related to the type of projects for a revolving instrument design.

The transferability of perceived good practices

As stated earlier, the case studies' perceived good practices cannot be directly translated to a blueprint for a revolving fund for inner city development. The situation and circumstances require different choices and approaches considering the design of a revolving fund. Therefore, chapter eight regards the uncovering of which design fits best as a revolving fund for inner city development. The design principles outlined in tables 15 until 18 are either relatively general and can thus be incorporated, or they are tailored to the situation of inner city development. In this way, the design principles can be used to acquire a design that fits best.

8.2 A preferred variant that fits best

The design principles outlined in section 8.1 are the building blocks of the preferred variant that fits best in the inner city development practice. As stated, the design principles are either generally applicable for a revolving fund or tailored to fit in the inner city development practice.

Changing circumstances in inner city development
As stated, the circumstances largely dictate the considerations for a revolving fund. In the case of inner city development according to the literature, the case studies, and the market challenge, the circumstances mostly relate to the complex nature of projects. Inner city development is complex due to the high number of stakeholders (public, private, semi-public, civic, etc.) with each their own level of commitment, values, and objectives. Additionally, the high development costs, the long lead time and duration of projects with changing circumstances (e.g. political, economic, etc.), difficult land and real estate ownership and difficult logistics make inner city development complex. A revolving fund aimed at operating in the urban development practice over a longer period of time needs to be able to cope with these circumstances that are bound to change over time. Therefore, a "one size fits all solution" is not possible. This is incorporated in the preferred variant.

In figure 45, the preferred variant that fits best is visualized, based on the design principles and the needed adaptability outlined in the frame above. Keep in mind that this is merely an operationalisation of the design principles in a proposed design. Other operationalisations may be logical as well; the preferred variant is no "one size fits all solution". However, the proposed design seems to fit best to the inner city development practice based on the outcomes of the literature study, case studies, market challenge and research by ERAC and Rekenkamer Oost.

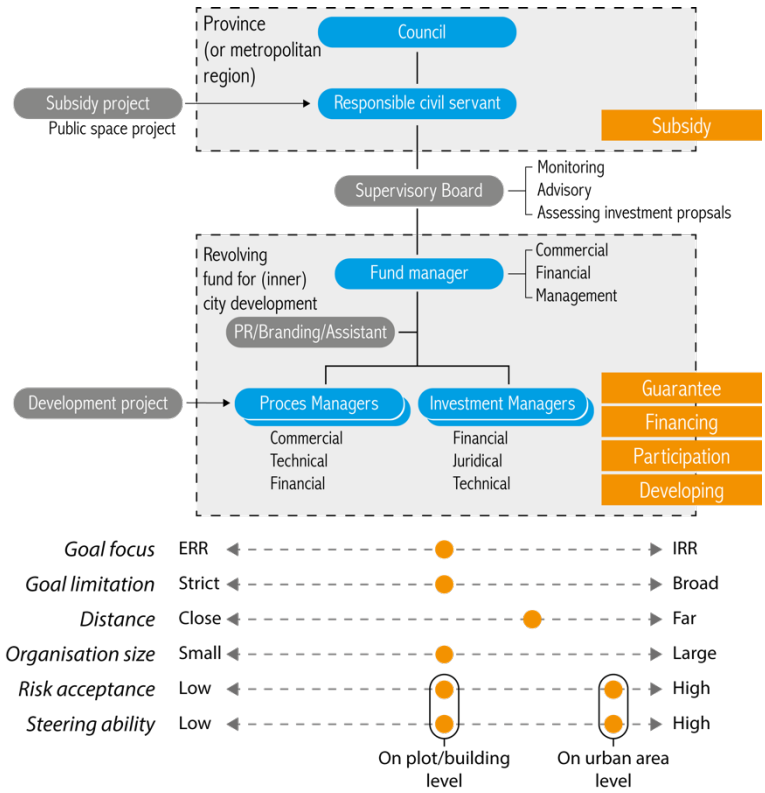


Figure 45: The preferred variant of a revolving fund that fits best in inner city development.

The preferred variant mostly resembles the *full-fletched revolving fund* variant from the variant study. However, the preferred variant differs in the sense that the organisation size is larger and the goal focus is equal on ERR and IRR. Additionally, the preferred variant has made the distinction between two types of projects it can stimulate in relation to the financial instruments it may apply. For projects on the plot/building

level, financing is the main financial instrument that may be applied. However, for larger-scale projects on the urban area level, a more active role should be adopted since these projects are more complex and have a longer time-span than projects on the plot/building level. In these cases, it could be necessary to actively develop the first plot(s) of an urban area to create commitment and to stimulate the development of the rest of the area. However, this should only be the case when financing is not enough to stimulate the development of the area. Also, in the preferred variant, the choice regarding the operational level is made: the operational level that fits best is the provincial level or metropolitan region level. The main reasons are to have an adequate pipeline of projects, but the fund managers still need to know the state-of-play.

Goal
The goals and objectives should be clear yet not too limitative; other actors, and especially the target group, should know why the revolving fund exists. The target group needs to be able to quickly identify whether the revolving fund could help them or not. Therefore, the revolving funds should stick to the core-business which is inner city development. The revolving fund should be fairly adaptable in many ways, also in the sense that each project is different; the fund should be able to apply a customized approach for each project. A general notion (based on BHB case study and the ERAC report) is that the vintage-approach should be applied, which ensures a clear ex-ante assessment of possible inner city locations that could be stimulated by the revolving fund. In relation to the goal, the ability to scale-up should be incorporated; when certain projects outside the scope contribute to the fund's goals, they should be included to the scope as well. Since inner city development contributes to societal objectives (e.g. sustainability, liveability, decreasing mismatch on housing market, etc.), the fund should not solely pursue financial gains. The ERR and IRR should be equally important. Striving for a predefined spatial multiplier financial multiplier helps in ascertaining the goals of a revolving fund for inner city development.

Organisational structure
As outlined, the organisational structure in figure 45 resembles that of variant 3 (full-fletched revolving fund). However, due to the complex nature and high costs of inner city development, a larger organisation is advisable. This relates to the fund volume; the outcomes of the case study indicate it is advisable to start with a relatively small fund volume for approximately ten projects. However, ten inner city development projects require much more financial resources than for instance ten transformations of smaller office buildings. With large amounts of money, a firm governance and mandate structure is advisable. Therefore, an experienced Supervisory Board with strict mandates should be established to ensure that the financial resources are allocated to the right projects. The job positions should therefore also be filled by experienced personnel with the right competences (e.g. commercial/development, financial, technical, juridical, management competences). These competences are essential in inner city development. Also, the shareholder structure should be straightforward. Preferably, the revolving fund has one, or maybe two shareholders to keep things simple. The organisation should be kept flexible: when circumstances demand upscaling or downscaling, this should be possible.

Financial structure
One of the most essential aspects regarding the financial structure is the investment strategy with the investment instructions for the fund management. The investment strategy secures the goals of the governmental body that initiated the revolving fund. The fund management must act according to the investment strategy, thereby achieving the predefined societal and spatial objectives. Also here, the adaptability of the fund regarding the changing circumstances of the inner city development practice should be incorporated. The investment strategy should be flexible enough to cope with changes, therefore this should be evaluated and updated in certain intervals (for instance every two years). The financial instruments should include guarantees, financing, participation and development, ensuring a flexible financial organisation with the ability to provide customized solutions. The focus should be on guarantees and financing on the plot/building-level. On the larger urban scale, participation and actual development should be possible, as sometimes a larger gesture is needed. Development should only be carried out when clear potential is apparent and the development of the first plot(s) unlocks further development by other actors. The fund volume should initially be large enough to support for instance ten pilot projects. Scaling-up should be possible, which makes the use of predefined tranches logical. The financial instruments and financial arrangements should be flexible; each project requires a different approach.

Type of projects
As stated, the revolving fund should be equipped to cope with projects on the plot/building level and the urban area level. Furthermore, the projects that are stimulated should demonstrable contribute to the fund's predefined goals and objectives. The focus should therefore lie on inner city area that experience vacancy, decay or other societally negative effects.

To summarize: the preferred variant is set out with a governance structure similar to OMU and HMO, with an organisational structure as BHB, with one shareholder similar to OMU and HMO, with flexible financial instruments at its disposal similar to HMO, with the aim of risk reduction through portfolio structuring similar to the Restoration Fund, with in-house competences similar to OMU, HMO, BHB and the Restoration Fund, with a clear investment strategy similar to SOFIE/ED/FRED, and with a clear focus on financing over subsidy similar to the Restoration Fund. The preferred variant is thus an adapted version of the Full-Fletched Revolving Fund variant, specifically tailored to the inner city development practice and context.

In terms of goal focus, societal benefits and financial yield are equally important. By doing so, the societal character of the revolving fund is incorporated and it distinguishes itself clearly from regular commercial banks in this sense. The goal limitation is set at medium, which provides enough flexibility on the one hand, and enough clarity for the relevant actors on the other. Based on the interviews and market challenge, adequate distancing from the governmental body is seen as highly advantageous and is thus incorporated in the preferred variant. Another important good practice is using a relatively small organisation in relation to the fund volume. However, since inner city development projects are usually quite large, a slightly larger organisation than for instance OMU, HMO and BHB is logical. More capacity is needed, whereas the needed skills and knowledge (i.e. financial, real estate market, technical, juridical, sociological, fiscal knowledge) should be adequately represented in the job positions. According to the interviews and market challenge, financial flexibility and customization is essential, thus the revolving fund has the ability of employing guarantees, financing, participation and even development when required. This results in high risk acceptance and thus high steering ability.

8.3 Who fills the fund?

A metaphor used often by Friso de Zeeuw regarding (revolving) funds is that they are like cows: they are milked on earth and filled in heaven. In other words: it usually is unclear who provides the initial fund volume but receivers of the resources are easily found. This as an essential remark, since a revolving fund is a very promising but the initial fund volume should be provided by someone. During the interviews and market challenges, this aspect also played a role, but no clear answer was put forward to who would initially fill a revolving fund for inner city development. For instance, Erwin van der Krabben signalled that the overall perception is that the political urgency for inner city development and transformation is rather low within the central government. It may thus be expected that the government that is currently in the making (July 2017) will not provide large sums of money to invest in revolving funds focussed on urban development and transformation.

> *"It is mostly a political discussion. The overall perception is that there is no high political urgency for inner city development and that subsidy is preferred over a complex revolving fund."*
> *Erwin van der Krabben – Professor Planning and Property Development, Radboud University*

Based on the market challenges, the urgency seems more pressing on the Provincial and municipal level. However, not every Province and municipality has the luxury of abundantly available resources, readily available to invest in urban development revolving funds. One of the ways that seems logical to acquire funding from the central government is to create higher urgency by coupling of agenda's. When for instance the issue of inner city development and transformation is directly coupled with the energy transition issue, public transport/infrastructure, and/or sustainability, resources may become available through various programs. An example is Invest-NL[15], an investment institution set up by the central government to provide venture capital to stimulate certain transitions (e.g. energy, sustainability, mobility, food, digitization of the industry, and societal domains like care, security and education). Additionally, resources may be acquired from the European. Further research is needed to further investigate the possibilities.

[15] See: https://www.rijksoverheid.nl/actueel/nieuws/2017/02/10/kabinet-trekt-investeringen-los-met-oprichting-invest-nl

9. Support base for a revolving fund in inner city development

One could design and set up a revolving instrument to stimulate urban development in Dutch cities, but when there is no support base or demand for such an instrument it would not be of any added value. Therefore, defining whether or not there is public and private support for a revolving instrument in the urban development practice is essential. Also, a short exploration of eligible projects is carried out to further illustrate the demand for a revolving fund in inner city development. Finally, the influence on the decision-making of real estate developers is assessed. This chapter provides the answer to research question nine: *Is there support for a revolving fund for inner city development and how would it influence the decision-making of real estate developers in inner city development?*

9.1 Political and market support base

The success of a revolving fund directly depends on the willingness of actors involved in the urban development process to make use of the instrument. For instance, if a large fund volume is allocated to stimulate certain developments in Dutch cities, but developers do not perceive advantages over regular financing or projects are not halted due to financing issues, then the revolving fund would be a waste of resources. This section relates to the structuring element/prerequisite of *market demand for a revolving instrument*, described in section 7.2.

In each of the interviews conducted during the case study, the question has been asked whether a revolving fund for inner city development would experience support from both the public (political) side and private (market) side. Virtually all interviewees and the participants of the market challenge (see frame below) expressed support for a revolving fund in the urban development practice. However, certain conditions are essential and various reasons are also expressed why a revolving fund could not be supported by either the public or private sector.

Workshop: The market challenge

The market challenge was held on the 9th of June, 2017 in Rotterdam. A total of 26 participants attended the workshop (see appendix 7). The workshop was divided in two discussions fuelled by various statements:

1. The first discussion regarded the definition of experienced barriers in inner city development:
    - I. Time-span → projects usually have a very long lead-time, increasing the risk profile of the project leading to expensive or not obtainable financing resulting in a negative business case.
    - II. Complex ownership → In inner cities, usually land and real estate have various owners with different interests, increasing the risk profile, leading to expensive or unobtainable financing.
    - III. Coupling of "sweet and sour" → in some cases it would positively influence an overall business case when subprojects are bundled (*zoet-zuur benadering).* In that sense, the sour subprojects (with a negative business case) could be compensated by the sweet subprojects (with a positive business case). However, due to the complex ownership problem this is not always possible, providing an additional barrier.
    - IV. Commitment → due to the long time-span of regular inner city development projects, political and market commitment is essential. However, political commitment is sometimes lost for example when a new council is elected. Also, market commitment may be reduced when interest in the area declines.
    - V. Phasing → financing is very hard to obtain from regular commercial banks when inner city development projects are still in the early (thus riskier) phases. When certain risks are eliminated, regular banks may want to finance the developer or investor. However, especially in these early phases, the developer or investor requires financing.
2. The second session regarded assessing the support base and conditions for a revolving fund for inner city development from the different viewpoints of the participants.
    - I. The participants show support for a revolving fund for inner city development.
    - II. However, the revolving fund then should make a different consideration regarding risks than a regular commercial bank would do (resulting in a lower interest rate).
    - III. In some cases a loan from the fund stimulates a development enough (usually on building/plot level). However, in some cases a further gesture is needed through actual development by the revolving fund, which in that sense is more a development agency.
    - IV. The revolving fund should incorporate the nine success factors as mentioned in chapter 8.

Reasons for support

As stated earlier in this thesis, several researchers position a revolving fund in the urban development practice as a potentially beneficial instrument (e.g. Boelman et al., 2016; Dekker et al., 2016; Krabben et al., 2013; Rebel Group, 2016; Van Heijningen et al., 2013). According to the interviews with Erwin van der Krabben and Edwin Netjes, they both see a revolving fund as a potential means to overcome certain (financial) barriers in urban development projects. In the case of clear market failure (i.e. when regular commercial banks are not willing to finance these projects, mostly apparent in the earlier phases), a revolving fund could fill this financing gap without disrupting the market. A revolving fund fits in the "regional ecosystem", according to Edwin Netjes, which means that the system of relevant actors, programs and organisations support the instrument. This is underlined by interviews with Robert van Ieperen, Jimmy Kools and Thimmo van Garderen. The interviewees that are currently working with revolving funds (i.e. Michiel van Keulen, Barend Jan Schrieken, Cees Busscher, Frank Hazeleger, Roy Besselink and Jeroen Krijgsman) all expressed a clear public and private support base for their activities and they perceive a revolving fund focussed on inner city development as a logical step forwards in the urban development practice. As indicated earlier, HMO already widened their scope to inner city locations as well. Janbart van Ginkel has clearly expressed that a revolving fund would only be supported when market failure is clearly demonstrated. Stimulating certain projects with high societal benefits but with financing problems by employing a revolving fund could therefore be logical. However, when setting up a revolving fund, one must always ask himself what the revolving fund supplies and whether there are other instruments that might achieve the same (being less complex, cheaper, etc.). Therefore, solid argumentation that legitimates the use of a revolving fund and an explanation which (financing) gap the fund aims to fill is mandatory. The interviewees mostly focussed on the private side (i.e. Pike Fabriek and Jan Fokkema) both express support for a revolving fund, as they distinguish certain development projects that are really helped with a revolving fund. Richard Luigjes expressed the least support, both from a political and market perspective (see below).

"The market is ready to deal with the problems currently experienced in inner city development. Financing forms a serious barrier; there is clear market support for a revolving fund"
Jan Fokkema – Director at NEPROM

"There is no shortage of available capital, it is a matter of risk perception. A revolving fund could operate differently by accepting a higher risk profile when banks are not willing to do so."
Edwin Netjes –Partner/Owner at KplusV

Reasons against support

Although Erwin van der Krabben has indicated that revolving funds might stimulate certain projects, he also expressed that the actual setting up of a revolving fund is a political discussion. The overall perception is that a subsidy is still preferred over a more complex revolving fund instrument. Furthermore, urban development is perceived to be not highly urgent on the political agenda at the national level. Thimmo van Garderen perceives a compensation system as an alternative instrument to stimulate inner city development: by using the proceeds of "easier" greenfield locations for inner city development locations, the latter could be stimulated. Richard Luigjes was least convinced of the support for a revolving fund. He expressed his doubts whether public resources should be employed to stimulate private matters. Furthermore, he stated that each urban development project in essence is feasible, but becomes unfeasible due to complexity, high risk perception, fragmented ownership relations and prolonged project planning. Thus, the problem does not always relate directly to financing issues, but to optimizing a business case. A final remark here is that clear political support is necessary to acquire initial funding for revolving funds. It is perceived that a revolving fund for inner city development should be funded by public resources initially. Therefore, political support is essential. As stated earlier, coupling the issue with other agenda's or issues might enhance the political support and urgency.

"The Government leaves the market to develop Dutch cities, and they are right to do so. Business cases in general are all solvable or the market is just not interested enough due to various reasons."
Richard Luigjes – Manager Fund Development at SVn

Table 19 shows an overview of the perceived political support base and the support base from a market perspective.

Interviewee	Company/institution	Political support base	Market support base
Erwin van der Krabben	Radboud Universiteit	Yes, however not highly urgent	Yes
Edwin Netjes	KplusV	Yes, if market failure is clearly demonstrated	Yes
Thimmo van Garderen	BNG	Yes, but compensation system could be better	Yes
Jimmy Kools	Fakton	Yes	Yes, if the process is not too complex
Robbert van Ieperen	Fakton	Yes	Yes
Michiel van Keulen	Gemeente Rotterdam	Yes	Yes, practice shows support
Richard Luigjes	SVn	Perhaps,	Yes, but it is not always a financing issue
Barend Jan Schrieken	Nationaal Restauratiefonds	Yes, less expensive than subsidy	Yes, but keep it simple
Janbart van Ginkel	AT Osborne	Yes, reasoning why and how is needed	Yes, but not only financing, also advice
Pike Fabriek	Pike Vastgoed	Yes	Yes, own experience provides support
Cees Busscher + Frank Hazeleger	OMU	Yes, own experience provides support	Yes, own experience provides support
Roy Besselink	HMO	Yes, own experience provides support	Yes, own experience provides support
Jeroen Krijgsman	BHB	Yes, own experience provides support	Yes, own experience provides support
Jan Fokkema	NEPROM	Yes	Yes

Table 19: Overview of interviewees' perceived support base for a revolving fund regarding inner city development.

The table shows that the interviewees indicate a wide political and market support base for a revolving fund for inner city development. The market challenge (9th of June) further underlines this statement with the notion that on the building level, financing is senseable. On the urban area level, in some cases actual development is necessary when the market is reluctant to develop the area. Especially this last notion was also clearly put forward by various actors during a workshop on the 29th of June, hosted by the Province of Gelderland and Fakton. Here, developers, municipalities, financiers, academics and public actors from various municipalities and the Province put forward the statement that with larger urban area developments in the Province, a larger gesture was needed over a revolving fund with only loans at its disposal. The broadly underlined approach indicated during the workshop was that this further gesture should incorporate the ability to actually develop plots with the separate legal entity with the idea to kickstart the first steps in the area leading to private actors in the area as well.

"In essence, a revolving fund could be a solution to financing issues. However, one should always demonstrate that there is clear market failure and that other, less complex instruments do not achieve similar results. Legitimization and filling the financing gap is key"
Janbart van Ginkel – Senior Advisor, AT Osborne

9.2 Eligible inner city projects for a revolving fund

An important notion is that there need to be eligible projects that are benefitted by the employment of a revolving fund. During the interviews, the interviewees expressed confidence in a revolving fund for inner city development. However, clear examples of current projects that could be stimulated by a revolving fund were easily put forward. Searching for eligible projects is not the focus of this thesis, but it is one of the main prerequisites for a revolving fund to be successful. Therefore, a short exploration is conducted here. The exploration shows several examples that at first sight appear to comply to the three main prerequisites for a revolving fund: yield potential, market failure, and achieving societal objectives. The examples are:

- Achtersluispolder, a large area of approximately 94 hectares. Focussed on transforming a slightly dated harbour area with approximately 300 businesses in Zaanstad next to Hembrug Terrein. Large initial investments are necessary for instance in infrastructure, the quays and displacement of companies. It could be conceivable that by using venture capital from a revolving fund, the initial investments can be made. The proceeds of the development of new dwellings in later phases in the area then could flow back to the revolving fund based on clawback arrangements (*kostenverhaal*). Also, it is conceivable that the municipality, private actors (e.g. developers) and the revolving fund together arrange these investments in a separate juridical entity such as a joint venture (a typical joint venture model is the GEM, or *Gemeenschappelijke Exploitatie Maatschappij*) or another form of PPP. The project is perceived to have a positive business case (on the long-term) due to the location and an improvement of the functional programme (from harbour business

to mainly living, retail and leisure). Currently, the high initial investments withhold the market to develop the area (market failure).

- Erfgoedfabriek, a development and investment programme initiated by the Province of Noord-Brabant in 2011. Many old factories, castles, monasteries located in cities throughout the Province are vacant. Erfgoedfabriek aims at transforming these buildings into different functions. For instance, *Bierbrouwerij De Drie Hoefijzers* in Breda is a redevelopment project that could have been stimulated by a revolving fund. Currently the redevelopment is currently carried out using loans from the Restoration Fund, the municipality of Breda and the Province. Another example is the *Dongecentrale* in Geertruidenberg, a former power station. The province and BOEi are aiming at redeveloping this factory and the accompanying buildings. Recently, the first restorations of several buildings have started. Large initial investments are needed to carry out this project. A revolving fund could help this project to proceed. At a first glance, both projects have yield potential, however this is more certain for the brewery than the old power plant. Both show market failure as the buildings both were vacant and the market was not willing to invest in the real estate. Both buildings are listed as cultural heritage. Transforming these buildings ensures the preservation of Dutch cultural heritage, boosts the local economy and reduces vacancy (societal objectives).

The brief exploration of eligible projects that comply with the three prerequisites of a revolving fund shows that there are various urban development projects that could be helped with a revolving fund for inner city development. This notion contributes to the support base for a revolving fund for inner city development as well.

9.3 Influence on the decision-making of real estate developers

As stated earlier in this thesis, the role of project developers is essential in the urban development process. According to Patsy Healey (1991), the project developer can be seen as 'the key coordinator and catalyst for development.' Their main expertise is to spot a development opportunity (location), to know what the market demands (product) and to make it happen (timing) (Adams & Tiesdell, 2012). According to Ross-Goobey (1992), developers orchestrate the development performance by bringing capital, labour and rights in land together to create the right product in the right place at the right time.

The influence on decision-making in theory

To be able to be the key coordinator and catalyst, to bring together location, product and timing or to orchestrate a real estate development project by bringing together capital, labour and rights in land, real estate developers employ decision-making. As indicated, their decision-making is mainly based on financial aspects (Ramselaar & Keeris, 2011), especially when they need to decide on investment opportunities. This is of vital importance in the assessment of the influence of revolving funds in inner city development on the decision-making of real estate developers. Since choices are largely based on financial aspects, the financial influence of revolving funds is dominant in developers' decision-making. As indicated throughout this thesis, a revolving fund employs financial instruments and thereby influences a project's business case. To use the definition of Adams and Tiesdell (2012) and Ross-Goobey (1992); when a real estate developer sees potential in a location (location/rights in land), knows what type of development experiences demand in that location (product), but cannot make it happen yet due to financing reasons (timing/capital), a revolving fund might just be the key in the success of that development. As Ramselaar and Keeris (2011) describe, the assessment framework of project developers is largely underlined by financial decision criteria. Since the use of a revolving fund for real estate developers is mainly a financial matter based on financial decision criteria (i.e. regarding financing, (financial) risk, financial return, etc.), the use of a revolving fund is an instrument real estate developers could get acquainted with rather easily. For instance, when a project that was initially unfeasible due to problems with regular financing now receives a loan from the revolving fund, the project may become feasible. A real estate developer could now decide to proceed with that project, whereas he would not consider that when a project is unfeasible. In that sense, the employment of a revolving fund in inner city development theoretically influences the decision-making of real estate developers.

The influence on decision-making in practice

As stated in the previous section, the support base for a revolving fund is apparent in the private sector. The interviews with Pike Fabriek, a real estate developer, and Jan Fokkema, director of NEPROM (the association of Dutch real estate development companies), both indicate a willingness of real estate developers to work with a revolving fund in inner city development. An important prerequisite is that the process must be quick and easy. If it involves a lengthy and complex process, real estate developers would not be willing to make use of a revolving fund. Additionally, the use of a revolving fund should not increase development risks and should not (largely) influence the predicted financial return of a development. Connecting the use of a revolving fund with societal benefits is logical, as Pike Fabriek mentioned the issues regarding the mid-priced residential market. Using a revolving fund to connect other issues or opportunities (e.g. sustainability goals, employment issues) with alternative financial resources for real estate development increases the support base for a revolving fund and therefore influences the decision-making of real estate developers further.

The confusing term "market conformity"

When the interest rates of revolving funds were discussed in the interviews and market challenge, the term "market conformity" was used quite regularly. However, this term provides confusion. How could one speak of interest rates that are conform market terms, but there is clear indication of market failure? One could state that in the case of market failure, any interest rate cannot be labelled "at market rate" as the market is not able to provide financing. When a revolving fund issues loans at "market rate", then there would be no market failure, since a regular commercial bank could also provide a loan at that same "market rate". What the interviewees and participants of the market challenge meant with interest rates at market terms is that a revolving fund may perceive risk differently than banks. When there is clear market failure and banks are not willing to provide financing due to the perceived risk profile, a revolving fund could fill this gap by providing a loan with an interest rate that resembles interest rates banks would issue with investment projects that are perceived to be less risky. When a project is risky, a bank may easily issue a loan with an interest rate of 10% or even 20%. A revolving fund, accepting the same risks but willing to finance due to other reasons (i.e. societal benefits), may issue a loan with an interest rate of say 4% or 5%. The consideration of a revolving fund is different from a solely financially-driven assessment, since societal benefits are weighed more.

Outcomes of the market challenge

One of the main issues regarding the influence of decision-making of developers relates to the long timespan of inner city development. The developers stated during the workshop that usually, the lead time of projects is crucial: when it is (too) long, rendering financing hard to obtain and/or expensive, developers decide not to undertake the development project. A revolving fund has the ability to be committed in a project for a longer period of time compared to other financiers, due to its different role perception: a commercial bank is yield-driven, whereas the revolving fund is mainly driven by its societal goals. Therefore, a revolving fund can opt to provide cheaper financing. The developers present during the market challenge indicated that certain projects with a longer lead time would become feasible for them to develop due to the intervention of the revolving fund, therefore influencing the decision-making of developers. An example was a larger inner city location with an initiative phase of three years, with reducing rental cash flows and other location specific risks. A loan with an interest rate of 9% is than too expensive to carry for three years. The business case becomes negative. When the revolving fund could provide a loan with an interest rate of 4% to 5%, the business case becomes positive. A second perceived advantage that may change the decision-making of developers is the distancing from political decision-making; a revolving fund is not directly related to the day-to-day politics, ensuring a higher degree of political commitment for a certain project than in regular circumstances. Providing clearer commitment is perceived by developers as more certainty, which positively influences the decision-making of developers. A third conclusion relates to the reluctance of banks in the early phases of a development project, where especially the smaller developers experience reluctance of banks to finance these projects. Due to the high perceived risks (e.g. LTV-related issues, no clear track record of the developer, etc.), financing usually is not obtainable. A revolving fund may set different conditions in that sense, which means that smaller developers (without a long track record) may now receive financing through the fund.

10. Conclusions and recommendations

This chapter provides the conclusions of this thesis and recommendations for further research.

10.1 Conclusions: Answering the main research question

In this section, all main conclusions of this thesis and the answer to the main research question are outlined.

1. Clear market failure is apparent

Based on the literature study, the interviews and the two market challenges of the 9th and 29the of June, a main conclusion is that particular inner city development projects experience market failure. The main causes of this market failure are:

- Time-span → projects usually have a very long lead-time, increasing the risk profile of the project leading to expensive or not obtainable financing which results in a negative business case.
- Complex ownership → In inner cities, land and real estate usually have various owners with different interests. This increases the risk profile, leading to expensive or unobtainable financing.
- Coupling of "bitter and better" → in some cases it would positively influence an overall business case when subprojects are bundled (*zoet-zuur benadering).* In that sense, the bitter subprojects (with a negative business case) could be compensated by the better subprojects (with a positive business case). However, due to the complex ownership problem this is not always possible, providing an additional barrier. Integral plans are perceived to be much less risky.
- Commitment → due to the long time-span of regular inner city development projects, durable political and market commitment is essential. However, political commitment is sometimes lost for example when a new council is elected. Also, market commitment may be reduced when interest in the area declines over time. The lack of consistent public vision and the competence level of municipalities was also mentioned regularly as a clear barrier.
- Phasing → financing is very hard to obtain from regular commercial banks when inner city development projects are still in the early (thus riskier) phases. When certain risks are eliminated, regular banks may want to finance the developer or investor. However, especially in these early phases, the developer or investor requires financing.

2. A revolving fund stimulates certain development projects

The case study shows that revolving funds successfully stimulate development projects in the built environment. By providing guarantees, loans, participations and strategic purchase of real estate, they stimulate development which would not have occurred without the intervention of a revolving fund. Three criteria always legitimate the intervention of a revolving fund:

1. Projects financed through a revolving fund must have a positive business case/yield potential.
2. The projects that acquire financing from a revolving fund set up by a governmental body (and thus funded by public financial resources) must achieve social benefits/goals.
3. There needs to be clear market failure: projects or companies must have trouble acquiring regular financing at the capital market.

A project may not be eligible to acquire regular financing from a commercial financier, yet have yield potential. This relates to the problems outlined in main conclusion 1: when a bank perceives the project to be too risky, especially in the early phases of the development, it usually decides not to provide financing. A revolving fund assesses a project differently (more societally-driven), thereby providing the ability of financing for these projects under acceptable conditions.

3. The conditions for a successful revolving fund for inner city development

Setting up a revolving fund is quite complex, since many choices and considerations need to be weighed. These considerations relate to the goal, the organisational structure, financial structure and type of projects of the revolving fund. Based on the case studies and market challenges, the conditions for a successful revolving fund are described. In terms of the goal, clear goals, targets and objectives should be defined to provide clarity for the target group of the revolving fund. The interests and goals of the responsible public body need to be clear and incorporated in the goals and objectives of the fund. The scope and approach

of the fund should however be adaptable, as circumstances change over-time. Reassessment and regular evaluation whether the revolving fund's goals and results are still in line with the policy goals is necessary. Related to the organisational structure, the main conclusion is that distancing the revolving fund from day-to-day political decision-making is essential. The personnel of the revolving fund should have well-developed competences (e.g. commercial/development, financial, technical, juridical, management competences). A solid governance structure is advisable which ensures the right allocation of resources from the fund to projects that contribute to the predefined goals and targets. A mandate structure that ensures enough autonomy for the revolving fund's director is essential, however it should be well-balanced: the fund management's autonomy and the steering ability of the shareholder should be well-balanced. The shareholder structure should be straightforward. Preferably, the revolving fund has one, or maybe two shareholders to keep things simple. The organisation should be kept flexible: when circumstances demand upscaling or downscaling, this should be possible. Regarding the financial structure, the investment strategy is leading; it incorporates the policy goals and provides the guidelines for the day-to-day operations of the revolving fund. Also here, adaptability is essential: changing circumstances in inner city development demand for a flexible approach. Evaluation and updating the investment strategy is therefore highly recommendable. The fund volume should initially be large enough to support for instance ten pilot projects. Scaling-up should be possible, which makes the use of predefined tranches of resources logical. The financial instruments and financial arrangements should be flexible; each project requires a different approach. Finally, in relation to the type of projects the revolving fund should focus on, there are two main types. The first relates to projects on the building/plot-level; in this case, the focus should be on financing through the revolving fund. The second relates to projects that are part of a larger inner city development area (urban area-level). In this case it could make sense to develop (a first) part of the development to unlock other developments in the area carried out by other developers. Furthermore, the projects that are stimulated should demonstrable contribute to the fund's predefined goals and objectives. The focus should therefore lie on inner city areas that experience vacancy, decay or other societally negative effects.

4. A preferred variant that fits best

Based on the conditions for a revolving fund, a preferred variant is established that fits best with the circumstances in inner city development (see figure 45). Note that the outlined preferred variant is based on perceived good practices of other revolving funds, interviews and the market challenges. It is therefore not a blueprint for a successful revolving fund in general. It is an operationalisation of the variant that fits best in the inner city development practice, based on the outcomes of the case study. The preferred variant has made the distinction between two types of projects it can stimulate in relation to the financial instruments it may apply: guarantees, financing and participation for projects on the building/plot-building and actual development where necessary to stimulate projects on the larger urban area level. Also, in the preferred variant, the choice regarding the operational level is made: the operational level that fits best is the provincial level or metropolitan region level. The main reasons are to have an adequate pipeline of projects, but the fund managers still need to know the state-of-play.

5. Political and market support is apparent

For a revolving fund to be useful, a clear support base is essential. Based on the interviews and market challenges, the conclusion is that both from a political and market perspective there is support for a revolving fund for inner city development. The political support base is mainly based on the idea that a revolving fund provides the ability to stimulate certain action through revolving instruments instead of a non-revolving subsidy. This means that policy goals can be achieved without granting subsidies, which involves higher costs. A revolving fund can be used complementary to existing subsidy instruments making overall public expenditure lower, while achieving the same public goals. This relates to the visible trend of the increased notion of public stewardship. Despite these positive factors, there is also the connotation that revolving funds are quite complex and difficult to set up. This leads to the perception that subsidies are much easier to issue compared to guarantees, loans, and participations, let alone actual development. A revolving fund demands more knowledge, competence and a larger organisation. The support from a market perspective is apparent as well. This, compared to a perceived low urgency to intervene in the real estate development market, leads to the perception that there is no high urgency on the central government level for (revolving funds for) inner city development. This urgency can be increased by coupling of other agenda's and programmes such as the energy transition issue, mobility, sustainability, etc.

Developers express a positive stance towards a revolving fund: when developers want to invest in certain projects that show yield potential but financing is not available, a revolving fund might fill this gap. However, the developers in the interviews and market challenges put forward several important conditions they think are essential for a revolving fund to be an interesting instrument for them:

- Prolonged timeframe → the fund should be committed for a longer period of time
- Market conformity → in prolonged processes, the interest rate should be affordable
- Customization → due to the complex nature, (financial) customization is essential
- Do not act like a bank → be more flexible in regard to the application criteria
- Clear goals and objectives → Be clear but not too limited in regard to the fund's goals
- Distanced → independent of political decision-making, long-term commitment
- Autonomy of fund manager → Fund manager should be free in day-to-day operations
- Critical mass fund volume → fund volume should be enough to take on ten projects
- Not every project will succeed → Some plots or areas will remain undeveloped

6. The influence of a revolving fund on real estate developer's decision-making

The influence a revolving fund has on the decision-making of real estate developers can be viewed from a theoretical perspective and a practical perspective. Theoretically speaking, the role of real estate developers is to bring together capital, labour and rights in land to create the right product in the right place at the right time. Decision-making lies at the heart of this process. Real estate developers' choices are largely based on financial decision criteria. Revolving funds mainly influence the financial feasibility of projects, therefore dominantly impacting developers' decision-making. Also from a practical perspective, the conclusion is that a revolving fund would directly influence the decision-making of real estate developers. Especially the interviews with Pike Fabriek and Jan Fokkema, and the market challenges of the 9th and 29th of June underline this conclusion, as a willingness of real estate developers to work with a revolving fund for inner city development is apparent. The interviewees and participants of the market challenges put forward several prerequisites. The process of acquiring a loan should be quick and provide certainty. It should not (largely) influence the predicted financial yield of the development, relating to the costs (i.e. interest rate) of acquiring a loan. Also, risk-reduction due to the possibility of a revolving fund regarding co-financing is rather interesting; when a revolving fund employs a subordinated loan for example, regular commercial banks are more willing to finance a project since their default risk is largely reduced through the intervention of the revolving fund. This influences the decision-making of developers, since financing a project becomes easier this way. Another important issue is the time-span of inner city development projects, which forms a great barrier. The employment of a revolving fund helps to diminish this barrier since the revolving fund has the ability to be committed to a project with a lower interest rate for a longer period of time compared to commercial financiers. A prerequisite is that the interest rate is around 4% or 5%, which makes it possible for developers to carry this loan for a longer period. The developers present during the market challenge indicated that certain projects with a longer lead time would become feasible for them to develop due to the intervention of the revolving fund, therefore influencing the decision-making of real estate developers. Another important aspect for real estate developers is the distancing of a revolving fund from the responsible public body. This relates to commitment also, as a revolving fund that is distanced from political decision-making is more attractive for real estate developers. The revolving fund provides more political commitment than in regular circumstances with day-to-day politics. The goals and objectives of a revolving fund are defined for a longer period of time. A final conclusion is that a revolving fund may stimulate certain projects in the earlier phases, whereas commercial banks are not willing to finance due to various risks, such as LTV-risks (current state of land and buildings is too low compared to the needed resources to carry out the transformation), track record risks, land-use plan risks, etc. This influences the decision-making of real estate developers that do not have the resources to finance projects themselves in the earlier phases and need borrowed capital.

How could a revolving instrument stimulate inner city development and how does this influence the decision-making of project developers in inner city development projects?

Since all nine research questions are answered in this thesis, the main research question can now be answered. The question is build up in two components. The first relates to how a revolving instrument could stimulate inner city development. The short answer is by setting up a legal entity or reserving financial resources within a governmental body that can employ financial instruments that influence inner city development. The longer answer is that the variant study shows many different ways of structuring a

revolving instrument. The variation lies in the six main structuring elements: goal focus, goal limitation, distance to governmental body, organisation size, risk acceptance and steering ability. This indicates that there are many ways of stimulating inner city development through the use of a revolving instrument. The variant study has presented a preferred variant, which is structured as a revolving fund, founded as a separate legal entity that can employ guarantees, loans and participations in case of development projects on the building/plot-level. In case of larger-scale projects on the urban level, the entity may develop independently to unlock further development by other actors. The case study and specifically the market challenges show that real estate developers are willing to make use of revolving fund under certain conditions, described in main conclusion three. Therefore, the financially driven decision-making of real estate developers is influenced by a revolving fund through the employment of financial instruments making certain developments feasible that were initially unfeasible.

10.2 Recommendations for further research

1. Unlawful State Aid
In the literature related to revolving instruments and the interviews with professionals, the issue of unlawful state aid has been mentioned several times. Unlawful State aid occurs when support is granted by the government or paid for by governmental resources, the support offers an economical advantage to companies which they could not obtain through regular, commercial measures, the advantage is selective, which means that it only benefits certain companies, the advantage falsifies or threatens to falsify competition, and the advantage has a (potential) influence on inter-state trade. Researching the implications of unlawful state aid would be of added value in relation to the employment of revolving instruments.

2. Eligible projects
This thesis has focussed in broad lines on what type of project could be benefitted by a revolving fund, mainly in terms of phasing and financing issues. However, further research is necessary to define casuistry in the Netherlands. When an overview of inner city development projects is established that can be helped with revolving instruments, the vintage-approach can be employed to define an informed approach of the actual setting up of revolving funds for inner city development in The Netherlands.

3. Complementary instruments
It is wishful thinking that one planning instrument might solve all problems related to inner city development. Planning instruments can stimulate the process, but certain prerequisites will always be necessary. As indicated by various research (e.g. Rebel, Fakton), employing complementary instruments leads to more stimulation than employing one instrument. Therefore, it would be valuable to research what type of instrument might be useful to complement the employment of revolving instruments.

4. Scientific research on revolving funds
During the research for this thesis, it became clear that there is a void in the scientific literature related to revolving instruments. Most knowledge is captured in the form of practical knowledge of professionals. It would be of added value to enlarge the body of scientific literature regarding revolving funds.

5. Consideration employment of financial instruments under public vs. private law
The employment of financial instruments from a revolving fund can be either structured under public law (mainly *art. 4:21 Algemene wet bestuursrecht*) or under private law agreements. Further research could demonstrate the pros and cons for each approach. It has implications for the legal agreements and it may have implications for the fund's (financial) organisation. Therefore, further research would be of added value.

6. Initial funding of revolving funds and coupling of agenda's
What is shortly described in this thesis is the question who will fill revolving funds for inner city development. The thesis has shown high potential for the instrument in the urban development practice, but has not fully investigated who could provide the initial funding. Is this the central government? Do Provinces see a role for themselves or maybe the municipalities? Further research is necessary to uncover this. Additionaly, the question whether it would help to couple agenda's and programs (for instance sustainability, infrastructure, energy transition, etc.) is a very pressing one. This is suggested regularly in the market challenges and in other settings. Further research should uncover what the possibilities are and whether for instance Invest-NL could be considered as a potential source for the initial funding of revolving funds for inner city development.

11. Reflection and discussion

In this reflection, the broader implications of the use of a revolving fund in inner city development and this thesis' relevance is discussed, followed by a short discussion regarding the research of this thesis.

11.1 Reflection

Introducing a revolving fund in the inner city development practice has implications and consequences, since the intervention of a revolving fund influences the 'regional ecosystem'[16] in which it operates.

1. Multiple-role perception for public actors
Public actors definenand enforce policy. Through the employment of rather complex instruments like a revolving fund, this role perception changes. The general connotation is that certain actions should always be carried out by "the market" and not by public authorities. These actions usually relate to the stewardship of public resources. For instance, the traditional view is that a Dutch Province should not be involved in stimulating certain developments by actively operating in the development practice. The Province should focus on defining and enforcing policy that stimulates and facilitates market actors. However, the perception is that this role seems to be slowly changing; for instance in the case of market failure, a multiple role perception of public actors is more logical to achieve predefined policy goals. Verheul et al. (2017) indicate a role perception with four roles: steering, regulating, stimulating and facilitating. Setting up a revolving fund fits in this connotation of a multiple-role perception.

2. Expertise and knowledge is needed
By employing a multiple-role perception, additional expertise and knowledge is needed. As indicated in this thesis, the employment of a revolving fund requires business case knowledge to assess whether a certain project has a positive or negative business case. The current knowledge level is perceived to be not sufficient. A wide array of instruments in regard to each of the four roles is available to achieve policy goals. However, the overall perception is that for instance municipalities and Provinces are not sufficiently equipped to employ and fully understand these various instruments. Additional expertise and knowledge is needed to improve the operations of public bodies in this sense. Verheul et al. (2017) indicate that for instance municipalities are not sufficiently equipped and propose room for experimenting, knowledge-sharing and gaining experience.

3. Reduced steering-ability by distancing a revolving fund?
Distancing a revolving fund from the respective public body provides several advantages. However, putting public resources in a separate legal entity may be experienced as a diminishing steering-ability for the respective public body regarding these resources. Therefore, there might be aversion to the distancing of resources in a separate legal entity. How do we know that the fund manager will attract the right projects? Is the policy with the relevant societal goals still the main reason to employ public resources? To ensure this, the investment strategy, predefined goals and targets and frequent periodical evaluation are essential.

4. Redundancy of civil servants
Current subsidy programs established by the public bodies are run by civil servants. When a revolving fund is successfully established, the number of issued subsidies will decline. This means that subsidy programs will receive less applications for financial stimulation, resulting in a redundancy of civil servants who currently assess and process the subsidy applications. The revolving fund as a legal entity requires personnel, adding new jobs to the market, but the subsidy programs will shrink in terms of job positions.

5. Large location differences
The employment of a revolving fund largely depends on the state-of-play in the local/regional market. When market pressure is high, a revolving fund in general is unnecessary, since demand and yields are high, resulting in positive business cases. For instance, the cities of Amsterdam and Utrecht experience extremely high market pressure at the moment, rendering a revolving fund for inner city development rather unnecessary. However, even within these cities there are large differences in areas and neighbourhoods. Certain areas experience difficulties regarding inner city development. A revolving fund might stimulate

[16] According to Edwin Netjes, the regional ecosystem relates to the system of relevant actors, programs and organisations in which a revolving fund operates.

development in these locations as well. On the other side of the spectrum, there are shrinking rural regions such as De Achterhoek and the North of Groningen. These areas experience virtually no market pressure as studies show that residents are leaving these areas. A revolving fund for inner city development is virtually useless here, as business cases are generally negative. The locations that are in the middle of the spectrum are benefitted most with a revolving fund for inner city development, since market pressure and demand for dwellings is apparent but not extremely high. Business cases show yield potential, but risks are still high, especially in the early phases. Here, a revolving fund is of high added value.

6. Positive externalities
The employment of public resources through a revolving fund brings about positive externalities. By showing commitment, other financiers and investors are more encouraged to co-finance and invest (financial multiplier) and other developers are encouraged to develop in the area as well (spatial multiplier). The question remains how high these multipliers are but clearly, the setting up of a revolving fund leads to positive externalities. Developing or transforming run-down areas in inner cities leads to welfare and societal effects, such as increased agglomeration effects, a better and more efficient use of existing public transport infrastructure, reduced commuter traffic, preservation of greenfield locations, and reuse of existing real estate. This leads to spatial, economical and socio-cultural improvements (see: Verheul et al., 2017).

7. Increasing support base by coupling of trends
As indicated in this thesis, the support base for a revolving fund for inner city development is apparent, both from a political and market point of view. However, the instrument remains a rather unfamiliar phenomenon and inner city development remains not rather high on the political agenda in The Hague. To increase the urgency and acceptance of a revolving fund for inner city development, a coupling with other trends and initiatives could be established. For instance, connecting the issues of inner city development in the residential sector with the energy transition issue and with increasing the sustainability of existing dwellings, results in higher urgency and increased support.

8. Lobby for ISV 2.0
As stated in this thesis, several researchers, interest groups and companies steer towards a revival of a large subsidy instrument for inner city development. Verheul et al. (2017) conclude that targeted public investment remains necessary. It is unclear whether this type of subsidy will return. A revolving fund for inner city development stimulates certain projects that comply with the prerequisites; however, this will not result in the same effect as a large subsidy program along the lines of the traditional ISV. Therefore, it will have a smaller impact. However, it remains an instrument that does stimulate certain projects without resorting in extremely high public spending by granting large subsidies for each dwelling that is developed.

9. Mismatch between the "Wall of Money" and the available projects
Now that the crisis is over, the sector is speaking of a "Wall of Money", readily available to be invested in real estate projects. However, the money does not find its way to the right projects. One would expect that dwelling production would increase tremendously, now that capital is abundantly available but this is not the case. One of the issues is that (municipal) development plans are not regularly updated, they do not involve an integral plan, and they do not comply with the current demand. For instance, demanding a that a plan includes 30% of social rental dwellings may not be logical when a neighbouring area already consists of a high level of social rental dwellings. This results in a mismatch between the "Wall of Money" and development plans. Well-conceived, integral plans find the needed resources more easily.

10. Overcoming the barriers
This thesis has outlined the experienced barriers in real estate development in the residential sector. In essence, the barriers are threefold (Verheul et al., 2017): I) juridical; procedures are long and complex, national rules and regional rules apply and may frustrate development. II) managerial and organisational; unclear or absent spatial vision, uncertain political commitment due to four-year election system, insufficient knowledge and expertise. III) Financial; high land development costs, high costs due to speculation, high land costs lead to dense programming which is not always in line with the residential demand, uncertain yields for investors. A revolving fund will not overcome all these barriers, but helps decreasing these barriers, mainly on financial aspects and to a lesser extent managerial and organisational aspects as well.

Scientific and societal relevance

This thesis relates to a topic that represents scientific relevance in the sense that revolving instruments can be seen as a planning instrument that might be employed by (public) actors. Scientific literature however is not abundantly available resulting in a scientific knowledge gap. This thesis contributes to the closing of this gap. Another important issue is the nationwide debate on the mismatch between supply and demand in the residential sector and the growing number of households in the Netherlands. This thesis has linked the two dominant ways of thinking with research and Highest and Best Use (HBU) theory with the related bid-rent curve. Additionally, this thesis adds to the understanding of the rather new phenomenon of revolving instruments in the body of knowledge regarding urban area development through a comparative case study. The contribution to the UDM practice and the description of a viable alternative for subsidies is of scientific relevance.

Societal relevance is clearly apparent in this thesis, as it involves a topic that is directly relevant for society. It relates to the mismatch between supply and demand in the residential sector, a phenomenon house buyers are confronted with, especially in (local) markets such as Amsterdam, Haarlem and Utrecht. If revolving instruments lead to more development, supply will increase and house prices will eventually drop. Additionally, contributing to the knowledge of revolving instruments and depicting the good and bad practices of existing revolving funds, actors that are currently exploring the possibilities of revolving instruments have a document to consult which show what is already happening in practice. Additionally, if a revolving instrument focussed on inner city development would be employed, certain areas that are currently deteriorating could be transformed to better living environments. It would also increase employment opportunities, sustainability and promote economic development in these areas.

Reliability and validity of the results

Bryman (2012, p. 390) describes four aspects regarding reliability and validity of qualitative research. *External reliability*, which relates to the replicability of the research. This thesis is fairly replicable due to the clear, straightforward research design. However, an important issue is the “freezing” of the setting that is researched from external circumstances, which is a difficult criterion to meet in qualitative research. One of the strategies to increase the replicability is to adopt a similar role as that of the initial researcher. It is therefore assumed that this thesis has a fairly high external reliability. *Internal reliability,* which relates to the degree to which members of a research team agree with each other about what they hear and see. This is not relevant to this thesis, as it concerns individual research. However, the preliminary results of the thesis have been discussed with several other professionals and the results were in line with what they have encountered in their practice. This indicates a relatively high internal reliability. *Internal validity,* which relates to the congruence between (theoretical) concepts/ideas that are developed during the research and observations. If there is a good match, the internal validity is high. In this thesis, important concepts have been defined and redefined during the case study which have been translated to a second analysis framework. This framework has been extremely helpful and the concepts/ideas proposed in the framework were clearly visible and recognizable by the interviewees during the case study. This demonstrates that the internal validity is high. *External validity,* which relates to the possibility to generalize the findings across different settings. This type of validity is usually a problem for qualitative research due to the tendency to employ case studies and small samples. This is also the case for this thesis, as a comparative case study has been employed. It is hard to determine whether the findings can be generalized and whether they are transferable to other settings. When employing a case study a particular phenomenon is analysed in its real-life context (see Robson, 2002), which is the case in this thesis. Therefore, the external validity cannot be defined clearly for this research.

11.2 Discussion

This section of the reflection includes a final discussion in terms of the overall approach of the thesis, with a short elaboration on the good and bad aspects of the research.

The initial approach with the selection of research methods, the objective and final product, the problem analysis and research questions provided no issues. One part of the research that provided issues was the case selection. The selection criteria that were formed have proven to be slightly too broad. Initially, four cases were selected, one of which was the Business Improvement District. This case has been deselected during the research. The main reason was that this instrument is mainly a private-led matter; public actors

are usually not as involved as initially anticipated. Therefore, the BID was not a representative/exemplary case that would significantly contribute to the rationale behind the preferred variant of a revolving instrument. Another aspect related to the case selection that was not preconceived was the variance in financial arrangements of the existing funds. The National Restoration Fund has the ability to issue sub-commercial loans due to a governmental guarantee, which is a unique situation. Therefore, many aspects of the Restoration Fund case are useful but the financial arrangements are less translatable to a revolving instrument for inner city development.

Another very important aspect during the case analysis was the analysis framework. Initially, the framework was focussed on three aspects: actors, fund characteristic's and a case example. During the first case study (regarding SOFIE), this initial framework was used to structure the analysis. However, the framework resulted in a mostly descriptive analysis, without focussing on the essential aspects of a revolving instrument. A new analysis framework was set up which was used to restructure the SOFIE case and which was used to structure the other case studies. This framework provided a structure which was less descriptive and more focussed on the good and bad practices of essential elements of a revolving instrument. The use of the second framework helped to structure not only the analysis but also the conclusions and setting up the variants/preferred variant. This process is recognized by Bryman (2012, p. 384) in his description of the main steps of qualitative research. In these steps, an iterative process is visible relating to the interpretation of the initial data, setting up a conceptual and theoretical framework, tighter specification of the initial research questions and collection of further data. These steps are iterative, something clearly recognizable in this thesis resulting in a renewed analysis framework.

A definition of (pilot) projects that could be stimulated with a revolving fund would have strengthened this thesis further. In chapter 9, a short indication is provided of potential projects that meet the three main criteria for a revolving use of resources. A further elaboration on casuistry is advisable to further define the need for a revolving fund for inner city development.

The issue of unlawful state aid is important when employing public resources. Based on the interviews with professionals and the case study examples, it is not an issue if thorough research is carried out before setting up a legal entity, and if interest rates at market rate are used. However, this is an aspect that needs further research to fully conclude that unlawful state aid does not provide a barrier in the use of a revolving instrument for inner city development.

12. References

Adams, D., & Tiesdell, S. (2012). *Shaping places: urban planning, design and development*: Routledge.

Baud, I., Denis, E., Pfeffer, K., Sydenstricker-Neto, J., Scott, D., Sutherland, C., . . . Richter, C. (2014). Mapping City Visions: Integrating Mega-projects in Urban Development.

Becker, S. O., Egger, P. H., & Von Ehrlich, M. (2010). Going NUTS: The effect of EU Structural Funds on regional performance. *Journal of Public Economics, 94*(9), 578-590.

Beerlage, P., de Graaf, B., & Hamdi, A. (2010). Ontwikkelingsmaatschappij Provincie Utrecht. In *Businessplan*. Rotterdam: Ecorys.

BHB BV. (2008). Kennisbundel herstructurering van bedrijventerreinen. In N. V. B. O. Maatschappij (Ed.). Tilburg: N.V. Brabantse Ontwikkelings Maatschappij.

Bierenbroodspot-Rudolph, J. (1984). Nationaal restauratiefonds. *Heemschut: tijdschrift van de bond Heemschut, 61*(6), 111-112.

Boelman, A., Visscher, P. B., Sassen, N., & Vlek, P. (2016). *Rotterdam en Den Haag in stedelijke transitie*. Rotterdam.

Breuer, W., & Brueser, D. (2012). The DMI Approach for Urban Development Funding.

Briffault, R. (1999). A government for our time? Business improvement districts and urban governance. *Columbia Law Review*, 365-477.

Brink. (2017). De reële transformatiepotentie in bestaand bebouwd gebied. In. Rotterdam: Brink Managment/Advies.

Bryman, A. (2012). *Social research methods*: OUP Oxford.

Buijze, A. (2014). Mogelijke vormen van regulering bij gebiedsontwikkeling.

Buitelaar, E., & Bregman, A. (2016). Dutch land development institutions in the face of crisis: trembling pillars in the planners' paradise. *European Planning Studies, 24*(7), 1281-1294.

Daamen, T. (2010). *Strategy as Force: Towards Effective Strategies for Urban Development Projects: The Case of Rotterdam City Ports*: IOS Press.

De Zeeuw, F. (2012). Binnenstedelijk ontwikkelen moet op alle fronten anders. *Real Estate Magazine,(80) 2012*.

De Zeeuw, F. (2014). Trendbreuk in het nationaal ruimtelijk beleid? *Rooilijn: tijdschrift voor wetenschap en beleid in de ruimtelijke ordening, 47 (1), 2014; auteursversie*.

Dekker, E., Bongers, K., Holt, D., & Krikke, B. (2016). Revolverend instrumentarium SteenGoed Benutten. In. Rotterdam: Rebel Strategy & Finance.

Dijsselbloem, J. R. V. A. (2014). Aanbiedingsbrief bij overzicht van besteding rijkssubsidies per ministerie. In. Den Haag: Ministerie van Financiën.

Dubbeling, D. (2014). In de stad bouwen of daarbuiten? Exploitatieverschil woningbouw inzichtelijk gemaakt. *Bouwmarkt 54 (5), 8-9.(2014)*.

Dąbrowski, M. (2014). Engineering multilevel governance? Joint European Support for Sustainable Investment in City Areas (JESSICA) and the involvement of private and financial actors in urban development policy. *Regional Studies, 48*(12), 2006-2019.

Elkington, J. (1997). Cannibals with forks. *The triple bottom line of 21st century*.

European Commission. (2014a, 15-10-2014). European Regional Development Fund. Retrieved from ec.europa.eu/regional_policy/en/funding/erdf

European Commission. (2014b). Integrated Territorial Investment, Cohesion Policy 2014-2020. In.

European Commission. (2014c, 15 October 2014). JESSICA : Joint European Support for Sustainable Investment in City Areas. Retrieved from http://ec.europa.eu/regional_policy/nl/funding/special-support-instruments/jessica/ - 7

European Commission. (2014d). JESSICA: Joint European Support for Sustainable Investment in City Areas. Retrieved from ec.europa.eu/regional_policy/en/funding/special-support-instruments/jessica/#1

European Commission. (2016). Regional Policy. Retrieved from ec.europa.eu/regional_policy/en/policy/themes/urban-development

European Commission. (2017). European strucutral and investment funds. Retrieved from cohesiondata.ec.europa.eu/funds/erdf#

European Commission, & European Investment Bank. (2012). JESSICA, UDF Handbook. In: European Commission.

Franzen, A., Ten Have, F., Uitzetter, D., & De Zeeuw, F. (2017). #trackchanges. In *Veranderingen in de waardeketen van gebiedsontwikkeling*: TU Delft, Deloitte en BPD.

Friedmann, J., & Sanyal, B. (2005). Planning cultures in transition. *Comparative planning cultures*, 29-44.

Geltner, D., Miller, N. G., Clayton, J., & Eichholtz, P. (2001). *Commercial real estate analysis and investments* (Vol. 1): South-western Cincinnati, OH.

Gross, J. S. (2008). Business improvement districts in New York City's low-and high-income neighborhoods. *PUBLIC ADMINISTRATION AND PUBLIC POLICY-NEW YORK-, 145*, 221.

Gross, J. S. (2013). Business improvement districts in New York:. In *The private sector in public service or the public sector privatized?* New York: Urban Research & Practice.

Havenaar, J. (2010). Provincie pakt bedrijventerreinen aan met ‘OntwikkelingsMaatschappij Utrecht’. In. Utrecht: Provincie Utrecht.

Healey, P. (1991). Models of the development process: a review. *Journal of property research, 8*(3), 219-238.

Henneberry, J., Lange, E., Moore, S., Morgan, E., & Zhao, N. (2011). Physical-financial modelling as an aid to developer’s decision-making. *Urban Design in the Real Estate Development Process, Wiley-Blackwell, Chichester*, 219-235.

Heurkens, E. (2012). *Private Sector-led Urban Development Projects: Management, partnerships and effects in the Netherlands and the UK* (Vol. 4): TU Delft.

Heurkens, E., Adams, D., & Hobma, F. (2015). Planners as market actors: the role of local planning authorities in the UK's urban regeneration practice. *Town Planning Review, 86*(6), 625-650.

Heurkens, E., & Hobma, F. (2014). Private sector-led urban development projects: comparative insights from planning practices in the Netherlands and the UK. *Planning Practice and Research, 29*(4), 350-369.

Hobma, F. (2011). *Constitutional and administrative law comments on public-private partnerships in urban development: Experiences from the Netherlands.* Paper presented at the 5th Conference of the International Academic Association on Planning, Law and Property Rights, PLPR, Alberta, Canada, 25-28 May 2011.

Hobma, F. (2014). Internationale vergelijking financiering en kostenverhaal bij organische gebiedsontwikkeling. In: TU Delft

Hobma, F., & Jong, P. (2015). *Planning and Development Law in the Netherlands. An Introduction*: Instituut voor Bouwrecht.

Holt, D., Van Ginkel, J., Van Aart, L., & Van Den Bungelaar, W. (2013). Praktijkervaringen met Revolverende Fondsen (mede op basis van EFRO). In *Antwoorden op veelgestelde vragen*. Rotterdam: Ecorys and ERAC.

Hoyt, L., & Gopal-Agge, D. (2007). The business improvement district model: A balanced review of contemporary debates. *Geography Compass, 1*(4), 946-958.

Hübner, D., Maystadt, P., & Alomar, R. (2006). *Memorandum of Understanding*. Brussels.

Jong, M. d. (2006). *Woningcorporaties: van insitutie naar vastgoedfonds.* Tias Business School, Eindhoven.

Jonge, H. d. (2007). Gebiedsontwikkeling voor een kenniseconomie. *Real Estate Magazine, 50,* 12-15.

Kalvet, T., Vanags, A., & Maniokas, K. (2012). Financial engineering instruments: the way forward for cohesion policy support? Recent experience from the Baltic states. *Baltic Journal of Economics, 12*(1), 5-22.

Kansen voor West II. (2015). Samenvatting Operationeel Programma Kansen voor West II. In. Rotterdam: Gemeente Rotterdam.

Kelle, U., Bryant, A., & Charmaz, K. (2010). The development of categories: Different approaches in grounded theory. *The Sage handbook of grounded theory*, 191-213.

Koning, N. (2015). *Van leegstand naar leven: Een ander woon en leefmilieu voor de Nederlandse binnenstad.* TU Delft, Delft University of Technology,

Korthals Altes, W. (2013). Grondbeleid: dienend of bepalend? *VHV Bulletin, 40 (3), 2013*.

Krabben, E. v. d., Lenferink, S., Martens, K., Portier, J., & Stoep, H. v. d. (2013). Onderzoek innovaties bij integrale gebiedsontwikkeling en knooppuntontwikkeling. *Arnhem: De Stadsregio*.

Kreuz, C., & Nadler, M. (2011). UDF typologies and governance structures in the context of JESSICA implementation. *Brussels: DG REGIO*.

Leanza, E. (2012). JESSICA operational aspects Progress update & challenges ahead. In. Brussels: European Commission.

Leydesdorff, L., & Etzkowitz, H. (1998). Triple Helix of innovation. *Science and Public Policy, 25*(6), 358-364.

Loozeman, L., Gans, K., Groeneveld, A., & Ros, S. (2016). Vergelijkend rapport omgevingswet. In. Haarlem: Gemeente Haarlem & G32-stedennetwerk.

Mackaaij, R., & Nozeman, E. (2014). Projectfinanciering in crisistijd. In *Verkenning van de rol van alternatieve financieringsbronnen op de Nederlandse vastgoedontwikkelingsmarkt.* Amsterdam: ASRE Research Center.

Manifest binnenstedelijke transformaties. (2017). *Manifest binnenstedelijke transformaties*. Retrieved from https://www.gebiedsontwikkeling.nu/artikelen/manifest-binnenstedelijke-gebiedstransformaties-aangeboden/

Meulen, G. v. d., Mulder, M., Verwoerd, F., & Willems, J. (2013). Kostenverschil binnenstedelijk bouwen en bouwen op uitleglocaties in Noord-Holland. In. Amsterdam: Economisch Instituut voor de Bouw.

Michie, R., & Wishlade, F. (2011). Between Scylla and Charybdis: Navigating financial engineering instruments through Structural Fund and State aid requirements. *IQ-Net Thematic Paper*(29), 2.

Millington, A. (2000). Risk and Uncertainty, and Risk control. *Property Development, EG Books, London*.

Mulder, M., Saitua, R., Schep, E., & Verwoerd, F. (2014). Verkenning woningbouwprogrammering Regio Amersfoort. In. Amsterdam: Economisch Instituut voor de Bouw.

Munter, T. (2014). Revolverende fondsen bij herstructurering bedrijventerreinen. In *Een financiële kijk op herstructureringsmaatschappijen*. Amsterdam: Amsterdam School of Real Estate.

Nationaal Restauratiefonds. (2015). 30 jaar kennis en ervaring. Jaarverslag 2015 Nationaal Restauratiefonds. In. Hoevelaken: Nationaal Restauratiefonds.

Netwerk Zuidelijke Randstad. (2015). MIRT-Onderzoek stimuleren stedelijk wonen.

Nooijer, Y. d. (2010). *Op pad naar de verzakelijking tot duurzame bedrijventerreinen: Meer private betrokkenheid bij de herontwikkeling van bedrijventerreinen om tot duurzame bedrijventerreinen te komen.* TU Delft, Delft University of Technology,

NV BOM. (2004). Ondernemingsplan BOM Bedrijventerreinen. In. Tilburg: NV Brabantse Ontwikkelings Maatschappij.

NV BOM. (2013). Jaarbericht 2012. In. Tilburg: N.V. Brabantse Ontwikkelings Maatschappij,.

NV HMO. (n.d.). Projecten. Retrieved from http://www.hmo.nl/projecten/

NV OMU. (2013). Doelstelling en werkwijze N.V. Ontwikkelingsmaatschappij Utrecht. In. Utrecht: NV OMU.

NV OMU. (2015). Participatiecriteria. In *N.V. Ontwikkelingsmaatschappij Utrecht*. Utrecht: NV OMU.

NV OMU. (2016). Mogelijkheden en werkwijze ontwikkelingsmaatschappij utrecht. In. Utrecht: NV OMU.

NV OMU. (2017a). Onze missie. Retrieved from http://www.nvomu.nl/over-omu/onze-missie/

NV OMU. (2017b). Onze projecten. Retrieved from www.nvomu.nl/projecten

OECD. (2015). Entrepreneurship at a Glance 2015. In. Paris: OECD.

Ondernemersplein. (2016). Regionale Ontwikkelingsmaatschappijen. Retrieved from http://www.ondernemersplein.nl/ondernemen/geldzaken/geld-voor-uw-onderneming/info-en-advies/externe-financiering/009a-regionale-ontwikkelingsmaatschappijen/

Ouden, W. d., & Brink, J. v. d. (2016). De subsidie nieuwe stijl. Publiek geld verplicht? *Nederlands Juristenblad, 91*, 10.

Ouwehand, A., & Rohde, W. (2015). Toekomst van sociale huisvesting; voortgaande discussie in woord en daad. *article*.

Panjer, M., Aart, L. v., Bungelaar, W. v. d., & Smeets, R. (2016). Ex ante assessment deel I, FRED II. In. 's-Hertogenbosch: European and Regional Affairs Consultants B.V.

PBL. (2015). De stad in trek. Retrieved from http://www.pbl.nl/infographic/de-stad-in-trek

Peek, G.-J. (2012). *Investeren in gebiedsontwikkeling nieuwe stijl: Handreikingen voor samenwerking en verdienmodellen*: Ministerie van Infrastructuur en Milieu.

Priemus, H. (2003). Wederopstanding van de stad op de nationale beleidsagenda. *ICES, stad & infrastructuur*, 7.

Provincie Noord-Brabant. (2005). Statenvoorstel 34/05 A. In *Oprichting Brabantse Herstructureringsmaatschappij Bedrijventerreinen*. 's-Hertogenbosch: Provincie Noord-Brabant.

Provincie Noord-Brabant. (2011). Begroting 2012. In. 's-Hertogenbosch: Provincie Noord-Brabant.

Provincie Noord-Brabant. (2012). Statenvoorstel 71/12 A. In *Aanpassing organisatiestructuur N.V. Babantse Ontwikkelingsmaatschappij (BOM)*. 's-Hertogenbosch: Provincie Noord-Brabant,.

Provincie Overijssel. (2008). Statenvoorstel nr. PS/2008/270. In *Aanpak beleidsintensivering herstructurering, voortgang project Vitale Bedrijventerreinen*. Zwolle: Province Overijssel.

Provincie Overijssel. (2016). Statenvoorstel nr. PS/2016/763. In *Verbreding opdracht Herstructureringsmaatschappij Bedrijventerreinen Overijssel NV*. Zwolle: Provincie Overijssel.

PWC. (2010). JESSICA, Holding Fund Handbook. In. Sint-Stevens-Woluwe: EIB.

Ramselaar, A., & Keeris, W. (2011). Een beslissingsondersteunend model bij projectontwikkeling: Voor investeringsselectie, monitoring en evaluatie. *Real Estate Magazine,(Special), 2011*.

Rebel Group. (2016). MIRT-onderzoek financiële arrangementen bij complexe transformatieopgaven. In: Rebel Group.

Restauratiefonds. (n.d.-a). Restauratiefonds-hypotheek. Retrieved from https://www.restauratiefonds.nl/monumenteigenaren/financieringen/restauratiefonds-hypotheek

Restauratiefonds. (n.d.-b, n.d.). Revolving Fund. Retrieved from https://www.restauratiefonds.nl/over-ons/organisatie/revolving-fund

Ritsema van Eck, J., van Dam, F., De Groot, C., & De Jong, A. (2013). Demografische ontwikkelingen 2010-2040. Ruimtelijke effecten en regionale diversiteit. *Planbureau voor de Leefomgeving PBL, Den Haag. TRACY Consortium (2013a). Work package, 4*.

Robson, C. (2002). Real world research. 2nd. *Edition. Blackwell Publishing. Malden*.

Rooijen, C. v. (2016). *De Omgevingswet: gericht op wat mag en niet op wat niet mag.*

Root, L., Krabben, E. v. d., & Spit, T. (2015). Between structures and norms: assessing tax increment financing for the Dutch spatial planning toolkit. *Town Planning Review, 86*(3), 325-349.

Ross-Goobey, A. (1992). Bricks and Mortals. *Century Business, London*.

Saaty, T. L. (1990). *Decision making for leaders: the analytic hierarchy process for decisions in a complex world*: RWS publications.

Sanyal, B. (2005). *Comparative planning cultures*: Routledge.

Schaar, J. v. d. (2005). Over rollen van partijen in de stedelijke vernieuwing. *Amsterdam: RIGO Research en Advies*.

Schumpeter, J. A. (2013). *Capitalism, socialism and democracy*: Routledge.

Smit, J., Gijp, P. v. d., Boer, M., & Schrieken, B. J. (2015). De 10 succesfactoren van 30 Restauratiefonds. In *30 jaar revolverend financieren*. Amersfoort: Restauratiefonds

Sorel, N., Tennekes, J., & Galle, M. (2014). *Bekostiging van publieke voorzieningen bij organische gebiedsontwikkeling*: Planbureau voor de Leefomgeving.

Spenkelink, S., & Willigenburg, A. K. (2016). Revolverende fondsen. In *Onderzoeksplan*. Deventer: Rekenkamer Oost-Nederland.

Spenkelink, S., & Willigenburg, A. K. (2017a). Provinciaal geld op afstand. In *Een onderzoek naar de Gelderse revolverende fondsen*. Deventer: Rekenkamer Oost-Nederland.

Spenkelink, S., & Willigenburg, A. K. (2017b). Provinciaal geld op afstand. In *Een onderzoek naar de Overijssels revolverende fondsen*. Deventer: Rekenkamer Oost-Nederland.

Stumpel, B. (2014). Urban Development Trust: Possibilities & limitations for Dutch Urban Area Development. In: TU Delft, Delft University of Technology.

Stumpel, B., & Heurkens, E. (2014). Gebiedsfondsen: Lessen uit Engeland voor Nederlandse gebiedsontwikkeling. *Real Estate Research Quarterly, 13 (4), 2014*.

SVn. (n.d.). Flyer: Investeringsfonds SOFIE. In. Rotterdam: SVn.

Taskforce JESSICA. (2008). *JESSICA, een nieuwe vorm van EU-financiering ter bevordering van duurzame investeringen en groei in stadsgebieden*. Luxemburg: EIB.

Taylor, Z. (2013). Rethinking planning culture: a new institutionalist approach. *Town Planning Review, 84*(6), 683-702.

Teule, R., Heeger, H., & Hilkhuysen, G. (1991). *Sleutelen aan de stadsvernieuwing*: Delftse Universitaire Pers.

Van Aart, L., & Van de Ven, J. (2015). Tussentijdse evaluatie JESSICA-pilot Rotterdam: SOFIE. In. 's-Hertogenbosch: European and Regional Affairs Consultants B.V.

Van Duinen, L., Rijken, B., & Buitelaar, E. (2016). Transformatiepotentie: woningbouwmogelijkheden in de bestaande stad. In. Den Haag: Planbureau voor de Leefomgeving.

Van Ginkel, J., Holt, D., & Koppert, S. (2010). Jessica in The Netherlands. In *Evaluation Study*. Rotterdam: Ecorys.

Van Heijningen, A., Holt, D., & Dekker, E. (2013). *Watertorenberaad, werkboek 2013*. Rotterdam: Watertorenberaad.

Van Hoek, T., Koning, M., & Mulder, M. (2011). Succesvol binnenstedelijk bouwen: maatschappelijke kosten en baten; opties tot optimalisering. *EIB-publicaties*.

Verdult, V., Hulsker, W., Meurs, E., Kelder, P., & Zon, J. v. d. (2016). *Evaluatie van de Regionale Ontwikkelingsmaatschappijen (ROM's)*. Retrieved from Rotterdam:

Verheul, W. J., Daamen, T., Hobma, F., Heurkens, E., & Vriends, R. (2017). Gebiedstransformaties: Ruimte voor durf en diversiteit. In. Delft: TU Delft.

Werkgroep werken Midden Brabant. (2013). Regionale Agenda Werken 2014. In.

13. Appendices

The following appendices are added to this report:

Appendix 1 – Background information regarding problem analysis

This appendix provides additional background information regarding the problem analysis. The reason to provide this information in an appendix is to keep the actual report more concise.

Dutch inner city development practice: then and now

As history shows, the Dutch government has introduced numerous regulatory and financial arrangements to stimulate (inner city) development. During the *Gebiedsontwikkeling Agenda Stad* meetings, two timelines have been established that describe the regulatory and financial side of Dutch inner city development practice, both from the viewpoint of the Dutch government. From a public law viewpoint, it can be concluded that from the 1980s up until now, the main tendency is that the focus was always on accelerating and simplifying development (See: De Zeeuw, 2014; Korthals Altes, 2013). An overview of all laws and regulations relevant to (urban) development is summarized in figure 46.

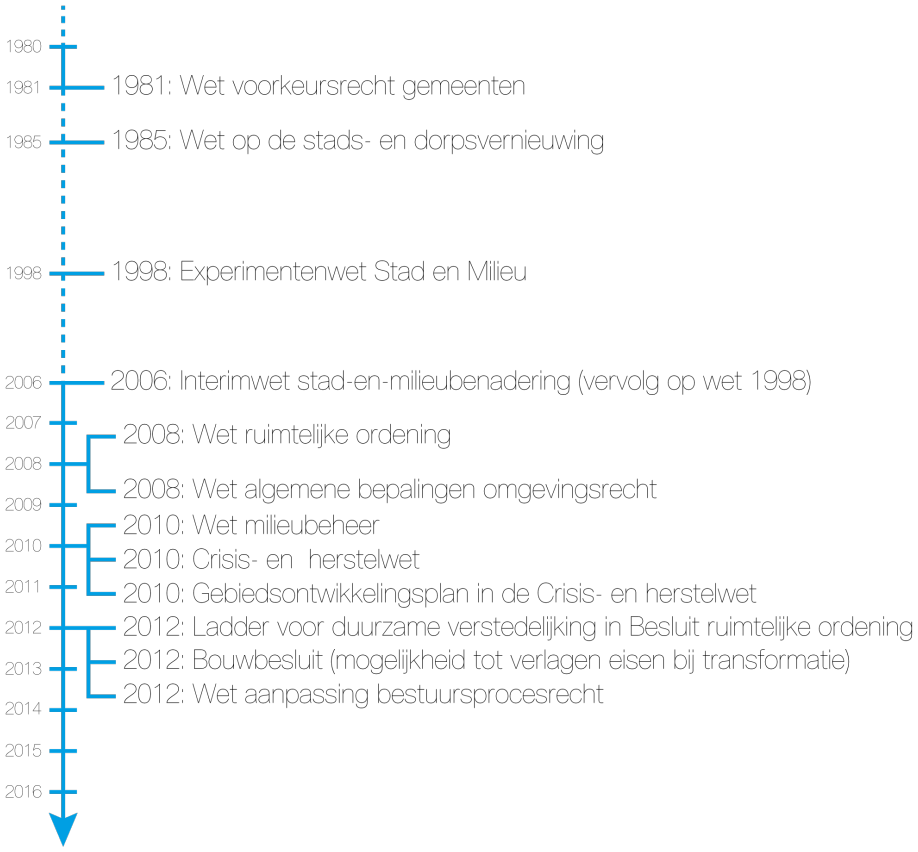


Figure 46: Overview of Dutch public regulation regarding (inner city) development in a timeline.

From a financial viewpoint, it is clear that from the 1970s until 2014, the Dutch government financially stimulated Dutch inner city development in numerous ways, through for example *Stadsvernieuwingsgelden*, *Locatiesubsidies* and the *investeringsbudget stedelijke vernieuwing (ISV)* (See: Priemus, 2003; Teule et al., 1991). These financial instruments are summarized in a timeline figure 47.

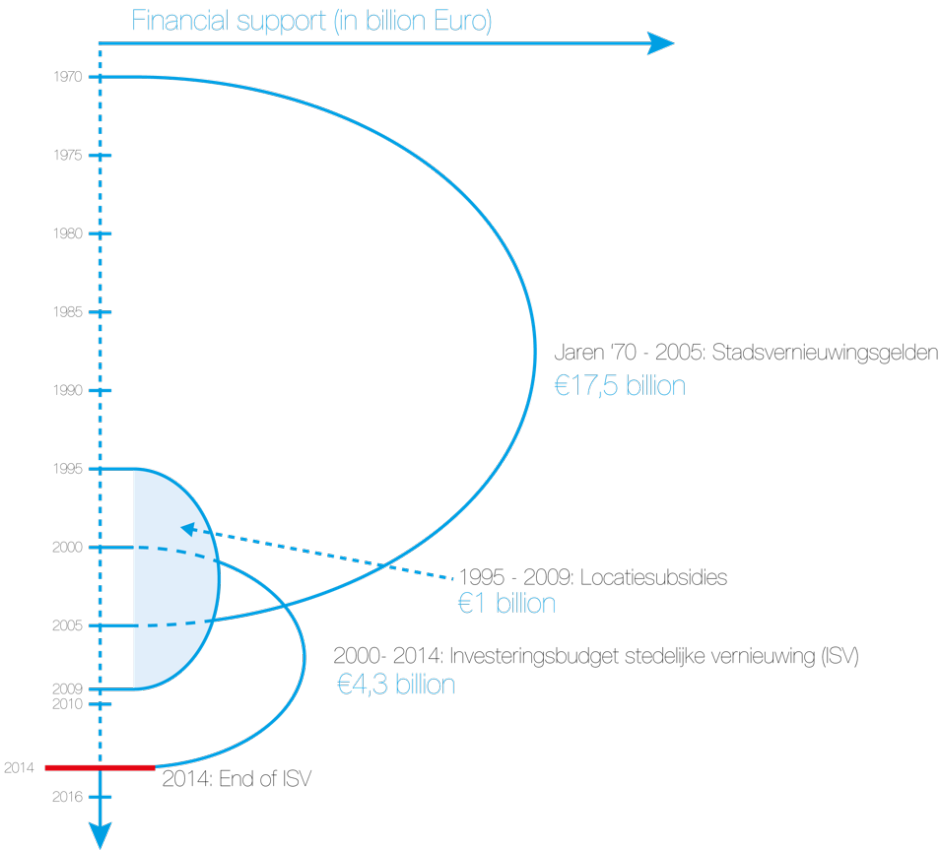


Figure 47: Financial instruments used by the Dutch government from the 1970s until now.

Within the boundaries of Dutch cities, the larger greenfield development areas (*uitleggebieden*) are scarce and the focus is more drawn towards urban compaction (*stedelijke verdichting*), city edge transformation and brownfield development areas (Boelman et al., 2016). The examples of Dutch cities Rotterdam and The Hague illustrate this very clearly as their greenfield developments have decreased from approximately 75% of the total addition to the housing stock in 2002 towards less than 10% in the years 2013 until 2015 (Boelman et al., 2016). This is shown in figure 48, where blue reflects the greenfield developments and grey the urban developments.

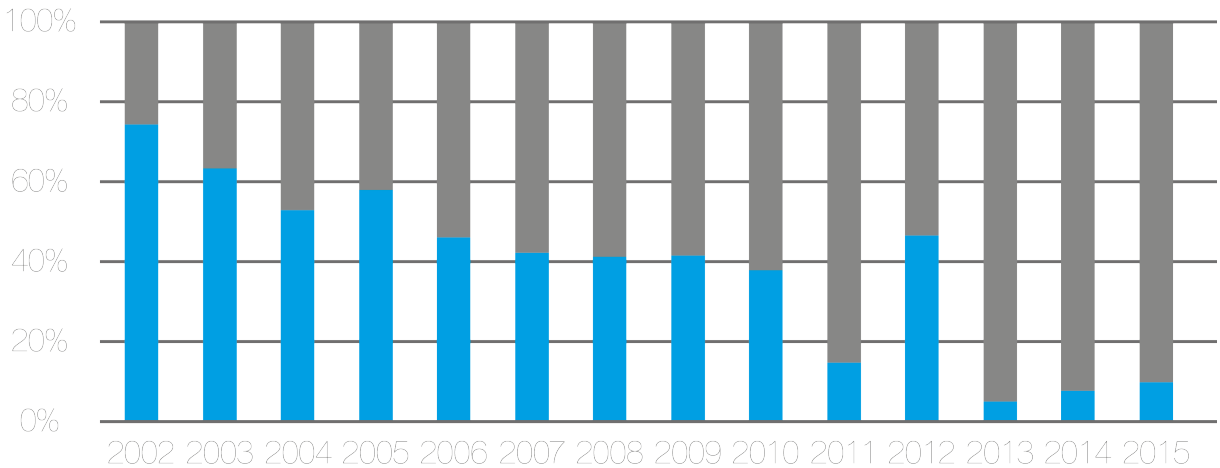


Figure 48: Greenfield developments (in blue) vs inner city developments (in grey) in The Hague (Based on Boelman et al., 2016a)

The greenfield developments in Dutch cities are starting to belong to the past and urban transition is becoming more and more predominant. But what is urban transition exactly? This concept is a catch-all term for restructuring and transformation of existing urban areas (Boelman et al., 2016). Within this

So far, the analysis has focussed on supply and demand of urban dwellings and the financial costs of urban development, but obviously urban development also has a societal side. As stated, people preferably want to live in pleasant living environments with accompanying public space. However, the emphasis in the discussion is mostly on the economic value of development. Figure 49 demonstrates that inner city development entails spatial value, social-cultural value, and economic value.

Figure 49: The spatial, socio-cultural and economic values of inner city development and their effects (Verheul et al., 2017)

Appendix 2 – Business Improvement District

The Business Improvement District, in short BID, is a rather new form of public private partnership, originating from Canada. Currently, the model is used in North America, Europe, Africa and Asia, operating under different names and structures (Hoyt & Gopal-Agge, 2007). The BID can be defined as: "privately directed and publicly sanctioned organizations that supplement public services within geographically defined boundaries by generating multiyear revenue through a compulsory assessment on local property owners and/or businesses." (Hoyt & Gopal-Agge, 2007, p. 946). The main goal a BID is place-specific economic development and provision of (public) services (Gross, 2013). The BID is historically a private sector-led planning instrument which aims at revitalizing city centers. The instrument became quite popular, especially in the US, driven by socioeconomic and political factors, such as urban sprawl, decline of city centers, new retail forms, a declining tax base, increasing use of PPPs for urban revitalization (Hoyt & Gopal-Agge, 2007). The main idea is that in Anglo-Saxon countries, the broader urban planning culture promotes private sector intervention when cities decline due to socioeconomic factors. Another reason why the BID is quite commonly used in Anglo-Saxon countries is the inherent flexibility of the model (Hoyt & Gopal-Agge, 2007).

Legal

The BID model is created by municipal designation, granted by state-level enabling legislation. The laws and regulation for BIDs vary across countries, but most require a ballot signed by relevant stakeholders as a prerequisite to start a BID in a certain area (Hoyt & Gopal-Agge, 2007). The duration of a BID is accounted for in so-called sunset clauses, which limit the life of the BID. However, most BIDs never cease to exist, as they are usually renewed or extended (Hoyt & Gopal-Agge, 2007). The BIDs are mostly founded as a non-profit organization, a private-public or public-non-profit partnership.

Financing

In essence, the idea behind the BID (mostly in North-America) is that of a defined geographic area/district in which a benefit assessment is used that allows for tax assessments on properties within this area, whereby the generated revenues are transferred back to the district (Hoyt & Gopal-Agge, 2007). This line of finance is the main source of financing for BIDs, varying largely as it depends on the local property values, the size of the district, and the way the assessment is carried out (Briffault, 1999; Hoyt & Gopal-Agge, 2007). Other sources of finance come forth from the innovative character of BIDs, which enables them to raise funds that rely on several sources of revenue, such as voluntary donations, in-kind contributions, subsidies and government grants. It gives the BIDs a rather high level autonomy in problem-solving, as it also provides constituent members in the region with supplemental public services (Hoyt & Gopal-Agge, 2007)

Operation of a BID

A standard/elementary BID, especially in the US, employs its budget to provide local public goods like sanitation, security and capital improvements. However, this varies largely within the US and internationally, as for instance in South Africa the employment of BIDs is largely focussed on security. This variety might be explained by city size or the BID size (Hoyt & Gopal-Agge, 2007). Smaller BIDs usually focus on physical maintenance, medium-sized BIDs on marketing and promotion, and large BIDs provide the whole range of activities, with capital improvements included, as shown in a study in New York City (see Gross, 2008). Additionally, the role of BIDs evolved further towards a more proactive role in metropolitan governance and administration. The BIDs started partnerships with local governments to achieve this role (Hoyt & Gopal-Agge, 2007).

BIDs also vary in the way they operate in terms of mission, authority, and legal and financial frameworks (Hoyt & Gopal-Agge, 2007). The UK for instance uses the town centre management model, which is characterized by the joint funding of local authorities and the private sector. Other BIDs are solely funded by the public sector. A reported downfall of the town centre management model is its dependence on voluntary financing, as this constrains the effectiveness of the model due to the time-consuming acquisition and justification of this type of financing (Hoyt & Gopal-Agge, 2007). However, this is counteracted by incorporating mandatory assessment as the principle source of finance in the BID legislation. In Japan, BIDs are usually set up in the form of town management organizations, fully financed by the government (Hoyt & Gopal-Agge, 2007). In 2003, a pilot was launched which implemented the mandatory assessment principle (similar to the UK).

One of the main prerequisites for the foundation or continuation of a BID is the support of (local) property owners. Additionally, BIDs increasingly share role identities, operating strategies, and organizational cultures, which implies that BIDs are becoming more institutionalized at an international level (Gross, 2008; Hoyt & Gopal-Agge, 2007). Finally, several studies described by Hoyt and Gopal-Agge (2007) have found that the BID model is quite a successful intervention in several ways: the BID promotes residential development, it argues the ability of BIDs to strategically advance retail, and BIDs emphasize place-marketing. However, some critics state that BIDs are only effective against smaller problems related to urban decline (Hoyt & Gopal-Agge, 2007).

BID not used in thesis
As outlined in the report, the BID as an instrument has been deselected from the case study. The reasons to do so are:

- Main source of financing is mostly the proceeds from (private) tax assessments, thus not public funding. This was the first case selection criterion.
- Involvement of public actors is limited to providing the legal framework in which the (usually private-led) BID can be established. The (more dominant) involvement of a public body was the second case selection criterion.
- A BID does not employ financial instruments like guarantees, financing or participation for (private) actors with the goal to stimulate development. This was the third case selection criterion.

Appendix 3 – JESSICA Initiative: additional background information

Actors

Each member state of the EU has been allocated financial resources since 1988 by the European Union under the Structural Funds Programme, (Becker et al., 2010). This programme includes three schemes: Objective 1, Objective 2, and Objective 3. The European Union provides this programme with the goal to foster GDP growth of the member states (Becker et al., 2010). With the JESSICA initiative, EU countries had the possibility to invest (part of) their EU structural fund allocations in the revolving funds belonging to the initiative. The stimulation of investment in Europe's urban areas through the initiative helps to "recycle" the member state's financial resources (Dąbrowski, 2014; European Commission, 2014c). In short, the actors that are involved in the JESSICA Initiative are listed in table 21.

Actor overview	
(Initial) investors	**Initial investors** European Commission (through ERDF) Council of Europe Development Bank **Additional investors** Financial institutions/banks Municipalities Other public/private investors
Ownership	European Commission European Investment Bank Council of Europe Development Bank (Joint policy initiative by EC, EIB and CEB)
Management	So-called Management Authorities (MAs): typically financial institutions that dispose of fund management skills (at national or regional level)
Target Group/Applicant	Member State of EU (national) Regions (regional) Cities (city-level)

Table 20: Actor overview of the JESSICA Initiative

Financial structure

Financial resources within the ERDF, reserved by the EC, EIB and CEB, are transferred to UDFs from the MAs, and in some cases via the HFs. The UDFs then acquire additional financial resources from public and private investors and other financial institutions (e.g. from municipalities, banks, and other public and private investors). Finally, the UDFs allocate financial resources to sustainable urban development projects, based on guarantees, loans, mezzanine and/or equity (either venture capitalist or late-stage equity). The financial structure is visualised in figure 50.

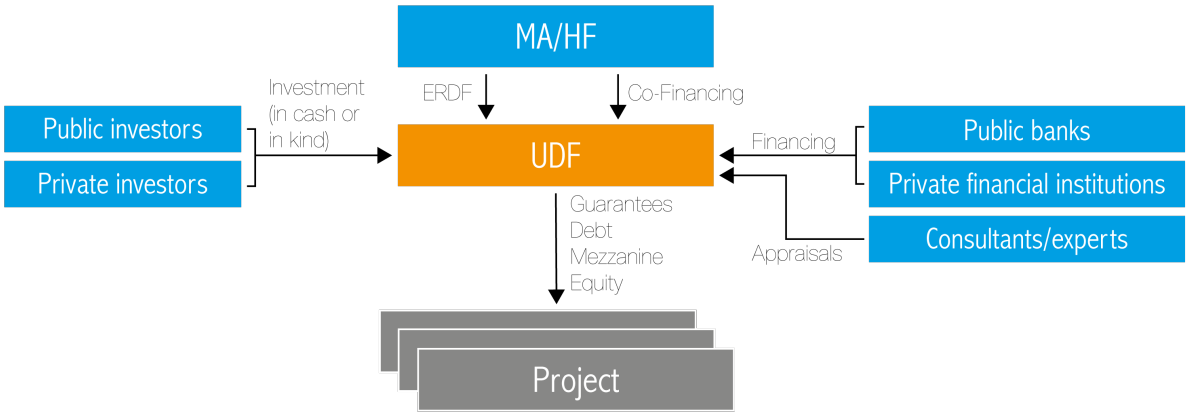


Figure 50: Financial structure of the UDFs (Adapted from European Commission & European Investment Bank, 2012)

As stated, the allocation of resources from the UDFs can be structured by applying four different financial products. Structured in order of increasing importance for the individual projects and increasing risk-profile of the financial instruments (see figure 51), they are further elaborated below.

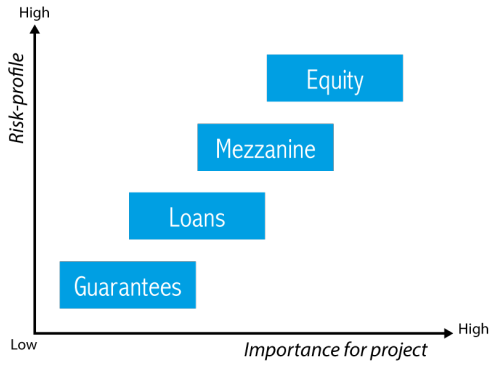


Figure 51: Financial products in terms of importance for the project and risk-profile

1. Guarantees

Guarantees can be provided by a UDF to support an urban project, which means that legally binding commitment is given by a third party. This commitment entails that when the main borrower defaults on a loan, the third party pays the remaining balance of that loan, including unpaid interest. The guarantees can be issued toward the project company that undertakes the urban project in question, which gives it the opportunity to attract external finance (mainly in the form of loans from the private sector). In return, the project company pays a processing fee which covers the risk exposure and transaction costs. Guarantees are particularly useful when the project company is unable to provide the necessary collateral to the lender (e.g. bank or leasing company) the project company wants to lend from (Kreuz & Nadler, 2011). See figure 52.

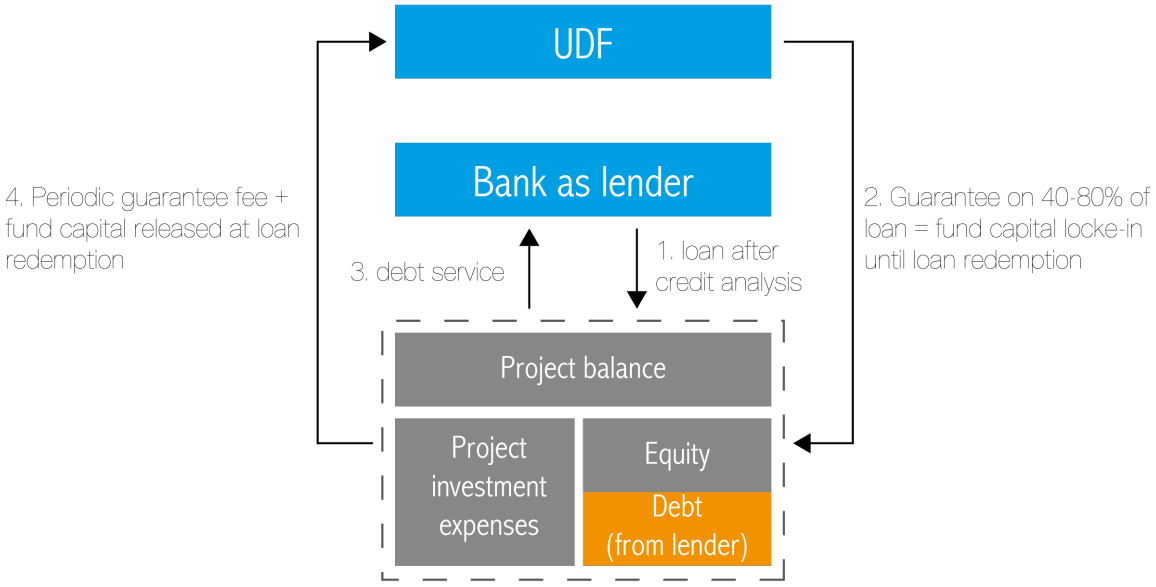


Figure 52: Project financing through guarantees (Adapted from Kreuz & Nadler, 2011)

In figure 52, four actions are visualized, which together form the process of issuing guarantees from a UDF to a project. (1) The first action is that the project company applies for a loan from a financial institution (e.g. bank). (2) The financial institution might ask for more security through a guarantee. The project company then has the possibility to ask for a guarantee (usually 40-80% of that loan) from the UDF, if a credit analysis of the project company and its business plan provide green-light. The UDF then provides a guarantee to the financial institution (e.g. bank), which grants the project company access to debt financing. (3) The borrower (in this case the project company) carries out its debt service. (4) Additionally, the project company pays fees to the lender (usually 1-2% p.a. of the outstanding guaranteed amount), which is a cash inflow for the UDF. Another important aspect is that when the borrower (i.e. project company) defaults on its loan, the guarantee fund will reimburse the lender/bank. The project company's collateral is then sold; losses incurred are born by the guarantee fund (Kreuz & Nadler, 2011).

The use of guarantees reduces the investment risk for third parties (in this case the bank), as (part of) the default risk of the loan principle is covered by the guarantee fund. However, the downside of using guarantees for a project is that finding complete equity and debt financing is still needed from third parties. The guarantee itself does not provide direct financing. This leads to the fact that not the project company is the final recipient, but the lender (Kreuz & Nadler, 2011).

2. Investment loans (or debt)

Project financing via loans is the most important way of attracting external financing for urban development projects. Loans can be granted by the UDF to a project, in which case there should not be any contradicting regulations within the Member State in which the project is located. The loan could directly be issued by the UDF at an interest which could be below the market rate, since the financial resources in the UDF are (public) Structural Fund resources. However, in some of the Member States, a financial institution with a banking licence may only issue the loans. The interest rate of the loan is usually calculated as follows:

Fund costs + management costs + risk premium = loan interest rate[17]

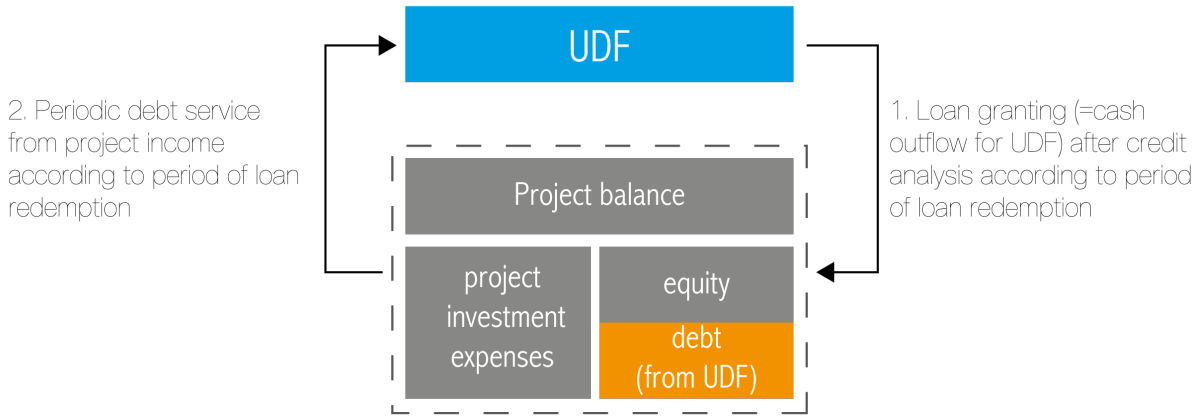


Figure 53: Project financing through loans (Adapted from Kreuz & Nadler, 2011).

In figure 53, two cash flows are visualized related to two actions. (1) The first action entails the granting of a loan from the UDF towards the project company. (2) The second action concerns the loan repayments (i.e. principal and interest payments) from the project company to the UDF (=periodic debt service). During the period of investment through the loan, the UDF (or financial institution with banking licence in some cases) will monitor the repayments but will generally not provide (management) advice to the project company. The project company simply repays its loan within the agreed period or defaults on its loan when it fails financially (Kreuz & Nadler, 2011).

In the case of investment loans, the risk is considerably higher for the UDF compared to guarantees. The main reason is that the guarantee at highest covers 80% of the outstanding loan, whereas in the case of an investment loan the lender bears a full 100% risk of default. Furthermore, the UDF is responsible for monitoring of the repayment by the project company, not the bank, which implies higher management costs for the UDF. Due to the higher risk-profile, the EC policy limits the use of investment loans to low-risk investment projects with a reliable periodic income. Where the final recipient of the financial product was the lender in the case of guarantees, the final recipient with loans is the project company itself. This has the side-effect of leverage (through debt-financing), due to the lower, subsidised interest rates of the investment loan, which results in a positive effect on the internal rate of return on equity (IRR) for the developing party. Additionally, the weighted cost of capital is reduced substantially due to the lower interest rate handled by the UDF (Kreuz & Nadler, 2011).

One of the criteria for an investment loan is that the urban project must contribute to socio-economic targets (e.g. job creation, social cohesion, level of investment) as part of the State aid regulations. Another important aspect is the calculation of the reference and discount rates for the loan. All interest rates in relation to loan instruments need to be calculated on the basis of a reference rate (e.g. LIBOR rate) plus a premium. This premium is defined based on the creditworthiness and collateral of the borrowing actor. The reason for this is limit the “subsidy element” of the loan (Kreuz & Nadler, 2011).

[17] Bear in mind that in this case the value of the fund in real terms decreases over time (due to inflation). In some cases, the fund could also demand a higher interest rate to compensate for inflation.

3. Mezzanine capital

Mezzanine capital is a financial instrument which is similar to equity financing, but with limited management costs. The UDF would not provide pure equity or pure debt capital, but instead provides financial products that are a mixture of both equity and debt elements. These mixtures could be set up by a mixture of subordinated loans, participating/converting mortgages, silent/limited partnerships, convertible bonds, preferred/bonus shares and other types of financial instruments. These instruments can either be closer to equity capital or debt capital. The one thing that all these instruments have in common is that the UDF (who is the mezzanine investor) does not participate actively in the project management. Additionally, the UDF does not bear full liability in the case of insolvency of the project. When this is the case, equity-oriented mezzanine capital investors usually participate in the losses, whereas debt-oriented mezzanine capital investors are only subordinated (Dutch: *achtergesteld*). Paying back mezzanine investments consists of fixed current interest payments and a share of the profit generated and growth in asset values.

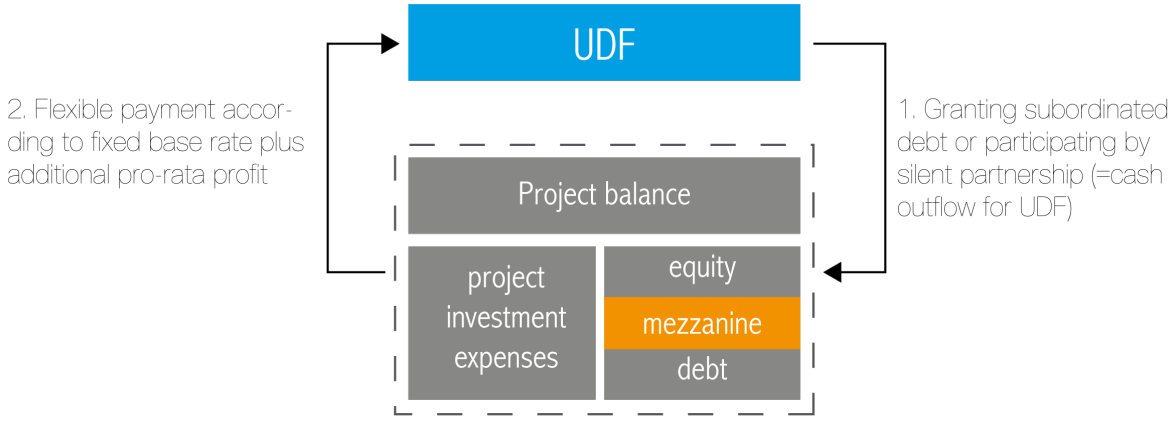


Figure 54: Project financing through mezzanine capital (Adapted from Kreuz & Nadler, 2011)

As illustrated in figure 54, mezzanine financing can be carried out in several ways. One of the most common ways of mezzanine financing is through a silent partnership, in which the silent partner contributes capital to a certain company and in exchange receives dividend when the company makes profit. This is shown in the figure above as action 1, which reflects the UDF being a silent partner of the project company. In this case, the UDF is not involved in the project company's management (thus resembling a silent partner) and expects a (usually rather small) rate of return on its investment on a regular basis (action 2 in the figure). Usually, this type of financing is limited to a 5-10 years' period. Another classic example of mezzanine financing is through the use of a subordinated loan (Dutch: *achtergestelde lening*), which is also visualised as action 1 in the figure above. In this case, the debt instrument takes a lower repayment (action 2) priority than the normal debt capital provided by for other lenders outside the UDF, for instance banks. This implies that in case of payment default, repayment is subordinated for the mezzanine capital provider and all other lenders are prioritized in reimbursement. This means that the default risk is substantially higher than regular loans. Additionally, banks do not require collateral (e.g. mortgages) with this type of financing, adding up to the risk-profile. This is reflected in a higher interest rate for the borrower (Kreuz & Nadler, 2011).

Usually, mezzanine capital finances around 15 to 18% of the total investment sum of a typical project. The reason for this is that usually private parties (e.g. developers) do not possess sufficient equity to fully finance the project and/or attract the sufficient amount of debt financing (due to lending requirements), thus the mezzanine capital bridges this equity gap in the overall project financing. The mezzanine capital is usually limited to the development phase and matures with the completion of the project (Kreuz & Nadler, 2011).

The final recipients of the capital are in particular the project developers who themselves have insufficient equity to finance or attract additional debt financing for their urban project. One of the main advantages of using mezzanine project financing is that relatively small capital sums can provide funding for many different projects, and it requires no active management of the project from the UDF, limiting management costs for the UDF. At the same time, it provides incentives for private equity investors and developers. Another advantage is that the mezzanine capital market is unregulated for a large part. This provides flexibility in terms of the contractual design of the UDF (Kreuz & Nadler, 2011).

4. Equity capital

Equity capital investment is one of the most important financing methods for urban projects. When the UDF takes an equity stake in a project, it can play a very active role in the project management, distinguishing this type of project financing from the previous three. There are two types of equity capital that an UDF can provide to urban projects: venture capital financing and late-stage equity financing. It depends on the phase in which the UDF provides equity capital, which of the two types can be provided. When early-stage financing is needed, venture capital financing is the type of equity capital to go with. When the project is in a later stage, the expansion-stage, the UDF might use late-stage equity financing. Each type is discussed below in figure 55.

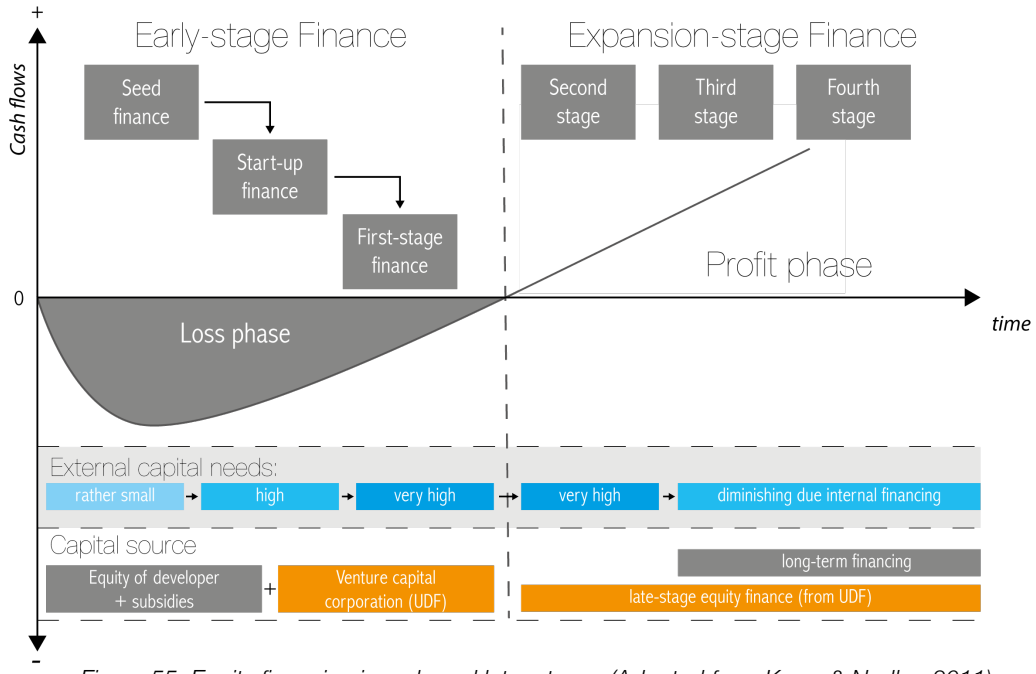


Figure 55: Equity financing in early and later stages (Adapted from Kreuz & Nadler, 2011)

Venture capital

Venture capital is a common type of so-called “start-up finance”, which entails that it provides financial support for companies that are in the early phase of their development and they do not have access to capital markets. When the UDF provides venture capital, it acquires an equity stake in the project company (action 1 in the figure below). With this action also comes the responsibility of the UDF to provide management advice to the project developer. This requires the UDF to assume an intensive management role (i.e. being part of the executive committee or supervisory board of the project company). The reason why the UDF might want to do this (and take on an investment with a rather high risk-profile) is the potentially high rates of return on the venture capital investment. Typically, this return on investment comes in the form of selling the UDF’s stake, preferably at a higher price than the acquisition price. The exit price typically is contractually defined based on the project’s envisioned profit. The exit strategy usually is selling the assets to a long-term investor. In that sense, the revolving character of the fund is achieved through a trading method: the revenues gained from selling the assets should cover all investment costs for the UDF, which is action 2 in figure 56 (Kreuz & Nadler, 2011).

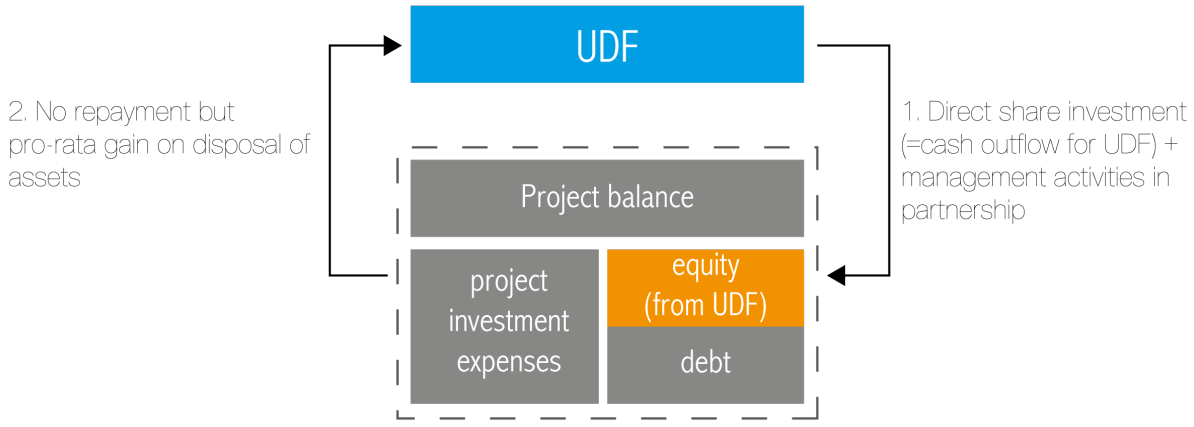


Figure 56: Project financing through venture capital (Adapted from Kreuz & Nadler, 2011)

Another reason why a public body (in this case the UDF) would want to invest in a project early-stage, as is the case with venture capital project financing is that early involvement leads to a larger influence on the project's programme/configuration. Furthermore, raising public equity resources in the early stages could result in high private equity raising for the UDF (called the multiplier effect). The capital base of the UDF thus increases quite heavily, which is needed in the first stages to cover the "first loss" of projects financed by the fund. Another advantage is that a solid capital base results in the ability to acquire debt-financing more easily (Kreuz & Nadler, 2011).

The use of venture capital is thus mostly beneficial to private developers and investors, since the UDF provides starting funding and management expertise for the projects financed from the fund. This type of financing is, due to the multiplier effect, mostly conceivable at urban areas where private investors and developers are reluctant to invest (thus filling a market gap). The deployment of venture capital clearly signals public commitment, thus enhancing the possibility that private investors and developers are willing to invest in these areas (Kreuz & Nadler, 2011).

Late-stage equity

As the name suggest, late-stage equity financing from the UDF entails that the UDF functions as a long-term investor in the later stages of projects. In that sense, the UDF's long-term investment resembles an open-ended or closed-ended investment fund. Similar to the venture capital approach, the UDF buys shares from the asset-holding company (i.e. project company), which is visualised as action 1 in the figure below. However, the UDF leaves the entire (property) development to (a) private actor(s). In this sense, the UDF only invests in newly-developed assets (no redevelopment/transformation projects). The profit for the UDF is in this way received in the form of periodic repayment in the form of regular rent and leasing income minus the operating costs. This should remain the income source over an extended period of time (operation phase) (Kreuz & Nadler, 2011)

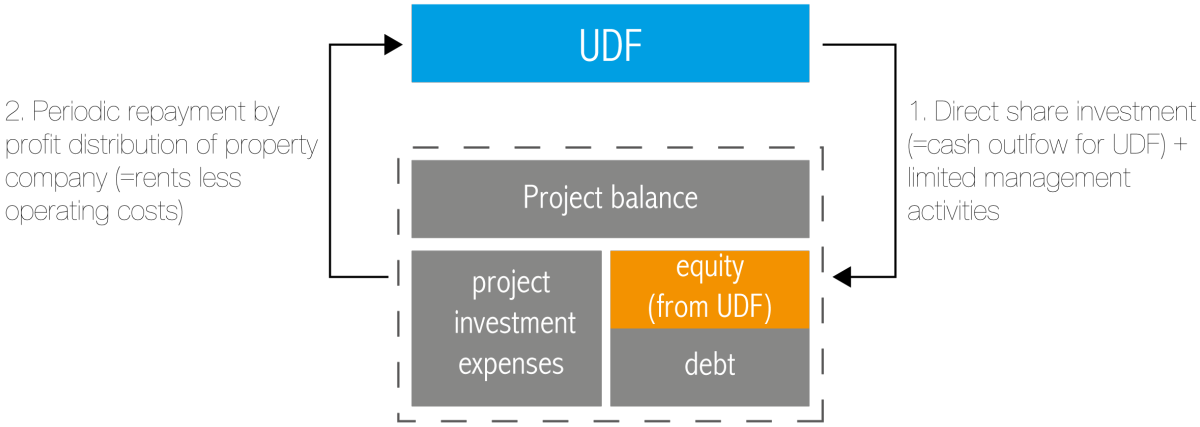


Figure 57: Project financing through late-stage equity financing (Adapted from Kreuz & Nadler, 2011)

The risk-profile for this type of investment is significantly lower than venture capital financing, as the financing occurs in the operation phase. This works two ways: the already existing assets work as collateral and cash flows are easier to predict and stable. Only property vacancy or non-performance would lead to declining cash inflows. The risk-profile however remains higher than in the case of guarantees or loans, since issuing equity-financing still includes the risk of insolvency. Another important distinction between late-stage equity financing and venture capital financing is that the first involves less project management involvement from the UDF compared to the latter. The private investor is usually fully responsible for the management of the assets (Kreuz & Nadler, 2011).

Application criteria
Application criteria regarding the JESSICA initiative are assessed in two instances:

- UDFs must comply with criteria to acquire State aid from EC
- Urban projects must comply with criteria to acquire financing from UDF

Firstly, the State aid assessment takes place when an UDF is planned. There are several criteria that need to be met by UDFs applying for state aid through the JESSICA initiative. They are listed below in four categories, directly derived from the Urban Development Funds Handbook (see European Commission & European Investment Bank, 2012).

1. Urban Project/IPSUD assessment criteria

The main criterion is that the project that applies for aid from a UDF is part of an Integrated Plan for Sustainable Urban Development (IPSUD). This entails that there is a so-called "system of interlinked plans comprised of a set of projects which seek to achieve specific aims impacting upon an urban area (or a collection of urban areas) and which seek to bring about a lasting improvement in the economic, physical, social and environmental conditions of a city or an area within the city." (European Commission & European Investment Bank, 2012, p. 141). The IPSUD is not a hardly defined entity in the Structural Funds regulations, which entails that Member States and MFs have the possibility to define whether or not a specific urban plan is an IPSUD. The IPSUD should however include a set of documents that describe how urban projects and programmes support economic development for the urban area (European Commission & European Investment Bank, 2012). Additional application criteria are that the IPSUD is required to demonstrate that it is aligned with the Commission Strategic objectives and that (European Commission & European Investment Bank, 2012, p. 42):

- The Urban Projects within the IPSUD are in targeted urban areas;
- It is underpinned by an urban socio-economic and environmental needs assessment to show demand for assets and services;
- Contains or is part of a coherent development under the responsibility of a local authority (or other suitable public body);
- The activities proposed by it are likely to support Urban Projects that contain Eligible Expenditure (as defined by a Member States OP); and
- In addition, the assessment must also consider the nature of likely beneficiaries – in terms of sector and size – no aid can be provided to a firm in difficulty.

In short, the project must lie in a **predefined area**, it needs urban **socio-economic** and **environmental needs assessment**, it must be managed by a **local authority**, it must likely support **Eligible Expenditure** (=payment in accordance with EU regulations), and it must assess the **nature of likely beneficiaries**.

2. Fair rate of return

A fair rate of return (FRR) is defined as a rate that represents the market rate of return which in its turn reflects the nature and risk of an investment in an Urban Project (benchmarked against similar investment opportunities or defined by an independent expert) (European Commission & European Investment Bank, 2012). The criteria related to the FRR are as follows (European Commission & European Investment Bank, 2012, pp. 42-43):

- At the outset of an Urban Project the level of aid provided to other investors or Urban Projects must not result in higher than generally accepted market rate returns for them (known as a 'fair

rate of return' or FRR). In addition, the level of aid granted must take account of the UDF receiving, as a minimum, the initial value of its initial investment ("Financial Sustainability"); and
- During the delivery of an Urban Project a suitable profit sharing mechanism must be in place to ensure the principles of a FRR are maintained. This could include sharing 'upside' profits between investors (including the UDF) and protecting a first loss exposure taken by the UDF in relation to an Urban Project.

In short, UDFs may not require a higher return than the market return (**Fair Rate of Return < Market rate**).

3. Co-Investment

The idea here is that an UDF should not finance a project on its own. The project needs to have other (types of) investors alongside the UDF financing (European Commission & European Investment Bank, 2012):

- The UDF may not finance an Urban Project without other market investors assuming a proportion of the investment risk. State Aid for Risk Capital (SARC) states that this level of Co-Investment must be significant (suggested to be not less than 30% in regional aid assisted areas and 50% in non-regional aid assisted areas); and
- It is important to remember that other investors can invest in an Urban Project directly or through the UDF and that the level of OP resources are likely to be the main source of public resources available to the UDF for investment.

In short, **an UDF should seek (private) co-investment** and not solely finance an urban project.

4. Urban Project selection by UDFs

The UDF's selection process for urban projects should be open and transparent (European Commission & European Investment Bank, 2012):

- Section 2.2 of the Handbook provides details on the approach to good practice for UDF Urban Project selection;
- In assessing any State Aid notification, the Commission will review this to ensure the UDF is required to provide an inclusive process through which any and all Urban Projects can approach the UDF for investment – including assessing the way the UDF publicises its calls for Urban Projects. The selection process must then be demonstrated to be open and transparent to provide clarity around investment decisions by the UDF; and
- Part of the decision-making process should include a mechanism to assess non-financial or socio-economic metrics within an Urban Project and, through this mechanism, provide a rationale for accepting Urban Projects with lower rates of financial return that deliver higher socio-economic impacts within the IPSUD area.

In short, the UDF's project selection and publicising calls for projects must be **open and transparent**, while **assessing socio-economic values** of projects as well.

Secondly, the urban projects applying for financing from the UDF must meet certain criteria as well. However, before the selection criteria are described in the UDFs Handbook, the process of setting up the UDF itself is described, which is important in the context of the application criteria as well. The set-up process of the UDF, which includes defining the defining of the procurement process, the UDF typology and level of competition of potential candidates, is managed and approved by the MA. Furthermore, the nature of the UDF's business strategy, the financial products (i.e. guarantees, loans, mezzanine, equity) and the governance structure of the UDF must be defined. The business strategy is an important issue, as it includes the UDF's business plan. In the business plan, the UDF's objectives, investment targets and approach for delivering instruments is set out. If the plan is found to be complete, a Level II Funding Agreement is signed, granting the new UDF with funding from the ERDF/Cohesion Fund resources. Components of this agreement are arrangements regarding the UDF's timescale, use of investment products, monitoring (credit assessment, risk assessment) and quality of staff resources. When the Level II Funding Agreement is signed, the UDF now has the ability to allocate funding to urban projects. The UDF then needs to finalize their geographic area on which it focusses, making it clear for initiators/managers of

the urban project in which area the UDF is willing to invest. Additionally, the UDF must have determined its thematic scope and its targets in terms of financial rates of return. Furthermore, the UDF needs to execute marketing activities, such as media advertising, attending (public) meetings, meeting with relevant development agencies and investors. Then, urban projects may apply to the UDF, which gives the UDF the responsibility of an initial assessment and information gathering of the project (i.e. early overview project details, investment needed, type of financial product most suitable for the project, revenue potential, overall financial appraisal, socio-economic, non-financial performance and delivery structure). Urban projects can now be pre-selected, resulting in a target list of eligible projects. This list is then finalized using suitable application criteria. The process of the formation of the UDF is visualised in figure 58 below.

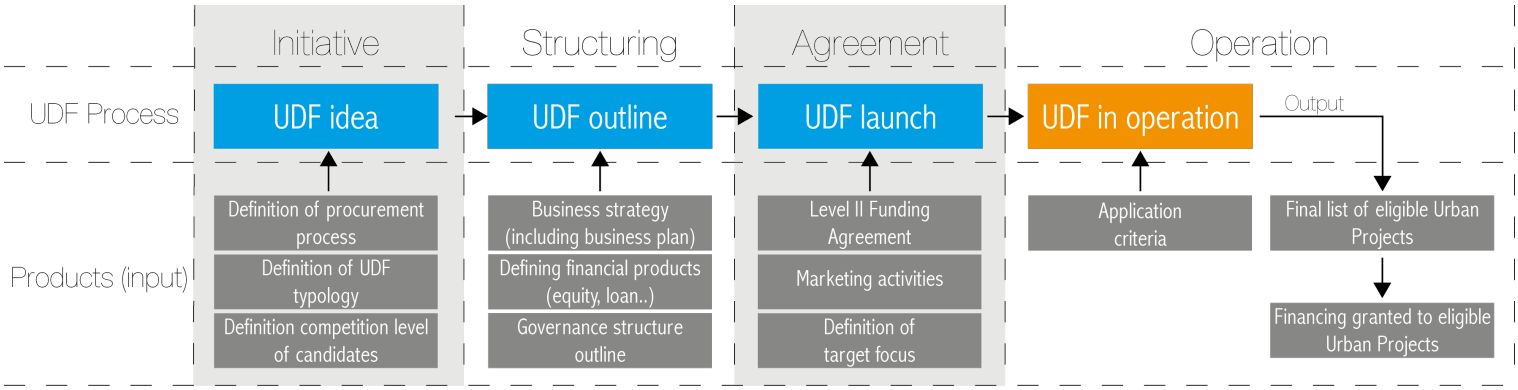


Figure 58: UDF formation process, from an idea to an UDF in actual operation

The application criteria used in the process are categorized in three main topics with sub-criteria, which are as follows (see European Commission & European Investment Bank, 2012, pp. 64-65):

1. *Financial viability*: An Urban Project must generate revenue or assess enhancement that can repay investors.
    - The information regarding the Urban Project in which a Fund Manager is considering issuing financial support (by loan, equity or guarantees) must demonstrate a reasonable probability of realising these repayments.
    - The financial strength and ability to realise a commercial return is assessed by determining the project's Internal Rate of Return (IRR) in the development phase.
    - Timing of the repayments is important regarding the ability of subsequent investment by the UDF.
2. *Strategic fit*: The Urban Project is eligible to be supported by the Operational Programme resources.
    - The Fund Manager must be able to draw satisfactory conclusions about the amount of eligible expenditure within the Urban Project, in order to assess whether the Operational Programme's eligibility parameters will be met.
    - The UDF's core objectives must be in line with the Urban Project's objectives and the relevant IPSUD.
    - The reputation of the initiator of the Urban Project needs to be in line with the UDF's objectives (assessment/review of this reputation needs to take place).
3. *Deliverability*: An Urban Project must be delivered in a reasonable timescale so as not to leave the UDF with uninvested resources for an extended period of time.
    - UDFs need comply with the investment timeframes outlined in the Operational Programme.
    - The deliverability criterion might function as a go/no-go criterion: assessment of the Urban Project's readiness within the time parameters may be carried out.

Operating area

The operating area for JESSICA is easy to distinguish, as each member state has the possibility to allocate some of its structural fund resources to a UDF. Thus, the operating area of the programme is in principle all over Europe in the countries that are part of the EU. To indicate, between 2008 and 2012 the countries listed in table 22 have received funding from the programme.

Country	Size of investment	# of projects
Czech Republic	€20 million	1
Bulgaria	€33 million	1
Portugal	€130 million	1
Spain	€214 million	2
Lithuania	€227 million	1
Poland	€257 million	5
Greece	€258 million	1
United Kingdom	€283 million	3
Italy	€318 million	3

Table 21: Overview of ERDF-investments per country (Leanza, 2012)

The Netherlands is not included in the table since ERDF-investments took place after the evaluation in 2012.

Appendix 4 – Interview overview

The table below shows all interviewees.

Name	Company/authority	Function	Date
Critical (financial) knowledge			
Erwin van der Krabben	Radboud Universiteit	Professor Urban Planning	18-jan-17
Edwin Netjes	KplusV	Adviseur en partner	16-mrt-17
Thimmo van Garderen	BNG	Senior Manager Business Development	14-mrt-17
Jimmy Kools	Fakton	Partner, Capital	31-mrt-17
Robert van Ieperen	Fakton	Partner, Valuation	12-apr-17
Revolving funds			
Michiel van Keulen	Gemeente Rotterdam	Beleidscoordinator investeringen bij stadsontwikkeling	16-mrt-17
Richard Luigjes	SVn	Manager Fondsontwikkeling, Klant & Markt	17-mrt-17
Barend Jan Schrieken	Nationaal Restauratiefonds	Ontwikkeling & Strategie	15-mrt-17
Janbart van Ginkel	AT Osborn	Adviseur	14-mrt-17
Cees Busscher + Frank Hazeleger	OMU	Directeur + Investment Manager	18-04-17
Roy Besselink	HMO	Bureau Coordinator	25-04-17
Jeroen Krijgsman	BHB	Investment Manager	25-04-17
Private actors			
Jan Fokkema	Neprom	Directeur	22-05-17
Pike Fabriek	Pike Vastgoed	Eigenaar	03-05-17

Table 22: Overview of interviewees

All recordings and summaries of the interviews can be requested at the author of this thesis. The use of quotes in the reports is incorporated in this thesis to underline certain important aspects relevant in this thesis. The responsibility of the translation of these quotes fully lies with the author.

Appendix 5 – Invitation for workshop, June 9th

Workshop Revolverend Fonds bij Gebiedsontwikkeling

Vrijdag 9 juni 2017 @ Fakton, WTC Rotterdam

Uitnodiging Workshop

Doel

Vanuit de TU Delft en Fakton wordt een workshop georganiseerd gericht op de toepassing van een revolverend fonds bij gebiedsontwikkeling. Doel van de workshop is te verkennen hoe een revolverend fonds gebiedsontwikkeling kan stimuleren. De workshop bestaat uit de volgende onderdelen:

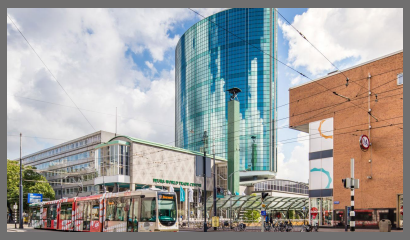
- Korte introductie en toelichting
- Financieringsproblemen en marktfalen bij gebiedsontwikkeling
- Uitgangspunten van een revolverend fonds bij gebiedsontwikkeling
- Plenaire afsluiting en uitkomsten

Aanwezigen

Wij nodigen professionals van de volgende organisaties uit:

- Ontwikkelaars/ondernemers
- Financiers
- Gemeenten
- Provincie
- Rijksoverheid
- Beleggers
- Academici
- Consultants
- Fondsbeheerders

Graag zien wij jullie op vrijdag 9 juni!



Praktische gegevens

9 juni 2017
14:00 – 17:00

Fakton Rotterdam, Beurs WTC
Beursplein 37
3011 AA Rotterdam
21e verdieping

Robin Vriends	Fakton
Aeisso Boelman	Fakton
Wouter Jan Verheul	TU Delft

Bij vragen kunt u mailen naar Robin Vriends
r.vriends@fakton.com

TU Delft

Fakton

Appendix 6 – Participants of the market challenge, 9th of June, 2017

	Participant	Company/Institute
1	Aeisso Boelman	Fakton
2	Anne van Eldonk	Fakton
3	Bart Kuil	The Way You Live
4	Dino van Dal	Ministerie van BZK
5	Erwin Daalhuisen	Fakton
6	Frank Hazeleger	OMU
7	Fred Hobma	TU Delft
8	Hans Beekman	Gemeente Rotterdam
9	Henk Harms	Gemeente Den Haag
10	Jan Fokkema	NEPROM
11	Jeroen Krijgsman	BHB/BOM
12	Koen Westhoff	Rebel
13	Marc van Os	Dura Vermeer
14	Marius Heijn	ERA Contour
15	Marius Schwartz	Provincie Zuid-Holland
16	Mark Nijenhuis	Amvest
17	Philip Zwart	CBRE
18	Pieter-Bart Visscher	Fakton
19	Randy van der Broek	COD
20	Rindert Groeneveld	Provincie Zuid-Holland
21	Robert Steenbrugge	Stebru
22	Robin Vriends	Fakton
23	Tarik Ouaj	CBRE
24	Thimmo van Garderen	BNG
25	Tom Daamen	TU Delft
26	Wouter Jan Verheul	TU Delft

Stimulating inner city transformations

The use of revolving instruments in inner city development

TU Delft

FAKTON

Real people. Financial strategies. Resilient places.