Collaborate to accelerate

Exploring the empirical perspective on accelerating the initiation phase of inner-city redevelopment projects: from industrial to mixed work-residential areas

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Exploring the empirical perspective on accelerating the initiation phase of inner-city redevelopment projects: from industrial to mixed work-residential areas

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Abstract

The Dutch housing market is dealing with an excess demand for dwellings, especially in the main urban areas, due to an increase in households, urbanisation and economic growth. On the supply side, the production of dwellings stays behind due to the consequences of the economic crisis, rising material costs and a lack of skilled labour. So, there is a great need to develop large quantities of dwellings in the urban areas.
Policy wise, there is a desire to create part of this demand within the current built-up area. This can be achieved by redeveloping inner-city brownfield sites (partially) into residential areas. Inner-city industrial sites are very interesting brownfield sites to be redeveloped into mixed work-residential areas because of their inner-city location and the large size of the areas.
Given the need to quickly develop large quantities of dwellings, it is desirable to accelerate these redevelopment projects of inner-city industrial sites.
This research focusses on the initiation phase because this phase is characterised by a long duration, which is caused by a high level of indistinctness regarding the project approach, passive approaches by and mutual dependencies and conflicting interests between the involved municipalities, landowner-users and project developers. Collaboration between these three parties is crucial because they all possess unique resources that are needed to redevelop the industrial sites. The municipality has the spatial planning power, the landowner-users own the plots in the area and the project developers have the redevelopment expertise and access to financial resources to realise the redevelopment. So, acceleration of the initiation phase can be achieved by accelerating the collaboration process. The collaboration process can be accelerated if the collaboration is designed according to the preferences of these parties because the collaboration will be more effective and therefore faster.

However, there is little research done regarding the initiation phase of these projects and it is unknown which factors the municipalities, project developers and especially landowner-users think are necessary and desirable to implement in the collaboration process to accelerate it. Getting insight into the different perspectives on which factors are and aren't important according to the three parties is scientifically relevant because it enriches the knowledge about the initiation phase of redevelopment projects. It is practically relevant because it serves as input to formulate recommendations to design the collaboration process in such a way that the potential to accelerate the collaboration process, and therefore the initiation phase, is enlarged. Therefore, the following research question is answered in this research: "*What are factors, indicated by municipalities, landowner-users and project developers, that accelerate the initiation phase of Dutch brownfield redevelopment projects of inner-city industrial sites into mixed work-residential areas, from a collaboration perspective?"*

The accompanying research objective is to identify the empirical perspectives of the municipality, landowner-users and project developers on what is needed to accelerate the collaboration process in the initiation phase of the studied brownfield redevelopment projects in order to provide practical recommendations to realise this acceleration.
The empirical perspectives are identified by conducting a structured Q-methodology research. This method is designed to extract empirical perspectives from a group of respondents by letting them rank a set of statements. These statements reflect the theoretical perspective on the studied matter.

The first sub question that is answered is therefore: *"Which conceptual model can be constructed that describes the theoretical perspective on the important factors for acceleration? "*
The theoretical perspective on which factors are important for acceleration is identified by a literature research of both scientific and practical literature. The literature study is structured by

combining the conceptual steering model of De Leeuw (2002) and the public-private urban management model of Heurkens (2012) and applying it to the context of the collaboration process in the initiation phase of Dutch redevelopment projects of inner-city industrial sites. The used conceptual model is shown in figure 1. The model shows that brownfield redevelopment projects operate in a context that exists of external factors that influence the project. This contextual level and its influences on the project are out of scope for this research. The redevelopment project itself is managed by a collaboration organisation that steers the collaboration process by making use of accelerating instruments. These instruments can be divided into four categories: shaping, regulating, stimulating and capacity building instruments (Adams, Watkins, White, 2005; Adams, Tiesdell, 2010).

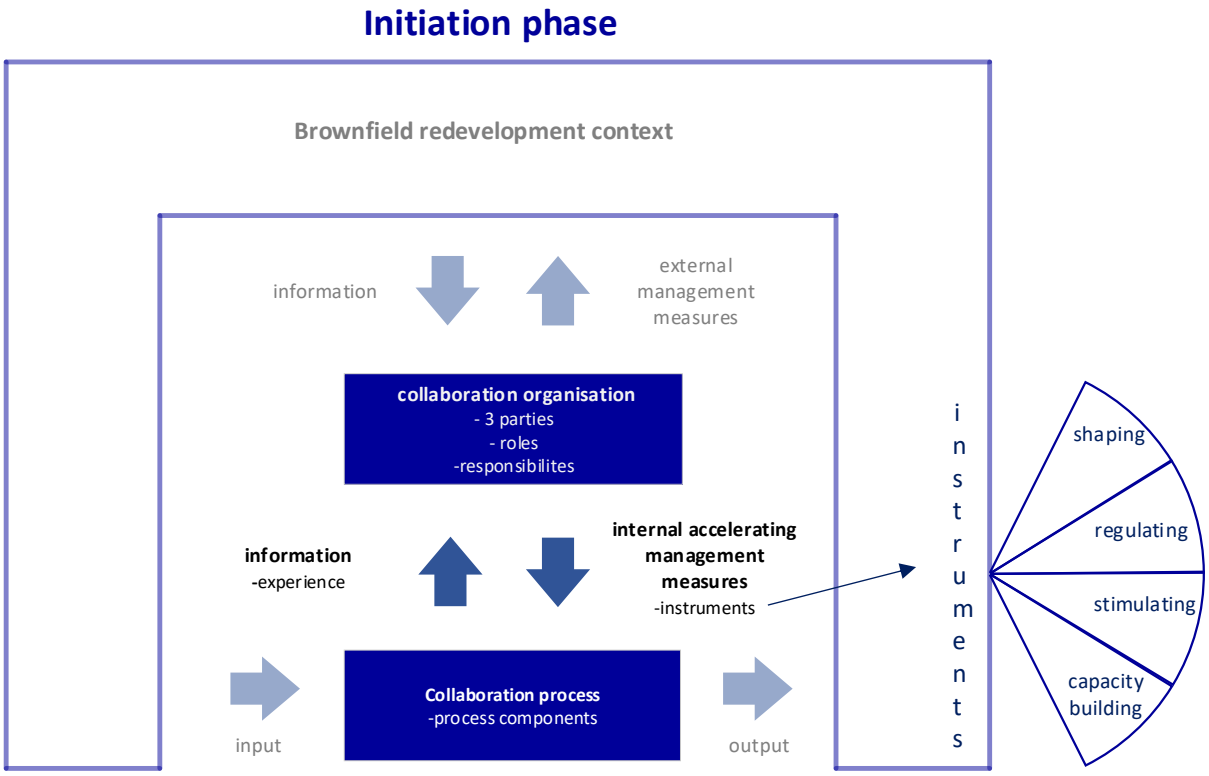


Figure 1: adjusted conceptual steering model as used for this research by incorporating the management instrument categories of Heurkens' (2012) public-private urban management model (based on Adams, Watkins, White, 2005; Adams, Tiesdell, 2010) into the conceptual steering model of De Leeuw (2002). .

The conceptual model identifies three categories of factors that are relevant from a collaboration perspective. Firstly, organisational factors that refer to the roles and responsibilities of the involved municipalities, landowner-users and project developers. Secondly, process factors that refer to aspects that need to be arranged within the collaboration process. Thirdly, instrument factors that refer to (policy) instruments that have the potential to accelerate the collaboration process.
The literature research resulted in 42 statements that represent the identified factors from the three categories and together they form the Q-set. This Q-set represents the identified theoretical perspective on which factors are important for acceleration of the collaboration process.

The Q-set is used as input for the Q-methodology research that answers the second sub question: *"What is the empirical perspective on important factors for acceleration?"*
Q-methodology is about the ranking of statements by a group of selected respondents. This ranking shows which factors are found important and which not. Furthermore, by comparing the individual rankings of the respondents, it is possible to group respondents that have similar ranking patterns. These groups of respondents share a similar perspective on what is and what isn't important to

accelerate the initiation phase. The number of identified groups determines how many different empirical perspectives exist in the practice of inner-city redevelopment projects.
The group of respondents for this research, the P-set, consisted out of nine municipal respondents, ten landowner-users and nine project developers. These respondents were evenly selected from three redevelopment projects of inner-city industrial sites into mixed work-residential areas that are currently in the initiation phase: Hamerkwartier in Amsterdam, Oudorp in Alkmaar and Schieoevers in Delft. These respondents ranked the 42 statements relatively to each other according to the degree to which they agreed or disagreed that a statement should be incorporated in the collaboration process to accelerate the initiation phase.

Analysing the individual rankings of the 28 respondents resulted in the identification of four main empirical perspectives that are characteristic for the three studied parties in the initiation phase. Each perspective values the factors in a different way and therefore shows a distinctive view on what is the best approach to accelerate the collaboration process in the initiation phase. The four perspectives are:

- Perspective one: the project developer led process

Perspective one thinks the best way to accelerate the initiation phase is when the project developer takes the initiative and fulfils the leadership role in the process. The project developer should have a major say in the spatial plans. The municipality should fulfil a facilitating role and only provide a clear spatial vision for the area but shouldn't contribute financially. Providing an alternative location for landowner-users, if applicable, is the task of the project developer. Re-allotment is an effective tool to create a landownership structure that enables large scale dwelling development. If possible, mixing residential functions with the existing landowner-users should be strived for.

- Perspective two: the municipal led process

Perspective two thinks the best way to accelerate is when the municipality takes the initiative, fulfils the leadership role and determines the guidelines of the process. The project developer's task is limited to focussing on acquiring land and the execution part of the process along the municipal guidelines. In this perspective the municipality has to apply an active land policy in order to accelerate the process. The municipality should bring all parties together in a project organisation that enables optimal use of all resources and coordinates the collaboration along the municipal guidelines. The current landowner-users should have the choice themselves to stay and continue their business activities.

- Perspective three: the joint commitment process

Perspective three sees a strong collaboration with a flexible role and task division as the best way to accelerate the process. Leadership is not important, it is about all parties being committed to the process and being prepared to use their resources in the process. Public financial instruments should be available such as providing subsidies and a revolving fund. Providing an alternative location for landowner-users is something that should be arranged within the collaboration between all parties. Flexibility is key to accelerate the process in order to be able to adjust to individual cases and new developments and insights.

- Perspective four: landowner-users first

Perspective four identifies landowner-users who want to stay and continue their nuisance producing activities, that prevent residential use of the area, as the main obstacle to accelerate the process. Therefore, this perspective is about satisfying their needs because they were the first ones in the area. The result is that they stay in the area and that therefore only a partial redevelopment is possible. Providing security and clarity regarding the spatial plans and the accompanying timeline of the redevelopment plans, are the most important aspects. The burden of the redevelopment process on the landowner-users should be limited, either by support by the municipality and project developers or by an expert that represents them in the process. Project developers should not have a major say in the spatial plans, while the current landowner-users should. If a landowner-user is willing to leave the area, the project developer should provide an alternative location.

So, the ranking of the statements by the respondents shows how the empirical perspective, expressed in the four identified perspectives, values the factors that are found relevant by the theoretical perspective. These insights are used to answer sub question three: "*What is the relation between the theoretical and empirical perspective?*"
The answer to this sub question is translated into universally applicable practical recommendations that apply to all Dutch redevelopment projects and case specific recommendations.

Universally applicable recommendations
Even though the four perspectives are different, they do agree with the theoretical perspective that the following five consensus aspects should be incorporated in the collaboration process in the initiation phase of all Dutch redevelopment projects of inner-city industrial sites, in order to accelerate the collaboration process:

- Create a shared and clear vision early on to provide clarity, long term security and a goal towards which all parties can work
- Be transparent regarding your interests
- Do not force current landowner-users out of the area
- Introduce pioneers and start place making activities early on
- Align expectations on which aspects are included in the project developer's responsibility

Case specific recommendations
Each redevelopment project is unique and requires therefore a tailor-made approach. That is why the insights into the four perspectives and consensus aspects are used to construct a conceptual model, the building block approach model, that can be used to recommend an organisational approach to design the collaboration process in a way that the accelerating potential of the initiation phase is enlarged. The approach building block model is shown in figure 2.

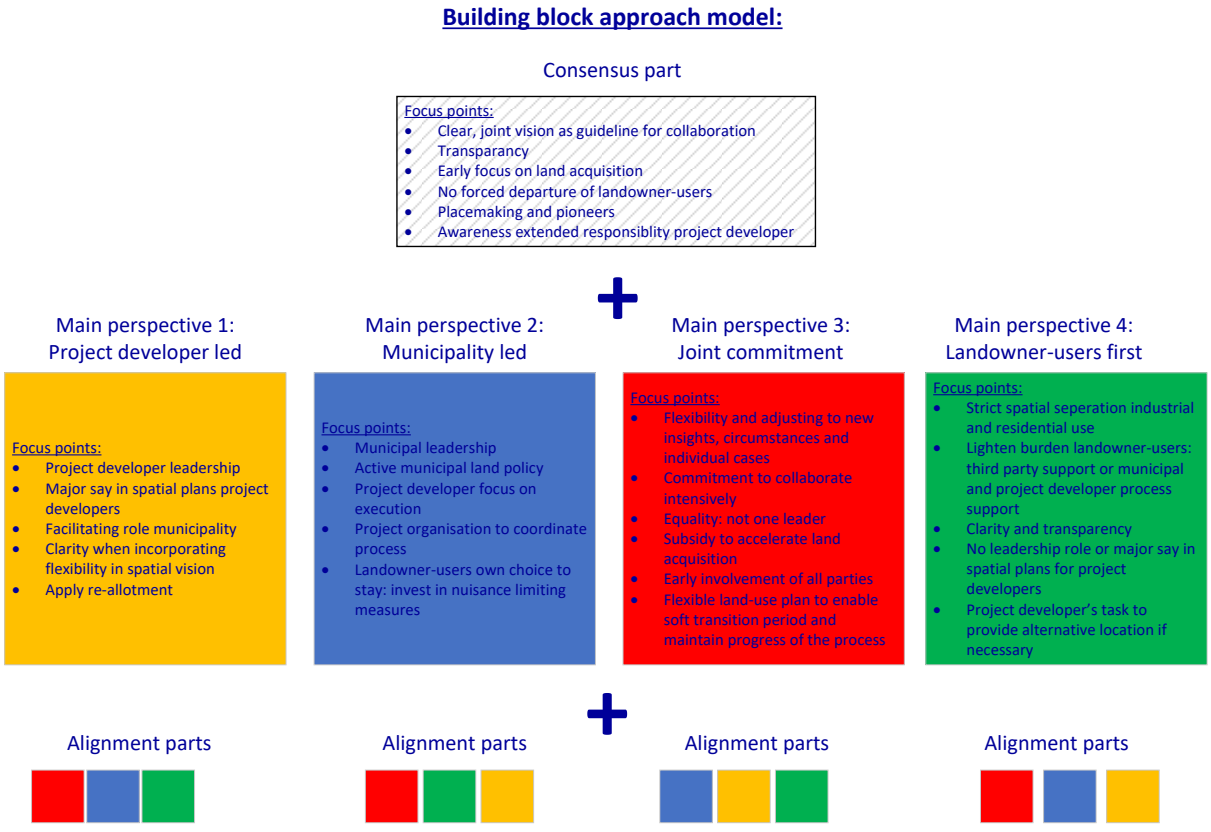


Figure 2: building block approach model. The main focus points of each building block are shown within each building block. A collaboration approach exists out of the consensus part, one main perspective block and a set of alignment parts that aligns the approach of the main perspective building block with some aspects of the other perspectives that are present in the case

A recommended collaboration approach for a specific case is built up out of the three layers of the model:

Firstly, the universally applicable recommendations from the consensus part.

Secondly, one of the four main perspective building blocks is selected. This is done by determining the dominant main perspective by identifying which perspective is held by the majority of the involved parties. This can be done in two ways.

Firstly, this research has identified a set of determinants that can be used to make a general overview of which party is likely to adhere to a certain perspective. The identified determinants are:

- A pro-redevelopment attitude is a determinant for perspective one, two and three
- Anti-redevelopment landowner-users that produce middle to high nuisance levels adhere to perspective four. The anti-redevelopment attitude is the decisive determinant for perspective four
- Municipalities that have acquired land via active land policy to accelerate and get a say in a redevelopment project that is initiated by a private party, adhere to perspective three
- Redevelopment projects in Amsterdam are most likely to have perspective two as the dominant perspective

The determinants do not cover all parties. To get a complete overview of which party adheres to which perspective and to subsequently determine the dominant perspective, a second method is recommended. An independent party should conduct an exploratory research by interviewing all involved parties and conduct a similar research as done in this thesis. Another option is to confront the parties with the perspectives and decide together to which perspective a specific party adheres most.

Thirdly, it is needed to adjust the approach on certain aspects in order to commit all important parties to the process, because it is very unlikely that all parties share the same perspective. These adjustments are made by applying the alignment parts. These parts refer to individual aspects that are part of the four main perspective building blocks. For every important party that does not adhere to the chosen main perspective building block, it is decided which aspect of the perspective that specific party adherers to, is most important to that party and can be aligned with the chosen main perspective. So, the alignment parties are used to commit all crucial parties to the collaboration process. In this way, the building block model recommends an approach that is designed according to the preferences of the main parties, which results in a more effective and therefore faster collaboration.

This building block approach model is validated in an expert meeting. The most important conclusion of the experts was that the red building block, that relates to the joint commitment process perspective, is valued as the approach with the most acceleration potential.

Reflection

This research has several main limitations.

Firstly, Q-methodology is a research method that provides insights into which perspectives exist in practice on a certain matter. However, it does not provide a proven strategy to accelerate inner-city redevelopment projects. The insights into the existing empirical perspectives are used to construct a conceptual model that can help to design the collaboration process in a way that the acceleration potential of this process in the initiation phase is enlarged. The building block approach model should therefore not be used as a holy grail, but rather as a framework to sketch the outlines of an

acceleration approach, based on the perspectives of the relevant parties in a specific redevelopment project.
Secondly, the presented perspectives do not cover all relevant aspects because only a limited Q-set is used that focuses on only three types of collaboration factors. In reality, more collaboration factors and also other type of factors influence the redevelopment process in the initiation phase.
Thirdly, this research focusses solely on accelerating the initiation phase. However, focussing on acceleration as a project driver can imply negative effects on the other drivers of the project management iron triangle: higher costs and reduced quality/scope. Additionally, the recommended acceleration approach aims at finding a certain level of consensus between all parties to make sure all parties are committed to the collaboration process. However, trying to find consensus between all parties can result in a lengthy process. Furthermore, the consensus outcome could also be that perspective four, landowner-users first, is dominant and that only a limited number of dwellings will be realised in the area. This would be undesirable when taking the current housing deficit into account.
Fourthly, the fundamental idea of this research is that a collaboration runs more effectively and therefore faster if it is designed according to the preferences of the involved parties. However, the parties must also be capable of executing the desired organisational model of the collaboration process. This capability factor is not considered in this research.

Next to the limitations, the reflection on the results has brought forward several recommendations for future research.
Firstly, the anti-redevelopment landowner-users that produce a high level of nuisance which prevents the mixing with residential use, represented by perspective four “landowner-users first”, are identified as the main obstacle to accelerate the collaboration process. The identified consensus aspects show that forcing these landowner-users out of the area is unwanted. However, the larger the total size of the plots owned by these landowner-users, the less dwellings can be realised in the area. The expert meeting brought forward that the only way to deal with this issue is to offer a realistic alternative to the landowner-users to make them leave the area voluntarily. Future research should be conducted to identify of which aspects such a realistic alternative should consist of. This helps to make an industrial site fully available for the desired redevelopment into a mixed work-residential area.
Secondly, this research is focused on the initiation phase only. However, choices for the design of the collaboration process, such as the division of certain tasks, also have implications for the later stages of the redevelopment project cycle (design and feasibility phase, execution phase). Future research to what these implications are, is needed to assess whether the recommendations of this research can only help to accelerate the initiation phase, or also the whole redevelopment process.
Thirdly, the presented building block model is an interpretation of the research findings and is only a theoretical, conceptual model. In order to validate if this conceptual model could be effective in practice, further research needs to be conducted. The most feasible research approach would be to conduct validation interviews with both experts and the parties that should operate in the collaboration process that is designed according to the recommended organisational approach.

Index

1. Introduction

This chapter introduces the main focus of this research by a stepwise refinement of the research context, starting with the current dwelling deficit in the Dutch housing market and ending with the need to accelerate the collaboration process in the initiation phase of brownfield redevelopment projects. The chapter ends with the problem statement that shapes the research scope.

1.1 Problem field: dwelling deficit in the Dutch housing market

At present, the Dutch housing market features an insufficient offering of dwellings (Faessen, Gopal, van Leuwen, Omtzigt, 2017; Capital value, ABF research, 2018). Current estimations predict a need for a maximum of one million extra houses in 2035 (Faessen et al, 2017). This dwelling deficit is concentrated in the main urban areas as a result of urbanisation (Leunissen, 2018; Kooiman, de Jong, Huisman, van Duin, Stoeldraijer, 2016). This urbanisation can be explained from a network perspective because the cities form central hubs to which people are attracted because of the concentration of jobs, educational opportunities, shops, commercial, leisure and cultural activities (Tordoir, Poorthuis, Renooy, 2015; PBL, 2016; Beets, van Dam, Jong, Manting, 2015). Besides the urbanisation, the current growing economy that is accompanied by low interest levels adds to the rising demand for occupier-owned dwellings (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2017). Finally, the number of households will increase by 500.000 in the period up to 2025 which adds to the rising demand for dwellings in the Netherlands (PBL, 2017). The supply side fails to match the rising demand which is expressed by several indicators such as the decline in newly built dwellings that is currently three times less than in 2013 (NVM,2018).
The supply is lagging the demand for dwellings for three main reasons. Firstly, the economic crisis of 2008 reduced the building activities for new dwellings to a minimum due to bankruptcies, financing problems and a risk-averse approach by project develops and contractors (Groenemeijer, Gopal, Poulus, van Leeuwen, Omtzigt, Koopman, Steyvers, Vijncke, 2016). Secondly the steep increase of the construction costs of 7,5 %, both last year and this year (Koenen, 2018) and thirdly a deficit of 55.000 skilled workers in the Dutch construction industry over the period 2018-2022 (EIB, 2017).
All in all, the current housing deficit amounts to 205.000 dwellings, 2,7 % of the total dwelling supply, and the forecast is that it will increase even further to 235.000 dwellings (more than 3 %) in 2020/2021 (Capital Value, ABF Research, 2018). So, there is a great and urgent need to construct new dwellings.

1.2 Inner-city, brown-field urban area development

The current, national spatial planning policy aims to accommodate the construction of new dwellings within the current built-up area first and only if this is not feasible, it is allowed to construct dwellings outside the built-up area (Infomil, n.d.; Schultz van Haegen-Maas Geesteranus, 2017). The preference for inner-city urban area development evolves around the following set of agglomeration advantages. The first main advantage is the more efficient usage of the inner-city urban environment (Greenberg, Lowrie, Mayer, Tyleer Miller, Solitare, 2001). Secondly, car usage is lower in cities because public transport and the bike are favoured, which makes urban living more sustainable (Kohlmann, Tragter, 2017; Verheul, Daamen, Heurkens, Hobma, Vriends, 2017). Thirdly, an improvement of the local economy due to an increase in inhabitants with an income and a spending pattern and an inflow of labour power (Duinen, van, Rijken, Buitelaar; 2016; Kohlmann, Tragter, 2017; Verheul et al, 2017). Fourthly, the public services are used by more people (Duinen, van, Rijken, Buitelaar; 2016; Kohlmann, Tragter, 2017; Verheul et al, 2017). Fifthly, the valuable open, green space will be retained which will add to the quality of living (van Duinen, Rijken, Buitelaar; 2016; Kohlmann, Tragter, 2017; Verheul et al, 2017). Additionally, maintaining the open green space is necessary as well from a sustainability standpoint in order to reach the climate agreement of Paris (Lee, Jordan, Horsley, 2015). On top of that, inner-city urban area development can imply sustainable use of current real estate and environmental degradation can be prevented (Kohlmann, Tragter,

2017; Verheul et al, 2017). Sixthly, inner-city urban area development will help to fulfil the demand for inner-city dwellings as a result of the increased urbanisation (Kooiman, Jong, de, Huisman, Duin, van, Stoeldraijer, 2016; Duinen, van, Rijken, Buitelaar; 2016). Especially, families and young people are eager to live in in the midst of vivid cities (Dam, van, Groot, de, 2017).

From a capacity standpoint, literature, both practical and scientific, agrees on the potential of inner-city redevelopment to fulfil the need for dwellings (Duinen, van, Rijken, Buitelaar; 2016; Verheul et al., 2017). However, the current debate centres around the exact capacity boundaries of this potential. Estimations of how much of the needed amount of dwellings can be realised by redeveloping inner-city sites and buildings into residential area differ, based on the expected demographic and economic growth, from 25 % (high growth) to even 75 % (low growth) (Duinen, van, Rijken, Buitelaar; 2016). Brink (2017) estimates a maximum capacity of 30%, but this percentage is only reached when the inner-city construction projects are subsidised substantially and feature a high building density. A lack of both financial support and densifying the dwelling volume would result in a capacity of only 10% (Brink, 2017).
In any case, inner-city redevelopment has thus the potential to, at least partly, solve the housing problem. Inner-city urban area development brings an array of advantages and it fits the national spatial planning policy.

1.3 The potential of inner-city industrial sites for dwelling development

Within the urban area, inner-city industrial sites have a great potential to accommodate the desired and needed inner-city dwelling construction projects because of their size, the good accessibility of the sites and the proximity of the site to the city centre (Netwerk zuidelijke Randstad, 2016). Box 1 shows the definition of inner-city industrial sites as used in this thesis.

box 1: definition of inner-city industrial sites with supporting definitions of industrial activities and spatial function

Definition inner-city industrial site:

- Inner-city industrial sites are defined for this thesis as: *areas that feature industrial activities and that are located within the current built-up environment, relatively close to the city centre and not in the outskirts of the urban area and that are therefore surrounded by other spatial functions*.
- Industrial activities are defined as: *usage of the area that causes nuisance in any category (noise, smell, traffic, view)*". In most cases this means that the firms on the site are active in the manufacturing industry.
- A spatial function is defined as: *the usage of a site for a specific goal such as residential living, working, shopping and leisure activities*.

The used definition for inner-city industrial site stresses the importance of the location of the site being not at the edges of the urban area but right in the middle of it. This location greatly determines the redevelopment potential of the site. This potential is enlarging even more with the need to realise more dwellings within the built-up area due to the increase in households, urbanisation and current national spatial policy. Another important variable that influences the redevelopment potential, next to the size of the area, is the type of landownership of the site. Dutch, inner-city industrial sites are often characterised by a fragmented landownership situation which makes redeveloping the area harder. (Adams, Disberry, Hutchison, Munjoma, 2001; Van der Krabben, Pen, de Feijter, 2015).
Before the redevelopment potential can be unlocked, the industrial site needs to be redeveloped by changing the current industrial function into a residential function. Therefore, redevelopment projects of inner-city industrial sites can be classified as a brownfield redevelopment.

1.3.1 Brownfield redevelopment

Many definitions of "brownfield" exist in literature and the term appears to have two origins, according to Alker, Joy, Roberts and Smith (2000). The most commonly used nowadays, is the definition of the US Environmental Protection Agency (USEPA). Box 2 shows both the original USEPA definition, as the updated version by USEPA.

box 2: the original and updated USEPA definitions of brownfield

USEPA definitions brownfield:

- Original USEPA brownfield definition**:** *abandoned, idled, or underutilized industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived contamination*" (USEPA, 1997, p1)
- Updated USEPA brownfield definition*: "a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant"* (US EPA, n.d.)

As Alker et al (2000) point out, the original USEPA definition implies that brownfield has to do with contaminated land, which is not necessarily the case in the way the term brownfield is used in this thesis, as is shown in the end of this paragraph. The second derivation of the term is based on the fact that brownfield is the counterpart of greenfield, as shown in box 3.

box 3: brownfield definition as antonym of the greenfield definition

Brownfield definition as antonym of greenfield:

- Greenfield: **"***formerly undeveloped area*" (Greenberg et al., 2001, p 130)
- Brownfield: "*land which has previously been subjected to development*" (Alker et al, 2000, p.52)

Based on the great variety of definitions of brownfield, Alker et al (2000) have tried construct a universal applicable definition of brownfield, based on the existing definitions, as shown in box 4.

box 4: universal applicable definition of brownfield by Alker et al. (2000)

Universal applicable definition of brownfield

- Brownfield: "*a brownfield site is any land or premises which has previously been used or developed and is not currently fully in use, although it may be partially occupied or utilized. It may also be vacant, derelict or contaminated. Therefore, a brownfield site is not necessarily available for immediate use without intervention*." (Alker et al, 2000, p 64)

Alker's et al (2000) definition implies that brownfield only refers to sites that are currently not fully in use, implying that industrial sites that are currently still fully in use would not be defined as brownfield. However, in contrast, the British Office of National Statistics (2014) does incorporate sites and real estate that are still in use as well in its distinguished categories of brownfield (box 5).

box 5: additional categories of brownfield according to the British Office of National Statistics

Additional categories of brownfield according to the British Office of National Statistics

- *"Land or buildings allocated for any development in the adopted plan or having planning permission for housing" (National office of National Statistics, 2014)*
- *"Other previously developed land or buildings where it is known there is a potential for redevelopment" (National office of National Statistics, 2014)*

The mentioned definitions of brownfield all have useful elements that together classify inner-city industrial cites as a brownfield redevelopment site. The formulated, comprehensive definition for brownfield that is specific for the Dutch redevelopment context and is used in this thesis is shown in box 6.

box 6: formulated, comprehensive definition of brownfield as used in this thesis

Comprehensive brownfield definition for this thesis

- "*Land that has been previously developed, is currently vacant, partially occupied or fully in use, is not immediately available for other usages and has a redevelopment potential*."

Box 7 defines the different elements in the formulated brownfield definition of box 6.

box 7: supporting definitions of elements of formulated, comprehensive brownfield definition

Supporting definitions of the most important elements of the formulated comprehensive brownfield definition

- Previously developed is defined as: "*a site that has been physically adjusted to accommodate a certain usage of that site*."
  This implies that the site is not anymore in its natural, untouched state.
- Not immediately available for other usages is defined as: "*the current state of the land and or the real estate on the land needs to be adjusted to enable a new usage of the site and this adjustment includes more than just the construction of new real estate*".
  This definition stresses that a brownfield redevelopment project is not a matter of simply constructing new real estate that fits the new usage of the site. It requires more activities such as demolition of the current real estate, soil remediation or redeveloping the current real estate.
- Redevelopment potential is defined as: "*the site has certain characteristics such as its location, size and or current real estate that make the site attractive to accommodate one or more spatial functions."*
- Redevelopment is defined as "*the process of developing a site again to accommodate the current or one or more different spatial functions*".

The formulated brownfield definition that is used for this thesis is used to define the concept of brownfield redevelopment, as shown in box 8.

box 8: formulated definition of brownfield redevelopment for this thesis

Formulated definition of brownfield redevelopment for this thesis

- Brownfield redevelopment: "*the process of redeveloping land that has been previously developed, is currently vacant, partially occupied or fully in use, is not immediately available for other usages and has a redevelopment potential, to accommodate the current or one or more different spatial functions."*

1.4 Redevelopment of inner-city industrial sites: a complex process

Coupling the characteristics of the brownfield redevelopment process to the characteristics of inner-city industrial sites brings forward that the redevelopment of inner-city industrial sites into residential areas is a complex process due to the internal difficulties of dealing with the current users, the fact that the current condition of the sites is not fit for residential use and the external difficulties of dealing with the inner-city external environment of stakeholders. However, there are more constraints that add to the complexity of the redevelopment challenge.

Firstly, the planning and regulatory constraint. The Dutch spatial planning regulatory framework exists out of extensive and hard juridical procedures, such as changing the land-use plan and obtaining environmental permits (Verheul et al, 2018; De Sousa, 2000).
Secondly, the organisational constraints. The Dutch spatial planning industry is sensitive to political developments which leads to inconsistency and uncertainty for private parties (Verheul et al, 2018; De Sousa, 2000).
Thirdly, the financial constraint. The redevelopment projects can become very costly due to various reasons, of which a few are named here: expensive soil remediation might be necessary due to possible soil contamination, current users might need to be bought out, high land acquisition costs as a result of steep increases in land prices due to speculation, high process costs, high up-front costs and difficulties to get finance for the project (Verheul et al, 2018; Adams, De Sousa, 2007).
The difficulty of the brownfield redevelopment process is that these constraints interact with each other. A good example are high land prices that cause the developing party to build dwellings in very high densities to make a positive business case. However, this high density might not be preferred by the local spatial planning policy which leads to lengthy procedures and which in turn lead to high process costs, and this can result in an even bigger need to build in high densities, and so on. Because of these interactions, the brownfield redevelopment process is a complex process that requires the joint effort of both private and public parties (Holt, Mulder, 2016). The public parties need to facilitate the redevelopment in a procedural and spatial policy way, while the private parties need to invest to physically redevelop the site. However, the main goals for both parties differ: societal gains for public parties and financial gains for private parties (Holt, Mulder, 2016).

In conclusion, due to the complexity of brownfield redevelopments of inner-city industrial sites into industrial area, collaboration between public and private parties is key. (Holt, Mulder, 2016). Focussing on the collaboration process between the relevant private and public parties is therefore essential to improve the redevelopment process. Therefore, this thesis exclusively focusses on this public private collaboration in the brownfield redevelopment process of inner-city industrial sites.

1.5 Project management perspective on brownfield redevelopment of inner-city industrial sites: focussing on the initiation phase

From a project management approach, the brownfield redevelopment process of inner-city industrial sites can be divided into four distinctive phases: the initiation phase, the feasibility phase, construction phase and exploitation phase (Wolting, Bregman, Pool, 2012). In general, the public private collaboration process gets more clear, linear and straightforward when progressing through the various phases. This is because the objectives, the process steps and the relations and responsibilities between the parties are more clearly defined (Wolting, Bregman, Pool, 2012). In the initiation phase, however, it is still unclear which parties will eventually realise the redevelopment, what the exact goals of the redevelopment are, what the final situation will be and how the collaboration will be designed.
The aim in the initiation phase is to turn a problem, into an opportunity and to engage the right parties in the right way to set the redevelopment process in motion (Adams, de Sousa, Tiesdell, 2010). Given the need to realise more dwellings in the current Dutch housing market, it is important to successfully go through the initiation phase to enable the start of the feasibility and construction phase in the redevelopment process. Nozeman (2017) stresses the importance of the initiation phase as well, by labelling it as the “condition sine qua non of a successful urban area development” (translation of Nozeman, 2017, p 9). This implies that without passing the initiation phase, no dwelling will be realised.
Furthermore, the importance of a good collaboration in the initiation phase is underlined by the fact that more and more brownfield redevelopment projects are started because they effectively help to, at least partly, solve the rising dwelling deficit (G32, G4, IPO, NEPROM, IVBN, Bouwend Nederland, NVB, TU Delft, 2017).

Because the initiation phase is crucial to the redevelopment process and because the public private collaboration is still unclear and can therefore be improved, this thesis focusses on this collaboration in the initiation phase.

In accordance with Wolting, Bregman and Pool (2012), a definition of the initiation phase of a brownfield redevelopment process is formulated for this thesis, as shown in box 9.

box 9: formulated definition of the initiation phase of a brownfield redevelopment process as used in this thesis

Formulated definition of the initiation phase of a brownfield redevelopment process

- Initiation phase of a brownfield redevelopment process: "*The phase that is started with a stated desire to redevelop an area and that is capped off with a collaboration agreement that can be used to start the design assignment*"

The definition states that in the initiation phase, the aim is to create a playing field that enables one or more parties to start making final designs that can then immediately be executed at the site. For the redevelopment of inner-city industrial sites, this implies that the current landowners are willing to redevelop their lands themselves, or that other private parties such as project developers need to acquire the land. For the municipality, this implies enabling the redevelopment juridical, procedural and spatial planning wise. In summary, public private collaboration is needed in order to successfully pass the initiation phase.

1.5.1 The triangular public private collaboration in the initiation phase

The public private collaboration process in the initiation phase of the studied redevelopment projects is formed by three main parties: the municipality, the current landowner-users and the project developers (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, Ministerie van Infrastructuur en Milieu, Vereniging Nederlandse Gemeenten, Interprovinciaal overleg, NEPROM, 2011; de Sousa, 2000).
In comparison to greenfield urban area development, the role of the current landowners is much more prominent because they own and are actively using the crucial resource in the process: the land. Any redevelopment plan directly affects them. Adams et al. (2001) conclude that land supply does not automatically respond to demand in the land and property market and that it is therefore "simplistic to reduce the role of the landowner to that of supplying enough land to meet demand by responding rapidly to any changes signalled from the market" (Adams et al, 2001, p.474). Adams et al. (2001) have found that "ownership constraints disrupted plans to use, market, develop, or purchase sixty-four of the eighty sites" they analysed (Adams et al, 2001, p 474). Especially fragmented landownership turned out to be the most troublesome for the redevelopment process because landowners are only willing to sell their land for unrealistically high prices or because they are not willing to sell at all (Adams et al, 2001). Dutch inner-city industrial sites are characterised by such a fragmented ownership situation (Van der Krabben, Pen, de Feijter, 2015).
Yousefi, Hipel, Hegazy, Witner and Gray (2007) stress the importance of a successful collaboration between the current landowner-user, the purchaser and the governmental body when it comes to brownfield redevelopment projects. For redevelopment projects of inner-city industrial sites to residential areas, these three parties are the industrial firms that are the current landowner-users, the project developers that are the purchasers and the municipality that is the governmental body (Ministerie van binnenlandse zaken en koninkrijksrelaties et al, 2011).

These parties are entrenched in a triangular collaboration network that is based on mutual dependencies which results in the need for a public private collaboration process (Brail, 2008). Figure 3 shows these triangular dependencies. In a facilitating, municipal land policy collaboration process, each of the three parties fulfils a role based on the vital and distinctive resources they

possess and the goal to redevelop the industrial site into a residential area (Ministerie van binnenlandse zaken en koninkrijksrelaties et al, 2011; Yousefi et al, 2007).
The landowner-user owns the land and he either needs to sell the land to a party that develops the land, such as a project developer, or develop the land himself in order for the land to be available for the intended redevelopment.
The project developer's task is to take the financial risk of the redevelopment. Taking the financial risk starts with the purchase of the land and runs throughout the feasibility and construction phase until the constructed real estate is sold. The project developers' distinctive resources are their urban area redevelopment expertise and the ability to carry the financial risk of the project.
The task of the municipality is to facilitate the process by providing the right juridical and spatial planning support, as well as safeguarding the interests of the landowner-users. The distinctive resource of the municipality are the local juridical and spatial planning instruments, such as the land-use plan.

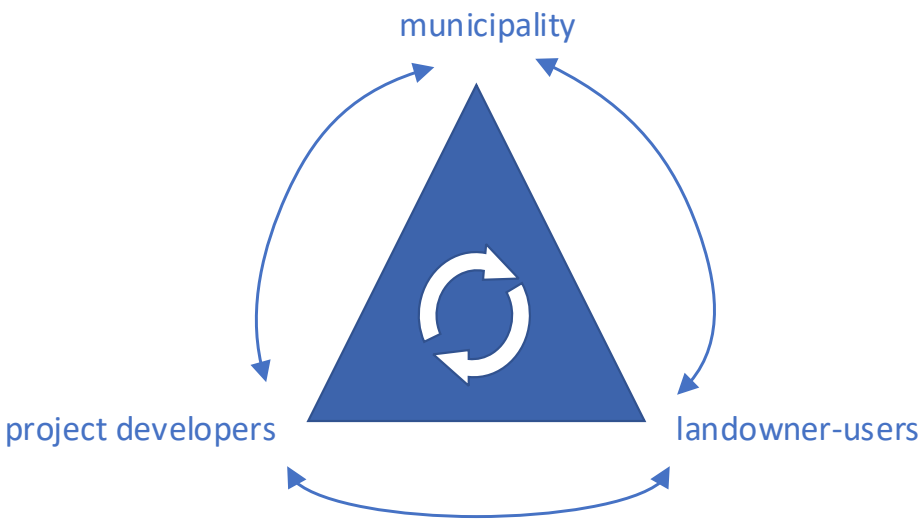


Figure 3: triangular dependencies in the collaboration process in the initiation phase of redevelopment projects of inner-city industrial areas into residential areas

1.6 Process management perspective on the collaboration process: the three main obstacles that frustrate the public private collaboration

From a process approach, three main aspects frustrate the collaboration in the initiation phase: the indistinctness regarding the future situation and the way leading to that unknown future situation, the wait-and-see impasse in which the parties are stuck and the potentially conflicting interests of the three parties. All three aspects contribute to a lengthy initiation phase.

1.6.1 Indistinctness

The initiation phase is all about defining how to address the redevelopment task and creating the right environment and playing field to make the site and the stakeholders ready for and committed to the redevelopment of the industrial site into residential area (Wolting, Bregman, Pool, 2012). This phase is by definition characterised by a high level of indistinctness of the pathway that should lead to this redevelopment-ready environment and playing field. This indistinctness allows for strategical behaviour and fuzziness which could result in a very lengthy initiation phase (Yousefi et al, 2007).

1.6.2 Wait-and-see impasse

The initiation phase of inner-city redevelopment projects tends to get stuck in a cyclical pattern of playing the waiting game and waiting for others to create the right conditions for a player to step in. (Neprom, 2016). In general, the municipality has learned its lesson during the economic crisis of 2008 that active municipal land policy can lead to serious financial losses of public money. Therefore, the municipality tends to position itself in a facilitating role while pointing at the private parties to redevelop because that is their main task (Deloitte, 2017; Neprom, 2016).
The project developers have also faced the consequences of the economic crisis and they are currently hesitant to undertake high risk redevelopment projects as well (Deloitte, 2017; Neprom 2016). Due to the lack of construction activity during the crisis, the need for housing and other real estate only increased which allowed cherry picking by the project developers by going for those projects that were relatively low risk, high reward (Deloitte, 2017). The risk profile of brownfield redevelopment projects does not match that profitable profile because of high land prices, limited space to construct dwellings and limited opportunities due to interference with the existing environment (de Sousa, 2000). For project developers, green field development projects are preferred because the business case is much easier and, most often, more profitable (Adams, de Sousa, 2007). However, the current governmental, regional and municipal policies, combined with the current housing market conditions, force them to focus their housing development ambitions at least partially on inner-city redevelopment projects.
The landowner-users are most often the industrial user of the plot which implies that their businesses' continuity depends on the usage of that plot. Therefore, keeping the current situation intact is in principle in favour of their businesses. Therefore, they have a rather anxious and passive approach that eyes the continuation of the status quo.

So, individually, the players do not feel it is up to them to initiate and direct the process. However, there could be a potential gain for all players.
The municipality has to perform up to its policy goals of facilitating significant amounts of new dwellings in the short term. Linking this to the current national policy to concentrate new urban development projects as much as possible within the current built-up area, makes inner-city redevelopment projects a major chance to deliver these policy goals.
For the project developer, the redevelopment forms a potentially profit-making project in a market where, due to municipal and national governmental spatial policy, the focus is on brownfield redevelopment. So, in order to attract new projects, project developers need to get involved in brownfield redevelopment projects.
A redevelopment could be beneficial for current landowner-users in several ways, although it most likely does form a threat to continuing their businesses in the same way at the current location.

Mixing light industries and other businesses at the current industrial site with residential use, could be beneficial by having easier access to potential customers. Furthermore, the change in land-use plan could imply a raise in land value from which the current owners could benefit by selling their plots. Additionally, a relocation could provide new (expansion) opportunities and perhaps better site conditions (de Zeeuw, 2018).
Activating this potential gain for all lies within the collaboration process between these players. This collaboration should aim for and orchestrate an anti-cyclical movement out of the wait-and-see approach.

1.6.3 Potential conflicting interests

As Holt and Mulder (2016), Adams et al (2001) and Deloitte (2017) show, each party has different interests that potentially could conflict with each other. The municipalities interest is to create as much societal value as possible while trying to optimise the benefit for its residents and firms located in the area at the same time. The project developers' interest is to develop sites in order to make a financial profit, while trying to fulfil the needs of the future residents of the site. The landowner-users' interest is to make a financial profit as well but then by continuing their current business activities on the industrial site. These interests could be in conflict with each other when each party strives to maximise their own interests. An example would be if a project developer wants to make as much profit as possible. In this case he would want to purchase the land from the current landowner for a minimum and construct dwellings in a very high density on the site. However, such a high density might not be in line with what the city needs or the municipality desires. The landowner-user would be left with only a minimal amount of money which would not enable him to start over in a different place.

1.7 Context related problem statement: the need to accelerate the initiation phase

Within the presented triangular collaboration network, the municipality and the project developers are aware of the desirability of redevelopment projects as an instrument to generate more dwellings (Stedennetwerk G32, Gemeente Utrecht, Neprom, ivbn, bouwend nederland, nvb, natuurmonumenten, 2017; Neprom, 2016). Governmental bodies, project developers, construction companies and investors have agreed in the city deal "inner-city development and redevelopment" that in order to create future proof cities with a sustainable, economic growth, it is necessary to focus urban area development on densifying the urban environment, renovation and redevelopment (City deal binnenstedelijk bouwen en transformatie, 2016). Unfortunately, regardless of this awareness, the initiation phase of these projects tends to take a very long time due to the described indistinctness, the wait-and-see impasse ant the conflicting interests (Stedennetwerk G32 et al., 2017; Neprom, 2016). With the urgent housing deficit in mind, it is very desirable to accelerate the collaboration process and thereby the whole initiation phase and eventually the whole redevelopment process, to quickly realise dwellings. The municipality and the project developers are aware of the undesirability of a very slow process and both have signed a manifest that stresses the importance of an acceleration of the process (Stedennetwerk G32 et al., 2017). So, the acceleration of inner-city redevelopment projects is desired from a both a public and private point of view (Neprom, 2016).

In short, the redevelopment of inner-city industrial sites provides a great opportunity to partially fulfil the current and future dwelling deficit along the lines of the current national planning policy. However, the redevelopment process is complex and requires an intensive public private collaboration. Therefore, the initiation phase of these redevelopment projects takes a long time, which is undesirable with the increasing dwelling deficit.
This chapter has introduced the research context which can be summarised by the following context related problem statement:

Acceleration of the redevelopment of industrial inner-city areas to mixed work and residential areas is needed to fulfil the current, urgent demand for extra dwellings in the Netherlands. However, the initiation phase is delayed because of the complex collaboration process that features triangular interdependencies between the municipality, project developers and the current industrial landowner-users.

1.8 The need to accelerate the public private collaboration

Inner-city redevelopments require a public private collaboration and because of the current national housing deficit, it is very desirable to accelerate this collaboration process.
De Zeeuw (in an interview with Straatman, 2017) states that an intensive public private collaboration is necessary to effectively apply all available resources to quickly act on the housing deficit. Ten Have (2018), based on Deloitte (2017), underlines the necessity of a public private partnership for acceleration from a process-oriented perspective. Public parties need private parties for their expertise, working capacity, land and their ability to function as a realistic, countervailing power to too ambitious municipal plans. Private parties need the municipality for consent regarding urban area development projects. So, bringing these parties together in a collaboration organisation is the first step. The second step is to accelerate this collaboration in order to accelerate the eventual construction of dwellings. The World Economic Forum (2016) endorses the fact that public private collaboration is crucial in urban development projects and that the key for acceleration therefore lies within accelerating this collaboration.
Van der Weerd (2007) has found that especially the content of the collaboration in combination with the extent to which the parties' expectations overlap with the practical functioning of the collaboration are important for the collaboration to result in a faster urban area development process. So, identifying the perspectives of the municipality, landowner-users and project developers on what they believe is needed to accelerate the collaboration process they are part of, is crucial. These insights make it possible to design the collaboration process in such a way that it is aligned with the expectations of the collaboration parties. Additionally, these insights also make sure that parties are aware of each other's true perspectives, rather than acting on the basis of invalid prejudices which is counterproductive for accelerating the collaboration process (Deloitte, 2017)

1.9 Research scope

The scope of this research is defined by a set of five aspects (see Figure 4). In summary, this research studies the acceleration of the collaboration between the municipality, project developers and landowner-users in the initiation phase of inner-city redevelopment projects of industrial sites into residential areas.

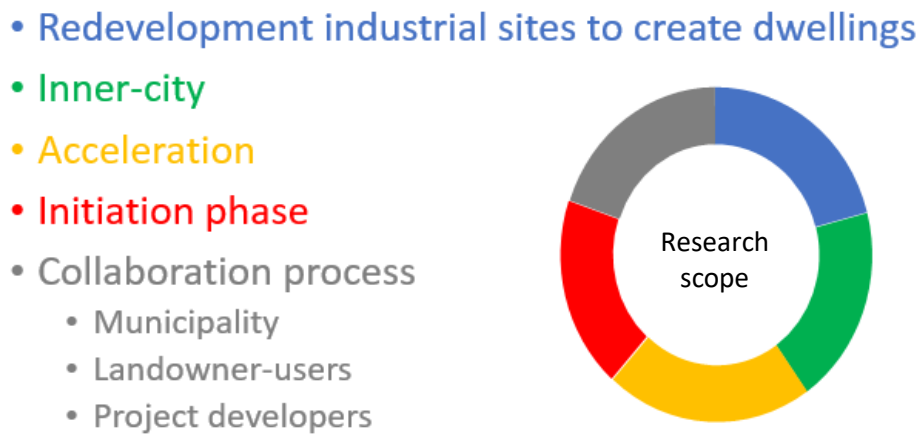


Figure 4: the five aspects that define the research scope

1.9.1 Implications of research scope:

This research only focusses on a very specific, but crucial aspect of the whole redevelopment process of inner-city industrial sites into residential area. This means that only the collaboration between the municipality, project developers and landowner-users is studied because they own the crucial resources to make the redevelopment happen. Other stakeholders such as nearby residents are not included because they do not own a crucial resource for the initiation phase to be successful. Other stakeholders that are only involved in the later stages of the redevelopment process, such as architects and contractors are not relevant for this study (Wolting, Bregman, Pool, 2012).
Because the focus is on the collaboration aspect, only those aspects of the redevelopment in the initiation phase are included that need the public private collaboration in order to be incorporated successfully. This means for example that the financing challenge of these redevelopment projects is out of scope because it is a task a project developer should handle on its own. Only when policy instruments play a role, such as a revolving fund, the public private collaboration aspect is important for the financing aspect. In the latter case, it is considered to be within the set scope of this thesis.
The same reasoning applies to the municipal spatial planning instruments and procedures. Aspects such as the long duration of certain procedures or the large number of required procedures are mainly a municipal, organisational matter on which the influence of the private parties is very limited. Only when it concerns aspects of procedures that include both a private and a public party, such as an expropriation procedure, it is part of the research scope.
Because the focus is on accelerating the collaboration process in the initiation phase, aspects such as improving the quality of the redevelopment plans are not considered within the research scope. Additionally, any implications of certain acceleration methods for the later stages of the process are also not part of the research scope.

All in all, this implies that any findings, conclusions and recommendations only apply to the specific research scope. In order to generalise any findings, it is therefore necessary to take the interactions of these aspects with the whole external environment into account. The insight that this thesis will put forward is therefore a useful stepping stone to help accelerating the initiation phase of the studied redevelopment projects, but not a comprehensive guideline.

2. Research design

This chapter shows to which research gaps this research provides answers, what the main research goal, research objective and research question is, how the research is set up and what the relevance of the outcomes is.

2.1 Research gaps

The literature study has shown that the initiation phase of a redevelopment of inner-city industrial sites featuring fragmented private landownership is very complex and requires the commitment of and collaboration between the municipality, landowner-users and project developers. The challenge gets even more complex when the collaboration process is linked to the current and increasing national dwelling deficit. This deficit asks for an acceleration of the complex collaboration in the initiation phase, which can be achieved by an effective public private collaboration (Ten Have, 2018; Deloitte, 2017). How this collaboration should look like is unknown. There is only very limited literature available that specifically focusses on the collaboration aspect together with the initiation phase of brownfield redevelopment projects. The limited available literature on the initiation phase of brownfield redevelopment projects mostly focusses on aspects such as the liability regarding possible contamination of the site, difficulties with financing the business case or they focus on strategic behaviour of the involved parties in the negotiations (Yousefi et al, 2007; Bendor, Metcalf, Paich,2011). However, no literature has been found that highlights the possibilities to accelerate the collaboration process in the very early stages of the redevelopment process.
Therefore, the first identified research gap is how the collaboration process in the initiation phase can be accelerated.

In literature, the public and especially municipal point of view is dominant when analysing effective strategies for brownfield redevelopment projects (de Sousa, 2017; Verheul et al, 2018; Cao, Guan, 2007). However, especially in times when the tasks and responsibilities of the private parties is as prominent as ever due to the passive municipal approach (Neprom, 2016), insight into their perspectives on how to accelerate the collaboration in the initiation phase is key. More specifically, both within the scientific and the practical literature, there is little known about the exact opinions of landowner-users regarding the spatial (re)development process. Urban area development is one of the main focuses of municipalities and the core business of project developers but industrial landowner-users are focussed on their own industrial business sector. Therefore, they will not be trapped into the common, urban area development thinking patterns. The landowner-users do not feel the urgency of the tight housing market which makes it less evident for them to collaborate in the process. Identifying their opinion could open up new perspectives on the redevelopment challenges, as well as it could provide crucial insights into opportunities to accelerate redevelopment projects facing fragmented landownership of private, industrial owners. Adams et al (2001) stress the importance of the landowner-users in the initiation phase. Not only does the fragmented landownership cost time and money in the process which makes brownfield projects less attractive than greenfield projects, but more importantly, it also majorly affects whether the urban area development takes place at all, regardless whether it is brownfield or greenfield (Adams et al, 2001). Adams et al. (2001) reason that urban area development occurs in “windows of opportunities”. These windows are created by development cycles that are based on lagging supply of dwellings as a reaction to high pressure from the demand side for dwellings (Adams et al, 2001). However, if the fragmented ownership by the private landowner-users causes the lagging supply to be delayed, the windows of opportunity may be missed. Then, the brownfield redevelopment process can only take place in a next window of opportunity, or it can be fully cancelled. Especially in the current times of an increasing dwelling deficit and the policy to accommodate new dwellings as much as possible in brownfield development projects, the fragmented private landownership is a crucial factor. Therefore, it is crucial to identify the perspective of these private landowners as well, in order to

accelerate the process that includes them, rather than excludes them in favour of only focussing on the municipality and the project developers.
So, the second major research gap is the perspective of the private parties and especially the one of the landowner-users on the method to accelerate the initiation phase from a collaboration point of view.

2.2 Research specific problem statement: the need to accelerate the public private collaboration process in the initiation phase

Combining the insight that the public private collaboration process needs to be accelerated with the identified research gaps, results in the following problem statement that is at the heart of this thesis:

To accelerate the initiation phase of redevelopment projects of inner-city industrial areas to mixed work and residential area, it is needed to accelerate the public private collaboration. Acceleration of this collaboration can be achieved if the collaboration process can be organised according to the preferences of the municipality, landowner-users and project developers. However, both practical and scientific literature do not know which factors are important to accomplish the acceleration according to the municipality, project developers and especially landowner-users.

2.3 Research goal

The practical goal is to contribute to an acceleration of the duration of the initiation phase of Dutch inner-city redevelopment projects of industrial sites to mixed work and residential areas. The scientific goal is to show insight into which elements regarding process aspects, roles, responsibilities and instruments from both a public and especially a private perspective, are crucial to accelerate the collaboration process in the initiation phase of the studied redevelopment projects. Especially providing insight into the landowner-user perspective will form a valuable contribution to academic literature.

2.4 Research objective

The research objective is to identify the empirical perspectives of the municipality, landowner-users and project developers on what is needed to accelerate the collaboration process in the initiation phase of Dutch brownfield redevelopment projects in order to provide recommendations to realise this acceleration.
Once these perspectives are identified, it is firstly possible to see which parties share a similar perspective. This is useful because it shows between which parties conflicts will possible occur and which parties will probably find each other quickly in the process. Secondly, identifying the main perspectives on the acceleration of the collaboration process, will reveal on which aspects which parties agree or disagree. Both aspects can be used to formulate sets of recommendations to design the collaboration process that are effective for the identified main perspectives. In this way, this research will provide insight into which set of recommendations have the potential to accelerate the collaboration process, depending on which main perspectives the involved parties have.

2.5 Central research question and sub questions

In order to fill the identified research gaps and to achieve the stated research goals and research objective, the following research question has been designed:

"*What are factors, indicated by municipalities, landowner-users and project developers, that accelerate the initiation phase of Dutch brownfield redevelopment projects of inner-city industrial sites into mixed work-residential areas, from a collaboration perspective?*"

The central research question is formulated in such a way that the focus lies on identifying factors that are most important to accelerate the initiation phase of brownfield redevelopment projects. These factors are defined as follows for this thesis: "*aspects that externally shape or internally form the collaboration process between the municipality, project developers and landowner-users*." Once these factors are identified, it is possible to use this insight to formulate approaches to design the collaboration process in such a way that these factors are incorporated and that therefore the initiation phase will be finalised quicker. The initiation phase of a redevelopment project is defined as follows, in accordance with Wolting, Bregman and Pool (2012): "*The phase that is started with a stated desire to redevelop an area and that is capped off with a collaboration agreement that can be used to start the design assignment*." The term "collaborative perspective" is added in the formulation of the research question to stress that the factors are specifically related to the collaboration process, that is defined as follows: "*the interactive relations between the municipality, landowner-users and project developers and the content of these interactions*." Lastly, Brownfield redevelopment is therefore defined as follows: "*the process of redeveloping land that has been previously developed, is currently vacant, partially occupied or fully in use, is not immediately available for other usages and has a redevelopment potential, to accommodate the current or one or more different spatial functions*."

The *object of study* are the Dutch brownfield redevelopment projects. The *subject of study* is to accelerate the initiation phase of these projects and the *actors of study* are the municipalities, landowner-users and project developers that need to collaborate to realise the redevelopment projects.

2.5.1 Sub questions

In order to answer the central research question, three sub questions need to be answered first:

1. Which conceptual model can be constructed that describes the theoretical perspective on the important factors for acceleration?
2. What is the empirical perspective on important factors for acceleration?
3. What is the relation between the theoretical and empirical perspective?

Sub question one is answered by chapter four and five. Chapter four introduces two conceptual models that divide the relevant factors into three categories: organisational factors, process factors and instrument factors. Chapter five uses the structure of the conceptual model to identify 42 factors from literature that are relevant for the collaboration process in the initiation phase of brownfield redevelopment projects.
Sub question two is answered in chapter eight and nine. Chapter eight shows which perspectives are identified among 28 respondents from municipalities, landowner-users and project developers from three redevelopment projects. Chapter nine shows the relation between the perspectives and the three parties and the three cases.
Sub question three is answered in chapter ten and eleven. Chapter eleven uses the empirical perspectives on the theoretical factors to construct a building block model that recommends different approaches to design the collaboration process in the initiation phase, depending on the dominant perspectives in a specific case. Chapter eleven shows the conclusions from an expert meeting that was organised to validate the most important and noteworthy findings that relate to the relation between the theoretical and empirical perspective.

Chapter 12 "Conclusions and practical recommendations" answers each sub question specifically by summarising the main insights of the chapters that answer each sub question, as is shown in figure 5. Chapter 13 presents the limitations of the research, a reflection on the research method and the main findings and recommendations for future research. Figure 5 shows the research overview with all chapters and the important relations that structure the chapters.

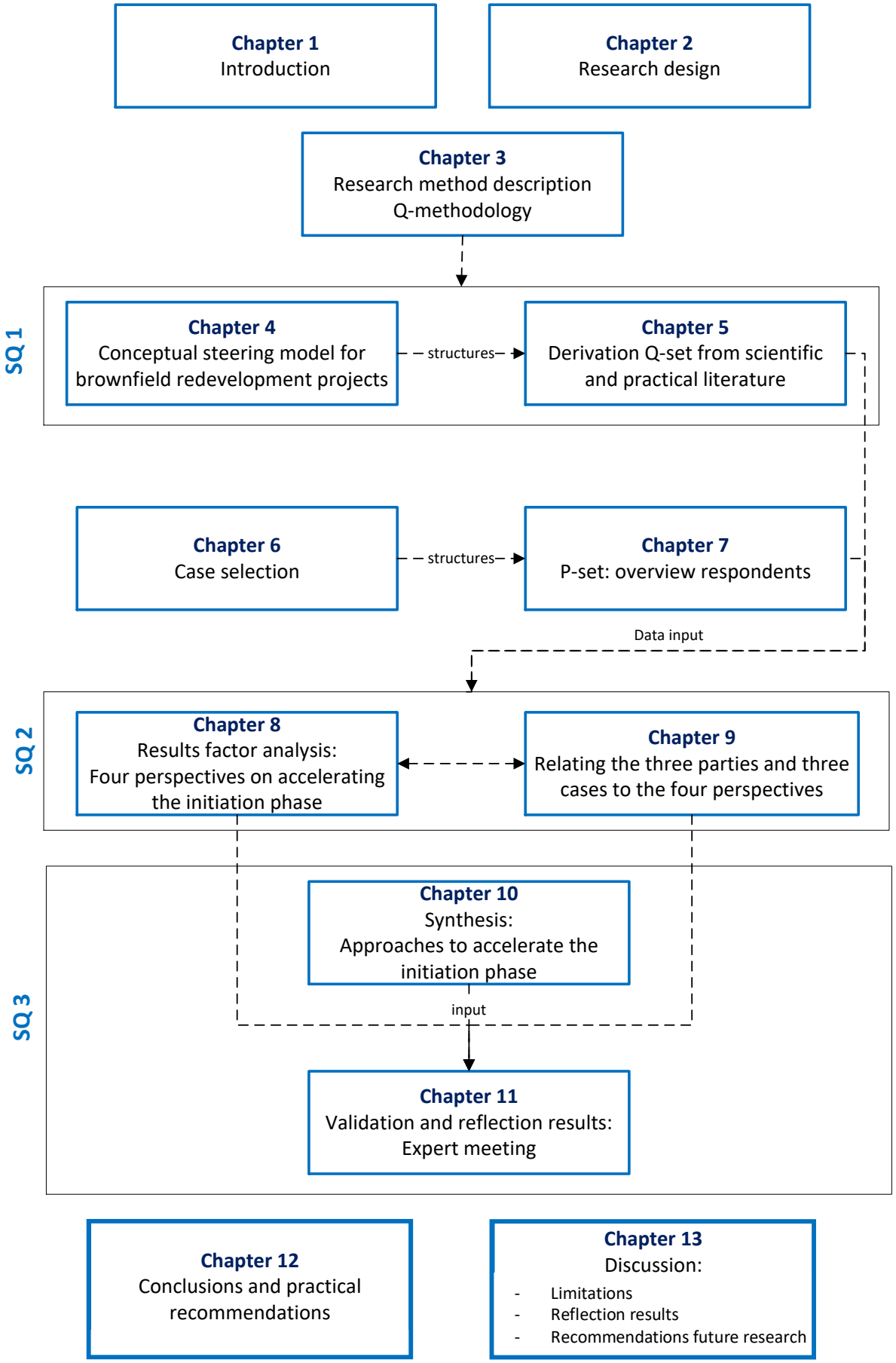


Figure 5: Research overview showing all chapters and the important relations that structure the chapters

2.6 Research design

The perspectives of the municipality, landowner-users and project developers are identified by interviewing the respective parties by using Q-methodology. Q-methodology is a method to extract general, comprehensive perspectives on a certain matter from a set of respondents, based on the ranking of a set of statements regarding the certain matter by the respondents (Watts, Stenner, 2005). Three redevelopment projects of inner-city industrial sites that are currently in the initiation phase will be selected for the case study. The respondents for the Q-methodology are selected from these three cases. For each case, three respondents from each of the three studied parties (municipality, landowner-users and project developers) are selected. The respondents, the P-set, rank a set of statements, the Q-set, that relate to aspects that could be important to accelerate the collaboration process according to the literature. The ranking is based on the extent to which respondents agree or disagree whether the statement needs to be implemented to accelerate the collaboration. A literature study is used to derive the statements from the relevant scientific and practical literature. The statistical analysis of the ranking of the statements reveals a set of comprehensive perspectives on what is needed to accelerate the collaboration process according to the municipality, landowner-users and project developers. The analysis shows which type of respondents share which perspective and on which aspects the perspectives agree and differ. The insights regarding which factors are desired and which are unwanted to accelerate the initiation phase are used to construct a building block model that can be used to recommend approaches to design the collaboration process in such a way that the potential to accelerate this process is enlarged. Finally, these recommendations and other important findings are validated in an expert meeting. Figure 6 shows the flow diagram that shows an overview of the research design.

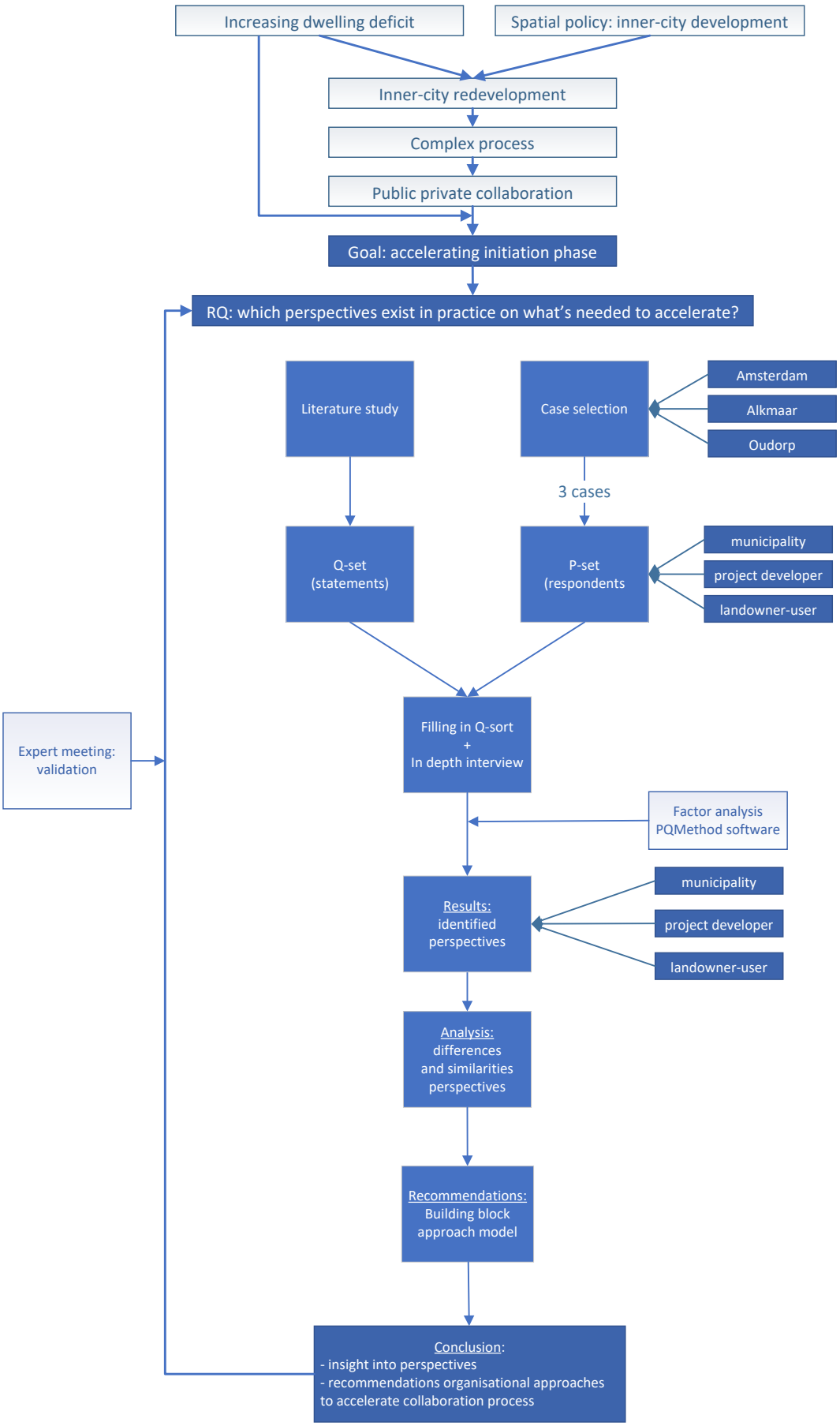


Figure 6: flowchart of research design

2.7 Relevance research outcomes

This research will provide insight in how municipalities, landowner-users and project developers look at different factors that are important when trying to accelerate the collaboration process in the initiation phase of brownfield redevelopment projects. The scientific relevance is therefore the insight into which perspectives exist in practice among the three mentioned parties regarding the acceleration challenge. Especially the insight into the perspectives of landowner-users and perspectives regarding the initiation phase of redevelopment projects is scientifically relevant.
In practice, there is a great need to accelerate redevelopment projects because both public and private parties stress the necessity of inner-city redevelopments (Neprom, 2016, Stedennetwerk G32 et al., 2017). From a public perspective, the supply of dwellings needs to increase fast to accommodate the rising number of dwellings seekers. From a project developer's perspective, accelerating these projects is favourable because the longer the process takes, the more money it costs and the risk of missing out on other opportunities increases when current projects take longer. So, the tight housing market combined with the need to facilitate housing at inner-city locations results in a need from the urban development practitioners for a set of recommendations to achieve the desired acceleration of the redevelopment projects. Therefore, the practical relevance of this research lies within the approaches to design the collaboration process that are constructed on the basis of the insights regarding the identified perspectives on the acceleration challenge.

3. Research method description: Q-methodology

This chapter gives an overview of the Q-methodology research method. First a short introduction is given on why Q-methodology is used for this research. Then, all steps of the methodology are explained. After the research steps are explained, an overview of the expected results is presented. The chapter finishes by highlighting the relevance of Q-methodology to obtain the main research goal and explaining the main limitations of the method.

3.1 Introduction

Q-methodology is used to identify each respondents' opinion regarding role and responsibility division, collaboration and the usage of accelerating instruments. Q-methodology is a well-suited method to compare theoretical concepts and the practical view on these concepts by quantitatively measuring the attitude of the respondents to literature statements (Cross, 2004). Furthermore, it is a combination between quantitative and qualitative research, which suits the purpose of this research really well (Brown, 1980). It is a good fit because this research aims at identifying the empirical perspective of the important players in the inner-city redevelopment projects. Q-methodology shows two important results. Firstly, it shows which statements are found important and which are valued as less important. Every statement refers to a certain aspect that has been identified in scientific and practical literature. The respondents will rank the statements on an axis, stating to what extent they agree or disagree with the statement. In this way, the statements that are placed at the extremes of the axis, are most important according to the respondent. Secondly, Q-methodology enables to group respondents based on their corresponding perspectives on the aspects (Watts, Steiner, 2005). This is relevant because it reveals which parties agree or disagree with each other and on which aspects. This information can be used to identify recommendations to design the collaboration process in such a way that the collaboration is shaped according to the identified preferences of the parties.

The good combination of quantitative and qualitative lies within the power of Q-methodology to measure the relative perspective of the respondents on the statements, the quantitative part, and subsequently to reveal the motives for the subjective ranking by the respondents by interviewing them while they are sorting the statements, the qualitative part (Watts, Stenner, 2005).

The focus of the Q-methodology on the subjective perspective of the actors is unique and is best expressed in the variables in the Q-methodology. As Watts and Stenner (2005) write "persons become the variables of interest" (Watts, Stenner, 2005, p. 72). Q-methodology therefore aims at finding correlation between persons and not between any other type of variables.

3.2 Summary method description

This paragraph shows a summary of the method description. Watts and Stenner (2012) have set up a six-step guideline to perform Q-methodology. For each step, a summarised overview is presented and a reference is made to the relevant chapter that covers that step. Appendix one shows an extensive method description of each step.

The first step is to collect statements on the studied topic via a literature research. For this research, international and national scientific literature, reports from the spatial planning sector, news items, articles, consultation of experts in the scientific field from the TU Delft and experts in the practical field from Akro Consult and attending relevant meetings, workshops and presentations, are used to identify factors that could contribute to an acceleration of the initiation phase of redevelopment projects.

Two conceptual models are used to structure the literature research. Chapter four introduces these conceptual models and applies them to the studied context of inner-city redevelopment projects.

Step two is to select a number of factors and to translate them into statements that together form the Q-set. The Q-set for this research consists of 42 statements, which are shown in chapter five.

Step three is to select the respondents that form the P-set. For this research, the respondents are selected from three Dutch redevelopment projects of inner-city industrial sites into mixed work-residential areas: Hamerkwartier in Amsterdam, Oudorp in Alkmaar and Schieoevers in Delft. Nine municipal respondents, ten landowner-users and nine project developers, equally distributed over the three cases, form the P-set. Chapter six introduces the cases and appendix three shows the three extensive case descriptions. Chapter seven shows the selection strategy for the P-set and appendix four shows an extensive overview and description of all twenty-eight respondents.

Step four is to collect the data by letting each respondent fill in the Q-sort. The used Q-sort for this research is shown in figure 7. The Q-sort forces the respondent to rank the statements from totally agree to totally disagree and thereby reveals its preference structure. To make all respondents aware that the study is about finding factors that accelerate the initiation phase, the respondents were asked to rank the statements by choosing the extent to which they agreed or disagreed with the following statement for each of the 42 statements of the Q-set: "This statement has to be executed to accelerate the initiation phase."

The respondents are asked to rank the statements by answering to what extent they agree or disagree with the following statement: "This statement (referring to a specific statement of the Q-set) needs to be applied to accelerate in the collaboration in the initiation phase." After filling in the Q-sort, a separate interview is performed with each respondent to determine the underlying reasons for his ranking choices.

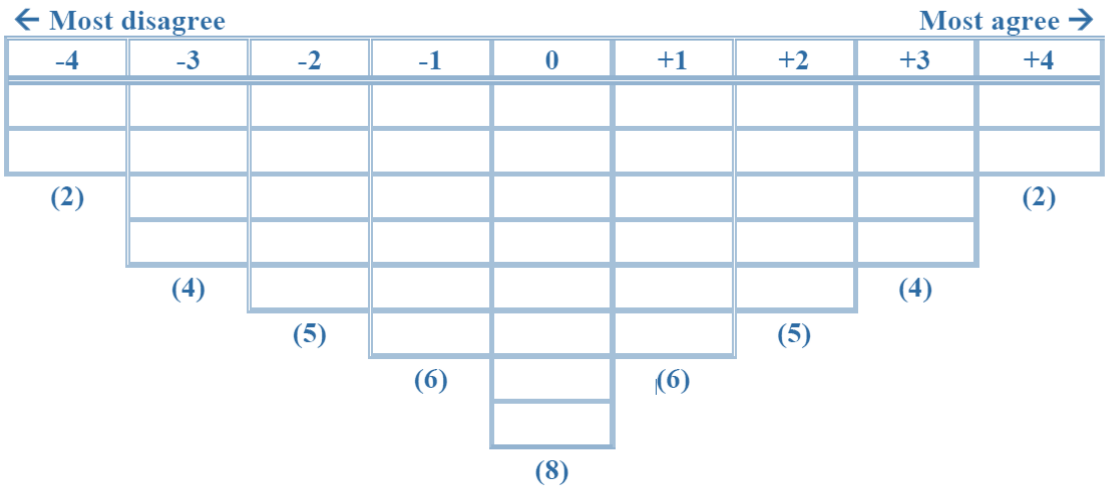


Figure 7: Q-sort with room for 42 statements

Step five is the data analysis which is aimed at finding factors. A factor is "*a certain pattern in the filled in Q-sorts which can help to cluster similarly thinking respondents together*". A factor expresses a certain ranking pattern of the statements and thereby shows a certain perspective on which factors are and which factors aren't important to accelerate the initiation phase of inner-city redevelopment projects. Additionally, the analysis shows the degree of similarity of the filled in Q-sort of each respondent with the found factors. Respondents that have a high similarity score for the same factor, have a similar perspective. The software package PQMETHOD is used for this data analysis. Chapter eight shows the results of the data analysis, while appendix six shows all the data analysis steps in detail.

Step six is to explain what the factors mean in practice. This means that in this step it is explained what a certain cluster of similar thinking respondents thinks about the 42 statements. The ranking pattern of the factor and the interviews with the respondents that have a high degree of similarity

with the ranking pattern of that factor, are used to translate these factors into perspectives. These perspectives show what the main empirical perspectives of the municipality, landowner-users and project developers are on how to accelerate the initiation phase of the inner-city redevelopment project from a collaboration perspective. Chapter eight shows the defined perspectives.

3.3 Relevance Q-methodology for research goal

"In order to collaborate successfully it is essential to know each other's interest first and subsequently to align them. It has a counterproductive effect when the parties have certain perceptions regarding each other's interest that lead to discrepancies amongst them." (translation from Deloitte 2017, page 19). First identifying and naming of the real interests and perceptions regarding each other's interest is needed as a basis from which recommendations can be formulated on how to improve the collaboration (Deloitte 2017, p 19). It is furthermore of utmost importance to update the mutual visions and perceptions in order to guarantee a fit-for-purpose collaboration strategy. If parties get stuck in their perceptions towards the other parties, eventually these perceptions will deviate more and more from the actual situation which has a negative effect on the collaboration between these parties. Additionally, the perspective of the landowner-users on the redevelopment project will be identified, which has been stated as knowledge that is currently lacking in the literature.

Q-methodology is a distinctive alternative to traditional factor analysis because it is about correlating persons, instead of tests (Stephenson, 1935). Each filled in Q-sort can be viewed as a personal profile containing the personal view on the topic of research. Correlation between these personal profiles shows that the respondents share a similar view and different groups of correlating profiles show that there are several overarching perceptions, common viewpoints, regarding the topic of research (Brown, 1993). Therefore, Q-methodology is the right research method to identify possibilities for acceleration of the initiation phase of inner-city redevelopment projects. Acceleration is possible when it is clear to which aspects which parties agree and disagree. Once it is known that all parties expect a similar role from a specific party, then that party can fulfil that role from the beginning already which can accelerate the whole process because the phase of indistinctness is skipped. Factor analysis of the Q-sorts will reveal an array of common viewpoints to which the individual respondents correlate. In this research, the respondents are selected based on their role in the redevelopment projects. This allows for tracking them in the factor analysis. Q-methodology will therefore reveal whether all respondents from the same sub group (municipality, project developers, landowner-users) uphold a similar viewpoint regarding the collaboration process or not. Furthermore, each respondent is labelled with their exact characteristics like the case to which they are related, their exact function within the organisation and the type of business they work for or own (multinational vs family business for example). This makes it possible to derive specific conclusions from the factor analysis that have a direct link with the real-life practice.

Respondents

The fact that Q-methodology does not require a large number of respondents to produce significant results, makes it a good fit with the complexity of the research domain (Smith, 2001). This research is structured in such way that only a very limited group of specific parties qualify for being a potential respondent. Only people that work for either the municipality, project developer or are the landowner-users and who are active in the initiation phase of a current, specific redevelopment project, are qualified. This strict selection is done according to Brown (1978) who states that it is about respondents who are theoretically relevant to the studied case. The relevance is based on the expectation that a particular respondent has a clear and distinctive perspective on the studied matter which could define one factor (Brown, 1978).

There is no optimal number or strict lower or upper limit regarding the number of respondents (Watts, Stenner, 2005). In fact, in theory, even one respondent is enough to distinguish a factor as a viewpoint that is out there in the society. However, in order to show that this factor would be representative for the area of research, more than one respondent needs to load on a factor (Watts, Stenner, 2005). A very large P-set could lead to very generic factors which neglect the subtle differences between respondents. However, it is acknowledging and valuing these subtle details in which the power of Q-methodology lies (Watts, Stenner, 2005). Brown (1980) states that the aim should be to have four or five persons load on a factor and that most commonly two to four factors are identified and rarely more than six. The used P-set contains 28 respondents which would fit Brown's prescription in the case of an equal distribution of Q-sorts loading on the factors. However, on beforehand it is unknown which and how many Q-sorts will load on how many and which factors. Watts and Stenner (2005) prescribe a minimum of two respondents per factor.

Individual opinions matter

Because Q-methodology shows the individual perspectives on the studied matter, it acknowledges the fact organisations are built up out of individuals. This means they are not a homogenous unity. This perception shows great resemblance with the real-life practice. The individual opinions and characteristics of the involved players in the initiation phase shape their behaviour and therefore the mutual interactions. Identifying these individual perceptions is then crucial to gain insights in how to accelerate this collaboration. Subjectivity plays a key role in this phase and Q-methodology is therefore the right research method.

3.4 Limitations Q-methodology

A first limitation is the fact that only a limited number of statements can be tested. The added value of the research lies within selecting a representative Q-set (Brown, 1980). The representativeness of the presented Q-set in chapter five is validated by my supervisors in a consultation meeting. Secondly, all respondents have been asked if they missed an aspect in the Q-set. Only a few respondents highlighted some individual missing aspect while the vast majority did not miss any aspect. Overall, all respondents acknowledged that the Q-set was representative for the collaboration in the initiation phase from an accelerating perspective.

Secondly, an often-mentioned critique is the matter of subjectivity involved in Q-methodology due to its small sample size. This would make it hard to generalise any findings (Thomas, Baas, 1992). The idea is that subjectivity plays an important role in ranking the statements. Three important arguments should be mentioned against this thought. Firstly, Brown (1980) states that the underlying idea of Q-methodology is, is that there is only a limited set of perspectives on a certain topic. Therefore, it does not matter how many respondents load on the identified factors, as long as the factors are identified. Every representative Q-set will identify these factors (Brown, 1980). Secondly, Thomas and Baas (1992) state that the generalisation of findings is of less relevance in Q-methodology. This is because the method is about identifying the reigning perspectives and not as much as which part of the population adheres to each perspective. For this research, it is relevant what the participants think because they are the ones who ultimately shape the collaboration process. Thirdly, subjectivity is at the heart of human behaviour. The actions of the players in the collaboration process are based on the subjective perceptions of these players. Any critique referring to the fact that the filled in Q-sorts are only a snapshot of a person's opinion in that specific moment, omits the fact that the same subjectivity also determines people's actions, especially in the initiation phase when facts are scarce and everybody acts based on their own assumptions and perspectives. Q-methodology acknowledges this subjectivity and this method shows therefore insights into the real-life practice.

4. Conceptual steering model for brownfield redevelopment projects

This chapter introduces first the basic conceptual steering model of De Leeuw (2012) and then the adjusted version of this model that used to structure the types of factors that are relevant in the initiation phase of brownfield redevelopment projects from a collaboration perspective. Finally, the public-private urban management model of Heurkens (2012) is introduced. The adjusted version is used to further structure the instrument factors.

4.1 Basic conceptual steering model

Brownfield redevelopment projects can be described as a complex system of interacting variables. The involved parties are an example of such variables. As discussed in chapter 1, inner-city redevelopment projects are a relevant topic of study because of developments in the context of the Dutch housing market that requires the construction of new dwellings within the built-up environment. This thesis is about identifying factors that will, according to the municipality, landowner-users and project developers, accelerate the initiation phase of these brownfield redevelopment projects. So, it is about finding factors that help to steer the process in a certain way.

In order to get insight into the complexity of this process in a structured way, this thesis uses the conceptual steering model of De Leeuw (2002) and applies it to the brownfield redevelopment context. His conceptual model is a system thinking approach that he applied to the business administration domain. Heurkens (2012) shows that that the business administration domain shares similar characteristics with the urban (re)development project domain. Firstly, both domains are about "analysing, designing and managing goal-oriented processes in and between organisations." (Heurkens, 2012, p. 52). Secondly, in both domains, the involved parties participate in a project to realise organisational-dependent goals. Thirdly, the complex reality must be dealt with in an interaction process between both public and private parties from different disciplines with different perspectives. Because of these similarities, De Leeuw's conceptual steering model (2002) is often used in the urban area development, for example by Heurkens (2012). The basic conceptual steering model is shown in Figure 8.

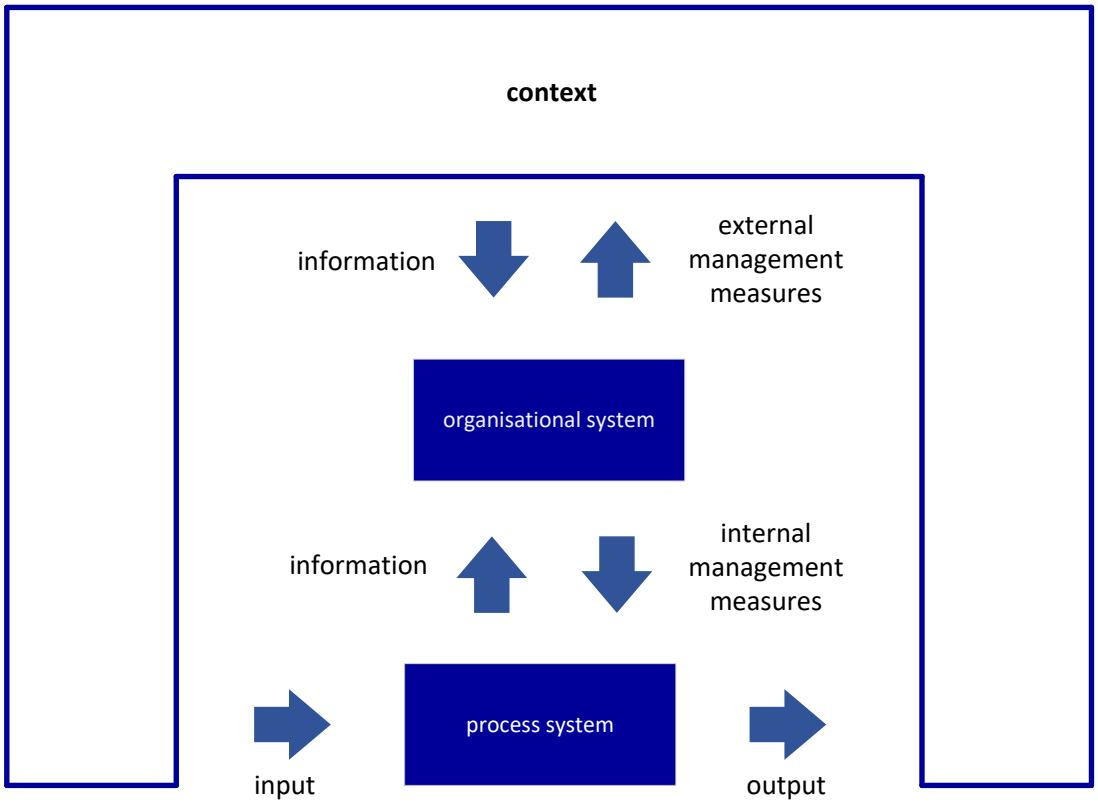


Figure 8: conceptual steering model (based on De Leeuw, 2002)

The model exists out of three main elements: the context, the organisational system and the process system (De Leeuw, 2002). The context is the higher-level system a studied system is part of. This context is most often dynamic. The studied system itself consists of two main systems: the organisational system and the process system. The organisational system represents the organisational structures that are present in the system such as all formal and inform relations between and roles of the different parties that are active in the studied system. The process system represents the process that is being studied and the process is steered by the parties that are related to each other in the organisational system.
The three main elements are connected to each other by means of relationships, shown as arrows in Figure 8. Dynamics in the context level influence the process system and this influence is interpreted as an input for the process system; the system reacts to changes in the context. This reaction has to be executed by the relevant parties in the organisational system. The required information to react on the change is transferred from the process system to the organisational system. The reaction from the responsible parties in the organisational system consists out of management measures. Two types of measures are distinguished by De Leeuw (2002): internal management measures that aim to evoke a certain output of the process system and external management measures that directly influence the context. The output of the process system also influences the context level. The organisational configurations between the parties and the parties themselves react to information they subtract directly from the context level.

4.2 Conceptual steering model applied to the context of acceleration of the initiation phase of the redevelopment process

The focus of this research lies on the organisational system and the process system and the relationships between these two systems because this research investigates in which way the parties in the organisational system can accelerate the process in the process system. The aim is to extract information from the parties within the organisational system in how they think the organisational system should be constructed, how the process should be designed and which internal management measures should be applied in order to accelerate the collaboration process. The context and its interactions with the organisational and process system are therefore out of scope. However, it is still important to acknowledge that any change in the context level can impact the organisational and process system and any change in the organisational and process system can impact the context level. Therefore, focussing on only the two subsystems implies a simplification of the real-world situation. However, a conceptual model is meant to simplify the reality in order to get insight in how the system works in a systematic way. Figure 9 shows the adjusted conceptual steering model of De Leeuw (2002). The highlighted parts show the relevant parts of the conceptual model for this research.

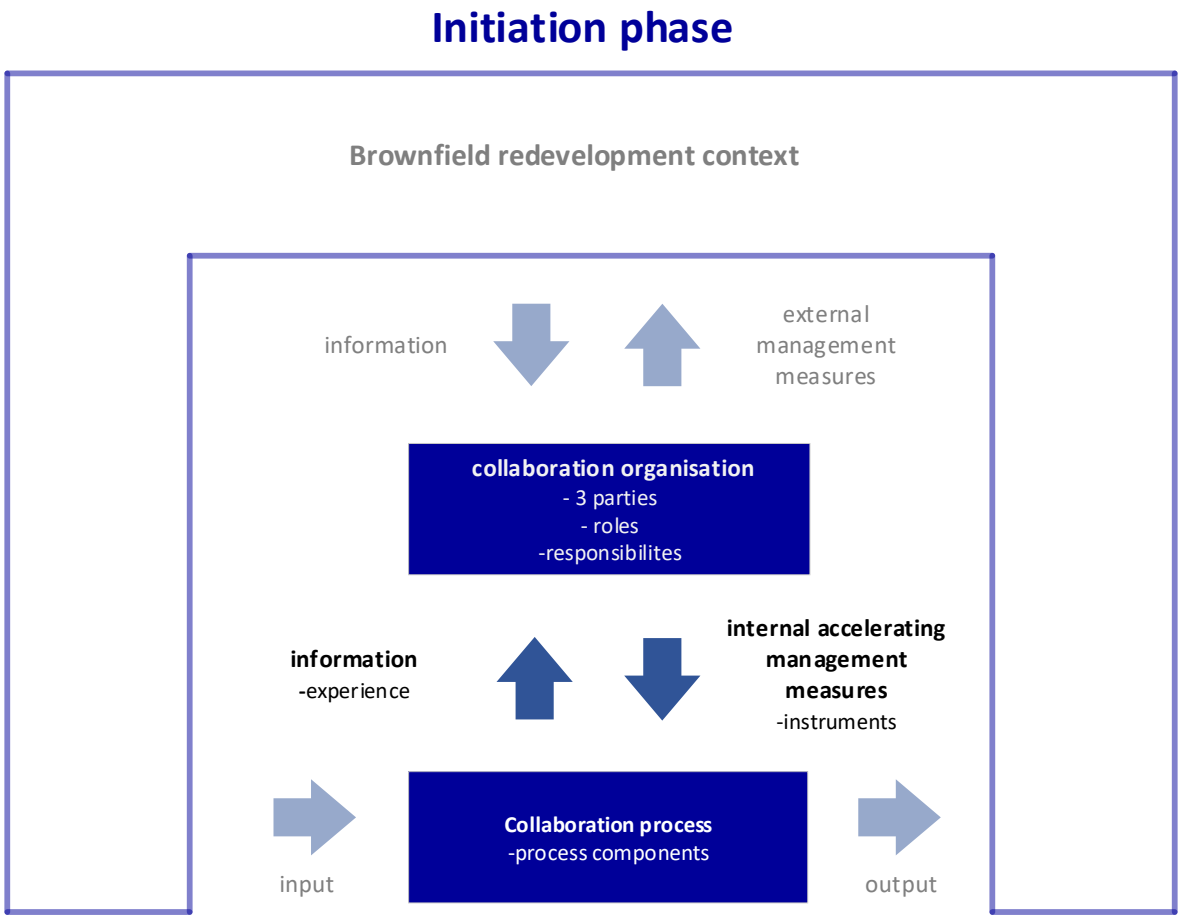


Figure 9: adjusted conceptual steering model of De Leeuw (2002) to the context of the initiation phase of brownfield redevelopment projects. The highlighted elements are relevant for the scope of this research

The focus of this research is on the collaboration process and therefore the organisational system is labelled as “the collaboration organisation” and the process system as “the collaboration process”. The organisational system is formed by three parties and their mutual relations. These mutual relations depend on the different roles and responsibilities that are assigned to each party. The three parties are the municipality, landowner-users and project developers. Which roles and responsibilities are necessary to accelerate the collaboration process depends on the components that form this process. Based on information on how the collaboration process works and on the personal experience of the three parties with similar processes, the parties have an opinion on which internal management measures will accelerate the collaboration process. These measures are also linked to the process components because the measures should affect the components of the process. The studied internal accelerating management measures are instruments that have the potential to accelerate the initiation phase.
The main research question of this research focusses on identifying factors that contribute to an acceleration of the initiation phase of Dutch brownfield redevelopment projects according to the municipality, landowner-users and project developers. The adjusted conceptual steering model is used to structure these factors into three categories: organisational factors that refer to the needed roles and responsibilities and which party should have which role and responsibility, process factors that refer to the components that have to be incorporated in the collaboration process in order to accelerate the initiation phase and thirdly the instrument factors that are used by one or more parties to influence one or more process components.

4.3 Conceptual public-private urban management model

Heurkens (2012) has looked into different urban management concepts to steer urban development projects. On the basis of extensive literature research, Heurkens (2012) has designed the conceptual public-private urban management model (see Figure 10). This conceptual model is built up out of two halves: one half that shows in which moments in time and in which phases management activities can be applied to steer the urban development project, and one half showing what is needed to execute these management activities and which types of management activities there are. The upper half, labelled as "management activities", can be divided into two parts, a project management quarter that shows the distinctive project steps that need to be passed from a project management perspective (based on Wijnen, Renes, Storm, 2004) and a process management quarter that distinguishes three different types of interaction that are most relevant for urban area development projects (based on Teisman, 2003). Within each phase of the project management quarter, these three types of interaction occur. The management instruments half features a quarter that shows the three main resources that a party needs in order to be able to obtain a power position and to be able to influence the process (Burie, 1978). The other quarter shows four types of management instruments to influence the managed project (based on Adams, Watkins, White, 2005; Adams, Tiesdell, 2010).

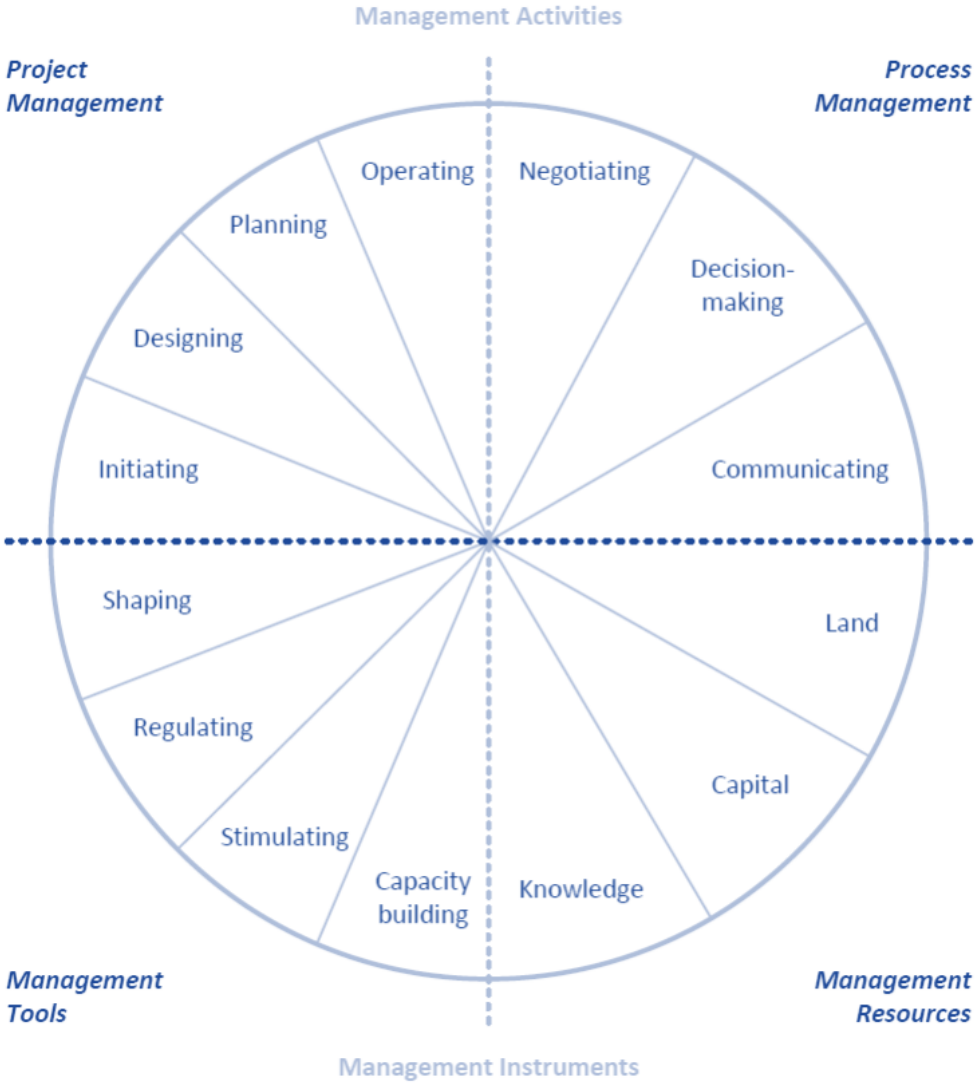


Figure 10: conceptual public-private urban management model, taken from Heurkens (2012) page 105

This model can be used to further conceptualise and structure the concept of the internal management measures of Figure 9. Therefore, the conceptual public-private urban management model is related to the earlier introduced conceptual steering model of De Leeuw (2002) and it can be incorporated in this model, as shown in Figure 11.

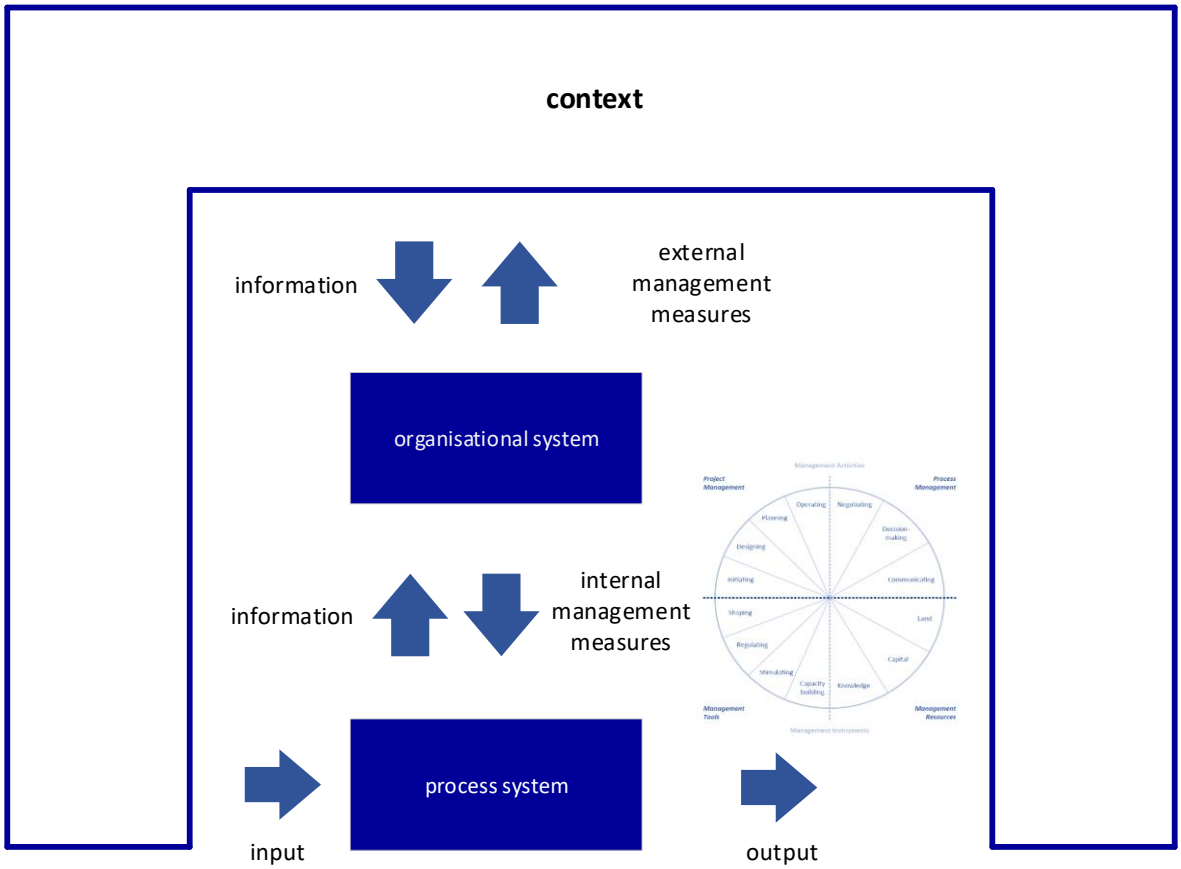


Figure 11: conceptual public-private urban management model (Heurkens, 2012) incorporated into the conceptual steering model (De Leeuw, 2002)

4.4 Conceptual public-private urban management model applied to the context of acceleration the initiation phase of the redevelopment process

The conceptual model in Figure 11 can be used to further structure and conceptualise the internal, accelerating management measures for the redevelopment.
This research focusses exclusively on the initiation phase of the project management cycle, this is demarcated in red in Figure 12.
From a process management perspective, the focus is on the collaboration part. In Heurkens' conceptual model, the negotiation phase is about a trade-off between all players' objectives and based on these negotiations, decisions are made that subsequently need to be communicated. All three process management activities occur in the collaboration in the initiation phase, and are therefore highlighted in yellow in Figure 12.
The internal, accelerating management measures need to be implemented by one or more of the three players. In order to do so they need at least one of the three management resources, highlighted in green (Figure 12). The municipality owns at least the public space in the area and has the knowledge. The project developer has the capital and the landowner-users owns the land. By making use of Heurkens' model, it is validated that these three parties are the right parties to be included in the analysis because they have the power to influence, and therefore accelerate, the collaboration process. The municipality has spatial planning expertise and holds the power to the legislative spatial policy instruments. Landowner-users own plots in the area. Project developers

possess urban area development expertise and access to capital to finance the redevelopment project.
All management instrument categories, based on Adams et al (2005) and Adams and Tiesdell (2010), are highlighted in purple because all types are relevant for brownfield redevelopment projects (Figure 12). Shaping instruments influence the conditions of the collaboration. A relevant example is a municipal planning policy. Regulating instruments demarcate what is and what isn't possible to achieve in the collaboration process. A relevant example is allowing residential use of an area that is appointed only an industrial function in the land-use plan. Stimulating instruments try to steer the process in a certain desired direction. A relevant example is a subsidy for landowner-users if they sell their land to a developing party in order to accelerate the numbers of plots available for redevelopment. Capacity building instruments open up room for other actors to take part in certain aspects in the collaboration. A relevant example is to establish a project organisation.

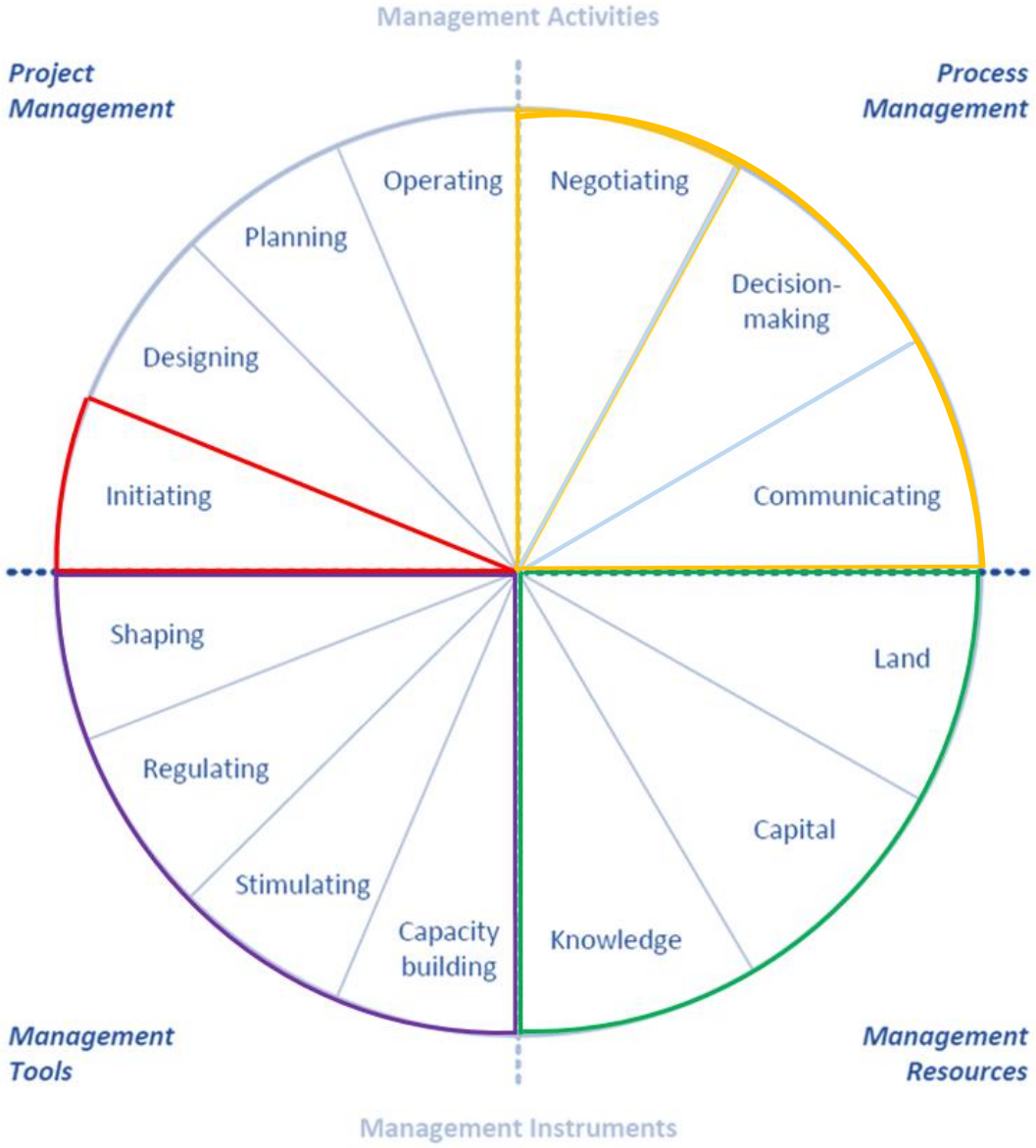


Figure 12: adjusted public-private urban management model, based on Heurkens (2012) page 105.

5. Derivation Q-set from scientific and practical literature

This chapter shows which aspects have been detected in and selected from a literature research based on both scientific and practical literature. Firstly, the link between the introduced conceptual models (chapter 4) and the literature research and the selection of aspects for the Q-set is introduced. This part concludes with the final list of selected aspects from which the statements for the Q-set are derived. Secondly, an overview is shown of the 42 statements that together form the Q-set. The statements are categorised according to the derived trichotomy from the conceptual models: process, organisational and instruments.

5.1 The conceptual model as guideline for literature research Q-set

The literature research is structured along the identified three types of factors from the adjusted conceptual steering model (Figure 9) that are relevant when accelerating the initiation phase of brownfield redevelopment projects from a collaboration perspective: process factors that refer to aspects of the collaboration process, organisational factors that refer to roles and responsibilities and instrument factors that refer to instruments that can be applied to accelerate the process.
The literature research embodies reading numerous scientific papers, articles based on practice, news items and consultation meetings with advisors from Akro Consult and my committee members in order to create an as comprehensive as possible within limited time overview of what literature has identified as important factors in each of the three categories. From this research, a selection of aspects is selected that is identified as characteristic and relevant for the collaboration process in the initiation phase of brownfield redevelopment projects. This selection was validated to fulfil these requirements of being characteristic and relevant in a validation meeting with my supervisors. From each aspect, one or more factors can be derived that are used to form statements for the Q-set of 42 statements.

Process aspects:

- Strong collaboration in a network
- Flexibility of the redevelopment plans
- The need for a municipal and/or joint spatial vision
- Transparency of interests
- Individual profit maximisation
- Buying out landowner-users
- Purchase of land
- Relocation landowner-users
- Feasibility and desirability of a mixed work-residential area
- Financing aspect
- Benefitting from increase in land value
- Introducing other spatial functions in the area

Organisational aspects (roles and responsibilities):

- Authors of the spatial vision
- Joint leadership
- Landowner-users deciding themselves to stay or go
- Offering an alternative location to landowner-user
- Municipal leadership role
- Municipal urban area development role
- The project developer's role
- Flexible roles

Instrument aspects

- Shaping
  - Flexible land-use plan
- Regulating
  - Expropriation of landowner-users
  - Allowing and introducing pioneers
- Stimulating
  - Subsidy for landowner-users to leave the area
  - Municipal land policy
  - Guarantee municipal financial contribution
  - Revolving fund
  - Lighten process burden for landowner-users
  - Placemaking
  - Re-allotment
- Capacity building
  - Project organisation
  - Expert to represent landowner-users
  - Public developer/quarter master
  - Urban area development by current landowner-users

Appendix two presents an extensive overview of the performed literature review that shows scientific insights and insights from practice regarding the selected aspects. This literature framework is used to derive statements from each aspect, that together form the Q-set for this research. So, for each aspect, a literature paragraph is followed by a set of statements that logically follow from the theoretical framework.

5.2 Structuring Q-set according to the conceptual models

The 42 statements that together form the Q-set can be structured using the adjusted conceptual models of De Leeuw (2002) and Heurkens (2012).

The aspects that refer to important topics that need to be taken care of by all parties in the collaboration process are grouped under the category “process statements”. The aspects that refer to roles, responsibilities and specific parties that should fulfil these roles and responsibilities are grouped under the category “organisational statements”. The statements that refer to the application or implementation of certain (policy) instruments that can be used to accelerate the collaboration process, are grouped under the category “instrument statements”. This category is further divided into shaping instruments, regulating instruments, stimulating instruments and capacity building instruments.

The categorisation of the statements is not an exact science and some statements can be related to multiple categories. However, the category a statement is assigned to, does not influence the results of the Q-methodology in any way. It is only used to show the coherence between the statements and practical relevance of the statements.

The categorisation gives the following overview of the Q-set:

5.2.1 Process statements

1. Flexibility that is accompanied by uncertainty regarding the redevelopment plans is better than fixed redevelopment plans that do provide certainty.
2. Pursuing individual profit maximisation prevents a fast collaboration
3. The feasibility of the redevelopment project is more important than the profitability
4. A strong collaboration between all parties is crucial to make sure all parties will make optimal use of their resources (knowledge, privileges, money, land) in the collaboration process to achieve a better end result.
5. Realising dwellings and other functions (shops, food and drink service industry, offices, culture) in an area will lead to landowner-users selling their land faster.
6. A clear vision of the future, regardless the content of this vision, is the best for landowner-users because this provides them with certainty regarding the future situation
7. The redevelopment of the area results in a higher appraisal of the land value from which all parties should benefit
8. The relocation of firms has to be part of the collaboration process between the parties
9. Arranging the relocation of firms early on stimulates a constructive attitude of the landowner-users towards the redevelopment.
10. The current landowner-users need to be bought out
11. The purchase of land is a pure financial negotiation between the project developer and the current landowner-user that will always result in an agreement because both parties understand each because they are both entrepreneurs
12. A municipal vision for the redevelopment area is necessary in the initiation phase
13. It is crucial that all parties make a joint spatial vision for the area that functions as a long-term landmark towards which the parties can jointly work
14. Living and industrial activities have to be strictly separated to enable a successful redevelopment of the area
15. All parties have to be transparent in the collaboration process regarding their interests

5.2.2 Organisational statements

16. The municipality and the project developers have to jointly, in a certain ratio, finance the redevelopment by establishing a special fund in which they both participate
17. The municipality has to fulfil the leadership role by connecting the other parties with each other and coordinating the collaboration
18. The project developer has to take the initiative and has to fulfil the leadership role and the municipality has to fulfil a passive, facilitating role
19. The leadership role in the collaboration process has to be distributed over all parties
20. The project developer's responsibility is limited to profit maximisation for himself.
21. Project developers only have a role in the collaboration process once they actually own land in the area
22. Flexible, and interchangeable roles are more effective than a fixed and strict role division from the beginning of the process
23. The current landowner-users have to have a major say in the spatial plans for the area
24. The project developers have to have a major say in the spatial plans for the area
25. Offering an alternative location to the current landowner-users is the responsibility of the project developer
26. Offering an alternative location to the current landowner-users is the responsibility of the municipality
27. The landowner-users should have the choice to keep continuing their business activities in the new mixed work-residential area
28. The municipality and/or the project developers have to lighten the burden of the landowner-users in the collaboration process by providing help, resources and the right information

5.3.3 Instrument statements

29. The municipality has to apply an active land policy – stimulating instrument
30. The municipality has to apply a passive, facilitating land policy – stimulating instrument
31. The current landowner-users need to be expropriated if they do not want to cooperate in realising the redevelopment – regulating instrument
32. The guarantee that the municipality will contribute financially to make the business case positive when it is negative for the project developer, needs to be granted in the initiation phase – stimulating instrument
33. A subsidy is needed to let landowner-users leave the area – stimulating instrument
34. Landowner-users need to develop dwellings themselves in order to skip the process of selling the land – capacity building instrument
35. A revolving fund that grants loans with a very low interest rate, regardless of the project's risk profile, is necessary in the collaboration process – stimulating instrument
36. Place making is crucial to make the area attractive for the new residential function – stimulating instrument
37. The introduction of pioneers as new residents and users of the area is crucial to make all parties aware that the redevelopment has really started – regulating instrument
38. The landowner-users need to be represented by an expert in order to create a level playing field between all parties regarding urban development expertise – capacity building instrument
39. An independent "public developer" or "quarter master" is crucial to generate trust and alignment between all parties – capacity building instrument
40. Re-allotment is necessary to create a landownership structure which allows for a better distribution of residential and business use than in the current fragmented landownership situation – stimulating instrument
41. A land-use plan that enables a soft transition period of a decade from industrial use to a mixed residential-work use, by allowing the current industrial use next to the new residential function for a decade, is needed in the collaboration process – shaping instrument
42. A project organisation in which all parties participate to coordinate the redevelopment process with their expertise, needs to be established – capacity building instrument

5.3 Validation Q-set

It is important to restate that the Q-set in itself does not mean anything. It is about the ranking of the Q-set that is important (Watts, Stenner, 2005).

The selected list of process, organisational and instrument aspects is not a complete set of aspects and is certainly not the only possible or right set of aspects. The same holds logically for the factors that are derived from this list of aspects. However, the final list of 42 statements is approved in a meeting with my supervisors and validated to be a Q-set that is representative for the important aspects of the brownfield redevelopment projects. Additionally, all respondents were asked to indicate whether they missed any aspects in the Q-set. The vast majority of the respondents indicated they did not, while some respondents highlighted some individual aspects such as the role of the province and soft factors like trust and communication styles. However, this are only some individual aspects and overall, all respondents acknowledged that the Q-set is representative for the collaboration in the initiation phase from an acceleration perspective.

Because urban area development is not exact science and requires often a tailor-made approach, it is also not possible to incorporate all important aspects in a Q-set because there is no such thing as a fixed set of all important aspects. These aspects differ per case and therefore, constructing a Q-set that is valid and representative for the studied brownfield redevelopment projects is the best approach possible within a limited time span. Watts and Stenner (2005) acknowledge that incompleteness of the Q-set is inherent in Q-methodology. What matters is that the Q-set is representative for the studied subject. Completeness of the Q-set is therefore not the goal, the Q-set is only an instrument to extract the different perspectives in a group of people on a certain matter. Thomas and Baas (1992) have proven that different sets of statements, for the same studied subject, that are structured in different ways, can still be expected to have similar results.

So, in accordance with the findings of Thomas and Baas (1992) and the validation of the Q-set by my supervisors, it can be assumed that this Q-set will lead to the identification of perspectives that do really exist in practice.

6. Case selection

This research will focus on three redevelopment cases that are currently in the initiation phase. These cases will provide the respondents, the P-set, for the Q-methodology. Because the aim of this research is to get insight into the similarities and differences in the respective perspectives of municipalities, project developers and landowner-users on the collaboration process, it is necessary to choose respondents that are all part of the same project. Every redevelopment project is different and therefore it is needed to interview municipalities, project developers and landowner-users that are part of the same process to make sure their perspectives are comparable. However, to make the conclusions of this research more generally applicable and to make the research more interesting from both a scientific and a practical perspective, three cases will be studied. This means that the eventual findings will be more representative for Dutch inner-city redevelopment projects and that it is possible to get insights into differences between redevelopment projects and in differences between the same type of player in different contexts.
This chapter will first introduce the case criteria that were used to select cases. Then the choice for each of the three cases will be explained, followed by an extensive case description.

6.1 Case criteria

The following content and pragmatic criteria have been formulated:

Content criteria

- location: Netherlands, inner-city and brownfield
- current land use of the site is mainly industrial
- at least one party has expressed the intention to initiate a redevelopment of the site
- intended new use of the site is mixed work and residential area
- fragmented landownership (= multiple owners)
- current landowner-users are active industrial firms (or at least one of them and the other landowner-users running firms in other business sectors)
- project developers have not yet acquired most plots
- affected active industrial firms want to continue their business
- relocation task for industry that is currently occupying the site
- project is in initiation phase: no collaboration agreement (SOK in Dutch) has been reached yet
- need to collaborate between municipality, project developer and landowner-user

Pragmatic criteria

- External, objective documentation available
- Access to internal documents
- Access to representatives of involved parties for interviews
- Willingness of all parties to cooperate

6.2 Selection of three cases: Amsterdam, Alkmaar, Delft

Eventually, three cases qualified for all case criteria. Especially the pragmatic criteria turned out to be decisive because getting in contact with the right people was crucial in order to be able to interview nine respondents per case within a limited time period. The following three cases were selected: Hamerkwartier in Amsterdam, Oudorp in Alkmaar and Schieoevers in Delft. The first contact for Delft was obtained from the TU Delft, the first contact for Alkmaar via Akro Consult and the contact for Amsterdam was obtained via the project web page of the municipality of Amsterdam. All cases are characterised by an initiative to redevelop an industrial site which is currently used by landowner-users who perform industrial activities into a mixed work-residential area. Furthermore, all sites are located close to the city centre and are located along a canal or river. However, the cases differ as

well regarding the exact moment of the initiation phase they are in, the size of the area, the type of current landowner-users and the position of the project developers.

The Amsterdam case is interesting because the Amsterdam housing market is known to be a special niche market within the Dutch housing market. It is interesting to see if the popularity of Amsterdam and the traditionally strong position of the municipality due to the high percentage of municipal ground lease, affects the perspectives of the municipality, project developers and landowner-users. Additionally, the Amsterdam case has already some non-industrial functions, such as a residential apartment block and some restaurants and bars, incorporated in the industrial site. Therefore, the Amsterdam case is already further in the initiation phase than the other two cases. It is interesting to see if that leads to different perspectives in comparison to the other two cases.
The Alkmaar case is interesting because the redevelopment process started with private initiatives from project developers who acquired former industrial land along the canal to realise luxurious apartments. Furthermore, a landowner-user that owns a substantial part of the whole industrial site was pushing to redevelop the area as well. The municipality stepped in later to gain control of the process. Another distinctive characteristic of the Alkmaar case is that the municipality has acquired big and very centrally located plots in the area. It is interesting to see if this active land policy by the municipality affects the perspectives of all parties on the role of the municipality.
The Delft case is interesting because the redevelopment project is part of a bigger redevelopment project to create a technology innovation campus together with the TU Delft. The ambition is to redevelop the area in to an area that houses both high-educated people and several smaller technological and innovative firms. Furthermore, the municipality has given itself the obligation to realise 15.000 dwellings in the coming twenty years and sees the chosen area for this case study as the only place to accommodate a large part of this number. The municipality will therefore feel a sense of urgency to make the intended redevelopment reality.

Appendix three shows the extensive case descriptions of all three cases. For each case, an overview is given regarding the state of the current housing market in the respective cities, the current spatial visions, the municipal vision, the location of the redevelopment areas, the characteristics of the site and the landownership structure.

7. P-set: respondents selection

This chapter explains the applied selection strategy to construct the final P-set and shows the structure of the final P-set.

7.1 Respondents selection strategy

The applied selection strategy was to approach the responsible, municipal project leaders for the selected cases and via them to acquire the contacts of the involved municipal urban developer and land policy maker, the relevant project developers and the landowners-users. In correspondence with the municipal project leader, a variety of types of respondents has been selected if that was possible. This implies that the researcher has tried to interview as much different respondents as possible. With respect to the project developers this variety implied that bigger and smaller organisations have been approached and organisations that already own land and those who don't yet and are interested in acquiring land. With respect to the landowner-user this variety implied that organisations have been approached that were family businesses and ones that were only local branches of multinationals, organisations that produce (noise, smell, traffic) nuisance and those who don't, organisations that are known to have a positive attitude towards a redevelopment, those who are against it and those who are indifferent and organisations that are small and own small plots and organisations that own big plots.

Next to this approach, the researcher also approached landowner-users directly, either via email and phone or by simply ringing the bell physically. In this way, also parties that were not very active in the talks with the municipality have been approached and included in the P-set. This also meant that landowner-users with different level of knowledge regarding the redevelopment plans have been included in the P-set. The parties whose contacts were known at the municipality tended to be more up to date regarding the redevelopment plans than the parties that were approached in a different method. This can logically be explained by the fact that once a party has frequently contact with the municipality, his contact data are known at the municipality and because of the frequent contact, the landowner-user is up to date regarding the redevelopment plans. In addition to this, Watts and Stenner (2015) stress that Q-methodology is about letting respondents categorise themselves via the Q-sorts, instead of the researcher categorise ring them up front. This notion has been used by applying a more opportunistic approach in ringing bells of several firms in order to find participants for the sub group landowner-users. Simply their presence at the site was a criterion to approach these firms and once it was verified the firm also owned the land, the firm was used as a participant in the landowner-user sub group.

Furthermore, snowball sampling was used by asking participants in the category landowner-users to suggest other landowner-users that were qualified to participate in the research.

7.2 Final P-set

The P-set exists out of 28 respondents. The initial set-up was to interview three respondents per type of party (municipality, project developer and landowner-user) per case. This would result in a total of nine respondents per case and in total 27 respondents for three cases. So, also nine respondents per party (municipality, project developer and landowner-user) in total. One extra respondent was interviewed because an extra opportunity offered itself to interview one more landowner-user for the Schieoevers, Delft case. Because an extra respondent will only add value to the dataset, the author decided to add this extra respondent to the dataset.

Appendix four shows the overview table of all the respondents (Table 8 in appendix 4). The appendix also shows an overview of the characteristics of the landowner-users because these respondents vary much more from each other than the other two groups (municipality and project developers) (Table 9 in appendix 4). The appendix concludes with an overview of short descriptions of each respondent.

8. Results factor analysis: four perspectives on accelerating the initiation phase

This chapter shows the main results of the performed factor analysis on the data of the 28 Q-sorts. First a summary is given about the first four steps of the analysis. Second, the interpretation method of the selected factors is shown. Third, the description of the four identified factors is given that translates these factors into four perspectives on the 42 statements. Fourth, the consensus aspects are presented. On these aspects, all four perspectives have the same opinion. Fifth, four remarks are presented that relate to the presented perspectives.

8.1 Summary factor analysis step one to four

The factor analysis is built up out of five steps. An extensive description of step one to four is given in appendix six. Here, a short summary will be given.

Step one is about extracting factors. A *factor* is "*a certain pattern in the filled in Q-sorts which can help to cluster similarly thinking respondents together*". A factor is therefore a collection of statement scores for all 42 statements. Every respondent has a factor score for each factor that indicates to which extent the respondents' own perspective is similar to a certain factor. The higher the factor score, the more similarity between the respondent's perspective and the factor. Initially, seven factors are extracted using Brown Centroid extraction method in the software program PQMethod.

Step two is about selecting the right number of factors with the help of a set of selection criteria. Eventually four factors are selected.

Step three rotates the factors in such a way that the respondents' factor scores are maximised on one factor and minimised on the other factors. In this way, the explained variance by the factors is maximised, it is clearer which respondents load on which factors and subsequently, which respondents share a similar perspective (Exel, van, Graaf, de, 2005).

Step four is about identifying the respondents that define each factor. These respondents load significantly on the factor ($p<0,05$) and their Q-sorts explain more than half of the common variance. This means that "the square of the loading on that factor exceeds the sum of the squares of the factor loadings on the remaining factors" (van Excel, de Graaf, Rietveld, p. 388). This shows that that a specific Q-sort loads clearly more on one factor than on the other three, meaning it is a good Q-sort to define the respective factor. These Q-sorts are called defining Q-sorts. Factor 1 is defined by four respondents, factor 2 by six, factor 3 by seven and factor 4 by three. The average of the statement scores of defining Q-sorts for each factor is used to construct four factor arrays. A factor array shows the Q-sort, the statement scores for all 42 statements, of a respondent who would load 100% on that factor. The four factor arrays are shown in Table 1.

Step six is about the interpretation of the four factors and translating them into perspectives.

8.2 Step six: Interpretation of factors and definition of perspectives

Interpretation of the factors is done by looking at the *distinguishing* and *consensus statements*. *The distinguishing statements* are *those statements whose statement score on two factors, the respective ranking of that statement on each factor, differs more than the different score* (van Exel, de Graaf, 2005). The difference score is "*the magnitude of difference between a statement's score on any two factors that is required for it to be statistically significant*" (van Exel, de Graaf, 2005, p 9). For this particular research it means the difference score is 0,302 ($p<0,05$) (see appendix 6.2 for the calculation). *Statements that are not distinguishing between any of the selected factors* are called *consensus statements* (van Exel, de Graaf, 2005).

So, the consensus statements show similarities in perspectives and the distinguishing statements show the differences. Additionally, the *characterising statements* are of importance as well. *These are the statements that are ranked at the extremes of the factor exemplary Q-sorts (statement scores of -4 and +4)* (van Exel, de Graaf, 2005). These statements form the basis of the respective factor

descriptions. This description is then extended by using the information from the respective distinguishing and consensus statements. The in-depth interviews with the respondents that load significantly on a certain factor are used as well to deliver the factor description. These factor descriptions result in the identification of a perspective on the 42 factors that is present in the real-life practice of the collaboration process in the initiation phase of inner-city redevelopment projects.

Table 1 shows the factor arrays. These are the idealised statement scores for each factor. So, a respondent who would rank 100% on a factor, would rank the statements as shown in Table 1. The distinguishing statements for each factor are coloured red, the consensus statements are coloured green and the ***characterising statements*** for each factor are depicted in bold, italic and underlined.

Table 1: Factor arrays: the statement scores for a respondent who would load 100% on a specific factor. The distinguishing statements for each factor are colour red, the consensus statements green and the characterising statements are depicted in bold, italic and are underlined

#	statement	*Factor 1*	*Factor 2*	*Factor 3*	*Factor 4*
1	Flexibility that is accompanied by uncertainty regarding the redevelopment plans is better than fixed redevelopment plans that do provide certainty.	+2	-2	***+4***	-2
2	Pursuing individual profit maximisation prevents a fast collaboration	-3	-1	+3	+2
3	The feasibility of the redevelopment project is more important than the profitability	0	+1	+3	-1
4	A strong collaboration between all parties is crucial to make sure all parties will make optimal use of their resources (knowledge, privileges, money, land) in the collaboration process to achieve a better end result.	+3	+3	+3	0
5	Realising dwellings and other functions (shops, food and drink service industry, offices, culture) in an area will lead to landowner-uses selling their land faster.	+1	+1	+2	+1
6	A clear vision of the future, regardless the content of this vision, is the best for landowner-users because this provides them with certainty regarding the future situation	***+4***	***+4***	+1	+3
7	The redevelopment of the area results in a higher appraisal of the land value from which all parties should benefit	+1	0	0	+1
8	The relocation of enterprises has to be part of the collaboration process between the parties	+2	+1	+2	-2
9	Arranging the relocation of enterprises early on stimulates a constructive attitude of the landowner-users towards the redevelopment.	0	0	+2	-1
10	The current landowner-users need to be bought out	-3	-1	-3	***-4***
11	The purchase of land is a pure financial negotiation between the project developer and the current landowner-user that will always result in an agreement because both parties understand each because they are both entrepreneurs	-2	-2	***-4***	-2
12	A municipal vision for the redevelopment area is necessary in the initiation phase	***+4***	***+4***	-1	+2

13	It is crucial that all parties make a joint spatial vision for the area that functions as a long-term landmark towards which the parties can jointly work	+3	+1	0	+1
14	Living and industrial activities have to be strictly separated to enable a successful redevelopment of the area	-2	-3	-3	+2
15	All parties have to be transparent in the collaboration process regarding their interests	+1	+2	***+4***	+2
16	The municipality and the project developers have to jointly, in a certain ratio, finance the redevelopment by establishing a special fund in which they both participate	0	0	-1	-1
17	The municipality has to fulfil the leadership role by connecting the other parties with each other and coordinating the collaboration	-3	+2	0	0
18	The project developer has to take the initiative and has to fulfil the leadership role and the municipality has to fulfil a passive, facilitating role	+3	***-4***	-2	***-4***
19	The leadership role in the collaboration process has to be distributed over all parties	-1	-3	0	+2
20	The project developer's responsibility is limited to profit maximisation for himself.	-2	-3	***-4***	-3
21	Project developers only have a role in the collaboration process once they actually own land in the area	0	+2	-2	-1
22	Flexible, and interchangeable roles are more effective than a fixed and strict role division from the beginning of the process	-2	-2	+1	+1
23	The current landowner-users have to have a major say in the spatial plans for the area	-1	0	+1	***+4***
24	The project developers have to have a major say in the spatial plans for the area	+2	+1	-1	-3
25	Offering an alternative location to the current landowner-users is the responsibility of the project developer	+1	-1	0	+3
26	Offering an alternative location to the current landowner-users is the responsibility of the municipality	-1	0	-2	-2
27	The landowner-users should have the choice to keep continuing their business activities in the new mixed work-residential area	-1	+3	0	***+4***
28	The municipality and/or the project developers have to lighten the burden of the landowner-users in the collaboration process by providing help, resources and the right information	+1	0	-1	+3
29	The municipality has to apply an active land policy	***-4***	+3	-1	0
30	The municipality has to apply a passive, facilitating land policy	+3	-3	-3	0
31	The current landowner-users need to be expropriated if they do not want to cooperate in realising the redevelopment	-3	-1	-2	-3
32	The guarantee that the municipality will contribute financially to make the business case positive when it is negative for the project developer, needs to be granted in the initiation phase	***-4***	***-4***	-3	+1

33	A subsidy is needed to let landowner-users leave the area	0	-2	+2	0
34	Landowner-users need to develop dwellings themselves in order to skip the process of selling the land	+1	-1	-2	-1
35	A revolving fund that grants loans with a very low interest rate, regardless of the project's risk profile, is necessary in the collaboration process	-1	-2	+1	-3
36	Place making is crucial to make the area attractive for the new residential function[1]	+2	+2	+3	+1
37	The introduction of pioneers as new residents and users of the area is crucial to make all parties aware that the redevelopment has really started	0	+2	+1	0
38	The landowner-users need to be represented by an expert in order to create a level playing field between all parties regarding urban development expertise	-1	0	0	+3
39	An independent quarter master is crucial to generate trust and alignment between all parties[2]	0	-1	0	0
40	Re-allotment is necessary to create a landownership structure which allows for a better distribution of residential and business use than in the current fragmented landownership situation	+2	0	-1	-1
41	A land-use plan that enables a soft transition period of a decade from industrial use to a mixed residential-work use, by allowing the current industrial use next to the new residential function for a decade, is needed in the collaboration process	-2	+1	+2	-2
42	A project organisation in which all parties participate to coordinate the redevelopment process with their expertise, needs to be established	0	+3	+1	0

8.3 Description perspective of each factor

The data analysis resulted in four factors that form four distinctive views on which factors are desired and which factors are unwanted when accelerating the collaboration process in the initiation phase of brownfield redevelopment projects. These factors are translated into four perspectives by interpreting the ranking of the statements in the factor arrays of Table 1 and using the interviews with the respondents to construct a summarising description for each perspective. The name of each perspective is based on the case description and represents the main distinctive characteristic of that perspective.

Paragraphs 8.3.1 – 8.3.4 show the summarised perspective descriptions. Appendix seven shows the full description for each perspective. Quotes from the defining respondents are used to illustrate the perspectives in appendix seven.

8.3.1 Perspective 1: The project developer led redevelopment.

This perspective says that the project developer should lead the collaboration process to accelerate the initiation phase. Their influence and role in the process are big and the municipality fulfils only a facilitating role by making a clear municipal vision. The municipality should not support the project developer or the landowner-users financially. This perspective wants to blend the existing landowner-users with the new residential function if that is possible nuisance wise. The role of the

[1] Statement 36 is only a consensus statement at the significance level p<0,01

[2] Statement 39 is only a consensus statement at the significance level p<0,01

landowner-users is limited to aspects that specifically apply to individual cases such as relocation or possibly redeveloping their own sites themselves, but does not include a major influence in the spatial plans. So, by a clear role division between the project developers and the municipality and by handling each landowner-user case individually, the initiation phase can be accelerated.

8.3.2 Perspective 2: The municipal led redevelopment

This perspective serves as the counterpart of perspective one. This perspective identifies the municipality as the central, leading party in the process. Active municipal land policy is part of this leading role. However, other financial contributions such as subsidies or financial guarantees to the project developer are clearly not desired. The project developer should be focussed on the execution part of the redevelopment. Collaboration is desired and should be steered by a project organisation for which the municipality has to bring all parties together. As in perspective one, the aim should be to blend in the landowner-users with the new residential function. However, this perspective is more clear that the current landowner-users should have the choice themselves to stay and continue their business activities.

8.3.3 Perspective 3: the joint commitment process

This factor evolves around flexibility as the key to accelerate the collaboration process. This perspective does not prescribe an explicit and fixed role division for each party, but rather stresses the importance of delivering quality together in a strong collaboration process. An interesting and relevant insight from the interviews with the respondents that define this perspective is that they often refer to the "it depends" statement. They constantly stress that there is not a "one size fits all approach", but that adjusting to each specific case is better. Therefore, it is not important who takes the leadership role. It is much more important that all parties are prepared to help each other out. This means for example that relocation should be something all parties are responsible for and not just the landowner-user. This implies that the municipality needs to support the other parties. This also means that public financial supporting instruments as subsidies and a revolving fund should be available.

8.3.4 Perspective 4: anti-redevelopment attitude: landowner-users first.

This perspective is defined by only landowner-users who own a plot of considerable size, produce high levels of nuisance which prevents a good mix with a residential function, whose relocation is very costly and who are happy with the current situation. This perspective says that the interests of the landowner-users are most important and that everything has to be arranged for them to continue their businesses. The municipality and the project developers should support the landowner-users in the whole process in order for them to focus on their own business activities. Clarity and transparency are key. So, in this perspective, acceleration of the initiation phase is created by making sure that the potentially biggest obstacles, the big, nuisance producing firms, are satisfied and will therefore not delay the process. The consequence is that a full redevelopment is not possible, but a partial redevelopment is. This perspective can be summarised as follows: "keep the situation as it is, we (landowner-users) were here first so we cannot be moved."

8.4 Consensus aspects between all perspectives

Even though the four perspectives each express a different, distinctive view on the best way to accelerate the initiation phase, they also show that there is consensus on a set of aspects that are considered important to incorporate in the collaboration process in a certain way.
Five pure consensus statements are identified when applying the 0,01 significance level. A pure consensus statement implies that all perspectives have a similar ranking for an aspect. *Statements that are not distinguishing between any of the selected factors* are called *consensus statements* (van Exel, de Graaf, 2005). These five statements are coloured green in Table 1. Because of rounding up, the statement scores can differ one digit. However, consensus is not only reached when all

perspectives have the same statement score, but also to a certain extent when all perspectives agree or disagree with a statement. Therefore, what is important is first and foremost the sign of the ranking. If all perspectives agree (positive ranking) or disagree (negative ranking), the perspectives show consensus even though the level of importance attached to the statement (the exact ranking +1,+2 etc.) can differ. In this way 15 aspects of consensus are identified in total. First the pure consensus statements are presented, followed by the other aspects of consensus.

Pure consensus statements

5- All perspectives agree that that realising other functions in the industrial area is an incentive for landowner-users to sell their land faster. However, the perspectives agree that it is only of limited importance when pursuing an acceleration of the collaboration. (statement score +1/+1/+2/+1)[3]
7- All perspectives agree that from an accelerating point of view it is not that important whether all parties benefit from a higher appraisal of the land value. (statement score +1/0/0/+1)
16- The perspectives do not attach much value to the idea of the project developer and municipality co-financing the redevelopment. From the interviews, it became clear that most respondents did not find this option plausible. (statement score 0/0/-1/-1)
36- All perspectives agree that place making works to make the industrial area attractive for residents. So, place making is a good instrument to accelerate the initiation phase because it will already set the redevelopment in motion while the parties are still in the initiation phase. (statement score +2/+2/+3+1)
39- All perspectives are indifferent to the implementation of a quarter master when trying to accelerate the collaboration process. (statement score 0/-1/0/0). *"A quarter master can't get past the fact that there are some major players in the process that own big plots of land and have the financial firepower to develop the sites. These players will therefore determine what will happen and a quarter master will be subject to the will of these big players.*" (Amsterdam municipality, respondent 3). "*There are already lots of parties in the collaboration process, adding extra parties doesn't have an accelerating effect." (Amsterdam project developer respondent 8)*.

Partial consensus statements

4- All perspectives, except perspective four that is indifferent, strongly agree that a strong collaboration between all parties is needed for optimal use of the available resources. Perspective 4 does not want a redevelopment to occur and therefore doesn't value a strong collaboration as important. (statement score +3/+3/+3/0)
6- All perspectives agree that a clear future vision is the best for the landowner-users because it provides long term security. Only perspective three agrees minorly with this statement, while the others strongly underline the importance of this aspect. (statement score +4/+4/+1/+3)
10- All perspectives indicate that the current landowner-users shouldn't be bought out, showing an aversion for forcing the current owners out of the area. (statement score -3/-1/-3/-4)
11- All perspectives agree that the purchase of the land between the current landowner-user and project developer is more than just a financial negotiation and will not always lead to an agreement. This indicates that the land purchase is viewed as an important possible obstacle for accelerating the process. (-2/-2/-4/-2). "*Emotions, feelings and past experiences greatly determine the outcome of such a negotiation process." (Alkmaar municipality, respondent 10)*. "*An agreement is not reached when the landowner-user values his land too high. Realism is an important factor."* (Amsterdam project developer respondent 9).
13- All perspectives, expect perspective three that is indifferent, agree that a joint spatial vison could be a crucial factor, however the level of importance attached to it differs amongst the perspectives. (statement score +3/+1/0/+1).

[3] The statement score for each perspective is given:
(perspective 1 / perspective 2 / perspective 3 / perspective 4)

15 – All perspectives agree that transparency regarding the interests of each party is important, but the level importance attached to the statement differs. (statement score +1/+2/+4/+2)
20- All perspectives strongly disagree that the project developer's responsibility is limited to profit maximisation for themselves. (statement score -2/-3/-4/-3).
26- All perspectives disagree that the municipality has to offer an alternative location to the current landowner-users, only perspective two is indifferent regarding this matter. (statement score -1/0/-2/-2)
31- All perspectives disagree that the current landowner-users need to be expropriated if they do not want to cooperate with the redevelopment. (statement score -3/-1/-2/-3)
Because all the perspectives also disagree that the landowner-users need to be bought out, it can be concluded that it is not found desirable by any perspective to force the current landowner-users out of the area in any way. From this it can be concluded that the landowner-users are therefore a critical party to take along in the collaboration process because a one-sided approach to force them out of the area is not desired.
37-All perspectives are neutral or positive regarding the introduction of pioneers in the area. (statement score 0/+2/+1/0). Combining this with the ranking of statement 36, it can be concluded that place making activities with pioneers are desired when accelerating the redevelopment process.

8.5 Remarks statement scores of all perspectives

The financial aspect is considered a major obstacle in the literature regarding inner-city redevelopments. However, the identified perspectives overall, don't value the financial instruments as crucial to accelerate the initiation phase. Most respondents feel it is the project developer's responsibility to make a good business case for himself and that the municipality should not use public money to solve a private party's problems. This is noteworthy because one the focal points of the Dutch governmental policy regarding urban area development is to set up a revolving fund. However, this research shows that all perspectives, except for perspective three that ranked the revolving fund as +1, do not value this fund as a crucial instrument to accelerate the initiation phase. However, perhaps the revolving fund could be of more value in the later stages of the redevelopment cycle.

The perspectives differ greatly in the role of individual profit maximisation in the collaboration process. Perspective three and four see striving for individual profit maximisation as a major obstacle for a fast collaboration. Perspective one and two acknowledge individual profit maximisation as an opportunity for all parties to fully commit themselves to the project in order to get the best result possible. In this way, the collaboration could be accelerated.

Even though perspectives one, two and three all disagree that living and industrial activities need to be strictly separated for a successful redevelopment project. However, all the respondents that define these perspectives have acknowledged that for some, high nuisance producing firms it is simply not possible to coexist with residential use of the area. Especially when mixing certain firms with residential use leads to dangerous situations health wise (high concentrations of toxic emissions or high noise levels) or traffic wise (high intensity of big trucks coming and going that could lead to accidents with bikers for example), relocation is necessary to realise the desired redevelopment. So, perspectives one, two and three all aim to retain the current firms if that is possible safety wise.

All perspectives agree that the responsibility of project developers includes more than profit maximisation for themselves. From the interviews with the respondents it showed that especially sustainability and the added quality for the urban area are two important responsibilities for the project developers.

9. Relating the three parties and the three cases to the four perspectives

This chapter elaborates on the division of the municipality, landowner-users and project developers over the four perspectives in paragraph 9.1. Paragraph 9.2 links the three cases to the perspectives and explains, if possible, why certain perspectives are present in a specific case. The results of this analysis are used to identify determinants that show which parties will adhere to which perspectives. These determinants are validated in the expert meeting (chapter eleven) and are presented in the conclusion (chapter twelve).

9.1 Division three parties over perspectives

Figure 13 shows the defining Q-sorts for each perspective, sorted by the type of respondents and the case to which they relate. Table 2 shows in descending order of factor loadings which respondents define the perspectives. Appendix 6.5 shows a graph with the exact factor loadings of the twenty Q-sorts for the four perspectives (Figure 39). Twenty out the twenty-eight respondents can be characterised by a specific perspective.

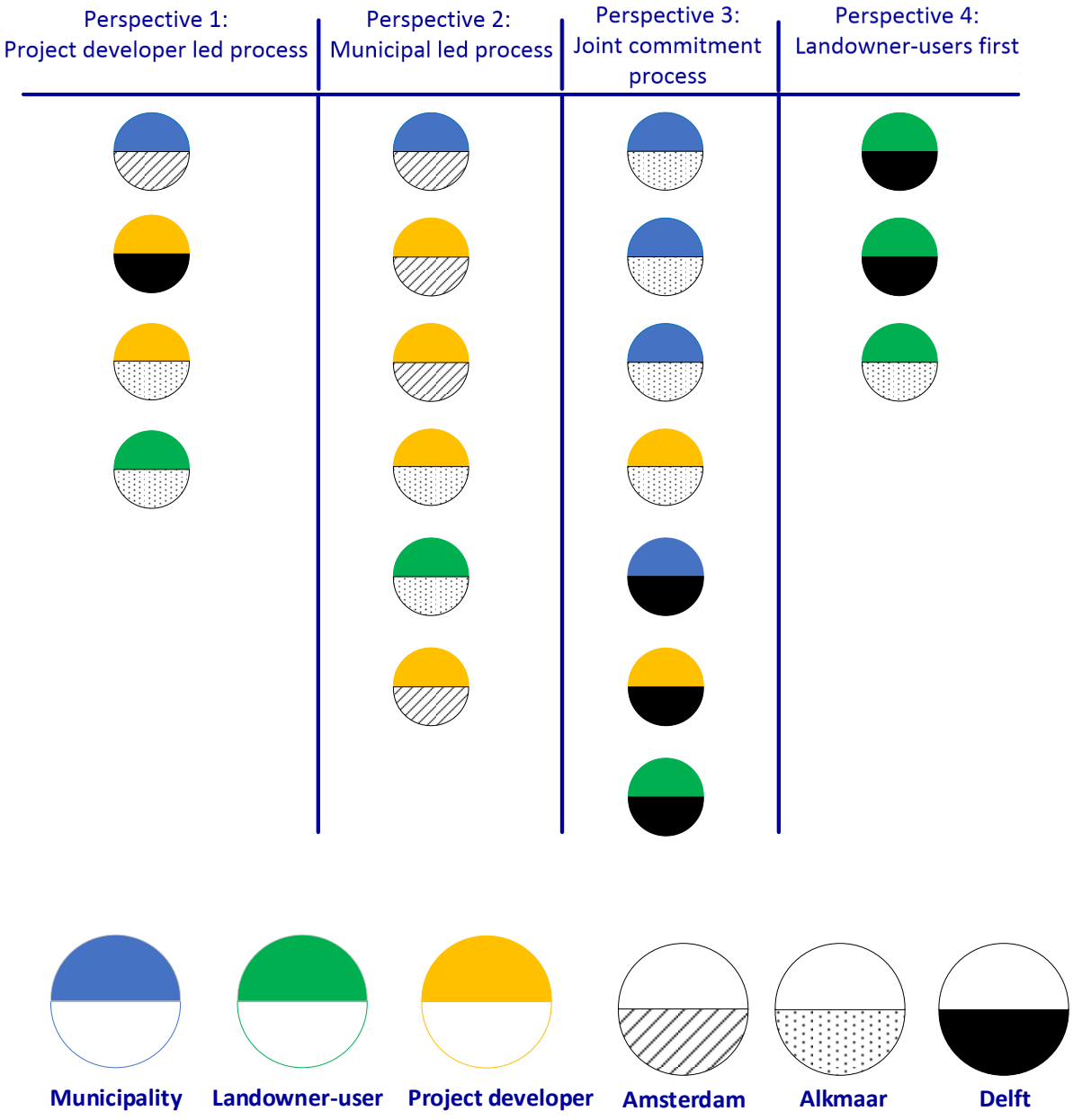


Figure 13: overview of defining respondents for each perspective, ranked by the factor scores in descending order

Table 2: defining Q-sorts for each perspective, sorted by factor loadings. So, the Q-sorts are ranked from higher to lower factor loadings

Perspective 1	#	Perspective 2	#	Perspective 3	#	Perspective 4	#
Municipality of Amsterdam	2	Municipality of Amsterdam	3	Municipality of Alkmaar	11	Medium size, high nuisance, multinational landowner-user Delft	23
Small project developer Delft	27	Small project developer Amsterdam	9	Municipality of Alkmaar	12	Medium, high nuisance, family business landowner-user Delft	25
Small project developer Alkmaar	17	Small project developer Amsterdam	7	Municipality of Alkmaar	10	Small, medium nuisance, family business landowner-user Alkmaar	15
Big, high nuisance, family business landowner-user Alkmaar	14	Small project developer Alkmaar	18	Big project developer Alkmaar	16		
		Very big, high nuisance, family business landowner-user Alkmaar	13	Municipality of Delft	19		
		Medium size project developer Amsterdam	8	Big project developer Delft	26		
				Medium size, medium nuisance, multinational landowner-user Delft	24		

The eight other respondents did not load clearly more on one perspective than on the other perspectives and their Q-sorts do not fulfil the requirements for defining Q-sorts (see paragraph 8.1). The individual perspectives of these eight respondents overlaps with multiple identified perspectives, but does not form a distinctive perspective, as is shown by the factor diagram and factor selection criteria. Therefore, these eight respondents are omitted for further research. These respondents are shown in Table 3.

Table 3: omitted respondents for perspective definition, sorted per type of respondent and case

	Municipality	Landowner-user	Project developer
Amsterdam	1	3	-
Alkmaar	-	-	-
Delft	2	1	1

9.1.1 Interpretation of division of defining Q-sorts for each perspective.

This paragraph explains, if possible, the division of the defining Q-sorts over the perspectives.

Perspective 1

The four defining Q-sorts for perspective one all relate to respondents whose individual situation explains why they think the project developers should take the leadership role and the municipality should only facilitate. The respondent of the municipality of Amsterdam has ranked the statements according to the Amsterdam municipal perception that it is the task of private parties to redevelop areas and the municipality task is limited to evoking private party initiatives by providing the right regulatory framework. The small project developers expressed eagerness to redevelop the plots they owned in Alkmaar and Delft but felt restricted by the municipality. The loading of the landowner-user from Alkmaar on this perspective can be explained from his perspective on the municipal involvement in the Alkmaar case. The Alkmaar municipality has acquired some big, centrally located plots in Oudorp. The landowner-user therefore feels like the municipality cannot function anymore as an objective party who safeguards the interests of all Alkmaar's firms and residents. The landowner-user feels like the redevelopment will financially benefit the municipality and therefore he has lost faith in the municipality. Because the landowner-user feels like the redevelopment is inevitable, he rather would have the project developers taking the lead than the municipality. Overall, three of the four respondents that define perspective one are pro-redevelopment minded.

Perspective 2 and 3: pro-redevelopment parties

Perspective two and three show the pro-redevelopment attitude. The municipal respondents and the project developers both have an interest in redeveloping the site, either from a spatial planning or a financial perspective.

The landowner-user from Delft that defines perspective 3 has indicated in the interview that he understands the need for the redevelopment and that the company doesn't necessarily need to stay at the current location. This is because the firm in Delft is only a local branch of a multinational company that deals with such relocation assignments often. The respondent is hired by the company to deal with these housing challenges. The landowner-user from Alkmaar, that defines perspective two, owns a major part of the whole industrial site on a very attractive location for residential use along the canal. The landowner-user wants to scale down his businesses activities drastically and sees a major opportunity to make money by selling his land as residential land. The redevelopment of the area is therefore of great importance to him.

Perspective 4: anti-redevelopment landowner-users

The division of the defining Q-sorts shows that perspective four represents the "leave-me-alone-I-just-want-to-continue-with-my-business-activities" landowner-user perspective. The specific respondents are all characterised by their negative attitude towards the redevelopment, their determination to maintain their current business activities at the current location and their acknowledgement of the fact that residential cannot be mixed with their business activities. This perspective represents the firms that cause medium to high nuisance levels with their business activities. This is why they are located at an industrial area because this area enables them to execute their business activities without causing nuisance for others and without them experiencing nuisance from others such as complaining residents.

All in all, the parties that are characteristic for perspective four are landowner-users who produce medium to high nuisance levels and have an anti-redevelopment attitude. Only the anti-redevelopment attitude is unique for this perspective.

So, when looking at the division of the three parties over the perspectives, three main conclusions can be drawn. Firstly, the pro-redevelopment parties are represented by perspective one, two and

three, while secondly, the anti-redevelopment landowner-users are represented by perspective four. So, the attitude towards the redevelopment is a determinant for a party to belong to either perspective one, two or three (pro-redevelopment) or four (anti-redevelopment). Thirdly, municipal landownership of land that is acquired via active municipal land policy to kickstart the redevelopment, in combination with a private party redevelopment initiative, is a determinant for municipal parties to belong to perspective three "the joint commitment process".
Other characteristics such as size of the company or project developer, size of the plot of the respondent, level of nuisance and the firm being a family business or a local brand of a multinational firm do not determine to which perspective a respondent belongs.

9.2 Linking the identified perspectives to the three cases

Amsterdam

The second perspective "the municipal led redevelopment" can be labelled as the Amsterdam perspective. The Amsterdam (re)development sector is unique in two ways. Firstly, the municipality has a dominant position in the process due to ground lease construction that affects most plots in Amsterdam. Secondly, the excessively high demand for dwellings that makes the Amsterdam housing market very profitable for project developers and they do not have to worry if they can sell their dwellings. Because of this unique situation, a strict role division is possible and logical: the project developers want to take advantage of the favourable market conditions and want to focus on building dwellings and do not need to be involved in the spatial planning process. The municipality is the only party who can allow for residential use of the area and is therefore the one who determines the framework in which the project developers need to operate.

Alkmaar

All the municipal respondents from Alkmaar belong to the third perspective "the joint commitment process". This can be explained from two characteristics of the Alkmaar case. Firstly, the initiative for the redevelopment has organically developed out of private initiatives to realise dwellings along the canal. The municipality has stepped in later in order to try get grip on the situation and to determine its position regarding the spatial plans for the area. This means that at this moment, the municipality has paused the process until they have formed their spatial vision for the area. This implies that the municipality is seeking its position in the process that has already organically taken shape. Secondly, the municipality owns several big and centrally located plots in the industrial area. In this way, they have a double position as a municipality and a landowner. Therefore, the municipality operates on same level as the other parties, which could explain undervalued role of leadership in this perspective. All parties are equal in the process and need to find out together how to shape the process. So, the characteristics of the Alkmaar case suit the joint commitment character of the third perspective very well.

Delft

The delft respondents show a very scattered division over the four perspectives. The absence of perspective two in this division can be explained in two ways. Firstly, the municipal vision aims for an organic or incremental redevelopment process which would contradict with a municipality who would actively participate in redeveloping the area. Secondly, a possible explanation could be the bad experiences the Delft municipality has had with the redevelopment project of the train station area, resulting in major financial losses. Therefore, the municipality might not want to get financially involved in the redevelopment by an active land policy, which is a characteristic of the "municipal led process perspective". The division of the other parties over the perspectives are related to the characteristics of the parties, as described in paragraph 9.1.1, and not to the case characteristics.

10. Synthesis: Approaches to accelerate the initiation phase

This chapter introduces the building block approach model that uses the insights in the four perspectives to recommend an approach to design the collaboration process in such a way that the potential to accelerate the initiation phase is enlarged.

This research has identified four different perspectives on which elements are important when trying to accelerate the collaboration process in the initiation phase. These perspectives can be transformed into building blocks to construct collaboration approaches to accelerate the initiation phase on inner-city redevelopment projects. It is not possible to construct complete approaches because this research has only analysed 42 elements, while many more aspects would be part of a complete approach.

Paragraph 8.4 has shown that all perspectives agree on a set of important elements. Therefore, every acceleration approach will incorporate these consensus aspects as is described in paragraph 8.4

For each perspective, a collaboration approach can be formulated. This approach designs the collaboration process in the initiation phase in such a way, that it is aligned with a certain perspective. The approaches are organisational recommendations to set up the collaboration process in such a way that the potential to accelerate the process is enlarged. If all parties share a perspective, the corresponding building block approach would be the best way to accelerate the initiation phase for that specific case. However, in practice, it will rarely be the case that all parties in the collaboration process share the same perspective. Therefore, it is needed to incorporate some aspects from other perspectives that other major players have in order to truly accelerate the initiation phase. As stated in paragraph 1.5.1, it is crucial to have all three parties aboard in order to redevelop a site successfully. Without adapting the approach to the main players, these players could cause major delays because of their possible opposing behaviour if they do not see their interests represented in the approach.

So, the collaboration approach exists firstly out of a shared part that all perspectives agree on. Secondly of a main approach that is based on the perspective that is shared by most parties in a specific case. Thirdly, on top of that, some aspects that are found most important by the other major parties are incorporated in order to get them aboard as well. These aspects are called the "*alignment parts*". Figure 14 shows the three main building blocks for the collaboration approaches.

The following paragraphs will explain each building block. Paragraph 10.1 explains the consensus part that all approaches share. Paragraph 10.2. elaborates on the approach that belongs to each main perspective, followed by a description of the alignment parts in paragraph 10.3. This chapter concludes with an example of a collaboration approach that is been built up out of the presented building blocks for the Oudorp case in Alkmaar.

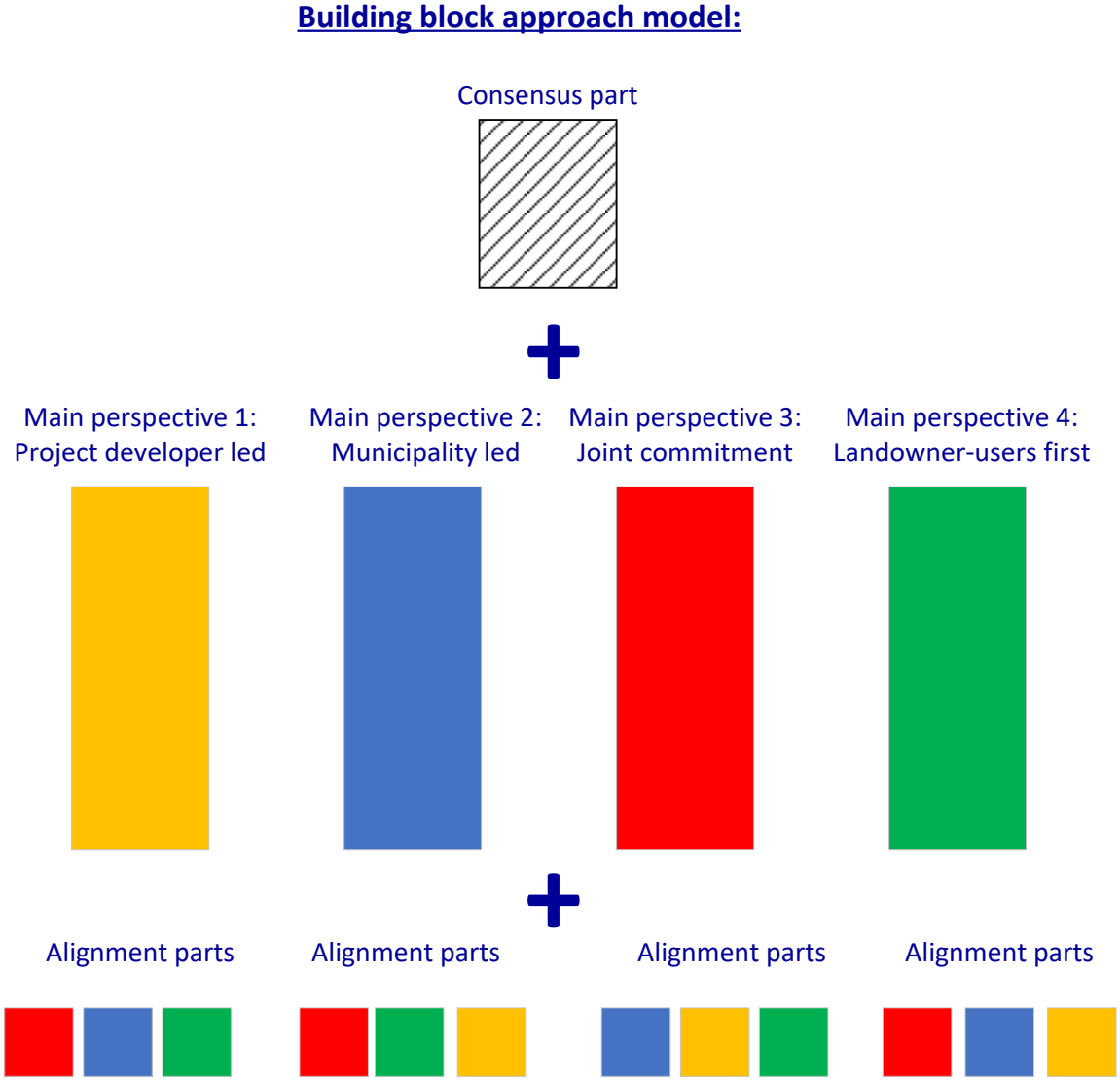


Figure 14: building block approach model. Every collaboration approach is built up out of the consensus part, one main perspective building block and a set of alignment parts that aligns the approach of the main perspective with some aspects of the other perspectives that are present in a case

10.1 Consensus part

Firstly, a clear vision needs to be established quickly in order to provide clarity and long term security on what is going to happen and when it is going to happen. It is important that this vision is a joint vision that is shared by all parties because then it is clear what to expect and to which end result everybody is working. Furthermore, this enables all parties to collaborate which is needed to guarantee an optimal use of the available resources needed to complete the initiation phase. When making this vision, all parties should be transparent regarding their interests. The landowner-uses need to be taking along in this vision.

Secondly, land acquisition by project developers from current landowner-users is needed to create space for the redevelopment. However, the landowner-users should not be forced out of the area by expropriation or buying them out. Therefore, it is important to start very early in the process with the land acquisition process because both parties need to agree on a solution that works for both

sides. This process is not just a financial negotiation but also involves emotions and other interests which can result in a lengthy process.
Thirdly, all parties should be transparent regarding their interests that play a role in the process.
Fourthly, place making, together with the introduction of pioneers, has to be applied in order to bring new functions such as leisure, food and beverage services and residential in the area. This is important because this will firstly already start the redevelopment and secondly it will ease the land acquisition process because landowner-users are more willing to sell their lands if other functions are realised in the area.
Lastly, it is important to define clearly which aspects are the project developer's responsibility by aligning the different perspectives on this matter. This research shows that this responsibility goes beyond profit maximisation and includes the commitment to create a high quality urban area. A project developer who is aware of this and is willing to act upon it, improves the collaborative spirt which can have an accelerating effect. Clarity about each other's responsibilities accelerates the process because it prevents miscommunication.

Figure 15 summarises the main focus points of the consensus part.

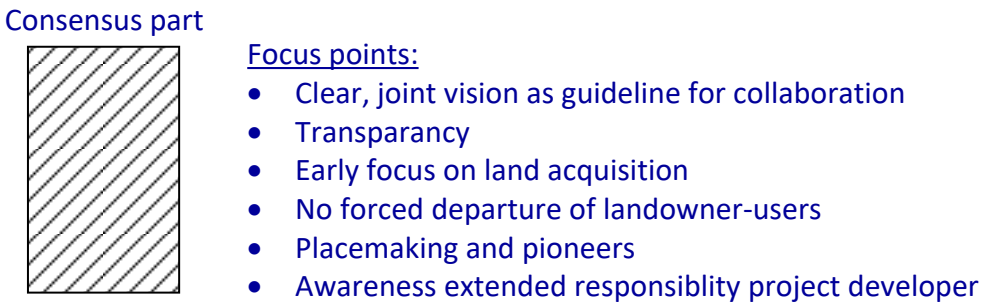


Figure 15: focus points consensus part building block for partial accelerating approach

10.2 Approach building block for each main perspective

In practice, it will hardly happen that all important parties share the same perspective. However, in most cases one perspective will be dominant, as is the case in the three studied cases. For Amsterdam, perspective two "the municipality led process perspective" is dominant, for Alkmaar and Delft the "joint commitment process perspective" is dominant, although the dominance of the main perspective is much less in the Delft case than in the other two cases. The dominant perspective will determine which approach block will be used.
The recommend aspects for each main perspective are described in the following paragraphs. Appendix seven shows an overview table for each perspective with the do's and don'ts, structured according to the trichotomy of process, organisational and instrument factors.

10.2.1 Project developer led process perspective

The project developer has to take the initiative and the lead in the collaboration process. This role includes having a major say in the spatial plans, but also implies that the project developer also has a responsibility towards landowner-users to try to find an alternative location for them if that is needed. Re-allotment is a good instrument to relocate a landowner-user within the area and in general to create an ownership structure that enables the redevelopment of the whole area. Project developers have the responsibility in this approach to successfully realise the re-allotment amongst themselves and with the landowner-users.
The role of the municipality is a facilitating one and is limited to making a municipal spatial vision and applying a passive land policy. The spatial vision needs to be clear but should also include a degree of flexibility to adapt to changing circumstances. It is key to be clear to which elements this flexibility applies in order to keep things clear for everyone and to try to stay as close as possible to the

municipal vision. So, in this approach, the municipality takes the lead in formulating the spatial vision but it is still important that all parties recognise themselves in the vision such that they are committed to jointly works towards realising it, as is stated in the consensus part building block (paragraph 10.1). The role of the landowner-users is limited. They should not have a major say in the spatial plans and they should not be able to decide all by themselves whether they are staying or not. The municipality and project developers should support the landowner-users expertise wise and they should think along with him when it comes to a possible relocation.

Main perspective 1:
Project developer led

Focus points:

- Project developer leadership
- Major say in spatial plans project developers
- Facilitating role municipality
- Clarity when incorporating flexibility in spatial vision
- Apply re-allotment

Figure 16: focus points approach building block for project develop led process perspective

10.2.2 Municipality led process perspective

The municipality has to firmly position itself as the leading party in the process. The municipal vision should serve as the major guideline for the process. Participation in establishing this vision by project developers and landowner-users is not desired, although they should still be able to support the vision, in accordance with the consensus part building block (paragraph 10.1). The municipality should apply active land policy in order to quickly make land available for the new, desired residential use and to make clear that the redevelopment is really happening. The municipal leadership role also includes the founding of a project organisation and to bring all important parties together in that project organisation. This project organisation makes sure all available resources are used optimally and coordinates the collaboration according to the municipal guidelines. The project developers need to focus on redeveloping the area in accordance with the municipal vision and they should only be included in the collaboration process and the project organisation once they own land in the area. The current landowners should have the right to stay in the area and therefore it is important to invest in nuisance limiting measures that make a mix of industrial and residential use possible in most cases.

Main perspective 2:
Municipality led

Focus points:

- Municipal leadership
- Active municipal land policy
- Project developer focus on execution
- Project organisation to coordinate process
- Landowner-users own choice to stay: invest in nuisance limiting measures

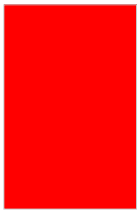
Figure 17: focus points approach building block for municipality led process perspective

10.2.3 The joint commitment process

This approach is all about flexibility and adjusting roles and responsibilities according to new insights and changing circumstances in order to accelerate the initiation phase. The most important aspect is to make sure that all parties are committed at all times to collaborate and to always come to a solution together. This implies that all parties need to be committed to give and take and to be

transparent regarding their interests. A strong municipal vision is therefore not desired. A strong collaboration should be key and all topics should be dealt with within the triangular collaboration such as a possible relocation, although mixing industrial and residential use, if possible nuisance and safety wise, should be the situation to strive for. It is important that all parties operate on the basis of equality and are willing to use their specific resources to make progress. For the municipality and or other public bodies, this implies that they have to contribute financially by means of a revolving fund and a subsidy for landowner-users as an incentive to leave the area in order to make land available for residential use. Acquiring land by project developers should be start with early on and the subsidy can help to accelerate this process. Project developers should already be involved in the process early on to contribute to create a strong partnership between all parties. A flexible land-use plan that enables a soft transition needs to be used to be able to start the redevelopment at those locations that are ready for this. This land-use plan will also allow to take more time for the harder cases, while the process as a whole can still continue.

Main perspective 3:
Joint commitment



Focus points:

- Flexibility and adjusting to new insights, circumstances and individual cases
- Commitment to collaborate intensively
- Equality: not one leader
- Subsidy to accelerate land acquisition
- Early involvement of all parties
- Flexible land-use plan to enable soft transition period and maintain progress of the process

Figure 18: focus points approach building block for the joint commitment process perspective

10.2.4 Landowner-users first perspective

The approach for this perspective is all about satisfying the big, nuisance producing firms which presence in the area prevents a total redevelopment. The landowner-users are the ones who choose themselves whether they want to stay or if they want to go. The landowner-users have to have a major say in the spatial plans in order to guarantee that they can keep continuing their industrial activities in the area. The landowner-users should be enabled to keep their focus on their own businesses and therefore they should either be represented by a third-party expert, or the municipality and project developers need to provide the needed support. The role of the project developer is limited to this supporting role and providing an alternative location to the landowner-user if he wants to leave the area. The spatial plans for the area should maximise the spatial separation between the current industrial and desired residential use. Providing clarity and transparency throughout the process is key. So, by fully meeting the wishes of the landowner-users that are able to frustrate the process due to the size of their lands and the produced nuisance levels, at least a partial redevelopment can be realised and the initiation phase can then be accelerated.

Main perspective 4:
Landowner-users first

Focus points:

- Strict spatial seperation industrial and residential use
- Lighten burden landowner-users: third party support or municipal and project developer process support
- Clarity and transparency
- No leadership role or major say in spatial plans for project developers
- Project developer's task to provide alternative location if necessary

Figure 19: focus points approach building block for landowner-first perspective

10.3 Alignment parts

The idea of the alignment parts is that it is most likely that not all important parties in a certain case will share the same perspective. Therefore, the collaboration approach needs to incorporate the most important elements of the main perspectives of the other crucial parties. This is indicated by the three colours of the alignment parts in figure 14 that correspond with the colours of the non-selected main approach building blocks. The order of the different coloured alignment parts does not hold any meaning.
Which elements need to be incorporated depends on the dominant main perspective and the corresponding approach, the perspective(s) of the other main player(s) and the case characteristics. An alignment part cannot conflict with one of the aspects of the chosen main perspective building block.

To illustrate how a collaboration approach should be constructed on the basis of the main perspectives of the important parties, an example will be given for the Oudorp case in Alkmaar.

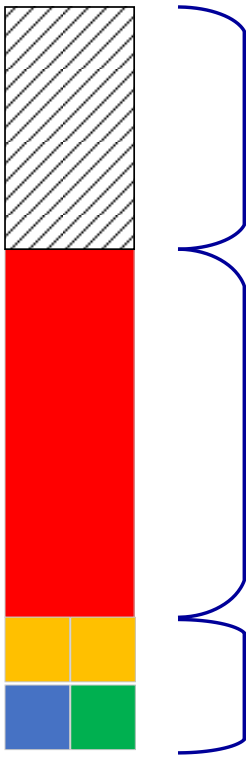
10.4 Application building block approach to Oudorp, Alkmaar case

The consensus part building block is the same for all approaches. The dominant main perspective is perspective 3; the “joint commitment process” perspective. All municipal respondents and one big project developer share this perspective. However, the other three perspectives also apply to this case because of the other Oudorp respondents.
One landowner-user has perspective four, the landowner-users first, perspective. This landowner-user is located at the edge of the redevelopment area, near a main road. Because of this location, it is relatively easy to spatially separate it from a future residential use. Furthermore, the location is not attractive for residential use because it is next to an intensively used road. Because perspective 3 is all about flexibility, the redevelopment can be started in other parts of the area and leave the landowner-user alone. Therefore, the alignment part for perspective four would be to strictly separate industrial and residential use for that specific location. The fact that the landowner-user at the edge of the area is allowed to stay, also corresponds with perspective two to give the landowner-users the choice to stay.
One project developer and one landowner-user have perspective two, the municipal led process, as their dominant main perspective, while one project developer and one landowner-user have perspective one, the project developer led process, as their dominant main perspective. The main perspective for this case, perspective three, clearly does not want to appoint one party as the leader. However, on other aspects the main approach can be adjusted. In the Oudorp case, the municipality owns some centrally located, big plots in the area which it can use to facilitate re-allotment, as is desired by perspective one. Strategically using the land acquired by the municipality, is also in line with perspective two that advocates an active municipal land policy. Additionally, it should be clear to which aspects the flexibility applies and between which boundaries the flexibility is allowed. This clarity is also desired by the landowner-user that has perspective four. So, the adjustment parts for perspective one are: clarity regarding the flexibility level and the application of re-allotment by making use of the municipality owned plots.
Because collaboration is crucial according to perspective three, a project organisation can be founded to formally organise this collaboration. The municipality should bring all the parties together in this project organisation. The adjustment part for perspective two is then the founding of a project organisation.

Figure 20 shows the example collaboration approach for the Oudorp case.

It is important to note that the alignment parts are based on the characteristics of the respondents. The presented approach therefore does not necessarily hold when all parties of the Oudorp are included in the analysis.

Collaboration approach Oudorp, Alkmaar



Consensus part

- Clear, joint vision as guideline for collaboration
- Transparancy
- Early focus on land acquisition
- No forced departure of landowner-users
- Placemaking and pioneers
- Awareness extended responsiblity project developer

Main perspective 3: joint commitment process

- Flexibility and adjusting to new insights, circumstances and individual cases
- Commitment to collaborate intensively
- Equality: not one leader
- Subsidy to accelerate land acquisition
- Early involvement of all parties
- Flexible land-use plan to enable soft transition period and maintain progress of the process

Alignment parts

-Clarity regarding flexibility aspects and boundaries
-Apply re-allotment with use of municipal owned plots
-Founding of project organisation
-Strictly seperate industrial and residential use for specific location

Figure 20: example of a collaboration approach for Oudorp, Alkmaar by applying the building block approach model

11. Validation and reflection results: the expert meeting

This chapter gives an overview of the expert meeting that was used to validate seven selected findings of this research. The most important conclusions of the expert meeting are reported in this chapter.

In order to validate the results of this research and to be able to interpret the value of these findings in the bigger picture of the field of urban area development, a two-hour lasting expert meeting was organised on the third of October 2018. The experts were selected on the basis of their expertise and experience in the urban area development sector, their objectivity regarding the researched municipalities, landowner-users and project developers and lastly on diversity in their background being more practical or more scientific. Table 4 shows the overview of the four experts that attended the expert meeting

Table 4: overview participants expert meeting

Participant	Employer	Background
Tom Daamen	TU Delft & SKG	Scientific
Maarten Hoorn	Platform 31	Research
Frank ten Have	Deloitte Real Estate Advisory	Practical-advisory
Patrick Esveld	Akro Consult	Practical-advisory

The meeting featured seven discussion rounds that were each structured by first showing an overview of a specific result and then by putting up a statement that served as input for the discussion amongst the experts.
The next paragraphs will each introduce the discussed result, the statement and the most important findings of the discussion.

11.1 The four identified perspectives

The main result of the research are the four identified perspectives on which factors are important to accelerate the initiation phase of brownfield redevelopment projects from a collaboration perspective. The experts were presented the following two statements:

Statements:
- I totally recognise these four perspectives from my experience
- This set of four perspectives is complete in the context of accelerating the collaboration in the initiation phase

The main takeaway from all experts was that perspective three, the joint commitment process, is unanimously recognised as the main perspective. In their perspectives, perspective three is the only feasible perspective that can result in an acceleration of the initiation phase. Furthermore, they distinguished taking initiative and taking the lead as two different aspects. In their opinion, whoever takes the initiative is of less importance than what happens once the initiative has been taken. The occurrence of the other three perspectives can then be linked to this initiative role. The contextual case characteristics will result in different parties taking the initiative and that's why perspectives one, two and four occurred in the results. However, to optimise the potential to accelerate the collaboration, the experts agree that a strong collaboration between all parties that is characterised by a willingness to solve issues jointly, is needed. So, from a practical perspective, especially perspective three was recognised, although the other perspectives were also recognised because of the link with the different parties who can take the initiative for the redevelopment project.

11.2 Perspective two, the municipal led process, is the Amsterdam perspective

Perspective two is characterised by a strict functional division in which the municipality orchestrates the process and the project developers are focussed on the execution part and work within the municipal boundaries. Four of the six respondents that defined perspective two were from the Amsterdam case, three project developers and one municipal respondent. The strict functional division can be linked to the characteristics of the Amsterdam urban area development practice. Due to the very tight Amsterdam housing market, Amsterdam project developers are mainly focused on constructing dwellings as fast as possible and they are not as interested in taking the lead because as long as they can build, it will be okay because almost every dwelling sells in Amsterdam. The municipal holds a dominant position because of the ground lease system. Furthermore, the municipal strategy for the Hamerkwartier is not to change the land-use plan but to deviate from the current land-use plan, that does not allow residential use, per plot. In this way the municipality keeps full control of any developments in the area.
The experts were presented the following statement

Statement:

- Perspective two “the municipal led process”, is characteristic for Amsterdam and can therefore be labelled as the Amsterdam perspective

All experts recognised Amsterdam in perspective two. However, the tight housing market in Amsterdam is not the only cause for the dominant municipal role. Because of the favourable market conditions, the municipality can be demanding, but the municipal culture and the tradition of the Amsterdam urban area development sector are a decisive factor as well. All parties are used to a dominant Amsterdam municipality and therefore, project developers take a passive approach because that is how it has always been. One remark from an expert was that the number of civil servants in Amsterdam is much larger than in the other major cities which might have led to a typical case of “supply taking care of its own demand”. Furthermore, the experts also endorse the fact that the ground lease system enlargers the dominant municipal position. The other major cities in the Netherlands, Utrecht, Rotterdam and The Hague, also feature tight housing markets but do not have a tradition of such a strong municipal role in the development process as in Amsterdam. Therefore, perspective two can be seen as the Amsterdam perspective, but this does not necessarily imply that this perspective is only present in Amsterdam projects.

11.3 Municipal land ownership and private initiative as indicators for perspective three

All three municipal respondents from Alkmaar define perspective three. The distinctive case characteristics of Alkmaar can be used to explain this. The Alkmaar municipality has applied active land policy and has acquired three centrally located, big plots in Oudorp. Therefore, they municipality has become a landowner as well with the intention to develop the land, which makes the municipality a project developer as well to a certain extent. Therefore, the municipality has become a player in a level playing field with the other parties. This can explain why the Alkmaar municipality sees perspective three as the best way to accelerate the initiation phase. Additionally, the Oudorp case is characterised by a private initiative to realise dwellings in the area. The municipality stepped in later which explains why it did not take the lead. Because of its landownership, they do have power over the development which could explain why perspective one is preferred by the Alkmaar municipal respondents.
The experts were presented the following statement:

Statement:

- The coupling between municipal landownership and private initiative for the redevelopment and the municipality holding perspective three, the joint commitment process, is logical and correct

The experts do endorse that the coupling could be logical but it all depends on the attitude of the municipality. Perspective two does not apply in this case because there is already a private initiative. Because of the land acquisition, the municipality wants to have a stake and a say in the redevelopment process. Therefore, perspective one does not apply neither in this case. The experts called this land acquisition “initiating land policy” or “trigger money”. By acquiring the land, the municipality showed to all private parties that the redevelopment is really happening. The experts valued this strategy as the municipal land policy of the future because it enables the municipality to steer the process, without investing huge amounts of public money.
The experts underline that active municipal land policy is a signal towards all parties that the municipality is serious about the redevelopment of the site and that the process has really started. If the municipality does not actively use the acquired plots to kickstart the redevelopment, other parties will be confused and wait what the municipality will do. In this case, the active municipal land policy will delay the initiation phase.
So, from an acceleration perspective, a municipality should only apply “initiating land policy” if it at least has the intention to actively use that plot to kickstart the redevelopment.

11.4 The building block approach model

The mechanism of the building block approach model was explained to the experts and the following statements were presented:

Statements:
- The building block approach model is an effective instrument that will result in an acceleration of the initiation phase in practice
- What would you do with the knowledge about the four perspectives?

The experts distinguished two ways to use the building block approach model. Firstly, the model gives insight in which different ways the collaboration can be constructed. Secondly, it can be used to confront all parties with the fact that there are different perspectives and approaches to accelerate the process and that different parties prefer different approaches. Then, this overview can be used to create mutual understanding among the three parties and the identified differences can be used as input for sessions to create an approach that works for all parties. Especially the alignment parts are therefore relevant according to the experts. Urban area development is all about a tailor-made approach and therefore there does not exist a model that can applied to all cases. In their opinion, the main building block should in principle be the one of perspective three, the joint commitment process. The process of interviewing the different involved parties and identifying which perspectives they hold, is valuable because it gives insight in what is needed to achieve the joint commitment process. So, the process of coming to the building block approach might be more valuable than the building block approach model itself. Running this process creates mutual understanding among the involved parties for each other perspectives and shows which differences need to be bridged in order to come to a joint commitment process.

11.5 Landowner-users impasse

The research shows that no perspective wants to force landowner-users out of the area. However, if all current landowner-users stay, there is no space to construct dwellings and therefore the redevelopment cannot take place. Especially the landowner-users that have perspective four, landowner-users first, that produce high nuisance levels and that have high moving costs, form a problem. Constructing dwellings by the landowner-users themselves is not desired to accelerate the process. The research also shows that the negotiation regarding land acquisition by project developers from landowner-users is not always just a financial negotiation that always results in an agreement. So, forcing these landowner-users out of the area is not desired, land acquisition negotiations do not always lead to agreements, while keeping the landowner-users in the area is not

an option because it prevents residential use of the area due to the produced nuisance by the landowner-users.
The following question was presented to the experts:

Question:
- What should be done with this impasse that blocks the acceleration of the initiation phase?

The experts agreed with the four perspectives that forcing landowner-users out of the area is not desired because it will evoke a contra productive attitude from these landowner-users which will only delay the whole process. The only way to deal with this impasse is to offer a realistic alternative to the landowner-users. What a realistic alternative is, depends on the type of firm and the state of the firm. If a landowner-user almost wants to retire, a financial compensation might be better than providing an alternative location for example. The experts stressed that it is important to keep talking with the landowner-users, to understand their situation and to try to solve the issue within the collaboration with the municipality and project developers and with respect for the situation of the landowner-users as is done in perspective three, the joint commitment process.

11.6 Financial instruments not crucial for acceleration

Within the public opinion and in many articles and news items, one of the main challenges of redevelopment projects is the financial and financing challenge. Four financial instruments were included in the research and none of these instruments (revolving fund, subsidy, municipal guarantee to contribute financially to the business case, a joint fund by project developers and the municipality to pay the process costs) were identified by the perspectives as critical to accelerate the process.
The following statement was presented to the experts:

Statement:
- The financial challenge and financial instruments are not important when accelerating the initiation phase

The experts did not agree that the financial component is not relevant. After all, the redevelopment will only happen if it can be paid for. However, in the initiation phase, the focus is more on creating a common interest than on using financial instruments. It is important that all parties have the idea that they can make money along the process, but the initiation phase is too early for financial instruments to matter and make an impact.

11.7 Flexibility vs clarity

Perspective one, the project developer led process, and especially perspective three, the joint commitment approach, value flexibility in the spatial plans more than fixed plans that provide security and clarity. Perspective two, the municipal led process, and especially perspective four, landowner-users first, value clarity, security and fixed plans way more than flexibility. On top of that, all perspectives stress that a clear future vision is desired. So, flexibility and clarity seem to be two factors that collide with each other and therefore form an obstacle when trying to accelerate the initiation phase.
The following statement was presented to the experts:

Statement:
- Clarity and flexibility interfere with each other when accelerating the initiation phase

The experts did acknowledge that it is not possible to provide clarity and security on one hand and flexibility on the other hand at the same time regarding the same aspect. However, in their

perspective, it is most important to be clear in the future vision that can form a goal to which all parties can jointly work. The flexibility can be incorporated in the way towards achieving this future vision. Once developments are made, it is possible to provide more clarity and safety regarding the process. It is really important to make sure that any given guarantees are kept in order to keep all parties committed to the process. The more security and clarity is offered in the process, the higher the willingness to commit to the process. Therefore, perspective two that is about strictly following the municipal guidelines, could result in an acceleration of the initiation phase. Maximal flexibility leads to maximal insecurity. However, it is simply not possible to provide total security from the beginning and therefore providing a clear future vision is crucial.

12. Conclusions and practical recommendations

This chapter highlights the main findings of this research by answering the three sub questions that together answer the main research question. The chapter finishes with an overview of the identified practical recommendations to accelerate the initiation phase of inner-city redevelopment projects of industrial sites to mixed work-residential areas. Recommendations for scientific research are presented in chapter thirteen, the discussion.

This research was set up to identify factors that contribute to an acceleration of the initiation phase of Dutch brownfield redevelopment projects. The research was focused on the collaboration between the municipality, current landowner-users and project developers. The main research question was therefore: "*What are factors, indicated by municipalities, landowner-users and project developers, that accelerate the initiation phase of Dutch brownfield redevelopment projects of inner-city industrial sites into mixed work-residential areas, from a collaboration perspective?"*

The central research question is answered by successively answering the following three sub questions:

1. Which conceptual model can be constructed that describes the theoretical perspective on the important factors for acceleration?
2. What is the empirical perspective on important factors for acceleration?
3. What is the relation between the theoretical and empirical perspective?

By performing a Q-methodology research, a set of acceleration factors was derived from literature and subsequently ranked by nine municipal respondents, ten landowner-users and nine project developers. The factors refer to process elements, organisational elements regarding roles and responsibilities roles for each party and potentially accelerating instruments. The respondents ranked 42 statements, based on the identified acceleration factors, relatively to each other and to the extent to which they agreed or disagreed that a factor should be applied in practice to accelerate the initiation phase. The respondents were selected from three case studies, Hamerkwartier in Amsterdam, Oudorp in Alkmaar and Schieoevers in Delft. All studied cases were inner-city industrial sites that are going to be redeveloped into mixed work-residential area.

12.1 Sub question one: the theoretical perspective

Brownfield redevelopment projects can be analysed by using the conceptual steering model by de Leeuw (2002) (figure 21). This conceptual model is designed for the business administration domain but can be applied to the public-private management of urban area development projects, of which the studied public-private collaboration process in the initiation phase is part of, because of the similar characteristics of both domains (Heurkens, 2012). This thesis uses three aspects of De Leeuw's model to distinguish three relevant categories of factors that can contribute to an acceleration of the studied collaboration process: the organisational system, the process system and the internal management measures.

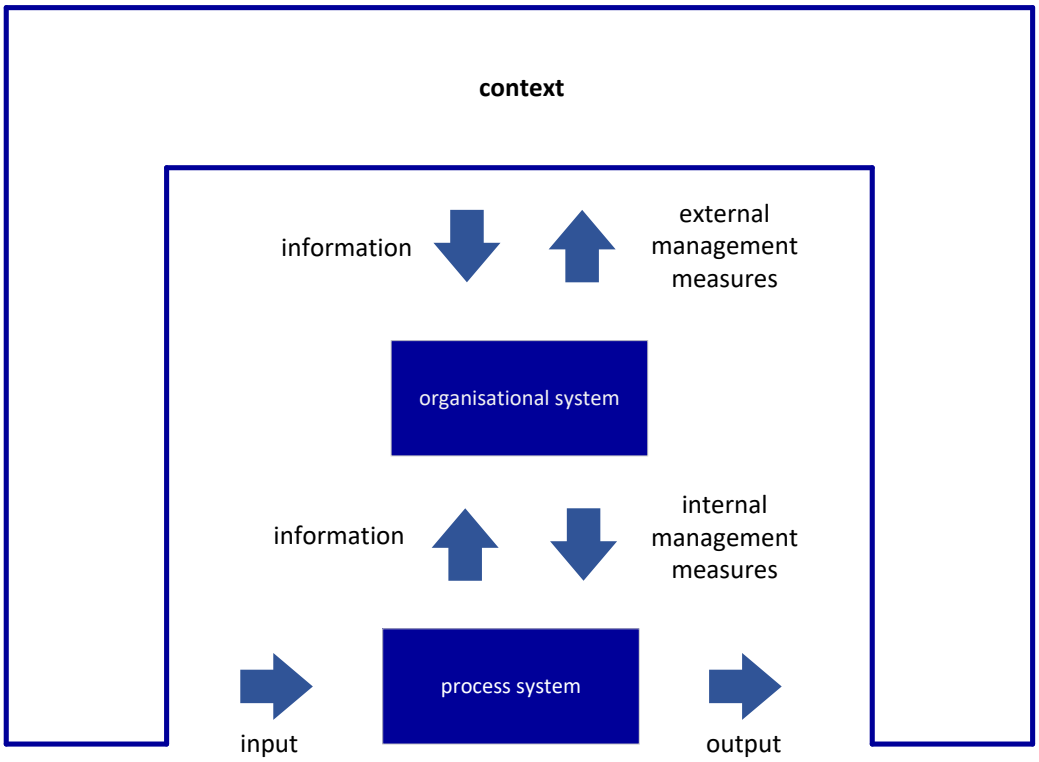


Figure 21: conceptual steering model (based on De Leeuw, 2002)

These three aspects are then applied to the context of the initiation phase of brownfield redevelopment projects of inner-city industrial sites into mixed work-residential area. Figure 22 shows the adjusted conceptual steering model as used in this research. The studied organisational system, from De Leeuw's original model, is the collaboration organisation that is formed by the municipality, landowner-users and project developers that interact via the division of roles and responsibilities over these three parties. This collaboration organisation steers the collaboration process, the studied process system from De Leeuw's model (2002). The collaboration process is built up out of a set of process components. These components are topics for which collaboration between the three parties is necessary to realise these topics in a certain way in the redevelopment project. The three parties within the collaboration organisation steer the collaboration process by using internal management measures. For this research, these measures are instruments that are used to accelerate the collaboration process. These instruments are categorised according to Heurkens' public private urban management model (2012) that distinguishes four types of management instruments: shaping, regulating, stimulating and capacity building instruments (based on Adams, Watkins, White, 2005; Adams, Tiesdell, 2010).

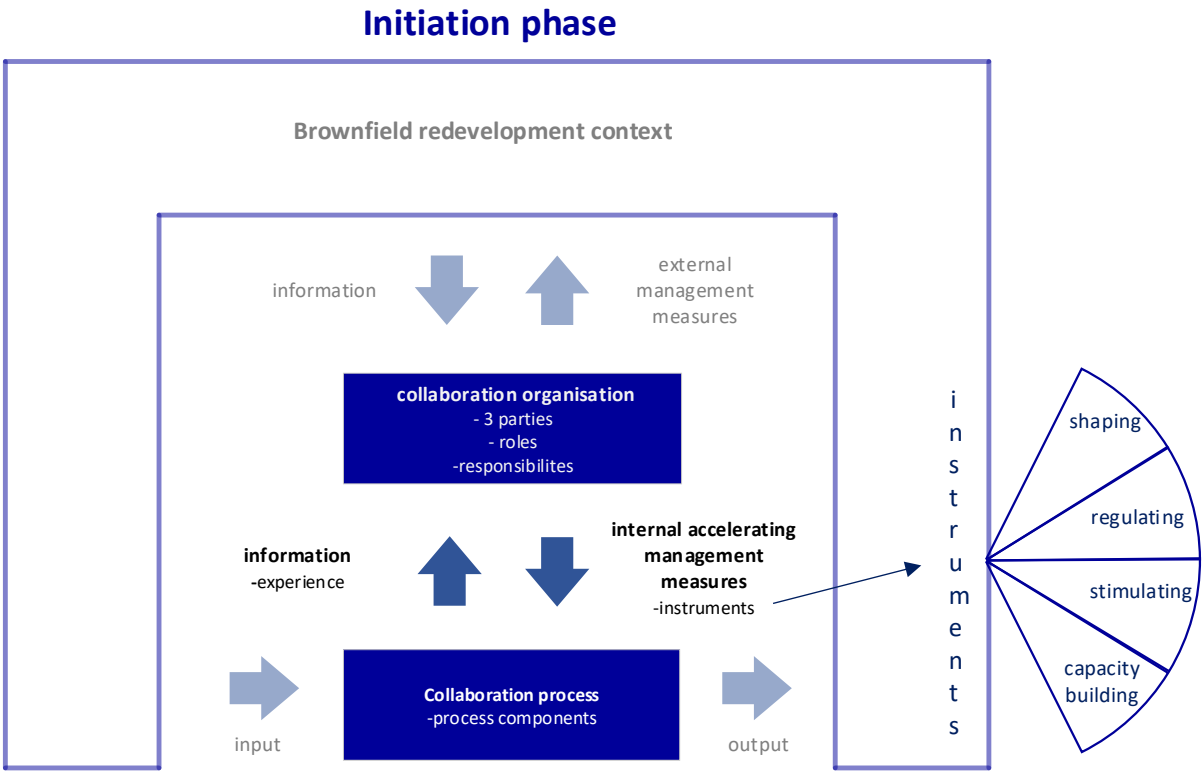


Figure 22: adjusted conceptual steering model as used for this research by incorporating the management instrument categories of Heurkens' (2012) public-private urban management model (based on Adams, Watkins, White, 2005; Adams, Tiesdell, 2010) into the conceptual steering model of De Leeuw (2002)

De Leeuw's and Heurkens' conceptual models are integrated into the applied conceptual model for this research. This model is then used to structure a literature framework into three categories: organisational factors, process factors and instrument factors. This framework is used to conduct a literature research that identifies aspects that, according to practical and/or scientific literature, play an important role when trying to accelerate the initiation phase of brownfield redevelopment projects from a collaboration perspective. Twelve process aspects, six organisational aspects and fourteen instruments are identified, as shown in table 5. 42 statements are then derived from these aspects and instruments and together they form the Q-set. So, this Q-set expresses the theoretical perspective on which factors are important when accelerating the initiation phase of inner-city redevelopment projects.

Table 5: overview of the identified aspects that are important to accelerate the collaboration process from a theoretical perspective

process	organisational	instruments	
Flexibility of the redevelopment plans	Authors of the spatial vision	**shaping**	
Municipal spatial vision	Joint leadership		Flexible land-use plan
Transparency of interests	Landowner-users deciding themselves to stay or go	**Regulating**	
Individual profit maximisation	Offering an alternative location to landowner-user		Expropriation of landowner-users
Buying out landowner-users	Municipal leadership role		Allowing and introducing pioneers
Purchase of land	Municipal urban area development role	**Stimulating**	
Relocation landowner-users			Subsidy for landowner-users to leave the area
Feasibility and desirability of a mixed work-residential area			Municipal land policy
Financing aspect			Guarantee municipal financial contribution
Benefitting from increase in land value			Revolving fund
Introducing other spatial functions in the area			Lighten process burden for landowner-users
			Placemaking
			Re-allotment
		Capacity building	
			Project organisation
			Expert to represent landowner-users
			Public developer/quarter master
			Urban area development by current landowner-users

12.2 Sub question two: the empirical perspective

The empirical perspective is formed by the ranking of the statements of the Q-set by twenty-eight respondents from the municipalities, landowner-users and project developers from three redevelopment projects that are currently in the initiation phase: Hamerkwartier in Amsterdam, Oudorp in Alkmaar and Schieoevers in Delft. The respondents ranked the statement on the basis of the extent to which they agreed or disagreed that a specific statement should be incorporated as

such in the initiation phase to accelerate this phase. Analysis of these twenty-eight rankings revealed that four different sets of similar ranking patterns could be identified. The individual ranking patterns represent the individual perspective of each respondent. The four sets of similar individual ranking patterns are used to define four comprehensive perspectives on how the initiation phase should be accelerated. These perspectives summarise and form an overarching perspective of a number of similar individual perspectives of the respondents. So, practically, this means that it is possible to group individuals based on the similarity between their individual perspectives.

12.2.1 The four identified perspectives

Next, the four identified perspectives are introduced.

1. **Project developer led process.** This perspective is about the project developer taking the lead in the process and having a major say in the spatial plans for the area. The municipality should fulfil a facilitating role by making a municipal vision and applying a passive land policy. Financial municipal aid should not be given. A strong collaboration is important, as well as a clear spatial vision that provides clarity about the future and a goal towards which all parties can jointly work.
2. **Municipal led process**. This perspective is about the municipality taking the lead and guiding the process. The municipality determines the spatial plans while the project developer should focus on executing these plans. The municipality has to apply an active land policy to kickstart the redevelopment but shouldn't provide any financial aid to project developers or landowner-users. The municipality should bring all parties together in a project organisation that enables optimal use of all resources and coordinates the collaboration along the municipal guidelines. The landowner-users should have the choice to stay in the area and a strict spatial separation between residential and industrial use is not necessary.
3. **The joint commitment process**. This perspective is all about a flexible division of roles and responsibilities and a tailor-made approach for each individual case. The most important aspect is that all parties are prepared to help each other out; leadership is not important. This means that all important topics are handled jointly by all parties and the exact role division depends on who is most capable of handling a specific matter. Transparency in a strong collaboration is needed and individual profit maximisation is considered destructive for this collaboration. Furthermore, public financial aid is needed as well as place making, while a strict separation between residential and industrial use is not needed.
4. **Landowner-users first.** This perspective is all about making sure that landowner-users can keep continuing their business activities. They should be able to choose if they want to stay or not. If they do, then the municipality and the project developers need to lighten the burden for them in process by providing help, resources and the right information. Clarity about the future by means of a clear spatial vision is essential. Residential and industrial use have to be strictly separated. Project developers should not have a say in the spatial plans, nor have a leadership role, while the current landowner-users should. If a landowner-user wants to leave, the project developer is responsible to find an alternative location.

12.2.2 Determinants for the perspectives

Next to the four perspectives, this research also shows insight into which parties are likely to have which perspective, based on four identified determinants that are summarised in table 6.
A first determinant is the pro or anti-redevelopment attitude of a respondent. Perspective one, two and three all eye a complete redevelopment, while perspective four wants a strict spatial separation between industrial and residential use which would result in only a partial redevelopment. This study shows that the anti-redevelopment attitude is linked to landowner-users that produce medium to high nuisance levels only. Perspective four is therefore characteristic for anti-redevelopment landowner-users who produce medium to high nuisance levels.
A second determinant is that the parties in a redevelopment project in Amsterdam are likely to have perspective two "the municipal led process" because of the traditional dominant municipal position

due to the municipal ground lease. The project developers in Amsterdam are used to this traditionally strong municipal position and because of the favourable Amsterdam housing market, they are focussed on delivering dwellings quickly, rather than trying to get involved in the spatial planning policy.
A third determinant is the stage of the redevelopment project and the applied municipal land policy. If a redevelopment project is initiated by a private party and the municipality does want to get a stake in controlling the redevelopment by applying strategic, active land policy, the municipality is likely to have perspective three.

Table 6: overview of the identified determinants that show which characteristics are determinants for which perspective

Determinant	**Perspective one:** Project developer led process	**Perspective two:** Municipal led process	**Perspective three:** Joint commitment process	**Perspective four:** Landowner-users first process
Pro-redevelopment attitude	✓	✓	✓	
Anti-redevelopment attitude				✓
Amsterdam project		✓		
Active municipal land policy + private initiative			✓ Only for municipality	

12.3 Sub question three: the relation between the theoretical and empirical perspective

By performing the Q-methodology, this research has tested how the empirical perspective, the ranking of the Q-set by the respondents that resulted in the four perspectives, relates to the theoretical perspective, the Q-set. The four identified perspectives agree on a set of fourteen factors, the consensus factors, being important to accelerate the initiation phase of inner-city redevelopment projects. Table 7 shows these consensus factors, structured along the factor trichotomy of process, organisational and instruments and translated into do's and don'ts. The eight factors in the "do's" category show that theory and practice agree that these factors are important and should be incorporated in the collaboration process as shown in table 7. The six factors in the "don'ts" category show that the empirical perspective does not agree with the theoretical perspective that these six factors are important or should be incorporated in the way they are presented in the Q-set. The "don'ts" category shows how the empirical perspective values these six factors.

*Table 7: overview of the identified **consensus factors,** categorised in do's and don'ts for the three factor categories process, organisational and instruments*

Consensus factors

process	organisational	instruments
Do's		
A strong collaboration is necessary to guarantee optimal use of all resources		Realise other (non-industrial) functions in the area as an incentive for landowner-users to quicker sell their land
Provide a clear future vision to give long term security to landowner-users		Apply place making to attract new users to the area
Make a joint spatial vision that forms a goal to which all parties can jointly work		Introduce pioneers into the area to make parties aware the redevelopment has started
Focus early on the land acquisition by project developers		
All parties have to be transparent regarding their interests		
Don'ts		
No co-financing of the process by municipality and project developers	The responsibility of the project developers is not limited to profit maximisation (includes sustainability and creating high quality urban area)	Public developer/ quarter master not necessary for acceleration
Not all parties have to benefit from the increased land value	The municipality should not provide an alternative location for landowner-users who move away	
Do not force landowner-users out of the area by buying them out or expropriation		

The fundamental idea of this research is that collaboration is needed in order to accelerate the complex redevelopment process (Deloitte, 2017). As table 7 shows, the empirical perspective agrees with the theoretical perspective on this matter by stating that a strong collaboration is necessary for optimal use of resources, which is valued as necessary to accelerate the initiation phase.

Noticeable is that the empirical and theoretical perspective do not agree on any organisational factor. This is explained by the four perspectives that together form the empirical perspective. The four perspectives especially differ on the organisational aspects which is expressed by the names that each perspective is given. Each perspective's name refers to the organisational aspect of which party takes the lead and has the dominant role in the collaboration. So, because the four perspectives do not agree on all organisational factors, except the two presented in table 7 in the "don'ts" category, these factors are not consensus factors which makes a comparison between the empirical perspective as a whole and the theoretical perspective on these organisational factors impossible.

Another difference between theory and practice is the dominant role of the financial aspect and especially of financial instruments in particularly practical literature, but also in spatial policies such as the launching of a revolving fund by the Dutch government to kickstart brownfield redevelopment projects. However, the empirical perspective shows that financial instruments are not valued as being important to accelerate the initiation phase. This is explained by the fact that later stages of the redevelopment project cycle deal with constructing a sound business case, while the initiation phase is about creating commitment between parties to collaborate to realise the redevelopment.

By answering the three sub questions, the main research question is answered.

12.4 Practical acceleration recommendation: synthesis empirical and theoretical insights

Two approaches are distinguished to accelerate the initiation phase of inner-city redevelopment projects: an universally applicable approach that practitioners should always apply and a case specific approach: the building block model approach.

12.4.1 Universally applicable recommended approach

Based on these consensus factors, a recommended acceleration approach is formulated that should be implemented by the three parties in the initiation phase of Dutch, inner-city redevelopment projects. This recommended acceleration approach features five aspects:

- Create a shared and clear vision early on to provide clarity, long term security and a goal towards which all parties can work
- Be transparent regarding your interests
- Do not force current landowner-users out of the area
- Introduce pioneers and start place making activities early on
- Align expectations on which aspects are included in the project developer's responsibility

Landowner-users are the only identified party that includes individuals that have an anti-redevelopment attitude. These anti-redevelopment landowner-users are therefore the major obstacle in accelerating the collaboration process in the initiation phase and their opinion is summarised by perspective four "landowner-users first". If the number, the size of the plots and the nuisance levels of these anti-redevelopment landowner-users is limited, the initiation phase can be accelerated by following the perspective four approach and applying a strict spatial separation between residential and industrial use and lighten the organisational burden for the landowner-users (see figure 23). This approach implies that the focus of the collaboration approach is solely on satisfying the anti-redevelopment landowner-users which means that the involved project developers and municipal civil servants must be willing to set aside their own wishes and interests if necessary.

However, if either the number, the size or the nuisance levels are not low, mixing both industrial and residential functions is not feasible in combination with a complete redevelopment. Applying the perspective four approach would then result in significantly downscaling the scope of the project regarding the possible number of dwellings in the area. This is undesirable with the current housing deficit. However, a forced departure of landowner-users is not desired by any perspective. Therefore, it is advised to choose for a gradual redevelopment process that starts with acquiring and eventually redeveloping those plots located furthest away from the anti-redevelopment landowner-users. This research shows that realising other spatial functions in the area will result in landowner-users faster selling their plot. Therefore, it is important to introduce place making activities and pioneers early in the area. Another crucial aspect in this gradual redevelopment process is to be very clear in the time path of the process, to work along a clear spatial vision and to be transparent in what is going to

happen when and how in order for the landowner-users to be able to adjust their firm's strategies and be prepared.
Providing an alternative location with a guarantee that the landowner-user can continue its business for the long term there, could take away the obstacle of the anti-redevelopment landowner-users as well. Perspective one, three and four see this more of a task for the project developers than for the municipality. However, it is then also important to make sure that the landowner-user is financially offset if the price for the old plot is not enough to fund the move.

These recommendations are based on the findings of this research. However, additional research into how can be dealt best with landowners-users who prevent a redevelopment of the industrial site but do not want to leave, is necessary to identify recommendations for an effective, comprehensive approach for this matter.

12.4.2 Case-specific recommended approach: the building block model

The building block model is a conceptual model designed to apply the insights of this research into the practice of inner-city redevelopment projects. The model exists out of tree layers, the consensus part, the main perspective and the alignment parts. A case specific acceleration approach is built up out of the three groups of building blocks: one consensus part that applies to all brownfield redevelopment cases, one of the four dominant perspective building blocks and then a selection of adjustment parts that refer to the adjustment factors. Figure 23 shows the conceptual building block approach model. In each building block, the main strategic focus points for that building block are shown. The main idea behind the strategical building blocks is that if the collaboration process is designed according to the wishes of the main players, the process can be run through more effectively and therefore faster. The identified determinants can help to get a first impression of which parties hold which perspective. However, it is advised to first conduct a thorough exploratory research among all relevant parties to assess to which perspective they adhere to and why. Knowing the personal reasons for a party to adhere to a certain perspective is crucial to construct an effective approach, by making use of the alignment parts. Such an assessment should ideally be conducted by an independent party to guarantee objective documentation of the assessment and therefore objective input for the building block approach model.

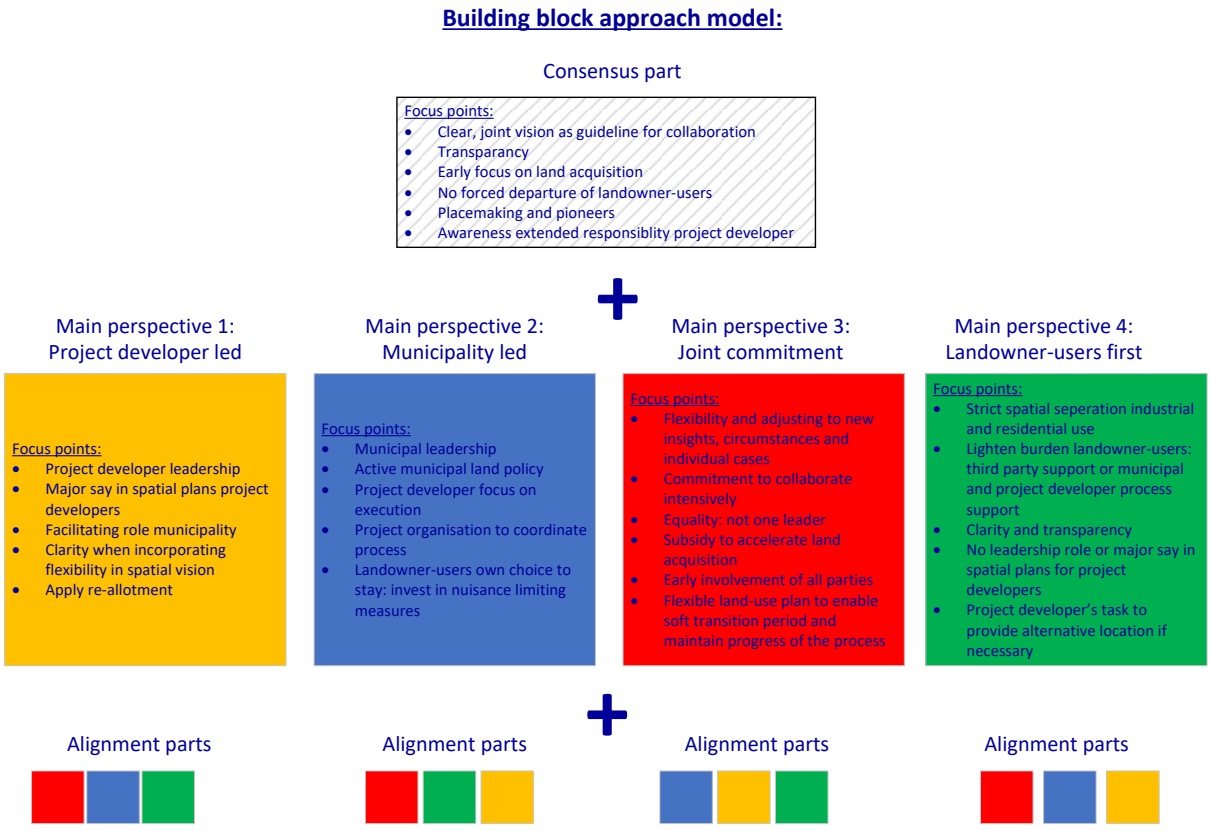


Figure 23: building block approach model. The main focus points of each building block are shown within each building block. A collaboration approach exists out of the consensus part, one main perspective block and a set of alignment parts that aligns the approach of the main perspective building block with some aspects of the other perspectives that are present in the case

The consensus set shows the basic set of factors that need to be incorporated by any means in the collaboration process to accelerate it and is equal to the presented universal applicable approach.

Then, on top of this consensus set, four different sets of factors are recommended to be incorporated in the collaboration, depending on the dominant main perspective for each specific case. These factors are called the "dominant main perspective factors". The dominant main perspective is determined by means of the majority of players sharing one perspective. So, each case specific acceleration approach has only one of the four main perspective building blocks. The recommended aspects from the consensus part and each of the main perspective building blocks do not clash with each other and can therefore be applied next to each other.

However, in most cases, there will also be important parties, for example a landowner-user who owns a big and very centrally located plot, that do not share the dominant main perspective for that case. Then it is advised to incorporate some relevant factors from the perspective of that important party to make sure that this party can recognise itself in the approach and will commit itself to the collaboration process. These factors are called "adjustment factors" and are taken from the main perspective building block that a particular important party has (indicated by the corresponding colours of the alignment parts and the main perspective building blocks), as long as that factor does not collide with a factor of the dominant main perspective. For example, if perspective one "the project developer led process" is the dominant approach, then an adjustment factor for a landowner-user that holds perspective four "landowner-users first" cannot be to not give the project

developer any say in the spatial plans or leadership task. However, a good alignment factor would be to extend the dominant role of the project developer by including the supply of an alternative location in the project developer's responsibility. In this way, the characteristics of the main approach of perspective one are used to align the chosen collaboration approach and the main interests of a landowner-user that holds perspective four as much as possible. Which aspect from the main perspective building blocks should be used as an alignment part is case and party dependent.

In order to accelerate, a good collaboration between all parties is necessary. The alignment parts are crucial because they are the key in adjusting the collaboration approach towards parties that do not have the dominant perspective. In this way the chances on a good collaboration with committed parties is enlarged, which subsequently enhances the acceleration potential of the building block approach.

The building block model fits right in the adjusted conceptual steering model of De Leeuw (2002) by closing the feedback loop in the model, shown in figure 24. This research is about identifying the empirical perspective of the three parties on the process, organisational and instrument factors and using this information, based on the practical experience of the parties (the green arrow in figure 24), to construct a conceptual model that recommends a building block approach to design the collaboration process that results in a collaboration organisation, the use of internal accelerating management measures and a collaboration process that enlargers the acceleration potential of this collaboration (the dark blue components in figure 24).

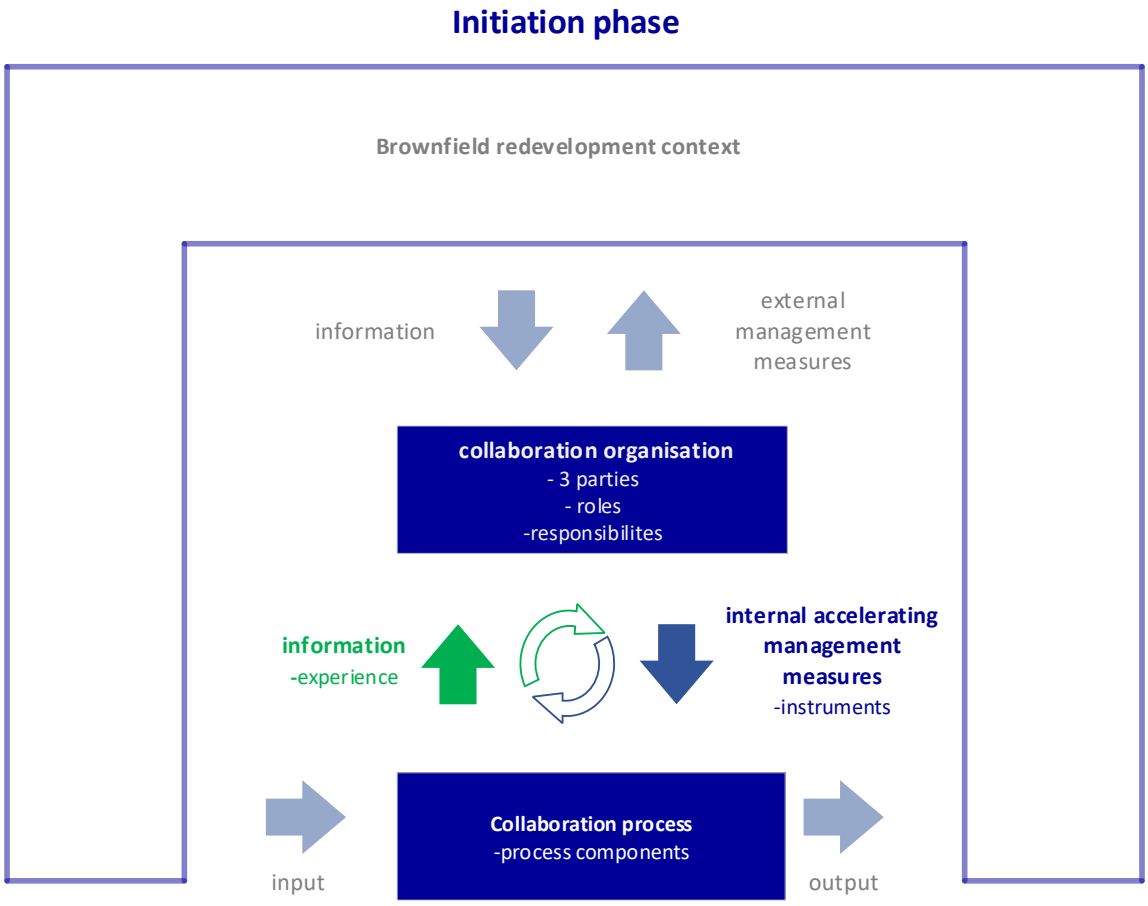


Figure 24: adjusted conceptual steering model of De Leeuw (2002) showing the feedback loop that is closed by the identification of the empirical perspectives on how to accelerate the collaboration process in the initiation phase of inner-city redevelopment projects

12.5 Final remarks

It is important to note that not one brownfield redevelopment project is similar and therefore a tailor-made approach is needed for every case. The proposed building block approach must therefore not be interpreted as a holy grail to accelerate the initiation phase, but as an approach that, based on the findings of this research, has the potential to construct the collaboration process in such a way that the likelihood of accelerating the initiation phase is enlarged.

Validation of the results and the proposed building block approach model in an expert meeting showed that in practice, especially main building block three, related to the "joint commitment process", is valued and recognised as the best way to accelerate the process, according to the experts. The alignment parts of the model are valued as crucial because it provides the possibility to provide a tailor-made approach.

The process of interviewing all involved parties in the initiation phase, getting insight into which parties have which perspective and using that information to create mutual understanding between the involved parties and to find ways to bridge the most important differences (by using the alignment part building blocks), is in itself valuable to accelerate the initiation phase of brownfield redevelopment projects. So, the assembly process of the building block model in itself can be used as an instrument that can contribute to the acceleration of the initiation phase.

13. Discussion

This chapter shows the main limitations of the performed research in section 13.1. Section 13.2 covers a reflection on the research method and findings. The chapter is closed off by a list of recommendations for future research that build upon the findings of this research in section 13.3.

13.1 Limitations performed research

This paragraph will give a concise overview of the most important limitations of this research and the resulting implications of that, regarding the results and conclusions.

13.1.1 Ambiguity statements and limited size Q-set

Even though the 42 statements have been formulated with great care, some statements can be interpreted in multiple ways. An example is statement four: “A strong collaboration between all parties is crucial to make sure all parties will make optimal use of their resources (knowledge, privileges, money, land) in the collaboration process to achieve a better end result”. This statement is ambiguous because it is not clearly defined what a better end result is. The focus of the study is on accelerating the process and the respondents were requested to rank the statements on the basis of the degree to which they agreed or disagreed that the statement should be realised to accelerate the process. However, a better end result does not have to be an accelerated end result in the perspective of a respondent. A similar degree of ambiguity can be found in statement three: “The feasibility of the redevelopment project is more important than the profitability.” For project developers, a project is feasible when the project is profitable. So, feasibility and profitability are not by definition separate aspects for project developers.

In order to cope with the ambiguity of some statements, ranking of the statements was done in a face to face meeting in order to be able to explain and clarify certain statements to the respondent. However, if a respondent does not ask for an explanation, there is a possibility that the respondent has interpreted the statement in a different way than meant in this research. Because of the considerable number of respondents, 28, the impact of such individual misinterpretations is likely to be limited. More importantly, the identified perspectives are a generalisation of multiple defining Q-sorts. Therefore, individual misinterpretations are not likely to have resulted in different perspectives than that are actually present in practice. The four perspectives were also recognised by the experts in the expert meeting, which validates this conclusion. However, if all parties have misinterpreted statements in the same way without the researcher being aware of it, the impact on the results would be significant.
Nonetheless, even though some statements have been identified as ambiguous in hindsight, deleting these statements from the Q-set and ranked Q-sorts was not an option because it would imply changing the acquired data. After all, the respondents could have ranked the other statements differently if they were given a Q-set without the ambiguous statements. The effect of deleting the statements afterwards would be significantly bigger than the effect of potential misinterpretations.

Another important limitation is the limited size of the Q-set. Only 42 factors have been tested, while many more factors influence the collaboration process in the initiation phase. However, it is inherent to Q-methodology to have to make a choice in which aspects are included and which not. For the final results, the different perspectives, it is more important to have a Q-set that is representative for the studied topic, than to have a complete Q-set, which is by definition impossible. However, the choice for the 42 factors does imply that any recommendations on how to approach the process to accelerate it, can only be done for these 42 factors.

13.1.2 Representativeness P-set

Firstly, The P-set was assembled by a dual strategy of getting contacts via the municipality and by simply ringing doors of landowner-users. Even though this resulted in a great variety of respondents, still only those parties who were willing to cooperate for this research are part of the P-set. While some landowner-users simply did not have time, others rejected the request for strategical reasons because they feared it might affect their strategical position in the process with the municipality. However, most probably, these last group of landowner-users would have a similar perspective as perspective four, landowner-users first.

Secondly, another group of landowner-users who might be underrepresented are those landowner-users who are very willing to sell their land and want to cash in quickly. In all cases, project developers have already acquired plots of lands, most likely from these landowner-users who were eager to sell their land. However, because they are so eager to sell, these landowner-users do not form an obstacle in accelerating the initiation phase and therefore missing out on their perspective might not be a major limitation. On the other hand, if it is known why they are eager to sell their land, these insights might be useful to apply to other landowner-users who do not want to leave but whose business activities prevent residential use of the area.

Thirdly, the respondents group was characterised by a great variety in knowledge about the redevelopment plans and the urban development practice in general. Even though this will have affected the ranking of the statements, this is not a limitation of this research. In practice, the initiation phase is about dealing with these different knowledge and experience levels and incorporating this aspect in the study is therefore valuable.

Fourthly, it is possible that the respondents have ranked the statements in a strategic way that would differ from their real-life behaviour. However, this is inherent to any interview or survey research method, but it is still important to acknowledge this. The overall results were validated by the experts in the expert meeting and they did not find the results to be odd based on their practical experience.

Lastly, the landowner-users from Amsterdam are the only respondents group of which not even one respondent defined a perspective. Additionally, the three landowner-users all differed in the extent to which they loaded on the four factors. Each respondent is unique and this could explain why they did not define one of the factors. Respondent four did not know much about the redevelopment plans and the whole urban area development process. Respondent five was the only respondent who dealt with a municipal pre-emption right and respondent six was the landowner-user who wanted to construct an apartment block himself on his own plot.

This also shows an important limitation of Q-methodology: there will always be parties that cannot be assigned to one the identified perspectives. Q-methodology is about distilling the main perspectives that are present in a group and there is not one respondent that fully loads on one perspective and not on any other perspective. However, the aim of this Q-methodology is not to assign every individual to a perspective or to identify all individual perspectives, it is about identifying the main perspectives in order come up with insights that are applicable to more Dutch redevelopment projects. However, it is important to acknowledge that for every case, different people are involved and that there are as many perspectives as there are people. This is also stressed by the experts in the expert meeting. Therefore, it is important to not use the identified perspectives as means to group individuals and to treat them as one. The perspectives should be used to organise the collaboration process in such a way that for a specific case the possibilities to accelerate the process are enlarged.

13.1.3 Factor selection

The choice to extract four factors is based on a set of decision criteria. However, there is not a fixed set of decision criteria and there is also not a fixed protocol on how to deal with different outcomes of the different decision criteria. This research applied the most commonly used decision criteria. According to the criteria and the factor diagram, the data allows for a maximum of five factors.

However, the fifth factor correlates clearly with factor one and four and does therefore only add limited value to the four selected factors. Additionally, the cumulative explained variance of the five factors 7/1,7/2,7/3,7/4 and 7/7 is also less than the cumulative explained variance of the four-factor level (see Table 13 in appendix 6.2.1). The followed factor selection method was taken from two PhD theses by Sleenhoff (2016) and by Di Ruggero (2014) and a scientific article from Van Excel, de Graaf and Rietveld (2011).
The final factor selection was validated by the expert meeting and they did not miss any perspective in the final set. This validates the choice for four factors.

13.2 Reflection on research method and findings

13.2.1 Implications limited scope with focus on acceleration

This research' scope is limited to acceleration of the initiation phase as the only assessment criterion for the literature research and the interpretation of the research results. Chapter one has introduced the research scope, using a project management approach. The central concept in project management is the iron triangle of time, cost and quality/scope which expresses the main success criteria of a project: it has to be realised as cheap as possible while delivering the best quality in the shortest possible time (see figure 25). Focussing on the criterion time, has implications for the criteria costs and quality.

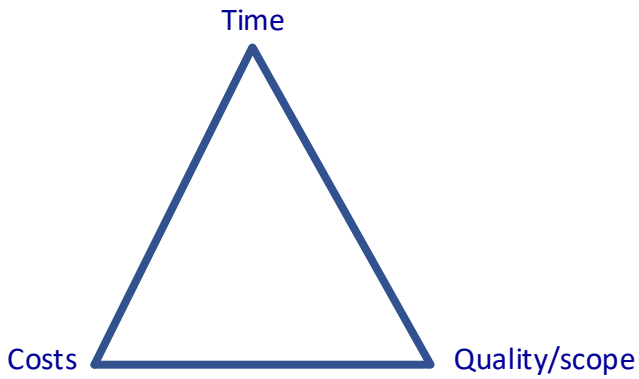


Figure 25: project management iron triangle

Costs

In theory, accelerating the process will lead to lower process costs because less paid man hours are spent to finish the initiation phase successfully. In practice, however, solely focussing on acceleration can also lead to higher costs. An example is the land acquisition negotiation, which is a crucial aspect of the initiation phase. When the goal is to acquire the land as fast as possible, this could result in very high land prices because the current landowner-users use the need for acceleration strategically to raise the price of the plot.

Another looming danger is the tendency to opt for "quick-wins" that accelerate the process now but could result in delays further on in the process and therefore higher process costs. An example of such a quick-win decision is to choose a collaboration approach based on assumptions on what other parties' perspectives on the process and project are, rather than first starting dialogues with all parties to create clarity on what each party's interests are. Without this clarity, resistance can be evoked from parties who feel misunderstood and neglected in the process, which leads to delays that backfire the "quick-win" decision. These delays can increase the process costs.

The anti-redevelopment landowner-users who do not want to leave the area and whose size of their plot or nuisance level makes a complete redevelopment of the area impossible, are the biggest identified obstacle to accelerate the initiation phase. Providing a "good alternative", regardless of the

exact definition of this “good alternative” that is case specific, is the only way to make them move out of the area according to the experts. The exact content of such a “good alternative” is case specific but will most likely be costly. If an alternative location or a financial compensation needs to be arranged, this will drive up the costs of the project significantly. Financing these costs is a complex challenge which could cause delays as well.

Quality/scope

This research shows insight into what parties find desirable regarding the organisational and process aspects and the use of accelerating instruments. However, what is found desirable does not imply that it leads to qualitatively the best result. The capability of the parties to execute an assigned role or responsibility is a first crucial condition that determines the quality of the output. Secondly, focussing on acceleration can result into cutting down on quality which is undesirable as this research shows. From the interviews it came forward that aspects such as a high-quality urban area and incorporating sustainability in the redevelopment project are important aspects, even when the focus is on acceleration.

Following perspective four “landowner-users first” would result in only a partial redevelopment of the industrial area into residential area because it leaves the existing situation as untouched as possible for those parts of the area where anti-redevelopment landowner-users are located. This implies a drastic cutback in the number of dwellings that can be realised, which is undesirable because of the current dwelling deficit. A trade-off must then be made whether developing at least some dwellings is preferred over taking more time to deal with landowner-users who do not want to move out of the area in order to redevelopment the area at once. Additionally, if a new location needs to be provided for the landowner-users to relocate them, this extends the scope of the project and increases the complexity of the process.

13.2.2 Desirability of acceleration: Windows of opportunity

Timing is key in brownfield redevelopment projects, which is best expressed by the windows of opportunity principle as used by Adams et al (2001). Developments in the context of the brownfield redevelopment projects, the outer layer of De Leeuw’s (2002) conceptual steering model, create windows of opportunities in which the ideal environment is created for the redevelopment projects. These windows close when undesirable developments occur. An example is when nearby, large scale greenfield housing projects are initiated which threaten the business case of the brownfield redevelopment project. So, even though on macro level, acceleration is desired, on the individual case level, delaying could be then be wiser to wait for the right timing in which better quality can be delivered and/or less costs can be made and more revenues can be generated.

Additionally, delaying the initiation phase could potentially help to create a less fragmented landownership situation or a situation with less anti-redevelopment parties owning a plot. This could happen because of organic developments in which landowner-users decide themselves to move away for various reasons such as needing more space to expand the business or bankruptcy.

However, even though delaying inner-city redevelopment projects could be beneficial to execute the project in a more ideal window of opportunity, in the current context of the Dutch housing deficit, acceleration is needed. This implies that all involved parties first need to be aware that the societal need for dwellings is of great importance. Secondly, all parties need to design realistic targets for what they want and need to get out of the redevelopment project. Realistic targets acknowledge that striving for a maximised, ideal personal result for every party in a collaboration with multiple parties under time pressure is not feasible.

So, if acceleration of the process is the main driver, concessions have to be made regarding other drives such as costs, revenues, quality of the output and scope. With regard to the windows of opportunity principle, this implies that the current window of opportunity in the Dutch housing sector is sufficient to initiate and accelerate inner-city redevelopment projects; despite the fact that on the individual case level, the window of opportunity might not be ideal due to local conditions

such as the presence of anti-redevelopment landowner-users. The desirability of accelerating the redevelopment projects is therefore linked to the current housing deficit.

13.2.3 Acceleration effect of building block approach model

The building block conceptual model is based on the fact that a good collaboration is key to accelerate. However, as brought forward by the expert meeting, the theoretically optimal acceleration method is a top-down approach that gives one party the keys to the process and the other parties should focus on executing the plan that is made by that one party. This idea is also expressed to a certain extent by perspective one, two and four that clearly put one type of party in the lead. The most hierarchical top down organisational approach would be perspective two "the municipal led process" because the municipality is the party who has the spatial planning power. Once a municipality provides very clear guidelines on what is allowed, what isn't and when and how the redevelopment should happen, the project developers can act accordingly and the landowner-users also have clarity on what to expect.
So, the conceptual model does provide the opportunity for a rather hierarchical structured collaboration but does not prescribe one. Prescribing implies the risk of putting a party in a leading position while for a particular case another party would be more capable or a better fit. Three examples are firstly, a municipal led hierarchy with a municipality who only wants to take a facilitating role. Secondly, a municipality who has less experience with and expertise of redevelopment projects than a project developer who has been involved in many different redevelopment projects nationwide. Thirdly, a project developer led hierarchical collaboration with a project developer who is not aware of the city's needs or is not capable of overseeing the complete redevelopment from all relevant multidisciplinary angles. Prescribing a certain approach will therefore have a counterproductive effect if that approach does not match the preferences and capabilities of the involved parties.

The expert meeting shows that perspective three "the joint commitment process" is valued as the best and most common way to successfully accelerate the collaboration process. At first, this seems contradictory because a collaboration process that does not have a clear leader could result in lengthy discussions without leading to much progress. However, at the core of this research lies the fact that in order for parties to collaborate, they have to be able to recognise their interests in the process to commit themselves to this collaboration. So even though perspective one, two or four might result in a faster collaboration process because they advocate a more top down organisational structure, this will only work in practice if, by making use of the alignment parts of the building block model, all parties feel their voice is heard in the process design. Otherwise, resistance is evoked from parties that feel neglected which can cause serious delays. After all, collaboration from all parties is needed because of the crucial resources they own (land, expertise, capital).
So, if for a case, perspective three "the joint commitment process" turns out to be the dominant desired approach, the assumption is that this results in a faster initiation phase than a top-down approach would in that particular case because of the fact that all parties actively commit themselves to the collaboration. Additionally, perspective three is the only approach that features flexibility as its main characteristic. One way to accelerate the initiation phase is to react quickly once acceleration opportunities occur. A flexible collaboration organisation is best positioned to do so.

The fundamental idea behind the conceptual building block approach model is that collaboration is crucial to accelerate and that consensus and alignment are vital ingredients for a good collaboration. The identified consensus factors as well as the alignment parts of the model aim to design a collaboration process based on inclusion of all parties by finding common grounds. Applying an approach that aims for compromises and therefore for what's feasible, rather than what is theoretically optimal, could result in suboptimal results. The main reason for this suboptimal result would then be the recommendation to not force current landowner-users out of the industrial area.

The more space is occupied by current landowner-users and the bigger the nuisance zones that don't allow residential use, the harder it is to construct the needed number of dwellings in the area. Furthermore, the presence of nuisance producing landowner-users can negatively affect the residential quality of the area. So, the acceleration can still be realised with the recommended approach, but the outcome would not be satisfactory given de desired number and quality of dwellings.

Another critical comment to the consensus principle that supports the conceptual building block approach model is that always looking for common grounds can result in a very lengthy process because many rounds of discussions are held to align all parties, known as the "poldermodel" in Dutch. However, looking for common grounds and striving for inclusion of all parties is only one part of the conceptual model, expressed by the alignment parts. The consensus part does not require extensive discussions because this research shows that the empirical and theoretical perspectives agree on these aspects, so the implementation of these aspects is desired by all parties.
By means of the main perspective building blocks, the model does make a clear choice for one main approach, based on the dominant perspective for a case. So, the proposed conceptual model aims to strike the golden mean between including all parties to prevent disruptive behaviour and choosing a clear main approach to prevent endless rounds of discussions in a "poldermodel".

13.2.4 Greenfield development as substitute for brownfield redevelopment

Opting for a greenfield development could be more beneficial regarding the scope and quality of the project due to more space being available without the presence of nuisance producing firms. However, from an acceleration perspective, brownfield projects are proven to be developed faster than greenfield projects. Research of 1,040 development projects in England showed that, on average, brownfield developments took 29 weeks less to go from planning approval to completion (Glenigan, CPRE, 2016). For all project sizes, brownfield projects were completed faster than greenfield projects, as shown in figure 26.

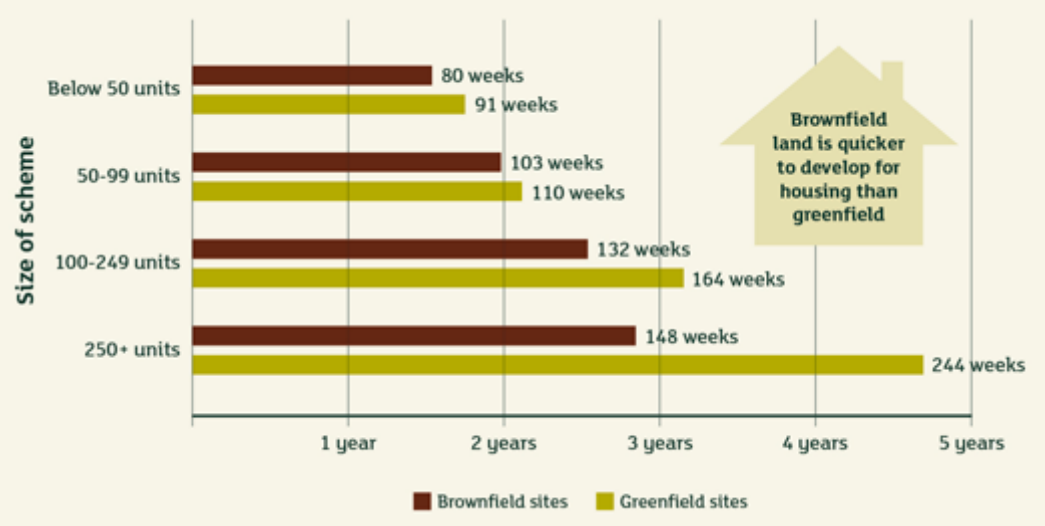


figure 26: average duration of brownfield and greenfield (re)development projects to build dwellings from planning approval until completion of all dwellings. Graph taken from Glenigan, CPRE, 2016, p.5)

However, these research findings apply to the phases after completion of the initiation phase. So, in order to truthfully state that brownfield projects are developed faster than greenfield projects, data should be collected and analysed regarding the duration of the initiation phase of these projects. Nonetheless, considering the substantial advantages of brownfield redevelopment projects, as

described in paragraph 1.2, in combination with brownfield projects taking considerable shorter to complete once the planning permission is awarded, makes recommending greenfield developments to substitute redevelopments of inner-city industrial sites not logical for any other reason than the often limited capacity for dwellings of inner-city industrial areas.

Within the field of inner-city brownfield redevelopments, redevelopments of business parks would be more feasible from an acceleration perspective, than redevelopment of inner-city industrial areas due to the absence of nuisance producing landowner-users in the former areas. The major advantage of business parks is that residential use and offices can perfectly be mixed which makes relocation of current landowner-users less of an obstacle. Firstly, because relocation is not needed to use the site for residential use. Secondly, because finding an alternative location, if needed, is easier because offices are allowed to be located at more locations than nuisance producing industrial firms.

13.2.5 Absence of public private joint venture model in acceleration perspectives

In the Dutch urban area development history, complex development projects were characterised by a strong public private collaboration, most often organised in a joint venture model (the Gemeenschappelijke Exploitatie Maatschappij, GEM, in Dutch). However, with inner-city redevelopment projects certainly qualifying to be a complex project, the identified perspectives, nor the expert meeting brought forward the joint venture model as being a good method to accelerate the studied projects. This apparent contradiction can be explained by the changed role of the municipality because of the economic crisis of 2008. Municipalities have backed away from investing huge amounts of public money in urban area development projects because it involves too much financial risk. Participating in a joint venture is therefore not in line with the recent shift towards a more facilitating municipal role (Deloitte, 2017).

Furthermore, as is shown in the Alkmaar case and as is brought forward by the experts, when municipalities are nowadays willing to invest public money in redevelopment projects, they do so by applying an active land policy that kickstarts the project and/or gives the municipality a stake in and thereby partial control of the project. So, in the current practice, a public private joint venture model is not desirable anymore and a possible desired active municipal role lies within applying initiating land policy that is limited to some strategical plots in the area.

Another explanatory aspect could be the fact that municipal involvement in a joint venture organisation implies a financial municipal interest in redeveloping the site. Especially from a perspective of anti-redevelopment landowner-users and citizens, this is undesirable because it negatively affects the trust these parties have in the ability of the municipality to objectively represent the interests of its citizens and firms. Even though this dual municipal role is allowed in the Dutch urban planning system, it can work counterproductive in a case where large plots are occupied by anti-redevelopment minded landowner-users. Deloitte (2017) also names this dual role and municipal financial involvement as one of the reasons, together with the high cost of control and inflexibility of a fixed joint venture model, that this collaboration structure is less desired and applied nowadays.

However, as shown in this research, a municipal initiating land policy can help to kickstart the redevelopment and creating new functional use of the area triggers landowner-users to sell their land faster. When a municipality applies an initiating land policy, it also acquires a financial interest in redeveloping the site. However, this interest is considerably smaller than in the case of a joint venture model.

So, per case, the municipality has to assess whether the acceleration advantages of municipal land acquisition outweigh the disadvantages of a loss of their credibility of objectively representing the interests of the city, its citizens and firms.

13.2.6 Applicability research findings to Dutch inner-city redevelopment projects

The practical value of the research findings lies within the insight into which perspectives exist on what is needed to accelerate the collaboration in the initiation phase and the resulting stepping stones to design a collaboration approach that enlarges the acceleration potential. For the three analysed cases, the research showed to which perspective the interviewed parties adhere most, which enables the application of the building block model. The in-depth interviews make it possible to assess whether a certain approach could work or not for each individual party.
To apply the insights to other redevelopment projects, a similar assessment of all important parties needs to be conducted. The identified determinants for a party to adhere to a perspective can help to get a first impression of the division of parties over the four perspectives, as is shown in Table 6 in chapter twelve. However, the set of determinants does not indicate for every type of party of every case to which perspective it is most likely to adhere. This shows that general characteristics of a case and a respondent are not sufficient to apply the recommended building block approach model. This implies that case specific characteristics and personal circumstances for a party are of great influence on the perspectives of parties. This results in the need for a complete assessment of all parties, as done in this research with Q-methodology, for cases and parties with different characteristics and circumstances as the analysed cases and parties.
Additionally, the determinants should ideally not only be validated by the expert session, as done in this research, but also in practice to assess the robustness of the determinants' validity.

Conducting the assessment with all important part firstly shows which perspective is dominant and which important parties adhere to the non-dominant perspective. The former being important to choose the main perspective building block and the latter being important to use the right alignment parts when designing a collaboration approach. Secondly, an assessment by means of an interview with an independent party reveals exactly how parties feel about the redevelopment, the other involved parties and which personal experiences and circumstances influence their perspective. This information is very valuable because it explains why a certain party has a certain perspective. This information can then be used to assess whether a certain approach would work.

A complete assessment of all parties is however time consuming. Another way of applying the research findings is by confronting all parties together in a meeting with the four perspectives and accompanying approaches. In this meeting, the approaches are explained and parties can directly show by which approach they feel most represented. This gives a first impression which building blocks are most relevant for that case. Additionally, mutual understanding for each other and the complexity of the collaboration challenge is created between the parties for two reasons. Firstly, the parties can explain why they adhere to a certain perspective, which creates awareness and understanding of all the involved interests. Secondly, because the parties are aware of the existing differences, the understanding is created that collaboration is needed to realise the redevelopment. This understanding could lead to parties being more committed to a strategy that aims to include all parties, as recommended in the building block approach model, because that is necessary to quickly go through the initiation phase.

Next to the assessment, the consensus factors are recommended to be incorporated in the collaboration process of every redevelopment project.

The focus of this research is on inner-city redevelopment projects of industrial sites to a mixed work-residential areas. However, the findings can, in principle, also be applied to brownfield redevelopment projects that are not on an inner-city location. The main characteristics of these projects with respect to the three crucial involved parties are similar to inner-city redevelopment projects. The type of landowner-users can be different because of different allowed nuisance levels or sizes of the plots, but this research shows that those characteristics are not relevant because they do not determine to which perspective landowner-users adhere.

13.2.7 Implications research setup/ research method

The choice for Q-methodology as the research method has certain implications for what this research does and doesn't deliver.
Q-methodology gives insight into which perspectives are present in a group of respondents, who represent a certain sector or part of the society, regarding a certain topic. These perspectives are identified on the basis of ranking statements that are formulated with the help of a literature research. This study provides therefore insight on which aspects theory and practice agree, the consensus aspects, and disagree. Additionally, it also gives insights on which aspects the four distinguished empirical perspectives agree and disagree.
Q-methodology does not result in a proven, complete strategy on how to accelerate the initiation phase of the studied redevelopment projects. The findings of this Q-methodology research are first and foremost insights into how the studied parties think about what is desirable and what not, when accelerating the collaboration process in the initiation phase. These insights are then translated into a conceptual model. The added value of this model lies within recommending a certain approach to design the collaboration process in a way that enlarges the acceleration potential. However, this conceptual model is not a battle tested strategy. The conceptual model needs to be extended with other aspects that are relevant for the initiation phase. Validating and improving this model should be done in future studies that focus on the translation of the conceptual building block model into a strategy and its practical implementation.

Even though only a limited set of respondents from only three cases have been included in this research, it can be assumed that the four perspectives are valid and representative for Dutch inner-city redevelopment projects. Firstly, because the experts have validated the perspectives as a complete set of perspectives, based on their practical experience. Secondly, all perspectives are defined by multiple respondents from multiple cases and, except for perspective four, also from different parties. This shows that a different P-set will, most probably, lead to similar results. Thirdly, all perspectives are defined by respondents from at least two cases which shows that the perspectives do not fully depend on one specific case. Therefore, it can be assumed that similar results are obtained when different cases are selected. However, the exact definitions of the perspectives two and three are, on a more detailed level, case dependent, as is described in chapter 9.2. Perspective two is based on the Amsterdam urban area development sector, and perspective three is based on the Alkmaar case that is characterised by active municipal land policy.
So, the general results of the four types of perspectives are not considered to be unique for the selected cases and respondents. However, on a detailed level, the case and respondent characteristics do influence the exact definitions of the perspectives.

13.2.8 Naming of the perspectives

A crucial aspect of Q-methodology is the definition and naming of the identified perspectives. The statement scores and the interviews show that perspective one, two and four each can be linked to one specific party that is put central in that perspective. Perspective three, however, does not identify one leading party, but underlines that all parties need to collaborate on an equal level and the roles and responsibility of each party differ along the process. Therefore, this perspective was first labelled as "the organic process" because the collaboration is organically shaped by the case characteristics and occurring developments and is not fixed from the start. However, the term "organic process" can be interpreted as a process that takes place incrementally and which progress is fully determined by coincidence and the natural flow of developments. Obviously, such a process will not result in an acceleration of the initiation phase. Therefore, the name of perspective three has later been changed into "a joint commitment process".

The expert meeting showed that perspective three, “the joint commitment process”, is valued as the best and practically most common way to accelerate the initiation phase. The experts especially valued the equal level playing field among the parties that was focussed on jointly going through the initiation phase. Even though each perspective was explained extensively to the experts, the naming of the perspectives might have influenced their preference for perspective three. The names of perspective one, two and four are all related to one specific type of party which makes it look like these perspectives are less about collaboration than perspective three. This is however not necessarily the case. The main difference is that perspective one, two and four see a clear and fixed division of roles and responsibilities within the collaboration as the key to acceleration, while perspective three values flexibility in the collaboration as key.

13.3 Recommendations for future research

13.3.1 Replication and validation

Brownfield redevelopment projects require a tailor-made approach because every case is different. Therefore, it is important to replicate this study for other cases (for example different locations, different landownership situations, different housing markets, different landowner-users) in order to see if the found perspectives are characteristic for brownfield redevelopment projects in general. The same holds for the building block approach model. If replications of this study show the same perspectives and the same ranking of the individual statements, it is possible to validate the applicability of the model for Dutch, brownfield redevelopment projects.
In order to generalise any findings, the results of this research could serve as input for a regular questionnaire that is conducted among a representative sample of the Dutch municipalities, project developers and landowner-users. This survey would make it possible to link parties to certain perspectives and to see which individual factors are valued highly by which party.

The Q-set of this research only contained 42 factors, while there are more factors relevant when trying to accelerate the initiation phase from a collaboration perspective. Therefore, replications of this research with different Q-sets need to be carried out in order to see how the relevant parties value them. Especially soft collaboration factors such as the role of trust, strategical behaviour and communication skills are missing in the current Q-set. These soft factors were also brought forward as missing aspects in the Q-set by some respondents in the interviews. Also, the role of the province in relation to its influence in the spatial plans was indicated as a missing aspect.
Next to collaboration factors, many more types of factors such as juridical factors do also influence the redevelopment process. Q-methodology studies with these type of factors should be conducted to get a more complete insight into the empirical perspective on the whole redevelopment process and not just on the collaboration part.

From a validation point of view, a Q-methodology research with the same factors but with differently formulated statements should be conducted. If this leads to the same results as this research, it can be concluded that exact formulation of the statements is irrelevant. This would take away any doubts regarding misinterpretation and ambiguity of the statements. Additionally, replicating the exact same research with the exact same respondents would reveal if the ranking of the statements has been made randomly or that the filled-in Q-sorts for this research are a good representation of the respondents’ perspectives. Ideally, such a replication study should be done within limited time after the first research because otherwise perspectives can have changed due to new developments in the case. However, if such a replication study is performed in a later stage of the initiation phase, the results would reveal how stable the perspective of the respondents are, which could provide valuable insights that can be used in the collaboration approaches.
Another research method to validate the perspectives and especially the recommended building block approach, is to analyse successful historic cases and to check whether the factors that brought

success to those cases, can be linked to the factors that form the different building blocks of the building block approach model.

13.3.2 Sustainability vs acceleration

All perspectives strongly disagree that the project developer's responsibility is limited to profit maximisation. From the interviews it showed that especially incorporating sustainability in the construction methods and materials and creating a high-quality urban area are the most important aspects that are also the responsibility of the project developer. So, even in a research about acceleration, sustainability and quality are found to be very important. A recent research among more than 1000 consumers and 330 professionals in the urban development sector showed that 76% of the respondents disagreed with the statement that accelerating the construction of dwellings is more important than incorporating sustainability in these dwellings (USP marketing consultancy, 2018). It is interesting if future research is conducted that incorporates both accelerating aspects and sustainability statements. A Q-methodology research would then show which specific elements of the concepts acceleration and sustainability are highly desired and which are highly unwanted.

13.3.3 Implications recommendations later project stages

The focus of this research is on the initiation phase and the recommendations therefore also apply to this stage of the project cycle. However, any choice made in the initiation phase, such as giving landowner-users a major say in the spatial plans, has an impact on the later stages of the redevelopment process. It is interesting to investigate what these implications are for the feasibility and execution phase. Once these implications are known, it is possible to assess whether the recommendations in this research will result in an acceleration of the whole redevelopment process or not. The recommendations of this research are only valid if they result not only in an acceleration of the initiation phase, but also in an acceleration of the whole redevelopment process. Only then, dwellings are realised faster, which is what is needed considering the current housing deficit.

13.3.4 Dealing with nuisance producing landowner-users

One of the findings of this research is the impasse regarding nuisance producing landowner-users who want to stay in the area and who produce too much nuisance for residential use to be implemented in the area but forcing them out of the area is found undesirable by all perspectives. However, if a full redevelopment of the area is desired, these landowner-users will have to leave. From the expert meeting it became clear that in these cases, it is important to provide a realistic alternative for the landowner-users. It is therefore really valuable to conduct research about what this realistic alternative is, which demands landowner-users have and which other parties can offer what to provide such an alternative.

From this research it is not possible to conclude what kind of alternative would satisfy landowner-users who do not want to leave. From the conducted interviews, it becomes clear that the landowner-users do not want a redevelopment because they see it as a threat for their business activities. These activities produce too much nuisance to be combined with residential use. Possible alternatives to research are providing another location, offering a certain amount of money to the landowner-user that satisfies him or perhaps it is possible to implement nuisance reducing measures that do enable a mix of residential and industrial activities.

13.3.5 Validation building block approach model

The presented building block approach model is a conceptual model that is based on the interpretation of the research findings. However, future research needs to be conducted to verify if this conceptual model has an accelerating effect on the initiation phase in practice. The best research method would be to design the collaboration process of a set of real-life redevelopment projects according to the building block approach model, and to compare the duration of the initiation phase to comparable, historic cases.

A more feasible approach would be to conduct interviews with the parties that should operate in the designed collaboration organisation and with experts, to validate if the model has practical relevance and would result in an acceleration of the collaboration process.

13.3.6 Building block approach model assembly process as accelerating instrument

The experts in the expert meeting especially valued the insight into the different perspectives and into the division of the respondents over these perspectives in each case. The process that has led to these insights can be used as an instrument to get insight into the perspectives and division of the parties in a case over the identified perspectives, to make all parties aware that there are different perspectives and thereby creating mutual understanding and to use this information as input to try to align the different perspectives in the process. Future research is needed that identifies who should conduct this research and who should use this information and in which way should it be used to create mutual understanding among the parties.

13.3.7 Aligning perspectives

The research identified four perspectives and showed that different parties in a case have different perspectives on what is desired to accelerate the initiation phase. If a specific redevelopment project is characterised by all four perspectives being represented by a similar number of parties, there is not a dominant perspective. In this case, applying the recommended building block approach model is not feasible because it is not possible to combine all four perspectives into one collaboration process design because they differ too much on important aspects. Therefore, it is then needed to align perspectives amongst the relevant parties. The expert meeting brought forward that it is therefore needed to understand why a party has a certain perspective and to come up with innovative solutions to align all parties such that they are all committed to the collaboration process. Research into methods to achieve this alignment is therefore very valuable from a practical perspective. One possible method would be to confront all parties with the different perspectives to create mutual understanding between the parties. This can be a first step to make the partiers aware that they should incorporate a level of flexibility in their perspectives to come to a workable collaboration process. However, how this alignment is created if all four perspectives are equally represented in the group of involved parties, should be sorted out in future research.

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Images:

Front page and closing page photo:
Own picture by Lars van Tiel

Pictures in figure 30, 33 and 35 in appendix 3 are taken by Lars van Tiel during site visits of Hamerkwartier, Oudorp and Schieoevers

Figure 29 is taken from Projectteam Hamerkwartier, Gemeente Amsterdam (2017), p 24

Figure 31 is taken from Projectteam Hamerkwartier, Gemeente Amsterdam (2017), p 29

Figure 32 is taken from Gemeente Alkmaar, Urhahn (2018), p 14

Appendix 1: literature background Q-methodology method description

1.1 Step 1: collecting statements

The statements can be collected from any kind of source: from academic literature to interviews to news articles (Watts and Stenner, 2005). The main concern is that these statements broadly cover the topic of interest. Furthermore, it is important to keep the research question in mind. It should be possible to use the statements as an answer to the research question. So, the statements for this research are about factors that could accelerate the collaboration in the initiation phase of inner-city redevelopment projects of industrial sites into mixed work-residential area.
In this research, the statements have been collected by consulting national and international scientific literature, reports from the spatial planning sector, news items, articles and interviews on relevant spatial (re)development websites such as gebiedsontwikkeling.nu and stedelijketransformatie.nl, consultation of experts in the scientific field from the TU Delft and experts in the practical field from Akro Consult and attending relevant meetings, workshops and presentations organised by the Chair Urban area development ("praktijkleerstoel gebiedsontwikkeling") from the TU Delft and Platform 31.

1.2 Step 2: selecting the Q-set

The ideal size of the Q-set lies between 40 and 80 (Curt, 1994; Stainton Rogers, 1995). Fewer statements will carry the risk that they do not cover the topic broadly enough, while more than eighty statements would result in a very lengthy and though sorting process by the respondent who can then easily lose the overview of his preference. Van Eeten (1998) writes that most Q-sets are between 40 and 50 statements. So, there is not a strict prescription on the size of the Q-set, but literature agrees to a minimum of 40. The author has chosen to opt for a Q-set of 42 statements, according to the Q-methodology performed by Minkman, Van der Sanden and Rutten (2017) and Van Excel, de Graaf and Rietveld (2010).
A Q-set can never fully cover the topic due to the limited amount of statements. However, it is only necessary that the included statements are representative for aspects that form the studied topic (Watts, Stenner, 2005). More importantly, the aim of Q-methodology is not to construct a complete as possible Q-set, because the Q-set is merely an instrument to measure the respondents' perspectives. The Q-set in itself doesn't hold any meaning, it are the relative rankings of the Q-set by the respondents that matter (Watts, Stenner, 2005). Or as Brown (1993) says, it are the respondents that give meaning to the statements by ranking them. Important to note is that comparative studies indicate that different sets of statements, structured in different ways can be expected to show similar results (Thomas, Baas, 1992).

1.3 Step 3: selecting participants for the Q-set: the P-set

For Q-methodology it is not required to have large sets of respondents (Watts, Stenner, 2005). The size depends on the exact intended purpose of the research. If the focus is on the individual, lesser respondents are needed than would be the case if the focus is on groups. In this research, the focus is on the group aspect because this study aims at distinguishing the relevant perspectives of the municipalities, project developers and landowner-users. These three parties are the studied groups. Therefore, nine municipal respondents, ten landowner-users and nine project developers respondents are selected from three Dutch redevelopment projects of inner-city industrial areas into mixed work-residential area. These three projects are: Hamerkwartier in Amsterdam, Oudorp in Alkmaar and Schieoevers in Delft.
For the municipality the following three functional roles are selected: urban planner, project leader and land policy maker. These three roles embody the three main, relevant professional, municipal aspects in the initiation phase.

Regarding the project developers, the responsible employee for the specific case is selected, to guarantee sufficient case specific knowledge. Project developers should either be interested to acquire land in the studied area or should already own land and be interested in acquiring more land. Furthermore, in any case they shouldn't be able to develop dwellings on their land yet, because that would mean they are no longer trapped in the studied triangular network.
Regarding the landowner-users, a wide variety of different types of landowner-users is selected in order to make the P-set as representative as possible.
It should be noted that Q-methodology evolves around individuals ranking the statements. So, the individual, professional perspective is identified and not the general group perspective. So, each individual will be asked to rank the statements according to their professional roles, which doesn't have to overlap per se with the organisation's general view.

1.4 Step 4: acquiring the data

Step 4A: filling in the Q-sort

Step four entails the selected respondents to fill in the Q-sort with the Q-set. The Q-sort is a matrix with an axis going from "totally agree" to "totally disagree" in a certain number of steps, with the "neutral" in the middle of the axis. For this research a nine-point scale will be used with "totally agree" placed at the right extreme (+4), the neutral placed in the middle (0) and "totally disagree" at the left extreme (-4). A so called "forced distribution" will be used. This distribution prescribes how many statements can be places at each point of the scale (Figure 27). For this research the same Q-sort is used as in the research by Minkman, Van der Sanden, Rutte (2017).

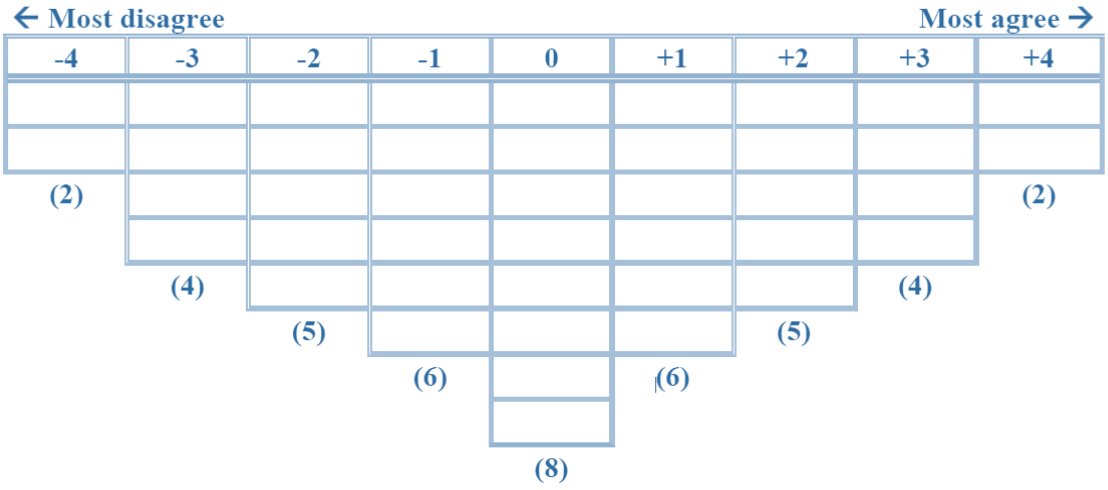

Figure 27: Q-sort with a forced distribution and room for 42 statements

The exact outline of the Q-sort is not relevant for the outcomes of the Q-methodology (Brown, 1980). It also doesn't matter if a total free or forced distribution is chosen, as is proven by Brown (1980). However, the forced distribution offers a structured guideline that is more convenient for respondents to rank the statements. It is crucial that the respondent ranks all statements and that the final ranking is recorded.
To make all respondents aware that the study is about finding factors that accelerate the initiation phase, the respondents were asked to rank the statements by choosing the extent to which they agreed or disagreed with the following statement for each of the 42 statements of the Q-set: "This statement has to be executed to accelerate the initiation phase."

Step 4B: in-depth interview

The in-depth interview aims at clarifying three things (Watts, Stenner, 2005). Firstly, it should clarify how the respondent has interpreted the characterising statements. These are the statements that

are ranked at the extremes of the factor exemplary Q-sorts (statement scores of -4 and +4) (van Exel, de Graaf, 2005). Additionally, the respondent is asked to clarify the ranking of two other statements of his/her choice. Subsequently the interview reveals why the respondent agrees or disagrees so strongly with the specific characterising statement. Secondly, the interview is used to determine if the respondent missed any statements or aspects in the Q-set and why. In this way it is tested if the Q-set is representative for the collaboration process in the initiation phase, according to the respondents. Thirdly, any additional comments that the respondent might have regarding the statements, the ranking or the research are recorded.

1.5 Step 5: statistical analysis

The first analysis step is to construct a correlation matrix that shows how much each filled-in Q-sort correlates with other filled-in Q-sorts as a whole. Then, factor analysis is performed. A set of factors is produced, on which respondents load that have similar Q-sorts. Each factor represents a different pattern of similarity between the Q-sorts of the respondents (Watts, Stenner, 2005). The freely available software PQMETHOD is used for the data analysis. The varimax procedure is used for factor rotation with the aim to maximise the variance that is explained by the produced factors. The last step is to select the factors that will be interpreted. A set of decision criteria is used for this. Then, it is possible to construct an average Q-sort for each factor that represents the average perspective of all the stakeholders that load on that specific factor.

1.6 Step 6: interpretation of factors

The last step is about interpreting the identified factors. This is done by carefully looking at which statements are ranked high (totally agree) and low (totally disagree) and to which statements differ clearly in ranking in comparison to the other factors (Watts, Stenner, 2015). Then, it is up to the researcher to identify a pattern and to come up with an explanation for that. The in-depth interviews can help in forming this explanation. The interpretation of the factors results in the description of perspectives.

Appendix 2 literature framework and derived factor overview Q-set

This appendix presents a literature framework that shows scientific insights and insights from practice regarding the selected aspects, as shown in chapter five. Per aspect, the framework is used to introduce the reader in the relevant literature. Then the framework is used to derivate the statements for the Q-set from. So, for each aspect, a literature paragraph is followed by a set of statements that logically follow from the theoretical framework.
First the overview of all the aspects is shown. Sometimes, an aspect covers factors from different categories. Then, the individual factors are named in the right category and the aspect name is then added in brackets.

Process aspects:

- Strong collaboration in a network
- Flexibility of the redevelopment plans
- The need for a municipal and/or joint spatial vision (author(s) of the spatial vision)
- Transparency of interests
- Individual profit maximisation
- Buying out landowner-users (dealing with current landowner-users)
- Purchase of land (dealing with current landowner-users)
- Relocation landowner-users (dealing with current landowner-users)
- Feasibility and desirability of a mixed work-residential area
- Financing aspect
- Benefitting from increase in land value (the role of the project developer)
- Introducing other spatial functions in the area (place making and pioneers)

Organisational aspects (roles and responsibilities):

- Authors of the spatial vision
- Joint leadership
- Landowner-users deciding themselves to stay or go (dealing with current landowner-users)
- Offering an alternative location to landowner-user (dealing with current landowner-users)
- Municipal leadership role
- Municipal urban area development role
- The project developer's role
- Flexible roles (the need for a public developer/quarter master)

Instrument aspects

Shaping
- Flexible land-use plan

Regulating
- Expropriation of landowner-users (dealing with current landowner-users)
- Allowing and introducing pioneers (placemaking and pioneers)

Stimulating
- Subsidy for landowner-users to leave the area (dealing with current landowner-users)
- Municipal land policy (municipal urban area development role)
- Guarantee municipal financial contribution (dealing with current landowner-users)
- Revolving fund (the financing aspect)
- Lighten process burden for landowner-users (level playing field)
- Placemaking (placemaking and pioneers)
- Re-allotment

Capacity building
    - Project organisation (joint leadership)
    - Expert to represent landowner-users (level playing field)
    - Public developer/quarter master
    - Urban area development by current landowner-users

First the process aspects and derived statements are introduced (section 2.1), followed by the organisational aspects and statements (section 2.2) and the instrument aspects and statements (section 2.3). From some aspects, statements are derived that belong to different categories. In this case, these aspects are presented at the end of this appendix, in section 2.4 “mixed aspects”.
These mixed aspects are:

- Authors of the spatial vision
- The need for a public developer / quarter master
- The role of the project developer
- Dealing with the current non-residential landowner-users
- The financing aspect

2.1 Process aspects and derived statements

2.1.1 Strong collaboration in a network

Visser, Beuzenberg, Besters, Laven and Swagerman (2015) have analysed six cases of redevelopment projects that were all characterized by a stagnation in the development and needed a change in approach to accelerate the project. They found that flexibility regarding the content of the spatial plans is crucial to initiate and realise inner-city redevelopment projects, which can subsequently lead to the realisation of other urban development projects. They argue that a new form of urban area development fits better to the needs of the current urban development challenges than traditional top-down or bottom-up approaches. This new form is called “public development” and is characterised by a joint effort of parties that team up in a network and the focus is on creating quality, rather than making quick money. This implies that it is about long-term commitment to a project and not a matter of solely constructing real estate and cashing in on the sales of the dwellings. In this network, parties such as investors, users, municipalities, landowner-users and project developers, are active and they all use their own specific resources to contribute to the joint urban development project. This is needed because Visser et al (2015) bring forward that inner-city redevelopment projects are no long monodisciplinary but are rather multidisciplinary projects that require so much more input because constructing real estate is one thing, incorporating it successfully in an existing environment while adding value is another task that requires a multi-effort approach. Public development offers this joint effort and enables access to a wide variety of needed resources. The need for such a network to make a wide variety of resources available to the redevelopment project is supported from a practical perspective by Annius Hoornstra, director of urban planning of Zaanstad (in an interview with de Jong, 2018). He claims that a network is needed to bring parties together in the initiation phase to make them familiar with each other and to give access to each other’s expertise and resources (de Jong, 2018). The idea of setting up a structure to optimise the exchange and deployment of resources that belong to different parties can be related to the New public management approach (van den Berg, 2014). This approach advocates a project based approach and forming a network to optimise the exchange of resources is an example of such an approach (van den Berg, 2014).

Statement:

- A strong collaboration between all parties is crucial to make sure all parties will make optimal use of their resources (knowledge, privileges, money, land) in the collaboration process to achieve a better end result

2.1.2 Flexibility of redevelopment plans

Flexibility is regarded an important characteristic in the initiation phase because it enables to adapt to changing circumstances, which are quite common in this phase (Visser, et al., 2015). Great spatial redevelopment plans are those plans that are able to adapt to new demands and developments in the market (Franzen et al, 2017). Therefore, a high rate of flexibility is an important aspect when making spatial plans for an inner-city redevelopment project (Visser, et al., 2015). This guarantees the possibility to adjust the plans according to new insights, new developments on the demand or supply side and it allows to mix multiple functions in the area and the exact configuration of functions can change over time. Especially in an inner-city context, this can be beneficiary because of the rapidly changing urban environment that can require different functional aspects to be present at the redevelopment site. This is less likely in a more monofunctional environment like a greenfield development of a residential neighbourhood in the outskirts of the city, which is characterised by a less dynamic environment. So, flexibility thrives in dynamic environments and redevelopment projects in inner-cities operate in such a dynamic environment.

However, the downside of the flexibility is the danger that the freedom is not utilised, resulting in a monofunctional site that does not fulfil the potential of the site. Another looming danger is that the proportions of the different functions don't match the desired proportion (Visser, et al., 2015). Of course, the question is who decides what is desired or what is the maximum potential of a site. However, since the municipality is the public body that can determine the desired outcome by their legislative power regarding the land-use plan, it is considered to be the municipality, as the representative of the common cause, to determine the optimal use of the site. So, in order to limit the risk of the incorporated flexibility resulting in a monofunctional or suboptimal redevelopment area, the municipality can try to take up a more active, guidance role (Visser, et al., 2015). The municipality can set certain limits or can create certain boundary conditions that need to be met. In this way, there is still a degree of flexibility, but the municipality makes sure a certain minimum level of spatial quality is guaranteed. One possible way to contain the flexibility in the spatial plans is to let the municipality develop the spatial vision for the area in which it sets the framework in which any initiatives should fit.

From the landowner-user perspective, very flexible redevelopment plans cause a lot of uncertainty which is fatal for their investment strategies. Firms are located on an industrial site because that gives them certainty that they can continue their production without any trouble (Pen, 2018). Vague plans lead to an unworkable situation for the landowner-users because they cannot make sound business decisions due to the uncertainty (Pen, 2018; de Zeeuw, 2018). An example is when it is not sure which functions will be allowed and where in the redeveloped area, the landowner-users does not know if the new functions will conflict with and threaten the continuity of his business activities.

Statements:

- Flexibility that is accompanied by uncertainty regarding the redevelopment plans is better than fixed redevelopment plans that do provide certainty.
- A clear vision of the future, regardless the content of this vision, is the best for landowner-users because this provides them with certainty regarding the future situation

2.1.3 Transparency of interests

One of the main characteristics of the initiation phase is the fact that there is no total clarity on what is going to happen. Furthermore, parties are not familiar with each other and are suddenly faced with a need to work together somehow. In these circumstances, it is key to be open and transparent about your interests in order work together effectively, according to Jop Fackeldey, elderman and chairman of platform "Stedelijke Transformatie" (Stedelijke transformatie, 2018).

Statement:

- All parties have to be transparent in the collaboration process regarding their interests

2.1.4 Individual profit maximisation

The current tendency in the urban area development process is that every participant wants to maximise their profit at the minimum risk possible (Franzen, ten Have, Uitzetter, de Zeeuw, 2017). The consequence is that an increasing percentage of plots is sold to the highest bidder (Deloitte, 2017). This evokes external parties, such as speculating investors, to acquire lands in the hope of making a good profit in the development process. However, these parties are not familiar with urban area development and their lack of expertise frustrates the progress of the development process of complex projects (Deloitte, 2017). Furthermore, a risk averse and profit maximising approach makes parties hesitant to participate in complex projects such as inner-city revelopment projects (Deloitte, 2017). So, in both ways, individual profit maximisation frustrates a quick and smooth development of the collaboration process.

A collaboration that is not centred around individual profit maximisation is destined for a better process and subsequently a better end result (Deloitte, 2017). More importantly, urban area development should be viewed as a means to an end which implies that the aim is not to have a positive number at the end of the excel sheet used to calculate the business case. Urban area development is about providing social needs, both from a public and private perspective (Franzen, ten Have, Uitzetter, de Zeeuw, 2017). Therefore, making sure a redevelopment project that accommodates the need for dwellings and improves the quality of the city is actually realised should be more important than achieving a certain profit margin ((Franzen, ten Have, Uitzetter, de Zeeuw, 2017).

Statements:

- Pursuing individual profit maximisation prevents a fast collaboration
- The feasibility of the redevelopment project is more important than the profitability

2.1.5 Feasibility and desirability of a mixed work-residential area

The studied redevelopment projects all feature a municipal spatial vision that envisions a well-functioning multifunctional work-residential area. The Dutch spatial planning tradition has always kept a firm spatial separation between working and residential areas. The underlying idea is that industrial activities that generate any kind of nuisance do not match well with residential use. Former alderman of the Hague Marnix Norder pleads that this strict separation is outdated (VIjselaar, 2011). The current society features new methods of working with people working from home instead of at the office and people starting their own businesses at home or in garages. Norder claims that working and residential use are getting more and more mixed. Furthermore, it is a matter of a mind-set that people acknowledge the fact that they are going to live in an area that features industrial activities. Norder claims that in that case, people should accept the nuisance that could be caused by the industrial firms. It is the cost people pay for wanting to live on a central, inner-city location that is easily accessible, which are the attractive characteristics of inner-city industrial sites. Of course, some industrial activities that require special permits because their nuisance is too big to allow mixing with residential uses, are not compatible to stay in a mixed work-residential area. A possible positive effect of combining working and residential is the fact that the area is not only in use during working hours, but also after working hours. This increases the social control in the area and reduces the risk of burglary and vandalism.

So, the question is whether working and residential used should be spatially separated or not to enable a successful redevelopment.

Statement:

- Residential living and industrial activities have to be strictly separated to enable a successful redevelopment of the area

2.2 Organisational aspects and derived statements

2.2.1 Joint leadership

Inner-city redevelopment projects are complex and require a joint effort by multiple parties with each party deploying their distinctive resources in the process (van den Berg, 2014). The leadership role in these projects should therefore be a joint effort based on collaboration and equality because all parties are crucial to realise the redevelopment (van den Berg, 2014). This joint leadership could be institutionalised by establishing a body in which the municipality, project developers and landowner-users participate. This body is project specific and aims to orchestrate the redevelopment process based on the assembled expertise of the participating parties.

Statements:

- The leadership role in the collaboration process has to be distributed over all parties
- A project organisation in which all parties participate to coordinate the redevelopment process with their expertise, needs to be established

2.2.2 The municipal leadership role: a connecting municipality

McAllister, Taylor and Harman (2015) have examined the interaction patterns of local governments, state governments, consultants and project developers. They find that local governments, the municipality in this research, performs mainly across-type bridging, while the developers show a clear lower application of "across-type bridging" configurations. Figure 23 maps the main interaction patterns of the analysed players by McAllister, Taylor and Harman (2015). Across-type interactions refer to interactions between different types of parties, both in function and in values, while within-type interactions reflect interactions of similar type of parties who are connected together in a clique. The local government has functioned as a connecting force which results in the possibility for learning and innovation in the process but is also accompanied by higher transaction costs. Project developers showcase the tendency to operate in a more isolated style that is focussed on strengthening relations within the clique of like-minded players.

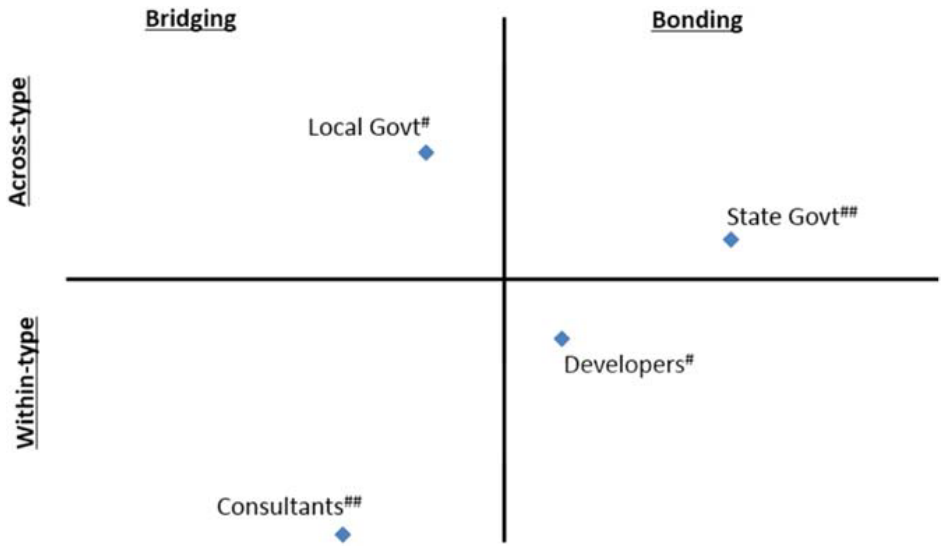

Figure 28: interaction pattern of actors within urban development network (McAllister, Taylor, Harman, 2015, page 392

From this map, it can be derived that the municipality is focussed on the overall picture by involving as much relevant parties as possible, while the developers are more focussed on developing the for them relevant functional relationships that help them in their task. This distinction can be linked to the classical task distribution between public and private parties in which the public party is more

concerned with the higher-level, overall picture and wants to create quality for as much parties as possible, whereas the private party is much more single goal and task specific focussed.
It is interesting to assess whether this classical role distribution is desired by all parties or that it simply occurs because this distribution has become a habit. Secondly, the question is if these relationship strategies are the ones that result in the highest project value or that a shake-up of the traditional model has a bigger potential in the specific context of inner-city, brownfield redevelopment projects.

Statement:
- The municipality has to fulfil the leadership role by connecting the other parties with each other and coordinating the collaboration

2.2.3 The municipal urban area development role

The times of urban area planning following a classical and fixed role division are over (Visser, et al, 2015). Every project is unique and every project environment requires different parties to take up different roles. It is no longer a formality for the municipality to take the initiative and to orchestrate the whole urban development process (Heurkens, 2012). The municipal role has shifted more and more in supporting private party initiatives and facilitating the urban area development process by taking away barriers and legislative hassle (Visser, et al, 2015; van den Berg, 2014). Project developers have taken over this municipal leadership role in a process called forward integration of market parties (Heurkens, 2012). Another argument for a more passive municipal role is that it evokes initiative from private parties, once they realise the municipality will not take the lead (themasessie versnipperd grondeigendom, 2018). These private initiatives could lead to a broader support for the plans in comparison to a situation in which the municipality plans everything on its own. If project developers want to make a profit by being part of a redevelopment, they should take action themselves to realise that profit once the municipality stays pat. From this perspective, the municipality should only facilitate private initiatives and shouldn't acquire any lands. Passive municipal land policy is then the way to go
However, in some cases it should be the municipality who creates a positive and catching atmosphere around a certain site that triggers parties such as project developers to follow this mind-set, according to Hoornstra, director of urban planning of Zaanstad (de Jong, 2018). In this way, the municipality serves as a catalyst for the redevelopment, which makes project developers more willing to join (de Jong, 2018). Another argument for a more active municipal role given by Hoornstra is the fact that project developers tend to portray a passive approach in using their landownership position. When they have acquired the land in the right time when the land-use plan still only allows for industrial use, they simply benefit from their land increasing in value when residential use is allowed (de Jong, 2018). In the right markets, this easily offsets the loss of delaying any incomes. Furthermore, most often, the project developers, the new landowners, rent out the land and its real estate to the previous owner, thereby guaranteeing themselves of a steady incoming cash flow. Both factors could result in a tendency for project developers to be rather passive in the initiation phase. This mind-set would call for an active municipal land policy (de Jong, 2018). Active municipal land policy is defined as "*the municipality buys land, prepares the land to make it ready for construction activities and residential use and then sells the land to another party*." In this way, the municipality acquires land and can subsequently sell it to a party that does want to redevelop immediately. This active land policy gives the municipality the power to keep control of maintaining progress in the redevelopment process. Passive land policy is defined as "*the municipality limits itself to establishing a land-use plan and constructing public services such as a draining system, whose costs are transferred to the landowners.*"

Statements:

- The project developer has to take the initiative and has to fulfil the leadership role and the municipality has to fulfil a passive, facilitating role
- The municipality has to apply an active land policy
- The municipality has to apply a passive, facilitating land policy

2.3 Instrument aspects and the derived statements

2.3.1 Level playing field

Within the triangular collaboration between the municipality, project developers and landowner-users, a discrepancy exists regarding the level of expertise regarding urban area development between the municipality and the project developers on one side, and the landowner-users on the side. It could therefore be beneficiary for all parties if the landowner-uses are represented by a knowledgeable expert party to create a level playing field expertise wise.
The difference in expertise level regarding urban area development between the parties is due to the fact that urban area development is the core business of the municipality and the project developers, but not of the landowner-users. The latter has to focus on its core business of continuing its activities and the redevelopment project is an extra project. If the municipality and the project developers intent to accelerate the triangular collaboration, it could be beneficiary if they unburden the landowner-user by providing the landowner-user with all the required information and decision opportunities he has. This would enable the landowner-user to focus on its core business, while the municipality and project developers can make sure the landowner-user is informed correctly and in time to guarantee a smooth collaboration process.

Statements:

- The municipality and/or the project developers have to lighten the burden of the landowner-users in the collaboration process by providing help, resources and the right information
- The landowner-users need to be represented by an expert in order to create a level playing field between all parties regarding urban development expertise

5.2.15 Flexible land-use plan: the need for a transitional period

Major changes are ahead regarding the Dutch, national urban area development policy. A new Environmental Planning Act (omgevingswet in Dutch) is coming which should be put into practice in 2021. This new act aims to make the legislative procedures faster and easier by reducing the number of laws by combining multiple rules into a new framework. Furthermore, the new Environmental Planning Act hands more responsibility to the local players who will get more freedom to adjust development projects to the local context and need (rijksoverheid, n.d.). Relevant for this case is the Crisis and Recovery Act (crisis en herstelwet in Dutch). This law offers much more spatial planning freedom regarding the use of a site and the extent to which certain norms need to be met. The most relevant product of this act is the “land-use plan with an extended field of application” (bestemmingsplan met verbrede reikwijdte in Dutch). This product offers the possibility to temporarily deviate from certain norms. Especially in the context of the current industrial use of the studied sites, this can be very valuable. In the transition period between full industrial use and mixed work and residential use, residential activity can be realised next to industrial activity. This enables the possibility to attract “pioneers” that start to populate the industry area and makes partial development of the site possible. In other words, this land-use plan with an extended field of application offers a transitional period which could accelerate the process in two ways. Firstly, it could lead to less resistance of current industrial land owners, because they are assured they can continue their businesses for a fixed period of time (10 years). This assurance gives them stability to a

certain extent which gives them time to adapt their business strategies. The expectation is that this scenario is preferred above a hard transition. Secondly, the process will be accelerated because redevelopment of individual plots to a mixed work and residential area can already be started with the current land-use plan that allows high levels of environmental nuisance still in place.

Statement:

- A land-use plan that enables a soft transition period of a decade from industrial use to a mixed residential-work use, by allowing the current industrial use next to the new residential function for a decade, is needed in the collaboration process

5.2.16 Place making and pioneers

Place making is the joint process in which residents, firms and stakeholders adjust a place or area into an attractive and pleasant place to reside with a distinctive character (based on Tureay, 2013). Place making can be an interesting instrument to use in the initiation phase because it can help to make the industrial site attractive to reside for other groups of people besides the employees of the industrial firms located in the area. In this way, new users are attracted to the area which is in itself already a start of the redevelopment process. Several forms of place making can be distinguished, ranging from branding a place and enlarging its exposure to luring leading firms to the area in order to create a ripple effect that lures other firms to the area, to organising temporary activities to make people familiar with the area (Tureay,2013). Visser, et al. (2015) have found that investing in changes in the physical environment that show the upcoming redevelopment, can help to create a positive ambiance that helps to get jammed redevelopment projects get back on track. These physical changes can vary in size and effect ranging from allowing people to build a little terrace on the public pavement and creating a playground to changing parking lots into green public space or changing water sides into little urban beaches.

One step further than place making is to introduce pioneers as a new type of users and residents of the area. These people will permanently use the area, both for their daily activities and as their home. A change in or an exception on the land-use plan is necessary to allow pioneers to live in the area. These pioneers will make the physical changes Visser et al (2015) talk about and will thereby make all parties aware that new functions are added to the previously, mono functional area. A possible consequence could be that existing landowner-users feel threatened by the upcoming alternative functions in the area and feel hampered in their business activities. This could make them more willing to sell their land and to relocate their business to a location where their activities are not disturbed.

Statements:

- Place making is crucial to make the area attractive for the new residential function
- The introduction of pioneers as new residents and users of the area is crucial to make all parties aware that the redevelopment has really started
- Realising dwellings and other functions (shops, food and drink service industry, offices, culture) in an area will lead to landowner-users selling their land faster

5.2.17 Re-allotment

This research focusses on redevelopment projects that are characterised by fragmented landownership. The presence of a high number of owners with all of them having their own specific interests, combined with a high number of relatively small plots in the area, makes it very hard and complex to construct a feasible plan for a whole new functional layout and use of the area. For example, if a plot that is appointed a residential function is located next to a nuisance producing factory, exchanging the residential use plot with another plot whose owner would not experience nuisance from the factory could result in the residential area being developed, while without the land exchange, it wouldn't have. Another example would be if multiple landowners have multiple, but graphically dispersed plots. In this case, each landowner would not be able to realise bigger sized

apartment buildings for example. However, if they would trade plots amongst each other, they could create a large area of connected plots which would allow for bigger apartment blocks to be realised. Therefore, re-allotment can be a very effective instrument because it opens up new opportunities (themassessie versnipperd grondeigendom, 2018; Verheul, Daamen, Heurkens, Hobma, Vriends, 2017). It generates more opportunities to create a positive business case and it can prevent lengthy and costly processes of negotiation and collaboration that would be needed otherwise to realise the same apartment block in an ownership wise fragmented area (Holt, Mulder, 2016).
Re-allotment is the smart exchange of land and its real estate between private parties that enables new development opportunities that were not possible in the original configuration (Kadaster, n.d.). It is possible that the exchange of land is combined with a monetary compensation if the exchanged lands are not equal in perceived value. By applying re-allotment it is possible to construct a landownership structure that better fits the new intended use after the redevelopment. In this way the chances of a successful redevelopment can be increased because the re-allotted situation allows for an entire area redevelopment, while the original, fragmented situation could result in only separate redevelopments on individual plots.
However, even though re-allotment is meant for cases with fragmented landownership, it might lose its effectiveness in complex cases with a high number of landowners. In such cases, process management and a good spatial area vision are then much more important to get the redevelopment done (Schaick, van, 2016). One way to deal with the issue of a high number of landowners is to divide the area into subareas and to apply re-allotment only within these subareas (Schaick, van, 2016). Another important factor is the value of the real-estate on the plot. If it is too valuable to the current owner, re-allotment will not work effectively (Schaick, van, 2016).

Statement:

- Re-allotment is necessary to create a landownership structure which allows for a better distribution of residential and business use than in the current fragmented landownership situation

5.2.18 Urban area development by current landowners-users

A substantive part of the initiation phase is formed by the land acquiring by a project developer from the current owner. Once the municipality has stated in a spatial vision document that it wants to redevelop an area, project developers are needed to realise this development. Before the project developers and the municipality can agree on exact plans for the redevelopment, it is necessary for the project developers to acquire land in the area. To do so, they will need to negotiate with the current owners. Once the spatial vision is published, it is likely that that the land-use plan for the industrial site will be changed to allow residential living. Land with a residential spatial function is worth way more than land with an industrial function. So, publication of the spatial redevelopment vision will result in an immediate increase in the land value. Additionally, it immediately creates a need to acquire land by project developers. These two causes will lead to smart landowner-users, who are willing to sell, to aim for higher prices which could make the negation with the project developers lengthy because the project developer doesn't want to pay too much in order to safeguard its profit margin. These lengthy negotiations could be prevented in two ways. Either the project developers will follow a speculation strategy that aims to acquire lands before any municipal spatial documents have been issued, in order to be able to acquire the lands for a considerably lower price in comparison to the price for land with already a residential function in the land-use plan. Or, the negotiation is skipped and the current landowner-user himself will act as a project developer and he himself will build dwellings that fit within the new redeveloped area. This alternative will give current landowners-users an interest in the redevelopment of the area because it enables them to take financial advantage of the increase in land value (themasessie versnipperd grondeigendom, 2018). In this way, a lengthy negation is prevented, and the landowner-users will be cooperative in the process of redeveloping the area, rather than wanting to keep the current industrial use of the

area intact (Van der Wal, project leader and consultant complex urban area developments at themasessie versnipperd grondeigendom, 2018). Both factors could result in an acceleration of the initiation phase. The lack of experience and knowledge regarding area development of these landowner-users could result in a delay later on in the process. However, the stages beyond the initiation phase are out of the scope of this research.

Statement:
- Landowner-users need to develop dwellings themselves in order to skip the process of selling the land

2.4 Mixed aspects

2.4.1 Author(s) of the spatial vision

According to the New Public Management theory, the redevelopment process should be characterised by a strict distinction in tasks between the public and private parties (Heurkens, 2012; van den Berg, 2014). This implies that the municipality writes the spatial vision and sets up the guidelines and the private parties should execute these plans (van den Berg, 2014). Applying this theory to the initiation phase of redevelopment projects means that the municipality has to start the process by delivering a clear vision and then it is up to the project developers to execute it. Franzen, ten Have, Uitzetter and de Zeeuw (2017) state as well that it is the municipal task to create a spatial vision.

However, Laglas (2011) argues that making a spatial vision for an area development is no longer the privilege of the municipality. Especially in an inner-city context, broad public support is crucial and therefore the process of making such a vision should be a joint, collaborative process in which all stakeholders are included (Laglas, 2011). The risk of a solely municipal spatial vision is that important parties do not feel that their interests are recognized in the vision and this could frustrate the collaboration that is needed in the urban area development process (Van Randeraat, 2006). A joint spatial vision is therefore more likely to be broadly supported and makes parties also committed to executing the vision.

Working together to construct a joint and shared vision for the redevelopment is needed to guarantee two things in the process (Visser, et al., 2015). Firstly, it gives guidance in the way ahead by sketching the bigger picture and showing the long-term goals and opportunities for all those involved. An appealing vision to which all three parties can work jointly to achieve is crucial in complex inner-city redevelopment projects, according to Van der Wal, project leader and consultant complex urban area developments (themasessie versnipperd grondeigendom, 2018). Secondly, it enables everybody to add something to this vision based on their personal perception of added value in the project. In this way, all parties are engaged and committed to the long-term view and they are all aware of the end goal towards they are working.

Statements:
- A municipal vision for the redevelopment area is necessary in the initiation phase
- It is crucial that all parties make a joint spatial vision for the area that functions as a long-term landmark towards which the parties can jointly work
- The current landowner-users have to have a major say in the spatial plans for the area
- The project developers have to have a major say in the spatial plans for the area

2.4.2 Dealing with current non-residential landowner-users

The direct implication of the ambition to redevelop a current industrial site into a mixed work, residential area is that at least some of the current landowners-users need to leave the area or they should use their land for a different function such as residential (platform 31, n.d.) If all landowners-

users would stay and keep continuing their activities, there would be no room to implement other functions such as leisure and residential in the area. Several options are available in handling the current landowner-users. Firstly, it is possible to let the landowner-users decide themselves whether they want to stay or to go. This option is incorporated in an organic redevelopment process, which tempo is dictated by the market. So, either the landowner-users stay, or they come to an agreement with an investor or project developer to sell their land. If the objective is to accelerate the development process, an organic process is probably not a good fit because it is unknown how long it will take.
Another option is to follow a strategy that aims at actively acquiring land from the current landowner-users. In this strategy, the aim is to come to an agreement with the current landowner-user for a good and fair price for the land. The ultimate goal is to acquire the land so in this scenario, the buying party is willing to spend in order to accommodate the redevelopment. The idea in this scenario is that both parties will eventually be able to agree on a price because they understand each other from their similar roots of being an entrepreneur (Korthals Altes, personal communication, April 12, 2018). A possible option in this scenario could also be to provide landowner-users who are willing to leave with a subsidy as a financial incentive.
A third option would be expropriation by a governmental body, which will be the municipality in the case of inner-city redevelopment projects. Expropriation should be used only as a last resort and can only be applied under strict conditions (kenniscentrum Infomil, n.d.) However, first the municipality should have tried to negotiate with the current landowner-user. If these serious tries fail, the public body can expropriate the current landowner-user, who will receive financial compensation, only if that is needed to realise value for the common cause that exceeds the cause of the landowner-user (kenniscentrum informal, n.d.). Expropriation can be applied on the basis of a assigned spatial function in the environmental plan (omgevingsplan in Dutch) or a granted environmental permit (van Angeren (stibbe), paraphrased by Hobma, 2017).
If, regardless in which way, the current landowner-user leaves the area and wants to continue its firm, he will need to find an alternative location. The question is whether providing such an alternative location is the responsibility of the municipality and/or the project developer and/or the landowner-user himself? Another question is the timing of handling this relocation in the process. Handling it up front could result in a collaborative attitude of the landowner-users because they will get certainty about the future early on. On the other hand, landowner-users could also show more resistance in the beginning of the process because they want to block the whole redevelopment process. In this case, handling the relocation challenge up front in the process works counterproductive.

Statements:

- The landowner-users should have the choice to keep continuing their business activities in the new mixed work-residential area
- The current landowner-users need to be bought out
- The purchase of land is a pure financial negotiation between the project developer and the current landowner-user that will always result in an agreement because both parties
- A subsidy is needed to let landowner-users leave the area
- The current landowner-users need to be expropriated if they do not want to cooperate in realising the redevelopment
- Offering an alternative location to the current landowner-users is the responsibility of the municipality
- Offering an alternative location to the current landowner-users is the responsibility of the project developer
- The relocation of firms has to be part of the collaboration process between the parties
- Arranging the relocation of firms early on stimulates a constructive attitude of the landowner-users towards the redevelopment

2.4.3 The financing aspect

The traditional way of financing urban area developments is to get a bank and/or an investor on board who gives out a loan to a project developer who will repay the loan plus the interest after the project developer has sold the developed real estate. Another possibility is to already sell a part of the to be developed real estate to an investor before the development starts. Complex redevelopment projects tend to take longer than greenfield projects which makes this classical way of financing less attractive because the risk are higher and the project developer will have to pay therefore more interest over a longer period of time. So, inner-city redevelopment projects require new types of financing (Robbe, 2015).

One possible way would be to develop a site in successive sub phases who are separately financed. In this way, both the risk and the payback period are limited. This model is called the "sink model" because the initial investments and the payback time are smaller and divided over multiple cycles in comparison to the "bathtub model" that is characterised by very high initial investments and a long payback period (de Zeeuw, 2017).

Especially in the initiation phase, the municipality could have an important financing role. Because the investing partners such as project developers are not yet known or already aboard the process in the initiation phase, another party has to step up to finance the first steps of the initiation phase: making a spatial vision, acquiring input from relevant parties, informing parties, trying to align parties and finding common ground, etc. In the case of fragmented landownership, it is the task of the municipality to finance these initial steps because no other party is inclined to do this because of the high number of landowners and the relatively small ownership positions in such a fragmented landownership situation (Visser, et al., 2015). Especially when the municipality feels the need to accelerate the whole process, it should fulfil this financing role. It is possible for the municipality to try to recoup these investments later on when it is clear which parties will realise the redevelopment and will therefore benefit from the initial, municipal investments. The municipality and developers should then jointly decide how a settlement regarding the initial investments can be reached.

One possible way would be to create a fund in which both the municipality and project developers participate by depositing a certain amount of money, based on a determined ratio, in the fund (Robbe, 2015). Such a fund is called a "goal fund" and is characterised by the fact that the participants will not receive their money back because everything is invested for the stated goal. This goal is a shared goal of the participants who all have an interest in realising the goal.

According to Desiree Uitzetter, director urban area development at the biggest Dutch project developer BPD, there is a need for a merger of private and public financial resources to finance these risky projects because project developers, banks and private investors alone are not able to supply sufficient capital (de Graaf, 2016). So, because of the long periods of return on investment, co-financing is then necessary between the municipality and project developers in order to create a feasible financial business case (Zeeuw, de, 2017; Franzen et al., 2017).

Another, more extreme, financial role of the municipality could be to step in if the project developer is not able to make a positive business case within the set spatial requirements. In this role, the municipality would contribute financially to make the business case break-even.

A more durable alternative is a revolving fund that can be defined as "a fund that is filled and used by a public body to grant loans, to invest and to warrant private loans for projects that serve a social goal and is refilled by the repayments of the granted loans or the returns on the investment" (translation from Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2012, p 4). So, this fund is filled once and can be used over and over again. The underlying idea is that the fund can be used to give that little edge that is needed to initiate a project. It provides capital before a project produces financial returns and serves then as a bridge between the investment moment and the moment of an incoming cash flow. Once that project is initiated it will lead to a sequence of other investments. In this way, the revolving fund serves as a catalyst (Robbe, 2015). Especially for complex, high risk and lengthy urban development projects, such as inner-city redevelopment projects, a revolving fund brings added value because it provides a long-term financial commitment to the project which

creates security and stability which subsequently leads to parties committing themselves to the project more easily (Boelman, Vriends, van Eldonk, 2018).
Verheul et al (2018) distinguish three conditions that need to be met to make use of a public revolving fund. Firstly, the project should have a positive business case to ensure the fund will be refilled again. Secondly, the project should add social value. Thirdly, there should be a form of market failure that makes financial public aid necessary. The Dutch Minister of the Interior and Kingdom Relations, Kajsa Ollongren, has announced to set up a revolving fund especially for complex, inner-city developments, which is filled initially with 38 million euros from the central government (Ollongren, 2018). The idea is that other public bodies and market parties will add to this initial amount. Even though project developers are happy with this fund, the general opinion is that the fund is by far not sufficient. They claim that a yearly public investment of 1 to 2 billion euros is needed (Neprom, 2018)

Statements:

- The municipality and the project developers have to jointly, in a certain ratio, finance the redevelopment by establishing a special fund in which they both participate
- The guarantee that the municipality will contribute financially to make the business case positive when it is negative for the project developer, needs to be granted in the initiation phase
- A revolving fund that grants loans with a very low interest rate, regardless of the project's risk profile, is necessary in the collaboration process

2.4.4 The role of the project developer

Due to forward integration within the urban area development chain, project developers have gained gradually the leadership position in the Dutch spatial planning sector (Heurkens, 2012). This is mainly due to the fact that by acquiring bit plots of land, their interest in developing the sites has increased and has made them more active in initiating the development of their sites. This development has been combined with a municipality who owns less land and has come to new insights regarding their role as public body in the spatial planning sector. Active land policy brings along a certain risk and the current perception is that Dutch municipalities shouldn't be involved in risky investments with public money. So, nowadays, the overall expectation in the spatial planning world is that project developers take the leadership role, while municipalities take up the facilitating role.
The dominant position that goes along with landownership could also cause irritation with public partners (Deloite, 2008). The underlying reason being the perception that project developers are perceived to acquire land to force the municipality to cooperate with them. Landownership is then perceived as the crucial condition to be a partner in the urban area development process. On the other hand, Franzen et al. (2017) advocate a role for private parties in the spatial planning, even if they do not own land, because of their expertise and understanding of what the market needs and wants.
The expected, active leadership role for project developers collides with stereotype perceptions from public parties regarding the interests and behaviour of project developers. Prevailing thoughts are that the project developers showcase sherry picking behaviour with only undertaking the high profit cases and thereby leaving the less profitable areas undeveloped (Deloitte, 2008). Another perception is that the project developers are only interested in maximising their profit (Deloitte, 2008).
However, from a New Public Management perspective, the role of the project developer can also be viewed as the financing partner of the municipal plans (Deloitte, 2008). Then, the project developer is the one that takes the financial risk which logically means that they are the ones who can cash in on any profits resulting from taking the financial risk. This would also imply that the project developers are then the only party who should benefit from a rise in land value as a consequence of the redevelopment as a reward for taking the financial risk.

On the contrary, according to Desiree Uitzetter, director urban area development at a major Dutch project developer, project developers claim they feel it is their responsibility to help solving the current housing deficit by actively developing dwellings (de Graaf, 2016). So, in this way their responsibility goes deeper than profit maximisation and stretches out to help solving societal needs in the urban area planning sector. Hoornstra, director of urban planning of Zaanstad, adds that this responsibility also extends to realising public facilities and utilities, such as realising a school in a newly developed area, when the municipality limits itself to a passive, facilitating role (de Jong, 2018).

Statements:

- Project developers only have a role in the collaboration process once they actually own land in the area
- The redevelopment of the area results in a higher appraisal of the land value from which all parties should benefit
- The project developer's responsibility is limited to profit maximisation for himself

2.4.5 The need for a public developer / quarter master

A central figure in the public development approach of Visser et al. (2015) is the public developer: an independent person who is long term committed to the project and tries to mobilise parties and getting certain networks of players engaged in order to keep the process going forward. This person showcases a flexible approach and is able to adapt to changing circumstances and to exploit new opportunities (Visser, et al, 2015). This person tries to align supply and demand. This implies that the public developer tries to connect parties with each other based on their resources and demands. In the end, the public developer is able to align all interests and to come up with a plan that is jointly supported. Creating this alignment is crucial in the collaboration process (van den Berg, 2014). Important to note is that Visser et al. (2015) also acknowledge that multiple different parties can fulfil this public developer role. An example is an involved party such as a landowner-user or project developer who sees a certain opportunity popping up because of the involvement in the specific case. It is therefore possible that different parties fulfil the public developer role during different phases, or even simultaneously. Especially in the initiation phase it is important that this public developer is an independent, third party. Later on, it is important to have this role being represented from within the network of committed parties because of the build-up trust within this network (Visser, et al, 2015). Another name for the public developer is "quarter master".

Statements:

- An independent quarter master is crucial to generate trust and alignment between all parties
- Flexible, and interchangeable roles are more effective than a fixed and strict role division from the beginning of the process

Appendix 3: Case descriptions

This appendix introduces all three cases. All case descriptions follow the same structure. First, a general overview is given of the current condition and developments in the local housing market to illustrate the need for more dwellings that should be realised in the to-be-redeveloped areas. Then, the current spatial vision is illustrated. Subsequently, the municipal vision for the to-be-redeveloped area is illustrated, followed by a description of the exact location, the site characteristics and the landownership structure.

3.1 Amsterdam

Amsterdam, the capital of the Netherlands and perhaps even more famous abroad than the Netherlands itself, serves as a people magnet and does not only attract tourists, but also lots of Dutch and foreign residents who want to live in the vibrant city that Amsterdam is known for. In particular, the inner city within the ring of the A10 is really popular. This development of increasing popularity is clearly recognisable in the local housing market. Due to Amsterdam's popularity, the prices for owner-occupied dwellings and the rents for private let dwellings have increased significantly. The value of dwellings has skyrocketed in Amsterdam with annual increases of 9,7 % in 2015, 13,5 % in 2016 and 14,0 % in 2017 (CBSa, 2018). In comparison, the national growth rates in those years were 2,8; 5,0 and 7,6 % respectively (CBSa, 2018). Only since 2017, the other three major Dutch cities (Rotterdam, The Hague and Utrecht) show double digit growth rates as well (CBSa, 2018). The average dwelling price of sold dwellings in Amsterdam is 462.000 euro (2nd quartile of 2018; NVMa, 2018), while the national average is 288.000 euro (2nd quartile of 2018; NVMb, 2018). In comparison, the other three big cities have an average dwelling selling price of 251.000 euro in Rotterdam (2nd quartile of 2018; NVMc, 2018), 323.000 euro in Utrecht (2nd quartile of 2018; NVMd, 2018) and 301.000 euro in The Hague (2nd quartile of 2018; NVMe, 2018. This clearly shows that the Amsterdam housing market can be classified as a separate niche market. As a consequence of the increasing housing prices the average household income in Amsterdam has grown, over the past ten years, resulting in a decrease in households with a low income and a growth in the middle and higher income classes (Berkers, Dignum, 2018). Due to the rising housing prices, only the more wealthy households could afford to live in Amsterdam's city centre and its surroundings. Parallel to this development, the housing market has changed in a similar direction: the share of the rental sector decreases, as well as the shares of the low and middle segment for owner-occupied houses at the expense of the high segment featuring expensive dwellings that are only affordable for the highest incomes (Berkers, Dignum, 2018).
In order to keep at pace with the rising housing demand, the Amsterdam dwelling stock has increased with about 4.000 – 5.000 annually since 2014 (OIS Amsterdam 2017). About half of the newly-built housing stock is inhabited by new residents from outside the Amsterdam municipality borders. Since 2008, the population has increased with, on average, about 11.000 new inhabitants every year. The expectation is that this growth will continue, resulting in a population of 998.000 in 2050 (OISa, n.d.), roughly 150.00 inhabitants more than in now, in 2018 (854.00 inhabitants in 2018 (OISb, n.d.)).

3.1.1 Municipal spatial policy

3.1.1.1 Structuurvisie Amsterdam 2040

In 2011, the city council of Amsterdam has issued the policy document "Structuurvisie Amsterdam 2040: economically strong and sustainable" in which it states its ambitions regarding the spatial policy for Amsterdam. The municipality has expressed the intention to increase the dwelling stock by 70.000 by 2040 to accommodate the influx of new residents (Gemeente Amsterdam, 2011). Effectively, this means that 100.000 new dwellings need to be constructed because dwellings will be

subtracted from the housing stock due to demolition or merging (Gemeente Amsterdam, 2011). In the vision, the city council has identified a capacity for 115.000 dwellings. An important ambition that is linked to the desired expansion of the housing stock, is the densification of the urban area. The city council wants to intensify the use of the current built up area in order to accommodate its growing population, offices, retail and industries, to make energy consumption and transportation more efficient and to maximise the open, natural landscape (Gemeente Amsterdam, 2011). This ambition implies a mix of spatial functions such as offices, industry, dwellings and leisure. The city council sees that the need of densification of the spatial use is most urgent in the heart of the city. The heart of the city covers the area that is demarcated by the A10 ring road and the IJ river, with the canal belt being the most popular area. In order to accommodate the demand for the Amsterdam, metropolitan climate, the municipality wants to expand this metropolitan area to the external sides of the A10 ring way and to the north of the river IJ (Gemeente Amsterdam, 2011). The idea is that these locations will be densified by realising huge amounts of dwellings on these locations. These locations will be redeveloped from mono functional working or low-density residential areas to a metropolitan area featuring a dense, mixed functional use of work and living.
The main takeaway of this spatial vision document is the ambition of Amsterdam to densify the city by constructing new dwellings within current built-up urban area and by redeveloping mono functional work areas into mixed work and residential area.

3.1.1.2 Koers 2025

The policy document issued in 2011 was mainly about providing a long-term vision for Amsterdam. Therefore, in 2016, the Amsterdam city council, issued a policy document that operationalised this long-term vision for the period up to 2025: “Koers 2025: ruimte voor de stad”. The city council explains its approach to construct 50.000 dwellings up to 2025. The approach aims to develop dense, metropolitan environments that feature both a mix of functions and people (Gemeente Amsterdam, 2016). This approach is the best fit for Amsterdam: a dense city offers more possibilities to more people and it offers more possibilities to be more sustainable (shorter distances, less car use, less CO2 emission and a smaller ecological footprint) (Gemeente Amsterdam, 2016). The vision explicitly appoints locations where those 50.000 dwellings should be built.
One of the appoint development sites are the northern river IJ banks. These sites are mainly former industrial (harbour) sites that need to be redeveloped to create the desired metropolitan areas. The municipality has planned around 14.000 new dwellings on these river banks (Gemeente Amsterdam, 2016). The development of several projects has been started since then.
First, the former NDSM shipyard has been assigned a new mixed work and residential function. The NDSM yard gained popularity by new initiatives in the cultural, handcraft, leisure and food and drinks sector who started to establish their businesses in the old, run-down ship yard buildings. In 2008 the construction of the first new residential and office building started. The development of the site is done in successive phases and in total, the municipality has planned 5.100 dwellings at the NDSM yard (Gemeente Amsterdam, 2018; Gemeente Amsterdam a, n.d.). Furthermore, 40.000 m2 of gross floor area is added to the existing 45.000 m2 for working purposes and 41.350 m2 of gross floor area is planned for commercial and non-commercial activities (Gemeente Amsterdam, 2018).
Secondly, Buiksloterham is being redeveloped and the municipality aims at adding 4.700 dwellings and 7.000 new jobs to the existing 3.000 jobs in Buiksloterham (Gemeente Amsterdam b, n.d.). The first construction works started in 2010 (Gemeente Amsterdam c , n.d.). The policy document “Koers 2025” contains a list of locations that have the potential to be quickly redeveloped into a mixed work and residential area, the so called “acceleration locations”. One of these “acceleration locations” is the industrial site Hamerkwartier, located on the Northern river IJ banks, close to the Amsterdam central train station and opposite the passenger terminal for cruise ships.

3.1.2 Hamerkwartier

So, the next redevelopment project that should redevelop the northern IJ banks into a metropolitan area is the industrial site Hamerkwartier. The municipal ambition is to create 6.500 to 6.700 new dwellings (510.000 m2 gross floor area) in a high density, mixed with 270.000 m2 gross floor area for work and other services (projectteam Hamerkwartier Gemeente Amsterdam, 2017). The intended mix residential and work is 2/3 residential and 1/3 work.

3.1.2.1 Current state policy wise:

The municipality of Amsterdam works in a four stage decision making model when it comes to urban area development projects (projectteam Hamerkwartier Gemeente Amsterdam, 2017). The first stage is the exploration phase in which the possibilities in the area are identified. The second stage is the project policy document in which the municipality states the desired urban area development. The third stage is the investment decision in which the city council decides about the exact design of the area, the exact outlines for the number of dwellings, working spaces, services etc. and the budget that is needed to execute these plans. The fourth phase is the execution phase in which the construction works start. Even though this decision making model is a subsequent linear model, it is possible that individual building projects are allowed to start before all four stages have been executed. The four stage model is used to orchestrate the main part of the redevelopment project but allows for individual projects to be initiated as frontrunner projects that fit in the overall vision for the Hamerkwartier.
Because Hamerkwartier has been appointed an “acceleration location” the municipality has skipped phase one and has immediately formed a project policy document which was finished in November 2017. However, due to the last city council elections in 2018, the municipality has decided to wait until the end of this year to ask for approval by the city council (Remijnse, personal communication July 23, 2018).

3.1.3.2 Municipal vision:

The municipality has three important ambitions for the Hamerkwartier (projectteam Hamerkwartier Gemeente Amsterdam, 2017). Firstly, a high volume of dwellings needs to be realised in a high density. Secondly, Hamerkwartier should become a mixed area in which residents can live, work, shop, follow eduction and can relax. Additionally, the area should feature a mix in dwelling and resident type. In order to prevent a concentration of only expensive, owner-occupied houses in which only the wealthiest households can live, the municipality has prescribed a 40/40/20 distribution regarding the housing programme, in accordance with the municipal housing policy documents “Woonagenda 2025” and “Actieplan Middeldure Huur” (projectteam Hamerkwartier Gemeente Amsterdam, 2017). This implies that 40% of the dwellings should be for the social housing rental sector, 40% should be in the middle class category for the rental sector or owner-occupied sector and 20% can be in the high class category for either rental or owner-occupied. Without this prescription, developing parties are inclined to build only expensive, high class dwellings because they are most profitable and due to the excellent location of the Hamerkwartier and the popularity of Amsterdam it would be possible to sell or rent out all of these expensive dwellings. Thirdly, after the redevelopment, Hamerkwartier should be a high quality and lively neighbourhood.
The municipality aims to retain 100.000 m2 gross floor area of the current businesses that operate in the area. The idea is that per individual case it will be analysed whether the business can be incorporated in a residential environment (projectteam Hamerkwartier Gemeente Amsterdam, 2017). If not, it has to be analysed whether mitigation measures can be taken to guarantee a goof fit between the firm and the residential environment. If relocation outside the Hamerkwartier of a currently located firm is necessary due to the redevelopment, the municipality has stated that they will actively help looking for an alternative location within the metropole region (Gemeente Amsterdam, 2011).

3.1.3.3 Location:

Hamerkwartier is located at the waterfront of the river IJ and is surrounded by some of Amsterdam's poorest neighbourhoods with a relative high percentage rental houses in the social housing sector: IJplein, Vogelbuurt and Vogeldorp. Figure 29 shows the location of the Hamerkwartier in Amsterdam. In recent years, the population in these neighbourhoods has slightly changed due to richer households who have discovered Amsterdam North as an affordable alternative to the city centre, moving in and social housing corporations selling dwellings to private households (projectteam Hamerkwartier Gemeente Amsterdam, 2017). Hamerkwartier's accessibility is quite good and due to the opening of the north south line as an addition to the free ferry between IJplein and Amstedam central station, the accessibility by public transport has increased significantly. Also, a new metrostation, Sixhaven, is planned on the North South line that would add to the accessibility by public transport. Furthermore, there are plans to construct the Javabridge, a pedestrian and bicycle bridge connecting Javaeiland with Hamerkwartier. However, the current infrastructure is not fit to facilitate all the traffic once the redevelopment is finished. Nearby, a major petrochemical plant (Albermale) is located who has a certain zone around its plant in which residential living is prohibited due to safety and nuisance reasons. The consequence of this is that the south-eastern part of the Hamerkwartier is unfit for residential use as long as the plant is located at its current location. No research has been performed yet regarding the ground conditions and possible ground pollution (projectteam Hamerkwartier Gemeente Amsterdam, 2017).

Figure 29: overview of the location of Hamerkwartier, depicted in orange, in Amsterdam. Image taken from Projectteam Hamerkwartier, Gemeente Amsterdam (2017), p. 24.

3.1.3.4 Characteristics Hamerkwartier:

In the early 1900's, an industrial site developed itself along the river IJ banks and the Hamerkwartier featured several canals to optimise the accessibility by ship of the industries located in the Hamerkwartier (projectteam Hamerkwartier Gemeente Amsterdam, 2017). Over the years, these canals have been closed, but the area is still characterised by a grid structure. In recent years, the typical industrial site occupation (car dealers, garages, construction companies, electricians, the municipal ferry maintenance plant, a cable and pipe manufacturer etc.) has been mixed with new pioneers in several handcraft industries (beer breweries, handmade bicycle manufacturer, fireplace manufacturer), new offices, kindergarten, several bars, a Jumbo food market, a restaurant, kindergarten, a hotel and a cinema and one apartment building for students. The new functions have made the area more lively and has attracted more visitors to the area which extends the hours of activity outside the normal office hours. Figure 30 shows a collection of pictures taken in the Hamerkwartier.

Figure 30: collection of pictures taken in the Hamerkwartier

3.1.3.5 Landownership situation

The area can be divided in roughly two parts: the south and the north part, based on the current landownership patterns (see Figure 31). The south part features four big land ownership positions that are owned by a housing corporation (Eigen Haard), an investor-project developer combination (Heinz and Provast), the municipal public transport company (GVB) and a project developer (Amvest). The north side features a scattered landscape landownership wise with lots of different small landowners or private parties who possess the ground lease rights. Approximately one third of the land is issued as municipal ground lease and the other two thirds are privately owned. The municipality land position is therefore very limited to merely the public space (projectteam Hamerkwartier Gemeente Amsterdam, 2017).

Due to speculation several investors and project developers have gained strategic landownership positions throughout the area. In many cases, the new owners simply make a deal with the former owner about renting the land and its buildings for the foreseeable future. In this way, the investors and project developers are guaranteed a steady cash flow and if the municipality decides to enable the development of dwellings in the area, they already own the land. The underlying idea is that it is cheaper for the speculative party to buy the land if the land-use plan only allows for industrial activity than would be the case if the land has been awarded a residential function. In some cases, the municipality has issued pre-emption rights on certain properties to prevent this speculation by private parties. This, out of fear that these parties only seek to maximize their profits by selling their newly acquired land for really high prices and if nobody is prepared to buy the plot for that amount, they will simply stay put and thereby frustrate the redevelopment process. However, lots of speculative buyers are either project developers or parties who are interested in redeveloping the area by constructing dwellings. These parties are very eager to start building

So, in conclusion, Hamerkwartier features a mix of some major private land owners in the south of the area and a great number of land owners in the north varying from small private land owners who use their land for their own firms, to pawnbrokers who rent out their properties and speculating investors and project developers.

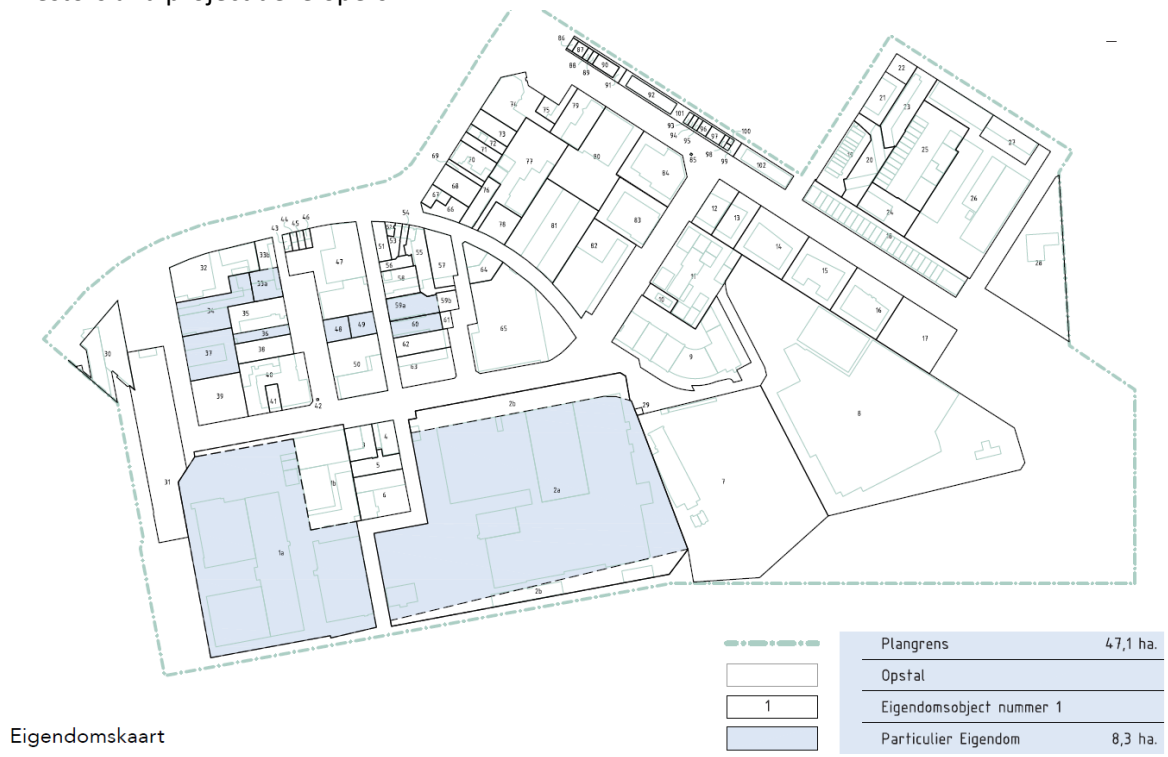

Figure 31: overview of the landownership situation in the Hamerkwartier. The purple plots were acquired by investors or project developers as of November 2017. Figure 31 has been taken from projectteam Hamerkwartier Gemeente Amsterdam, 2017, p 29

3.2 Alkmaar

Alkmaar positions itself as an urban hub on the cusp of the Amsterdam metropole region and as the central, compact city for the region Noord-Holland-Noord (Gemeente Alkmaar, 2017). Due to the proximity of the coast and the rural landscapes, combined with a lively and historic city centre, Alkmaar is an attractive city for those who want to escape the hectic Amsterdam metropole region and those who want the escape the more rural areas of Noord-Holland-Noord.

3.2.1 Developments Alkmaar housing market

In the most recent housing vision of the Alkmaar region, the expectation is that until 2040, there will be a steady growth both in population (approximately 20.000 in the period 2013 – 2040) and in households (approximately 17.000 in the period 2013-2040) (Gemeente Alkmaar, Gemeente Bergen, Gemeente Castricum, Gemeente Graft-De Rijp, Gemeente Heerhugowaard, Gemeente Heiloo, Gemeente Langedijk, Gemeente Schermer, 2013). The latter is also a consequence of the tendency of people to live on their own for a longer period of time. Alkmaar's current housing stock does not fit the expected future housing demands, both quantitatively and qualitatively (Geuting, de Leve, 2017). The expectation is that the demand for urban living will increase which results in an increase in demand for rental dwellings in the low and middle segments, in the category one or two-person households and owner-occupied dwellings in the more expensive segments (Gemeente Akmaar, 2013).

3.2.2 Municipal spatial vision Alkmaar: omgevingsvisie Alkmaar 2040

In 2017, the municipality of Alkmaar has issued its most recent spatial policy document regarding Alkmaar as a whole. Important to note is that the municipality positions itself in a facilitating role in which it assigns itself the task to safeguard the interests of the city as a whole. However, the initiative to undertake projects should ideally originate bottom-up and the municipality will then support these initiatives by providing guidance throughout the process (Gemeente Alkmaar, 2017). Two relevant ambitions are formulated in the spatial vision. Firstly, the municipality wants to utilise the potential benefits of the Noordhollandsch Knaal better by using the canal as a lively and welcoming city river that serves as a public meeting place for leisure activities (Gemeente Alkmaar, 2017). Secondly, densification of the city to accommodate more functions and dwellings in order to guarantee the compactness of the city, which is considered a quality of Alkmaar by the municipality (Gemeente Alkmaar, 2017). Both ambitions result in the municipal desire to redevelop business and industrial parks along the Noordhollandsch Kanaal into modern, urban, mixed residential-work environments that will revitalise Alkmaar by utilising the spatial qualities of the canal (Gemeente Alkmaar, 2017). They municipality has identified four industrial sites as potential redevelopment sites: Viaanse Molen, Overstad, Oudorp and Overdie (Gemeente Alkmaar, 2017; Barbara Bakker, n.d.)

3.2.3 Oudorp and Overdie

3.2.3.1 Current state policy wise

In January 2018, the Alkmaar municipality has finalised its concept version of the spatial vision document regarding the redevelopment of industrial sites Oudorp and Overdie. This version is currently awaiting approval by the city council. Once the spatial vision document is approved by the city council, the land-use plan can be changed to enable residential use of the area. However, the municipality will not simple add residential use to the land-use plan, but it will enable the possibility to allow residential use in the area. The municipality will only allow this for a certain plot after individual negotiations with the landowners (Gemeente Alkmaar, 2018). In this way, the municipality keeps control over the redevelopment process.

The immediate cause for the municipality to start working on an overarching area spatial policy document, was a sequence of several private initiatives to construct dwellings along the Noordhollandsch Kanaal (Gemeente Alkmaar, 2018). Project developers gradually expanded the residential area from the city centre outwards along the canal. The municipality facilitated these developments by providing the necessary environmental permits. However, the municipality feared that these developments would create a "golden river bank" in which only one row of dwellings would benefit from the canal's benefits and the hinterland would be cut off from the canal. This, in combination with the need and ambition to accommodate more households in the future, led to the idea of redeveloping whole industrial sites along the canal and not just the river banks. This would allow for far more households to benefit from the canal than would be the case in the "golden river bank" scenario. Therefore, the municipality has paused the granting of environmental permits until the city council has approved the plan for the industrial sites of Oudorp and Overdie as a whole.
The whole area currently has a noise and smell nuisance zoning that allows for noise and smell nuisance up to certain limits, which has to be removed first before it is legally allowed to live in the area. In 2017, an acoustic research was performed to determine whether the current noise nuisance by the existing industrial firms would make residential use of the area impossible. The conclusion is that this is not the case and that therefore redevelopment of the area into a mixed work and residential area is plausible (Huizer, Vlieger, 2017). Once specific plans have been formulated, it should be determined per case whether some noise nuisance mitigation measures are needed, but in general the current nuisance level is acceptable (Huizer, Vlieger, 2017). To redevelop the area, it is necessary to redesign the zoning system such that it still enables the current nuisance producing firms to continue their manufacturing processes and allows for residential use of the area in other parts of the industrial site. The process of changing the nuisance zoning in combination with the change in the land-use plan, is expected to take at least two and a half years (Gemeente Alkmaar, 2018).

3.2.3.2 Municipal vision redevelopment Oudorp

The municipality envisions a facilitating role for themselves in the redevelopment process (Gemeente Alkmaar, 2018). This role implies that the municipality will try to support and facilitate private initiatives that fit within the set municipal boundary conditions and spatial municipal vision. The municipality aims for an organic redevelopment process in which the market will dictate the pace of the process. However, the municipality is willing to fulfil a more active role, for example by acquiring plots, if that is crucial to keep the process going (Gemeente Alkmaar, 2018). The current municipal plan is to divide the area into three parts (see Figure 32). The western and southern part, which should be redeveloped into a mixed zone for working and residential activities, the middle part, which should function as a transition zone and does not allow for residential use until 2030 and the eastern part, which will stay a mono functional working area (Gemeente Alkmaar, 2018). The eastern part already hosts most of the jobs in Oudorp (1600 in comparison to 400 in the western part) and by choosing for this division, most jobs are preserved in the area. Furthermore, the redevelopment area is more concise which makes it necessary for the developing parties to align the plans. It also reduces the risk of an incoherent area in which neither industrial activity, nor industrial use can thrive, let alone both functions at the same time (Gemeente Alkmaar, 2018). The municipality will investigate if and how it would be possible to relocate those nuisance producing firms that do not fit in the envisioned mixed working and residential area, to another, easily accessible industrial site in Alkmaar, Boekelemeer, that is located outside the city, next to the highway A9. However, the basic starting point is that the current firms should not be threatened or disrupted by the redevelopment (Gemeente Alkmaar, 2018).
Urban area planning wise, the municipality wants to mix several functions (residential, working, leisure, shopping, restaurants) both on an area level and on building level (Gemeente Alkmaar, 2018). The municipality wants to use the acquired vacant printing office to create the beating heart of the redeveloped site where cultural events and other activities are hosted and everyone feels

welcome to spend time and enjoy themselves (Gemeente Alkmaar, 2018). Another option is to sell these plots to a project developer in order to regain the investment (Gemeente Alkmaar, 2018). Furthermore, the municipality is willing to invest in the public space to improve the liveability of the area. It will partly recoup these costs by charging those private parties, most probably the project developers, who will benefit from the improved public space (Gemeente Alkmaar, 2018).

Figure 32: the concept version of the municipal spatial redevelopment plans showing the three parts of the area. Overdie is located at the south of the canal, shown in orange, and Oudorp is the large orange and purple area north of the canal. Figure taken from Gemeente Alkmaar, Urhahn (2018), p 14. ***NOTE: this figure has been excluded from this publicly available version because of confidentiality reasons.***

3.2.3.3 Location Oudorp and Overdie

Industrial site Oudorp is centrally located in Alkmaar, along the northern banks of the Noordhollandsch Kanaal at the opposite site of the ancient city centre and covers 43 hectares (see Figure 32). The area is very well accessible by car, as well as by only a ten-minute bike ride from the city centre and the central train station. Industrial site Overdie is located at the southern banks of the canal and the northern plots along the canal are included in the redevelopment vison (see Figure 32). However, after consultation with a municipal official, it became clear that in this area, the landowner-user had already teamed up with a project developer to develop a residential area. Therefore, the Overdie area does not meet the case requirements and is therefore omitted in analysis of the Oudorp case.

3.2.4 Oudorp

3.2.4.1 Characteristics Oudorp

The industrial site locates a high variety of firms, ranging from car dealers, a big ship yard, a bakery, logistic firms to offices, contractors, maintenance firms, shops, storage boxes and even a dentistry and a theatre. Especially the north-eastern part features lots of newly built real estate, while the rest is a mix of older and newer real estate. Figure 33 shows a collection of pictures taken in Oudorp. Recently, some real estate in the northern part has been lost due to a fire. Vacancy is limited and

limited to some of the older real estate However, at the heart of Oudorp, a vacant plot of 3,6 hectares is acquired by the municipality. This plot houses the vacant printing office of the Telegraaf Media Groep. Even though there was also interest from private parties to acquire the printing office, the municipality decided to buy it in order to have a position in the area from which it could influence the redevelopment process. The initial ideas were to use the place for place-making activities to attract Alkmaar's residents to Oudorp and to implement other functions such as leisure to the mono functional industrial site (Bakker, personal communication, July 17, 2018).
The whole area currently has a noise and smell nuisance zoning that allows for noise and smell nuisance up to certain limits, which has to be removed first before it is legally allowed to live in the area. It is therefore necessary to redesigning the zoning system such that it still enables the current nuisance producing firms to continue their manufacturing processes and allows for residential use of the area in other parts of the industrial site.

Figure 33: collection of pictures taken in Oudorp

3.2.4.2 Landownership situation Oudorp

Because of the size of the area, the number of landowner-users is also substantial. The western and southern parts of the area are characterised by some big industrial firms with big plots, while the eastern part is characterised by considerably more, but smaller landowners. The type of landowners varies between owners who also have their own business located on their plot, investors who rent out their real estate and a few developing parties who have acquired some plots or are in negotiation to buy them.

3.3 Delft

Delft forms is an important hub in the metropole region Rotterdam The Hague and its housing market also greatly depends on the functional relations between Delft and the other cities in this region (adviesgroep delft herstelt, 2016). Delft has an unique position in this region because of the TU Delft and some of the most advanced high tech and research institutes (adviesgroep delft herstelt, 2016). Its economy thrives on this knowledge intensive industries and Delft profiles itself more and more as a city of knowledge and technological innovations.

3.3.1 Developments Delft housing market

The municipality of Delft expects a population growth in the in the coming years. In the short run, the municipality expected an increase of 12.000 people in the period 2016 – 2023 which results in an increase of 9.000 households (Gemeente Delft, 2016). Important to note is that 4.000 of these households are expected to be student households. Within the province of South-Holland, there is a need to build 150.000 dwellings up to 2030 and another 60.000 in the period 2030-2040 (provincie Zuid Holland, 2017). The municipality of Delft has assigned itself, after consultation with the other municipalities in the region, to facilitate the realisation of 15.000 dwellings up to 2040, which includes for example the previously mentioned 9.000 households (Gemeente Delft, 2017 ; Lindeboom, Schouten, Verhoeven, 2017).

The current housing stock shows a clear imbalance with the housing demand of the population in Delft (Gemeente Delft, 2016). Because of the TU Delft and other research institutes such as TNO and due to high tech industrial firms such as Octatube, the middle and high income classes are well presented in Delft. The consequence is that the demand for rental and owner-occupied dwellings in the middle and high sectors is rather high. However, the current housing stock is mostly in the lower segments, resulting in an imbalance. The consequence is that Delft is not able to accommodate all of the highly educated people that are active in Delfts knowledge-driven economy. At the same time, the municipal ambition is to develop Delft into an international city of knowledge and technology by exploiting the opportunities that the cities knowledge and research institutes offer (Gemeente Delft, 2016). In order to realise this ambition, the housing stock needs to adjust to the demands of the high educated employees in this knowledge based-economy. The municipality therefore aims to develop more middle and high class dwellings, both in the rental and owner-occupied sector (Gemeente Delft, 2016). The municipality has appointed for example the central station area, “Nieuw Delft”, Harnaschpolder and the Schieoevers as places to align the housing stock with the ambition of becoming an international city of technology and knowledge (Gemeente Delft, 2016). The planned dwellings in these areas should fit the urban landscape and the wishes of the employees who are working in the research and technology industry.

3.3.2 Schieoevers

3.3.2.1 current state policy wise

In 2006, the municipality of Delft issued its vision for the redevelopment of the Schieoevers industrial site as a whole. In 2010, an updated version was published. Because the municipality aims for an organic, market-led redevelopment process, there is not a well-defined plan for the process, nor the final end result. Currently, the process is in the phase of constructing an Environmental Impact Assessment which aims at assessing which environmental effects the intended redevelopment will have. The final EIA is expected to be delivered in the summer of 2018 (Gemeente Delft, n.d.). This EIA will serve as input to determine the desired density of buildings in the area or the number of houses, for example.

3.3.2.2 Municipal vision Schieoevers

Given the need to accommodate 15.000 households in the coming twenty years (Gemeente delft, 2017), the municipality has appointed the Schieoevers as the only potential area within the municipal borders that is fit to accommodate a big portion of the total housing task at hand by redeveloping and/or densifying (Lindeboom, Schouten, Verhoeven, 2017). Additionally, the location of the Schieoevers is perfect to help developing Delft into the best city for high tech firms to locate themselves (Gemeente Delft, 2010). The ambition is to create the Technological Innovation Campus Delft (TIC-Delft) in which first class technology companies intensively collaborate with the TU Delft, TNO and Deltares to pursue technological innovations. In order to facilitate this, it is needed to create a well-connected neighbourhood with the right dwelling mix for the employees of these companies and research institutes. Furthermore, the municipality wants to retain a larger part of the alumni from the TU Delft (Gemeente Delft, 2010). Currently, a major part of the graduated students leaves Delft after their study period which implies a leak of young, well-educated residents for the city.

The municipal vision for the Schieoevers is to redevelop it from a mono functional industrial site to a mixed work-residential area (Gemeente Delft, 2010). This area should accommodate both dwellings and manufacturing industry and this mix should maximise the potential of the area. The idea is that certain areas in which the manufacturing industry produces noise nuisance during the day, can be used to host noise producing events at night (Gemeente Delft, 2010). The mixed working-residential area will be realised in Schieoevers-Noord, while Schieoevers-Zuid will be revitalised as an industrial site in which industrial companies are located that supply the technology companies on the TIC (Gemeente Delft, 2010). Schieoevers-Noord and Schieoevers-Zuid are separated by the Kruithuisweg. Because only Schieoevers-Noord will be redeveloped, Schieoevers-Zuid is out of scope for this research.

The redevelopment of the Schieoevers is the first step in revitalising the Delft-Zuid area and to improve the TIC-Delft. Further developments are the expansion of the Delft-Zuid railway station from two to four rail tracks and the development of a whole new urban mixed work-residential area at the west side of the river Schie, called “Blauw” (Gemeente delft,2010).

3.3.2.3 Redevelopment Schieoevers-Noord

Next to dwellings and workplaces, Schieoevers-Noord should also feature the following functional offering: culture, creative economy, sport, leisure and places to meet and get in contact with friends, family and fellow residents and users (Gemeente delft, 2010). Currently, Schieoevers accommodates about 40 jobs per hectare and the ambition is to raise this to 70 per hectare by intensifying the land use. The current state of the area is a mix of well-operating companies in well-maintained buildings and (partly) vacant, run-down buildings. Especially the latter category forms a good opportunity for place making by hosting temporary functions such as culture or leisure combined with a bar (Gemeente Delft, 2010). The municipality plans to improve the area’s accessibility by creating more cross river connections in the form of bridges (Gemeente delft, 2010). The municipality aims for an organic redevelopment process which means it expects the private parties, such as project developers, to take the initiative and to let them, together with the current landowner-users and firms, dictate the tempo of the whole process (Gemeente delft,2010; Gemeente delft a, n.d.). This implies that the municipality will only apply passive, facilitating land policy and will not acquire land in the area (Gemeente delft a, n.d.). Regarding the current users and owners of the land, the industrial firms, the municipality wants to cherish these firms and facilitate their continuity as much as possible as long as they are located in the area (Gemeente delft a, n.d.). The municipality foresees that the industrial firms that cause nuisance eventually will leave the area organically.

3.3.3 Focus area: Schieoevers-Noord, eastern banks Rotterdamseweg

The Schieoevers area can be divided into three sub areas that each have their own distinctive characteristics (Van Schoten, personal communication, 14th of June, 2018). Figure 34 shows the three sub areas.

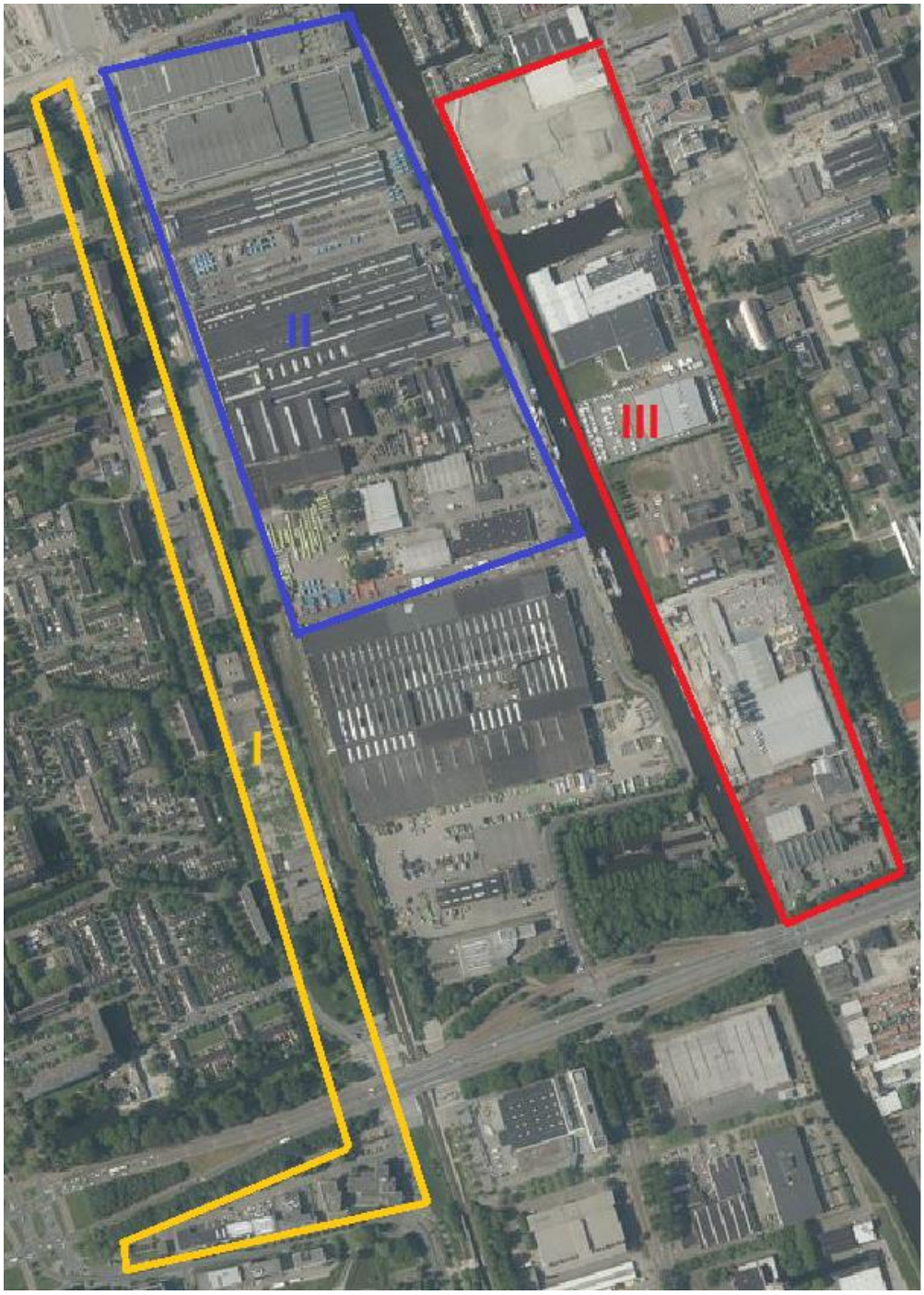

Figure 34: an overview of Schieoevers-Noord that shows the demarcation of the three sub areas I, II and III

Area I is demarcated by the railway track to the east, a neighbourhood to the west and the Tanthofdreef to the south. This area is characterised by a high level of municipal landownership, some vacant, run-down buildings, a mosque, and some offices and a garage at the Tanthofdreef. One of the plots is acquired by a project developer who has been granted a permission to build a 70 m residential tower that will accommodate 300 rental apartments (Certudo, n.d.). Due to the lack of active, industrial landowner-users, the high level of municipal landownership and the granted permission to build a 70 residential tower, this area does not match the case requirements and is therefore not appropriate for this research.
Area II is demarcated by the railway tracks in the west, the river Schie in the east, the Kruithuisweg in the South and the Engelsestraat in the north. This area is characterised by two large real estate properties: de Schiehallen and the Prysmian (a cable and pipeline manufacturing firm) plant. The Schiehallen are owned by a project developer who rents out its property to some firms for the time being, until they can start to develop dwellings in the area. Next to Prysmian, there are some other smaller industrial firms located in this area. However, because of the enormous size of the Prysmian plot relative to the plots of the smaller firms. The potential for redevelopment of the area practically depends on whether the Prysmian plot will become available or not. The presence of a project developer who owns a significant part of area II, in combination with the dependency for redevelopment on only one big player, makes area II not a great fit for this research when taking the case requirements into account.
Area III is situated on the eastern banks of the river Schie and is demarcated to east by the Rotterdamseweg, to the south by the Kruithuisweg and to the north by the Van Baarenstraat. The area is characterised by a wide variety of industrial landowner-users who all exploit their businesses on their own plots that are comparable in size. In the north, a vacant and fallow plot is owned by a project developer. However, that plot is comparable to the plots of the other landowners in the area, which makes that the project developer does not hold a dominant position regarding the total development in the area.
After consultation with the municipal project leader for Schieoevers, area III has been selected because it fits the case requirements best. The type and number of landowners, combined with the equal sizes of the several plots and the non-dominant position of the project developer, make this area most suitable to analyse in this research.

3.3.3.1 Current stat policy wise sub-area III

The project developer that owns the big plot in the north of the studied area has already made plans to construct around 200 dwellings. In April 2018, the municipality and the project developer have agreed to a collaboration agreement that will start the procedure to change the land-use plan to enable residential living in the end of 2018 (AM, 2018).

3.3.3.2 Location Schieoevers Noord area III

The industrial site is located next to the TU Delft campus, is easily accessible by car and is a five minute bike ride from the city centre and the Delft central train station, while the local train station Delft Zuid is even closer.

3.3.3.3 Characteristics:

The structure of the industrial site is designed in such a way that every plot has maximum accessibility to the river Schie. This results in a block wise structure in which most plots run from the water side to the road side over the full width of the area. The current users are: a concrete manufacturing plant, a building material supply shop, a camper and caravan dealer, a Styrofoam packaging plant, a student rowing club, a small harbour, a kitchen dealer, a glazier, a glass structure design company, a cultural event centre and restaurant and two vacant spots owned by two project developing firms.

The current land-use plan allows for industrial activities up to nuisance scale 3.2 and the maximum building height is 12 meters (ruimtelijke plannen, n.d.). Therefore, in order to enable residential use of the area, the land-use plan needs to be adjusted because the current nuisance scale doesn't allow for residential living. Figure 35 shows a collection of pictures taken in Schieoevers Noord.

Figure 35: collection of pictures taken in Schieoevers Noord

3.3.3.4 Landownership situation

The landownership structure is quite straightforward. The municipality owns the public space, the Rotterdamseweg, and a part of the ground of the cultural event centre. The buildings on this particular plot are however owned by the centre by making use of building rights (recht van opstal in Dutch) (Gemeente delft b, n.d.). Every firm in the area owns the land on which they are located. Furthermore, two project developers each own a vacant plot, with one developer owning a major plot and the other only a minor plot.

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Appendix 4: Overview respondents P-set

This appendix shows an overview of all respondents of the P-set and their relevant characteristics in Table 8 and Table 9. Then, a short description is shown for each respondent to explain their personal situation and their involvement in the case.

4.1 Overview tables respondents P-set

Table 8 shows an overview of all the respondents.

Table 8: overview of all respondents in the P-set, categorised by case, type of party the respondents belong to, their names, the name of the organisations they work for, their job and the corresponding respondent number. ***NOTE: the columns "name", "organisation"and "job" are excluded from this publicly available version for confidentiality reasons****.*

case	Type of party	Name	Organisation	Job	#
Hamerkwartier, Amsterdam					
	municipality				1
	municipality				2
	municipality				3
	Landowner-user				4
	Landowner-user				5
	Landowner-user				6
	Project developer				7
	Project developer				8
	Project developer				9
Oudorp, Alkmaar	municipality				10
	municipality				11
	municipality				12
	Landowner-user				13
	Landowner-user				14
	Landowner-user				15
	Project developer				16
	Project developer				17
	Project developer				18
Schieoevers, Delft	municipality				19
	municipality				20
	municipality				21
	Landowner-user				22
	Landowner-user				23
	Landowner-user				24
	Landowner-user				25
	Project developer				26
	Project developer				27
	Project developer				28

Table 9 shows an overview of the type of landowner-user that were interviewed. Unlike the municipality and the project developers, the landowner-users vary greatly in the level of nuisance they produce, the size of their plots, their attitudes towards the redevelopment and the type of

business they are. Creating such an overview could help to explain if different types of landowner-users load differently on the identified factors.

Table 9: overview important characteristics landowner-users. ***NOTE: the column "firm" is excluded from this publicly available version for confidentiality reasons.***

# Respondent	firm	Size plot	Nuisance level	Type of organisation	Attitude towards redevelopment
4		Very small	No nuisance	Private business	Open to redevelopment but wants to stay at current location
5		Very small	No nuisance	Family business	Open to redevelopment, outside of his plot, because of increased security
6		medium	No nuisance	Family business	Very much in favour of redevelopment because owner wants to develop big apartment block himself
13		Very large	High (noise and traffic)	Family business	Wants to leave, very much in favour of redevelopment
14		large	High (traffic and noise)	Family business	Wants to stay, against redevelopment
15		small	Low (traffic)	Family business	Open to redevelopment if quality area improves and strict separation residential and business activities
22		Medium-large	High (noise)	Private owner	Wants to stay, industrial environment better for business
23		Medium-large	High (noise and traffic)	multinational	Wants to stay, against redevelopment
24		Medium-large	medium (traffic)	multinational	Wants to stay, but is open to move for the right price
25		Medium-large	High (noise and traffic)	Family business	Wants to stay, open to redevelopment but no residential use nearby

4.2 Short description of respondents per case and per type of organisation

The following section will show an overview of all respondents per case and per type of organisation they work for.

NOTE: the detailed description of each respondent is excluded from this publicly available version for confidentiality reasons.

Appendix 5: Interview protocol in Dutch

Instructies[4]

1. Lezen stellingen
    - Stellingen moeten beoordeeld worden vanuit het perspectief/belang van de functie waarin de respondent werkzaam is. Dit geldt met name voor de respondenten van de Gemeenten die dus vanuit hun specifieke functie de stellingen moeten beoordelen en niet vanuit de algemene Gemeentelijke visie.
2. Stellingen indelen:
    - Bij het beoordelen van iedere stelling moet de respondent steeds beoordelen in hoeverre hij het eens of oneens is met de volgende stelling: **"**
      Deze stelling moet uitgevoerd worden om de initiatieffase te versnellen
        A. Is het antwoord "*ja*" dan komt de stelling in de groep "*mee eens*".
        B. Is het antwoord "*nee*" dan komt de stelling in de groep "*mee oneens*".
        C. Is het antwoord ***niet*** "*ja*" of "*nee*" dan komt de stelling in de groep "*neutraa*l".
3. De respondent pakt de stellingen in de groep "eens" (A) en plaatst deze op rangorde in de tabel. De twee stellingen waar de respondent het meest mee eens is, plaatst hij in de kolom +4, gevolgd door vier stellingen waar de respondent het net iets minder mee eens is. Deze procedure herhaalt zich totdat alle stellingen uit groep A op zijn.
4. De respondent herhaalt de procedure uit stap drie, maar nu met de stellingen uit de groep "oneens" (B).
5. De open plekken in de tabel worden opgevuld door de stellingen uit de groep "neutraal"
6. De respondent checkt of de tabel goed is ingevuld.
7. De ingevulde tabel wordt vastgelegd door middel van een foto van de tabel.
8. In een verdiepend interview wordt de respondent gevraagd om zijn keuzes toe te lichten voor stellingen in de categorie +4 en -4 en daarnaast voor twee stellingen naar keuze.
9. De respondent wordt gevraagd of er een belangrijk aspect ontbreekt in de set stellingen naar zijn mening.

[4] Steps 2,3,4 and 5 are according to Coogan, Herrington (2011).
Coogan, J., Herrington, N. (2011). Q methodology: an overview. Research in secondary teacher education, vol 1, no. 2, p 24-28.

Definities

- De *transformatie* betreft een transformatie van een industriegebied naar een gemixt woon-werk gebied.
- *Initiatieffase*: de fase de begint met het kenbaar maken van een wens om een gebied te transformeren en die eindigt met het bereiken van een samenwerkingsovereenkomst tussen partijen die samen verder de haalbaarheids- en ontwerpfase ingaan.
- Met "*alle partijen*" wordt bedoeld: de Gemeente, de grondeigenaar-gebruikers en de projectontwikkelaars.
- *Grondeigenaar-gebruikers* zijn partijen die zowel de grond bezitten, als deze gebruiken voor hun eigen onderneming.
- *HetF proces* heeft betrekking op de samenwerking tussen de drie partijen. Alles wat tot het samenwerkingsproces behoort moet geregeld worden in de samenwerking tussen de partijen.
- *Het project* heeft betrekking op de totale transformatieopgave. Alles wat tot het project behoort, vormt samen de gehele businesscase.
- *Uitplaatsing*: het verplaatsen van bestaande grondeigenaar-gebruikers naar een alternatieve locatie buiten het plangebied waar zij hun bedrijf voort kunnen zetten.
- *Actief grondbeleid:* de gemeente koopt de grond, maakt deze bouw- en woonrijp en geeft daarna de grond uit aan derden.
- *Passief, faciliterend grondbeleid*: de gemeente beperkt zich tot het stellen van een planologisch kader d.m.v. het bestemmingsplan en de aanleg van openbare voorzieningen, waarvan ze de kosten verhaalt op de ontwikkelende partijen.
- *Zelfrealisatie*: een grondeigenaar realiseert zelf woningen (of vastgoed voor een andere functie) op zijn eigen grond.
- *Place-making*: een gezamenlijk proces waarbij bewoners, bedrijven en belanghebbenden samen een plek of gebied veranderen in een aantrekkelijk en aangenaam gebied om te verblijven met een unieke identiteit.
- *Herverkaveling*: het op een slimme manier ruilen van gronden en vastgoed tussen private partijen om nieuwe ontwikkelingen mogelijk te maken die door de huidige eigendomsstructuur worden belemmerd.
- *Revolverend fonds:* een fonds dat eenmalig gevuld wordt en waaruit vervolgens leningen uitgegeven kunnen worden die op termijn terugbetaald worden aan het fonds waardoor het geld weer beschikbaar komt voor nieuwe leningen.
- *Ontzorgen*: alles uit handen nemen van een partij A doordat een andere partij B alles regelt en partij A zich daardoor nergens druk over hoeft te maken en zich kan focussen op zijn eigen bedrijf.
- *Kwartiermaker*: een onafhankelijke partij die partijen met elkaar verbindt en de kar trekt in het proces om zo ontwikkelingen mogelijk te maken in een gebied.
- *Projectbureau*: een nieuwe organisatie die voor de duur van het project wordt opgezet en als doel heeft om door middel van sturing het project succesvol te realiseren.

Appendix 6: Method description and results factor extraction

This appendix shows the method description and results for the first four steps of the factor extraction analysis. The results of these steps are used for step six: the interpretation of the four factors and the definition of the four perspectives. Step six is shown in chapter 8.

The software programme PQMETHOD by Schmolck (based on the original programme by Atkinson) is used to analyse the Q-sorts. First, the statements and the Q-sorts are processed in the programme. Then, a correlation matrix is extracted. This matrix shows the level of correlation between all 28 Q-sorts. The degree of correlation can be interpreted as the degree to which the respondents share a similar perspective on the collaboration process in the initiation phase. Next, this correlation matrix is subject to factor analysis. Factor analysis aims to distinguish factors out of the correlation matrix. Factors are groups of Q-sorts that correlate with each other and therefore share a similar perspective. The aim of the factor analysis is to eventually identify how many truly different perspectives exist regarding the studied matter (Brown 1980, 1993). PQMETHOD will show the factor loading of each Q-sort which shows to which degree a Q-sort corresponds with a factor.

6.1 Step 1: Factor extraction

PQMETHOD offers three possibilities of extracting factors: via the Centroid analysis method, via the Principal Component Analysis and just manually. The goal of factor extraction is twofold (Watts, Stenner, 2012). Firstly, the aim is to extract factors that explain as much of the study variance as possible. This means the factors should explain as much as possible regarding the relations between the Q-sorts. Secondly, the aim is to identify patterns of similarity between the Q-sorts in order to group similar Q-sorts. In this way, factor analysis is a data reduction method that brings the 28 perspectives of the 28 Q-sorts back to a smaller number of factors that express the key viewpoints represented in the Q-sorts.

Centroid method

The Centroid method offers two methods for extracting the factors.

Firstly, the "Brown Centroids" theory that suggests a "magical number" of seven Centroids (factors) extraction (Brown, 1980). Brown (1980) has based this magical number on experience with Q-methodology and as a first step it is advised to take seven factors in order to preserve as much variance as possible. It is important to note that the composition of the extracted factors does not depend on the number of factors that is requested to be formed (Schmolck, 2014).

Secondly, Horst's Centroid method works following the theory of the limiting level of residual correlations. This theory says that the programme should stop with extracting new factors if the average correlation coefficient of the extracted factors becomes smaller than one divided by the number of statements in the Q-set (Horst, 1965). For this research, the average correlation coefficient of the factors should not be lower than (1/42) 0,024.

Principal Component analysis

The Principal Component Analysis (PCA) will deliver the mathematically optimal number of factors (Ramlo, 2016). PCA aims to transform a set of correlated variables into a set of uncorrelated variables (Landau, Everitt, 2004). In this case, the correlated variables are the Q-sets and the uncorrelated variables are the factors. The first factor will explain most of the variance and later factors explain the variance in a decreasing manner (Landau, Everitt, 2004). The factor extraction is based on the correlation matrix. PQMethod will always extract the maximum eight factors if PCA is performed.

Manually

Thirdly, the programme allows to manually determine the number of factors to be extracted, up to a maximum of eight factors (Schmolck, 2014).

Choice of extraction method:

Even though PCA will mathematically give the optimal factors, that does not automatically mean it also gives the best factors (Ramlo, 2016). PCA is focussed on extracting non-correlating factors with a descending order of variance explained by each factor. However, the aim of Q-methodology is to identify the main perspectives that are present in practice. The aim is therefore not to conduct a factor that explains a very high percentage of the variance, as is done in PCA, but to conduct factors that represent the different perspectives. Furthermore, centroid analysis has not one best solution and gives thereby room to the researcher to select those factors that best fit the specific situation (Stephenson, 1953). Therefore, the Centroid method is a better fit for this research. Table 11 shows the seven extracted factors when using Brown centroid method.

6.1.1 Results step 1: factor extraction

Table 10 shows the correlation matrix for all 28 Q-sorts. This correlation matrix is used as input for the factor analysis. The higher the correlation between two Q-sorts, the more similar the ranking pattern of the respondents who filled in those Q-sorts and therefore the more similar their perspectives are regarding the statements of the Q-set. The results of the first factor extraction cycle by using Brown Centroid Method is shown in Table 11. Table 11 shows seven factors and the corresponding factor scores of the 28 Q-sorts for each factor.

Table 10: correlation matrix of all 28 Q-sorts

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	100	56	28	22	28	31	24	30	28	28	33	39	21	23	1	28	29	34	47	44	35	44	23	26	38	28	14	7
2	56	100	27	12	33	31	19	6	36	13	29	8	15	30	-10	18	29	19	29	44	46	20	13	-3	19	10	31	21
3	28	27	100	43	14	16	38	34	43	14	8	1	31	11	7	-2	12	49	35	33	36	20	21	-3	18	23	1	12
4	22	12	43	100	24	32	28	54	53	31	36	44	34	10	14	31	-4	34	39	35	43	39	41	33	27	44	-34	13
5	28	33	14	24	100	44	23	16	28	37	17	16	41	28	26	27	21	14	36	63	54	50	47	31	39	23	11	31
6	31	31	16	32	44	100	29	10	36	24	38	24	31	24	2	23	23	21	40	48	54	59	31	26	21	28	11	19
7	24	19	38	28	23	29	100	26	47	20	-3	15	46	14	3	20	38	22	46	47	37	30	14	5	13	5	-1	17
8	30	6	34	54	16	10	26	100	21	3	2	17	18	15	21	12	11	39	39	35	27	18	14	11	32	19	-27	40
9	28	36	43	53	28	36	47	21	100	41	41	32	77	34	1	39	34	42	44	50	48	26	22	16	41	31	-9	18
10	28	13	14	31	37	24	20	3	41	100	45	39	51	8	4	46	35	37	46	47	39	27	28	35	30	51	5	22
11	33	29	8	36	17	38	-3	2	41	45	100	51	35	22	-2	52	17	22	54	33	50	24	4	34	17	32	-13	-8
12	39	8	1	44	16	24	15	17	32	39	51	100	32	8	16	38	14	27	48	39	27	25	26	53	36	44	-14	-7
13	21	15	31	34	41	31	46	18	77	51	35	32	100	19	17	46	36	50	46	56	49	22	39	27	37	25	-8	19
14	23	30	11	10	28	24	14	15	34	8	22	8	19	100	-2	8	41	2	28	37	27	5	5	21	22	3	29	27
15	1	-10	7	14	26	2	3	21	1	4	-2	16	17	-2	100	4	-10	15	6	9	13	4	46	28	48	1	-5	14
16	28	18	-2	31	27	23	20	12	39	46	52	38	46	8	4	100	33	26	24	23	29	9	9	37	10	24	-11	6
17	29	29	12	-4	21	23	38	11	34	35	17	14	36	41	-10	33	100	27	41	51	41	-5	-1	22	15	26	11	35
18	34	19	49	34	14	21	22	39	42	37	22	27	50	2	15	26	27	100	44	28	33	0	11	14	19	16	6	18
19	47	29	35	39	36	40	46	39	44	46	54	48	46	28	6	24	41	44	100	57	54	44	18	41	27	37	-9	14
20	44	44	33	35	63	48	47	35	50	47	33	39	56	37	9	23	51	28	57	100	61	37	38	30	44	38	7	37
21	35	46	36	43	54	54	37	27	48	39	50	27	49	27	13	29	41	33	54	61	100	43	34	21	45	19	2	27
22	44	20	20	39	50	59	30	18	26	27	24	25	22	5	4	9	-5	0	44	37	43	100	45	29	40	17	-8	2
23	23	13	21	41	47	31	14	14	22	28	4	26	39	5	46	9	-1	11	18	38	34	45	100	47	40	29	-1	28
24	26	-3	-3	33	31	26	5	11	16	35	34	53	27	21	28	37	22	14	41	30	21	29	47	100	21	31	-12	5
25	38	19	18	27	39	21	13	32	41	30	17	36	37	22	48	10	15	19	27	44	45	40	40	21	100	16	-5	11
26	28	10	23	44	23	28	5	19	31	51	32	44	25	3	1	24	26	16	37	38	19	17	29	31	16	100	-20	24
27	14	31	1	-34	11	11	-1	-27	-9	5	-13	-14	-8	29	-5	-11	11	6	-9	7	2	-8	-1	-12	-5	-20	100	14
28	7	21	12	13	31	19	17	40	18	22	-8	-7	19	27	14	6	35	18	14	37	27	2	28	5	11	24	14	100

Factor loadings of Q-sorts on unrotated factors from Brown's Centroid method

Table 11: unrotated factor matrix Brown Centroid factor extraction method

Q-sort	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
1	0.5622	0.1579	0.0510	0.0878	0.0218	0.0295	-0.2144
2	0.3927	0.2046	0.3506	0.3544	0.1481	0.1628	-0.2458
3	0.4159	-0.4361	0.2923	0.0226	0.1112	0.0820	-0.1798
4	0.6294	-0.3025	-0.2034	-0.2890	0.0922	0.0559	-0.2296
5	0.5934	0.3775	0.2603	-0.1407	0.1096	0.0190	0.0281
6	0.5573	0.2156	0.0926	0.0320	0.0303	0.0575	-0.1980
7	0.4585	-0.2808	0.2692	0.1443	0.0687	-0.0889	0.0227
8	0.4363	-0.3333	0.0676	-0.3028	0.0773	-0.2817	-0.1602
9	0.6985	-0.2750	0.0369	0.2329	0.0594	0.1269	0.1467
10	0.5885	0.1318	-0.2271	0.1167	0.0532	0.0127	0.2124
11	0.5128	0.1088	-0.4443	0.3699	0.2046	0.2393	-0.1827
12	0.5376	0.0606	-0.4689	-0.0159	0.1252	0.0035	0.0290
13	0.6909	-0.1697	0.0262	0.1444	0.0218	0.1016	0.4893
14	0.3200	0.1775	0.2370	0.1712	0.0578	-0.1856	0.0099
15	0.2028	0.0143	0.0498	-0.4963	0.1035	0.1253	0.3424
16	0.4621	0.0168	-0.2970	0.1956	0.0758	0.0623	0.1897
17	0.4408	0.0753	0.0840	0.4393	0.1120	-0.5360	0.2502
18	0.4819	-0.3373	0.0281	0.1714	0.0620	0.1393	0.0692
19	0.7422	-0.0649	-0.0802	0.1397	0.0187	-0.1771	-0.1795
20	0.7942	0.1208	0.2119	0.0273	0.0258	-0.2007	0.0038
21	0.7409	0.0561	0.1868	0.0937	0.0203	0.1197	-0.1136
22	0.5010	0.0995	0.0065	-0.1423	0.0125	0.2099	-0.3046
23	0.4961	0.1907	0.0711	-0.5277	0.1440	0.1784	0.1406
24	0.4771	0.2609	-0.3385	-0.1798	0.1174	-0.0572	0.1680
25	0.5376	0.1165	0.1928	-0.2910	0.0523	0.2076	0.0806
26	0.4880	0.0131	-0.3372	-0.0486	0.0644	-0.0897	-0.0184
27	-0.0249	0.2998	0.3799	0.2969	-0.1527	0.0683	0.1265
28	0.3180	0.0385	0.3289	-0.0748	0.0424	-0.3253	0.0668
eigenvalue	7.8339	1.2575	1.6407	1.6535	0.2356	0.8995	1.0318
% explained variance	28	4	6	6	1	3	4

6.2 Step 2: Factor selection

Both PCA and Centroid will be used as factor extraction methods in order to use the different selection criteria to determine which and how many factors should be selected. However, for the further analysis, the centroid extracted factors will be used as shown in Table 11.

Deciding on the number of factors to keep from PCA can be done by following one of the following three rules (Landau, Everitt, 2004):

- Retain that number of components that together explain 70 – 90 % of the variance. Because the components are mutually independent, this is simply a matter of adding up the individual percentages of variance explained by a factor, the factor's eigenvalue.
- Exclude components with a variance or eigenvalue less than one, the Kaiser-Guttman criterion (Kaiser, 1960,1970; Guttman, 1954). Because the variables are standardised, every factor will automatically add a variance of 1. So, factors with an eigenvalue lesser than one, explain less variance than they add.
- Plot the explained variance of each extracted factor as a scree diagram. A scree diagram shows the explained variances or eigenvalues of the factors as a line diagram. The number of factors to be selected is indicated at the point where the line bends.

Watts and Stenner (2005, 2012) suggest the following two requirements to determine the number of factors to be selected for factor interpretation when using centroid analysis:

- Select only those factors with an eigenvalue higher than one, the Kaiser-Guttman criterion.
- Select only those factors on which at least two Q-sorts load significantly. Loading significantly implies that the factor loading of a Q-sort on that factor should be equal or greater than $1{,}96 * \left(\frac{1}{\sqrt{n}}\right)$ with a significance level of p<0,05, with n = number of statements in the Q-set (Brown, 1980, p. 222-223). For this research, n=42, these factor loadings should be equal or higher than 0,302 (p<0,05). What matters is the absolute factor loading, so regardless of the sign of the loading.
- Extract one factor for every 6-8 participants. Watts and Stenner (2012) advise this rule of thumb, based on their extensive experience of performing Q-methodology. For this research, 28 participants, this would imply four to five factors.
- Humprey's rule: "a factor is significant if the cross-product of its two highest loadings exceeds twice the standard error" (Brown, 1980, p.223). The standard error is calculated as follows: $\frac{1}{\sqrt{n}}$ with n = number of statements in the Q-set (Brown, 1980, p. 222). So, for this research the standard error is $\frac{1}{\sqrt{42}}$ = 0,189. So, the limit is 2 * 0,154… ≈ 0,309.

Additionally, Watts and Stenner (2012) also suggest the usage of a scree diagram, similar to Landau and Everit (2004). However, Watts and Stenner (2012) stress that in that case, first a PCA has to be done and then the number of extracted factors should be determined using the spree diagram. Then, the number of factors at which the line bends, can be used as the number of factors that needs to be used from the centroid analysis.

Factor diagram

A factor diagram is used to determine the optimal number of factors to select for the interpretation phase (Goldberg, 2016). The diagram shows the hierarchical structure between separately performed factor extractions. Applying Goldberg's factor diagram (2006) to the performed Brown's centroid extraction method, implies the following procedure (Sleenhof, 2016; Di ruggero, 2014). Firstly, only one factor is derived and the factor is kept unrotated. Secondly, in a separate analysis, two factors are derived using Brown's Centroid extraction method, after which they are rotated to optimise the factor loadings on one factor, using the varimax rotation method in PQMethod. Thirdly, three factors are extracted and rotated and this procedure continues until seven factors are extracted and rotated. The number seven is based on Brown's conclusion that there are rarely more than seven different factors in Q-methodology (1980). Each level of the factor diagram is built up out of the significant

factors resulting from the factor extraction. A *significant factor* is defined as follows: *a factor that has an eigenvalue greater than one and has at least two factor loadings that exceed the significance level of 0.302 (P<0,05*). The width of the boxes represents the percentage of explained variance of the perspective factor. The arrows between the boxes represent the significant correlations between factors of successive extraction analysis. Significant correlations are defined as a correlation coefficient larger than 0,302 at the significance level p<0,05.
The factor diagram graphically shows at which point the correlation between successive extracted factors is that high that a factor extraction with more factors does not add any value. Brown (1980) has proved that the correlation between two Q-sorts that are sorted by the same respondent with the exact same Q-set is approximately 0.80 or higher. Therefore, correlations between successive factors that exceed this 0.80 boundary, indicate that the factors cannot be interpreted as different perspectives

6.2.1 Results step 2: factor selection

This paragraph shows the verdicts of the selection criteria regarding the number of factors to select.

Overview verdicts selection criteria

Centroids method results:
Brown: This extraction method delivers seven factors.
Verdict selection criteria centroid:
Eigenvalue: when only the factors are selected with an eigenvalue higher than 1, five factors remain: factor 1,2,3,4 and 7.
Significant factor loading: when looking at the absolute factor loadings, factor 1,2, 3, 4 and 7 have at least two Q-sorts loading significantly (|factor loading| > 0,302) with a p<0,05. So, five factors would be selected based on this criterion.
Humphrey's rule would only select factor 1.
Watts and Stenner: four to five factors for 28 respondents, applying the rule of thumb to have a factor for every 6-8 participants.
Horst: Horst's criterion selects three factors.
Factor diagram: Figure 36 shows the factor diagram for the performed factor extractions from one up to seven factors. Factors 5/5 and 6/5, 6/6 and 7/5, 7/6 were not significant and are therefore omitted in the factor diagram. According to the factor diagram, the data allows for maximum 5 factors as the bottom row of the diagram shows. However, the fifth factor, factor 7/1 has significant correlations of respectively 0,48 and 0,32 which shows the limited added value of this factor (van Excel, de Graaf, Rietveld, 2011).

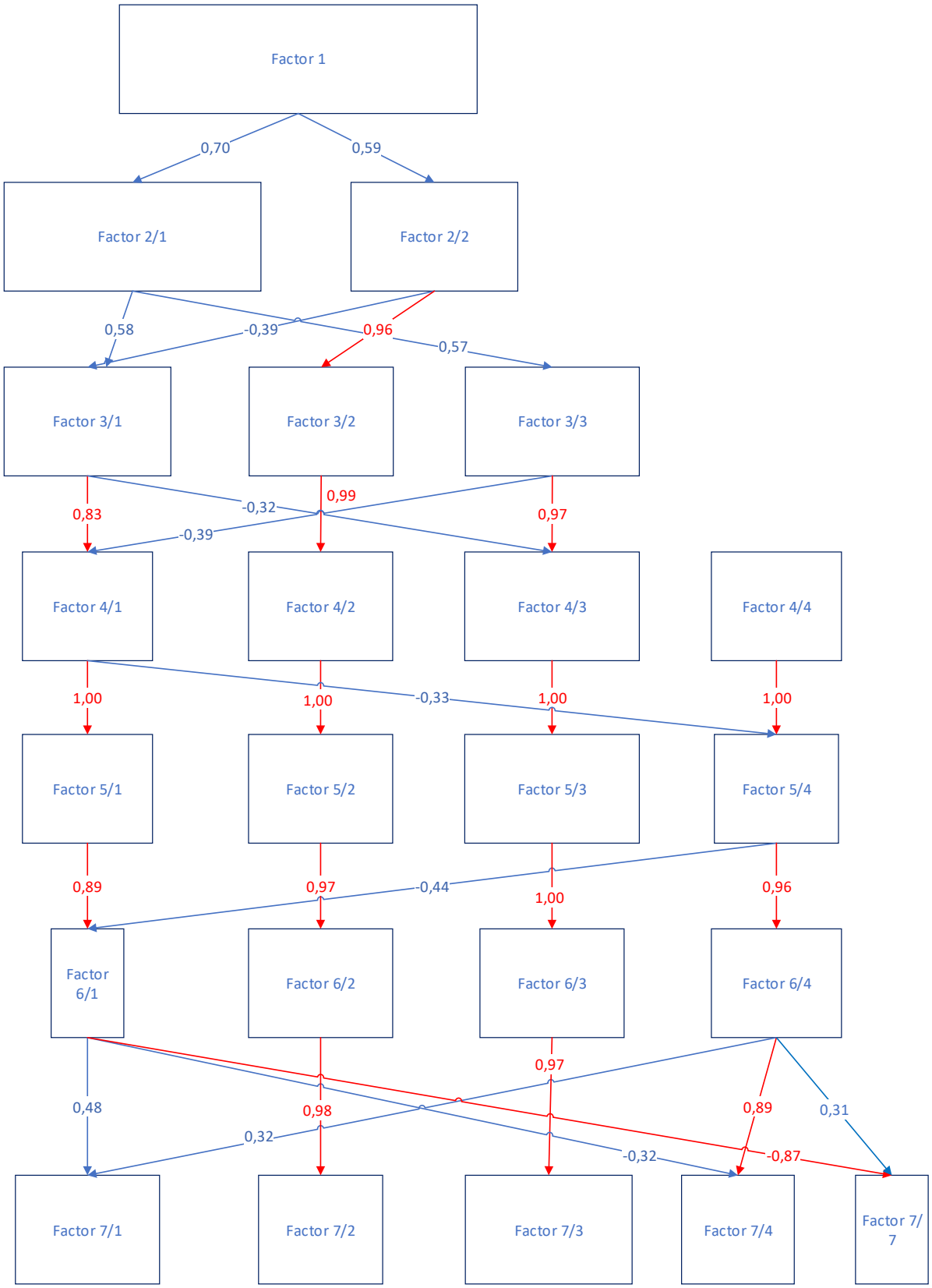

Figure 36: factor diagram successive factor extractions. The arrows indicate the significant correlation relations between successive extracted factors. Correlations >0,80 are pictured in red to show that two factors can be interpreted as similar. The numbers in the arrows represent the correlation coefficients between the factor scores of the respondents on the two factors. The width of the boxes represents the explained variance of each factor, the wider the box, the more variance the factor explains

PCA method results

Running the PCA extraction methods delivers eight factors.

Verdict selection criteria PCA:

Scree diagram:

The scree diagram clearly shows that the slope of the line through each factor's eigenvalue changes after factor two (Figure 37). This means two factors should be extracted according to the Scree test (Watts, Stenner, 2012).

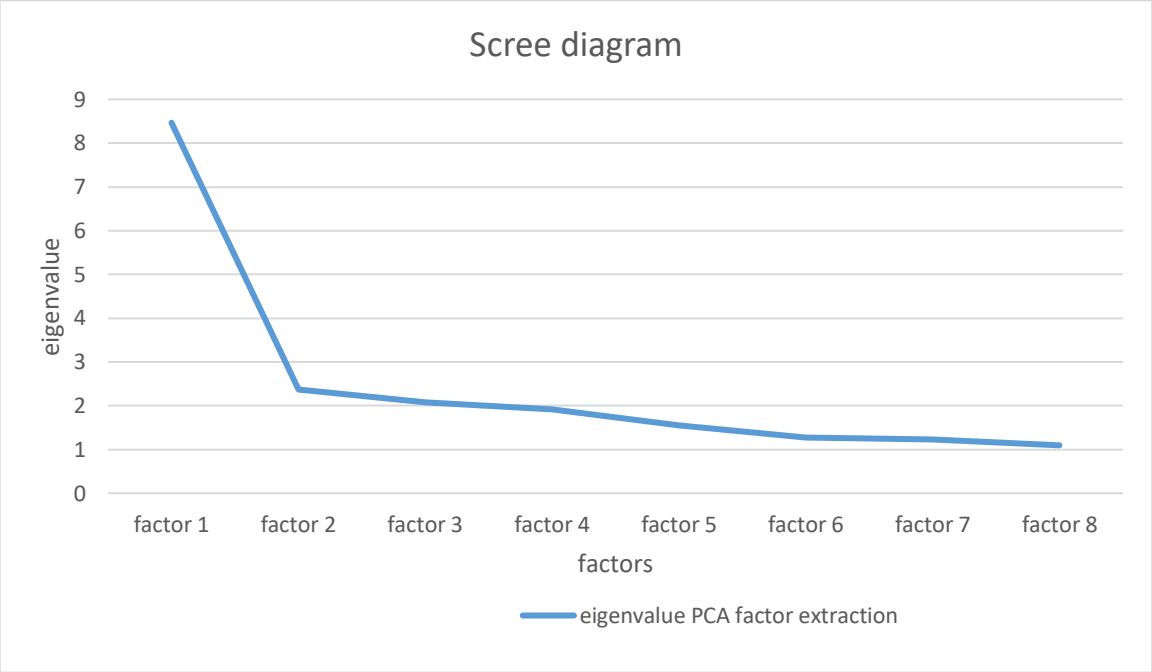

Figure 37: Scree diagram showing the eigenvalues of the factors extracted using the PCA extraction method

Table 12 summarises the results of all selection criteria regarding the number of factors to select and which factors from Table 11 that would be.

Table 12: overview results selection criteria factor selection

Selection criterion	Number of selected factors	Selected factors
Brown's magical number seven	7	1,2,3,4,5,6,7
Eigenvalue > 1	5	1,2,3,4,7
Two significant factor loadings	5	1,2,3,4,7
Humprey's rule	1	1
Watts, Stenner rule of thumb	4-5	1,2,3,4,(5)
Horst criterion	3	1,2,3
Factor diagram	5	1,2,3,4,7
Scree diagram	2	N.A.

Conclusion factor selection

The different criteria select a different number of factors ranging from one to seven factors. The choice has been made to focus on the criteria that relate to the specific Q-sorts, which means the criteria "magical number of seven factors" (Brown, 1980) and the rule of thumb by Watson and Stenner (2012) to select a factor for every 6-8 participants are left out when determining the final number of factors to use for the interpretation phase. This results in a spread of one to five factors. The average of all five remaining criteria would be 3,5 factors. Therefore, ultimately four factors are

selected because the factor diagram shows that the fourth factor clearly expresses a distinctive perspective based on the non-significant correlation of this factor with the other factors (see Figure 36). However, the potential fifth factor, factor 7/1, has significant correlations of respectively 0,48 and 0,32 which shows the limited added value of this factor, in accordance with Van Excel, de Graaf and Rietveld (2011). The fourth factor structure level has the highest cumulative explained variance in comparison to level five, six and seven (see Table 13). Therefore, factor 4/1, 4/2, 4/3 and 4/4 are selected for the interpretation step (see Figure 38). Table 14 shows the factor loadings, the percentage of explained variance and the eigenvalues of the unrotated selected factors.

Table 13: cumulative explained variance per factor structure level as presented in the factor diagram

factor structure level	Cumulative explained variance [%]
4	45
5	44
6	40
7	44

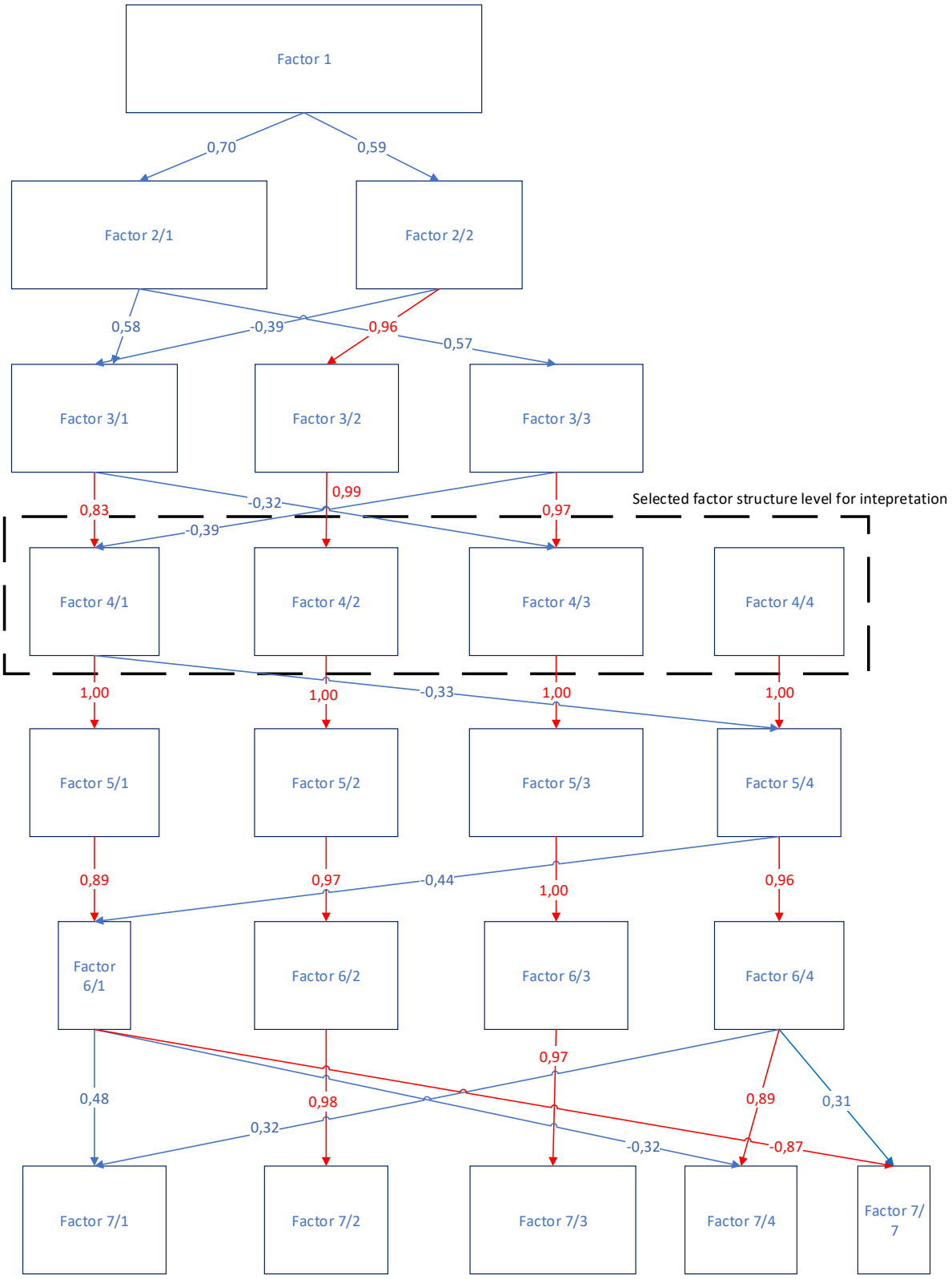

Figure 38: factor diagram for seven levels of factor extractions. The width of the boxes represents the explained variance of the factors. The arrows indicate the significant correlations between successive factors. The red arrows show factors that are similar to each other. The numbers represent the correlation coefficients between the factor scorers of the respondents on two factors. The dotted box shows the selected factor structure level for this research.

Table 14: unrotated factor scores, eigenvalues and explained variance per extracted, unrotated factor using Brown's centroid extraction method

Q-sort	Factor 1	Factor 2	Factor 3	Factor 4
1	0.5622	0.1579	0.0510	0.0878
2	0.3927	0.2046	0.3506	0.3544
3	0.4159	-0.4361	0.2923	0.0226
4	0.6294	-0.3025	-0.2034	-0.2890
5	0.5934	0.3775	0.2603	-0.1407
6	0.5573	0.2156	0.0926	0.0320
7	0.4585	-0.2808	0.2692	0.1443
8	0.4363	-0.3333	0.0676	-0.3028
9	0.6985	-0.2750	0.0369	0.2329
10	0.5885	0.1318	-0.2271	0.1167
11	0.5128	0.1088	-0.4443	0.3699
12	0.5376	0.0606	-0.4689	-0.0159
13	0.6909	-0.1697	0.0262	0.1444
14	0.3200	0.1775	0.2370	0.1712
15	0.2028	0.0143	0.0498	-0.4963
16	0.4621	0.0168	-0.2970	0.1956
17	0.4408	0.0753	0.0840	0.4393
18	0.4819	-0.3373	0.0281	0.1714
19	0.7422	-0.0649	-0.0802	0.1397
20	0.7942	0.1208	0.2119	0.0273
21	0.7409	0.0561	0.1868	0.0937
22	0.5010	0.0995	0.0065	-0.1423
23	0.4961	0.1907	0.0711	-0.5277
24	0.4771	0.2609	-0.3385	-0.1798
25	0.5376	0.1165	0.1928	-0.2910
26	0.4880	0.0131	-0.3372	-0.0486
27	-0.0249	0.2998	0.3799	0.2969
28	0.3180	0.0385	0.3289	-0.0748
Explained variance [%]	28	4	6	6
Eigenvalue	7,8339	1,2575	1,6407	1,6535

6.3 Step 3: Factor rotation

After the four factors are selected, factor rotation is performed in order maximise the level of variance that is explained by each factor (Watts, Stenner, 2005). This rotation implies that the factors are rotated in a two-dimensional space. In this two-dimensional space, all Q-sorts are placed and their position shows to what extent they load on the factors. By rotating the factors in this space, it will be possible to maximise the factor loading of one specific factor for a Q-sort, while minimising the loading of that Q-sort on another factor. In this way, it is clearer which Q-sorts load on which factors and subsequently, which respondents share a similar perspective (Exel, van, Graaf, de, 2005). Because the factors in Brown's Centroid method are extracted independently, factors do not change when the number of extracted factors change. For factor rotation, the number of factors that are rotated does matter. A rotation of two factors will result in different rotated factor loadings than would be the case of the same two factors are rotated together with one more factor.

PQMethod offers two ways of factor rotation: manual rotation and Varimax rotation. Varimax rotation will give the mathematically superior solution by providing the factor rotation that results in the rotated factors maximally explaining the variance (Watts, Stenner, 2015). Therefore, varimax rotation is the best method because it will optimise the variance explained by the chosen factors

6.3.1 Results step 3: Factor rotation

Factor 4/1, 4/2, 4/3, 4/4 have been rotated using the Varimax rotation method. This method optimises the division of the Q-sorts over the four factors. This implies that it maximises the loading of a Q-sort on one factor and minimises the loadings on the other three factors. The results of the varimax rotation is shown in Table 15.

6.4 Step 4: Exemplary Q-sorts of selected factors

When multiple factors load significantly on a factor, PQMethod will construct a weighted average of these factors to construct "a factor exemplifying Q-sort which serves as an interpretable 'best-estimate' of the pattern or item configuration which characterises that factor" (Watts, Stenner, 2005, p82). So, in the end, each factor has its own exemplifying Q-sort that can then be interpreted in the interpretation step. Table 1 in chapter 8 shows the statement scores for each factor.

6.4.1 Results step 4: Exemplary Q-sorts of selected factors

For each factor, the Q-sorts were "flagged" that *load significantly on the factor (p<0,05)* and *the Q-sorts that explain more than half of the common variance*. This means that "the square of the loading on that factor exceeds the sum of the squares of the factor loadings on the remaining factors" (van Excel, de Graaf, Rietveld, p. 388). Such a Q-sort is called a defining Q-sort. This shows that that a specific Q-sort loads clearly more on one factor than on the other three, meaning it is a good Q-sort to define the respective factor it is flagged for.

The idealised Q-sorts for each factor, the Q-sort of a respondent who would load 100% on that factor, is based on the average of the Q-sorts that are flagged for that respective factor and is called a factor array.

Table 15 shows the result of the Varimax rotation and flagging procedure. Factor 1 is defined by four respondents, factor 2 by six, factor 3 by seven and factor 4 by three.

Table 15: factor loadings after Varimax factor rotation; the bold factor scores denotes a flagged Q-sort

Q-sort	Factor 1	Factor 2	Factor 3	Factor 4
1	0,3662	0,1918	0,3607	0,2243
2	**0,6319**	0,1858	0,1032	-0,0099
3	0,1078	**0,6489**	-0,028	0,1248
4	-0,1833	0,4728	0,4227	0,4204
5	0,5104	0,0636	0,2174	0,52
6	0,3932	0,148	0,3256	0,29
7	0,2504	**0,5564**	0,0701	0,0721
8	-0,1176	**0,4723**	0,0963	0,3893
9	0,2474	**0,6216**	0,4092	0,0629
10	0,2109	0,1508	**0,5815**	0,1535
11	0,1615	0,1004	**0,7438**	-0,1402
12	-0,0524	0,0955	**0,6843**	0,1808
13	0,2523	**0,5195**	0,4121	0,1559
14	**0,436**	0,1139	0,0959	0,0844
15	-0,1225	0,0448	-0,0156	**0,5223**
16	0,0984	0,167	**0,5501**	-0,0091
17	**0,4632**	0,2487	0,3228	-0,1392
18	0,0989	**0,5485**	0,2561	0,0016
19	0,2618	0,4319	**0,5395**	0,1865
20	0,5	0,3798	0,368	0,4016
21	0,4623	0,4049	0,3559	0,3024
22	0,1766	0,1645	0,2943	0,3692
23	0,0787	0,0586	0,1766	**0,7247**
24	0,031	-0,0792	**0,552**	0,3614
25	0,2394	0,204	0,1519	**0,55**
26	-0,0336	0,1408	**0,5417**	0,2001
27	**0,5164**	-0,1057	-0,1736	-0,1223
28	0,2991	0,2183	-0,0511	0,2769
Explained variance [%]	10	11	14	10

6.5 Division three parties over perspectives

Figure 39 shows the defining Q-sorts for each perspective, ranked in descending order of their respective factor scores. The Q-sorts are categorised by the type of party they represent and to which case they belong.

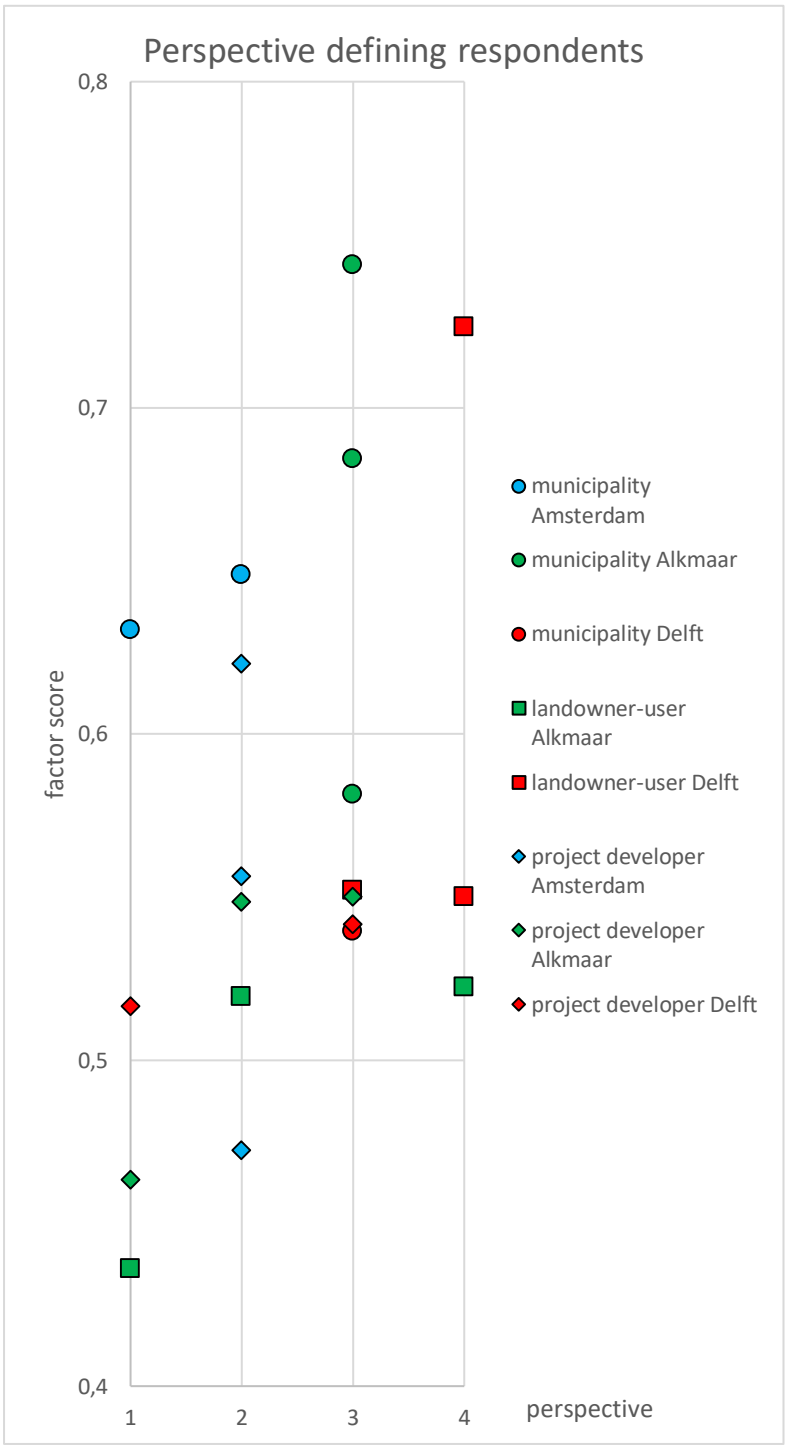

Figure 39: defining Q-sorts for every identified factor, sorted by the type of respondent and corresponding case

Appendix 7 Description of the four perspectives

This appendix shows in section 7.1 the full descriptions of the four perspectives. Section 7.2 summarises the most important factors for the recommended approaches for each of the four perspectives.

7.1 Full descriptions of the four perspectives

7.1.1 Full description perspective 1: The project developer led redevelopment

This perspective underlines the importance of a municipal spatial vison in the initiation phase because it provides certainty regarding the future for the current landowner-users (+4 statement 6, +4 statement 12). "*The municipal vision serves as a necessary framework that shows what the rules of the game are." "If you are located in the area as a landowner-user, then it is fair to know what you are up to." (Alkmaar project developer respondent 17) ."For us as entrepreneurs, it is crucial to know how long we can still execute our business activities and when we have to move." (Alkmaar landowner-user, respondent 14*). "*Indistinctness evokes passive behaviour because no one is willing to invest." (Landowner-user Alkmaar, respondent 14, respondent 14).* However, a degree of flexibility in the plans is preferred over fixed plans (+2 statement 1). Flexibility in the form of a land-use plan that enables a soft transition is not desired (-2 statement 41). Collaboration is valued as a crucial condition to accelerate the process. This implies that as much as possible needs to be arranged within the interactions between all three parties, such as the relocation of the current landowner-users and the joint spatial vision (+3 statement 4; +3 statement 13). However, the most important aspect of such a joint spatial vision is to have a common goal to strive for and not to let landowner-users have a major say in the spatial plans (-1 statement 23; +3 statement 13). Individual profit maximisation does not prevent a fast collaboration (-3 statement 2). *"Once everybody sees an opportunity to make money, there is a joint interest in making the redevelopment happen." (Delft project developer, respondent 27)*

The role of the municipality is limited to a facilitating role that requires a minimal municipal financial investment. Therefore, the municipality should apply facilitating land policy (+3 statement 30, -4 statement 29). "*The Amsterdam municipal policy is to only acquire land if that is needed to realise high quality public space." "The Amsterdam municipal development strategy is to evoke private initiatives and therefore a passive municipal role is required." (Amsterdam municipality respondent 2*). "*Acquiring lands is not the task of the municipality, they would only hinder the private parties in this way*." (*Alkmaar project developer respondent 17*). Additionally, the municipality should not guarantee to contribute financially to the business case of private partiers (-4 statement 32). "*It is not right to use public money for this matter." (Alkmaar project developer, respondent 17). "It is the business risk private parties should take, that is their responsibility." (Delft project developer, respondent 27).* Furthermore, the municipality should not fulfil the leadership role, but rather a facilitating role to support the leadership role of the project developer, who should be the only leader in the collaboration process (-3 statement 17; 3 statement 18; -1 statement 19). The role of the project developer is therefore not limited to profit maximisation for himself (-2 statement 20) but includes the leadership role in the collaboration process (+3 statement 18), a major say in the spatial plans for the area (+2 statement 24) and offering an alternative location (+1 statement 25). Flexibility in roles is not preferred (-2 statement 22). This perspective takes the interests of the current landowner-users serious. It clearly disapproves expropriation (-3 statement 31) and buying out of the landowner-users (-3 statement 10) because this perspective does not see the necessity for living and industrial industries to be spatially separated for a successful redevelopment (-2 statement 14). However, this does not necessarily imply that landowner-users should have the monopoly rights to decide whether they are staying or not (-1 statement 27) or that they should have a major say in the spatial plans for the area (-1 statement 23). "*Sometimes relocation is necessary because the current use of the area prevents a safe and good residential use" (Amsterdam municipality, respondent 2*). "*If landowner-users would have a major say in the spatial plans, they would all want a*

big apartment block planned on their plot because that maximises their land value. In this way, the process is not accelerated." (*Delft project developer, respondent 27) "A major say for the current landowner-users is not relevant if they are nuisance producing firms because they need to sell their land before residential use is possible." (Alkmaar landowner-user, respondent 14*). The landowner-users could however be supported in the process by the expertise of the project developer and municipality (+1 statement 28).
Re-allotment is valued as a necessary instrument to deal with the fragmented landownership structure (+2 statement 40). *"Re-allotment is necessary to enable area development as a whole and not just small developments." (Amsterdam municipality, respondent 2)*. Place making is considered a necessary instrument as well (+2 statement 36).

7.1.2 Full description perspective 2: the municipal led process

This perspective sees a clear, municipal vision as the most important aspect for accelerating the collaboration process (+4 statement 12; +4 statement 6). "*Everybody looks at the municipality to shape the plans*."(Amsterdam municipality, respondent 3). "*The municipality vision has to guide the spatial plans. The task of the private parties is to determine whether they are feasible." (Amsterdam project developer, respondent 7*). "*The municipality is the only party who safeguards the overall public interest while private parties only strive for their own interests and therefore it is crucial that the municipality makes the spatial vision." (Amsterdam project developer respondent 8)*. "*The municipality has the power to change the land-use plan or expropriate landowners and therefore, it only makes sense if they form the spatial plans because they can make them happen." (Alkmaar project developer, respondent 1*8). Clarity and certainty regarding the future redevelopment plans and the role division are highly valued (+4 statement 6; -2 statement 1; -2 statement 22). *"Clarity is the most important because once it is clear what the plan is, everybody can get to work" (Amsterdam municipality, respondent 3)*. *"Clarity means speed, indistinctness means discussion and delay." (Amsterdam project developer, respondent 9).* A strong municipality and a municipal leadership role is deemed to be better to accelerate the process than a strong project developer influence in the process. The municipality should take the leadership role, while the project developer only has a say once they own land in the area and a big project developers' say in the spatial plans is not considered crucial to accelerate the process (-4 statement 18; +2 statement 17; +2 statement 21; +1 statement 24; -3 statement 19). "*Private parties without land should have no place whatsoever in the process." (Amsterdam project developer, respondent 7)*. The strong position of the municipality is underlined by the desired active, municipal land policy (+3 statement 29; -3 statement 30). "*Creating quality is the most important, so if the market stays behind on this matter, the municipality should be prepared to acquire lands if that adds to the public quality of the area*." (Amsterdam municipality, respondent 3). "*Active, municipal policy shows that the municipality is determined to redevelop the area and this will create trust with project developers that the redevelopment will happen and will therefore result in a proactive attitude of the project developers." (Alkmaar landowner-user, respondent 13).*
However, the central role of the municipality does not include any financial contributions to the private business case of the project developer or subsidy (-2 statement 33; -4 statement 32; -2 statement 35). *"Making a positive business case is the responsibility of the project developer, it is his entrepreneurial risk." (Amsterdam municipality, respondent 3*). *A municipal financial guarantee will result in chaos and it is not a municipal task." (Amsterdam project developer, respondent 7)*. "*A redevelopment from industrial to residential use offers enough financial room to get a positive business case without public financial aid." (Alkmaar project developer, respondent 18*). Next to the central, municipal role, there is room for the other parties to contribute to the process. A strong collaboration between all parties, preferably lead by a project organisation, is a crucial aspect to accelerate the collaboration process (+3 statement 3; +3 statement 42). It is up to the municipality to connect all the parties with each in the collaboration (+2 statement 17). Individual profit maximisation doesn't have to hinder the accelerating effect of this collaboration (-1 statement 2).
The current landowner-users have a vital role in the process in this perspective. They should have the

choice to keep continuing their business activities in the new mixed work-residential area (+ 3 statement 27). This perspective says it is not necessary to spatially separate work and residential use (-3 statement 14). *"Because of technological innovations such as filters for polluted air and noise isolation methods, industrial use and residential use can be mixed." (Amsterdam municipality respondent 3).* The responsibility of project developers goes further than profit making (-3 statement 20). For the Amsterdam case this includes "*creating a high quality area, use of sustainable construction methods and materials and decontaminate the soil. It is reasonable to expect this from the project developers because the location of the Hamerkwartier is perfect in a very profitable market, so they can be expected to make enough money to invest in quality and sustainability and societal value." (Amsterdam municipality respondent 3*). "*Sustainability is also the responsibility of the project developer (Amsterdam project developer respondent 9)*. Place making and pioneers are seen as crucial policy instruments to accelerate the process (+2 statement 36; +2 statement 37).

7.1.3 Full description perspective 3: the joint commitment process

Flexibility regarding the redevelopment plans is a crucial aspect for acceleration (+4 statement 1). It is accepted if this implies less clarity for landowner-users (+1 statement 6). "*Experience shows that plans have to be flexible in order to adapt to changes that are certain to happen because of the long duration of the whole process." (Alkmaar municipality, respondent 11)*. The value of flexibility is also valued in providing a land-use plan that allows for a soft transition between industrial and residential use (+2 statement 41). "*The flexible land-use plan is crucial because it allows parties that are eager to develop to start already, while other parties who aren't ready yet or do not feel the pressure yet, can wait." (Delft project developer, respondent 26)*. Also, flexible roles are valued as effective (+1 statement 22).

Striving for (individual) profit is a big obstacle when trying to accelerate the collaboration process and should be prevented (+3 statement 2; +3 statement 3; -4 statement 20). The focus should be on feasibility of the project, which goes much further than profitability only (+3 statement 3). "*Not everything is about money, you have to look at what the city needs. Only then, society can be improved." (Alkmaar municipality, respondent 12)*. A strong collaboration in which all parties are transparent about their interests is crucial to accelerate the collaboration process (+3 statement 4; +4 statement 15). "*Only when you are truly transparent to each other, you can commit yourselves jointly to goal and you are able jointly enjoy the advantages and jointly bear the disadvantages." (Alkmaar municipality, respondent 12)*. "*Openness creates trust that is essential when collaborating." (Delft landowner-user, respondent 24*). Relocation of landowner-users is a much more important aspect in the collaboration than in the other perspectives. This perspective is indifferent regarding the statement that landowner-users should have the choice to stay (0 statement 28). A possible relocation of current landowner-users should be part of the collaboration process and should be arranged early on (+2 statement 8; +2 statement 9). Offering an alternative location is not the sole responsibility of the project developer or the municipality (0 statement 25; -2 statement 26). Even though relocation should be a part of the process, landowner-users also do not have to leave the area per se by being bought out or expropriated (-3 statement 10; -2 statement 31). This perspective does not provide a clear approach on whether landowner-users should stay or go. Landowner-users who redevelop their plots themselves is not seen an accelerating instrument (-2 statement 34)."*This would lead to undesirable plot wise development and not a coherent, comprehensive are development."(Alkmaar project developer, respondent 16).* "*Landowner-users lack the experience and expertise to develop themselves so it will not result in an acceleration in comparison to a project developer executing the redevelopment." (Delft municipality, respondent 19*). Living and industrial activities also do not have to be spatially separated (-3 statement 14). *"The functional mix is the strength of the redevelopment process. It brings liveliness to the area and creates and interesting and sparkling environment." (Alkmaar municipality, respondent 11).* The task of the project developers includes therefore more than only profit maximisation. *"It is the responsibility of the project developers to create a lively environment that offers more facilities and services than just dwellings."*

(Alkmaar municipality respondent 11). *"The continuation of high quality urban area development is also important, as long as the project developer does not lose money." (Alkmaar project developer respondent 16).*
This perspective does not identify a clear-cut role for the municipality. Passive municipal land policy is certainly not preferred (-3 statement 30), but a pure active municipal land policy neither (-1 statement 29). In contrast to the other perspectives, this perspective does not see a municipal spatial plan as crucial for the acceleration (-1 statement 12). *"A municipal vision is sensitive to political shifts and is subject to changes." (Alkmaar municipality, respondent 12)*. This perspective doesn't value the leadership role as a crucial aspect for acceleration (0 statement 17; 0 statement 19). However, it does not agree that the project developer takes the leadership role and the municipality a facilitating role (-2 statement 18).
Project developers can be involved in the process before they actually own a plot in the area (-2 statement 21), however they should not have a major say in the spatial plans (-1 statement 24). *"Project developers know very well how the housing and developing market works and therefore they can spot opportunities and make parties enthusiast for the redevelopment." (Alkmaar municipality, respondent 12).*
This perspective strongly disagrees that the acquiring of land is just a financial negotiation between two private parties that will always lead to an agreement because the parties would understand each other interests because of being both entrepreneurs (-4 statement 11). "*Emotions, feelings and past experiences greatly determine the outcome of such a negotiation process." (Alkmaar municipality, respondent 10)*.
This perspective attaches more value to financial instruments than the other perspectives. Firstly, providing a subsidy to support a landowner-user to leave is preferred over finding an alternative location for the landowner-user (0 aspect 25; -2 aspect 26; 2 aspect 33). Secondly, a revolving fund is seen as a potentially accelerating instrument (+1 statement 35), while the other perspectives do not. However, the municipality shouldn't contribute financially to the business case of the project developer (-3 statement 32). Lastly, place making is valued as a crucial instrument to make the area attractive for residential use and is therefore necessary to accelerate the process (+3 statement 36).

7.1.4 Full description perspective 4: anti-redevelopment attitude: landowner-users first

This perspective is very clear about the central position of the landowner-users in the process. They should have the choice to continue their business activities and they should not be expropriated, bought out or relocated (+4 statement 27; -4 statement 10; -3 statement 31; -2 statement 8). *"I paid a lot to get the perfect location with great visibility to attract potential customers. The most important thing is that I can stay and keep continuing my business at this location." (Alkmaar landowner-user, respondent 15)*."*I am the landowner, so I decide what happens with my land." (Delft landowner-user, respondent 23)*. The landowner-users should have a major say in the spatial because the starting point is that they will stay and therefore they need to have a voice in what is going to happen in order to safeguard their interests. (+4 statement 23). This perspective does not trust or see a role for the project developers. A leadership role for project developers or project developers having a say in the spatial plans are clearly rejected (-4 statement 18; -3 statement 24). "*Project developers are not long term committed to this area and therefore they do not take the interests of current landowner-users into account." (Alkmaar landowner-user, respondent 15)*. "*There is only a role for a project developer once the municipality and landowner-users agree on what should happen." (Delft landowner-user, respondent 23)*. Only if relocation is inevitable, the project developer needs to offer an alternative location for the landowner-user and not the municipality (+3 statement 25; -2 statement 26). The project developer should not be focussed on its own profit (-3 statement 20). The leadership role should at least be shared amongst all parties (+2 statement 19), but based on the fact that the project developers should not have the leadership role, the leadership should in hands of the municipality and the landowner-users. However, because the landowner-users need to focus on their own business operations, they should be supported by either the municipality and

project developers or an external expert (+3 statement 28; +3 statement 38). Industrial and residential use needs to be separated spatially because residential use will cause nuisance for the landowner-users (+2 statement 14). Transparency regarding everybody's interest is important, as well as a municipal vision for the area to provide certainty for the landowner-users (+3 statement 6; +2 statement 12; +2 statement 15). Because this perspective wants the keep the current situation as intact as possible, revolving funds or land-use plans that eventually result in a residential area are not desired (-3 statement 35; -2 statement 41).

7.2 Recommended approaches per perspective

For each of the four perspectives, an overview table of the most important factors that characterise the recommended approaches of each perspective in the building block approach model, is listed here. These factors are structured along the trichotomy of process, organisational and instruments. Table 7 in chapter 13 "conclusions and practical recommendations" shows the consensus factors and therefore they are not mentioned again in this appendix. Only when one perspective attaches clearly more value to a consensus factor than the other perspectives, the factor is mentioned again.

*Table 16: overview of the identified important factors for **perspective 1 "the project developer led process"**, categorised in do's and don'ts for the three factor categories process, organisational and instruments*

Perspective 1: the project developer led process

process	organisational	instruments
Do's		
Municipal vision is necessary	Project developer has the leadership and a major say in the spatial plans	
Clear vision necessary to provide clarity about the future and a goal towards which all partieswork jointly	Facilitating municipality	
Strong collaboration for optimal use resources	Landowner-users influence limited to their own plot related aspects, small role in the process	
Don'ts		
		No financial, municipal aid
		No active municipal land policy, but passive land policy

*Table 17: overview of the identified important factors for **perspective 2 "the municipal led process",** categorised in do's and don'ts for the three factor categories process, organisational and instruments*

Perspective 2: the municipal led process

process	organisational	instruments
Do's		
Strong collaboration for optimal use resources	Municipal leadership	Active municipal land policy
Landowner-users should have choice to stay	Project developer should focus on execution along municipal guidelines	Project organisation with all parties to steer process
Municipal vision necessary		
Clear vision necessary to provide clarity about the future		
Don'ts		
No strict separation residential and industrial use		No financial, municipal aid

*Table 18: overview of the identified important factors for **perspective 3 "not one size fits all: the joint commitment process**, categorised in do's and don'ts for the three factor categories process, organisational and instruments*

Perspective 3: not one size fits all: the joint commitment process

process	organisational	instruments
Do's		
Flexibility is key	Leadership not important	Public financial instruments are desired (subsidy, revolving fund)
Strong collaboration for optimal use resources		Apply placemaking to attract new users to the area
Individual profit maximisation is destructive for process		
Transparency regarding interests		
Don'ts		
No strict separation residential and industrial use	No fixed role and task division	

*Table 19: overview of the identified important factors for **perspective 4 "landowner-users first",** categorised in do's and don'ts for the three factor categories process, organisational and instruments*

Perspective 4: landowner-users first

process	organsational	instruments
Do's		
Clear vision necessary to provide clarity about the future	Landowner-users' interests are most important	Landowner-users need to be represented by third party expert
landowner-users should have the choice themselves to stay in the area	Municipality and project developers need to support landowner-users and guarantee the continuity of their business activities in the area	Municipality and project developers need to lighten organisation burden for landowner-users by providing help, resources and information
Don'ts		
	No leadership role or say in spatial plans for project developers	No revolving fund