Re-activating the inner-city fringe
Towards sustainable transformation of inner-city neighbourhoods to reactivate urban core
Yongki Kim
To my parents
Re-activating the inner city fringe
Towards sustainable transformation of inner city neighbourhoods to reactivate urban core.

June, 2013

Yongki Kim
‘Urban planning faces new challenges around the world. The economic crisis points up the risks and deficiencies on the old system and functions, of necessity, as a catalyst for new forms of city development. *Urban planner must reinvent themselves and their vision of the city. It is in that framework that we present a manifesto for flexible urban planning, grafted onto the power of private initiatives*.’

*The Spontaneous city*  
(Urban Design, 2009, p11)
Re-activating the inner city fringe
Towards sustainable transformation of inner city neighbourhoods to activate urban core.

Oude Westen, Rotterdam
Source: Author (27th April, 2013)
MSc thesis

Title
Re-activating the inner-city fringe

Subtitle
Towards sustainable transformation of inner city neighbourhoods to reactivate urban core.

Topic
Sustainable transformation of inner-city neighbourhood

Key words
urban regeneration, reurbanisation Building for the neighbourhood, Oude Westen, sustainable urban development, urban density, public space

Colophon

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MSc track Urbanism

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Graduation Studio 2012/2013
Urban regeneration in the European context
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Cover image by Y. Kim in 2013
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“In Europe, the next collective core responsibility and challenge for city makers is the existing city. It is “re-city” rather than making “new.”

-Henk Ovink *(Design & Politics, 2011)* -

*Director for Dutch National Spatial Planning, VROM*
Preface

This thesis is a final product carried out in the framework of the Master programme (MSc) in Urbanism at Faculty of Architecture, Delft University of Technology (known as TU Delft). Within this framework the project has been guided in the graduation studio ‘Urban Regeneration in the European context’ for the last ten months.

Fundamentally, this work is presented as a design-driven research process, which shows the design proposal as an end product is a result of relevant research in terms of societal and scientific sides.

This thesis is based on the main theme ‘Urban Regeneration’ which has become an important issue of urban development for the last decades. That is to say, to provide a better physical environment and social and economic opportunities for the people, urban regeneration became a challenge in the world. For complex contemporary urbanised areas, changing demand of users and dynamics of population characteristics should be taken into account to create a long-lasting spatial solution which connect design interventions to their social, economic and cultural contexts.

Moreover, Stouten (2010) pointed out that situation for the growth of urbanised area have changed, due to the financial crisis since 2007. What is the impact of the recession on the delivery of urban design qualities and planning strategies including new opportunities. In the Netherlands, as in other Western European cities, this means that a period characterised by urban growth and large strategic projects will be ended and the elaboration of new strategic plans needed.

Taking this into account, the project attempts to evaluate the former process of urban renewal and its consequences, mainly in case of Rotterdam region. And this is tried to introduce new approaches of sustainable transformation in urban regeneration for long-lasting solutions. Furthermore, the central district of Rotterdam has radically been transformed into new urban environment with
construction an ongoing infrastructural urban development and its surroundings. This enforces to have new strategic approaches of this area for a strong urban agglomeration.

Lastly, I would like to thank two supervisors and an examiner, prof. John Westrik, prof. Paul Stouten and prof. Andre Mulder to complete this project.

Yongki Kim

BK-city, 27 June 2013
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Summary

This study fundamentally intends to reflect the process of urban renewal during the period 1974-1993, based on the principle of ‘Building for the neighbourhood’\(^\text{**}\). This was aimed at improving housing quality, living condition and providing affordable social housings to low-income groups. That is to say that not only enhancing physical conditions but also lessening economic and social inequalities were a main objective of this principle.

With changing contexts, this principle had left the many critics and was replaced by a new concept, called ‘urban regeneration’ since 1990s. A main failing of ‘Building for the neighbourhood’ did not meet the sustainable development despite of a success of the qualitative improvements. For instance, housing standards and environmental quality brought social obsolescence in the end according to the research.

Oude Westen, for instance is a representative neighbourhood, applied to the principle of ‘Building for the neighbourhood’. This was a typical pre-war residential neighbourhood with 14,365 inhabitants, mostly from the working class. During the completion of urban renewal, an area-based, step by step rehabilitation strategy with reconstruction and renovation piece by piece was undertaken instead of wholesale demolition and a new construction. This was so local residents could continue to stay in same neighbourhood without displacement in the process. In terms of physical change, more outdoor space (public and collective) with public/commercial facilities were created in the old urban fabric.

Over the last decades after completion of urban renewal, this neighbourhood has had problems in terms of physical and socio-economic aspects. According to analytical and exploratory research by author, some spatial problems could be found to interfere with the sustainable urban environment for living.

First of all, a lack of connectivity regarding physical and socio-economic aspects to the surroundings is an obstacle to have a strong agglomeration at the district level.

Secondly, in the neighbourhood itself, there is a series of public spaces created during completion of urban renewal that are not attractive and there is a deficiency of permeability because of the isolation of functional network and monotonous ground-floor frontages of buildings. As a consequence of the neglect for car parking in the early stage of urban renewal, Oude Westen as a

**Bouwen voor De Buurt in Dutch**
A high-density neighbourhood inevitably has a problem of car parking. Lastly, a lack of diversity in housing typologies has led a number of local inhabitants to leave for other neighbourhoods within the city.

In addition, there are ongoing strategic urban developments, with Oude Westen adjacent to such as a new central station of Rotterdam, many new offices and business and huge public space (Kruisplein) will enforce Oude Westen to become a part of central district in near future.

Driven by the research, the design interventions show a possible scenario for Oude Westen in the future to enhance a built environment for living. Furthermore, this would be a sustainable transformation to connect the side with the city centre.

In the end, the research and design proposal as mentioned before can be reflected in another case of neighbourhoods where urban renewal has taken place in major cities in the Netherlands. From the study, therefore, the findings have social and scientific relevance for offer similar neighbourhoods in the Netherlands.
국문요약

70-80년대 도심내 주거지역 재개발의 따른 재활성화 방안에 관한 연구

로테르담(Rotterdam) 도심내 주거지역(Oude Westen)을 중심으로

본연구는 기본적으로 1974년부터 1993년까지 적용된 네덜란드의 도시재생 기본 개념인 ‘Building for the neighbourhood’에 대하여 살펴보고, 도시재생 과정과 결과를 분석하여 재활성화 방안에 관한 연구이다. 이 시기의 도시재생의 주된 목적은 낙후지역의 주거환경의 질을 높이고, 사회적 약자(저소득층, 노인 등) 위한 공공주택을 제공하는 것이다. 다시 말하여, 이 시기의 도시재생의 주된 목적은 물리적인 환경 개선뿐만 아니라 지역의 경제적 사회적 차이를 줄이기 위함이었다.

하지만 시간의 흐름에 따른 경제활동 및 사회적 욕구의 변화로 90년대 중반 이후 ‘Building for the neighbourhood’은 많은 비판을 받게 되고, 결국 새로운 도시재생 개념 ‘Urban Regeneration’으로 바뀌게 된다. 비록 당시 ‘Building for the neighbourhood’의 적용으로 물리적인 주거환경의 질을 향상시켰음에도 불구하고, 주요한 실패의 원인으로는 지속 가능한 발전이 가로지 못하다는 점이었다. 결과적으로 낙후지역의 도심재생은 사회적인 고립을 불러일으켰던 것이다.

가장 대표적인 지역으로는 네덜란드 로테르담 도심 내 주거지역인 Oude Westen을 꼽을 수 있다. 이 지역은 위에서 말한 바와 같이 70년대 도시재생의 기본개념이었던 ‘Building for the neighbourhood’이 적용된 대표적인 주거지역이다. 현재 14,365명이 거주하고 있는 이 지역은 대부분이 1880년대부터 1930년까지 건설된 전형적인 전전(pre-war) 주거지역으로 거주민의 대부분이 저소득층과 이민자들로 이루어져 있다. 도시재생과정에서 이 지역은 전반 철거방식 대신 부분적인 개선과 단계적인 재개발이 행해졌고 그 결과 기존 거주민의 불편한 이주를 막을 수 있었다. 물리적인 변화로는 기존 도시구조를 기본으로 지역 내 외부공공공간의 증가와 공공시설의 확충을 들수 있다.

하지만 20~30년이 지난 현재 이 지역은 물리적, 사회적 그리고 경제적인 문제가 발생하고 있는 것으로 나타났다. 연구결과에 따르면 결국, 이러한 문제들이 도심 내 주거지역의 지속 가능한 발전을 저해하고 있는 것으로 나타났다. 가장 큰 문제로는 주변지역과의 물리적, 경제적 그리고 사회적인 연속성 그리고 연결성이 결여되어 있다. 특히 이 주거지역은 유리한 지리적인 특성을 가지고 있어 물리적으로 불편하고 주변지역과의 결속이 부족하다.

다음으로 도시재생 중에 생겨난 많은 외부공공공간이 기능적인 연결성의 결여나 공공공간들을 형성하고 있는 건축물의 용도 간의 관계 결여로 인해 사람들이 찾을 때 어려움을 겪고 있는 것으로 나타났다.
지 않는 공간 혹은 고립된 공간들로 전락하였다. 특히 다른 구도시 주거지역과 마찬가지로 주차공간부족은 이 지역의 피할 수 없는 문제로서, 이 문제는 보행환경의 질을 저해하고 나아가 주변과의 시각적인 연결성을 저해하는 요소로 전반적인 물리적인 환경의 질을 떨어뜨리고 있다.

이 지역의 또 다른 문제점으로는 다양한 주거형태의 부족으로 많은 거주민이 가족구성원 혹은 경제활동의 변화에 따라 로테르담 내의 다른 주거지역으로 이주가 불가피한 실정이다.

앞에서 언급한 바와 같이 Oude Westen은 유리한 지리적 특성을 가지고 있다. 특히 현대 로테르담 중앙역, 주변지역개발(shops, businesses, dwellings and public spaces)은 이 지역에 직접적인 영향을 주게 될 것으로 예상한다. 결국, 그 동안 도심 외곽 주거지역이었던 Oude Westen은 가까운 미래에 물리적, 경제적 그리고 사회적으로 도심의 한 부분으로 변화될 것으로 보인다.

이러한 연구결과를 바탕으로한 설계의 주안점은 급속도로 변화하고 있는 주변지역에 따른 이 주거지역(Oude Westen)의 가까운 미래상을 제시하고, 나아가 내부적으로 주거환경의 질을 향상시키기 위한 방안으로 지속 가능한 개발의 원칙을 기본적으로 하고 있다.

마지막으로 이 연구와 이에 따른 설계는 유사한 문제점을 다루고 있는 네덜란드 내의 도심 내 주거지역에 반영될 수 있을 것으로 기대된다.
Deze studie is een reflectie op het proces van stedelijke vernieuwing in de periode 1975-1993 dat was gebaseerd op het principe ‘Bouwen voor de buurt’. Dit principe richtte zich op het verbeteren van de kwaliteit van de woningen en het voorzien in sociale woningbouw voor de lagere inkomensgroepen, met als hoofddoel niet alleen het verbeteren van de fysieke omstandigheden maar ook het verkleinen van de economische en sociale verschillen tussen bevolkingsgroepen.

Toen de omstandigheden veranderde ontstond er een groeiende kritiek op dit principe, en werd er vanaf de jaren ’90 een nieuw concept voor de stedelijke vernieuwing geïntroduceerd; ‘Stadsvernieuwing. De grootste tekortkoming van het ‘Bouwen voor de buurt’ was dat ondanks de kwaliteitsverbeteringen het geen duurzame ontwikkeling bleek voor de lange termijn. Dit had bijvoorbeeld te maken met dat de woningstandaarden en de milieu eisen snel verouderde, bleek uit het onderzoek.

In het Oude Westen in Rotterdam is een voorbeeld van waar het principe van ‘Bouwen voor de buurt’ toegepast. Het Oude Westen was een typische vooroorlogse buurt met 14.365 inwoners, de meeste behorend tot de arbeidersklasse. De stedelijke vernieuwingsstrategie die hier werd toegepast was een gebiedsgerichte, stapsgewijze aanpak, waarbij kleine stukken tegelijk werden aangepakt en werden gerenoveerd of gereconstrueerd. Dit in plaats van grootschalige sloop en nieuwbouw. Op deze manier konden bewoners in dezelfde buurt blijven wonen, en werden niet gedwongen zich in een ander deel van de stad te huisvesten. De fysieke verandering die plaatsvond tijdens dit vernieuwingsproces was dat er meer buitenruimte werd toegevoegd aan de stedelijke structuur (zowel publiek als collectief) met publieke/commerciële faciliteiten.

In de laatste decennia na afronding van deze vernieuwing zijn er in de buurt problemen op fysiek en sociaal-economisch gebied ontstaan. Uit een analytisch en verkennend onderzoek van de auteur is gebleken dat enkele ruimtelijke problemen en grondslag liggen aan de verstoring van de duurzame stedelijke leefomgeving.
Allereerst staat het gebrek aan verbinding op fysiek en social-economisch gebied met de omgeving de totstandkoming van een sterke agglomeratie op wijkniveau in de weg. Daarnaast zijn de publieke ruimtes die zijn gemaakt tijdens de stedelijke vernieuwing erg onaantrekkelijke en ontoegankelijk door de geïsoleerde ligging van het gebied en het monotone gevelbeeld van de aangrenzende woningen. Als een gevolg van het onderkennen van de parkeerbehoefte in de beginfase van de stedelijke vernieuwing heeft het oude-westen, een buurt met een hoge dichtheid, een tekort aan parkeervoorzieningen. Tevens heeft het gebrek aan diversiteit in de woning voorraad ertoe geleid dat lokale bewoners moeten vertrekken uit de buurt naar een ander deel van de stad.

Tegelijkertijd zien we dat in de omliggende gebieden zich stedelijke ontwikkelingen afspelen, zoals vernieuwing van het stationsgebied en nieuwe kantoorgebouwen en grote publieke ruimtes (Kruisplein) die ontwikkeld worden. Deze ontwikkelingen zorgen ervoor dat het oude-westen in de nabije toekomst deel zal gaan uitmaken van het centrum gebied.

Ondersteund door het onderzoek laten de ontwerpoplossingen een mogelijk scenario zien voor het Oude Westen, hoe de gebouwde omgeving verbeterd kan worden en hoe op een duurzame wijze en betere verbinding met het centrum kan worden gemaakt.

Het onderzoek en de ontwerpoplossingen zoals omschreven kunnen worden gereflecteerd op andere buurten in Nederland waar stedelijke vernieuwing heeft plaatsgevonden, en zijn daarom zowel sociaal als wetenschappelijk relevant voor dit vakgebied.
These days in Europe, we can no longer change cities through growth, as they aren’t growing but are stagnating or even shrinking. The new paradigm of urban planning is about to change by transforming the existing.

Thomas Sieverts** (Magazine ‘scape, 2/2011, p 44)

**A German architect and urban designer, author of ‘cities without cities’
Introduction

‘Regeneration became an important method of spatial intervention and today is a well-established subject for design aimed at providing more lasting solution.’ (Stouten, 2010, p.13)

It has been for more than a hundred years time to plan for an urban area, and cities have continued to change, more rapidly and radically. They have dealt with many of urban issues over a last century to develop, change and remain attractive places for the people to settle.

After the Second World War, the major urban issue was to restructure the destroyed urban centres for the economic recovery in Europe. Since the 1960s, many European cities have certain urban issues appeared like post war-neighbourhoods, Brownfield areas and sometimes central urban area. Introducing the advanced mobility and technology had a remarkable effect on the urban structure and life for the last decade.

The process of urban development is complex and dynamic. Nowadays regeneration issues of these kinds of areas are much more comprehensive and complicated to handle with planning and designing methods because of the integration of social, economic, ecological, cultural dimensions and so on. What is more, urbanists face new challenge which has to deal with urban issues caused by the global economic crisis. Furthermore, we urbanists have to consider new forms of city transformation which have to be sustainable in the planning and design process.

Motivation/Fascination

Personal motivation I have spent most of my entire life living in a satellite town, which was built at the end of 1980s as a result of a urban policy which were providing the residential area in the greater metropolitan periphery. Most of inhabitants in that town, even for me also spend a lot of time and money on transportation to commute to their work places or university situated in the metropolitan central area. I have always had many questions about why new dwellings always have been constructed in somewhere which used be empty space on the outskirts the city. Even though there are, of course, some projects constructed in the inner city area with new mixed-use development used to be residential quarters, previous occupants have often had to leave for other places to settle, because they could not afford living there with high rental costs. I have always had a doubt if these kind of urban developments would be sustain-
able for the long-term in terms of socio-economic and environmental aspects.

*Academic motivation* Since I came to the Netherlands for the studying the field of urbanism, I have been interested in the changing context of urban renewal and urban regeneration that respond to a changing demands over time. Especially, the process of renewal and regeneration as an issue of urban development was fascinating to me. From a non-European perspective of view, it could be seen easily that most urban projects are concerning the existing urban area with the small-scale interventions or strategic plans.

Today most of the large-scale urban projects, are either new town projects or high-rise developments in the urban core, might be taken place in the developing countries, which did the same in the sixties and seventies in Western Europe. It could be learnt that small scale improvements or strategic planning of the physical condition could not only make the space attractive but also develop socio-economic condition. Moreover, beyond the socio-economic growth, the urban places are concerned with qualities of life, well-being, etc. In the planning and designing processes. Secondly, Since the 1970s, the inhabitants have actively participated the decision-making process which was decentralisation of the roll by government which primarily resulted in the avoidance of displacement. Now, we are facing the global economic crisis, we as urbanist are challenging this to find the new design and planning methods.

**Relevance**

*Scientific relevance* As mentioned in introduction, urban areas have permanently been changing over time. These changes reflected on its previous transformation and gave the new direction of urban development with new strategies and visions suited for demands for the period. That is the important point that urban regeneration is the one of crucial spatial issues for offering the attractive urban area constantly. Especially, the location of this graduation project, could be a role model for the regeneration for inner city neighbourhoods which have undergone renewal decades ago. In other words, it is worth looking back to the previous renewal process to evaluate new planning approaches and design strategies as the second regeneration.

In terms of geographical position, it now seems possible for the location to be part of central area in the city since the dynamic changes surrounding, such as large scale developments and this firmly required the consideration of its new position to make attractive urban space. In that sense, this project would act as a catalyst, which definitely have to be considered in the near future.
Societal relevance Urban regeneration has a role of social shift through the enhancing the physical qualities of the area which led to socio-economic inequality. However, this is getting more complicated with global economic crisis in the present. This is the reason that social cohesion should be considered in the project.

Relevance of the Studio ‘Urban regeneration in European context’
Taking these things above into account, the main theme of this graduation project would have a proper relevance for working in the studio ‘Urban regeneration in European context’. Furthermore, the project location (Oude Western will be indicated in part 1) took place the urban renewal process in the 1980s with the modest way and worth to evaluate it in the process of graduation project.

Mentor team For achieving the successful graduation project Ir. J.A. Westrik from the chair of urban composition (theory and method) is a main mentor to give advice about the design methods. Dr. Ir. P.L.M. Stouten form Chair of Spatial planning and strategy is also a mentor to cover for the research, methodology and planning for this project. Lastly, Drs. A. Mulder, department of Real Estate and Housing is the external examiner.
Chapter 1_Thesis Plan
1.1 Problem statement

Living and working in the inner-city
The term ‘inner-city’ is defined as ‘the part near the middle of a city, especially where the buildings are in a bad condition and the people are poor’ or ‘the central part of a city where people live and where there are often problems because people are poor and there are few jobs and bad houses’. This shows that inner-city has its meaning not only for geographical features but also for physical, social and environmental characteristics.
This was reflected by the idea of ‘inner-city problem’ regarding to the image urban deprivation of 1960s and 1970s in the UK. Cities such as London and Bristol have large ethnic minority populations still largely concentrated in older residential areas in the inner-city (Cameron and Doling, 1994, p 1212).

In case of Dutch major cities for living and working in inner city, fig 1.1 shows that the proportion of job and living places in a quantitative way. Amsterdam, for instance, job places and living places are distributed in equilibrium. On the other hands, Rotterdam noticeably has a large amount of job places rather than living places. It tells that urban living environment in inner-city of Rotterdam is needed to encourage people to come and live to decrease the number of commuters.

Urban renewal
As traditional urban renewal approach, especially neighbourhoods applied

Fig. 1.1 Proportion of job places and living places in inner-city of Amsterdam(left) and Rotterdam(right) (Source: Author, based on ‘Stadvisie Rotterdam 2030’)
the concept of ‘Building for the neighbourhood’ in the period between 1974 and 1993 resulted in the decline in the housing density, partly because of the demand for increasing in living space decreased the amount of public space increased (Stouten, 2010).

Oude Westen, in Rotterdam, for instance is a result of ‘Building for the neighbourhood’ programme. As a consequence, the public spaces had the increase in urban renewal process. But they are not generally attractive spaces for walking, riding, staying and playing since most of streets are taken by car traffic/parking and there is a lack of permeability. Furthermore, these public spaces are not linked to the surroundings, such as the railway station, city centre, cultural facilities, park and river in terms of functional and physical aspects.

When it comes to the density, which refers to the consumption of space, density of this area had decreased by the renewal project which is not fitted for its urban context. Now large-scale development or/and densification process in the central area which related the public transport interchanges (e.g. station area development for mixed-use) take place in adjacent to this neighbourhood. This area seems to be forced by the improvement of infrastructural hub and new high density development to make a balance for the functions, capacity and city scape. Otherwise it could be an obstacle for these new development surrounding on the other way around.

In terms of socio-economic aspect, low income groups and ethnic minority groups moved to this neighbourhood. During the suburbanisation process mainly in 1960s, higher income groups in the large cities move out to the city periphery or suburb because of the relocation of job places and the obsoles-
cence of housing stocks. In the mean time, low income or uneducated group, the majority might be ethnic minorities replaced them in inner city neighbour-
hoods which had cheap housing rents. Now large-scale development in the city centre such as new station and economic core encourage the middle/high income groups to come back to the inner city area for living and working with having the sustainability and more cultural opportunities. This causes changes in the housing stock. Because higher income groups desires well facilitated dwell-
ings which guarantee the safety and privacy to live, and more parking space.

Taking these things into account, the inner-city neighbourhood of Oude Westen should be reconsidered for its position in terms of physical, socio-economic and environmental aspects as the second regeneration.
1.2

Research Framework

The aim of research Fig 1.3 depicts a research framework of project to give a direction in further research and its design tasks. The objectives of this research is to define a new approach to revitalise an inner-city neighbourhood, based on the traditional urban renewal approach. Secondly, this research is intended to discover how inner-city neighbourhood reacts to large-scale urban development surroundings and its urban network in the future. In addition, the requirements for the sustainable living in inner-city neighbourhood in terms of physical, social, economic and environmental aspects is revealed. Answer of this research question is related to the design interventions in inner-city neighbourhood.
1.3 
Location

Oude Westen is a typical residential area with 9,685 inhabitants (COS, 2010). It is situated in the central part of Rotterdam (officially belong to the city-centre by the municipal allocation), adjacent to the central railway station of Rotterdam and city core (Lijnbaan district). Towards South, this neighbourhood is closed to the museum park and the river.

This neighbourhood had been since the second half of twentieth century primarily an area for the working-class to settle where their job places (mostly harbour) areas were nearby. During the WWll, the historical city centre called the 'city triangle' was destroyed and this neighbourhood, which was not destroyed, became an important place. Many immigrants settled this neighbourhood and created their own social and cultural life. For instance, small enterprises or shops owned by immigrants led to economic development. As a consequence of this, it became a multicultural heart of Rotterdam today.

After the WWll, this area was basically neglected for the reconstruction plan. And the area developed into a deprived neighbourhood. Social disorder or obsolescence of housing stock were paid attention by municipality and this area was designated as an urban renewal area. Basically, the way of renewal by municipality was a wholesale demolition and reconstruction. However, this municipal plan was objected to residents which made it possible for the residents to move out from this neighbourhood because of unaffordable housing rents for them. It ended up the urban renewal was conducted with the modest way such as combination of renovation and reconstruction to avoid displacement of inhabitants. This way of urban renewal was a great success and became a role model for another European cities later on.
It has been a couple of decade to attempt to realisation of urban renewal in Oude Westen. Today, this area seems to be called by other phase of urban redevelopment. For instance, new urban development surrounding this neighbourhood and this area is asked to stand a new position with rich geographical potential.

Research on the location, a context of Oude Westen is delivered in a part of analytical research (chapter 4) and exploratory research (chapter 5) to understand in-depth.
Main research of the project will be not only done by steps, but also taking the iterative system in the progress. And of course, investigating the responses for the each sub-research question related to the others.

For sub-research question 1: “How can Oude Westen be evaluated as a result in the first urban renewal in 1980s? And what can be learnt from first urban renewal?”

This question could be covered with a literature review, reviews of urban policy documents for urban renewal and urban regeneration during last decades. Data analysis such as demographic, socio-economic and physical changes have to be done for this.
For sub-research question 2; “What is the existing qualities in terms of physical, socio-economic and environmental aspects in Oude Westen today?”

It has been a couple of decades done the urban renewal in Oude Westen. And, it would be important to investigate current qualities by the analytical research in terms of physical, socio-economical aspects. And finding the certain spatial problems of this neighbourhood is taking place in this process.

For sub-research question 3; “What is the future position of Oude Westen with the Rotterdam central area and new central station area in Rotterdam metropolitan region in the future, being a neighbourhood stand alone or a part of inner city?”

Through the literature review, current/future Dutch policy scheme and new large scale development plan in inner city regions could be explained the future position of Oude Westen. It is also crucial point to reveal who is the prospective inhabitants in this area in the future.

For sub-research question 4; “What kind of physical and functional network of Oude Westen is acting to Rotterdam central area?”

Through this question, the spatial strategy to reactivate this neighbourhood is going to be formulated.
1.5 Structure of this report

This thesis covers the overall graduation project, under the title 'Re-activating inner-city fringe'. Although the general rationale for this booklet has already been explained in the previous part, the structure of individual chapters may require further explanation.

In chapter 2, a theoretical framework is delivered to have a concrete base of further development of project. This is mainly based on a number of literature for the 'Sustainable living in inner-city neighbourhoods'. In the beginning, 'Stage of urban development' defined by Berg(1982) is formulated to understand relationship between urban trends and periodic background. This process of urban development is closely related to the urban policies. For instance, 'Urban Renaissance' and 'Gentrification' would support the sustainable living in inner-city neighbourhoods. It is followed by spatial strategy for making attractive living environment, exemplified by a British urban policy document 'Urban Task Force'(1999). This contains design principles of built environments such as mixed used development for pleasant urban areas for living and working. Furthermore urban density which decided for urban form is discussed for making the inner city inviting.

Next practical efforts on urban planning for attractive urban area formulated as urban renewal and regeneration in case of Rotterdam, which were a blue print in the Netherlands is presented in chapter 3. This indicates the changing context of urban redevelopment since WWII. Especially 'Building for the neighbourhood' ('Bouwen voor de Buurt' in Dutch) which was one of the unique urban renewal strategy in European countries between 1974 and 1993 is focussed in this section.

In chapter 4, analytical research is formulated to understand the location (Oude Westen). Since the area were designated for the urban renewal district urban the concept of 'building for the neighbourhood', this research is focussed on the process and evaluation of urban renewal. Furthermore, looking into a present situation of Oude Westen give ideas of new position at district level.

Before spatial intervention, an exploratory research in chapter 5 gives a clear definition of problem of this area with addressing the existing quality of area. As explained methodology section, empirical methods such as Public Space-Public Life(Jan Gehl) and Municipal document(2012) dealing with densification in inner city of Rotterdam are applied. By doing so, conclusion of the analytical research in chapter 4 is verified and strengthened to conduct spatial intervention.
Chapter 6 presents spatial strategy based on the former research. Spatial strategies at different level of scale (region, district and neighbourhood) are delivered.

In chapter 7, Design interventions are shown on the several strategic locations to enhance the quality of neighbourhood. This intervention are tried to solve the problems such as connectivities, improving the quality of public domains (identities of public spaces, walk ability and parking spaces).

Chapter 8 describes the reflection and evaluation of this project which explains the relationship between research and design. Also, it shows how this physical intervention as an product of project is linked to the wider social context.
Chapter 2_Theoretical Research
; Sustainable living in inner-city neighbourhoods
Urban Regeneration
- Definition -
- Understanding -
- Urban Renewal and Urban Regeneration in Dutch Context -

Reurbanisation
- Definition -
- Understanding -
- The model of ‘stage of urban development’ -
- Debate -
- Dutch spatial policy context -

Urban Renaissance
‘Urban living and working’
- Attractive urban living and working -
- Promoting ‘urban renaissance’ as an urban policy in the Netherlands -

Gentrification
‘two side of same coin’
- Definition -
- Gentrification process -
- Gentrification in the Netherlands -

Planning approach
- Integrated and strategic planning -

Design principle
- British Urban Task Force (1999) -

Mixed-use development
- Getting the right mix -

Urban Density
- Towards high density -

Sustainable urban living and working in inner city neighbourhoods

Fig 2.1
Illustration of theoretical framework (Source: Author)
2.1 Introduction

The Final result of the theoretical framework should be a critical review on the available and relevant knowledge of the urban regeneration strategies, especially for making the attractive urban spaces for living and working in the central urban areas. The theoretical framework is the aim of reviewing for the spatial strategies on reurbanisation, which lead to ‘urban renaissance’ and ‘gentrification’ process and also investigate the attractive built environments for urban living and working.

Cities constantly change with time and are permanently formed by a former time. Basically, this development process not only leads to the physical changes of urban structure, but also effect on the functional, socio-economic replacement. It is seen as a complicated dynamic and a rather interdependent process. Basically, with the demographic changes this could be explained by the model of ‘the stage of urban development’ which has four stages as a cyclical system; urbanisation, suburbanisation, desurbanisation and reurbanisation in sequence(Berg et al., 1982).

Especially, industrial cities in Western Europe are seen on the reurbanisation phenomenon in terms of functional re-concentration or population change in the present. Generally speaking, local and central government with developing new urban regeneration project, improving infrastructure and rehabilitating the existing housing stock in the central area enforce the stage ‘reurbanisation’(Berg et al., 1982).

The reurbanisation phenomenon also directly linked to the ‘urban renaissance’ meant to encourage the people to live and work in the central urban area. While investigating the Dutch urban policy, it was discovered how urban policies encourage urban living and working to the people. In terms of socio-economic aspects for this ‘reurbanisation’ process, changing the demographic profile in existing central area especially residential quarter could be taken place as a ‘gentrification’ process. Gentrification refers to the physical and social transformation of inner city neighbourhoods. It stresses the class aspect of urban change, defined as the renewed residential attractiveness of cities for middle and upper class(Lees, Slater and Wyly, 2008). It brought a dynamic change of the area with diversification of cities for urban life style, sustainable communities and social mix to its neighbourhoods, which results in restoration of city images, economic growth as positive aspects.

Finally, this investigates the spatial strategies of inner-city neighbourhoods in the Western Europe on reurbanisation stage to achieve the inclusive urban renaissance and successful gentrification process. Furthermore, it discovers the design principle to make the attractive environment for the urban living and
working.
The structure of theoretical framework is divided into four sections. The first part will discover the definition and understanding for ‘reurbanisation’ that the industrial cities in Western European countries have been facing and the recent debates. Later on, ‘urban renaissance’ and ‘gentrification’ as government documents especially in Dutch context will be addressed in the second part. In the third part the proper spatial strategies for urban living and working will be formulated with the deeper understanding for mixed-use development and high density which led to the desired urban renaissance. Conclusion for the position if urban regeneration in inner city on reurbanisation will be added in the end.
2.2
Urban Regeneration

**Definition, Understanding and Evolution** Urban areas have various roles and function such as shelter, security, social interaction and the sale and purchase of goods and services. These things are changing its demands over the time. But today urban areas are needed more than these things. Over the time, this process of changes have been seen as complex and dynamic system. Sassen(1991) pointed out that urban regeneration needs to respond to changing contexts with new economic concentrations in cities that area accompanied by new markets for new population groups with in the current urban population. It is meant that urban regeneration is not just a matter of obsolescence but also a complex of social and economic issues(Stouten, 2010). Urban regeneration, therefore can be defined as the following.

"comprehensive and integrated vision and action which leads to the resolution urban problems and which seeks to bring about a lasting improvement in the economic, physical, social and environmental condition of an area that has been subject to change"(Robert and Sykes, 2000)

After the WWII, urban regeneration has been developed and changed for its characteristics over the time, which reflected on the urban policies in general. In the 1940s and 1950s, for instance, reconstruction for the destroyed area was to give a priority and renewal for the neighbourhood scheme was paid attention in the 1970s. In the 1980s redevelopment scheme was reflected on the urban policy with more commercial style. Comprehensive approaches were seen as the reflection in the policy and practice for achieving sustainable development from the 1990s. The table(see appendix 1) illustrates the detail transformation of the concept of urban regeneration in general.

**Urban Renewal and Urban Regeneration in the Netherlands** When it comes to the urban renewal and urban regeneration in the Netherlands, especially the evolution of urban policies in the case of Rotterdam rep-
presented to a general Dutch leading (Stouten, 2010). Because of the important role of Rotterdam in terms of geographic position and economic resurgence. Urban renewal could be divided into three period: before 1974, between 1974 and 1993, and from the 1990s onwards. Main task in the first period of urban renewal was to rebuild the city after WWII. The priority of renewal was given to the reconstruction of harbour and industrial area followed by rebuilding offices and shops for the emergency of economic revival. Building housings was considered as the second task in spite of huge housing shortages. Mass housings estates were constructed in the city periphery to cover emergent task of housing shortages. It is followed by reconstruction in the city centre.

Since the new urban renewal strategy addressed in 1975, providing affordable new housings for residents of old areas in empty space and brownfield areas with special attention paid to lowest paid and vulnerable members of society. This new urban renewal strategy consisted of ‘Building for the neighbourhood’ policy, avoiding forced removal and displacement. That focused not only physical improvement but also social development. This strategy of this policy was to lessening social inequality with respecting to the household composition and the influx of minority ethnic groups. Especially low income groups had opportunity to improve their housing situation on the attractive locations. The mixture of composition of the population led to the changes in the social fabric and social network.

In the beginning of the 1990s, economic and political situation led to the market-led housing provision which means that the central government less controlled the housing market. And the term ‘urban regeneration’ firstly used in the policy documents (the Forth Report on Spatial Planning, Ministry of Housing, Physical Planning and the Environment**, 1988). It is referred to the stimulation of economic and socio-economic renewal and the quality of public space. In this period the concept of ‘Building for the neighbourhood’ was replaced to the combination of ‘building for the neighbourhood’ and ‘building for the city’. Furthermore, this policy intend to a balanced population composition with regard to different income groups and alleviate the restriction of building social housing.

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**Fig 2.3**

Evolution of urban renewal and regeneration in the Netherlands (Source: Author based on Stouten, 2010)
which was only permitted, to stimulate the market-led housing provision. Based on this, the three draft plans were developed: ‘complete city’, ‘attractive city’ and ‘undivided city’. These plans could be seen as the achievement for removing ‘disadvantaged areas’.

Here, we discuss about ‘Big City policy’ intended to combat inner-city deprivation resulted by high unemployment, increasing criminality, vandalism, deterioration of public space, tension between populations groups and so on, especially in the four major cities in the country (Stouten, 2010).
2.3
Reurbanisation; ‘back-to-the city’ movement?

Definition and Understanding  The term ‘reurbanisation’ is not a new term nor was it invented to describe the recent phenomenon of resurgence in European cities. Originally, it has been more than 30-years history. Initially, a German urban scholar, Elisabeth Pfeil (1972) introduced this term in early 1970s. She addressed the new planning approach to support compact city as a ‘concentration in new form’. In the 1980s this term was used again by Häußermann, Siebel (1987) and Kujath (1988) with the initial discussions (in Western Germany) about a revival of urban living (Haase et al., 2010). Initial discussion was from some observation for the tendencies of re-densification or re-population of inner-city areas after the decade of dispersion and urban sprawl in several European counties. This was the initial point that the term ‘reurbanisation’ became widespread.

This phenomenon could be seen as the interrelation to social shift that had led to the change of demographic behaviour rapidly. Haase et al. (2010) saw that urban areas were the first to be affected by decreasing birth rate, rising life expectancy and structural changes in households as well as destabilisation of traditional patterns of marriage, family and divorce to societal changes in life scripts, lifestyles and professional careers. In 1982, a group of European urban researchers published the results of a project on the ‘Cost of Urban Growth’ (Berg et al., 1982). One of the most influential outputs of this project was a general model of the urbanisation process in Europe from the early nineteenth

Fig 2.4
Population size of the core, ring and functional urban region (FUR) in different stages of urban development. (Source: Berg et al., 1982, p. 37)
century onwards. Four successive stages of urban development were defined and moved to the centre of international urban discourse.

The Stage of urban development (Berg et al., 1982) As mentioned briefly above, the model of ‘the stage of urban development’ became the central discourse as a quantitative approaches of population changes and this could only be seen in traditional industrial cities of Western European country (Lever, 1993, p. 282). The model shows that processes of urban development can be explained as four different stages; Urbanisation, Suburbanisation, Desurbanisation and Reurbanisation in sequence.

Figure 2.4 (preceding page) shows the fluctuation of population growth and decline with dividing into four stages. Also figure 2.5 illustrates the changes demographic behaviours.

The first stage, urbanisation came from industrial position which provides the new job opportunities in the initial urban area. Massive migration from rural to urban area is taken place to live the place where job places area nearby. In the early days workers do not permit to live far away from their workplaces which leads to the strong urban concentration and to a decrease in rural population.

It was followed by suburbanisation, which was led by a better mobility, a pursuit for having own private space and high quality of environmental condition for living beyond the city cores, surrounding or furthermore the outside towns. Residential quarters formed by this called ‘garden towns’ sometimes. Due to economic changes from the 1960s onwards, especially in older industrial regions
the continuous suburbanisation led to declining inner-city neighbourhoods. That circumstance effects on the change of the spatial structure in the urban region. Broadening infrastructure for connecting between city and its suburban leads also to generate small villages in between area. And monumental functions such as museums, theatres, hospitals, schools and so on are replaced to the empty space in the town centre. Furthermore, Green space for the recreation such as parks and green belts are designed. New employment for tertiary sector takes its space into the existing buildings in the central area.

Desurbanisation stages are following up for people tend to move to the urban periphery for having both of urban life and suburban life.. The small and medium sized-urban areas (satellite and sub-dominant) are founded within 50-120 kilometre range from the dominant urban centre. The people could have an urban life style in a smaller-sized urban centre with a better access to work, more open space and recreational opportunity to outskirts or countryside. During this third stage the cores lost even more population and the growth of the suburban ring declined. The overall population, therefore in the urban regions totally declined.

After that, reurbanisation which takes place “when the share of the core population in the total population of the FUR [Functional Urban Region]” (Berg et al., 1983, p 36) is seen as a last stage of this model, which is a cyclic model with all of four stages explained above. Berg et al. (1982) explained that the most urbanised cities in the Western centuries were already on this stage or going to be in no time. People move back to the central urban area for a better standard living like health care, job opportunities and so on. This stage is sometimes forced by government’s initiative to deal with the problem of inner city decline which causes problems such as pollution, inadequate housing stocks discussed later.

This demographic perspective of view as a quantitative approach could also show the characteristics of urban form for each phase (Lever, 1993). According to Lever (1993), he pointed out the features of the structural urban form for the case of Glasgow, one of the industrial city in the UK.

The 18th century development of the city saw the creation of the ‘merchant city’, now part of the central business area, in which former merchants’ houses have been converted to office space and warehousing has now been converted to housing. Glasgow in the late 19th century was a ‘walk to work’ city. The post-1950 development of the city saw the suburbanisation of both residential building and industrial development, both market-led and planned. Improvements in transport made the city more diffuse and redevelopment, of at least clearance, gave the city an empty core with substantial tracts of ‘brownfield’ land deserted by both older industry and slum housing and an inner city population trapped by housing market processes into areas of high unemployment. The current phase of urban development in Glasgow, we populate, is one of reurbanisation. There are a number of forces within economic change, within the housing market and in transport which with gathering momentum in the 1980s are leading employment and residence to recentralise in some west European and north American cities (Lever, 1993, p.268)
This case of Glasgow also says the demographic changes have interrelated to not only the physical urban structure but also socio-economic aspects. This will be discussed later in this paper.

The debate; phenomenon or policy? As seen above, the term ‘reurbanisation’ is not simply explained and it has still had the debate in academic field. That is the reason that Criekingen (2010) emphasised reurbanisation has a rather broad definition in recent works, including an analytic dimension as well as a normative, policy-oriented one. Buzar et al. (2007) thought this as “a process of repopulating the inner city with a variety of social group and lifestyles” on the analytic hand and “a comprehensive dynamic of improving the residential attractiveness of the inner city for a wide variety of population group” Reurbanisation was also spoken about ‘urban renaissance’, ‘rebirth’ or a ‘comeback’ of cities by scholars (Storper and Manville, 2006) with key characteristics such as ‘new residents’, ‘liveable inner city’, ‘rising attractiveness’, or ‘sustainable, socially mixed neighbourhoods’. These aspects brought some criticism for the perspective of gentrification research that will be covered onwards.

One of the main arguments refers to the deliberate use of the term reurbanisation in order to avoid the term gentrification so as to remove the social or class issue from the urban ‘renaissance’ discourse (Criekingen, 2010). Critics further maintain that the reurbanisation approach underlines the demographic character of urban change ‘in order to strip’ the process of its social or class character. Due to the neoliberal logic of revitalisation or regeneration policies, displacement is retitled as replacement or (re)population (Slater, 2008). In other words, reurbanisation is seen from the critics’ perspective as a ‘politically correct’ concept that –admittedly- is increasingly used in political strategies to strengthen inner city and urban living without the critical look at the dangers of displacement as well as other social risks of ‘renaissance’ policy (Colomb, 2007; Bürkner, 2008; Slater, 2008).

The discussions will continue with the ‘urban renaissance’ and ‘gentrification’, which are the main keywords to explain reurbanisation process in the next part.

Dutch spatial policy context To understand the changes of the spatial planning for Dutch cities, it is appropriate to review the national spatial policy in the Netherlands. In terms of a series of reports for spatial planning set up by the Ministry of housing, spatial planning and the environment in the present (Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieu or VROM shortly in Dutch), the change of spatial structure at international and national level are able to be seen for last decades. The first and second reports were addressed in 1960s which concerned the better distribution of population to the whole country with the job opportunities. In other word, a balanced urban growth all over the country was the main focus for this policy in 1960s.

The third report on the physical planning, published 1970s with a couple of series, was dealt with structural outline and basic planning decision. For instance, ‘growth centres’ as a national approach on the spatial planning was seen which development was to be concentrated.
The fourth report was published in 1988, concerning the market oriented planning and public-private cooperation. In the meantime, the planning approach of ‘compact city’ which concentrated development in existing urban centre was addressed. In 1990, extra report called VINEX (“Vierde Nota Ruimtelijke Ordening Extra” in Dutch) was a output shifting the planning strategy from ‘compact city’ to ‘urban network’ which pointed out the large outer city developments. The latest document of spatial planning policy (Vijfde Nota over de Ruimtelijke Ordening) was issued in 2001. Based on the principle of ‘Decentralise where possible, centralise where necessary’. To realise this concentration strategy, National government has spatial frameworks which consists of strengthening international transportation hub and high-speed railway stations as key projects. (see the Fig 2.6)

<table>
<thead>
<tr>
<th>Document</th>
<th>Dutch spatial planning policy (in Dutch)</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>The first report</td>
<td>Eerste Nota over de Ruimtelijke Ordening</td>
<td>1960</td>
</tr>
<tr>
<td>The second report</td>
<td>Tweede Nota over de Ruimtelijke Ordening</td>
<td>1966</td>
</tr>
<tr>
<td>The third report</td>
<td>Derde Nota over de Ruimtelijke Ordening</td>
<td>1973-1983</td>
</tr>
<tr>
<td>The fourth report</td>
<td>Vierde Nota over de Ruimtelijke Ordening</td>
<td>1988</td>
</tr>
<tr>
<td>The fourth report</td>
<td>Vierde Nota over de Ruimtelijke Ordening Extra (VINEX)</td>
<td>1994</td>
</tr>
<tr>
<td>The fifth report</td>
<td>Vijfde Nota over de Ruimtelijke Ordening</td>
<td>2001</td>
</tr>
</tbody>
</table>

Table 2.1: Dutch spatial planning policy documents (Source: Author)
### 2.4 Urban Renaissance and Gentrification

**Attractive urban living and working** Increasing attention of ‘urban renaissance’, which refers to urban living and working could be seen in urban policy documents in many countries over recent year. These varieties of documents for encouraging people to have urban living and working offer various potential benefits such as the followings (Table 2.2):

<table>
<thead>
<tr>
<th>Potential benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘greener’ transport modes such as walking, cycling and public transport (reduces the need for the car)</td>
</tr>
<tr>
<td>Reduce development pressure in more rural areas and reduce the consumption of ‘greenfield’ land, which is often productive agricultural land, green open space or important cultural-historic land.</td>
</tr>
<tr>
<td>Provides opportunities for energy efficiency such as combined heat and power system, energy efficient construction and less energy intensive mode or transport</td>
</tr>
<tr>
<td>From a social perspective, urban living may provide more equitable access to services and facilities</td>
</tr>
<tr>
<td>More opportunities for social interaction of access to employment</td>
</tr>
<tr>
<td>Financial and resource benefits of urban living, mainly for the governments rather than for individual</td>
</tr>
</tbody>
</table>

Table 2.2 Potential benefits for urban living and working (Source: Author, based on Stead and Hoppenbrouwer, 2004, p. 120)

#### Promoting ‘urban renaissance’ as an urban policy in the Netherlands

Stead and Hoppenbrouwer (2004) emphasis that recent government policy documents in many countries make reference to the need to promote urban living and working. Although ‘urban renaissance’ have various potential benefits (see above), promoting urban living and working is still problematic issues, especially argument for the non-urban areas (that is to say areas outside large urban centres) are more attractive in terms of a better environmental, lower levels of crime and a greater sense of community. That is why this part is discussed about the urban policy in the Netherlands with the brief comparison of situation in the UK to review and investigate how urban policies for urban living area addressed (Stead and Hoppenbrouwer, 2004, p. 119).

We can see the promotion for urban living and working in the urban policy for decades ago, the concept of compact city was seen the first attempt to encourage the urban renaissance. As international attention for the concept of compact city, Dutch policies have been considered since mid-1970s to achieve
the various objectives. Stouten (2010) indicates the compact city meant ‘a break with the post-war policy of dispersal and suburbanisation’ . Basically, the compact city is involved to the intensification, densification of functions and facilities in the urban area. This effects on the different area and different population groups. In 1980 this concept was getting emphasised on the highest possible residential density with preserving the existing urban environments to compete residential environments in the suburbs (Stouten, 2010, p. 97).

The special features of the renewal area applied this concept were mainly seen in terms of housing density and functions. But the housing density declined with partly increasing the household surfaces by new and modernised housing in the traditional renewal area. The amount of commercial and shopping space decreased and the amount of public space increased (Stouten, 2010).

In the 1990s, the concept of compact city was shifting its dimension to the sustainability. The policy was toward not only the stress of compactness but also suitability for the bicycle for reducing the motorised traffic, instead providing open (green) space, recreational facilities and mixed facilities in the inner city. According to the recent Dutch policy documents, specially the need to increase urban vitality, improve the quality of the environment in urban centres and promote attractive cities for residents, visitors and business are underlined on a wide range of policy field such as spatial development, spatial economic development, Social development, housing, urban renewal, urban development, rural development and transport. Here, these Dutch documents mainly indicates more ‘urban vitality’ rather than ‘urban living’ like the case of British policy documents (Stead and Hoppenbrouwer, 2004). This ‘urban vitality’ would be covered for improving the urban environment (especially in urban centres), making cities attractive for residents, visitors and business, preventing urban sprawl, protecting the countryside from development pressure, preventing the large-scale functional separation, and strengthening the economic potential and competitiveness of cities (Stead and Hoppenbrouwer, 2004, p. 121).

The documents identify a range of measures needed to make cities more attractive places to live and work. These measures include intensive and mixed land use, urban renewal, re-using previously developed land and buildings, creat-

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**Appendix 3**

The summary of policy statements concerning urban living in the Netherlands in 2000s

**Fig 2.7**

Promoting ‘urban renaissance’ as an urban policy in the Netherlands (Source: Author)
ing a mixture dwelling types, improving public transport accessibility to cities in terms of physical improvement.

Dutch policy document, on the other hands are not always promoting ‘urban renaissance’ but some documents contain the interruption for achieving increasing in urban living such as the following:

Higher-income households are increasingly moving to less urbanised areas the housing policy of the 1990s, as formulated in the VINEX, The Fourth Memorandum on Spatial Planning Extra, aimed to concentrate urban development and protect non-urban areas from urbanization. Although development in most VINEX locations is not yet complete, there is already a rather widespread belief that they are not an unqualified success. For example, critics point to a qualitative mismatch between housing supply in these locations and the current pattern of demand. It is feared that the unattractiveness of the VINEX for some consumers may act to stimulate further suburbanisation and increase urban sprawl. (Bontje and Ostendorf, 1999)

This document identifies the VINEX encourage not to urban living but rather suburban living.

Gentrification; two side of same coin

Definition The term ‘gentrification’ has been used more that 20 years time. This concept was originated from the UK and spread out to the US and European countries later on. The definition using in academic field is ‘the transformation the working-class or vacant area of central city into middle-class residential and/or commercial uses’ (Lee, Slater and Wyly, 2008, p. 15).

Actually, it is a policy language that never uses the word ‘gentrification’ and thus consistently deflects criticism and resistance. Terms like urban renaissance, urban revitalization, urban regeneration and urban sustainability are used instead.

<table>
<thead>
<tr>
<th>Positive aspect</th>
<th>Negative aspect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stabilisation of declining areas</td>
<td>Community resentment and conflict</td>
</tr>
<tr>
<td>Increased property values</td>
<td>Loss of affordable housing</td>
</tr>
<tr>
<td>Reduced vacancy rates</td>
<td>Unsustainable speculative property price increases</td>
</tr>
<tr>
<td></td>
<td>Homelessness</td>
</tr>
<tr>
<td>Increased local fiscal revenues</td>
<td>Greater draw on local spending through lobbying by middle-class groups</td>
</tr>
<tr>
<td>Encouragement and increased viability of further development</td>
<td>Commercial/Industrial displacement</td>
</tr>
<tr>
<td>Reduction of suburban sprawl</td>
<td>Loss of social diversity</td>
</tr>
<tr>
<td>Increased social mix</td>
<td>Increased crime</td>
</tr>
<tr>
<td>Decreased crime</td>
<td>Displacement through rent/price increases</td>
</tr>
<tr>
<td>Rehabilitation of property both with and without state sponsorship</td>
<td>Under-occupancy and population loss to gentrified areas</td>
</tr>
</tbody>
</table>

Table 2.3 Summary of neighbourhood impacts of gentrification (Source: Author based on Atkinson, 2004, p.112)
avoiding the class constitution of the processes involved and neutralizing the negative images that the process of gentrification brings with it (Lees, Slater and Wyly, 2008).

This gentrification has been a controversial issue regarding if this is helpful or harmful for the residential neighbourhood in this profession. Table 2.3 (preceding page, Atkinson, 2004) shows the positive and negative neighbourhood impacts of gentrification. It is often to say that the negative impacts are overwhelming the benefits in the reality.

**Gentrification process** The local government often plays a more active and direct role in the gentrification process (Smith 1979b). The actual gentrification process, though it may involve all of these actors to varying degrees, has not unfolded similarly in different cities, nor is it likely to unfold in the future. Theory must explain multiple gentrification processes. The most commonly accepted version is initially invaded by "pioneers." Then the process quickens as gentrity, along with small real-estate interests, financial institutions and construction firms, participate in the purchase and rehabilitation of single-family dwellings (London 1980). The dynamics are different in those neighbourhoods in which a large-scale developers and speculators purchase multifamily housing and the area is transformed into luxury condominiums and cooperative apartments (Richards and Rowe 1977, Cottlieb 1982).

One can also identify a gentrification process in which the local government takes the initiative through a major urban renewal project or through homesteading programs. Each of these processes (there are maybe others) bring together the curious actors and condition in a different manner with varying implication for the contribution of the resultant financial and social benefits and cost. (see fig 2.8)

**Dutch gentrification** According to the situation of the gentrification in the Netherlands, it has relatively lower spatial segregation compared with the US and the UK (Kempen, Teule and Weesep, 1992), due to the different composition of the housing market, where over half the housing is owned and rented out by public housing corporation. (Lees, 2008, p 2455)

---

**Bottom-up**

Initially invade by **pioneers**, then process quicken as gentrity along with small real-estate interest, financial institutions and construction firms, participate in the purchase and rehabilitation of dwellings.

---

**Top-down**

**Local government** takes the initiative through a major urban renewal project or through homesteading programs.

---

**Fig 2.8**
Gentrification processes
(Source: Author)
Nevertheless, gentrification issue has been a crucial governmental agenda as called ‘housing redifferentiation’ since 1997 (Hulsberger and Stouten, 2001).

In Rotterdam, for instance 54,000 houses were built between 1990 and 2008 as the development of new housing types and residential environments. In fact, because of the demolition of existing housing stocks (42,000 housings), total amounts of housing stock did not noticeably change. Nevertheless, the overall increase of middle and high income groups could been seen according to the research ‘Settle and Go’ (Municipality of Rotterdam, COS, 2008 and 2010). In other words, ‘social climber’ have been more inclined to stay within the same neighbourhood by ‘housing redifferentiation’. An influx of high income households has been seen as well. (Mak and Stouten, forthcoming).
2.5
Spatial Strategy of Urban Regeneration

Planning approaches; integrated and strategic planning
Stouten (2010) pointed out ‘social, economic and environment-related developments change the conditions affecting urban planning’. In that sense, bulk of literatures and urban policy documents we have considered stress that an integrative approaches is the most important principle of spatial strategy for successful urban living and working. The Ministry of Spatial Planning in the Netherlands conclude that vital and attractive cities not only concern investments in physical-spatial structures, but also investments in social and cultural infrastructure, such as care, welfare, education and sport (Ministerie, 1997). In the Housing Report, the same Ministry states that without any coherence, physical investment will be relatively useless and merely shift problem elsewhere. Stead and Hoppenbrouwer (2004) also pointed out ‘Many of policy statements promote an integrated approach in which spatial, economic, social and environmental interests are closely interwoven, p 121’. Kempen, Wassenberg and Meer (2007) refer to the importance of the integrative approaches many of the physical urban restructuring projects in European cities projects have been characterised. Furthermore, this would be divided into two different meaning.

First, it can refer to a combination of measures from different sectors or segments, for example a combination of physical, social and economic measures. Second, the concept of integration can refer to collaboration between different partners, for example a public and a private one, or between governments, housing corporation and inhabitants. The term “urban governance” is often used for such urban project collaboration. (Kempen, Wassenberg and Meer, 2007, p. 487).

Urban Task Force final report of 1999 – Towards an Urban Renaissance - describes the benefits of physical regeneration would flow to local people, if strong economic and social programmes are following together, which points out the amalgamation of economic, social and physical aspects of urban development (Force and Rogers, 1999).

Furthermore, the strategic plan is also needed for achieving for successful urban living. The strategic plan was defined as a holistic project addressed to inter-sectoral development objectives (Camora and Burgess, 2001). In other words, it means breaking with the more inward-looking approach of the post and replacing it by outward-looking approach with taking more account of general economic and social developments, and integrating them while taking also envi-
The plan framework consisting of proposals for medium and long-term action, accompanied by a mechanism for short-term micro planning by Camora and Burgess (2001). This is the aim of achieving sustainable improvements in economic social and physical conditions. Background of this approach came from the problem of old approach which consists of its short-term character; it was too fragmentary and project-oriented, and was developed without any general developed spatial planning framework for the city as a whole. Importance of basic principles underlying the new approach are that strategy and the various programmes are decided on by consent of all those involved in the process (Stouten, 2010, p. 101).

This strategic plan is often compared with 'Master plan'. The following explains the distinctions between the strategic plan and master plan.

‘Difference between the strategic and master plan is that it is oriented towards results and instrumentalised through objectives. The Strategic plan follows an iterative process that is oriented towards building scenarios for regional development integrated through the projection of a vision for the development of the different sectors at different scales of the regional reality (Carmona, Burgess and Badenhorst, 2009, p 25).’

The final report of Urban Task Force (1999) also explains the need for a strategic approach which is without a strong strategic base, supported by higher tiers of government, and backed by a firm commitment of resources, it is impossible to target particular programmes or initiatives with confidence. The process becomes essentially reactive.

**Design strategies**

To offer attractive urban living condition to people, physical condition, which is one of the most recognisable aspects for inhabitants. Urban Task Force (1999), promoting design-led strategy to improve city public spaces and neighbourhood, describes the key principle or urban design for creating more liveable places. Fig 2.9 illustrates the key principles of urban design for urban renaissance.

**Key principles for urban design**

- Site and Setting
- Context scale and character
- Public realm
- Access and permeability
- Optimising land use and density
- Mixing activities
- Mixing tenures
- Building to last
- Environmental responsibility
- Sustainable building

Fig 2.9

Key principle of urban design (Source: Author, based on Force and Rogers, 1999, p 71)
Mixed-use development; getting the right mix

As seen in the strategies in terms of physical improvement, the mixed-use development seems the most important aspects for the ‘urban renaissance’. And a wide range of the literature or government documents is identifying the significance of it. In that sense, the Dutch policy statements also mainly stress for its importance, need and various benefits of the mixed-use illustrated in table 2.4.

This seems that the Dutch policy documents primarily focus on the mixed-use development for dealing with the lack of space in the urban centres. Stead and Hoppenbrouwer (2004) suggest that the distinct claims for housing, employment, recreation, infrastructure and open space can be mixed in a creative way through the mixed land uses, then at the same time spatial quality can be improved and the ability of amount of space can be used more efficiently. Thus, mixed land use not only refers to mixing different uses, but also to a more efficient and intensive use of land.

This importance of the mixed-use development can be found in the British policy document for promoting the ‘urban renaissance’. Figure 2.4 illustrates that the advantages of the mixed-use development in the inner city are relates not only to the built environment but also social and economic condition.

In terms of mix-use development, Urban Task Force (1999) shows an example for how successful urban neighbourhoods integrate a range of services near residential areas without creating mono-functional zones of shopping, business
and housing (see Fig 2.11).

**Urban density; towards high density?** One physical element of desired urban renaissance is higher urban density. Density defines main urban fabric and consumption of the space. That is why using the concept of density has had great impacts on the modern urban planning and design. At the beginning of twentieth century, Raymond Unwin, the forerunner of ‘garden city movement’ propose the a standard density of 30 houses per hectare. Later on, Jane Jacobs, a well-known American urban theorist warned not only the slum in the inner city, but also urban problem occurred on the low-density area. She, therefore suggested the minimum density of 250 dwellings per hectare to be a necessary condition for a vital and participatory city life without any urban problems. Many of literatures also indicate the importance of high density or compact city for sustainable urbanisation and economic growth.

The importance of densification is also stressed by Uytenhaak (2008), the increase in use of space per person in the Netherlands since 1990s (Fig 2.12). And Figure 2.7 shows the densification process of Wijnhaveneiland done by KCAP, which is the positive way of densification with preserving the existing urban fabric and buildings.
2.6

Conclusion

In recent years, for instance Urban Task Force (UK) and spatial planning documents (Netherlands) emphasises sustainable development in inner-city neighbourhood. Fundamentally, sustainable living in inner-city neighbourhoods is a complex concept that involves the integration of different dimensions and a holistic approach to the urban transformation.

Demographic changes showed the requirements for changing demand in urban policy. Especially, the last stage of urban development as a cyclic system, Reurbanisation emphasised spatial quality and its re-use of space. A wide range of the literature indicates that reurbanisation is sometimes used as a synonym of renewal or regeneration (Davison and Lees, 2010). Along this line, Urban policy documents, discussed in case of the UK and the Netherlands, manifest to promote ‘living and working in inner-city neighbourhood’.

To achieve and create a sustainable living environment in the inner-city, an integrated and strategic plan is a necessity in the planning process. Mixed used development in terms of functions, various housing types and its tenures are vital elements for enhancing the living quality. High urban density which is not overcrowded but concentration, also creates more sustainable forms of inner city neighbourhood.

In the next chapter, urban renewal and urban regeneration in the case of Rotterdam is discussed. It will discover how to change context of urban development in inner-city neighbourhood. Furthermore, it will focus on the concept of ‘Building for the neighbourhood’ as the first consideration of inner-city neighbourhoods in Rotterdam.
Chapter 3_Urban Renewal and Regeneration in Rotterdam

‘Building for the neighbourhood’
Fig 3.1
Image during the realisation of urban renewal in Oude Westen
(Source: Hartigh, Nederlands fotomuseum)
3.1

Introduction

The city of Rotterdam is one of the most important Dutch cities with 616,250 inhabitants (COS, 2012), situated in the South-West Netherlands in terms of economic, cultural and social perspectives. The large port of Rotterdam has led economic growth of Netherlands, even more influenced on the other European countries. Various ethnic groups, over 160 different nationalities have led the city of Rotterdam to the multicultural environment with its passion and excitement up to now.

When it comes to urban renewal and urban regeneration in the Netherlands, especially the evolution of urban policies in case of Rotterdam represented to a general Dutch blueprint (Stouten, 2010), because of the important role of Rotterdam in terms of geographic position and economic resurgence. Urban renewal could be divided into four periods; before 1974, between 1974 and 1993, between 1990s and 2008, and from 2008 onwards. The main task in the first period of urban renewal was to recover the city after WWII. The priority, therefore was given to the reconstruction of harbour and industrial areas followed by rebuilding offices and shops for the emergency of economic revival. Building housings was considered as the second task in spite of huge housing shortages. Mass housing estates were constructed in the city periphery to cover the emergent task of housing shortages. This was followed by the reconstruction of city centre.

Since a new urban renewal policy addressed in 1974, special attentions had been paid attention to the residents in old neighbourhoods which were mostly the lowest income groups and vulnerable members of society for providing affordable housings. This new urban renewal policy consisted of ‘Building for the neighbourhood’ as a strategy, fundamentally for avoiding forced removal and displacement. That focused not only physical improvement but also social development. Main strategy of this policy was to lessening social inequality. Especially low income groups had opportunities to improve their housing situation on the attractive locations. The mixture of composition of the population led to the changes in the social fabric and social networks.

In the beginning of the 1990s, economic and political situation led to the market-led housing provision which means that the central government less controlled the housing market. And the term ‘urban regeneration’ firstly used in the policy documents (the Forth Report on Spatial Planning, Ministry of Housing, Physical Planning and the Environment**, 1988). It is referred to the stimulation of economic and socio-economic renewal and the quality of public spaces. In
this period the policy ‘Building for the neighbourhood’ was replaced to the combination of ‘building for the neighbourhood’ and ‘building for the city’. Furthermore, this policy intended to a balanced population composition with regard to different income groups and alleviate the restriction of building social housing which was only permitted, to stimulate the market-led housing provision. Based on this, the three draft plan was developed; ‘complete city’, ‘attractive city’ and ‘undivided city’. This plan could be seen as the achievement for removing ‘disadvantaged areas’. And ‘Big City policy’ intended to combat inner-city deprivation resulted by high unemployment, increasing criminality, vandalism, deterioration of public space, tension between populations groups and so on, especially in the four major cities in the country (Stouten, 2010).

Fig 3.2 Urbanised Landscape (source: Palmboom, 1990, p.35)
3.2

Historical urban development of Rotterdam

**Origin of Rotterdam** The city was born on the mouth of river Rotte, which flowed from the peats region of southern Holland to the Nieuwe Maas, in the thirteenth century. The settlement under- lied on the peat which was over laid with clay (Laar and Jaarsveld, 2007). In the eleventh century, due to the high level of the ground water the ditches were dug parallel to the existing river or waterway for the agriculture. But, the problem was to the lower-lying land which was caused by the draining of the peat area. Furthermore, the flood and wind forced the inhabitant in this area out to a higher area to settle in twentieth century. Because of these problems, the first dikes, sluices, dams and drainage sluices were built in this area to protect their settlement in 1300s.

**Urban structure_Underlying on landscape**

Parcelling of the hinterland is characterised by the drainage ditches laid out when the land was cultivated. These forms basically lead to the main urban structure that followed. The ditches are not only for drainage but also the separation of the parcels and provide a network for water management. The parcels are hydrological units, and also property units that can be farmed. In short, the parcels, ditches and roads has several functions simultaneously.

In case of Rotterdam region, very complex division of the parcels is seen as a consequence of the joining of the two rivers, the Rotte and Maas. Because of the complexity, this area is still one of the most difficult in the contemporary urban structure of Rotterdam.

Compare to Amsterdam, where city developed along a small provincial river and an inland sea, the forms of parcels in Rotterdam is relatively complex and dynamic (fig 3.3). The different types of landscape offered different opportunities of the urbanisation that occurred after the end of the nineteenth century.

**1400-1800_Fishing town(haringhaven)** After river mouth was closed by dam, shipping traffic was hampered by these dams. This made it necessary to carry cargo over the dam, loading it from one ship to another. The dam therefore turned out to be an outstanding location for the trading of cargo. Especially, herring fishing industry made the village grew into a city at that period. A number of herring ships were able to accommodate on the port this herring business in Rotterdam formed the foundation of developing an International trade centre from the second half of sixteenth century. (website: Port of Rotterdam)

**Pre-War period_fishing port to commercial port**

Port of Rotterdam became the commercial harbour instead of previous fishing port. It had an important market and place where goods from around world
were stayed and stored for a short time to spread to another places. With having industrial facilities in the harbour, Rotterdam grown faster than most of Dutch cities in the first half of twentieth century. Furthermore, facilitating modern sewer system based on Rose’s Waterproject(1954) for the poor hygienic and social condition, and digging 20.5 kilometre long of ‘Nieuwe Waterweg (1866-1872)’ to link North Sea, Rotterdam and hinterlands changed the city of Rotterdam to develop rapidly and radically to become International port city. This caused a dramatic increase of population from 100,000 to 300,000 between 1850 and 1900. In the meantime, according to construction revolution city of Rotterdam expanded its territory beyond the city wall and built Cool, Oude Westen, Nieuwe Westen to West, Kralingen, Oude Noorden and Crooswijk to North-East. On the South bank of river, Noordereiland, Kantendrecht and Feijenoord started to construct. These pre-war housing districts were completed and brought more people to come to Rotterdam, population of Rotterdam in 1940 recorded more than 600,000.

The ‘traffic machine’ _Infrastructural development_ Between 19th and 20th century the remarkable increase of motorised transportation changed the urban landscape. In other words, the relationship between the city and the landscape shifted as people who wanted to more private space and life moved to out to the suburbs. As a consequence, the rural area has become the part of urban landscape. This development led to dramatic changes in the city structure and the landscape.

Palmboom (1990) states the term ‘traffic machine’ (Fig 3.6), which created a new system on the urban landscape. In the beginning of the railway construction in the nineteenth century, a new line that connects the cities was laid down on the underlying landscape pattern. This line and the fabric of the landscape were intersected at random, frequently isolating areas of land from the ‘backbone’ and severing functional relationships. These severed areas became easy prey for the random urbanisation, industrialisation or neglect. In the twentieth century, the motorways were built and made an entirely new form of the city called ‘frame around Rotterdam’. The effect of the motorway system on the spatial structure is even more radical than that of the railways. The motorways act as a gigantic apparatus for merging and filtering traffic, which is organised along strict hierarchical lines. Both the development of hierarchy and the barrier of the motorways divide districts and also penetrates the whole of the city. As a consequence it has been seen one agglomeration.

_Catastrophe and Post-war period_ For the bombardment of Rotterdam on May 14, 1940, all of the historical city centre the so-called ‘city triangle’ and it surroundings (parts of Kralingen and Noordereiland), nearly 27,000 apartment units in 11,000 buildings (800 people died and 80,000 homeless, were destroyed by the German airforces. This made not only destroyed area but also its surrounding in mess. And Maas-tunnel opened to connect between north-east and south-east of Rotterdam in 1942.

In post-war period, between 1945 and 1975 urban development of Rotterdam

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**Fig 3.6** Traffic machine (source: Palmboom, 1990, p35)

**Fig 3.7** ‘Basicplan’ by Ir. C. van Traa, 1946 (source: Laar and Jaarsveld, 2007, p60)
could be categorised with three objectives. The first aim was to reconstruct the industrial harbour and its infrastructure for recovering economic in urgent. And restructuring city centre which had bombardment was the second priority. Last objective was to build new housing districts for reducing the housing shortage.

To realise these objective, Cornells van Traa drawn Basic Plan for the Reconstruction of Rotterdam in 1946, which led to an entirely new urban landscape of Rotterdam. The Basis plan emphasised its creation and coincided with a revolution in urban design thinking. This attempted to streamline the previous multifunctional structure of the city and to give it one unifying theme. The separation of functions, low residential density and motorised-traffic oriented urban design were main design principles for the ruined city centre. These principles were based on CIAM and later Team X. Finally, the new city centre was built to the modern city form according the principles of CIAM. For example, in 1953 Lijnbaan were introduced as the first pedestrian shopping street in Europe.

With these principles, since 1960 the large scale urban expansion and infrastructure development had started to build such as Pendrecht, Zuidwijk and Lombardijen in city periphery. In the mean time, the first underground metro line in the Netherlands was opened to connect central station and Zuidplein on the South of Rotterdam. All this would support the development of harbour industry. As a consequence of it, the demand of labour increased and in fifties and sixties, labour not only from Zeeland and Brabant But migrants from Southern Europe (Spain, Italy and Greece) came to the harbour. That led Rotterdam to become the largest harbour in the world fore last decades with population peaked of 731,564 (1964).

From 1970s consideration of urban development shifted to old neighbourhoods which became deprived neighbourhoods such as Oude Westen, Oude Noorden, Crooswijk, etc were mostly taken by low-income group and ethnic minorities.

During this period, approach to the urban renewal in Rotterdam based on the four pillars; new organisation al group for the project group, the purchase of the housing stock by municipality, the provision of affordable rent for the new and renovated dwelling as the concept of “Bouwen voor de Buurt” (will be discussed in next section) and a detailed allocation plan. (Komossa, 2005)

Since 1990s, new urban and architectural policy created a modern skyline in Rotterdam. High-rise buildings and distinctive buildings were built and made city of Rotterdam called ‘Mahattan aan de Maas’ or ‘Architectural Museum in Europe’.

At the end of twentieth century old docklands outside dikes integrated into the city like as ‘living with water’ such as large-scale waterfront development in south bank of Rotterdam called Kop van Zuid. This project is the one of the largest strategic plan in the Netherlands for creating new living and working environment near to the water on South-bank of river. Especially, Erasmus bridges opened in 1996 was not only giving the connection between city centre and
Kop van Zuid but also an icon to the city of Rotterdam. Today, large scale urban development related to infrastructure such as Central station of Rotterdam (Rotterdam CS) and its related functions and facilities surrounding, and Randstad rail line as well as Stedenbaan project have catalysed to urban development of Rotterdam to last a growth pole in the Netherlands today.

Maps of History

Fig 3.10
Maps of history in Rotterdam central region (source: Lee, 2011)
3.3

‘Building for the neighbourhood’ (‘Bouwen voor de Buurt’)

Background As mentioned in the preceding sections, the priorities of urban development were given to urban expansion and economic recovering during the 1960s. In the meantime, old neighbourhoods were neglected from this consideration. These old neighbourhoods were quite dense and mainly taken by low-income working class groups in that period. After the War, the densely populated working-class neighbourhoods were thought to be unwelcome according to the modernistic plan for the city centre. The threat of wholesale demolition accelerated the deterioration of those neighbourhood and the process of social filtering. Many families with better income left the low-rent dwellings for new suburban housing areas, and were replaced by single parent families and immigrant workers (Hui, 2012, p. 411). Since most private rented dwellings were owned by low-income working class, proper maintenances of housing stocks were hardly invested. Slum dwellings and demolished housing stocks were easily found in old neighbourhoods.

At the end of 1960s, urban renewal were firstly considered by municipal government of Rotterdam, as a consequence of changing the principle of urban planning, from ‘urban expansion’ to ‘compact city’ at the national scale level of urban development. This earlier consideration of urban restructuring was to demolish old neighbourhoods. But oppositions of this were occurred especially by the residents of these old neighbourhoods. They did not regard the wholesale demolition of neighbourhoods, but the refurbishment of the housing stocks, economic use of buildings, maintenance of urban fabric and social structure without displacement of residents in deprived neighbourhoods. It ended up to establish ‘Action Groups’ of old neighbourhoods against the proposal of demolition which would caused displacement of original residents (Hui, 2012, p. 412). Requests of Action groups to the city council were replacement of broken and unfavourable housing stocks, provision of new affordable social housing for low-income group, setting up an investment regulation for housing maintenance, etc.. The residents demonstrations and actions contributed to the change of political viewpoint. Especially, progressives were strongly in favour of the claim of action group and urban renewal had a turn-around with winning the local election in May 1974. This was an important and starting point for the urban renewal in Rotterdam.

Objectives Urban policy documents, ‘Urban Renewal 1975” which became known under the title ‘Building for the neighbourhood’ set up in 1975 by an alderman, J. Van der Ploeg. This included basic principles of urban renewal and the designation of the first 11 old neighbourhoods(fig 3.11) for urban renewal (Lat-
Urban Renewal and Regeneration in Rotterdam

er on, further 11 old neighbourhoods were added as second ring areas). It was mainly considered to social minority such as low-income groups, elderly, etc. to have affordable housings in old neighbourhoods. Fundamental principles of ‘Building for the neighbourhood’ as an urban renewal strategy were avoiding forced removal and displacement as mentioned before. This was not only paid attention to physical improvement in residential area, but also respected for social development.

Residents in the involved neighbourhoods closely participated to the decision-making process to give their opinions to municipal department as decentralisation and democratisation.

A lack of investment for maintaining their housing properties seemed to cause the deterioration in old neighbourhoods. This was because that housing socialisation was one of important strategy of ‘building for the neighbourhood’, to not only to provide affordable houses to social minorities, but also to proper maintenance for the housing properties.

Consequence Twenty years urban renewal between 1973 and 1993 remained many changes in terms of physical, social and economic contexts. This was an urban design experiments related to a change of housing ownership. Although privatising housing tenures was a main shift at the national level, the major Dutch cities was an exception for it until the late 1980s(table 3.1). Especially in Rotterdam between 1974 and 1993, over 56.000 dwellings(approximately 34% of the pre-war housing stocks) and 9.923 businesses were changed their ownership to the social sector(fig 3.12)(Stouten, 1995, pp 23, 25).

Amount of social housing stock in renewed neighbourhoods was at approximately 60 percent, 35.7%,(1976) to 57.7%(1990). Apart from socialisation of housing ownership 120.000 house, 66.000 for new construction and 54.000 for renovation were modernised which were more than 60 percent of housing stocks in renewed neighbourhoods. Also large amount of public facilities such
as schools, community centres, hospital, mosques and offices were appeared in those neighbourhoods.

![Table 3.1: Housing tenures in Rotterdam as percentage](Source: Stouten, 1995, p 18)

<table>
<thead>
<tr>
<th></th>
<th>Rotterdam</th>
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<td>Social rented</td>
<td>35.7</td>
<td>46.8</td>
<td>49.7</td>
<td>57.7</td>
<td>41</td>
<td>42</td>
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<td>Private rented</td>
<td>56.3</td>
<td>37</td>
<td>35.7</td>
<td>26.5</td>
<td>20</td>
<td>13</td>
<td></td>
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<td>Owner occupation</td>
<td>8</td>
<td>16.2</td>
<td>14.7</td>
<td>16.4</td>
<td>39</td>
<td>45</td>
<td></td>
</tr>
</tbody>
</table>

Source: Statistisch overzicht Volkshuizenvesting Rotterdam 1987 en 1990

![Fig 3.13: Change of urban fabric](Source: Stouten, 1995, p38)

Oud Crooswijk, Rotterdam, before and after urban renewal
In the beginning of the 1990s, economic and political situation led to the market-led housing provision which means that the central government less controlled the housing market. And the term 'urban regeneration' firstly used in the policy documents (the Forth Report on Spatial Planning, Ministry of Housing, Physical Planning and the Environment**, 1988). It is referred to the stimulation of economic and socio-economic renewal and the quality of public space. In this period the policy 'Building for the neighbourhood' was replaced to the combination of 'building for the neighbourhood' and 'building for the city'. Furthermore, this policy intend to a balanced population composition with regard to different income groups and alleviate the restriction of building social housing which was only permitted, to stimulate the market-led housing provision. Based on this, the three draft plan were developed; 'complete city', 'attractive city' and 'undivided city'. These plans could be seen as the achievement for removing 'disadvantaged areas'.

Here, we discuss about 'Big City policy' intended to combat inner-city deprivation resulted by high unemployment, increasing criminality, vandalism, deterioration of public space, tension between populations groups and so on, especially in the four major cities in the country (Stouten, 2010).

Since economic crisis from the middle of 2000s, urban regeneration in the Netherlands have been changed into a stagnation.
3.5 Conclusion

Changing contexts for the urban regeneration is an crucial factor to understand urban renewal and regeneration in the Netherlands. In case of Rotterdam showed that dynamics for urban development since WWII. Especially the basic principle of urban renewal, 'Building for the neighbourhood' showed the possibility for and area-based approach and step-by-step rehabilitation in the deprived neighbourhood.

Findings explained that reshaping the housing ownership was definitely involved in the process of urban renewal. Since concentration for social fabric and improving for building structure, outdoor space seemed to be neglected in this context. Although some case (Crosswijk, Oude Noorden and Oud Westen) showed increasing the amount of public space (outdoor), the quality of them were not considered properly. This could be bringing the isolation of neighbourhood at the district level. This is discussed in next chapter in case of Oude Westen.

In the present, most of urban development in urbanised area are stagnated due to the economic recession. This is probably a main reason that small scale interventions undertaken by local authority could be seen in many case. But this approach could have a limitation of sustainability. New approach as a long-lasting solution should be needed with considering different dimensions.

As mentioned above, urban renewal particularly in case of Oude Westen is introduced to understand the implementation of urban renewal 'Building for the neighbourhood' From the perspective of background, process and consequence and current condition in depth.
Chapter 4_Analytical research
; Location study
Fig 4.1 Cools(ch)e polder around 1880 (Source: Laar and Jaarsveld, 2007,p 40)
4.1 Oude Westen; before urban renewal

From polder to urban area Oude Westen is one of the oldest neighbourhoods in Rotterdam. It was built on ‘Cools(ch)e polder’ which was agricultural land until the end of nineteenth century. Houses in Oude Westen had been built since second half of nineteenth century. According to construction revolution, this area with houses was mostly built between 1890 and 1920. Three quarters of house consisted of one or two room with a large living room and a kitchen.

An agricultural polder was replaced into a residential neighbourhood, but the polder layout still clearly remains as streets and urban structure; grid form with long North-South streets and a tight narrow West-East streets. Westersingel was created on municipal boundary between Rotterdam and Delfshaven by Rose’s Waterproject plan (1852) which made for the demand of a sewer system as a consequence of social disorder and poor hygiene. Later on, Rotterdam Council (1892) approved the street plan of Oude Westen which could have traffic connection to Cools(ch)e polder from former inner-city of Rotterdam. New water system (1852) also created a recreational network with large lots for mansions and limited detached villas alongside Westersingel and Zoo on the North of Oude Westen.

At the beginning of WWII, there were around 22,000 inhabitants in this neighbourhood. At that time, the population density was 1,000 people per hectare, making it the most densely populated district of Rotterdam. This area has increased in importance for the whole Rotterdam. Shops and business were situated Oude Westen instead of destroyed district and facilities for night life such as bars and theatres were placed in this neighbourhood.
Fig 4.4
Image for the open space between closed block in Oude Westen before urban renewal (Source: unknown)
4.2.
Urban renewal in Oude Westen

**Background** *(Demolition vs Renovation)* In 1950s, Oude Westen was a typical working-class neighbourhood (85% of skilled and unskilled working-class in 1958) with rows of private-rented, back-to-back dwellings. Similar to the other inner-city working-class neighbourhoods, Oude Westen consisted of originally dwellings with cheap design or construction. Furthermore, maintenances for properties were neglected. This brought the Oude Westen had became a deteriorated and deprived neighbourhood since the 1950s.

Beginning of the 1950s, under influence of ideas about the separation of functions, successive urban reconstruction called for the Oude Westen to be demolished. Since it was thought as an interruption to the desired large-city image for the city centre.

In 1960s, demographic changes of this neighbourhood occurred. Many families left for the new neighbourhood, especially for the outside of city as a suburbanisation. Single parents and guest workers replaced them in the low-rent dwellings. This was the start to have a constant population turnover in Oude Westen (Komossa, 2005).

Until the end of 1960s, the housing condition was unfavourable to live and both of quality and quantity for the communal open space, facilities and infrastructure were insufficient in this neighbourhood.

Active tenants in the neighbourhood themselves established a residents’ organisation ‘Oude Westen Action Group’ to object municipal plan that aimed to demolish large parts of the area. The first meeting of the ‘Oude Westen Action Group’ took place on February 25, 1970. Their initial claim was to consider the poor-state maintenance of the dwellings and streets, and the absence of parks and playgrounds in the neighbourhood. A group of local architects who had experienced for working on a ‘reconstruction’ plan joined and supported the Action Group. The idea of action group was not the wholesale demolition, but rather a small-scale and step-by-step improvement of living conditions for original residents with existing housing stocks. Against city’s large-scale demolition and rebuilding plans, demonstrations were organised by residents’ action groups in Rotterdam. Some tenants even demolished the old buildings that were about to collapse. This actions by residents became a great success (Hui, 2012, p 553).

As a consequence of this movement the Oude Westen was basically included in the first 11 urban renewal areas in Rotterdam for small scale, and step-by-step improvement as the new approach of ‘Building for the neighbourhood’.
Urban Renewal in process

Urban morphology

Urban form/structure_ One of the significant changes during completion of urban renewal was to create more open space (public and collective space) in the neighbourhood. According to the landscape feature, long and narrow closed urban blocks were situated in this neighbourhood. These oblong urban blocks were often an obstacle to connect one side to the other side. Not only courtyards of urban block, but also streets in between each urban blocks were quite narrow. Fig 4.8 shows that a west-east connection created in the proposal of urban renewal.

In terms of the transformation urban block during urban renewal, there were four main principles could be seen for creating open space inside the neighbourhood (fig 4.9). The first principle was to divide the oblong (North-South direction) urban blocks into two or three different urban blocks. This new open spaces in between urban blocks were transformed into public spaces such as playgrounds, squares, etc.

These new spaces are often used with the public facilities which are adjacent to these public spaces. And also shared entrance for dwellings created on the side of hosing blocks.

Second change was the combination of two adjacent urban blocks to create one block with larger open courtyard for playgrounds, parking spaces, gardens, etc.. Gaffelblok (1981-1983), for instance showed to merge two urban blocks and created a public space above a semi-underground parking space.

The third principle of urban block transformation was the combination the first and second principle to the one. For instance, the urban block Tiendplein (1989) is seen as the merging two small back-to-back housing block and combining newly trimmed urban block surrounding. As a consequence of complicated
Fig. 4.10
The old situation (opposite page) and the new situation (Source: Author)
Fig 4.11
Sections, the old situation(above) and the new situation(below) (Claus and Kaan, 2005, pp.20,21)
transformation created a public space in the middle. The fourth principle was less related to urban structural change but rather for the vertical transformation of public space. This has something to do with small urban blocks included a tiny courtyard to transform the entire ground level of the block into a public facility and semi public space with entrance for the dwellings situated on top of ground floor.

Open space and Urban density_ As a consequence of transforming urban blocks, more open spaces (un-built area) were created in Oude Westen. Compare to situation before urban renewal, 7% of open space was increased, especially public outdoor space (public and collective space) significantly increased in 26%. On the other hands, many of former private outdoor spaces in courtyard such as private garden were replaced into collective spaces or public spaces. In terms of building density, ground space index (GSI) and floor space index (FSI) declined for 10 per cent and 4 per cent respectively. In other words, public space per inhabitant increased to 25 m²/p (2005) from 14 m²/p (1974). Also, indoor space per inhabitant rose to 77 m²/p (2005) from 57 m²/p (1974) as space consumptions.

Greenery(Het Wijkpark, 1987)_ A lack of green space in this neighbourhood were a problem and green space for local inhabitant was needed in desperate. With this great demand for green space, Het Wijkpark (the neighbourhood-park in English) was constructed on Eastern part of Oude Westen (1.4 hectare) in 1987. Location of this park used to be the municipal boundary between Rotterdam and Delfshaven until 1886. Later on, a Roman-Catholic nursing house called Simeon en Anna was founded in 1902. This had lasted before urban renewal and finally northern parts of this complex were demolished for replacing this green park. Because of its location, this would function local park and city park both.

Landuse_ Before urban renewal, shops and offices were situated inside a neighbourhood, mainly Gouvernestraat (fig 4.13, next page) as an important street.
Fig 4.13
Gouvernestraat in 1960
(source: Google image, keyword: Gouvernestraat)
Also, these functions were scattered over the neighbourhood. Most of these were small businesses or enterprises led to economic vitality of this neighbourhood, such as not only for local life for the residence but also job opportunities for the residence. During realisation of urban renewal, most of these shops, cafés, service businesses and other small enterprises were relocated along the main streets of this neighbourhood (West-Kruiskade, Nieuwe Binnenweg and Westersingel).

As a consequence of relocation of shops and businesses, this neighbourhood clearly divided into four quarters by strong edge of commercial functions and inside each quarters mainly have been remained as residential quarters.

**Housing provision**

*Housing typology* Until the end of 1960s, there were approximately 5,000 dwellings, mostly built between 1880 and 1920 (see chapter of history) and 11,000 residents, which had mainly one and two person households (almost 75% of dwellings were tiny and small) lived in this area. (Hui, 2012, p411). But these houses were a problematic and new houses were needed in desperate because of not only the size of dwelling but also unfavourable condition such as a lack of technical equipment and poor structural situation. (Hui, 2012), which led to the deterioration and decline of this area.

As a consequence of urban renewal, newly constructed housing block consisted of larger spaces with more rooms, kitchens or sometimes taking two floors for one single household which suited for family households. Furthermore, modernised dwellings had changed the composition of its space. For instance, re-composed one housing unit with assembling two housing units which used to be next to. Also, sharing the door and staircase to enter their dwelling were significant changes. This changes were closely related to the housing (re)differentiation.

In terms of the size of houses, the change of large dwellings has increased.
Therefore, the number of houses had fallen between 1974 and 1984 from 5725 to 4650, a decrease of 19 percent. The population decreased in the same period by 33 percent from 14,365 to 9,460.

Quality of housing and Housing tenure
In terms of division of tenure (dS+V, volgens Rotterdam's Kwaliteits Onderzoek, 1994/95), Oude Westen had relatively larger proportion of social housing than the average of Rotterdam. On the other hand, private housing and owner-occupied housing sector were consisted in this neighbourhood was lower compare to the situation of the total of Rotterdam. Average quality of dwellings in Oude Westen were worth the situation in Rotterdam. More than one fifth of housing were poor condition which were almost pre-war housing. These houses were mostly belonging to either private houses or owner-occupied houses. But most of dwelling in social housing sector had a good quality because of newly constructed and modernised during the urban renewal.

Socio-Economic fabric
population composition
When it comes to population composition, 58% (COS, 1997) of population in Oude Westen belonged to ethnic minorities. This was more than twice as high proportion as total ethnic minorities in Rotterdam. Surinamese and Turkish were the majority, 17% and 15% respectively. Natives (Dutch) consisted of 28%, which were half of the proportion of Rotterdam (59%). 0-14 years of whole population in Oude Westen consisted of 20% of total amount, higher than Rotterdam (17%). People over 65 years old had a small proportion (10%) significant lower than Rotterdam (16%).

Household income (1994)
Average income of households in Oude Westen was 15,400 euros which was below the average in Rotterdam (17,700 euros). This was 80% of national level of average and lower than 10% lower than Rotterdam. In Oude Westen, lowest income group was 27% higher than Rotterdam (17%). On the other hand, highest income group in Oude Westen was 6%, lower than 7% of Rotterdam.

Education
56% of 16-50 years in Oude Westen had middle and higher education. It was higher than the one in Rotterdam (48%). But between 1992 and 1997, this was decreased in 1% although it had increased 2% in total in Rotterdam.
Fig 4.15
Oude Westen before urban renewal (source: Clus and kaan, 1995)
Fig 4.16 Oude Westen today (source: wijkscan Oude Westen, 2011)
4.3. Oude Westen today

It has been almost two decades to attempt the concept of ‘Building for the neighbourhood’ on the first urban renewal in Rotterdam. Today Oude Westen seems to face another phase. Spatial and social problems, as a consequence of urban renewal have occurred to interfere the sound living environment. Also, large urban development adjacent to Oude Westen such as new Rotterdam central station development, Weena point, Kruisplein, Calypso, etc, impact and request to this neighbourhood to have a new position. The situation in Oude Westen for a last decade and today is analysed to examine potential positions of the neighbourhood in the future.

**Socio-economic fabric**

*Population change* since 2000, the population in Oude Westen has slightly decreased. And it seems to be stable from 2010. Especially population of CS Kwartier has significantly increase form 2000. Also neighbouring residential area such as Middelland and Nieuwe Westen have the increase of population since a couple of year ago. This could be seen as a trend to come back to the inner city neighbourhood for living if they could afford.

*Social housing* Most of social housing in Oude Westen modernised and reconstructed during the realisation of urban renewal. These social houses are mainly situated in the middle of the neighbourhood with public facilities such as school, health care etc.

Many of owner-occupied houses, mainly situated along Westersingel and ‘s-Gravendijkwal, and southern part of New Binnenweg seem to be well main-
Housing stock
When it comes to the size of houses in Oude Westen today, 68% of houses are less than 85 m². And 29% of houses have larger than the size of 85m².

Household composition
Main change for household is that one person household has been increased to 44% in 2012 from 39% in 1995.

Built environment
Urban structure, public space.

The period from 2000 onwards has a number of small renewal project. However, basic urban structure which was made during realisation of urban renewal has maintained with its form. Some part of housings planned on urban renewal 1980s were realised after 2000. Series of public space in the middle of neighbourhood have different characteristics with combining public facilities such as playground, school yards, green, square and sport. These diverse public space tried to connected each other to enhance the quality of outdoor space in Oude Westen. Furthermore, the quality of main street has been considered for a last decade. For instance, De Boogjes, which was newly constructed in 1978-1979, situated along New Binnenweg had a controversial discussion about the arcade.
of this urban interfere the quality of street. This was the reason, it has been renovated with removing the arcade and open to the street recently.

Fig. 4.21
Two main road in the neighbourhood; New Binnenweg (above) and West-Kruiskade (below)
(Source: Author)
Land use
As mentioned previous section, urban renewal in Oude Westen brought the positioning change for the many facilities (shops, cafes and businesses and small enterprises, mainly along New Binnenweg, West-Kruiskade and partly Westersingel. Many of small shops and enterprises owned by the ethnic minority group are situated along the West-Kruiskade. These small shops lead to local-daily life and vitality of this neighbourhood. On the other hand, much larger shops, business, ateliers and restaurants are situated along the New Binnenweg. These are characterised at not only local scale but also further district scale. Mauritsweg, opposite direction of Westersingel has shops and business which are more or less covering at the city level (for instance cafe uni.) repositioning for these shops and business are needed for the economic and spatial balance.

Parking space
A parking space are taken in narrow and one-way direction of this nieghbourhood. According to the statistic around 2.500 vehicles are owned by residents of this neighbourhood which is 0.4 cars per household this neighbourhood. this is relatively low amount of car ownership, but it is a problem for interfering the quality of public spaces in this neighbourhood because of narrow streets.

Impact of new urban development
As stressed before, National strategic urban development of Rotterdam central station (Rotterdam CS) and its surrounding such as Weena Point, Calypso, Kruisplein would definitely enforce Oude Westen to have a new spatial position.

-- Rotterdam central station (Rotterdam CS)
To cope with growing flow of passenger, new rotterdam central station (Rotterdam CS) will be completed soon and it offers a new potential and possibilities to the city of Rotterdam. This will be connected with European High-speed
Train and Randstad Rail (new light railway system) will make a strong urban agglomeration between Rotterdam and the Hague as South-wing of Randstand. Rotterdam CS anticipates almost that passengers per day will be as three times as passengers using Rotterdam CS, from 111,000 per day (2012) to 323,000 per day (2025). This would be almost 75 million passengers per year which is more than Schiphol International airport for 40 million passengers. This would obviously influence on Rotterdam city centre including Oude Westen.

-- Calypso

Building complex of Calypso is located on the Kruisplein with the height of 71.3 metres (highest tower), recently finished the construction. This building complex consists of 407 apartment with diverse size of room (from 51m2 to 221m2) for short staying and luxury condominium. And shops and offices for 4,800m2 will be situated between second floor and fifth floor with a underground parking garage for 500 cars.

-- Weena point

Between the Rotterdam CS and Oude Westen, existing building complex called ‘Weena point’ are under construction to have more impression for the identity of Rotterdam with its slogan ‘First Rotterdam’. Gross floor of Weena point will increase almost three times from 42,000m2 to 110,000m2 with offices, restaurants, shops, apartments, courtyard and parking facilities. Especially, a mix of public facilities such as high quality shops, a brasserie, a bar and art gallery at the street level will give urban vitality to this area.

-- Kruisplein (parking garage)

Kruisplein will directly connect between Rotterdam CS and Oude Westen. With this green promenade would continue to the water along the Westersingel to give amenities to the public space in Rotterdam centre. This would have
Fig 4.26
Obstacles for connectivity (Source: Author)

Fig 4.27 (next page)
Quality of urban islands as obstacles (Source: Author)
not only an important role as a public space but also cover the parking facilities underneath Kruidspalein; 5 floors and 8 parking levels and will accommodate 760 cars. The 20 meter deep garage, 150 metre long and 33 meters wide. This parking garage will be connected existing underground parking garage below Schouwburgplein.
4.4 Conclusion

Taking the current situation in Oude Westen into account, this neighbourhood seems to became a part of city centre because of many aspects. Especially new development of central station area ask this neighbourhood to have a new position in the near future.

In the next step, this result of analytical research will become more clear and answer for what way of direction in this neighbourhood will be addressed.
Chapter 5_Exploratory research

; Intermezzo
‘People go where people are’

Jahn Gehl (Public space—Public life, 2007)
5.1 Introduction

Exploratory research is a form of research conducted for a problem that has not been clearly defined. Exploratory research helps determine the best research design, data collection method and selection of subjects. (Wikipedia)

In this chapter, the criteria of spatial intervention is examined for a sustainable transformation of the research location, Oude Westen. This is based on the methods from the former practical researches such as ‘Public space and public life’ (Gehl, 2007) and a municipal document for densification plan ‘Rotterdam make the inner city’ (Municipality of Rotterdam, 2012). Therefore, this research is to scrutinise former researches and apply to the research location. By doing so, concrete answers for the research and strengthens further design intervention of strategic locations is given.

Fig 5.1
Methods for this research (Source: Google image and Municipality of Rotterdam)

Fig 5.2
Urban life trends
(Source: Gehl, 2006, p 9)
5.2 Public Space—Public Life

This research is based on a rather practical exploration of ‘Public Space—Public Life’ by a Danish architect and urban designer, Jan Gehl who has a fascination for the quality of public spaces that is related to public life and activities at a human dimension. In other words, he pointed out that urban quality is the concept of relationship between cities and people. And this relationship would be seen as a urban life trend over the time. A hundreds years ago, necessary activities mostly related to manufacture, trade and non-motorised transportation. The quality of urban space was less magnified to role. On the other hands, since 2000 optional activities have become a crucial aspect of urban life with better economic growth and variety of option to spend their time. This is main reason that quality of public space is a key factor for a vibrant urban life(fig. 5.2).

To examine the quality of public space in Oude Westen, the methodology by Gehl is applied to the research. Conducting this research makes it possible for the analysis to be more clear and also it gives new insight and ideas in the next phase.

Four criteria are classified for an investigation.; Context, Movement, Recreation and visual environment(fig. 5.3). Each of them is discussed in the next section.
Context
As emphasised in proceeding chapter, Oude Westen has remarkable advantages according to the geographical feature. From the neighbourhood centre, many of important place could reach with 5-10 minutes walking. This reasonable walking distance would be a potential aspect in Oude Westen.

City of Rotterdam has a modernised skyline with high-rise building in the central district and south bank of river. On the other hands, They sometimes brings problems such as poor micro-climate conditions and conflicts with public space. In case of Oude Westen, the neighbourhood which is a low-rise high density area has a relatively good condition for this although high-rise buildings stand surrounding.
Movement

Oude Westen is dominated by car flow and parking in the main roads. Especially the 's-Gravendikwal and Rochussenstraat, which have a heavy traffic flow because of connection to the highway. West-Kruiskade is the most problematic road for traffic. Since tram line running with vehicles within one lane, traffic flow is not in good condition. Furthermore most of car traffic is to access to the inside neighbourhood which make traffic flow slow. In terms walking and cycling, environment it is poor condition in general. Many of missing links for the bicycle route are seen in main roads and there is no bicycle path inside the neighbourhood.
Fig 5.6 (left)
Traffic flow (Source: Author)

Fig 5.7 (right)
Parking spaces and way to access (Source: Author)

The modal split of Rotterdam

The modal split of Copenhagen

Fig 5.8 (left)
Bicycle routes in Oude Westen (Source: Author)

Fig 5.9 (right)
The modal split of Rotterdam (above) and Copenhagen (below) (Source: Author)
Recreation

For the recreation aspects, strengthening the link between neighbourhood and waterway (Westersingel) is needed. Although Westersingel has a crucial connection from the station to the river, there is no recreational activities along the road. And the neighbourhood park is also in the same condition as Westersingel.

Fig 5.11 shows the recreational cluster at the city scale, Shouwburgplein cluster (left) and Museum park (right) where Oude Westen is nearby. Shouwburgplein cluster has the Doelen and the Pathe cinema as large institutions. Shops and restaurants are situated around the edge of the square. This square is also kept quite lively during the day with passer-by, the surrounding cafés and restaurants. In the evening the square is transformed into an entertainment centre. Museum park has the Boijmans-Van Beuningen museum, NAi, the Kusthal and the Natural History Museum. Also, tree, grass and water define the atmosphere of this park. Especially during the day, many visitors come to this park. (De Hoog, 2013, p 58).

Two recreational clusters are closely linked to Westersingel and the neighbourhood park in Oude Westen. In that sense, a careful consideration is needed.
Visual environment

Visual environment, lastly is the most recognisable aspects by people among the categories. Green structure is important not only for the environment itself but also for the visual quality of space. Fig 5.12 shows the green structure in Oude Westen. Missing links between the green structures and green public spaces could be seen. The neighbourhood park (Het Wijkpark) seems a stand alone and the playground next to the Weena point does not play a role as a green space.

Ground floor frontage, secondly is dealt with for examining a visual environment in Oude Westen. Fig 5.13 (next page) illustrates the categories for evaluating the quality of ground floor frontages. Since this area is mainly residential quarter, adding an extra category only for housing blocks would help for the proper evaluation. Result of evaluation (fig 5.15) shows the modernised housing blocks during the urban renewal have normally shared-entrances to dwelling units which occurs poor ground floor frontages with no activities outdoor spaces.
Main street
- Small units, many doors (15-20 units per 100m)
- Diversity of functions
- No closed or passive units
- Interesting relief in facades
- Quality materials & refined details

Housing block
- not capable

ATTRACTIVE

Pleasing
- Relatively small units (10-14 units per 100m)
- Some diversity of functions
- Only a few closed or passive units
- Some relief in facades
- Relatively good detailing

SOMEWHERE IN-BETWEEN

Dull
- Mixture of small and larger units (6-10 units per 100m)
- Some diversity of functions
- Only a few closed or passive units
- Uninteresting facade design
- Somewhat poor detailing

UNATTRACTIVE

Fig 5.13 Evaluating category for ground floor frontage (Source: Author)
Quality of ground floor frontage

Fig 5.14
Images for ground floor frontage (Source: Author, 4th Dec, 2012)

Fig 5.15
Evaluation for ground floor frontage, attractive (above) and unattractive (below) (Source: Author)
5.2 Urban Density (Densification)

In the theoretical research (Chapter 2) we see the urban density is an important factor for the sustainable urban environment not only for the physical aspect but also social and economic aspects.

In 2012 Municipality of Rotterdam addressed a densification strategy, titled as 'Rotterdam-people make the inner city' (fig 5.1). Hypothesis of this research is that 'sufficient densification in pleasant green surroundings, the quality of life in the inner city will improve making Rotterdam a more sustainable city' (Municipality of Rotterdam, 2012, p 7). Therefore this research is mainly aimed at simulating possible scenarios for the densification of Oude Westen by author, based on this municipal document.

First of all, there are basic indicators to discuss urban density. Fig 5.16 shows that basic indicator, FSI (Floor Space Index) and GSI (Gross Space Index).

Pont and Haupt (2010) pointed out that FSI reflects the building intensity and GSI refers to the coverage, demonstrates the relationship between built and non-built space.

According to the municipal strategy, the level of FSI increases in 2.6 (2040) from 1.9 (2010) without changing the level of GSI. It possibly means to add extra floor existing structure for keeping amount of non-built area.

\[
FSI_x = \frac{F_x}{A_x} \quad \text{and} \quad GSI_x = \frac{B_x}{A_x}
\]

**Fig 5.16**
Basic indicators of spacecalculator (Source: Pont and Haupt, 2010, p107)

- \(F_x\) = gross floor area (m\(^2\))
- \(B_x\) = footprint (m\(^2\))
- \(A_x\) = area of aggregation \(x\) (m\(^2\))
- \(x\) = aggregation
Possible scenarios According to the numeric values in this document, two main possible scenarios can be simulated to examine how to change the space quality.

The first scenario is to add up three floors, as a result of calculation, on top of the modernised buildings which can afford to equip lifts and other facilities inside. With this, there would be spatial and technical problems anticipated. For instance, daylight and wind cannot reach the open spaces as a climate impact which let to reduce the spatial quality. And of course, a lack of parking space would become a serious problem of this area. In terms of technical and financial aspect, equipping public facilities inside existing structures would be difficult and inefficient. (see fig 5.17, next page)

Fig 5.18(next page) shows another densification scenario. This is basically adding extra floors on top of the building along the main public spaces(main streets,
Fig 5.18  
Scenario A and its spatial problems by densification (Source: Author)

Climate impact (daylight, wind, etc.)  
Parking  
Equipping facilities  
Problems

Scenario A

Fig 5.19  
Scenario B and its spatial problems by densification (Source: Author)

Parking  
Equipping facilities  
Problems

Scenario A
squares, playgrounds, etc.)
It seems public spaces to become more vibrant and active for more users, but still predict problems. More car traffic flows would interfere to enhancing the quality of space and more capacity of car parking space will be required. Same as scenario A, equipping the facilities in existing construction would be ineffective.

Scenario A and B show that densification for a dense-neighbourhood seems to be difficult to deal with primarily in physical, economic and environmental aspects
Consequently, another approaches of densification should be considered in this neighbourhood.
5.3 Conclusion

According to Gehl(2007), ‘quality of public spaces’ could be categorised into four different factors. Along the analytical research (chapter 4) Oude Westen basically has a splendid position in the certain context with many potential not only for the living but also for the outdoor activities. However, public spaces in Oude Westen have a lack of links for movement. Especially car traffics which are passing through and parking are dominated in this neighbourhood to interfere with the mobility for the people and cyclist.

In terms of recreational feature, Oude Westen has two main attractions, situated in the adjacent area, Schouwburgplein and Museum park are connected to the Westersingel and the neighbourhood park. However now these two public spaces seem to be neglected for outdoor activities. Westersingel is one of main city axis between Rotterdam CS and River on the South as waterline, it is needed to improve its quality. The neighbourhood park seems a deteriorated space, although it is a main green ground in this neighbourhood. Since this is faced between the rear side of building structure, which means that many activities could not expected in this park. Ground floor frontage should be changed.

In next chapter, spatial strategy is introduced based on preceding research to examine design interventions.
Chapter 6_Spatial strategy
Fig 6.1
Illustration of strategy
(Source: Author)
6.1

Introduction

In this chapter, the spatial strategy is addressed in order to show a vision of the neighbourhood in the future. Also it is related to select strategic locations for the design interventions. Furthermore, this shows a certain phase of design interventions in the next step.

As far as conclusions of research are concerned, there are several problems interfering in the creation of a sustainable urban environment in this neighbourhood. Fig 6.1 depicts a strategy of the neighbourhood which consists of addressing the problems and strengthening the potential aspects of the neighbourhood.

First of all, there is a spatial disconnection to the surrounding areas even though it has a good geographical position in a district. A lack of quality of public spaces is seen as problems in Oude Westen. Although public spaces inside neighbourhood have been increased as a consequence of urban renewal, the quality and identity of them is in need of desperate improvement in order to have a good living environment.

On the other hand, there are some potential aspects such as geographical features and also new development surroundings. For instance, a well-facilitated infrastructural hub, new Rotterdam central station (Rotterdam CS) where Oude Westen is nearby will have more connections including high speed train (HST) to cover much larger areas to the national/European scale level. It means more passengers will be used this station for their destinations. This is investigated in depth in the next section.

Fig 6.2 (next page) illustrates that spatial strategy is classified at different scale levels (region, district and neighbourhood).

At the regional level, the potentiality of Oude Westen is stressed. Oude Westen have a good public transportation system such as railway train station, bus stops, metro stops and tram stops in the neighbourhood and its surrounding. This would take advantage of a daily urban system.

Next, one of the problems of this neighbourhood is its disconnection to the surroundings in terms of physical, social and functional aspects keep in order to strengthen its position at the district level.

Lastly, improving the existing public spaces inside of neighbourhood such as playgrounds, squares and streets are dealt with. Especially, a pack of car parking on the narrow streets has interfered with the walkability and connection.
CENTRAAL STATION

Gentrification
diversification
of housing stock

Potential
Daily urban system
Infrastructure
City core

Urban Agglomeration
Enhancing connectivities

Fig. 6.2 Strategies at different scale level (Source: Author)
6.2
Spatial Strategy

Regional level

Daily urban system As mentioned earlier, new Rotterdam CS is situated next to Oude Westen. Rotterdam CS will complete its construction in 2014. The new station is anticipated to get nearly three times more passengers in 2025 (323,000 per day) compared to 2012 (111,000). This will play a role of an infrastructural hub not only in the Netherlands but also in Western Europe. For instance, high-speed train will connect to central London and Paris within a couple of hours. Fig 6.3 illustrates the destinations (main cities) which would take around an hour by high-speed trains. For instance, this could reach to Antwerpen for 32 minus and Bruxelles-Mid for 70 minutes. Inter-city trains support to connect to main cities in the Netherlands around an hour from Oude Westen (door-to-door). This would be a strong opportunity to encourage for people to stay in Oude Westen to commute to their job places or school, and travel to somewhere outside Rotterdam.

Fig 6.3
Destinations from Oude Westen around an hour (Source: Author)
Except for the high speed train and inter city train from Rotterdam CS as public transportation hub, light-rail systems such as Randstadrail and Stedenbaan support to connect to South-wing of Randstad region. It would makes a strong regional agglomeration between Rotterdam and Den Haag. In fact, many discussions have taken place for strengthening a regional agglomeration rather than Randstad concept in recent years. For the neighbourhood itself, there are many public transportation connections in the neighbourhood or surroundings (fig 6.4). Especially, two metro stops (Rotterdam Centraal and Eendrachtsplein) cover all metro lines (A,B,C,D and E) of Rotterdam are situated near Oude Westen to connect to Den Haag (line E) and larger area of Rotterdam. Trams run though main streets of Oude Westen (West-Kruiskade, New Binnenweg and Mauritsweg) with nine lines. Lastly bus stops of Rotterdam CS is adjacent to Oude Westen.

Taking these things into account, the public transportation systems facilitates would be attractive for the living in the Oude Westen.
**District level**

*Connectivity* As discussed in Chapter 4 (Analytical research), a lack of connectivity to surrounding in terms of functional, physical aspects is one of the problems in this neighbourhood. Especially, the area between West-Kruiskade and New Binnenweg closed towards both of east and west directions by huge urban islands. Because of these barriers, Westersingel where the canal runs through has been neglected as a public space. Furthermore, a detour is inevitable to reach the urban core (Lijnbaan district) from the middle of the neighbourhood, although it is adjacent.

Therefore, a strategy is to create connections from the neighbourhood to each side of area, existing barriers are opened up to have new connections. Especially new open connection to the east immediately linked to the Westersingel. This would also provide easy accessibility to the Lijnbaan district.
When it comes to North-South connection, a hidden axis is created between station to Museum park. This would be a different quality compared to Westersingel to give pedestrians options. And the Drievriendenstraat, Josephlaan and Josephstraat which run through the middle of the neighbourhood is strengthened to connect bus stops of Rotterdam CS and the neighbourhood in between a series of public spaces.

According to the Spaces Syntax program, new connections would enhance the connectivity from the neighbourhood to surroundings (fig 6.8_A). With this new connection, New Binnenweg would become a crucial path to connect another street or road.

Global integration (fig 6.8_B) shows that ’s Fravendijkwal and Rochussenstraat would be the most integrated roads with new connection which goes to west. Local integration (fig 6.8_C) shows that new connection would have the same integrated level (colour: orange) as Westersingel has. It means this connection will be an important street for this neighbourhood to active the space quality.

All this shows the new connections are reasonable to have in the neighbourhood not only as linkage to surrounding but also an activation for the neighbourhood itself.

Fig 6.8
Space Syntax analysis
Connectivity (A), Global integration (B) and Local integration, n=3 (C) by Author (Basic Source: A. van Nes)
**Neighbourhood level**

*Quality of public domain.* In terms of the quality of public domain, the public space inside of neighbourhood is anonymous and unwelcoming to the people (chapter 4 and 5).

Although a series of public spaces was created during urban renewal and intent to have characteristics, daily activities for the people are too concentrated on the two main streets, (West-Kruiskade and New Binnenweg).

A lack of public spaces with invitations to rest, contemplate or play has to be considered for overall quality of living environment.

In case of the neighbourhood park (Het Wijkpark), a lack of activities take place. Since all edge of this neighbourhood park is covered by a hard edge (no frontages to the park), the frontages which face to the public spaces in the neighbourhood such as playgrounds, square, etc. have a shared entrance to housing block and semi-underground parking spaces which are mostly seen for the modernised building during urban renewal.

This is why ground floor frontages are needed to create and upgrade along the walking links. To do this, the ground floors of main public spaces inside neighbourhood can be commercialised with neighbourhood scale shops and businesses.

This would occur more social interactions by people, especially for the residents to make vibrant public spaces in Oude Westen.
Walkability/Parking A pack of car parking in the narrow streets in Oude Westen fundamentally interferes the sound urban environment. Since this narrow width of street most of streets were formed with one-way directions, however, a parking spaces run alongside the streets. This resulted in a narrow pedestrian path without a certain bicycle created inevitably.

As a main strategy, parking space would be reduced from the street, to create walking or cycling environments without obstacles. Fundamentally two methods as a strategy can be implemented to reduce the parking capacity on the street in Oude Westen.

Sharing the large parking garages adjacent to Oude Westen would be one strategy. For instance, a huge parking garage at the Museum park, Kruisplein and Weena point complex which have more than a thousand for car parking spaces are used by workers and visitors during daytime. In night time, the residents
could park their cars to these parking garage to back their home with 5 to 10 minutes walking. Another strategy would be have parking spaces inside of urban blocks in further developments. This could also share with neighbouring residents.

Gentrification_ Oude Westen has a large proportion of social housing stocks. These housing stocks mostly have rather less than a surface of 85m² (see chap-ter 4). When those who live in small housing units have their family, they are naturally forced to leave for another larger places where they could afford from this neighbourhood. Housing diversification basically could provide them to options to move and stay within the neighbourhood. Therefore, new housing provision would be properly focused on middle size hosing units for the family living for instance, between 100m² and 150m² of housing surfaces. Then starters or students could accommodate these small size hosing units instead with affordable rents.

The diversification of housing stocks could not only play a role of providing people to have options for the housing stock but also stimulating the gentrification process. This would end up to activating housing markets in Oude Westen with rise the value of housing stocks.

Physically, in preceding chapter the simulation of densification with two different scenario have already been shown for the difficulty of a vertical densification on the existing building structures for new housing provision. A huge neighbourhood park(Het wijkpark) could partly be exploited to the transformation for urban blocks with existing owner-occupied housing stocks along the Westersingel.

As a consequence of this transformation, new housing stock could stand with owner-occupied housing stocks with forming one urban block which can have a social cohesion.

Fig 6.13
Diversity of housing typology (Source : Author, wijkscan Oude Westen, 2010 and COS)
6.3 Conclusion

According to the spatial strategy, design interventions in strategic locations are formulated.

First of all, the neighbourhood park should be improved in terms of the quality of public space and connectivity between north-south and west-east both directions.

The position of Oude Westen could have a potential to change into a part of city centre. Especially, a urban island located on the west side of Westersingel transforms a city-like environment to interconnect between neighbourhood(West) and a city core(East) as a transition zone by design intervention. Furthermore, by the strengthening north-south directions could enhance the quality of living condition, too(fig 6.14).

Spatial strategy discussed in this chapter would have much clearness by design interventions in the next phase.

To conclude, it would be also interesting to look into the map(fig 6.15) which was one of the study during the process for the 'Basic Plan'(1946) by ir. C. van Traa. This shows that a eastern part of Oude Westen is involved for the central axis from central station to the river on the south.
Spatial Strategy

Neighbourhood-like  City + Neighbourhood-like  City-like
Fig. 6.16: Policy contexts for Oude Westen at different scales (Source: Author, based on Municipality of Rotterdam)

Oude Westen Neighbourhood
City of Rotterdam
Municipality
Inner-city neighbourhood
District

Making inner-city

City Vision 2030:
Strengthen economy

City Vision 2030:
Attractive residential city

City Vision 2030:
International city on the river

Traffic Plan Rotterdam:
Connectivity, Increasing parking space (P+W)

Making inner-city: Densification + Intensification = Sustainable city

City Lounge:
Improve leisure, commercial, pedestrian quality of inner city

Central living and working
Pedestrian quality of inner city

Connected City:
Improve leisure, commercial neighbourhood

Residential differentiation
Leisure, commercial, pedestrian quality of Oude Westen

Masterplan Oude Westen:
Improve leisure, commercial, pedestrian quality of neighbourhood
Chapter 7_Design interventions
Strategic Location 1

Strategic Location 2

Strategic Location 3
In this chapter, design interventions are introduced, based on the result of a series of researches. And spatial strategy in preceding chapter indicated the main assignments for enhancing the quality of living environment in Oude Westen.

To implement a result of research into design, three main strategic locations were set up for the interventions.

The first strategic location is the neighbourhood park (Het Wijkpark in Dutch) with its neighbouring building structures. This intervention is fundamentally related to connectivity at both of district and neighbourhood level. Also improving the quality of public spaces, a parking issue and diversification of housing typology are closely linked to this intervention. That is why it would be the most crucial design intervention in this project as an answer of researches.

The location for the second design intervention is for Westersingel. This is related not only to the first strategic location because of its position, but also to improve the quality of public space which has been neglected as a waterway. An attractive waterway can enhance the connectivity between the central station (Kruisplein), Oude Westen, the museum park and river to the south. And of course, the west-east connection between Oude Westen and city core (Cool district) would also be affected.

Third strategic location is to strengthen North-South line through the middle of neighbourhood. This is not only linked to each quarter of neighbourhood itself, but also a main bus station next to the Rotterdam CS. Upgrading the walkability of this route could play a role of a catalyst for enhancing the quality of public spaces such as playgrounds, squares and a sport field along this north-south street.

Design concepts and proposals on strategic locations are introduced to achieve the sustainable transformation in Oude Westen in next section.
Fig 7.2
Scale model (1:2000)
by Author
Fig 7.3
Design progress with a scale model (1:2000) by Author
7.2 Design interventions

Strategic location 1 As discussed in chapter 4 and 5, this urban island has been an obstacle for the quality of this neighbourhood in terms of different dimensions. This is because this huge urban island with the neighbourhood park in-between should be re-arranged to suit for its context.

Fig 7.4 illustrates the transformation of urban blocks. Because of the ownership of housing stocks and its architectural value, the buildings along the Westersingel could not be entirely demolished, but only a few of buildings are removed to enhance the connectivity between Westersingel and neighbourhood. Also, a nursing house which is a modernistic architecture situated in the middle of this urban islands can be demolished and replaced into the new buildings because of interfering with the north-south connection and a poor architectural quality of this buildings. A out-dated buildings are also considered to remove to avoid a deterioration of this neighbourhood.
Fig 7.5 shows new building structures that a huge urban island is transformed without undesirable destructions. This results in the replacement of a urban island into the separated urban blocks. In this changes, especially the buildings along the Westersingel are merged into urban blocks with keeping their backyards and forming a urban block.

One of the most significant features in this proposal is that new ground floor frontages are created in both side of the neighbourhood park which used to be backside of buildings using for parking spaces or an annex of buildings (see fig 7.6). This would expects diverse activities in this public space. Fig 7.7 (next page) illustrates a change in formation of former the neighbourhood park with more or less same amount of green area (1.4 hectare). This change anticipates more people use the green space in their daily-life for passing by, playing, shopping,
business and so on. This green space has three different sequences related to the land-use for the buildings faced to this (see fig 7.8).
First of all, the north part of green area would become a urban square which links from Rotterdam CS - Kruisplein - West Kruiskade. Shops and Restaurants are situated at the ground level to have continuity with surroundings. The neighbourhood green would be situated in the middle of green axis. This is for the dwellings in the housing blocks surroundings.
And the southern part has semi-public characteristic, since it has facilitated with green space for a replaced-nursing house. But public functions are also situated at the ground level to have continuity to the Nieuwe Binnenweg. Street profiles (see fig 7.10) show three different characteristics in the green space. With this sequences for the green axis would expect diverse activities in outdoor space.
Fig 7.11
Land uses
(Source: Author)

Fig 7.12
Access to the parking space and sections
(Source: Author)
Fig 7.13
Connection through urban block
(Source: Author)

Fig 7.14
Image for West Kruiskade
(Source: google search, keyword: West Kruiskade)

Fig 7.11, 7.12 show the functions of new building structures and accesses to the parking space inside urban blocks. Basically, they consist of mixed-functions and diverse type of dwelling units to improve the social fabric as a gentrification strategy. New urban blocks mainly contain the parking facilities on ground floor. Since a strong urbanity of north urban block which is interconnected with West Kruiskade, Kruisplein and Westersingel, it has a underground parking space instead of ground floor. Entire ground floor is using for restaurants and shops.

Fig 7.13 shows a connection through the existing urban block which links between West Kruiskade and Weena point. Since its architectural value (fig 7.14), a short passage is created instead of destruction of building structures.

Fig 7.15
Sight-lines analysis on Spacesyntax programme
(Source: Author)
Fig. 7.16
Scale model, 1:2,000
(Source: Author)
Fig 7.17
Scale model, 1:2,000
(Source: Author)
Fig 7.18
Perspective view of urban square
(Source: Author)
Fig 7.19
Perspective view 2; neighbourhood
(Source: Author)
Strategic location 2 Based on the research, Westersingel is supposed to play a role of the most important line in this district. Alongside with strategic location 1, Westersingel is need to improve its quality and connection to surroundings. According to the first design intervention, two new connections(fig 7.20) to the neighbourhood are created. These are directly linked to Cool district (urban core) with Westersingel in between. First of all, connection A would be the space for mainly passing, since it plays a role of linking between the Schouwburgplein cluster and neighbourhood (see fig 7.22, p158). On the other hands, connection B has a different characteristic. It would become stay and go spot with recreation activities on the Westersingel. Fig 7.23 (p 159) illustrates the concept of connection B.
In terms of Westersingel itself, it has discussed in chapter 5 which is for the need for the consideration of environmental quality as a public space. Especially a narrow bicycle path runs between road and parking space which has made a poor condition of it. To improving the quality, change of street profile is introduced. A both direction of bicycle route are created just next to the canal and it connected to not only new Kruisplein but also bicycle path though the Rotterdam CS to reach to the northern part of station. And Westersingel could possibly be commercialised with kiosks to make people stay along the Westersingel. As a consequence of this change, it is able to form a agglomeration with Oude Westen, Rotterdam CS, Lijnbaan district and Museum park.
Fig 7.22
Illustration of concept: connection A
(Source: Author)
Fig 7.23
Illustration of concept;
connection B
(Source : Author)
Fig 7.24
Current situation: Westersingel, Connection B
(Source: Author, 15th June)
Fig 7.25
Perspective view 3: Westersingel
(Source: Author)
Strategic location 3 This intervention is to mainly strengthen north-south line in the middle of the neighbourhood. Because of the location of a main bus stop next to the Rotterdam CS, this route is becoming a crucial path not only at the neighbourhood level but also at the district level. To strengthen the north-south line, Drievriendenstraat, Josephlaan, Josephstraat are mainly chosen to implement (see fig 7.26). Because three streets are directly connected to a series of public space and public facilities such as a library, medical centre, school (see fig 7.27). And of course, they are interconnected with main roads, West Kruiskade and Nieuwe Binnenweg. Especially, Drievriendenstraat could be replaced by a car-free street instead of car flow and parking dominated street. This would give a better condition and amenity for the walking environment. An existing playground which seems not suit for district context transforms into public square with bicycle parking below. Cyclists from south or west could use this bicycle storage instead of parking garage in front of station. More explanation for the intervention is introduced in the next.
Design Interventions

Fig 7.27
Concept of strategic location 3
(Source: Author)
Fig 7.28 shows Stationplein in front of central station in Groningen which could be a possible design solution for the combination of public square and bicycle parking storage. Public square is situated on top of the bicycle parking garage which is semi-underground.
Introducing a bicycle parking garage brings also the transformation of street profile with the bicycle route on Drievriendenstraat. Drievriendenstraat with a narrowed-width (10 metre) is changed into a car-free zone not only for cyclists but also for pedestrians (see fig 7.29). Furthermore, small cafés or restaurants is situated along this street to have more activities. This is basically not a new findings but rather taking former situation. Fig 7.30 (next page) shows this street around 1960 which had many cafés and bars. And it changed into a unattractive walking environment after urban renewal (see fig 7.31, pp 170,171). Fig 7.32 (pp 172,173) illustrates a proposal which have a bicycle route with facilitating restaurants and cafés along the street.
Design Interventions

Fig 7.30 Image of Drievriendenstraat 1960
(Source: google image, keyword: Drievriendenstraat)
Fig 7.31
Current situation: Drievriendenstraat
(Source: Author, 15th June)
Design Interventions

Fig 7.32
Perspective view 4 
Drievriendenstraat 
(Source : Author)
Fig 7.30
Scale model, 1:2000
(Source: Author)
Fig 7.34
Scale model, 1:2000
(Source: Author)
Fig 7.35
Bird's eye view
(Source: Author)
Fig 7.36
Street web
(Source: Author)
7.3

Conclusion

Design interventions have shown a possible scenario of Oude Westen in near future. It is tried to have a minimum changes, but overall improvement at the different scale level. That is to say, this interventions would play a role of catalysts for enhancing living quality in inner-city neighbourhood.

Especially, attractive ground floor frontages seem to be an important factor to have an urban vitality with diverse activities in the public space. On the other hands, solving a car parking problem has a doubt, because of a lack of space in the old neighbourhoods which has high density.

To conclude, it would be a recommendation that the basic principle of transformation of urban blocks with existing structure is also able to apply for the further development, if the demand is needed(fig 7.37).
Chapter 8_Conclusion and Reflection
8.1 Conclusion and Recommendation

This study as a graduation project began with a problem statement for the deprived neighbourhoods where a city core is nearby. The stage of urban development (Berg et al., 1982) explained the process of demographic changes in inner-city neighbourhood and the need for the urban regeneration. Furthermore, looking back the former urban renewal undertaken in the past supported a possible scenario through the design interventions.

Fundamentally, by implementing design interventions driven by the research a possible scenario as a strategic plan was crystallised. This is a goal of answer to the main research question ‘What kind of strategic plan is needed, according to the present position of the inner-city neighbourhood referring to new urban development?’ With changing contexts for the urban regeneration, three strategic plans could be an answer of research question and play a role of catalyst for urban regeneration to make an attractive living and working environment. Especially the first strategic plan seems to be a starting point to develop neighbourhood.

On the other hands, some limitations can be found during this research and design. First of all, more understandings and findings for the urban regeneration since 1990s was needed. Especially the lack of investigation for the relationship between stakeholders involved in the urban regeneration procedure had to be studied for to a strong argumentation. Furthermore expected results in this approach in long term as sustainable urban development is needed in depth.

Taking these things into account, further additional research should be needed with more broad contexts for urban regeneration. For instance, practical feasibility in this framework for enhancing the quality of living environment in inner city neighbourhoods which are similar to Oude Westen.
Graduation project, under the title, ‘Re-activating inner-city fringe’ was implemented by a tied-up process of researches to examine strategic interventions (design). First of all, a theoretical research was undertaken to discover ‘the sustainable living in inner-city neighbourhood’. This gave the initial answer of ‘why?’ to the project. It was followed by the research which revealed the former contexts of main theme of the project. Looking back to the former contexts which were urban redevelopment in Rotterdam as a case study showed the changing context in urban renewal and urban regeneration in each periods. Later on analytical research was base on the location which were involved into the urban renewal in the past. This was a study to understand not only the transformation during urban renewal but also the consequences after the completion of urban renewal. This research provided the answer ‘How?’ to the project. To examine if there was errors occurred during former researches, the exploratory research would be conducted for verifying a accuracy. This research was base on the existing methods for examine the quality of space and possibility of this location for the strategic intervention. Design intervention were base on the strategies which were an outcome of all researches. In this process of research, the design intervention could have strong argumentation in the end.

This research and design were driven by studio ‘Urban Regeneration in the European context’. The frameworks of the studio have been supported to the project to develop in a right direction. In the beginning of graduation project, the literature reviews in a weekly studio session gave a direction of what main focus would be. Many of discussions which was a part of methodical line of approach of the studio provided the concrete idea for graduation project. What made more interesting I, discussions with supervisors from different specialisations in field of urbanism such as urban design, spatial strategy and planning was one of the valuable session to achieve the graduation project. Taking these things into account, the methodological line was fitted to the method of the graduation project.

Lastly, this project was closely linked to social context. Main theme of project, ‘urban regeneration’ is basically related to the development of social fabric by physical interventions. In other words, ‘urban regeneration’ has played a role of the social shift through the enhancing the physical qualities of the area which led to socio-economic in equality. However, this is getting more complicated because of the economic recession in the present. This is the reason that an outcome of this project reflected on social cohesion.

8.2 Reflection
Bibliography


## Appendix 1

<table>
<thead>
<tr>
<th>Period</th>
<th>Policy type</th>
<th>Major strategy and orientation</th>
<th>Key actors and stakeholders</th>
<th>Spatial level of activity</th>
<th>Economic focus</th>
<th>Social content</th>
<th>Physical emphasis</th>
<th>Environmental approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950s</td>
<td>Reconstruction</td>
<td>Reconstruction and expansion of older areas of towns and cities often based on a 'masterplan'; suburban growth.</td>
<td>National and local government; private sector developers and contractors.</td>
<td>Emphasis on local and site levels.</td>
<td>Public sector investment with some private sector involvement.</td>
<td>Improvement of housing and living standards.</td>
<td>Replacement of inner areas and peripheral development.</td>
<td>Landscaping and some greening.</td>
</tr>
<tr>
<td>1960s</td>
<td>Revitalisation</td>
<td>Continuation of 1950s theme; suburban and peripheral growth; some early attempts at rehabilitation.</td>
<td>Move towards a greater balance between public and private sectors.</td>
<td>Regional level of activity emerged.</td>
<td>Continuing from 1950s with growing influence of private investment.</td>
<td>Social and welfare improvement.</td>
<td>Some continuation from 1950s with parallel rehabilitation of existing areas.</td>
<td>Selective improvements.</td>
</tr>
<tr>
<td>1980s</td>
<td>Redevelopment</td>
<td>Many major schemes of development and redevelopment; flagship projects; out of town projects.</td>
<td>Emphasis on private sector and special agencies; growth of partnerships.</td>
<td>In early 1980s focus on site; later emphasis on local level.</td>
<td>Private sector dominant with selective public funds.</td>
<td>Community self-help with very selective state support.</td>
<td>Major schemes of replacement and new development; 'flagship schemes'.</td>
<td>Growth of concern for wider approach to environmental improvement.</td>
</tr>
<tr>
<td>1990s</td>
<td>Regeneration</td>
<td>Move towards a more comprehensive form of policy and practice; more emphasis on integrated treatments.</td>
<td>Partnership the dominant approach.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Introduction of broader idea of environmental sustainability.</td>
</tr>
</tbody>
</table>
### Table A2 Summary of policy statements concerning urban living in the Netherlands, 1997–2000

<table>
<thead>
<tr>
<th>Policy area</th>
<th>Source</th>
<th>Extracts/summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spatial development</td>
<td>Actualisering Vierde Nota over de Ruimtelijke Ordening Extra (VROM, 1997a)</td>
<td>Concentrated urban development in combination with the protection of rural areas against urbanisation is the essence of national spatial policy. The concept of the compact city now has a negative connotation. Urban functions need to be intensified whilst, at the same time, attention should be paid to the importance of space within a city. High quality open space within the city should be protected from intensification. These spaces are essential to the attractiveness of the city as locations for residents, businesses and services. Vital and attractive cities not only involve investments in physical-spatial structures, but also investments in the economic, cultural and social spheres. This requires integration, not only in terms of housing, employment, nature, traffic and transport, but also in terms of conservation and strengthening of social and cultural infrastructure, such as care, welfare, education and sport. Thus, it is better to speak of the 'comprehensive city' instead of the compact city with its negative connotations.</td>
</tr>
</tbody>
</table>
|                                  | Ruimte maken, ruimte delen; Vijfde Nota over de Ruimtelijke Ordening 2000/2020 (VROM, 2001a) | The Government strives for both vital and attractive cities and vital and attractive rural areas within a context of a considerable demand for spatial quality coexisting next to a continuing need for more space. In order to prevent continuing suburbanisation and increasing pressure on open space, additional demand for space for housing and employment should be concentrated within existing urban areas. These spatial demands must be accommodated within the city by:  
  - intensification and combination  
  - transforming untidy living- and working environments  
  - re-using previously developed land  
  - and—if necessary—extending existing urban areas  
  
  In this way, large-scale separation accompanied with negative mobility effects could be discouraged and cities can become vital and attractive. In order to attract middle- and high-income groups back to the city and to provide for a more well-balanced distribution of population groups, a more varied supply of housing is needed. This will increase the vitality of cities and fits in with the desire to bring housing and employment closer from a mobility viewpoint. To avoid monofunctional enclaves for housing, working, shopping and leisure, mixed-use development must be promoted. The current urban landscape has been determined too often by trends of dispersal and functional separation. Through the convergence of labour markets, information, knowledge and capital, cities have become important breeding grounds for new ideas and activities. This innovative environment is an important driving force behind the economic dynamics in and around cities. It is an ideal environment for business start-ups. The opportunity for a chance meeting with colleagues or competitors is important to find out about new developments and ideas in the market. These business start-ups are often found in run-down, busy areas within the city, where the separation between housing and employment is rather indistinct. There is a danger that urban restructuring, increasing density and monofunctional development will leave too little space for these kind of areas, which can undermine the economic vitality of a city. |
| Spatial economic development      | Nota Ruimtelijk Economisch Beleid (Ministerie van Economische Zaken, 1999) |                                                                                                           |
Appendix 3.2

Promoting an urban renaissance in England and the Netherlands: D Stead and E Hoppenbrouwer

Table A2: Summary of policy statements concerning urban living in the Netherlands, 1997–2000 (continued)

<table>
<thead>
<tr>
<th>Policy area</th>
<th>Source</th>
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<tbody>
<tr>
<td>Lack of space, congestion, bottlenecks in the labour market, restrictive environmental rules and high costs of accommodation are important push-factors for certain businesses to leave the city. During the last decades, many economic activities have disappeared from the cities in favour of the edges of cities. The economic growth of cities has remained behind the growth of the city surroundings, although the urban population has begun to increase again. In order to promote economic development within cities, specific arrangements need to be made with cities to attract and bring back economic activity to the city. This can be accomplished by: restructuring of old business locations; increasing the quality of business locations with good management; encouraging employment in inner city locations; promoting business start-ups (e.g. information, guidance, grants, space in buildings for small-scale businesses, mixed-use, deregulation, streamlining permits).</td>
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<tr>
<td>Housing</td>
<td>Nota Wonen (VROM, 2001b)</td>
<td>Village life has become popular. In villages, the living climate is attractive and both plot and dwelling sizes are bigger compared to what the city offers for the same price. The quality of the immediate residential and living climate continues to gain importance. Villages score far higher in this respect than do the cities and are also very likely to remain popular in the future. The city must become an attractive place to live once again. People must opt for the city by their own free will. This is especially important, as the need to live in the city will continue to lose urgency in the future. Better and swifter communication possibilities make the actual physical proximity to shops, facilities and work less and less important. Any district-oriented approach must fit within a vision on urban living on the higher scale levels of the city and the region. Environmental quality is also important. Cities are faced with an accumulation of factors that cause nuisance, such as noise and air quality. The transformation of existing neighbourhoods should therefore be accompanied by efforts to improve urban environmental quality. Environmental quality is an important condition for the economic success of a city. Without any coherence, physical investments would be relatively useless and merely lead to the shifting around of problems. The integral approach is therefore the most important principle of city policy. Environmental quality is important. Cities are faced with an accumulation of factors that cause nuisance, such as noise and air quality. The transformation of existing neighbourhoods should therefore be accompanied by efforts to improve urban environmental quality. The measures proposed extend to a plethora of different aspects: sustainable building, energy conservation, denser use of space, sustainable urban planning, increasing biodiversity, sustainable water management.</td>
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<tr>
<td>Urban renewal</td>
<td>Nota Stedelijke Vernieuwing (VROM, 1997b)</td>
<td>Without adequate future renewal, cities could become less attractive locations for housing and employment compared to new extension areas and non-urbanised areas. This can lead to excessive mobility, energy consumption and land use in non-urban areas, and affect the level of facilities. There is a necessity to shift attention from urban renewal policy mainly aimed at the housing stock towards policy aimed at increasing the attractiveness of cities as place to live, work, invest and stay. Next to the physical dimension of urban renewal, attention should also be paid to the social dimension (a differentiated composition of population and housing stock) and the economic dimension of urban renewal (a differentiated composition of city and surrounding). The importance of coherence of these three dimensions is therefore high. In order to promote economic development within cities, specific arrangements need to be made with cities to attract and bring back economic activity to the city. This can be accomplished by: restructuring of old business locations; increasing the quality of business locations with good management; encouraging employment in inner city locations; promoting business start-ups (e.g. information, guidance, grants, space in buildings for small-scale businesses, mixed-use, deregulation, streamlining permits).</td>
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### Conditions of a vital city to accomplish qualitative improvements of the residential, working, production and living environment are:

- stimulating economic activities in existing urban areas
- improving business location environments
- promoting mixed-use housing and employment development
- restructuring of old business locations
- improving the usage of existing infrastructure through intensive land use
- improving accessibility within existing urban areas by public transport and bicycle
- improving environmental quality (noise abatement, air, water and soil pollution)
- increasing the attractiveness of existing urban areas for higher income groups through a differentiated housing supply
- providing sufficient greenspace
- combating nuisance, vandalism, crime and insecurity

### Urban development

<table>
<thead>
<tr>
<th>Policy area</th>
<th>Source</th>
<th>Extracts/summary</th>
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<tbody>
<tr>
<td>Urban development</td>
<td>Grotestedenbeleid (GSB, 2001)*</td>
<td>Cities have problems such as high unemployment rates, a large subpopulation of people with little education, integration problems, anxiety about safety, growing crime rates, a dwindling middle class and declining economic vitality. Moreover, dilapidated housing and commercial buildings, inadequate infrastructures and the resulting poor accessibility form obstacles to progress. The underlying objective is to create ‘the comprehensive city’. These are cities where everyone feels at home, cities with thriving economies, jobs for job seekers, pleasant living conditions, liveable neighbourhoods, safe streets and a community that includes everyone and leaves no-one out. Urban policy seeks to create comprehensive cities by adopting an integrated approach. This term refers to the focus on approaching economic, social and physical policy areas simultaneously and in direct association with each other. The responsibility for the way the city functions is placed with local government bodies and their residents, the business community and the relevant institutions, which allows each city to focus on its own problems and visions. Cities can choose their own priorities within the framework of goals established in agreement with central government.</td>
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<tr>
<td>Rural development</td>
<td>Natuur voor mensen, mensen voor natuur (LNV, 2000)</td>
<td>An integrated approach to urban and rural areas is necessary. The fact that the Netherlands is heavily urban intensifies the need for nature. The most important users of nature and landscape largely live or work within the city. This makes the city an ally of nature and landscape rather than an enemy, although continuing urban development of course forms a threat. Urban development should take place in a compact form but with enough space for nature in and around the city to prevent pressure on rural areas. Nature makes up a valuable part of plans for vital cities and urban renewal. For the development of existing and new green facilities, municipalities should explicitly pay attention to the demands of the multicultural society. Investments in housing and business locations should be linked with investments in nature. It is necessary to examine the extent to which green areas can be financed by new urban development. This fits in with an integrated planning approach aimed at creating attractive residential and working environments.</td>
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<tr>
<td>Transport</td>
<td>Nationaal Verkeers- en Vervoersplan (NVVP) (Ministerie van Verkeer en Waterstaat, 2001)</td>
<td>Efficient and careful land use is necessary for a quality living environment and a vital city. Good reliable connections are essential for this. Road improvements, public transport and transfer possibilities between the car, bicycle, and public transport keep cities vital, offer attractive environments for housing and employment and offer the opportunity for developments at nodes. In large urban areas, frequent, rapid and safe systems such as light rail and high-quality bus services will transport an increasing number of travellers. The environmental performance of buses will be improved which will increase the accessibility and vitality of cities. A good accessibility by public transport and a close connection to spatial planning decreases urban sprawl.</td>
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*There is currently no urban policy document for the Netherlands. The Grotestedenbeleid (‘big cities policy’) is a collection of plans and projects for 30 urban areas in the Netherlands. (2001).
### Appendix 4

**Site and setting**  
The layout of a development site must recognise its social and physical context, and seek to integrate with existing patterns of urban form and movement. Design proposals should be recognised that each location is different; that each place relates differently to the town centres, facilities and transport routes in its hinterlands.

**Context, scale and character**  
Design should respect local traditions and relationships, and draw them to inspire and guide new forms of development. Re-using existing buildings and consolidating existing public spaces will contribute to achieving continuity and integration.

**Public realm**  
Priority must be given to the design of the public realm. From the front door to the street, to the square, the park and on out to the countryside, designs should create a hierarchy of public spaces that relate to buildings and their entrances, to encourage a sense of safety and community.

**Access and permeability**  
A user-friendly public realm should make walking and cycling easy, pleasant and convenient by keeping the size of urban block small, with frequent pedestrian cut-throughs to make a new development permeable and accessible to the existing neighbourhood. Car dependency should be minimised and integration with public transport maximised.

**Optimising land use and density**  
The design potential of vacant urban sites and buildings should be optimised by intensifying development and uses in relation to local shops, services and public transport. Any development designed around higher densities, should take account of privacy, sound insulation and safety.

**Mixing activities**  
Diversity of activity and uses should be encouraged at different levels: within buildings, streets, urban blocks and neighbourhoods. Careful planning, design and siting can be used to resolve potential conflicts.

**Mixing tenures**  
To avoid the single housing tenure. Of whatever kind, design should offer a wide choice of tenure option at urban block, street, and neighbourhood level, in a way which does not distinguish tenure by grouping or house type. New development should also be used to bring balance into existing mono-tenure areas.

**Building to the last**  
Building should be designed to be durable over many generations and through changing social and economic needs, providing adaptable and flexible environments that are not fixed in single-use, single-occupier roles.

**Sustainable buildings**  
Buildings, landscape and public spaces should be designed and built to high standards, aesthetically and structurally with durable materials, appropriate technology and orientation that minimise energy use and encourage recycling.

**Environmental responsibility**  
Land should be regarded as a scarce finite resource. Development projects should be as compact as possible and should enhance the environment, not just line damage, by respecting biodiversity, harnessing natural resources and reducing the call on renewable resources.

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Source: Urban Task Force (1999), p 71
The effective regeneration of urban areas is one of the major challenges for societies across Europe and the world. It aims to provide an improved physical environment and social and economic opportunities for citizens. Urban regeneration requires a strategic multi-professional approach making best use of public and private resources in a collaborative and participatory process.

Strategic urban regeneration has become an important method of spatial intervention and is opposed to fragmented solutions. It aims at the creation of lasting spatial solutions which connect design issues to their social, economic, and cultural contexts. Moreover, it takes account of the ever-changing requirements of users and dynamics of population characteristics.

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