Recognizing Synergetic Conditions for Cohabitation

Proposing an Alternative Method for Acknowledging Local Level Potentialities into the Municipal Decision-Making Process
Colophon

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This thesis is a result of the graduation performed at the Faculty of Architecture of the TU Delft, Department Urbanism. In this thesis I will set out a proposal for an alternative approach towards an Urban Regeneration perspective of the Municipality of Rotterdam.

The city of Rotterdam is in the process of dealing with an economic transformation in order to facilitate a desired Knowledge and Service economy and to attract affluent residents to the city, however, it also faces high concentrations of vulnerable social housing and social issues in peri-urban neighborhoods surrounding the city center. The current Urban Regeneration perspective of the municipality of Rotterdam is aimed at transforming sections of the peri-urban to areas suitable for the affluent residents, but thereby neglects the potential of the current less affluent residents. The project that I have been developing for the past year, intends to demonstrate the importance of recognizing the needs and potentials of different uses and users of these peri-urban areas in relation to the public space. It shows a method in which conditions and requirements are proposed to facilitate synergetic conditions for cohabitation. The neighborhood of the Oude Westen has been put forward as a case-study for assessment and further development of an alternative approach towards an Urban Regeneration perspective for the municipality of Rotterdam.

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I. Introduction
Introduction
Problem Field

Parallel to or, more likely, part of this transformation are trends that support and contradict the effects of these developments.

Rotterdam is a city of more than 600,000 inhabitants that plays a major role in the logistics of import and export of goods of The Netherlands and Europe. Before and after the Second World War the city has seen rapid growth in population and in size (CBS, 2011). By annexing adjacent towns and municipalities and extending the harbor activities, the city became an attractive working-class city with the harbor as its main employment supplier, still responsible for the generation of 10% of the GDP (General Domestic Product). But since the rise of the modern technology and the de-industrialization the city has been faced with the need for transformation. While during the industrial period the cities dealt with the loss of middle-and higher-income residents to the surrounding regions, now a recovery is seen. These economic and technological transformations brought a need for a repositioning of the city in relation to the world economy in order to be able to compete on the constantly changing global market. This competitive edge comes, according to theorists, from the creative economy which today is an intricate part of the ‘service economy’. The attraction of creative firms and creative workers is therefore one of the main goals of postindustrial cities today. However, these social and economic changes that are proposed have major spatial consequences that are felt in all parts of the city (Priemus and Hall, 2004).

In the current processes of the Urban Regeneration program for Rotterdam the focus is on developing a social-economic highly competitive environment without considering the local.
**Introduction**

**Trends**

Where in the past we have seen a flight of the affluent people to the suburbs or smaller municipalities because of the often unattractive state and typology of housing of the inner city neighborhoods, now we can see a return of the affluent residents to the inner city due to the attractiveness of proximity (close to jobs, schools, commercial and public facilities). Although these families or single households have the liquidity (in the sense of mobility) to live outside the central city area (in the peri-urban neighborhoods), the trend has developed to return to the attractive dynamics of the neighborhood near the city center.

**Migration**

The Netherlands has always been an immigration country (with some exceptions over time) with currently a settlement surplus of approximately 16,000 new inhabitants a year (144,000 immigrant - 128,000 emigrants). In the 1960s and 1970s a surge of migrant workers were stimulated to work in cities like Rotterdam, primarily in the harbor or other lower skilled jobs. They lived in neighborhoods close to these employment facilities, which, in the case of Rotterdam, was mostly in the South. With the rise of de-industrialization the need for these types of jobs rapidly decreased, thereby leaving a large number of people in need of other types of employment, in most cases further away from their homes. Because in the current situation the job opportunities are not always near their homes, living in a highly connected and opportunity rich environment has become of major importance to these weaker inhabitants who are often not as mobile as opportunity rich residents.

The next paragraphs show the impact of these trends through the national and municipal visions and local perspectives.
Traditionally, Rotterdam has been a predominantly working-class city, although the port and the city have undergone major redevelopment after the bombing of the center during the Second World War. The relocation of the harbor and technological innovation left the city with high numbers of unemployment, particularly under unskilled workers, while at the same time migration of middle- and high-income/educated people to the growing suburbs and surrounding regions took place. During these times the focus of the municipality was primarily on the provision of adequate social housing and employment for their working-class inhabitants. Now that the societal trends are changing and the demand for adequate housing in the center for affluent households is increasing, the national government and municipality have changed their policies to fulfill this demand and strengthen their economic position. The vision for the Randstad (MVROM, 2008) has been largely adopted by the municipality of Rotterdam in their Urban Vision 2030 creating major strategic interventions to facilitate this social and economic transition. The municipality’s vision is focused on two elements: creating an attractive residential city and strengthening the international economic position.

As a result of the traditional function Rotterdam has as a working-class city, the city copes with a high percentage of lower educated and lower income inhabitants, especially compared to the other three major cities in the Randstad. This poses a threat to the realization of the future vision in which there is a need for more middle- and high-educated people. To facilitate this need the municipality proposes a strategy of gentrification (Rotterdam, 2007), providing adequate housing and environment for the affluent or ‘opportunity rich’ people. A spatial planning perspective which entails a spatial and social transformation process in the peri-urban neighborhoods: transforming social housing buildings into single family homes or large apartments for higher purchasing power groups.

The vision clearly indicates a tendency of the municipality to focus on the regional/national and international position of the city. Socially: by attracting more middle- and higher-educated/ income households who often have broader social networks than residents of deprived neighborhoods (Reijndorp 2004). Economically: by attracting international firms to the RCD, internationally renowned architecture and studentification (high skill development). What becomes apparent in the implementation of this vision of the new center and, particularly of the peri-urban neighborhoods, is that it does not consider the spatial effects that could fragment the local scale/use of these areas for the original/current neighborhoods inhabitants. It prefers, and is spatially express towards the more affluent future residents, their spatial demands and potentialities, in detriment to the current users.

1 “Opportunities” and “potential” are important concepts in the legitimating discourse of gentrification. It delegitimises “opportunity poor” as inhabitants of the city and legitimises strategies to exclude whoever qualifies as such. Calculations of future potentialities are thus crucial in the social and spatial policies of today (Schinkel, 2009) in (van den Berg, 2011).
The economic restructuring, the growth of prosperity and the higher standards of living have had its effects on inner city neighborhoods creating current social problems but also current policies for social cohesion. Moreover, the increasing ethno-racial diversification of western societies contributed, together with the economic restructuring, to the emergence of easily identifiable and apparently self-explanatory social divisions.

Because social division is not only expressed socially and economically but also spatially, especially in the case of Rotterdam, the need for promoting social cohesion from the perspective of the municipality is high due to the issues economically poorer neighborhoods seem to develop. The existing arrangements to promote social cohesion, however, are not necessarily producing results that are equally beneficial for the different social contexts. In suburban middle-class context, for example, social cohesion can have substantial positive effect on issues such as improving the level of education, services and improving the built environment, creating an upgraded identity of place.

In poorer neighborhoods cohesion can be helpful for people to get by, but is usually no more than an asset in developing defensive strategies which do not bring these residents above their poverty level. (Maloutas and Pantelidou Malouta, 2004)

Even though there is evidence that the effects of social mixing in disadvantaged neighborhoods do not have significant impact on the economic position of the residents, the strategy is supported by a majority of residents . “Residents themselves come up with social mixing as a favorite living situation, compared with the current situation of dominance by some groups. They mention the demolition and new built houses for owner-occupiers as a measure to realize a neighbourhood that is also attractive for middle-income people and that attracts people that have jobs. It is not so much the idea of a higher status of middle-income households, as well that these households are decent people that will guarantee a better living environment.” (Ouwehand and Bosch, 2009)

However, generating conditions for cohabitation is not dependent on social mixing and diversification of the housing stock alone, a multi-facetted approach is needed. An important aspect in creating social cohesion is the potential of public space to facilitate conditions for interaction, which in the current spatial planning perspective of the municipality receives too little attention.

This thesis explores the promotion of cohesion linked to local social interaction through formal and informal networks, which, in fact, contributes to the reinforcement of social capital. Hajer & Reijndorp perceive the public domain as a space for cultural exchange between different social groups and actors, therefore as a favorable space for interaction and integration.
Neighbourhoods like the Oude Westen are areas which will experience extensive changes and pressures in the national and municipal vision because of the location, their demographic structure and the possible safety issues. The Oude Westen is a neighborhood adjacent to the central station and city center, with a high percentage of social housing (70%), a high percentage of unemployment and, according to the housing association and the municipality with use of the safety monitor (veiligheidsindex), the neighborhood is marked as a problem area (probleemwijk). A problem area constitutes social issues, lack of spatial quality, crime and safety issues, poor living conditions, etc. The ambitions of the municipality to strengthen the economic base, to increase residential attraction and decrease the social problems related to certain lifestyles in neighborhoods like the Oude Westen, in part led to the development of the current urban regeneration perspective or, as stated in the Urban Vision of the municipality, the gentrification strategy. The effects of the municipal strategies are twofold, gentrification as the direct effect and the intensification of the regional focus of the role of the Rotterdam center as the indirect influence.

The effects of both strategies are a two-sided coin. On the one hand, they improve or change the local spatial conditions creating higher quality housing and public space, but they also pose a threat to the position of the current weaker local inhabitants.

Whereas the goal of the municipality on the neighborhood scale is to increase social mixing and provoke integration between different "types" of residents, this type of gentrification strategy, according to critics, is far too limited to be able to create the required conditions for a social cohesive and integrated neighborhood. "It is ironic that a process that results in segregation and polarization - gentrification - is being promoted via social mix policies as the 'positive' solution to segregation" (Lees, 2000).

What is apparent in this situation, is that a distortion in the decision-making process has taken place. Namely, that the local stakeholders generally take the least important position in the current decision-making process.

Although there have been a number of community initiatives, local inhabitants have not been involved and have had no voice in the making of the development vision (Statistiek, 2010). A phenomenon which is a recurring problem in the planning and decision-making process of municipalities and housing associations at the municipal level. The result is that the strategy not only fragments the position of the current less affluent inhabitants in the future social, spatial and economic structure, but also within the initial decision-making structure.

The gentrification strategy tends to effect a wide scope of social, spatial and economic aspects, the primary effect tends to be people’s displacement, even though the social housing residents have quite extensive tenure rights (Kleinhans, 2003). The displacement does not take place in a single action by the housing corporation, but also takes place in later stages of the gentrification process by rising land values and rent prices (Uitermark et al., 2007, Atkinson, 2002) due to the increasing market pressures in the central areas. However, displacement is just one of the primary effects of the gentrification strategy.

In relation to the social transformation of the neighborhood, the literature shows that places with affluent residents attract higher-end shops and services, replacing local grocers for delicatessens, thereby possibly increases into the costs of living in such a neighborhood are constantly observed (Atkinson, 2000). As stated before, isolating the less affluent residents spatially by reducing the number of social facilities and decreasing public transport means acerbates the above described externalities.
Introduction
Problem Definition

Under the current developments of the municipality of Rotterdam and the societal and migration trend pressure is developing on the peri-urban neighborhoods like the Oude Westen owing to their high percentage of social housing, spatial quality and social issues.

In order to strengthen the city’s position on the national and global market and increase the residential attraction, strategies are imposed to attract more affluent and opportunity rich residents. The expectations are that Rotterdam will boost their professional workforce in the medical field, business and innovation sector, and creative industry, primarily in relation to professionals climbing the social ladder (students, graduates, young professional families following a services related economy program). The tendency is that these social climbers prefer living in an urban environment. The municipality has the ambition to house these young professionals in the inner city and attend to their needs for a dynamic center with regional orientation: the center of the South-Wing of the Randstad.

By housing and mixing these opportunity rich people in peri-urban neighborhoods with high percentages of social housing, unemployment and a variety of social issues, it is likely that parts of the neighborhood will improve in their social and spatial environment. However, due to the migrational trend it is not only the opportunity rich who desire or need to live in these highly connected areas but especially the weaker residents.

Under the current spatial strategic planning process of the municipality and the housing association gentrification and social mixing are seen as the main strategies to reach the goal of the Urban Vision 2030 and alleviate the social, spatial and economic issues in the peri-urban neighborhoods.

In this urban renewal perspective that is primarily defined by the transformation of the built environment, the municipality neglects to recognize the potential of the current inhabitants and the potential of the public domain, thereby creating the risk of fragmentation between residents instead of enhancing cohabitation.

In short: the urban regeneration agenda for central areas of the city is creating a distortion on the local neighborhood level. A distortion that does not provide or potentiate positive conditions for cohabitation between different income groups.
How to equilibrate the dynamic trend of gentrification, securing the position and potentialities of the less affluent residents in a/the residential neighborhood through a collective public space network?

Sub Research Questions

· What potentialities lie in the strategy of gentrification for current lower-income residents?

· What planning system(s) can facilitate the equilibrium on the spatial scale?

· How can the dynamic change of the center contribute (spatially, functionally) to the position of current residents of the neighborhood?

· How can a public space network contribute to the integration potentialities of the current and future residents of the neighborhood?
Introduction

Methodology

The sub research questions question the current position of the planning system of the municipality of Rotterdam which, due to the current strategy of gentrification, creates spatial fragmentation of the less affluent residents of an inner city residential neighborhood. By means of the research question an alternative, integrated planning approach for spatial integration of the current less affluent residents in a residential neighborhood is necessary, in order to secure the position of these less affluent residents.

The exploration consists, firstly, of the theoretical development of a research methodology in order to assess the different aspects of the current situation the Oude Westen neighborhood, which will determine what the current conditions in the neighborhood are.

This exploration is based on the previously described sub research questions characterized by Strategy, Planning, Inner City and Spatial Effects, and addresses three steps before exploring through a research by design process what an alternative strategy could be to achieve an equilibrium between the dynamics of the inner city and the position of the current residents.

The first step explores the consequences of the strategy of gentrification in relation to the current strategic planning perspective of the municipality. Followed by the development of positive conditions for cohabitation as a method for assessment, prescribing conditions that provide potential for cohabitation.

The second step is an exploration of the current situation of the municipality of Rotterdam and an assessment of the Oude Westen neighborhood through use of the proposed method framework on synergetic conditions for cohabitation.

The third step explores four scenarios where the issues of the Oude Westen from the previous step will be dealt with. Using the conditions for cohabitation as a guide for requirements, scenarios are developed under the current situation and the future societal trends. These scenarios lead to design guidelines for the Oude Westen which will be tested in a design in the fourth step.

The fourth step uses the design guidelines distilled from the scenario exploration into a design for the neighborhood showing a possible way how to equilibrate the dynamic trends in relation to securing the position of the current inhabitants, tailor-made for the Oude Westen neighborhood.

The final step will evaluate the design guidelines and the synergetic conditions for cohabitation method in the current decision-making process of the municipality and the housing association. Recommendations are made how to incorporate the design guidelines for the Oude Westen into the zoning plan and show how the conditions for cohabitation can be implemented into a possible revised decision-making process. This potentially increases the conditions for cohabitation in neighborhoods dealing with similar issues.
I. Introduction

Methodology Scheme

Current Policies
- Economic Competition
- Attractive Residential City

Current Issues
- Selective Out-Migration
- Non-Integrated Policies
- Local fragmentation

The urban regeneration agenda for central areas of the city are creating a distortion on the local neighborhood level. A distortion that does not provide cohabitation between different income groups.

Theoretical Framework
- Gentrification, Cohabitation Conditions, Territorial Cohesion

Analytical Framework
- Public Space Network

Theoretical Aim
- Determine parameters for synergetic conditions for cohabitation

Practical Aim
- Test the conditions for cohabitation under current and future situations

Research Question
- How to equilibrate the dynamic trend of gentrification, securing the position and potentialities of the less affluent residents in a/the residential neighborhood through a collective public space network?

Strategy
- What potentialities lie in the strategy of gentrification for current lower-income residents?

Planning
- What planning instrument strengthens the position of the lower income residents in the current dynamics of the city?

Spatial Effects
- How can a public space network contribute to the integration potentialities of the current and future residents of the neighborhood?

Inner City
- How can the dynamic change of the center contribute (spatially, functionally) to the position of current residents of the neighborhood?

Planning Instrument
- What planning instrument strengthens the position of the lower income residents in the current dynamics of the city?

Spatial Effects
- How can a public space network contribute to the integration potentialities of the current and future residents of the neighborhood?

Inner City
- How can the dynamic change of the center contribute (spatially, functionally) to the position of current residents of the neighborhood?

Research by design
- Literature research on gentrification process and effect (review paper) + conditions for cohabitation
- Literature research on integrative planning systems dealing with isolated/fragmented societies
- Demographic Research: Identifying the current and past social structure of the neighborhood
- Social Impact assessment: Identifying the impact of developments on the community
- Urban Morphology Study: Identifying historic development of the central area in relation to inner city neighborhoods
- Urban Morphology: Identifying historic development of the central area in relation to inner city neighborhoods
- Mapping development of the central area focused on function in relation to different scales

Research by design
- Urban Morphology Study
- Demographic Research
- Social Impact assessment

Scenario: Business as Usual
- Design Principles/Design

Scenario: Pedestrian Flows
- Recommendations for decision-making process

Scenario: Following Masterplan
- Assessment of current social and spatial conditions under the conditions for cohabitation

Scenario: Following Societal Trend
- Consensus as a basis towards cohabitation
II. Theoretical Research
In the following section we analyze the process and development of gentrification in order to understand its considerations and implications for a city, its neighborhood and its residents. By doing so we can investigate the risk of such a strategy/process in relation to the current trends, thereby assessing if these processes pose a risk for neighborhood conditions like in the case study of the Oude Westen.

Assessing the Risk of a Gentrification process

A Concept for Urban Regeneration

The positive gentrification process is thought to be an instrument for a municipality to control or alleviate social tension and restore neighborhoods to a climate of good liveability (Uitermark et al., 2007). In this sense it is used somewhat as a strategy for urban regeneration even though the effects of the gentrification strategy generally favor the future residents/gentifiers, and the economic development of neighborhood, city and region. Which means the people who may have to pay the price are the old residents with low income or in social housing, since they are directly affected by the consequences. In the next paragraph we will show that the local scale urban regeneration strategy of gentrification has been transformed by the municipality to be part of large scale economic visions to strengthen municipalities economically and demographically, thereby creating conflicts and distortions that need to be addressed. In this second section of the chapter we will discuss the importance of public space and the role it fulfills in creating conditions for better cohabitation among residents. And how the identity of a neighborhood and its inhabitants is expressed through the different dimensions of the public space and the importance of the expression to establish conditions for interaction and possibly integration of the different users.
Theoretical Research
Risk of a Gentrification Strategy
Evolution of gentrification in the Dutch Context

During the second wave of gentrification in the late 1980s the role of the private sector in the Netherlands remained limited due to the position of the housing associations which were still part of the public sector. Whereas in the rest of the world private investors were stimulated to invest rather than the government. There were initiatives to promote housing careers where residents were stimulated to move to better and more expensive accommodations, leaving cheaper subsidized housing for lower-income groups. (Stouten, 2010). However, these initiatives proved largely unsuccessful.

Evolution of gentrification in the Dutch Context
Since the first scientific observation of the gentrification process it has undergone transformations, not so much as to how it worked, as in the way it was used and governed by the public or private sector. Hackworth and Smith stated in their article "The Changing State of Gentrification" that gentrification today is quite different from what it was in the early 1970s, 1980s and early 1990s. To understand the changing role of the government and the private sector in this respect, it is necessary to understand the historical context. Slater defined three defining periods or waves since the discovery of the gentrification process, separated by two recessions. While in the UK gentrification during the first wave was highly localized and a somewhat discreet process, in the Netherlands huge urban regeneration programs were undertaken in the 1970s aimed at providing sufficient and adequate housing for lower income inhabitants. These programs were funded by the national government and developed by municipalities and housing associations that owned substantial areas of land, which they prepared for building and the allocation of which they controlled (Stouten, 2010). During this period gentrification was strongly and effectively opposed by the Dutch squatters movement, which helped create a decommodied housing stock that was accessible and affordable (Uitermark, 2009).
Theoretical Research
Assessing the risk of a gentrification strategy

Effects

Economic effects
Gentrification leads to increases in rent, home prices and land value, which is, of course, beneficial for housing associations and other home owners. Also, the prosperity of the newcomers sustains a better range of private retail outlets and services (Kearns and Mason, 2007). Unfortunately, these changes are unfavorable for the lower income residents. The introduction of better private retail outlets usually implies more expensive products and competition with existing lesser private retail. This makes daily life in the neighborhood more expensive and endangers the existing shop keepers who are dependent on local networks (Atkinson, 2002).

What is relevant for The Netherlands, is the report by OTB at the TU Delft. This report shows that incoming gentrifying residents in a regional and municipal scale create a pull factor for high-end innovative activity, they fulfil a demand for well-educated inhabitants (universities, schools, daycare, sports) and they contribute to a desired image for the city (Ouwehand et al., 2006), posing a new role into the spatial programming.

Dutch municipalities hold the position that gentrification can favor the position of the city on a regional, national and even international scale, way beyond the immediate local effect on the neighborhood. This shows that in the Dutch context the current position of the municipality on deprived neighborhoods is one that does not primarily focus on just addressing social, spatial and economic issues of the local neighbourhood scale but one that tends to focus on facilitating the market. This facilitates functions like those of the city center and the central business districts, and turns the focus to the regional, national and international scale.

Social Effects
The social effects of the gentrification strategy are still very much focused on the urban regeneration perspective of the municipality to create socially stable and integrated neighborhoods. The primary intended social effect of gentrification as a strategy in deprived neighborhoods is social mixing. Social mixing is then expected to reduce anti-social behavior to enhance educational outcomes, to stimulate social networks and to raise aspirations by providing role-models (Kearns and Mason, 2007)

A number of authors show that the introduction of middle-class households can trigger an effect called “defending the neighborhood”. They observed that middle-class households are stronger advocates for public resources and that they are more persistent in getting through to the right people and agencies. This could benefit all residents (Kleinhans, 2004, Blokland - Potters, 2001, Lees, 2008). Municipalities have used this mechanism as an argument to support their gentrification policies. In spite of the positive social effects, the coin of gentrification may also have downsides locally and for the region.

The most evident unwanted effect of gentrification is displacement of the poor to create housing for the affluent. In The Netherlands the existing residents have a strong position due to strong tenure rights. The housing associations have to offer similar alternative housing and often the residents can obtain a larger and better dwelling without increase in rent or loss of subsidy (Kleinhans, 2003).
Theoretical Research
Assessing the risk of a gentrification strategy

Effects

In the Dutch context, the loss of population density contrasts with the current national policy (MVROM, 2008) which aims to densify and intensify the cities. This policy is based on the thesis that high density is associated with improvements in the social (positive interaction, improving viability and access to community services), economic (enhancing economic development), environmental (increasing energy efficiency) and safety spheres (Carmona et al., 2010). To facilitate the needs of the affluent future residents, not only bigger homes are needed but also, for example, more parking spaces, which in turn has an aggravated effect on the density of the neighborhoods in population or in public space. Affecting the quality of the local area and the daily system of the less affluent inhabitants to whom the local level is more important.

However, displacement cannot only occur through a rise in rent, housing prices and land values, but also by the increase of the connectivity to the daily transport system of the affluent residents and through displacement of relatives and neighborhood friends. This loss of the social network does not contribute to the social cohesion and hampers the integration of the residents who stay behind and the so-called gentrifiers. This may lead to tension, resentment, community conflicts, and fragmentation (Uitermark et al., 2007, Atkinson, 2002). Kleinhans also points to a specific emotional effect on the residents who are displaced that is not mediated by the loss of social networks but by the loss of the sense of place. Clearly, there is a distinction between residents who actually want to move and those who want to stay but are forced to move. Kleinhans points out that more attention is needed to determine social-emotional ties of residents. In essence, determining who wants to stay and who wants to move provides the key to a maximization of happiness, if wishes can be granted. (Kleinhans, 2003)

Spatial Effects
The local spatial effects of gentrification have been "under-researched" even though there are clear physical changes visible. The most obvious spatial effect of gentrification is the renewal of the physical fabric of neighborhoods. Renovation and demolition of buildings, redividing of houses, fewer apartments per building etc. Gentrification on a large scale affects the density of the population, since gentrifiers generally under-occupy their property or have larger spatial and higher quality demands than residents of social housing or with a lower income (Atkinson, 2003).

In the Dutch context, the loss of population density contrasts with the current national policy (MVROM, 2008) which aims to densify and intensify the cities. This policy is based on the thesis that high density is associated with improvements in the social (positive interaction, improving viability and access to community services), economic (enhancing economic development), environmental (increasing energy efficiency) and safety spheres (Carmona et al., 2010). To facilitate the needs of the affluent future residents, not only bigger homes are needed but also, for example, more parking spaces, which in turn has an aggravated effect on the density of the neighborhoods in population or in public space. Affecting the quality of the local area and the daily system of the less affluent inhabitants to whom the local level is more important.
Spatial effects on Municipal scale
The spatial effect of the gentrification strategy in The Netherlands does not limit itself to the local scale. Due to the changing dynamics in the residential neighborhood and displacement, large scale pressure may build up throughout the municipality. As a result of the changing demographic of the neighborhood, the need for a certain type of transport and accessibility decreases thereby limiting the mobility of lower income, elderly and other less affluent residents. This is a distortion that could affect a larger area than the neighborhood the gentrification process has affected. The decrease in demand for certain types of mobility could cause a ripple effect to other neighborhoods. Whether this is really the case, will be researched in this graduation project.

Kleinhans describes in one of his papers the waterbed effect, which implies that trying to reduce social disorder through displacement does not solve the problem, only displaces it (Kleinhans, 2011). Furthermore, by displacing less affluent residents to other districts which are mainly peripheral areas with large concentrations and dynamics of migration, new and increasing pressure arises.

The gentrification strategy, if not managed properly or not inclusively, could pose a huge array of effects, local and non-local. By addressing the strategy of the municipality in a more inclusive/integrated manner the distortion on the local and non-local scale could be minimized and could possibly make use of the potentialities of the current residents. In the next section possible integrated planning theory is presented.
Theoretical Research
Assessing the risk of a gentrification strategy
Conclusions

What is clear about the process of gentrification is that it creates a dichotomy. On the one side it presents a process which, in time, potentially increases the social, spatial and economic conditions of a neighborhood while at the same time it threatens the position of the less affluent residents. Although the theory suggests that a gentrification process has largely negative effects for weaker local residents, we must consider that in cities like Rotterdam the process is much slower, especially due to the current economic situation in The Netherlands, and, from the perspective of the housing association, the well-being of the current residents is regarded as a high priority.

However, we must also recognize that gentrification – or, from the perspective of the housing association, social mixing - will not drastically change the situation of the weaker inhabitants, primarily because there are no indications of spatial improvement of the weaker inhabitants' direct living environment. If the living environment of the future residents is improved to their standards while the conditions of the weaker inhabitants remain the same, fragmentation could develop that in time might create the incentive for even further gentrification or social mixing.

In order to prevent this possible fragmentation and truly improve the conditions for cohabitation in a neighborhood, a more inclusive strategy must be developed in which both the potential of a gentrification process is acknowledged and the potential of weaker inhabitants if their social and spatial conditions are improved.

As stated before, the potential of a cohesive community can be created through recognizing the spatial demands on the creations of synergetic spatial conditions in and around the public space. In the following section we investigate the conditions and the potentials of public space and what role it can play in the direct environment and in a network in order to decrease the possible development of fragmentation and improve the synergetic conditions for cohabitation.

However, if we put gentrification in relation to the current trends of societal change and migrational influx, we see that in the current ways of planning this strategy could create a fragmentation between different inhabitants instead of synergetic developments.
Relevance of Public Space

In the previous section we explained that the gentrification process, either natural or planned, has in time been accepted as a proper means to uplift the social, spatial and economic composition of deprived neighborhoods. Though it might, up to a certain point, prove to be healthy for a neighborhood, an out-of-control process of gentrification poses a risk for the weaker inhabitants and their social and economic position in the peri-urban neighborhoods.

In this section we explore the conditions and opportunities public space possesses in relation to the interaction and integration of the socio-spatial and economic dimensions of the neighborhood. We explore how public spaces, as part of a public space network, can contribute to the cohabitation between different residential groups and to the opportunities of the weaker residents if the divers spatial demands and potentialities are considered. In other words, how and whether spaces in a public space network can diminish the need for large scale gentrification and social mixing to improve the social structure and create higher quality spatial and economic programming.

- First, we will explain the role public space plays in the expression of the identity of community life and, therefore, as a possible tool for urban transformation.
- Secondly, we will explore the importance of public space in a network of public spaces to secure cohesion and opportunities for social and economic exchange in different scales of operation.
- Thirdly, we will explore the different spatial conditions of public space and how these affect the opportunities for interaction and integration as well as programmatic opportunities.
- Fourthly, we will explore the different uses and needs of the living environment of the different lifestyles who currently reside or will in the future inhabit the peri-urban neighborhood. Finally, we explore possible economic stimulative programs to facilitate a growing market of self-employed entrepreneurs as a catalyst for more local social-economic conditions.
Relevance of Public Space
Public Space as a Tool for Urban Transformation

Public spaces are the places where residents of a city and visitors move through, spend part of their leisure time, interact and express their perception of how a space can be used; places where experiences and uses of inhabitants meet. Therefore, these spaces should not be conceived as just physical space owned by the state or municipality, but as space owned by all, and as a place for community expression in the sense that it facilitates contact and communion among individuals. In other words, it can be viewed as the place for spatial expression of a community (Janchez and Sepúlveda, 2009). This required a recognition of the real use and user of the space.

Every community or inhabitant expresses a different type of use and perception of his public space, therefore, it is a vital element in the local identity of an area. Those public spaces, beyond their physical form, differ in their social and cultural significance and expression for different social groups, therefore cities differentiate from one to another by their abundance of local identities. These spaces where a multitude of social and economic transactions take place, can be seen as the most powerful places in the daily system of the city. Borja (in Janchez and Sepúlveda, 2009) points out that, in the intensity and quality of the social relations the public space facilitates, it creates the potential to make groups, strengthens interactions and encourages symbolic identification, expression and cultural integration.

It is by strengthening on the local scale the existing ways of socio-cultural interactions as well as the differentiation of relations - within the neighboring context - that a more generalized process of urban integration will be viable. Janchez and Sepúlveda state that only by recognizing that the public space is a place of community dominion and should be approached from the perspective of its potential strengths, cities would be able to re-conquer/re-qualify their historically disarticulated areas (peripheries and stagnated settlements), and by this approach link and recognize the diversity of daily systems in the city as a whole.

Through these theories we observe that the local identity of public space is an intricate part in the sense of community and that it is this development process that creates the unique identity of a place. This is what makes these neighborhoods or areas so important for a city; it differentiates the identity of the city from other cities making it stand out in a global sense. In order to create a more viable process of integration between different residents and secure the identity of an area, an approach must be formulated to secure and develop the cohesion of these areas to the city as a whole from within the recognized conditions and potentials of the diverse neighborhood inhabitants, and, thereby, to diminish the need for introducing elements that disrupt the local identity.
II. 25

The main idea of territorial cohesion is to contribute to sustainable development and competitiveness. It is intended to strengthen regions, promote territorial integration and produce coherence of policies so as to contribute to the sustainable development and global competitiveness. (ESPD, 1999)

Relevance of Public Space

Public Space Network

In relation to the function of a network according to Carmona, Pinto et al. and Borja, the potential of a network of public spaces can provide conditions for territorial cohesion and perform as an element to promote and maintain a strong local centrality, environmental quality, economic competitiveness and, therefore, opportunities for social and economic growth of residents. According to Pinto et al. a network of public spaces is needed in order to secure a cohesive and sustainable neighborhood environment. In his paper he states the requirements for sustaining such a network.

It is clear that the local identity and local centrality of an area can play an intricate part in determining the quality of the network of a city, and are essential in expression of the identity of a local community. However, public spaces are not singularities operating just by themselves but they operate in a larger urban network. This urban network can be understood in two dimensions; first, the physical-formal in which the various urban elements, as well as the links and relations between these elements are recognized. Secondly, the formal-functional, representing the population as the user of the urban functions and the relations/interactions established through these functions. Furthermore, one must take into consideration that a network of public spaces is not only composed of isolated spaces (a street, square, courtyard) but also of the links between the different public spaces and the complementary relation established between them. It is these linkages and relations that influence how people experience the spaces and how they move within the city.

However, we must recognize that, although these linkages create the opportunity for complimentary relations between spaces, it also means that these spaces, and spaces beyond these initial two spaces, influence one another. By changing one aspect of a certain space we also influence the functions of the network, either positively or negatively. Therefore, when considering the potentials of the public space network we must also take into account the changes dynamics (especially with the societal and economic trends) and the influence these have on certain nodes within the network.

4 The main idea of territorial cohesion is to contribute to sustainable development and competitiveness. It is intended to strengthen regions, promote territorial integration and produce coherence of policies so as to contribute to the sustainable development and global competitiveness. (ESPD, 1999)
Relevance of Public Space
Public Space Network

So defining the first criteria for considering the synergetic potentialities of a public space network, we recognize:

Mobility/accessibility/connectivity: creating mobility and accessibility conditions that endorse cohesive urban spaces and connecting to different public spaces making easy access possible. Promoting the existing network of flows.

Land uses/activities: promoting multi-functionality in the network ranging from commerce and services to facilities and recreational activities. However, keeping in mind the socio-economical dynamics through the creating of new land uses and activities, which can contribute to regeneration of certain spaces.

Social Dynamics: generating social dynamics through the complementarity between public spaces and the activities available. These dynamics promote the urban experience as stated before and are capable of minimizing the phenomena of social exclusion and marginalization.

Comfort/safety: creating safety and security through movement within the urban network.
(Pinto et al., 2010)

With the principles for the public space network we need to investigate what types of criteria are needed to fulfill the spatial challenge of creating cohabitation between different lifestyles, users and dynamics of the system.

In the next paragraphs we will investigate the different aspects of public space followed by the needs and demands of the different lifestyles proposed for the neighborhood of the Oude Westen. At the end of the project we will show how these different aspects of the public space can be implemented into a decision-making policy.
The scheme illustrates the relations between the different aspects leading to the synergetic conditions for cohabitation with the public space as the general theoretical spine in providing requirements that offer conditions for territorial cohesion. Finally, the author’s interpretation of specific aspects of public space to assess and provide conditions that potentially re-qualify and secure a living environment beneficial to both affluent and less affluent residents.
The dimension of public space explored in this section shows how the quality and spatial composition of space affects the perception by individuals. In other words, how the conditions of the public space affect opportunities for interaction defining the importance of synergetic action, integration and expression of identity of its community and of individuals.

According to the theorists Carmona and Hanhöster the perception of public space and opportunities for expression are defined by four dimensions: the functional, interactive, participatory and symbolic dimension, each playing a vital role in the quality and facilitation of the different types of expression and interaction between lifestyles.

The following section using the theories of Carmona and Hanhöster will show how the perception of these dimensions influence potential conditions for interaction and different types of use.

**Functional dimension of space**
This dimension refers to the physical buildings, spatial conditions and to the resources these provide. Seen from this perspective the neighborhood is an important urban space in providing resources and spatial conditions for interaction. Neighborhoods, however, differ to a large degree in their type and quality of housing, resources, services and infrastructure. These spatial conditions play a significant role in determining the quality of life for the individual residents and the nature of interactions between residents. A deficit in the quality of available housing and quality of resources diminishes the conditions for social capital.\(^1\)

This negative image could likely be improved upon by stabilizing the quality of the small-scale street and block level surroundings.

**Interactive dimension**
The interactive dimension defines the spaces that are available for use by various residents and groups for communication, or spaces that promote intercultural exchange. This type of dimension or perception of dimension can be found in courtyards, green spaces, playgrounds, but also in small-scale shared spaces within buildings.

The potential of contact/interaction at the local level creates an opportunity for individuals, groups, lifestyles to re-examine the prejudices and beliefs they have about one another, thereby re-assessing their perception of the social climate in a neighborhood. Limited opportunities for interaction slows down the learning processes that are necessary for individuals and groups to learn how to manage potential conflicts of interest with one another in a civil manner.

**Appropriatory dimension**
The immediate surroundings, i.e. the buildings, streets and blocks around one’s residence, provide an opportunity and concrete space in which identity can be asserted by appropriating and using a space according to one’s needs.
Semi-public spaces like the courtyards within blocks are spaces that are in the immediate surroundings of the residence, and residents are generally highly interested in appropriating them for their use.

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\(^1\) Social Capital: the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit. Social capital thus comprises both the network and the assets that may be mobilized through that network (Nahapiet and Ghoshal 1998, p. 243).
The cohabitation between different residential groups with different interests and lifestyles depends very much on the use, quality, perception and typology of the public/semi public space and the variety and distribution of housing, which have its effects on the activities and, therefore, the interaction possibilities taking place in the public space. Gehl has identified three types of activities that take place in different types of spaces that need to be taken into account.

The municipality should not disregard the differences in interests, needs and lifestyles because they form vital elements in promoting social cohesion. Local residents can inform the authorities about these aspects during the decision-making process.

This appropriation of the immediate surroundings refers to the formal and informal ways in which residents supervise the use and appearance of space in their neighborhood. This appropriation or participation in the public life of a neighborhood can be perceived in two dimensions: a participatory one in which one, for example, uses a space for leisure, and a symbolic appropriation where the occupation of a space provides symbols contributing to a sense of security or familiarity. These symbols can have different meanings for different residents causing individuals or groups to feel insecure among such symbolic appropriated places. These different types of appropriation are subject to the spatial integration and composition of the neighborhood. Even though these dimensions in some cases may reduce the sense of safety for certain groups or individuals in certain places, they do provide an important element in the supervision and opportunities for social or intercultural interaction.

The risk of providing conditions for these ‘appropriatory’ dimensions is that the intensity and frequency of social conflicts will increase when the spatial integration becomes more integrated, and participatory and symbolic appropriation is expressed to a greater extent. According to Habermas this does not need to be a negative development; without conflict (due to the lack of spatial integration) the norms and values of civil society or community will not be discussed. Because the objective should not be to prevent conflict, but to allow conflicts to take place in order to find creative solutions that stimulate integration. (see Habermas, 1992 in Hanhörster, 2010).

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According to the theories of Gehl the perception of the different dimensions of public space stimulate different typologies of activities. Different dimensions and qualities of these dimensions stimulate conditions for activities that take place in the public realm, while the quality and perception of the dimensions stimulate the conditions for activities. It is in the activities that the interaction and possible integration of individuals and groups is potentiated. In other words, the dimensions provide the possible conditions for activities and the activities partially provide the potential for interaction.

Gehl distinguishes three categories of activities which have different demands in relation to the physical environment: necessary activities which are compulsory, optional activities which demand a certain environment for certain groups/lifestyles, and social activities which emerge from the presence of the necessary and optional activities. (Gehl, 1987)

Necessary activities include those that are more or less compulsory: going to school/work, shopping, waiting for a bus/person, running errands. In other words, activities in which those involved are to a greater or lesser degree required to participate. Because the activities in this group are necessary, their incidence is influenced only slightly by the physical framework, they are more or less independent of the exterior environment.

Optional activities are those pursuits that are participated in if there is a wish to do so, and if time and place make it possible. This category includes activities as taking a walk or a breath of fresh air, standing around and enjoying life, or sitting and sunbathing. These activities only take place when the exterior conditions are optimal, when weather and place invite them. These activities are especially dependent on the physical environment because most of the recreational activities that are especially pleasant to pursue outdoors are found precisely in this category of activities.

When the outdoor areas are of high quality, the necessary activities tend to take place in the same frequency due to their minor dependence on the physical framework. However, these activities tend to take place over a longer period of time due to the higher quality of spatial conditions. In addition however, the high quality also influences the intensity of optional activities. In other words, if the spatial conditions are poor, the activities in the public space tend to be strictly necessary ones, reducing the potential for interaction.

Social Activities are activities that depend on the presence of others (people) in public spaces. Social activities include children at play, greeting and conversations, communal activities, passive contacts, simply seeing and hearing other people. Social activities occur spontaneously as a direct consequence of people being or moving through an area. They are in that sense directly supported by the necessary and optional activities. Thus, social activities can be regarded as resultant activities, because they evolve from the exploits of the other two activities.
As stated before, the frequency of optional and social activities depends on the quality of the physical environment.

In general, socio-economic weak residents are very dependent on their immediate environment, the neighborhood, while stronger residents generally use a larger social and economic network giving them a spatial larger operating space, although some in this stronger group might prefer a very local daily network. These different networks mean that they create different flows within a neighborhood network making it in some cases difficult, for example, to frequently meet people from another group in the neighborhood, thereby endangering the social cohesion. Because pedestrian movement and circulation permit economic, cultural and social exchange, it forms an important link for establishing the synergetic conditions for cohabitation (Jacobs, 1992).
In the previous sections we described how the quality of the different dimensions could lead to a higher frequency and intensity of certain activities providing conditions for interaction and integration and strengthening the local identity. Quality and frequency of these dimensions and activities, however, also depended on the movement (pedestrian, cyclists or car) going through these dimensions.

Bill Hillier argues that in every movement in the urban system there are three types of elements: the origin, a destination and a series of spaces passed through on the way from or to the other. These go-through places he calls by-product places. The destination or go-to places could be ‘successful people places’ because they attract people. On the other hand, according to Hillier the by-product places can be deemed ‘successful people places’ as well, because land uses are derived from the pattern of natural movement rather than the other way around. Even though the land use reinforces the basic movement pattern or system, the higher the movement density (intensity of people flows) the greater the potential for interaction.

This movement density is determined by the connectivity of the street, square, courtyard etc. The connectivity or the integrated value is determined through Space Syntax, the higher the integrated value, the greater the intensity of natural movement and activity. The configuration of space, particularly its effects of visual permeability, is most important in determining the movement densities. Regardless of a specific location of a destination the integrated value shows that some places have more potential to generate interaction and diverse land uses than others due to their hierarchy in the spatial configuration.

According to Hillier ‘successful people places’ are conditional in the way a place is designed (how it is perceived and what activities can take place) and in the integration into the local movement pattern. These elements are complementary to one another. Nevertheless, if a space is well designed but poorly located in the local movement pattern, its potential to be used is diminished. Even more so, over-localized space disrupts the natural movement pattern and therefore reduces the conditions for interaction and potential for activities. (Carmona et al., 2010)

In neighborhood streets with a relative low local integration value residents are more likely to feel a sense of ownership over their direct living environment. Whereas highly integrated places and places with high intensities of natural movement, in this case the global integrated street, diminish the sense of place or ownership of an area. This aspect should not be overlooked in an urban planning process.

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6 Successful people places are characterized by the presence of people in an often self-reinforcing process. They typically have animation and vitality, an ‘urban buzz’ (Carmona et al., 2010).

7 Space Syntax: a computer based system that determines the hierarchies of use and movement based on the integration of movement (street structures) to one another. Space Syntax distinguishes two types of integration values; the global integration, which in most cases shows the movement on a global (or regional) scale in relation to ringroads as the highest globally integrated streets. And the local integration, where city centers, neighborhood high street and large access roads are primarily the streets with a high local integration value. These highly local integrated streets are also those that have the most potential to establish a high intensity of activities.
Although the natural movement pattern according to the Space Syntax system is primarily influenced by the integration value/connectivity of the urban structure, it is also influenced by the different groups of people that inhabit the area/neighborhood. Different lifestyles demand different activities, land uses and ways of transportation. Weaker or less affluent residents may be more dependent on public transportation and more affordable services, affluent residents may use different types of transportation and different quality services, therefore, could have different daily movement patterns. In the social conditions for cohabitation this possible difference in daily systems is assessed.
Spatial Conditions for Cohabitation

Safety

In the aforesaid three conditions determining cohabitation we have established how dimensions and integration in a network determine potential for activities and land-uses. Based on the theories of Jacobs, Hillier, Nes & Lopez, stated three other aspects that determine the potential for interaction and activities. Primarily aspects that undermine the sense of safety and security in a neighborhood: anonymity (not knowing your neighbor), lack of surveillance (eyes in the street, from user on the street as well as eyes from within buildings) and the availability of escape routes. The lack of these aspects in and around the public space decreases the sense of safety and poses a risk for an increase in crime.

Jacobs and Hillier already showed defensible spatial principles that create a natural surveillance through the movement and presence of people. These principles have already been addressed through the use of theories from Carmona, Hannhörster, Gehl and, of course, Hillier. However, Nes & Lopez contribute to these theories two additional principles viable for increasing the surveillance and safety within the public space on the micro-scale. So-called inter-visibility, the amount and position of surveillance of the street from within buildings, i.e. the density of windows and functions oriented on the street.

Secondly, the density and orientation of entrances on street level, i.e. the so-called 'constitutedness' of entrances on street level. A high density of entrances at street level to some extent indicates a certain degree of liveliness in a street. In the research of Nes & Lopez the density of entrances on the street relates to the potential for crime, the lower the density of entrances the higher the potential for crime due to the lack of surveillance.

These two principles can provide a certain degree of safety and surveillance (on the micro-scale) in streets that are less integrated into the natural movement pattern or do not possess the spatial conditions for certain dimensions and activities.

8 Jane Jacobs: ‘eyes on the street’ to secure safety and security sidewalks need eyes on the street from street users and residents. Enhanced by the diversity of activities and various auctions that naturally create populated places. But also fairly continuous users to add to the number of effective eyes on the street and to induce people in the buildings along the street to watch the sidewalks in sufficient numbers.

8 Bill Hillier: The feeling of safety in public space is enhanced by the presence of people, i.e. The presence and frequency of natural movement.
In the previous section on dimensions, activities, people flows and safety conditions we have established aspects applicable to the public space that can facilitate conditions providing better opportunity for interaction, vitality and potentials for program.

What are the relations between these assessed aspects of the spatial conditions for cohabitation? Whereas the dimension of public space provides guidelines on how quality, composition and dimension affect the potential for use of the space, the activities indicate how quality and type of spaces create conditions for different types of use triggering potential for interaction. The people flows and safety conditions indicate ways to facilitate, sustain and enhance conditions for use, program and vitality thereby playing a supportive role (without which the potential for success is limited) in relation to the dimension and activity conditions.

With the knowledge and understanding of these conditions in the public space we have established spatial requirements that provide conditions for interaction, integration and potential for program. These requirements can be used to assess the current conditions of the public space of a neighborhood and show possible alternatives to provide better opportunities for cohabitation.

However, these spatial conditions can only provide opportunities for cohabitation in relation to the different social groups since different groups require or desire different aspects of the public space. In order to establish what these differences might be, we will investigate these in the next section.
As stated before, although the assessed spatial conditions provide conditions for cohabitation to some extent, different social groups (affluent, less affluent, families with children and households without children) have different requirements, demands and uses of their spatial environment.

Research by Reijndorp has shown that over the past decades the living environment of the peri-urban neighborhoods has dramatically changed, mostly not to the benefit of the original inhabitants. Although in these neighborhoods different social groups resided, the network of these groups did not vary greatly and even overlapped. Most residents were very dependent on their so-called parochial domain (the sense of a close-knit community and ownership of a place/street) existing in these peri-urban (in the past called working-class) neighborhoods, especially from the perspective of the original inhabitants who highly regard these domains. This parochial domain provided in those days the support that was later provided by public services, community centers, libraries etc.

With the dynamics of the current society this parochial domain has decreased in expression and made way for more assertive lifestyles, higher mobility, migration and larger demands for space, coupled with the decrease in levels of public and private services thereby diminishing the opportunities for the original inhabitants.

In order to gain a deeper understanding of the requirements and uses of these groups in relation to their spatial environment, in the following section we will asses their desires for the living environment, daily system and their possible impact on the network of the neighborhood.

**Future inhabitants (New urban residents)**
Who are these new urban residents? According to Karsten et al. 2006, they are mainly former students of the city but also a small group of recent migrants and lifetime residents of the city. These groups are urban oriented families consisting of small households with an average of two children often with parents who have an above average age. They often have careers and have invested their earnings in an owner-occupied house. The families who primarily live in the North of Rotterdam (also the people who have been researched), have a wide variety of professions.

**Daily systems**
*New urbanites without children*
The daily system of the new urbanites without children (primarily students or young professionals) is more volatile than that of households with children; their daily network does not only reside around the work space and the neighborhood but also extends to amenities outside of the neighborhood where more likeminded people group.
While families desire proximity to maintain a manageable daily agenda, the activities of this group reside more on the desired facilities in the neighborhood or outside the neighborhood.

**Families**
The daily system of these residents is very measured, different agendas are fitted together, moving working hours and the outsourcing of care
responsibilities are a daily task. Proximity and accessibility are two of the main issues of daily life: physical proximity, cultural (diversity, culture and liveliness) and social (useful when facilities and amenities are close, also as meeting places of likeminded people). These urban families combine personal and professional life in the neighborhood and are more likely to bond to likeminded people with similar households and class position, and this runs parallel to the interest in diversity for the neighborhood. Superficial contact with other neighborhood residents of different lifestyles is an important factor for determining the livability for these new urban residents.

Two aspects are important in school and playground space. Interaction with migrants is important: new urban families do not prefer an all-white school but prefer a multicultural school even though this might mean a school outside of the neighborhood. As to public space for children, proximity is an important issue in some neighborhoods where there is a lack of this type of space. This means parents will sacrifice gardens for community gardens or the annexation of sidewalks.

These families fit the typology of the compact network society, work, facilities and friends all residing in the city.

Living Environment
New urbanites without children
According to the literature in regard of the living environment of urban professionals without children, location is the primary guideline for deciding where to live. While families prefer an environment in the lee, the new urbanites without children prefer to live close to the center in a cultural (theatre, cinema), fashionable and lively environment.

Families
The key aspect of the preferred living environment is "stedelijkheid in de luwte", urban environment in the lee. A concept that is full of dichotomies: child - city, care - career, green - urban, private - public, known - anonymity. Besides this general concept there are a number of physical demands: parking and car traffic may not be dominant in the area, life should be oriented towards leisure and children, daily facilities (shops and meeting places) need to be close (time-space and social perceptive) because of the complex daily agendas that these families keep, and essential for the public space is that it can be used as an extension of the home and that it has a clear lay-out which also facilitates shared caretaking.

Housing demands/desires
New urbanites without children
The preference for this group goes out to housing in an architectural style that expresses creativity and in which home renovation is an important factor. But it must be affordable and therefore does not require to be single-families' size.

Families
Dual income families prefer to live in larger houses, modern single families' homes are the ideal to avoid maintenance costs, there is no desire to live in a 3-4 bedroom apartment.
The final aspect of the conditions for cohabitation is focused on potential social-economic stimulative conditions. While providing the spatial and social conditions to ensure interaction, integration, vitality and security, an economic stimulative program can increase the potential for diminishing the unemployment in these social-economically weaker neighborhoods.

Self-employed entrepreneurs

Over the past decade there has been an increase in the number of entrepreneurs without employees (self-employed entrepreneurs), as a result of the financial crisis this number will grow even further. Based on the theories of ‘the creative class’ (Florida, 2003), municipalities acknowledge that a potential for increasing the attraction of residential areas coupled with fueling the economic motor of the neighborhood lies with attracting the creative industry to these neighborhoods. However, in many of these neighborhoods with affordable housing and small business locations this creative industry is already established to some extent. Research for SEV shows that a large number of these creative (or related to the creative industry) entrepreneurs are self-employed and often work from their home (first space), do not desire to work in the traditional workspace (second space), but are interested in working in semi-public spaces (third space). These third spaces are becoming more and more important for the exchange and meeting of ideas and innovations; meeting your peer is therefore an important factor in increasing the network of the (creative) self-employed entrepreneur.

However, as said before, most of these (creative) self-employed entrepreneurs work from their home and are therefore invisible entrepreneurs. In a collective workspace they would be more visible and this would create social-economic stimulative environment for the neighborhood. Such a space should facilitate to the different needs of the users, with silent workspaces, meeting rooms, but also some collective spaces where pollination between entrepreneurs can take place.
The different aspects of the conditions for cohabitation
The different conditions and dimensions that have been researched in this theoretical analysis will be the base for the analytical research. How does the current structure of the neighborhood measure up to these conditions and what spatial challenges do these conditions create? With the assessment of the current structure of the neighborhood - through the use of the formulated criteria for conditions for cohabitation - recommendations will be derived from the analysis. These recommendations must show what interventions could be done to improve the current structure of the neighborhood in order to facilitate the conditions for cohabitation. However, these must always be such that they could then strengthen the position of the current less affluent residents parallel to the strategies of the housing association and the municipality: improving the social, spatial and economic cohesive structure of the neighborhood in the local and municipal network.

Criteria

Public space dimensions and activities
In order to create the opportunities for integration the neighborhood needs to be assessed on the current dimensions of the public space indicating if these facilitate the multiple dimension necessary to facilitate the different activities that create the conditions for interaction and integration. If these dimensions and activities turn out to be singular in activity or dimension, an indication should be made in the type of activity and the group(s) it provides these activities for in order to assess what role they play in the network of public spaces, and what possibilities changes in the dimensions and activities could have on the direct environment and the surrounding network of spaces.

People flows/daily systems
By assessing the people flows according to the typology of spaces, connectivity and permeability we can indicate how frequent the spaces are likely to be used in relation to the possible activities and program they could facilitate. Through the assessment of the connectivity and integration of the street network of the neighborhood we can assess the potentials of accessibility and permeability (in relation to the activities), which would indicate the role the residential area plays in the spatial network of the city.
**Safety**
Through the assessment of the different programmatic, spatial and visual safety providers we can establish possible zones in the neighborhood in which the sense of safety is threatened, and what type of intervention should be done to increase this sense of safety. The proposed intervention, however, should always take into account the effects, societal trends and dynamics of the city have on public spaces, because the trends can already provide a sense of safety so that alterations might not be necessary.

**Social Conditions**
While the introduction of more affluent residents might improve the quality and safety of the direct living environment and provide the opportunity for local entrepreneurs in the residential neighborhood to receive a more affluent user base, the risks of introducing these affluent residents should also be taken into account due to their likely use of certain qualitatively higher facilities and amenities in that they could change flows in the neighborhood, making spaces less used and attracting less activities. Therefore, the social conditions should always be considered when developing principles in relation to the public space.
Spatial Challenge

The spatial challenge in relation to the dimension of the public space and the public space network is how to facilitate the cohabitation conditions in a neighborhood and city that is highly dynamic. When determining what interventions should be done in a current situation, we have to take into account the possibility of, for example, changes in the social composition of a neighborhood that alter the programmatic and spatial need, but also activities, flows and safety issues. Therefore, we need to assess how the different spaces and program in the neighborhood and city center dialogue with each other and how they affect the public space network.

However, how to recognize institutionally the potentialities and needs of the inhabitants requires an extended framework on the decision-making that will be analyzed in the next chapter.

In the following chapter we will analyze the current context of the city and of the Oude Westen in relation to the criteria for cohabitation, which will show what type of possible principles should be employed to facilitate better conditions for cohabitation. Because of societal trends and pressures these principles should then be tested following the different possible developments in the neighborhood in order to derive from those situations further principles that are flexible or adaptable enough to create the conditions for cohabitation between the different lifestyles in relation to the societal trends. This final investigation of the principles will be performed in the spatial challenge chapter by assessing the principles in four different scenarios following different social changes in the neighborhood.
public space
potential in providing an alternative approach to re-qualify disarticulated areas, diminishing the need for extensive social mixing/upgrading

public space network
potential of connecting to larger network providing conditions for territorial cohesion
Mobility Connectivity
Activities
Social Dynamics
Safety

conditions for cohabitation

social
necessary

safety
intervisibility
constituted

dimensions
functional
interactive
participatory

activities
necessary
optional

flows
typology of places
connectivity
permeability

economic

Conclusions
Conditions for Cohabitation
III. Analytical Research
Context Rotterdam
Settlements of Rotterdam date back to about 900 AC, located at the lower end of the Rotte stream. Around 1260 AC a dam was constructed along the Rotte at a location now named the Hoogstraat, which for centuries also formed the center of the city. By 1850 the city in its triangular form had accumulated about 90,000 inhabitants. Due to the poor hygienic and social conditions a project, to be called Rose’s Waterproject, was designed to improve the city’s water system and to expand beyond the city walls. Approximately 50 years later, the city had developed into an important import and export city, and through the ambitions of mayor Zimmerman the city was given a metropolitan appeal with prominent urban boulevards flanking the monumental architecture of the Coolsingel.

The 14th of May 1940 was a devastating day for the city of Rotterdam, German Luftwaffe bombed the center of the city, which gave Rotterdam the nickname ‘City without a Heart’. During and after the war plans were made for the reconstruction of the center (de Wederopbouw). Through the visions of Witteveen and Van Traa a strict modernistic center was built introducing modernistic planning ideas like the segregation of function, dominance of motor traffic and low residential density. The housing shortage was reduced by building a new modern neighborhood with open building structures, community gardens and separation of living and traffic. This great reconstruction, however, left certain 19th century neighborhoods untouched, which by the 1970s often were of poor quality. Between 1975 and 1980 plans were proposed to reinvest in the quality of the inner city neighborhood based on an urban regeneration planning perspective. At
Selective out-migration: In the case of Rotterdam, the migration of affluent residents (high educated families) to adjacent municipalities to find adequate housing to fit their desired living environment. Due to the shortage of adequate housing in the peri-urban areas of Rotterdam this selective out-migration has taken place. This trend has been taking place from the 1970’s, which also explains the large concentrations of social housing in these peri-urban areas. In the current Urban Vision 2030 the city is attempting to attract and alleviate this trend in order to provide these desired high quality housing and living environments.

From the 1980s onwards the municipality developed an extensive architectural policy in the center of the city, building new styles of apartment complexes, high rise office buildings and recreation facilities, which created a new modern skyline, giving rise to the nickname ‘Manhattan aan de Maas’. In the 1990s the Kop van Zuid project was launched developing an ambitious working and living environment on the South side of the river, with its main icon, the Erasmus bridge.

The outcome of all above mentioned policies is that, due to the historic development of the city and its current ambitions as described in the Introduction, a distortion between the ambitions and the current situation has been created: history and the social history of the current residents are not respected while the focus is on the future vision of a highly modern city.
Analytical Research
Context Rotterdam
Built Environment

The city center of Rotterdam in relation to its functions can be characterized as a decentralized structure with the dispersal of different attractors and facilitators of commercial, cultural, leisure, educational or economic clusters. This decentralized character is the result of the movement of central activities since the 1940s. Before 1940 the historical center was located in the East. In the Basis plan with the development of the Lijnbaan the shift to the West was created, thereby moving more towards the central station. With the development of the Kop van Zuid in the 1990s a movement to the South was initiated, with the latest unintentional small scale development of the Witte de Wit street fulfilling the need for hip young users.

Looking at the current residential built environment we see that in the peri-urban areas large quantities of social housing surround the city center, as a result of the Urban Renewal project of the late 1980s. Thirty years later these areas are now faced with a significant number of low quality housing according to today’s living standards, which do not fit the requirements of the proposed future affluent residents because of their small living surfaces.
In view of the societal trends with regard to affluent residents moving to the central city, these peri-urban areas are on the agenda to be redeveloped into areas facilitating residential environment for the middle- and high income/educated families: a population group highly desired by the municipality of Rotterdam. By attracting these affluent residents the municipality intends to improve the quality of the housing stock in these peri-urban areas, decreasing the concentration of social housing and the concentration of small dwellings.

Besides the redevelopment of these high concentrations of lower quality social housing areas, the municipality is also attempting to address a number of social and economic issues that take place in these areas.
With regard to the social structure of Rotterdam it becomes apparent that in the peri-urban neighborhood surrounding the center these neighborhoods, besides dealing with high concentrations of social housing (some in a vulnerable state), also face a number of social issues.

In relation to the high density of small social housing dwellings we also see high densities of inhabitants; this is, of course, self-evident, but this high concentration of people and high concentration of social housing is also often associated with social and economic issues. As is clear from the analysis of the social structure of Rotterdam, a number of these peri-urban areas also deal with lower percentages of employment, a low average of income per households and, on average, lower primary exam scores (CITO-scores) as compared to other neighborhoods without concentration of social housing and high density of inhabitants. More specifically, the peri-urban neighborhoods in the North of Rotterdam with high percentages of social housing are Oude Westen, Oude Noorden, Delfshaven, Rubroek, Kralingen-West and Nieuw and Oud Crooswijk. It is the Oude Westen, Oude Noorden and Oud Crooswijk that score significantly lower in employment percentages and average income, respectively 57%, 59% and 54% in percentages of eligible employed residents and € 24.900, € 24.400 and € 23.400 in average household income.
The question is whether the introduction of affluent residents into these neighborhoods will change these unemployment percentages or low incomes. Of course in the statistical data this will have an effect, but the question is whether this will in actuality change the economic position of the current residents. More specifically, will this change the situation of the residents who stay in the neighborhood, and what about the residents who have to move as a result of the transformation plans for these peri-urban neighborhoods? The implications for residents who might have to move either voluntarily or in a way forced will be clarified in the next section on connectivity.
The central station of Rotterdam is a very important node in the national transportation structure in the current situation dealing with an estimate of nearly 100,000 commuters on a daily basis, with a proposed increase to approximately 320,000 commuters daily with the construction of the new HSL line. It facilitates the means for a large number of users to come and go to work, shops or other facilities.

Like most cities, the central area is the highest connected area of the city. Public transport makes this area an important node for residents who do not have the means to own a car to reach their place of employment. In the periphery and adjacent municipalities the overlap of different transportation types decreases, which makes it more difficult for people living there to get to the inner city and implies more travel time.
As to the connectivity of the Oude Westen located in the peri-urban area, it is highly connected surrounded by different transportation types. This creates the opportunity for the residents of the neighborhood to have a larger reach in relation to, for example, employment opportunities than residents who live further away (see figure).

Therefore, the risk of displacement as a result of the gentrification/social mixing process is the decrease in employment opportunities due to the decrease in mobility, i.e. the increase in travel time and costs.
Analytical Research
Context Rotterdam
Connectivity

The connectivity of a place is, apart from the presence of public transport, highly dependent on the integration of street structure. While the highest global integration is mainly located at the ring road structure, we see that the peripheral neighborhoods of the city area are the locations with the best representation of the highest street networks, making these areas easiest to reach with transportation means outside the public transport system. However, these highest globally integrated streets are likely to deal with the highest amount of traffic and distribution of this traffic into the region. According to Hillier this does not constitute that these are the locations that are most likely to spawn more intense uses of public space. It is the correlation between the global and the local integration that spawn the highest probability of public space uses. This is evident in the figures below, where we see that the commercial areas of the city center are the places adjacent to the highest global local integration.

Looking at the Oude Westen neighborhood, we see that the ‘s Gravendijkswal in the West of the neighborhood is part of the globally integrated network, while the neighborhood high streets with the commercial functions are part of the highest locally integrated street structure, which explains its high movement patterns.

However, as the local integration figure shows, the residential core of the neighborhood is of a much lower integration compared to other residential cores in the city as, for example, the Oude Noorden neighborhood. This could partly explain the poor social and spatial qualities of the area. The fragmentation of the residential core will be further discussed in the assessment of the context of the Oude Westen.
III. Analytical Research

Context Oude Westen
With a large stake of the decision-making process given to the Action Groep the Oude Westen, the plans for the City Renewal of the Oude Westen were given the green light. With the policy 'Building for the Neighborhood' affordable renovated housing was built for 85% of the social housing residents.

From the late 1940s until the 1990s most of the municipal residential development plans were focused on providing adequate housing for the less affluent. Today we see a trend with regard to the central city neighborhood that focuses on developing housing for the middle- and high income residents. A development that follows the societal trend but also intends to decrease the social and economic difficulties in these social housing neighborhoods.
As was made clear in the Historic Development Section, the current built structure of the Oude Westen consists for 70% of social housing for a large part constructed during the Urban Renewal Period of the 1980s, but also in the more western area in the older 19th century buildings which require structural renovation. The neighborhood is divided into three sections separated by the two main neighborhood high streets (the West-Kruiskade and the Nieuwe Binnenweg), which also indicate a significant division between the section that contains most of the social housing and the Southern section primarily built around 1930 consisting of most of the private rent and owner occupied housing (also the section with the highest income groups).

All of the social housing in the neighborhood is owned by the housing association Woonstad, which, in the current masterplan developed by the municipality and Woonstad, is going to redevelop a number of the social housing dwellings, mainly in the middle section, into owner occupied housing for future affluent residents in order to diversify the housing stock and income groups in this area.
In 2010 Woonstad had approximately 3100 social housing dwellings in their stock of which by 2020 20% (550 dwellings) will have been redeveloped into owner occupied dwellings. This constitutes a rise of 40% owner occupied dwellings from 650 to approximately 1050 dwellings. Overall this means a decrease of 5.5% of the total number of dwellings (4300 to 4050). In this vision, by diversification of the housing stock the housing association aims to focus more on facilitating the needs of households with children.

The primary location for the diversification of the housing stock will be aimed in the western part of the middle residential section, an area that also houses most of the buildings with a high cultural historic value (due to the construction period around the 19th century). Apart from the cultural historic value of this location this area has a close relation to the Nieuwe Binnenweg, which has a quality of commercial activity different from the Northern West-Kruiskade (as will be shown in the next section). This location for the housing diversification, the different commercial quality and the desires of affluent residents develop a risk of fragmentation (in pedestrian flows) in the residential area of the neighborhood.
As stated before, the neighborhood can in general be divided into three residential sections crossed by two neighborhood high streets. These high streets are two important arteries for slow (pedestrian and cyclists) and fast traffic connecting to the city center. Both high streets contain a high diversity of commercial functions both different in character and quality in relation to one another.

The Nieuwe Binnenweg is an extension of the Oude Binnenweg (an important commercial street of the city center) housing a large number of businesses (shops, restaurants and cafes) and facilitating a user base that comes from outside of the neighborhood. This large operating scale is primarily due to the abundance of specialty shops (shops that aim at a specific niche market) and the high quality standard also causing them to cater to the more affluent purchasing power.

In contrast to the Nieuwe Binnenweg, the West-Kruiskade (to the North of the neighborhood) possesses a high concentration of groceries, beauty salons, jewelries, restaurant and cafes that, at first glance, focus on local residents. They offer a high diversity of groceries from different cultures with the large attractor being the Chinese district near the east (see Appendix from more detail). Even though this high street caters to a less affluent purchasing power, it does not limit itself to just the local residents. People come from different parts of the city (and even from outside of Rotterdam) to the West-Kruiskade for their occasional groceries. This makes it a strong economic backbone of the neighborhood for the entrepreneurs and its residents. Therefore, it does not potentially run as much risk of transformation in light of the future affluent residents and their demands for high quality goods.

It is true that this difference in character between the two high streets creates a certain dynamic in the neighborhood but at the same time it creates the risk of fragmentation in pedestrian flows. Whereas the affluent residents located in the west of the residential area will probably use the facilities of the Nieuwe Binnenweg, the less affluent residents in the east and south sections are more likely to use the West-Kruiskade.
Because of these hierarchical functions in the residential area, the difference in character of the neighborhood high streets and the orientation of use by the social groups, we notice that on a functional scale the residential area is fragmented from the high streets. Fragmented in the sense that it does not provide adequate go-to places for a diverse public, decreasing the potential use and affecting the potential for activity in the public space.

This potential risk in flows is increased by the hierarchical homogeneous functions in the middle residential area of the neighborhood, where the primary functions are primary schools, day care centers and a medical center in spite of the fact that, in the household composition, households with children form only a third of the demographic.

The primary schools and other related functions take up most of the public space and public facilities in the neighborhood. Because of the lack of functions catering to potential needs of households without children, there is a risk that these households will seek these functions elsewhere in the high streets or outside of the neighborhood. In other words, these functions create go-to places for children and their parents, however go-through places for other households - go-through places without the potential of spawning by-product places to cater to these other groups.
The assessment of the public space is divided into fragments: the square and park structure which has a strong relation to the adjacent functions and plays an important role in establishing places for activities, and the street structure which is important for facilitating a sense of safety.

The current functions and focus of the squares in the neighborhood are aimed at providing space for children, very much in relation to the hierarchical program of child-related functions. These spaces primarily facilitate necessary activities for households with children spawning potential social activities for parents and children using these spaces. For other social groups in the area these places do not provide either necessary, optional or social activities due to the lack of leisure space away from the playground.

A place for leisure that does exist, is the neighborhood park, connecting to the geographical core of the residential area and the West-Kruiskade, thereby providing an important leisure and go-through space for residents living near the east side of the neighborhood, elderly from the nursing home to the south and visitors who park their car in the Government street when visiting the West-Kruiskade. In spite of the presence of this important green and leisure space in the neighborhood, the intensity of use is not that great considering its potential. This is primarily caused by the connectivity; while it connects to the busy West-Kruiskade, the connection to the residential core is only convenient for residents of this eastern part of the neighborhood. It provides for them a go-through place with the by-product of facilitating optional and social activities. For other residents and visitors it only functions as a go-to place during the time when optional activities are possible, weather allowing.
The park could be used as an important artery and become a more important go-through place (with lots of potential for by-product places) for the entire resident community of the Oude Westen when it connects to the Westersingel, running parallel to the East. This potential of the park will be further investigated in the connectivity section.

The assessment of the squares and park of the neighborhood indicated that there is a lack of diversity in conditions for different types of activities in relation to the different social groups, the result being lack of use.

The current street structure also plays a part in creating these conditions because it functions in this situation mainly as a place that connects to the neighborhood high street (as traffic hubs), and as parking places, with parked cars on both sides of the street. The narrow street structure, therefore, leaves little or no room for appropriation by the residents who live on these streets, creating little activity besides the necessary activity of coming and going to various other places.
In relation to the assessment of the potential activities of the public space of the neighborhood we also assessed conditions for safety and security. By assessing the permeability, intervisibility and ‘constitutedness’ of the neighborhood we developed a good notion of potential unsafe areas that diminish the potential for activity and interaction.

As discussed in the previous section, nearly all of the streets in the neighborhood deal with double lane parking, reducing the space for appropriation, while this aspect plays an important part in facilitating movement and thereby creating social surveillance. As stated in the synergetic conditions for cohabitation, the concentration of entrances (constitutedness) and windows (intervisibility) also play an important part in creating the sense of security.

The Urban Renewal project in the 1980s spawned a number of housing blocks with portico entrances. While this type of entrance generates frequent use by its multiple households, it reduces the concentration, and also the sense of ownership of one’s entrance (since the entrance to one’s home is located inside the building). This typology in some streets drastically reduced the constitutedness of the streets, also leaving some parts with blind walls and thereby generating little to no surveillance.
In the case of the residential core with the medical center and the main primary school on the Gerrit Sterkmanplein, we notice that the medical center creates very little intervisibility which is caused by the necessary privacy owing to its function. This lack of intervisibility is not just limited to the medical center. A large number of functions seem to have little visibility on the street, either purposely (with papers blocking the windows) or the function being a garage with no windows. Most of these unconstituted parts also generate a lack of intervisibility.

The lack of surveillance and the lack of space for activity or appropriation decrease the sense of safety, and according to Nes & Lopez, increase the potential for crime (something that has taunted the neighborhood for a long time).
The assessment of the two neighborhood high streets is done using the three-step method, where the first step shows the reach of the high street to a point where it cannot continue in a straight line, at that point the second step starts including all the perpendicular streets the first step has crossed. For the second step the same principle counts creating the third step. With this method the reach of the neighborhood high streets is defined. Because cars cannot always enter certain streets this method is split up into the reach of car-related traffic and pedestrian/cyclist-related traffic.

What is clear in using this method in relation to the car traffic, is that the accessibility of the Oude Westen for this type of transportation is limited, especially from the Nieuwe Binnenweg, although this high street provides the best connection to the city center.

For the West-Kruiskade however, we see overall a much better connectivity, inside the neighborhood and towards the neighborhoods to the West. This might indicate that the West-Kruiskade might be more used for this type of transportation than other when attempting to exit the area to the West.
Looking at the reach of the slow traffic we see a connectivity which shows on the local scale, much more integration with the adjacent neighborhoods and a further reach. Since this regards pedestrian and cyclist traffic, even though the reach might be greater to a certain extent, it is less likely that it will actually be used.

What is also apparent in the pedestrian connectivity, is that, although the city center is accessible, it is not as well connected as one might expect being so close to it, especially seen from the residential area of the neighborhood.

To further assess the integration and connectivity of the high streets and the residential area into the overall local integration we need to use Space Syntax. This will also show us where other highly integrated local networks are and show the potential of new connections.
Analytical Research
Context Oude Westen
Local Integration

Global integration

By using the Space Syntax program to assess the local integration of the current situation it shows us that, as to be expected, the two neighborhood high street have a high local integration value, which explain the high intensity of activity in those streets, according to the theories of Hillier.

However, what also becomes apparent, is that the streets of the residential area are very poorly integrated in the local network, although they directly connect to these highly integrated high streets. If we put this fact in relation to the other aspects we have assessed (the poor spatial quality, no space for appropriation, and lack of intervisibility), we can conclude that this residential area in actuality is fragmented from the local integrated network on multiple fronts: the spatial (poor integration), the social (little space for divers activities and appropriation) and the economic (program not able to establish and sustain itself due to the lack of activity and pedestrian flows).

The potential risk of these aspects in relation to the development of the housing association is not only that it potentially leads to fragmentation between the uses of spaces and flows by the affluent and by the current residents, but also that the intervention by the housing association will not create the conditions for cohabitation and will not change the activity and safety issues of the neighborhood. And this could, in time, lead to the need for more affluent residents to create the spatial quality and reduce the safety issues.
By means of the Space Syntax program we can also see what the potential is of implementing new connections into the neighborhood in order to activate the residential area and create potential for more pedestrian flows, program, and interaction.

The first connection that has already mentioned, is the connection through the neighborhood park with the Westersingel in order to directly connect to the city center. What immediately becomes evident indicated by the blue line, is that this increases the local integration value of the Gouvernante street. With this connection we create the conditions for program (local businesses) to develop in the east of the neighborhood, which, due to the increase in pedestrian flows either coming from the neighborhood or potentially from the center, will attract more clientele and have a better chance of sustaining themselves.

While this connection to the Westersingel will activate the neighborhood to the east, we have also shown the global integrated street (‘s Gravendijkwal) running to the West; connecting to this global network activates more streets in the neighborhood, integrating the residential area even more in the locally integrated system. However, as stated in the conditions for cohabitation, there is also the threat of overconnectivity and the risk of losing a sense of ownership (reducing the conditions for appropriation) that is so apparent in most of the residential neighborhoods.

These new connections show the potential for new conditions that can spawn different program, activities and create more potential for interaction. Furthermore, it creates conditions for a variety of go-to and go-through places that can cater to different social groups even bringing about by-product places. Still, the potential of such interventions should take into account the current trend and potential social transformation of the neighborhood, which affect the needs, flows and types of activities.
**Analytical Research**

**Context Oude Westen**

**Conclusions**

**Built Environment**

The built environment in the residential area of the Oude Westen consists of approximately 71% social housing which, according to the masterplan of the housing association, will be partly redeveloped into housing for affluent residents in the West of the neighborhood.

In the research of the neighborhood high street (the commercial zones) we made an in-depth analysis of the type and programmatic scale of the different shops, which indicated a different operating scale of the shops in these two high streets. Whereas the West-Kruiskade in the typology predominantly focuses on local residents as their main clientele base (while at the same time attracting many users from outside the neighborhood), the Nieuwe Binnenweg operates on a larger scale due to the specificity of the shops/restaurants/cafes. In relation to the gentrification/social mixing strategy this could lead to a decrease in use of the West-Kruiskade and an increase in that of the Nieuwe Binnenweg following the increase in affluent residents who prefer the quality of the Binnenweg.

Assessing the different functions in the residential neighborhood, we also see related to the functions of the squares that the main hierarchical functions are the three primary schools: catering to single users, therefore possibly causing other types of users (besides households with children) to seek their optional or social space elsewhere.

**Public Space**

Due to the historical morphologic development along the historic agricultural line of the old polder structure, the street structures of the neighborhood with the introduction of the car have become narrow structures that do not allow ‘appropriatory’ activities of the residents. With the assessment of the intervisibility and ‘constitutedness’ of the built structure i.e. orientation of windows and entrances on ground level we saw that, besides being spaces that do not allow appropriation, they also create unsafe and low socially controlled spaces.

These ‘unappropriatory’ and unsafe spaces parallel to the singular functions of the squares (primarily aimed at activities for children and families) cause a social fragmentation that reduces the conditions for interaction or integration of different lifestyles in the neighborhood.
Connectivity
From the connectivity analysis of the Oude Westen we see that, although the three-step analysis of the Nieuwe Binnenweg and the West-Kruiskade indicates that these high streets are very well integrated, the residential core because of its connective direction (North-South) is poorly integrated into the area. This poses a risk for spatial fragmentation and less potential for development of a differentiated program, but it also creates an opportunity for new connections and higher permeability.

The focus of the functions and public spaces of the area is predominantly on households with children, which means most of these spaces are characterized as go-to places for these households. Whereas for other social groups these spaces are perceived as go-through places. Go-through places that do not spawn any by-product places facilitating needs of these other social groups.

Residential Area as Go-Through Place Lack of Visual Permeability
IV. Spatial Strategy
Spatial Strategies
Current Situation

Under the current situation of the neighborhood the high percentages of social housing, unemployment, social issues and a poor quality of public space are jeopardizing the use and safety of the residential area of the neighborhood. These issues create arguments for the housing association and the municipality to regenerate the neighborhood in order to attract other lifestyles as a means to improve the social and economic position. However, there might also be an opportunity to regenerate the neighborhood without the initial introduction of more affluent residents.

In order to improve and secure the social, spatial and economic position of the less affluent residents of the neighborhood, conditions should be provided for better cohabitation in the neighborhood and in the larger network of the city by changing the public space network, which entails changing the spatial conditions thereby providing opportunities for better interaction among residents and visitors. If the neighborhood public space in the public space network of the central area is improved according to the conditions for cohabitation, we can create opportunities to offer a more dynamic, safe and active place for the different lifestyles already residing in the Oude Westen. And by investigating how to improve the current conditions in the neighborhood for the less affluent residents, we might be able to show a means to raise and secure the position of the current residents without the need of introducing role-models residents.

If no interventions are done to better the conditions in the neighborhood, the rise in safety (according to the Safety Index Rotterdam) might stagnate; one can only do so much with the number of community-led social activities (primarily for children).

The consequence of the introduction of affluent residents is an improvement of the direct built environment. As a result there would be less need for interventions in the public space to create better conditions for cohabitation and a sense of security in that area. Otherwise without the introduction of affluent residents, the number of interventions in the public space over the entire neighborhood would be much higher. These interventions will be discussed in the scenarios in which we investigate the consequences of the introduction of the affluent residents and the current situation.
Spatial Strategies
Current Public Space Network

When assessing the current network of public spaces we see that the main commercial spaces are highly connected, even going through the Oude Westen neighborhood. However, if we focus on the network of public spaces in the residential area of the neighborhood which have other functions (primarily child-oriented functions), we see that they are very internally focused, do not relate to each other and do not connect to the functions and the spaces of the center. The lack of connectivity to the outside of the neighborhood reduces the movement density of pedestrians and does not contribute to the visual permeability of the neighborhood. However, it does create a safe and secluded environment for the children's playground, but thereby reduces typology of these places in the neighborhood to go-through places for a large number of residents without spawning any by-products or use for different types of lifestyles.

The fragmentation of the current neighborhood public space network into a central city network with primarily commercial functions and a local neighborhood network, consisting primarily of, for some, go-to places and, for others, go-through places, reduces the potential for interaction, frequency of movement and, therefore, the possibility for a divers program that stimulates the social and economic position of the current inhabitants. Its position in and around the neighborhood public space network becomes isolated.
IV. Spatial Strategies

Cohabitation Conditions

Spatial Relation

- user intensity
  - low
  - high
- green structure

- functional dimension
- interactive dimension
- participatory dimension
- necessary child related activity
- optional activity
- social activity
- typology of places
- connectivity
- visible collective workspace

current public space network
Spatial Strategies
Scenario: Business as Usual
Introduction + Connectivity

In the current situation the streets in the residential area of the neighborhood are dominated by parking spaces along both sides of the street, indicating that there is an active neighborhood, however, jeopardizing the ability to use the street space, since the streets are too narrow for few other activities besides parking your car or walking to/from your home. Because the activity on street level in the current situation can practically only facilitate movement to (constituting a go-through place), the other dimensions of public space cannot take place.

As shown in the analytical chapter, not only does the street structure prevent other than the functional dimensions of public space, the squares in the neighborhood also do not make use of multiple dimensions or create the opportunity for multiple activities due to their sole function as playgrounds for the primary schools and children of the neighborhood. They prevent the possibility for cohabitation conditions for different lifestyles, the opportunities to interact and possibly integrate the different lifestyles residing in the neighborhood.

In the scenario ‘Business as Usual’ we examine the neighborhood in the current situation without the notion of the master plan of the housing association. Therefore, we can investigate what possible minimal interventions should be done to provide the conditions for cohabitation in order to secure and improve the position (socially, spatially and economically) and conditions (safety, liveability and potentialities) of the current inhabitants.

Connectivity
An element in the safety/liveliness issue of the residential neighborhood is the lack of frequent pedestrian flows, in part caused by the connectivity (and narrow street profile) of the area which influences the possibility for a divers functional program that the residential area could facilitate. Increasing the connectivity influences the possible pedestrian flows and in reaction to that the program of certain places.

Connecting the residential core of the neighborhood to the center could therefore create a better spillover effect of tertiary functions in the neighborhood, while a connection to the museum park could increase the use of the neighborhood park, or, by creating a route through the Gouvernantestreet, intensify the ground level program.

By increasing the frequency of pedestrians through the area, we influence the safety/liveliness and possibly the diversity of program in the area, a program that facilitates multiple needs and lifestyles, decreases the need for demographic/social restructuring and increases the potential for cohabitation.

In the analytical research chapter we could see that the connectivity and permeability of the upper part of the Oude Westen work well. However, the issue with the upper area is the quality of the squares and courtyards that jeopardize the safety and security of the area, especially the Tiendplein which in the current state can be regarded as a void or ‘non-place’ since it does not generate very much activity which is caused by the poor connection to the neighborhood high street.
Scenario: Business as Usual

Parking
Reducing the number of parking spaces on street level creates space in the street to be appropriated by the inhabitants of the neighborhood increasing the potential for the participatory and symbolic dimension. On the other hand, the presence of cars does create a sense of use when spaces are not being appropriated, therefore a certain number or visibility of used parking spaces is necessary to sustain a certain perception of activity.

Removal of specific places of parking creates a new hierarchy to certain places. Places can then facilitate a social (library, (evening)school, community center) or economic program (cafe, small businessplaces, collective workplaces).

However, in this scenario with the possibility of developing one underground parking garage (in the new Odeon Community center) there is space for approximately 200 parking places, while there is a need for 500 to resolve most of the double lane parking spaces in the neighborhood. This means that there will be fewer places for appropriation.
Spatial Strategies
Scenario: Business as Usual
Program

In the current situation it is clear that the residential area of the neighborhood solely facilitates the needs of specific groups of inhabitants (children and parents). Therefore, groups with other needs for facilities, find these facilities outside the residential area, which diminishes the interaction, integration, safety and possibly economic benefits. In all, the lack of divers program reduces the potential for cohabitation.

In order to improve the diversity of program first, the connectivity of the residential core on the Gerrit Stermanplein was increased by connection to the Westersingel and thereby the city center. This makes it more attractive for local business to develop along this new axis and provides a more prominent role for the Odeon community center. Thereby a stronger relation could, in time, be created with the neighborhood park, and a social entrepreneurship program (community driven cafe/restaurant) could be developed where a variety of businesses is organized, maintained and exploited by the local community, improving their skills and their economic situation.

On the Gerrit Sterkmanplein, as mentioned before, the current functions on and around the square are either focused on children or have very little visible relation with the direct environment (medical center). To improve the diversity of users in and around the square, the primary school, which only functions during the day, will become a so-called Brede School: during the day it functions as a primary school and library, and during the evening as an education center for grown-ups, thereby providing a better round-the-clock use. As for the medical center, as stated in the conditions for cohabitation, the neighborhood houses a number of invisible businesses (self-employed entrepreneurs) whose current economic and entrepreneurial role in the neighborhood goes unnoticed, but they could fulfill a good example and create a larger network if they reside in a collective workspace. Therefore, the medical center is moved to the first floor and the groundfloor will house the collective workspace for these self-employed entrepreneurs increasing their direct professional network and their visibility to the rest of the neighborhood, thus fulfilling a certain role-model function.

To initiate conditions for cohabitation through the restructuring of the program in the residential area one could create potential for residents to use the public spaces in activities other than playgrounds. However, the success of diversifying the program depends on the other conditions for cohabitation due to the other spatial issues, for example the lack of pedestrian flows through the area. Although it fulfills an environmental need of the different current and future lifestyle groups in the area, the lack of spatial quality prevents people from exploring into the neighborhood and therefore threatens the success of public facilities and local businesses.
Spatial Strategies
Scenario: Business as Usual
Changed Cohabitation Conditions

In the current situation the spatial conditions are primarily focused on either providing functional dimensions for children (or households with children) or arteries running to the neighborhood high street (Nieuwe Binnenweg, West-Kruiskade). By removing parts of the double lane parking spaces, room for Participatory and possible Symbolic dimension is created in these arteries facilitating interactive activities, such as optional or social activities.

While the former arteries provide the small scale 'appropriable' spaces, the neighborhood squares, formerly providing the functional dimension for children, now offer diverse programs in the new hierarchical core of the neighborhood. At the same time they create a network of multidimensional public spaces ranging from Necessary, Optional and Social activators to the pure necessary spaces for specific users (playgrounds). The network and public places in themselves become attractive go-through places (in the case of the Gerrit Sterkmanplein a go-to place) for a large range of user-groups, making it even possible to spawn by-product places rather than being, in some cases, just go-to places for a single user-group or even non-places. The go-to space of the Gerrit Sterkmanplein, therefore, creates a hierarchical focal point in the residential area possibly generating more East-West pedestrian flows through an enhanced network of squares.
**Spatial Strategies**

Scenario: Business as Usual

Role in the Public Space Network

In the current situation the border between the city center and the residential area of the neighborhood is not only spatially very strong but also programatically; from a very dynamic user intensity of the city center and the neighborhood high streets jumping to an immediate very low scale user intensity and program, causing not only a spatial fragmentation but also safety and livability issues.

By increasing the permeability and connectivity on a multitude of scales (spatial and programmatic), the residential area of the Oude Westen can play a bigger part in the network of public spaces of the city center, not only through the potential for more frequent pedestrian flows but also by the different dimensions of public spaces and roles of the public spaces in the direct environment. The programmatic diversity and intensity gradually decreases towards to western part of the neighborhood but sustains the potential for the different activities that can take place in the public space thereby creating the potential for more frequent interaction between residents (and visitors) and possible integration (through visibility and programmatic functions).
IV. Spatial Strategies
Scenario: Business as Usual
Public Space Network

Cohabitation Conditions

Spatial Relation

- user intensity
  - low
  - high
- green structure

- typology of places
- connectivity
- visible collective workspace

- functional dimension
- participatory dimension
- necessary child related activity
- optional activity
- social activity
- interactive dimension
Spatial Strategies
Scenario: Extreme Pedestrian Flows
Introduction + Connectivity

In this scenario we investigate the potential and possible effect of an extreme intensification of the permeability and connectivity: creating the potential for a high intensity and frequency of pedestrian flows in order to improve the visibility and social control that these flows generate. But, moreover, the potential for more program, interaction and integration inside the residential area that could spawn from this higher connectivity.

Connectivity
By introducing the possibility for a high intensity of pedestrian flows through increasing the permeability of the area and, therefore, increasing the activity on street level, we can create a better visibility and sense of social control which contributes to the sense of safety.

Connecting the residential core better on a pedestrian scale to the two main city streets of the neighborhood through an avenue solely for slow traffic, the opportunity is created to attract more function into the residential core, at the same time activating the Rijnhout plain alongside the Nieuwe Binnenweg to become a dominant entrance to the neighborhood. By creating this central avenue more east-west oriented pedestrian flows are facilitated inside the area instead of the currently dominant north-south flows.

The connection to the ‘s Gravendijkswal will likely generate a small increase in pedestrian flow on the west side of the neighborhood and thereby generate the possibility for sporadical program on the Adrianaplein. It will also connect to the residential part of the Middelland neighborhood creating a slight increase (due to the crossing of the ‘s Gravendijkswal) in accessibility to this adjacent neighborhood. The higher permeability and connectivity potentially generate more program and public spaces with different possibilities for activities, however, it does diminish the gradient from highly active to a more leeway environment as presented in the previous scenario.

The third new connection connects the Museum park to the neighborhood park through the area of the Antonius elderly complex. It does not directly generate pedestrian flows for the residential neighborhood, but provides an alternative green route to or from the train station, thereby giving the neighborhood a more prominent role in the public space network and generating more visibility of the possible functions of the Odeon neighborhood.
Spatial Strategies
Scenario: Extreme Pedestrian Flows
Parking

While for the most part the space for small scale appropriation will be the same as in the previous scenario, in this scenario a higher intensity of pedestrian flows is sought not only in an East-West orientation but also in a North-South (the original dominant orientation of the spatial composition).

In order to create an extreme intensification of spaces for appropriation a central avenue is created on the highest integrated street (Josephstraat) of the residential area to facilitate better visibility on street level and create multiple places for diverse activities (leisure, marketplace, playground, local entrepreneurship) and interaction. Moreover, a new hierarchy is created in the North-South orientation primarily focused on a single street.

In order to provide for the North South axis, other spaces will need to facilitate the removed parking spaces, decreasing the space for appropriation in those areas due to the scarce parking places in the Odeon Center parking garage.
**Spatial Strategies**
Scenario: Extreme Pedestrian Flows

Program

By the intensification and diversification of program in the Josephstraat, the Gerrit Sterkmanplein and the Adrianaplein, a new hierarchy is created facilitating not only in East-West pedestrian flows but also more focused on North-South people flows through the Josephstraat.

As in the 'Business as Usual' scenario the aim of the program is to provide very local scale diverse functions in order to increase the economic and social conditions of the current inhabitants; not only by stimulating public program like the Brede School with education for adults on the Gerrit Sterkmanplein, the collective workspace for self-employed entrepreneurs and social entrepreneurship program in the Odeon center, but also by providing the opportunity for relatively cheap local business location alongside the new hierarchical axis. By providing better connectivity, accessibility and permeability of the hierarchical axis, the potential for more program is stimulated, thereby generating more opportunities for inhabitants to develop a local business.

Because in the current situation most of the squares solely consist of space primarily for playgrounds and therefore function as necessary spaces for a single user (children or households with children), the space for playgrounds will be decreased and combined with leisure spaces for other lifestyles, creating the potential for different types of activities and interaction between different users.
Changed Cohabitation Conditions
In the new situation, in comparison with the ‘Business as Usual’ scenario where the public space was aimed at providing space for the appropriatory dimension facilitating optional and social activities, the dominant dimension is the functional, providing high permeability with dominant go-to places, rather than go-through places. Thereby generating more flows of people, conditions for more frequent interaction moments and more places for possible integration.

Although in the current situation the neighborhood park generally functions as a go-to place providing different dimensions and activities, and therefore functions very well, it does not contain a significant people flow when there are no community or neighborhood activities taking place. So, by providing a new connection through the park its permeability as a go-through place is increased, making the activities of certain program (like the Odeon community center) more significant.
Spatial Strategies
Scenario: Extreme Pedestrian Flows
Role in The Public Space Network

With the two new connections on the East and the West side of the neighborhood and the improved pedestrian accessibility of the Josephstraat, the potential for a higher intensity of pedestrian flows has been created, thereby improving the opportunities for program near these interventions. This higher permeability has therefore established a stronger relation with the flows of the city center, in actuality making the residential neighborhood more part of the dynamics of the city center.

This stronger relation of the public space network will increase the social surveillance and economic potential of the neighborhood, however, it also affects the identity of the neighborhood. By becoming more a part of the dynamics of the city center it can potentially cause the loss of the sense of place or ownership. The higher influx of visitors and increased program on the ground floor level reduce the desire to appropriate the border-space between the front door and the street, diminishing the potential for interaction and integration between the residents of the neighborhood.

While the role in the public space network and the impact on the public space network might increase, it will at the same time affect the way the residential area is perceived by the residents (the reduced sense of ownership) and the visitor (as part of the general local integrated network, a more decreased sense of passing through a residential area).
IV. Spatial Strategies

Scenario: Extreme Pedestrian Flows
Public Space Network

Cohabitation Conditions

Spatial Relation
Spatial Strategies
Introducing the Affluent Residents

Due to the increasing trends of migration in the Netherlands and the societal change pressures are rising on peri-urban neighborhoods especially in the city of Rotterdam due to the high percentages of social housing which makes these areas attractive for affluent people in need of adequate housing and municipalities in need of well-educated residents.

How does this trend effect the conditions for cohabitation on a neighborhood and what intervention should be made to provide the conditions for cohabitation and securing the position of the current weaker/less affluent residents. (who need these areas due to the high connectivity and job opportunities)?

In the current master plan of the housing association the phasing of the plan starts with the refurbishment and restructuring of the housing stock over a period of 10 years, after which they intend to restructure the public space and potentially the connectivity of the residential area. In the meantime we see that current public facilities like the neighborhood library are going to be removed from the residential area, reducing the interactive and integrative program in the area.

How will this introduction of possibly more affluent residents effect the conditions in the public space? It will likely effect the street or very local surroundings of the homes of the affluent due to the renovation of the facades and possibly the improvement of the direct public space. However it will not facilitate specific interactions or conditions for cohabitation. In the current master plan of the housing association and municipality the conditions of the public space away from the renovated/new built owner occupied housing will be addressed after the new dwellings have been inhabited therefore it is questionable if these later interventions in the public space will create interactions and integration between the old and new residents.

I this scenario we will investigate the impact of the introduction of the new residential developments and how to facilitate the conditions for cohabitation in accordance with these new developments, taking into account the demands of the future residents and the potentialities of this future situation.

Effects: Use the article of Uitermark & Duyvendak Gentrification as a governmental strategy, social control and social cohesion in Hoogvliet Rotterdam
Spatial Strategies
Scenario: Following Masterplan
Introduction + Connectivity

Therefore, we can create high permeability in areas where it can influence better spin-off opportunities like the tertiary functions (community facilities, local businesses, small scale collective workplaces) in the area where the environment is in need of more visibility and safety.

Instead of an overall highly permeable and active residential area with places of multiple functions, program and therefore different interpretations of the living environment like in the case of the ‘Extreme Pedestrian Flows’ scenario, in this scenario the focus of the connectivity lies on a gradual decrease of program and interpretation of public space dimensions.

Affluent residents introduce a new lifestyle into the neighborhood, who, according to the research of Reijndorp, prefer to live in an environment called ‘Urban Living in the Lee’: benefiting from the diversity and proximity of services schools, playgrounds, shopping and high connectivity etc.), but in a direct living environment which is secure and a quiet refuge from the intense dynamic of the urban.

Following the current master plan over a period of eight years 600 of the social houses/apartments will be renovated, restructured or removed to create 400 owner occupied of private rented houses and apartments. Most of this restructuring will take place in the western part of the neighborhood, an area with historic characteristic features.

In this scenario we investigate how we can facilitate the connotations for cohabitation alongside the introduction of affluent households into the neighborhood and taking into account their needs/demands for their living environment.

Connectivity
With the introduction of affluent residents in parts of the neighborhood the necessity for safety through more visibility, activity and permeability is possibly less needed than in the scenarios without the introduction of affluent households. The reason being the spatial quality the new houses bring to the public space and the overall lawful behavior. Moreover, a high permeability might intrude in the concept of ‘Urban living in the Lee’.
Spatial Strategies
Scenario: Following Masterplan
Parking

With the introduction of more affluent residents the need for parking space will rise, especially since in the current situation the percentage of cars per household is very low (0.4 cars per household with a total of 5,135 households, in comparison 0.7 in Blijdorp and 0.9 in the Kop van Zuid). Although these affluent households might have a higher percentage of cars per household, their coming to the neighborhood would cause de-densification. In the current master plan 600 social dwellings will create 400 owner occupied dwellings which, if we take the Blijdorp comparison of 0.7 cars per household in a high owner occupied area, would mean a possible increase of 40 cars. In a total of 3,370 cars in the neighborhood basically no serious increase.

The restructuring and demolition of some of the building blocks creates the opportunity to facilitate more (or larger) underground parking spaces, thereby reducing the amount of double (or even single) lane parking in the area for affluent households. Thus, creating the possibility for more appropriable space in the affluent residential area of the neighborhood and, possibly, creating a courtyard sense of space.

In this scenario with the development of new housing blocks the opportunity is also created to develop an additional parking garage and to expand the current one in the west of the neighborhood, thereby creating the opportunity for all the proposed 500 parking spaces in order to remove the double lane parking from the neighborhood.
IV.

Spatial Strategies
Scenario: Following Masterplan Program

As stated before, the program in this scenario in relation to the public spaces gradually decreases in activity and use for multiple groups, whereas in the ‘Extreme pedestrian flows’ scenario the number of squares with program on the ground floor was widespread and stretched from East to West and in the Josephstraat from North to South. In this scenario the ground floor program for all residents gradually decreases until the Toni Koopmanplein, from where the squares will focus on providing leisure spaces for children (in the form of smaller playgrounds) and adults without the presence of ground floor businesses to facilitate Optional and Social spaces for the adult user groups and necessary spaces for the children.

As for the program on the axis to the city center it will be similar to the program as stated in the ‘Business as Usual’ scenario: to facilitate the strengthening of the economic and social position of the weaker inhabitants, the educational facilities such as the combination of primary school and adult education and the Odeon center (facilitation is a social entrepreneurship program). While on the Gerrit Sterkmanplein the medical center will make place for a collective workspace.

Programmatic intensity

Program
As stated before, the program in this scenario in relation to the public spaces gradually decreases in activity and use for multiple groups, whereas in the ‘Extreme pedestrian flows’ scenario the number of squares with program on the ground floor was widespread and stretched from East to West and in the Josephstraat from North to South. In this scenario the ground floor program for all residents gradually decreases until the Toni Koopmanplein, from where the squares will focus on providing leisure spaces for children (in the form of smaller playgrounds) and adults without the presence of ground floor businesses to facilitate Optional and Social spaces for the adult user groups and necessary spaces for the children.

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**Spatial Strategies**

Scenario: Following Masterplan

Role in The Public Space Network

**Changed Cohabitation Conditions**

In this scenario the neighborhood is divided into two general dimensions that gradually flow from one to the other. The first dimension is located in the East at the hierarchical spatial and programmatic core of the neighborhood functioning as the go-to area with the program and the permeability for necessary, optional and social activities; and as a potential go-through place, generating pedestrian flows of residents from and to the city center, thereby becoming the hierarchical focal point in the residential area as also in the 'Business as Usual' scenario. The programmatic core gradually reduces in dimension and activity through the squares towards the West of the neighborhood.

**Role in the Public Space Network**

The role of the neighborhood in the public space network is not that different from the 'Business as Usual' scenario. The programmatic and spatial hierarchy is still positioned towards the Gerrit Sterkman plein causing the residential area of the neighborhood to activate its role in the public space network of the city center. With the intensity of the program and potential pedestrian flows decreasing towards the West of the neighborhood we fulfill the desired living environment of the affluent residents, by facilitating the 'urban in the lee' concept.

However, with the introduction of the affluent residents in the West of the neighborhood the public space network in the residential area should be made very apparent in order to increase the potential for use by those residents. The risk will be that they primarily flow towards the Nieuwe Binnenweg, instead of through the residential hierarchy.
Spatial Strategies
Scenario: Following Masterplan
Public Space Network

Cohabitation Conditions

Spatial Relation

user intensity
low
high

green structure

functional dimension
interactive dimension
participatory dimension
necessary child related activity
optional activity
social activity
typology of places
connectivity
visible collective workspace

Spatial Strategies
Scenario: Following Societal Trends
Introduction + connectivity

*daily system: close proximity
housing: modern owner occupied
environment: urban in the lee*

*daily system: less dependent on proximity
housing: architecture style/creativity
environment: cultural, urban, lively*

Environment household with children

Environment household without children

Connectivity
If we follow the trend of the changing society and the preference of affluent households to life in the urban area (like the peri-urban) beyond the timeline of the master plan of the housing association (2010-2018), then other areas in the neighborhood might also qualify as 'urban areas in the lee', i.e. sheltered from the direct dynamics of the central city dynamics but in close proximity of them. From this perspective further restructuring of dwellings for the affluent might take place.

A large number of social housing buildings were built during the City Renewal project (Stadsvernieuwing), this means that, in ten years time, many of them will be more than 40 years old. Therefore, if we consider the gentrification potential following the societal trend, it is likely that City Renewal buildings able to fulfill the 'living in the lee' concept will be renovated or removed for dwellings and apartments suitable for affluent residents.

Connectivity
In the previous scenarios connectivity and permeability were main elements in facilitating safety and catalysts for a divers program in the neighborhood to stimulate economic growth among the current weaker residents and secure their position in the neighborhood. In this scenario with the stimulation of a gentrification process this is less of an issue due to the decrease in weaker inhabitants and the often higher quality environment the affluent residents bring to a neighborhood.

Because the desired living environment is in the leeway dynamic urban area, high pedestrian flows from East to West possibly disrupt this living in the lee situation. However, since the residential part on the east still houses a percentage of the social housing residents, there is still a need for a supportive program and a certain number of pedestrian flows.

To generate pedestrian flows without disrupting the living in the lee concept, to the west a border avenue is created as in the 'Extreme Pedestrian Flows' scenario in the Josephstraat, however, here the avenue functions as a border without any other program than residential or car-oriented traffic.

Because the orientation of the affluent residents will most likely be primarily towards the Nieuwe Binnenweg when it comes to shopping, groceries and leisure (cafe, restaurants), the avenue also functions as a main hierarchical access point to the Nieuwe Binnenweg through the Rijnhoutplein which could function as the main gateway into the neighborhood from the Nieuwe Binnenweg.

By creating a slow traffic avenue focused on living in the lee, we create a certain border between the east and west of the neighborhood making it possible to create a more divers program in the east near the center and a living in the lee area in the west. By stating that the ground levels can only be residential, we emphasize the border function, thereby reducing the attraction of invaders/visitors but increasing the functions as an entrance to
Parking
With the introduction and subsequent increase of affluent residents in the area in the previous scenario we saw a slight but not significant rise in the need of parking space. If we follow the trend and take into account the possible extension of the master plan to other building blocks on locations able to facilitate the ‘living in the lee’ concept, we see that an extension of approximately 400 social housing dwellings extra can be restructured into housing for the affluent. When sticking to the same ratio as before (600 social housing dwellings make place for 400 owner occupied), 300 extra affluent apartments or houses can be created.

In the current situation the number of cars per household is 0.4, in more affluent neighborhoods this is between 0.7 to 0.9. Thus, 1000 social housing dwellings currently have approximately 400 cars (1000 x 0.4), which in this scenario would mean: 700 new dwellings would generate 490 cars (700 x 0.7), but still no significant rise and manageable with the construction of new underground parking garages under the new affluent housing developments.
**Spatial Strategies**

Scenario: Following Societal Trends

Program

As stated in the conditions for cohabitation, the higher concentration of affluent residents in the area often operates on a larger geographical scale and does not require an economic stimulative program to increase its economic situation. Furthermore, an abundance of pedestrian flows and the potential for program this stimulates, disrupt their concept of the living in the lee environment. Therefore, the program and user intensity should be kept to a minimum while still able to facilitate a certain amount of stimulative program for the residents who require this.

As a result, the program has primarily been restricted to the Gerrit Sterkman plein, creating a not very apparent hierarchical anchor point in the residential area. With the presence of a collective workspace, the primary and evening school, still a certain amount of stimulative program is generated but the conditions for entrepreneurism have been removed in order not to disturb the urban in the lee concept.
Spatial Strategies
Scenario: Following Societal Trends
Changed Cohabitation Conditions

Changing Cohabitation Conditions
The conditions for cohabitation in this scenario are not created by introducing pedestrian flows and intensification of hierarchical programmatic and spatial anchor points. The safety and quality of the living environment is created by the higher concentration of affluent residents and the resulting transformation of multiple housing blocks. While the appropriatory space is increased by the presence of more parking garages and, therefore, a decrease in parking in the street, less conditions are created for go-to and go-through places facilitating by-product places due to the low intensity of pedestrian flows. Therefore, it is essential to create a strong relation between the different public space in the neighborhood so that there is the potential for internal movement of the residents and interaction between them.

The synergetic conditions for cohabitation, therefore, will primarily be provided by the intensification of the internal network of public spaces, which comes down to the diversification of conditions for activities, in that case creating strong spaces for optional and social activities.
Spatial Strategies
Scenario: Following Societal Trends role in
The Role of the Public Space Network

Impact on network
Role in the Public Space Network
In this scenario the need for an extensive public space network with a
direct spatial connection to the city center disrupts the concept of 'Urban
living in the Lee' that becomes more dominant with the increasing process
of gentrification. However, in order to facilitate synergetic conditions
for cohabitation a network of public spaces is needed, even though the
network consists solely within the structure of the neighborhood.

This means that the street and squares, even though they might obtain
better qualities due to the gentrification developments, still need to
facilitate different lifestyle groups with different spatial and programmatic
desires.

In this scenario the Nieuwe Binnenweg might generate more business due
to the higher concentration of possible users in its target group, and, at
first glance, this could jeopardize the position of certain shops in the West-
Kruiskade. However, in the survey (see Appendix) we noticed that the users
of the West-Kruiskade are not limited by just the Oude Westen but also
come from outside the neighborhood.

However, the issue in this scenario is the larger scale effect that is generated
by the extensive gentrification/social mixing process: the displacement it
causes of the less affluent residents - reducing their mobility by moving
away from the highly connected central city to peripheral neighborhoods
or even other municipalities, reducing their chances of employment,
increasing the potential for waterbed effects.
Spatial Strategies
Scenario: Following Societal Trends Role in Public Space Network

Cohabitation Conditions

Spatial Relation
While all the scenarios are intended to create the conditions to provide better opportunities for cohabitation in the residential neighborhood, they all hold certain risks when following either the societal or the migration trends.

Shown in the diagrams below are the possible risks and impact the different interventions might have on the public space network, the social structure and the program.

When we summarize the ‘Business as Usual’ scenario which creates permeability for pedestrian flows, small scale spaces for appropriation, social economic stimulative program and a network of public spaces aiding to the need of different lifestyles, the threat still remains that the hierarchical focal point in the East of the neighborhood will not secure the spatial and social quality in the West.

A threat that is reduced in the ‘Pedestrian Flows’ scenario by increasing the pedestrian flows and spaces for small scale economic development. By creating a new hierarchical structure in the form of two axis running from East to West and from North to South, the risk (as stated in the theoretical research) arises that the new influx of pedestrian flows decreases the sense of some type of ownership over the public space of the local residents and threatens the identity of the place.

By introducing the affluent residents as proposed in the ‘Master plan’ scenario, the risk of low spatial quality and social issue is resolved by the redevelopment of dwellings for the future opportunity rich residents including social and economic stimulative program for the less affluent residents. With the redevelopment of the new dwellings the opportunity for more appropriators’ space is created by the parking garages that can be built under the future dwellings resolving the parking issue of the double lane parking. While this scenario might create the appropriate balance between the opportunity rich and opportunity poor residents, it is essential that the network of public space facilitates the use and flow of all the different lifestyles which creates the possibility of cohabitation.

The final scenario is an exploration of the risk and potential of following the societal trend showing what the implications are. The overall quality the affluent residents bring to the neighborhood and the probable displacement of the less affluent reduces the need for synergetic conditions for cohabitation, meaning that there is less need for social economic stimulative program and less need for intensification of pedestrian flows and connecting to a large scale public space network.

With the assessment of the four scenarios showing the possibilities and risks of different spatial and programmatic hierarchies and the social dynamics in relation to a public space network, design principles are developed which could be used parallel to the potential societal trends.
Spatial Strategies
General Impact of the Scenarios

Risk

Programmatic intensity

Programmatic and Connective/Spatial Impact on Network
### Spatial Strategies
General Impact of the Scenarios

<table>
<thead>
<tr>
<th>Spatial Intervention</th>
<th>Scenario: Business as Usual</th>
<th>Scenario: Extreme Pedestrian Flows</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Programmatic and spatial hierarchy in residential core more frequent pedestrian flows from East.</td>
<td>Programmatic and spatial hierarchy by central axis high pedestrian flows.</td>
</tr>
<tr>
<td></td>
<td>Few street spaces for participatory/symbolic appropriation more visibility and social control.</td>
<td>Few street spaces for participatory/symbolic appropriation increasing visibility and social control.</td>
</tr>
<tr>
<td></td>
<td>Multiple public space dimensions on squares create interaction opportunities for different lifestyles.</td>
<td>Tertiary local scale program through-out central axis stim. econ. opportunities of current residents.</td>
</tr>
<tr>
<td></td>
<td>Gradual decrease in dimension of squares to facilitate public space network properties.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tertiary scale program for econ/soc. stimulation.</td>
<td></td>
</tr>
</tbody>
</table>

### Effects

<table>
<thead>
<tr>
<th>Scenario: Business as Usual</th>
<th>Scenario: Extreme Pedestrian Flows</th>
</tr>
</thead>
<tbody>
<tr>
<td>active eastern area</td>
<td>high pedestrian flows</td>
</tr>
<tr>
<td>focus on current inhabitants, no recognition of opportunities created by affluent residents</td>
<td>increase in visibility</td>
</tr>
<tr>
<td>Economic potential for residents</td>
<td>economic benifititial conditions for the less affluent.</td>
</tr>
<tr>
<td></td>
<td>loss of identity and place</td>
</tr>
<tr>
<td></td>
<td>extension of city center activities</td>
</tr>
<tr>
<td></td>
<td>connection to museumpark</td>
</tr>
<tr>
<td></td>
<td>also facilitates municipal/regional users.</td>
</tr>
<tr>
<td></td>
<td>loss of social networks inital</td>
</tr>
<tr>
<td></td>
<td>- extension of city center activities</td>
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<tr>
<td></td>
<td>- competition with neighbor- home high streets</td>
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</tbody>
</table>

### SWOT

<table>
<thead>
<tr>
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<th>Scenario: Extreme Pedestrian Flows</th>
</tr>
</thead>
<tbody>
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</tbody>
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### Evaluation

**Scenario: Business as Usual**

While the connection to the city center, indeed, creates a possible in- and out-flow (more likely a residential out-flow), it is unlikely in this scenario that, in spite of the differentiation of dimensions in the public space and the appropriation conditions in the street structure, it will generate a neighborhood with a sense of security in the current social situation.

**Scenario: Extreme Pedestrian Flows**

This scenario creates opportunities for interaction, movement and entrepreneurial developments, and through the connectivity and program becomes an extension of the city center. There is the threat is that too much connectivity could destroy the sense of place and identity; too many visitors/invaders reduce the sense the borderworld of public space and semi-public space.
### Spatial Strategies

**General Impact of the Scenarios**

<table>
<thead>
<tr>
<th>Scenario: Following Masterplan</th>
<th>Scenario: Following Societal Trends</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Spatial Intervention</strong></td>
<td></td>
</tr>
<tr>
<td><img src="image1.png" alt="Map" /></td>
<td><img src="image2.png" alt="Map" /></td>
</tr>
<tr>
<td><strong>Effects</strong></td>
<td></td>
</tr>
<tr>
<td>- Programmatic and spatial hierarchy introducing frequent pedestrian flows from the East.</td>
<td>- Isolated residential area stimulating ‘living in the lee’ concept.</td>
</tr>
<tr>
<td>- Increase in street space for participatory/symbolic appropriation increasing visibility and social control.</td>
<td>- Small scale soc/econ stimulation program for weaker residents.</td>
</tr>
<tr>
<td>- Multiple public space dimensions on squares create interaction opportunities different lifestyles.</td>
<td>- Multiple public space dimensions on squares create interaction opportunities different lifestyles.</td>
</tr>
<tr>
<td>- Gradual decrease in dimension of squares to facilitate public space network properties.</td>
<td>- Hierarchical living in the lee North-South axis stimulation pedestrian avenue.</td>
</tr>
<tr>
<td><strong>SWOT</strong></td>
<td></td>
</tr>
<tr>
<td>- active social economic stimulative eastern area</td>
<td>- possibility of weak interaction between different groups</td>
</tr>
<tr>
<td>- high quality western area</td>
<td>- make use of the residential island to facilitate and accentuate the concept for gentrification.</td>
</tr>
<tr>
<td>- social balance</td>
<td>- high quality ‘urban in the lee’ area</td>
</tr>
<tr>
<td>- with the introduction of the affluent and the local scale business the entrepreneurs receive a bigger clientele base possibly improving their turnover</td>
<td>- possibility for fragmentation if program and network of spaces do not attract both groups of users</td>
</tr>
<tr>
<td>- In the current planning process the municipality and the housing association start with the development of the future</td>
<td>- imbalance between influence new affluent resi. and weaker resi.</td>
</tr>
<tr>
<td>- intimate gentrification proc.</td>
<td>- decrease of users base West-Kruiskade.</td>
</tr>
<tr>
<td>- loss of social networks initial resi.</td>
<td>- intense gentrification proc.</td>
</tr>
<tr>
<td><strong>Evaluation</strong></td>
<td></td>
</tr>
<tr>
<td>With the connection to the center the potential for densification of program and pedestrian flows is generated in the East. While in the West the ‘urban in the lee’ concept is stimulated. However, without the proper conditions of the public spaces to the hierarchical focal point, the possibility for interaction/integration is at risk.</td>
<td>Although in this scenario the concept and trend of gentrification hold the possibility of creating a neighborhood with a spatial quality and a sense of safety, it does not participate in the public space network. Therefore, is does not generate economic beneficial conditions for the less affluent. Moreover, the gentrification process is possibly threatening the identity of the neighborhood.</td>
</tr>
</tbody>
</table>
The design guidelines indicate the requirements for the interventions in the public space in order to create the conditions for cohabitation that were first tested in the assessment of the current situation and in the scenarios used as guidelines to establish how these conditions change under societal trends.

What became clear when developing and assessing the scenarios, is that both extreme scenarios show that they create certain qualities: either a spatial quality through the large scale transformation of housing and establishing the ‘urban in the lee’ concept throughout the residential area, or by incorporating the neighborhood into the dynamics of the city center, increasing the pedestrian and programmatic appeal. However, both these scenarios are very invasive and could be balanced introducing affluent residents to a certain extent in order to create a balance between the influx people flows, the sense of ownership and residential quality.
To see how this balance might turn out when applying the design principles, the next section elaborates on the implementation of the principles into a possible design of the area under the combination of the 'Following the Masterplan' scenario and the 'Business as Usual' scenario.
V. Implementation of Design Guidelines
As stated in the conclusions of the spatial strategies chapter, the general conditions for cohabitation in relation to the connectivity, functional and spatial programming will be similar to the ‘Following the Masterplan’ scenario with a connection to the Westersingel and the hierarchical program aimed towards the geographical core of the residential area (the Gerrit Sterkmanplein), facilitating the pedestrian flows to activate potential program, social security and interaction between residents of the neighborhood, municipality and region.

In this chapter an impression will be given of the potential implementation of the design guidelines (which where developed through the assessment of the neighborhood and afterwards through the scenarios) in which the general spatial and programmatic requirements have been developed into a detailed spatial design of the neighborhood. This will show how one might design the spatial synergetic conditions for cohabitation in detail besides the established general interventions stated in the scenarios.

The five sections presented in the chapter show the different scales in relation to programmatic and spatial hierarchy and how these different spaces could be designed in order to facilitate the different dimensions, activities and typologies needed at that specific location. However, we must note that this design has been developed without a participatory process, and without actual input of the local residents, let alone the actual input of the municipality. On the other hand, we have a good notion of the vision of the municipality and the housing association as to be distilled from their developed municipal vision and local masterplan.
Implementation of Design Guidelines

Design

Additional program

Removed parking spaces
Implementation of Design Guidelines

Design

- current built form
- housing for affluent
- mixed program
- playground only
- multiple activity place
- basketball court
- public space paving
- leisure space (park)
- terrace community center
- leisure space nursing home
- quay Westersingel
- tramlane
- parking spaces
With the connection of the park to the Westersingel and the Nieuwe Binnenweg and the social-economic function of the Odeon Community Center a new hierarchical node is created on the intersection of these routes. A space where people from different orientations (residents on their way to and from the center, and visitors on their way to the museumpark) meet and can find their leisure. The park is thus an important go-to and go-through place for the neighborhood and visitors, at the same time creating the conditions for the three types of activities necessary to provide interaction and potential integration.

The connection through the grounds of the nursing home has improved the relation between the home and the neighborhood (especially the residents), thereby providing more use (flows and activities) of the park and increasing social surveillance.
The Odeon Community Center will fulfill its potential in providing a space for initiatives by location residents to create a social-economic program in which residents can learn skills (management, catering etc.) as a means for small income, and to further social integration. The Community Center becomes both an integrative landmark for the neighborhood and a programmatic go-to place for the park and its residents.
The new connection to the city center will activate the potential for program in the Gaffeldwarsstraat, creating lower priced location, as compared to the West-Kruiskade and the Nieuwe Binnenweg, for local entrepreneurs to set up business. Removing the parking spaces increases the relation between the opposite sides of the street and offers a better pedestrian connection to the Gerrit Sterkmanplein and space for different types of appropriation. As for the Gaffeldwarsstraat it holds good that with the pedestrian connection a go-through space has been created facilitating by-product places for commercial use but also a place for short-term interaction between residents.

Although the program in the street should primarily aim at benefiting the local residents, it will contain a high concentration of program so as to establish the hierarchical routes as stated in the design guidelines. To reinforce this hierarchy in program and connection to the public space network in the East-West direction, paving strips on opposite sides of the streets are applied.
The Gerrit Sterkmanplein functions as the residential core of the neighborhood, providing public facilities as a primary school, evening school and library, and thus extending its use both in time and diversity, whereas before its use was limited to children. The additional program is the collective workspace for self-employed entrepreneurs, a meeting/working and stimulative place where local entrepreneurs can interact and work with potential colleagues: interaction with residents from the neighborhood is also possible owing to the high visibility and the geographical location amidst the high concentration of pedestrian flows. This creates the conditions to showcase their work and receive feedback.

The public space of the square is aimed at facilitating spaces for different social groups and different types of use. Where, formerly, the square only provided space for children to play, in the future situation the space will be divided in the leisure/go-through space and playground space for the children of the primary school, which can also serve as a place for local market activities.
In the Gaffeldwarstraat the sides of the street (as an indication of appropriatory space and vein in the public space network) will be paved with a different kind of paving, the same type as on the square (and all the other squares in the neighborhood) to indicate a space with multiple dimensions facilitating the three types of activities.
The Sint-Mariastraat is an example of the effect reduction of double lane parking can have in these neighborhood streets that are not really a part of the hierarchical public space network. Nevertheless, these streets play an important role in providing conditions for interaction and micro-activities for the residents of the neighborhood.

In this case the reduction of parking space has created the opportunity for residents to appropriate the borderworld between the street and the house, and it increases the intervisibility between the opposite sides of the streets. By creating the opportunity for this appropriation (often in the form of leisure, reading a book in front of your house or children playing on the sidewalk) we create conditions for short-term interaction and social surveillance (an important aspect which in the current situation is an issue). This appropriational space contributes to the potential of optional and social activities.
In the current situation the West-Kruiskade functions, on the one hand, as a vital transport artery for the city and, on the other, as a neighborhood shopping street for local groceries. In this situation the transport function is very dominant in the area and slices the street into five sections: two commercial plinths, two traffic lanes and a tram lane. All have their own paving which sets the different functions apart from each other and from the supposed dominant function of the shopping area, the aspect which is the mean attractor. Moreover, the intensity of traffic slices the neighborhood into three sections.

In order to increase the dominance of the commercial function and decrease the traffic intensity/speed, one color set of paving is proposed to make drivers more conscious of the space as a residential zone in the hope of forcing them to reduce their pace.

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In order to increase the dominance of the commercial function and decrease the traffic intensity/speed, one color set of paving is proposed to make drivers more conscious of the space as a residential zone in the hope of forcing them to reduce their pace.
VI. Recommendations
In the past chapters we have shown the importance of defining the various types of lifestyles and its various daily systems in order to determine a new way to assess the local scale and connect this to the larger dynamics of the city. Because the definition of the different needs and lifestyles is essential in determining synergetic conditions for cohabitation, we need to establish a participatory system in which these needs and lifestyles can be defined per locality.

In this chapter we will assess the ‘synergetic conditions for cohabitation’ in the current decision-making process which can be applied as a method for assessing and providing principles for an alternative urban transformation method in Rotterdam as an example for The Netherlands, and assess the design guidelines derived from the scenarios in the policies and zoning plan of the municipality. Finally, we will establish what the role of the different stakeholders could be in establishing this alternative urban transformation method.

What is evident of the policies and visions in the current policy scheme, is that their aims are general in tone: to encourage the competitive position of the national, provincial and municipal bodies by increasing the connectivity, economic climate of regions and municipalities.

In recent years the spatial planning system has changed from a top down approach (in which land use plans at municipal or provincial scale had to be based on the principles of higher tiers) towards an approach in which rules and guidance frameworks are made by provincial bodies before local plans are drafted. This gives municipal authorities more freedom to set down their own visions.

As has already been stated in the problem definition of the project, from the municipal perspective of Rotterdam the goal of achieving a more diverse economic climate (towards a knowledge and service economy) can only be met if the residential issue facing the city, namely, the deficit in high educated residents in relation to the other G4 cities, is also addressed.

What can be gained from the current policies of the municipality is, that they intend to socially diversify the inner city neighborhoods in order to address, on the one hand, the societal trend of families moving to inner cities, and, on the other, the economic impulse these households might give to establishing the economic transformation. This policy has been adapted by the housing association as a means to create a more socially diverse neighborhood, introducing more spatial quality, establishing a role model function for these future residents and strengthening the neighborhood economy.

However, as stated before, the intended municipal and local policies react on the societal trends and economic potential from the spatial planning perspective of the built structure. Apart from the development of transport hubs where municipalities take into account the potential of intensifying pedestrian flows, uses and activities by different users, the primary planning perspective for neighborhoods has been in the transformation of housing typologies, mixed functions and social diversification. In the realization of
Recommendations

Policy Scheme

<table>
<thead>
<tr>
<th>National (The Netherlands)</th>
<th>Provincial (Zuid-Holland)</th>
<th>Municipality (Rotterdam)</th>
<th>District (Central District)</th>
<th>Neighborhood (Oude Westen)</th>
</tr>
</thead>
</table>

**Mem. Space**
- Strengthen competitive position, promote strong cities, major (inter) national spatial values, and safety.
  - Decentral where possible, centralized where it should be

**Mem. Mobility**
- Reliability, speed, safety of transport

**Randstad Urgent**
- Quality-proof Delta, Connectivity & dynamic economy, High Quality dwelling, employment and residential environment

**Randstad 2040**
- Secure living (green/blue delta), International strengthening, sustainable & regional connected cities

**Vision Zuid-Holland**
- Coherent, recognizable and diverse province, qualitative economic competitive position

**Provincial Interest**
- Competitive international profile, Sustainable Climate-proof delta, Coherent intercity network, City and Rural relations, Vital, divers Rural Landscape

**Urban Vision 2030**
- Strengthen economy & residential attractiveness, Gentrify, increase creative industry in peri-urban neighborhoods

**Residential Vision**
- Rise in home-ownership, improve dwelling, residential environment and facilities

**Work Locations**
- Two Zones: Knowledge & Servicezone /Harbor & Industrialzone. Increase EMC Hoboken.

**Traffic Plan Rotterdam**
- Connected city: growth train and car traffic(concentrated in main routes)
  - Stimulate cycling and PT use inside city

**City Lounge**
- Improve leisure, commercial, pedestrian quality of inner city.
  - smart economy - central living
  - connected city - culture and leisure

**Traffic Plan Inner City**
- Increase parking space (price increase to city center P+R outside center. Residents parking close to home (garage/street)

**Masterplan Oude Westen**
- Improve leisure, commercial, residential differentiation

**Neighborhood Vision**
- Bind & Seduce
  - Increase safety, social facilities, vitality, living, public space, entrepreneurship
  - gentrification -> spatial, economic, social and safety interventions

---

Transformation vision established from the perspective of intervening in the built structure, changing housing typologies and public spaces to facilitate these new typologies.

Without a participatory planning approach where stakeholders from different scales are recognized and without the recognition of the potential of intervening in the public domain in relation to its users, risk of fragmentation will be sustained.
Recommendations
Revising the Current Decision-Making Process

In this actionplan local and municipal stakeholders form a partnership in which they establish common goals and, as partners, execute the analysis through the synergetic conditions for cohabitation; establishing the current issues from the perspective of the local stakeholders and the municipal authority in relation to the potential of the public domain.

This alternative approach might interfere with the initial municipal goals for the transformation of these peri-urban neighborhoods. However, in this current economic climate where the housing market is dealing with decreasing housing prices, sales and lack of faith in the potential investment of becoming a home-owner, it might present a good alternative, in which a slowed down housing transformation might actually create better opportunities to secure conditions for cohabitation.

Recapitulating, the process posted for the recognition of the synergetic cohabitation conditions is now embedded into an integral proposal.

However, a frequent obstacle in the participation process is the laymen possessing insufficient knowledge and understanding when it comes to the perception of analyses, maps and the establishment of ground rules. Especially with regard to this last aspect, it is difficult to reach a consensus between the local stakeholders (primarily the residents) and the authorities (including the housing associations). Therefore, it is to be recommended to establish ground rules, a general goal and already acquired insight by the municipality, and to share these in the CAP. With this fundamental knowledge a basis for a discussion is laid. It is evident that these general goals may have to be adjusted in some ways as a result of the input from the local stakeholders. Which is of course one of the main arguments to hold such an actionplan.

Another aspect that should be considered is who will be qualified to be part of the committee of local residents.

The CAP (community action plan) shows a potential approach for a successful process of a participatory partnership.

A. Establishing a partnership between local stakeholders and the local authority
B. Establishing the goals
C. Doing an analysis of the project area (through the use of the conditions for cohabitation)
D. Creating the vision for the project area
E. Followup of the vision

To show that a number of the elements of the synergetic cohabitation conditions can already be implemented into current municipal plans, we will show where the potentials lie in the zoning plan of the municipality, in order to show that besides the CAP the municipality can already take action.
Recommendations
Revising the Current Decision-Making Process

Community Action Plan

1. Establishing a partnership between local stakeholders and the local authority
2. Establishing the goals
3. Doing an analysis of the project area (through the use of the conditions for cohabitation.
4. Creating the vision for the project area
5. Followup of the vision
The zoning plan of a municipality is a document that indicates the rights and regulations for possible interventions by housing associations, entrepreneurs, residents, private developers etc. Showing maximum buildings heights, building lines, multiple residential/mixed/commercial functions, potential future developments and small-scale interventions in the public space, like the restriction or facilitation of parking spaces.

Due to the timespan in which the zoning plan operates and the timespan in which, in this case, master plans are developed and implemented the implementation of certain design guidelines are limited. A zoning plan usually lags behind the developments of the area it covers. Therefore, the rules established in the zoning plan cannot be too detailed to prevent too much interference with possible future developments. If a zoning plan is too detailed, potential interventions in the zoning plan cannot effectively react on new developing trends, policies or visions from higher authorities.

Therefore, the zoning plan in relation to the design guidelines creates limitations due to the detail to which some of the guidelines refer: especially, in relation to the visual connectivity of the public space to indicate the public space network (on the neighborhood and network scale), the specific social-economic stimulative program and the specific hierarchical flows/program of the public spaces.

On the other hand, the zoning plan allows the implementation of certain design guidelines that are vital in providing some potential for the conditions for cohabitation. The potentials can be found in the feasibility to reduce or limit the number and location of parking spaces in specific locations (streets), and to restrict and provide the regulations to create mixed functions for specific buildings. On the next page the elements which can be implemented in the zoning plan, are named and illustrated in the zoning map.

Added elements in the zoning plan

Mixed program:  
Gerrit Sterkmanplein medical center = mixed (GD-5)  
-> mixed (GD-4) allowing mixed function on multiple levels  
Gaffeldwarsstraat = one side mixed (GD-2) -> both side mixed (GD-2)  
Adrianaplein corners = housing -> mixed (GD-2)

Parking garage:  
Odeon community center = mixed (GD-4) -> mixed (GD-4) + parking garage (PG)  
Two Housing Block Adrianastraat/Bajonetstraat = Housing (W) + mixed (GD-2) -> Housing (W) + mixed (GD-2) + parking garage (PG)

However not much can be said about the transformation of public spaces (like squares and parks)
Economic Development
Developing the Westkruiskade to facilitate the increase in flows (train station developments)
Neighborhood park is isolated connect park to the Westersingel and accommodate better connection with West-Kruiskade.

Development "dijkversterking 's Gravendijkwal
Reduce the number of societal functions, increase housing and office functions, through an 'uitsterfregeling'.

Development residential area
Sint Mariastraat: Currently 89 multi-family and homes (with some business levels),
  -> reduce number of multi-family homes to single family
Gaffeldwarsstraat: Currently 30 multi-family homes (in poor conditions)
  -> Redevelop into 9/18 single family homes
Bajonetstraat: Currently 90 multi-family homes
  -> Through redevelopment/ demolition or renovation reducing amount of the multifamily homes
POP panden: 91 poor quality small dwellings/business spaces in multiple locations
  -> Combine groundfloor and higher levels for DIY dwelling.
Possible Future developments:
  -> Development new housing in Zijdewindeplein: 4 Level + Parking
  -> Odeon Center Reduce amount of housing, incorporate future societal functions.

Mixed program: Gerrit Sterkmanplein medical center = mixed (GD-5) -> mixed (GD-4) allowing mixed function on multiple levels
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Recommendations
Zoning Plan

Zoning plan map
source: Municipality Rotterdam Ds+V (modified by author)
Conclusions
What this project has attempted to make clear, is that in the goals and needs of the municipality aimed at creating a socially divers neighborhood in an economically competitive environment the local perspective is not valued. In a planning perspective where the local potential, lifestyles and needs are not recognized within the process of today's societal and migration trends, this attitude can lead to fragmentation, and in the worst case lead to planned eviction.

However, in this project we have shown that these proposed goals can be achieved, and a better consensus can be reached at the local scale by addressing the public space as an effective instrument to integrate the needs, lifestyles, and daily systems into synergetic conditions for cohabitation but also as an instrument that can answer the complexity of today's city dynamics.

The research in this project has led to a method in which partnerships between the municipality and the local stakeholder/community can lead to a more integrated planning approach where the focus lies in the potentials of the public space. This is in contrast to the current planning perspective which focuses on the potential the transformation of the built form can bring about in establishing a diverse, safe and high quality living environment for the peri-urban residents. The method does not provide a toolbox with design solutions but it offers a set of conditions and requirements to assess a neighborhood within certain societal trends.

The integrated planning approach aims at recognizing the potential of the local (in its identity and its inhabitants) in relation to the municipal scale. In contrast to current views of introducing the global (affluent, opportunity rich) into the local, this method recommends to recognize the local as the main facilitator of the global (municipal) scale.

This research method and integrated planning approach have been tested on the Oude Westen peri-urban neighborhood being part of the Urban Regeneration vision of the municipality of Rotterdam. In consideration of the synergetic conditions for cohabitation the current situation of the neighborhood has been assessed indicating that, apart from the effects of the societal trends and the proposed spatial transformation, the Oude Westen neighborhood has to deal with a number of shortcomings: lack of space for activities facilitating different social groups, lack of safety and program and the fact that it is partly fragmented from a larger public space network.
Reflection
Reflection

During the development of the project in the P1 and P2 phase the relation between research and design was not evident, most likely due to the direction of the project being unclear. However after the P2 phase with the project general guidelines set out this relation became at lot stronger. Where in the previous phase the theoretical research aimed at understanding the problem (how certain municipal strategies effected neighborhoods) in this phase the research was very solution oriented and developed in forming the base for an evaluation or assessment tool. The assessment tool while purely theoretical at that time showed what certain potential requirements could be for an alternative urban transformative approach. This tool off course had to be tested, which was done using a neighborhood in Rotterdam. This assessment proved that the method could use full in determining the issues and potentials of in this case peri-urban neighborhoods.

However the project was executed using the understanding of different social groups under certain societal trends therefore scenario had to be developed which explored possible interventions under these different social groups and societal trends. Which was where the real research by design cam to pass. Using the developed method and the knowledge of the issues and potentials of the neighborhood four scenario's where developed, thereby attempting to gain deeper understanding how different social groups need and demand different spatial interventions. The results of the research by design phase developed into design guidelines specific for the Oude Westen neighborhood.

Even though the project is based and a very extensive theoretical framework taking up much of the project time there was a very logical and clear relation between the research and design near the end of the project.

The project might focus on a small fragment of the city of Rotterdam and impose interventions for this location, however it takes place in a very wide context and under large urban development. The project stayed true to the mission statement of the Complex Cities graduation studio as it formulated a spatial strategy and design under a global in this case regional context and investigated spatial processes under certain societal trends.

It has used the theoretical research to develop a method that potentially could be used in the investigation of different neighborhoods in the Netherlands and possible beyond. The project contributed to the realization of different processes, potentials and problems that cities face today, however, which are very important to realize in their aim to become a strong competitor on the global economic market.

The strategy formulated in to project focuses on an important aspect in the urban regeneration approach of in this case Rotterdam, where the focus is primarily on the potential of the built structure in relation the regeneration and not on the uses and users of the public space. Because of this realization and the establishment of a method that gives the tolls for an alternative approach the project has stayed very true to the method and objectives of the studio.

In relation to the wider social context in my opinion this is a very relevant project due to the fact that it shows a very strong relationship between acknowledging the different users and potential uses of the public domain and how this knowledge can be used to create a more cohesive social and spatial structure. The project recognizes different societal trends, which impose a dichotomy on the need and the desire to live in certain places and therefore provides and potential method on how to deal with this dichotomy while attempting to establish a social and territorial cohesive neighborhood.

While the project has dealt with a variety of social, spatial and societal aspect it is this realization that has the largest impact on city dynamics, as it provides an alternative for gentrification strategies, urban regeneration focused on the built form and therefore attempts the secure highly dynamic economic and social spaces for all social groups, especially the ones who need to live in such areas to increase their economic prospects. While the project intervenes on a very local scale the impact of the interventions might be much greater to the potential for stronger social and territorial cohesion, reducing the need for displacement of less affluent residents the peripheral neighborhoods and the displacement (or further increase) of social issues in these peripheral areas.


CBS- Central Bureau of Statistics (http://www.cbsinuwbuurt.nl/#pageLocation=index)

COS- Center for Research and Statistics (http://www.rotterdam.nl/monitoren)


Stadsvisie Rotterdam 2030

Randstad 2040

Source: http://radicalactivismvisualarchive.files.wordpress.com/2008/11/yuppy.jpg

http://theorycity.files.wordpress.com/2011/04/picture6-7_tarlabasi-before-and-after.jpg
Detailed Analysis Commercial High Streets

Chinese
Survey Oude Westen

Summary

Locatie afnemer
- e-mail: 0 (0%)
- school: 0 (0%)
- theater: 0 (0%)
- winkelcentrum: 0 (0%)
- busstation: 0 (0%)
- ziektehuis: 0 (0%)
- Fietsenstalling Pleinweg: 0 (0%)
- Ondernemershuis: 0 (0%)
- Overig (zelf corrigeren in tabel): 0 (0%)

Motivatie en gebruik

Hoe bent u hier gekomen
- auto: 1 (4%)
- bus: 0 (0%)
- metro: 3 (13%)
- fiets: 0 (0%)
- te voet: 8 (35%)
- bromfiets/scooter: 0 (0%)
- motor: 0 (0%)
- oordbaat: 11 (48%)
- andere: 1 (4%)

Wat is de reden van uw komst?
- dagelijkse boodschappen: 3 (14%)
- school: 4 (19%)
- openbaar vervoer (streekbus, metro, stadsbus etc.): 0 (0%)
- winkelen: 1 (5%)
- ontmoeten: 1 (5%)
- werken: 1 (5%)
- theater: 1 (5%)
- recreatie (Park O...): 4 (18%)
- parkeren: 0 (0%)
- andere: 6 (29%)

Hoe vaak komt u totaal in dit gebied?
- iedere dag: 11 (48%)
- 1-2 keer per week: 6 (29%)
- 4-6 keer per week: 1 (4%)
- meer dan 1 keer per maand: 1 (4%)
- minder dan 1 keer per maand: 5 (22%)
- nooit: 2 (9%)

People may select more than one checkbox, so percentages may add up to more than 100%.
Motivatie en gebruik

Waarom kom ik vaak in dit gebied?

- dagelijkse boodschappen: 4 (19%)
- uit eten en drinken: 3 (14%)
- school: 3 (14%)
- openbaar vervoer (streekbus, metro, stadsbus etc.): 3 (14%)
- winkelen: 8 (38%)
- ontmoeting / chillen: 8 (38%)
- werk: 5 (24%)
- theater: 1 (5%)
- recreatie (Park Oude Westen etc.): 4 (19%)
- parkeren: 2 (10%)
- Other: 2 (10%)

Hoe vaak kom ik totaal in dit gebied?

- elke dag: 11 (48%)
- 4-6 keer per week: 1 (4%)
- 1-2 keer per week: 5 (22%)
- paal keer per maand: 0 (0%)
- 1 keer per maand: 1 (4%)
- minder dan 1 keer per maand: 2 (9%)
- nooit: 1 (4%)

Waardering en beleving

algemeen oordeel - sfeer

- slecht: 1 (4%)
- matig: 2 (9%)
- redelijk: 4 (17%)
- goed: 11 (48%)
- zeer goed: 3 (13%)

algemeen oordeel - bereikbaarheid

- slecht: 1 (4%)
- matig: 0 (0%)
- redelijk: 2 (9%)
- goed: 16 (70%)
- zeer goed: 2 (9%)

algemeen oordeel - uitstraling

- slecht: 3 (13%)
- matig: 9 (35%)
- redelijk: 6 (23%)
- goed: 2 (9%)
- zeer goed: 0 (0%)

algemeen oordeel - informatievoorziening

- slecht: 9 (33%)
- matig: 3 (13%)
- redelijk: 1 (4%)
- goed: 8 (35%)
- zeer goed: 0 (0%)
Survey Oude Westen

- **algemeen oordeel - aanbod winkels**
  - Slecht: 0%
  - Matig: 0%
  - Redelijk: 9%
  - Goed: 9%
  - Zeer goed: 1%

- **algemeen oordeel - aanbod horeca**
  - Slecht: 2%
  - Matig: 0%
  - Redelijk: 7%
  - Goed: 10%
  - Zeer goed: 2%

- **algemeen oordeel - aanbod cultuur**
  - Slecht: 2%
  - Matig: 6%
  - Redelijk: 5%
  - Goed: 22%
  - Zeer goed: 0%

- **algemeen oordeel - aanbod zitplekken in de openbare ruimte**
  - Slecht: 10%
  - Matig: 3%
  - Redelijk: 1%
  - Goed: 6%
  - Zeer goed: 0%

- **Voelt u zich hier altijd veilig?**
  - Ja: 14%
  - Soms: 3%
  - Nee: 4%

- **Wat is uw eindoordeel?**
  - Zeer slecht: 0%
  - Slecht: 0%
  - Matig: 0%
  - Goed: 0%
  - Zeer goed: 0%

- **Waar ligt dit aan? - voldoende camera's**
  - Waarom wel?: 3%
  - Waarom niet?: 2%
  - Beide: 0%

- **Waar ligt dit aan? - voldoende politiebezicht**
  - Waarom wel?: 2%
  - Waarom niet?: 0%

- **Waar ligt dit aan? - overlast**
  - Waarom wel?: 3%
  - Waarom niet?: 2%
  - Beide: 0%

- **Waar ligt dit aan? - oververschietbaarheid**
  - Waarom wel?: 3%
  - Waarom niet?: 1%
  - Beide: 0%
Abstract - Gentrification generally refers to a change in neighborhoods where people of middle and high income gradually replace a resident lower-income population. The influence of gentrification on deprived neighborhoods has been part of the urban, social, and economic debate for many years (Smith, 1979, Marcuse, 1986). Nowadays, gentrification is rarely a natural process. Instead, municipalities often enforce it as a strategy to strengthen the economic, social, and spatial structure of cities undergoing economic transformation, which results in large-scale urban development (Rotterdam, 2007). The notion exists that gentrification on a neighborhood scale will decrease segregation, social exclusion, and deprivation, and creates more sustainable communities (Kearns and Mason, 2007). Motivated by this notion, municipalities tend to stimulate gentrification to improve social capital and cohesion in places where the cities have lost grip on social life. However, there are many critics who question the capability of this 'positive gentrification' policy (Slater, 2008, Lees, 2008, Uitermark et al., 2007).

Therefore, we look at why municipalities tend to see gentrification as a functioning means to create social control and cohesion in deprived neighborhoods and to demographically facilitate the economic transformation of the city. Second, we seek to find out why different academic fields dispute the positive effects of this strategy. Third, we want to develop a framework of aspects to take into account when dealing with deprived neighborhood near large-scale urban development such as business districts, city centers, and large train stations.

Towards understanding the workings of enforced gentrification and why it is a topic of debate, this review paper addresses three research questions: What is gentrification and how has it evolved? How have governments used gentrification as an instrument for their urban planning policies? What are the social, economic and spatial implications of the gentrification strategy on deprived neighborhoods and on the city as a whole? In order to answer these questions, we reviewed a wide range of academic articles on gentrification as a planning strategy.

Key words – Gentrification, municipal strategy, social mixing, social housing, social/economic/spatial effects

1. Introduction:

With the de-industrialisation in the West and the rise of newly industrializing countries that took over the production of goods, a change occurred in the post-industrial cities. This triggered a shift of capital from unproductive sectors to new productive ones and it set the stage for reinvestment in central city real estate for offices, recreation, retail and residential homes (Hackworth and Smith, 2001).

These postindustrial cities saw major reinvestment in their central business districts, which prompted a secondary reinvestment in residential neighborhoods nearby these districts. In addition, the economic restructuring led to an increase in technical and cultural activities and to an influx of many professionals. Technical jobs and cultural markets rose in the urban core, which prompted a change in the demography of the city. The former working class neighborhoods near the urban core attracted these white collar professionals who often maintained a non-traditional household and a lifestyle very different from that of the former working class residents (Zukin, 1987).

During the heyday of neoliberalism in the last decades of the 20th century, municipalities started to use the process of gentrification as a major strategy to strengthen the social, economic and spatial structure of their cities. This tendency has not been limited to metropolitan cities but it has trickled down to smaller industrial cities and even market towns.

In this literature review we aimed to investigate what gentrification is, how municipalities have exploited the gentrification process for their aims and how it affects the social, economic and spatial structure of inner city neighborhoods.

The structure of the paper is as follows. First, we describe what gentrification is and the changes it has gone through over time. Second, we illustrate how municipalities have tried to guide the process of gentrification towards deprived neighborhoods. Third, we give a review of the social, economic and spatial
Hackworth and Smith stated in their article “The used and governed by the public or private sector. Not so much as to how it worked, as in the way it was gentrification process it has undergone transformations, since the first scientific observation of the district has grown as well as the process itself, thereby changing economic and political conditions, its context has grown as well as the process itself, thereby creating externalities that are far greater than in the initial process.

2. What is Gentrification?

Gentrification has been part of the academic debate since fifty years ago, when the first description of the phenomenon was given by Ruth Glass in her 1964 work “London: Aspects of Change” in which she also coined the term “gentrification”:

“One by one, many of the working-class quarters of London have been invaded by the middle classes—upper and lower. Shabby, modest mews and cottages—two rooms up and two down—have been taken over, when their leases have expired, and have become elegant, expensive residences. Larger Victorian houses, downgraded in an earlier or recent period—which were used as lodging houses or were otherwise in multiple occupation—have been upgraded once again … Once this process of “gentrification” starts in a district it goes on rapidly until all or most of the original working-class occupiers are displaced and the whole social character of the district is changed.”

The process observed by Glass could also be described as “class-transformation” or in more general terms: “The production of space for progressively more affluent users” (Hackworth, 2002). This author demonstrates that “New-Built” developments can also lead to secondary gentrification nearby. Newly built developments for the middle classes can act as flagship developments from which tentacles of gentrification slowly stretch into adjacent neighborhoods. (Slater, 2006)

Looking at the process of gentrification over time we could say that the general effect has not changed, as it is still a matter of “class-transformation”. However, due to changing economic and political conditions, its context has grown as well as the process itself, thereby creating externalities that are far greater then in the initial process.

2.1 The Evolution of Gentrification

Since the first scientific observation of the gentrification process it has undergone transformations, not so much as to how it worked, as in the way it was used and governed by the public or private sector.

Hackworth and Smith stated in their article “The Changing State of Gentrification” that gentrification from today is quite different from what it was in the early 1970’s, 1980’s and early 1990’s. To understand the changing role of the government and the private sector in this respect, it is necessary to understand the historical context. Slater defined three defining periods or waves since the discovery of the gentrification process, separated by two recessions.

The first wave took place prior the global economic recession of 1973. At first, as Ruth Glass described in 1964, gentrification was a highly localized and discrete process, primarily funded by the public sector. In this way, local and national governments tried to counteract the economic decline of central city neighborhoods. While the state involvement was often justified because it was a means to counteract urban decline, the effect of these interventions generally did not improve or even worsened the conditions of the urban working class, who had to move from their old homes that became unaffordable after the necessary renovations.

In the Netherlands during this period huge urban regeneration programs were undertaken aimed at providing sufficient and adequate housing for lower income inhabitants. These programs were funded by national government and developed by municipalities and housing associations that owned substantial amounts of land, which they prepared for building and whose allocation they controlled (Stouten, 2010). However, gentrification was strongly and effectively opposed by the Dutch squatters movement, which helped create a decommodified housing stock that was accessible and affordable (Uitermark, 2009).

The second wave of gentrification came after the economic recovery in the mid 1970’s and lasted until the late 1980’s. Gentrification occurred even in cities that had not experienced it before. In addition, instead of planning and financing the projects themselves municipalities stimulated the private sector to do the necessary investments rather then directly planning the process themselves. This second wave lasted till end of the 1980s which characterized the transformation of gentrification due to the integration of a wider range of economic and cultural processes.

In The Netherlands the role of the private sector remained limited during this episode, due to the position of the housing associations who were still part of the public sector. There were initiatives to promote housing careers, were residents were stimulated to move to the better and more expensive accommodations, leaving cheaper subsidized housing for lower-income groups. (Stouten, 2010). However, these initiatives proved largely unsuccessful.

The third wave occurred after the recession at the end of the 1980’s, a period when gentrification processes slowed down. However, the late 1980s recession proved to be just a transition period of gentrification to the third wave. During the the second wave private investors usually stepped in after a neighborhood had started to improve. In this third wave however, private investors tried to maximize their profits by anticipating on the developments and by taking the initiative to acquire and renovate inner city buildings. Also the community opposition declined primarily due to the
Review Paper Gentrification
Gentrification: A Two-Sided Coin

continued displacement of the working class, thereby decreasing the opposition base. Finally, the most apparent change in the this period was the reappearance and growing involvement of governments in the gentrification process.

In contrast to the global trend of state involvement, the Dutch government opted for privatization of the housing associations who were to combine their traditional public tasks with market activities thereby becoming self reliant entrepreneurs (Stouten, 2010, MVROM, 1989). Moreover, as we will see later the municipalities took on a pro-active role when imposing new urban regeneration plans. During its 50 year development, the scope of gentrification gradually broadened from specific forms of neighborhood change towards a comprehensive reformation including such diverse issues as office development, changes in retail environment, city marketing and zero-tolerance policing strategies. (Uitermark et al., 2007)

3 Gentrification and the role of government

As discussed, the involvement with the gentrification process of government and other actors has changed over time. Davidson states that as gentrification became more diverse, complex and geographically differentiated, concern about displacement and related injustice issues tended to diminish. Nevertheless, gentrification was increasingly embraced by policymakers as a potential urban renewal solution. (Davidson, 2008). Hackworth and Smith make clear that the involvement of the state is related to the privatization process: “First, continued devolution of federal states has placed even more pressure on local states to actively pursue redevelopment and gentrification as ways of generating tax revenue. Second, the diffusion of gentrification into more remote portions of the urban landscape poses profit risks that are beyond the capacity of individual capitalists to manage. Third, the larger shift towards post-Keynesian governance has unhinged the state from the project of social reproduction and as such, measures to protect the working class are more easily contested”.

Within the Dutch context some of these notions do not apply. For example the housing associations, even though they are financially independent institutions since 1995, are legally bound to reinvest their profits in housing for target groups of social housing policies. Another point is that municipalities can collect taxes only for specific services. Income tax can be collected only by the national government. The motive for municipal gentrification strategies comes from a change in the perception of social housing. Until the 1990’s social housing was seen as an asset to the cities and a solution for social ills, whereas later, it was associated with crime, graffiti, disorder and disadvantaged neighborhoods with unliveable conditions. The national government now started to encourage local governments and housing associations to construct owner-occupied housing and to demolish social housing in order the create neighborhoods with balanced social composition (MVROM et al., 2000). Currently the notion of the local government is that social housing has become an ill in itself and that it is associated with dependency (Uitermark et al., 2007, MVROM et al., 2000).”

(Uitermark et al., 2007) make clear that through the change of perception of social housing from a municipal perspective the strategy on how a neighborhood with good liveability can be achieved has been adjusted by emphasizing spatial quality and gentrification as a means to guarantee social sustainability (social cohesion, social capital).

“Liveability means that neighborhoods are orderly in the sense that they exhibit a low level of crime, vandalism and nuisance, according to housing association” (Uitermark et al., 2007).

The change in perception of social housing and the change of involved actors made gentrification part of the national agenda. “The Large City Policy” (Grotestedebelied) was aimed at improving the liveability and social-economic position of large cities by improving the inner city neighborhoods on a regional scale” (Kruythoff and Haars, 2002). These changes in perception in relation to social housing are very much dependent on the political powers in time. For example when Pim Fortuyn’s party “Leebaar Rotterdam” (Liveable Rotterdam) came to power. During that period a strong call for the dispersal of poor and immigrant inhabitants and the creation of mixed neighbourhoods rose (Lees, 2008). An instrument that was proposed to achieve this goal was to introduce affluent households into neighborhoods with social-economic problems and high percentages of social housing. These affluent households could then serve as role models for the current inhabitants.

4. Effects of gentrification

Over the last decades there have been numerous studies on the effects of gentrification on residential neighborhoods. The impact may be small for acupuncture interventions and great for large scale neighborhood restructuring plans, but this does not change the fact that the direct effects are felt in the neighborhoods themselves. What are the intended effects and which unwanted effects do occur, according to the municipalities and what has the academic world to say about them.

4.1 Social effects

The primary intended social effect of gentrification as a strategy in deprived neighborhoods is social mixing. Social mixing is then expected to reduce anti-social behavior to enhance educational outcomes, to stimulate social networks and to raise aspirations by providing role-models (Kearns and Mason, 2007).

A number of authors show that the introduction of middle-class households can trigger an effect called “defending the neighborhood”. They observed that middle-class households are stronger advocates for public resources and they are more persistent in getting through to the right people and agencies. This benefits could all the residents (Kleinhaus, 2004, Blokland - Potters, 2001, Lees, 2008). Municipalities have used this mechanism as an argument to support their gentrification policies. However, next to the positive social effects, the coin of gentrification may also have downsides locally and on the region.
As for the “role-model” arguments research has shown that the closer the physical proximity between tenants, the greater the social tensions between residents from different backgrounds. This phenomenon may nullify the desired positive interaction between residents. (Beekman et al., 2001) in (Kearns and Mason, 2007)

The most evident unwanted effect of gentrification is displacement of the poor to create housing for the affluent. In the Netherlands the existing residents have a strong position due to strong tenure rights. The housing associations have to offer similar alternative housing and often the residents can obtain a larger and better dwelling without increase in rent or loss of subsidy (Kleinhans, 2003).

However, displacement can also happen through rising rent, increasing home prices and increasing land value, as well as through displacement of relatives and neighborhood friends. This loss of the social network does not contribute to the social cohesion and hampers the integration of the residents who stay behind and the so called gentrifiers. This may lead to tension, resentment, community conflicts, and fragmentation(Uitermark et al., 2007, Atkinson, 2002).

Kleinhans also points to a specific emotional effect on the residents who are displaced, that is not mediated by the loss of social networks but by the loss of the sense of place. Clearly, there is a distinction between residents who actually want to move and those who want to stay, but are forced to move. Kleinhans points out that more attention is needed to determine social-emotional ties of residents. In essence, determining who wants to stay and who wants to move provides the key to a maximization of happiness, if wishes can be granted. (Kleinhans, 2003)

4.2 Economic effects

Gentrification leads to increases in rent, home prices and land value, which is of course beneficial for the housing associations and other home owners. Also, the prosperity of the newcomers sustains a better range of private retail outlets and services (Kearns and Mason, 2007).

Unfortunately, these changes are unfavorable for the lower income residents. The introduction of better private retail outlets usually implies more expensive products and competition with existing lesser private retail. This makes the daily life in the neighborhood more expensive and endangers the existing shop keepers who are dependent on local networks (Atkinson, 2002).

Relevant for The Netherlands is the report by OTB at the TU Delft. This report shows that incoming gentrifying residents in a regional and municipal scale create a pull factor for high-end innovative activity, they fulfill a demand for well educated inhabitants (universities, schools, day-care, sports) and they contribute to a desired image for the city (Ouwehand et al., 2006). Dutch municipalities hold the position that gentrification can favor the position of the city on the regional, the national and even the international scale, way beyond the immediate local effect on the neighborhood. This shows that in the Dutch context the current position of the municipality on deprived neighbourhoods is one that does not primarily focus on just addressing social, spatial and economic issues of the local neighbourhood scale but one that tends to focus on facilitating the market. This facilitates functions like those of the city centre and the central business districts and turns the focus to the regional, national and international scale.

In summary, the effects of the gentrification strategy generally favor the future residents/gentrifiers and they favor the economic development of neighborhood, city and region. However, the people who may have to pay the price are the old residents with low income or in social housing, since they are directly affected by the consequences.

Next, the spatial translation of gentrification may pose a threat for both movers and stayers.

4.3 Spatial effects

The local spatial effects of gentrification have been “under researched” even though there are clear physical changes visible. The most obvious spatial effect of gentrification is the renewal of the physical fabric of neighborhoods. Renovation and demolition of buildings, rediving of houses, fewer apartments per building etc. Gentrification on a large scale affects the density of the population, since gentrifiers generally under-occupy their property or have larger spatial and higher quality demands than residents of social housing or with a lower income (Atkinson, 2003).

In the Dutch context, the loss of population density contrasts with the current national policy (MVROM, 2008) which aims to densify and intensify the cities. This policy is based on the thesis that high density is associated with improvements in the social (positive interaction, improving viability and access to community services), economic (enhancing economic development), environmental (increasing energy efficiency) and safety spheres (Carmona et al., 2010).

To facilitate the needs of the affluent future residents not only bigger homes are needed but also for example more parking spaces. Which in turn has an aggravated effect on the density of the neighbourhoods in population or in public space.

As for the public space authors claim that new residential users of different class with different notions or uses of public space appropriate the public space, make it an extension of their dwelling, and include them in their home territory. In this new dynamic new residents sometimes exclude uses and representation of the initial residents judging them to be inappropriate. (Bélanger, 2007). In this sense gentrification can redefine activities taking place in the public space without even changing the physical aspect of the space.

6. Conclusions

At first, gentrification was initiated by the public sector but later the role of the private sector became more important and at the same time its influence broadened from the neighborhood to the city as a whole. It became a city-wide strategy to strengthen the demographic structure, the economy and the quality of the public space. The municipality acquired the role of entrepreneurial planner. However, a narrow focus on the economic benefits on