INTERMEDIATE ROTTERDAM
URBAN REGENERATION IN TIME OF CRISIS

European Postgraduate Master in Urbanism
Strategies and design for cities and territories
TU Delft- Faculty of Architecture
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The leading theme of this work is the awareness of the shrinking condition that many cities worldwide, especially in the western realities, are facing. It is necessary to deeply understand not just dynamics and consequences of this phenomenon but also the characteristics and opportunities provided by its combination with the social and economical framework established after the financial and economical crisis of 2008.

As stated in the “Rotterdam-Detroit: can less be more?” manifesto for the International Architecture Biennale of Rotterdam 2012, the challenge is to create a vibrant, metropolitan urban atmosphere and economy, while the city as a whole is not growing, even might be shrinking, and has an extensive, fragmented structure. Cities facing this challenge need to make strict choices about concentrating program in certain places, needs to sometimes trim and triage underused buildings and infrastructures, in order to become vital and attractive again. After negative experiences with top down urban renewal projects, this process of optimizing the structure of a city in relation to its size, needs to be done in a responsive way; making use of the existing actors and political dynamics and of the existing urban and landscape qualities and heritage, while also imposing a strong and comprehensive new program on the city. The purpose is to identify and develop methodological tools that can be broadly applied, with the possibility to be adapted in different contexts.  

http://designaspolitics.wordpress.com/rotterdam-detroit-can-less-be-more/
The thesis is developed around the concept of the “intermediate city”. In fact, during this precarious phase set by the economical crisis and worsened by the shrinking condition of the city, it is necessary for Rotterdam to work in an “intermediate dimension” in several terms: of scale, time, financing and also location, focusing more on those parts of the city that have been neglected for a long time, in favour of concentrated interventions in the downtown and in the suburban edges, thus addressing limited targets of population.

The work is organized in three sections. The first explores in depth the problem field in general terms and in the specific case of Rotterdam, extracting important methodological tools from the Municipality Plan for 2030 and theories elaborated in the recent years, such as the ‘Open City’ for the 4th IABR and the ‘Spontaneous City’ by Urhahn Urban Design. The second part aims to sharply recognize which are the urgent issues through the face-off of the Rotterdam situation with the Detroit case. A city that is dealing with the extreme consequences of shrinking and, although in different scales and typologies, shows a comparable evolution and offers interesting principles that are now being tested and that present a broader validity. Finally, the third section, where the toolbox built upon the theories and the explored case studies is applied in a specific context in the city of Rotterdam. Here two complementary strategies, based on the same principles but with different processes and hypothesis, are proposed in order to depict an alternative model of urban regeneration as a basis for a more sustainable development.
# 1
Our City imagines how it should be. But does it understand what it already is?

# 2
Our City believes in the market and in process management and in visionary plans and in communication strategies.

But does it believe in itself?

# 5
Taking away physical boundaries, building shared spaces, restoring connections, revealing unexpected panoramas, lays the groundwork for an Open City.

# 6
We cannot afford to wait for the restoration of Big Government. Now is the time to build site-specific coalitions.
# 3
Urban planning should be used to emancipate citizens, not to remove and replace them.

# 4
Reality - the sum of all that came before - is a source infinitely more rich than The Ideal, a consciously constructed concept.

# 7
It is time to destroy the mythology of the Architect as Visionary.

# 8
We do not believe in making Big Plans, we believe in creating Facts on the Ground.
1st SECTION
PROBLEM FIELD AND THEORETICAL BACKGROUND
'Vacant NL' Dutch Pavilion at the Venice Biennale 2010
CAUSES
While urban shrinking in the 20th century was caused primarily by processes of spatial polarization or by local crises, in the 21st century urban population will diminish overall in many developed Countries. Until now, the essential causes of shrinking in developed Countries have been: the suburbanization, with a regional shifting of activities and people into the surroundings of the cities, the polarization in metropolitan areas, with a country-wide shifting of activities and people to the great urban agglomerations, and processes of deindustrialization, especially the crisis of mono-industrially oriented sites. In the 21st century, the total population, and with it the number of urban residents in the country, will drastically fall in many industrial countries. But also the longer-term conditions, such as the effects of climate change and the exhaustion of oil wells and other fossil energy sources, will be a parameter for the development of settlements. While some territories will be only trivially influenced by climate change, a large number of sites will be greatly compromised and threatened by heterogeneous climate effects. On the other hand the end of the fossil energy era will have particular effects on the sites that have fossil energy repositories; in the end phase of extraction, these sites profit from constantly rising revenues but when the local supplies are exhausted, they must completely reorient their economies.

CONSEQUENCES
One of the main consequences is represented by the creation of vacancies, that while in the 20th century concerned mainly industrial buildings and mid- and high-density housing, now involve also suburbs and office districts. In the industrial countries, industrial production processes are mostly already rationalized and automated and are carried out with few personnel, but processes of rationalization and shifting are now increasingly affecting also office and service activities. The automation of office activities, the shift to home offices, off-shoring, and the uncoupling of office work from office space by means of mobile, wireless equipment will reduce the need for the space of classical office complexes. The abandonment of suburbs instead is due to continuing suburbanization into ever more outlying areas and to a partial withdrawal into the city centers, since increasing mobility costs and an aging population contributes crucially to the processes of re-concentration. The transformations that come with shrinkage will also involve long-term social and economic conflicts with a different distribution of wealth in society. The forms of governance and processes of development thereby differ fundamentally between zones of growth and of shrinking. Here regions are increasingly characterized by disinvestment and exclusion from the established forms of globalized, large-scale capitalism. The classical economic elites of major companies and banks are replaced by local, often collectively organized micro-enterprises. In small-scale projects, they use the specific local situation and their intense social networking, realizing long-term projects with little capital on the principle of a “weak urbanism”

WORLD MAP OF SHRINKING CITIES 1950–2000
Cities with more than 100,000 inhabitants

POPULATION LOSSES
- >50%
- 40–50%
- 30–40%
- 20–30%
- 10–20%

Shrinking cities of more than 100,000 inhabitants. Short-term population losses (more than 1% per year) or ongoing population losses (more than 10%).

Source: Office Oswald, Tim Fleisler, 2006
REFLECTIONS

Urban planning and architecture in shrinking cities are facing new tasks; whereas until now construction has been seen as the goal of architectural/urban planning action, here it is the starting point. The key concepts of the modern age urban development were colonization, the founding of cities, allotting land for construction, urban expansion and density. But now that the industrial countries have urbanized more or less completely and their populations are stagnating or shrinking, the idea of colonization has lost its legitimacy. In the “postcolonial age”, the focus will be more on construction that has already accumulated over a long period.

This opens up new fields and scopes of action for the European city, that is discovering a “new porosity” left by such dynamics². To shape processes of shrinking, new tools must be developed, based both on the transformation of existing (post-architecture strategies) and on the setting of new basic conditions (pre-architecture strategies). Post-architecture comprises the tasks arising when architecture – construction – is already present. What in conventional architectural practice is the result, is here the starting point. The issue here is how what already exists can be perceived, used, changed, or removed. Pre-architecture, by contrast, is concerned with the things that precede an architectural practice and that make it possible in the first place. It concerns the production of desire, the imagination of possible new buildings and the formation of uses, clients and funding.

Selective migration Rotterdam 2003 (source: Rotterdam Urban Vision 2030)

Vitality web and conditions for business development (source: Rotterdam Urban Vision 2030)
SELECTIVE MIGRATION

In Rotterdam the peak of the population has been reached during the post-war (731,000 inhabitants in 1965) followed by a drop of 24% till 1980 (with the minimum of 555,000 inhabitants). Since then, the situation has been stagnant. The last data (4th trimester 2010') count 611,000 inhabitants, with an increase of 18,000 inhabitants, though as much as the 70% of this growth is due to the annexation of the town of Rozenburg (on March 18th, 2010) in the political borders of the city.

But what is relevant, more than figures, is the quality of the phenomenon. What is happening in Rotterdam has been defined as "selective migration", a sort of middle-class flight\(^2\). The city in fact saw the decrease of the registered population in the past two years; not as a result of the structural population shrinkage, but due to local causes. The diminishing inflow and the constant outflow from the city of precise targets of population, especially workers and families, that is too extensive to be counterbalanced by the inflow and upward mobility of young promising persons, attracted by the high level of education and possibilities to start a first-job that the city provides. This middle class has left the city to live in suburbs with their children. They abandoned the inner cities because it mainly facilitate high-rise apartments while the nearest neighborhoods lost their quality since low incomes dominate and restructuring during the 60’s and 70’s have resulted in “floating” urban planning and huge traffic solutions. The resulting unbalanced population, combined with a stagnating trend, implies less welfare and therefore less support for the facilities in the city, thus generating a vicious circle that leads to the impoverishment of the city and a damage to the Rotterdam region as a whole.

ECONOMIC CRISIS AS GENERAL CONDITION

The Netherlands have a long tradition in highly developed planning, something which was and still is very useful in the struggle against the sea and organizing the necessary flood protection and water control systems. That same methodology is recognizable in the way how the Dutch have built up their post war (WW2) housing areas. Again there was a need for collective action, to build new houses for a fast growing population in a destroyed country. Another typical Dutch phenomenon, especially of the recent years towards the crisis, are some remarkable scale jumps: in size of companies such as developers and housing associations as well as in area development plans stimulated by the central government. Dutch urban policy and planning have realized high profiles for top down area development plans driven by a limited number of developers; progress and development in the Netherlands are strictly planned and nothing is left to chance.

With the financial economic crisis, in general less money is available and, as a result, fewer risks are taken (especially in western countries). First, it was about building quickly, with everything being done by the housing associations; the building funds, including private

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1 source: www.cos.rotterdam.nl
2 Rotterdam Urban vision 2030
ones, opted for big projects. But now, in The Netherlands as in so many other countries, jobs are few, banks are defensive, developers are uncomfortable and governments are overstretched. It’s not a time any more for big plans or grand design, but for deleted ambitions. The economical crisis points out the risks of the Dutch planning system and, in a way, becomes a catalyst for new forms of city development, setting a dramatic break of policies and perspectives\(^3\).

**MUNICIPALITY APPROACH AND REGIONAL STRATEGY**

The two main objectives of the Spatial Development Strategy 2030 are the creation of a strong urban economy and of an attractive residential city, in order to counteract the demographic predictions. A highly educated working population with a great share of “knowledge workers” is essential in the enhancement of economy, with more businesses in the knowledge-based and service economy that are labor-intensive and provide the current working population with jobs that are easily accessible to immigrants and in general citizens with lower levels of instruction. But to bind people to the city, Rotterdam must possess appealing residential qualities. It requires not just attractive homes but also high quality public spaces, excellent educational facilities and a good accessibility. The Municipality wants to succeed in this assignment, otherwise the city will inevitably sink into poverty\(^4\).

One of the opportunities that the Municipality has to seize comes from the declining trend of the occupancy rate per dwelling in the whole Netherlands, causing prolonged demand for a larger number of houses. Rotterdam must take advantage of this demand to accommodate an optimal amount of residents within its boundaries, as fast as possible. In fact, the time span during which it will still be possible to take advantage of the growth of the (working) population and the related demand for housing is about 15 years from now on. The plans are to achieve the target of the construction of 56.000 homes between 2005 and 2020 inside the city limits, taking advantage also of the inner port areas that are getting free since the commercial and industrial activities are moving west towards the sea.

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4. Rotterdam urban vision. Spatial development strategy 2030
The answer that Gert Urhahn gives to the failure of the ‘Instant City’ and to the economical crisis is the ‘Spontaneous City’, as “a concept open to individual interpretation, that it has at its heart the desire to remake the city according to a new set of priorities”, a manifesto for flexible urban planning, grafted onto the power of private initiatives. For the publication on the Spontaneous City, they looked around to find out which the driving forces behind Spontaneous City across the world. That research resulted in some principles, which are some of the fundamental keys to the Spontaneous City.

‘Zooming in’ is the first principle, alternately reducing scale. It means embracing a development process simultaneously at the disposal of many initiators in various locations. It is essential to map out local needs, relevant players in renovation districts and the prospects or, rather, obstructions they face.

The second principle, ‘supervise open developments’, concerns flexibility and an open attitude. Urban functions, architecture, density, and lifestyle are constantly changing factors. Sustained development means that a city district or quarter must be able to adapt according to these changes, in terms of housing and employment functionality. An urban plan must inspire a broad range of participants and, at the same time, be able to adapt to the rules of the game as they are being played.

Third point: ‘create collective values’. The Spontaneous City, shaped by numerous initiative takers, can’t be successful without spatial frameworks and collective values. Defining shared ambition is an integral part of the game. It is a political process that must be developed both by the experts as well as the public. It involves collective investment, for example in the public space, the landscape, the water, a city’s heritage or an innovative energy. Finally, ‘be user oriented’; participatory structures must surpass participation itself. The energy, creativity and investment capacity of all involved parties must be embraced in order to meet future challenges. Fresh approaches and resources are needed, from micro-financing of local projects to digital visual platforms. Residents, associations, companies and co-operatives should be given an active role in urban renewal initiatives. The urban planner’s designs should be custom-made and tailored to the resources of the user.

The Spontaneous City is also strictly related with the practices of urban regeneration, that should not consist anymore of proposing demolition or substitution but of providing an answer to the question: ‘how do you retain the existing qualities whilst making them vital and attractive once more?’ This goal can be achieved by allowing the present residents to come up with ideas; moreover, a lively city needs economic reinforcement, with a mix of functions and entrepreneurship and mostly the regeneration should not tackle the whole neighborhood, but individual buildings or plots. In this way can be avoided that process of gentrification defined by Jane Jacobs the “self-destruction of diversity”.

Till now few urban areas have been created in which old and new reinforce each other, in which there is room for the very first residents, for first-time buyers in cheap, old blocks. To
Tool 1: ZOOM IN (source: The Spontaneous City)

Tool 2: SUPERVISE OPEN DEVELOPMENTS (source: The Spontaneous City)
change at the scale of plot or building, produces a city area with choices and surprises. The repetition of blocks, so characteristic of post war regeneration, disappears. Focused selling is an interesting strategy for increasing differentiation in a neighborhood and the social cohesion remains in place as a result of the block by block renovation. In this way housing associations and municipalities set out the main policy lines but the entrepreneurs and local residents are the ones who develop its urban nature, its liveliness and public spaces. “The present economic crisis offers us the space to do so. This is not the time to invent new formulas and apply them on a big scale, as the post-war regeneration end VINEX were. What we need is a mix of varied and small scale initiatives”.

1 The Spontaneous City, Urhahn Urban design, Bis Publishers, 2010
2nd SECTION
LEARNING FROM DETROIT
Population graph: comparison between Rotterdam and Detroit

Port of Rotterdam: evolution moving away from the city (source: students work EMU spring semester 2010)
LEADING INDUSTRIES
Detroit is definitely an example of post-fordist urbanism. In 1896 the first automobile was produced in a workshop on Mark Avenue and since then the development has been strictly related to the dynamics of this main economy. Fueled by a devotion to the imperatives of automobile industry Detroit continuously refashioned its own image according to the most recent production patterns, the newest paradigm of industrial operations. The flexible expansion of the factory was paralleled to the expansion of paved road system through the city. Houses and factories could be placed everywhere on the grid. Thus the city fulfilled and for a certain period it experienced the delirium of density. The riots during the 60s accelerated the white flight process as well as the extensive freeway system that facilitated commuting and isolated the downtown from the surroundings. The introduction of increasingly new techniques and consequent need of bigger spaces caused the abandonment of industrial sites, that were left behind for the impossibility to adapt them to the new necessities in short time. In this way the population has halved and the city tax base eroded.

A process really similar to what happened in Detroit, with the decentralization of production, interested as well the dynamics of Rotterdam with its port. Also in this case new technical necessities and the transformation of the transport activity after the invention of containers in 1966, caused the progressive separation between the city and its port. Moving out the activities, the same happened with people; most workers nowadays move daily from workplace to their homes, outside the city’s boundaries.

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1 Waldheim, C. (2001) Stalking Detroit
In black, industrial areas in Detroit (above) and Rotterdam (below)
Relocation market principle: Detroit Renaissance Center (1997)

Relocation market principle: De Rotterdam (2009)

Scheme of relocation market principle

Examples of vacant office buildings in Detroit

Examples of vacant office buildings in Rotterdam
RELOCATION MARKET IN THE DOWNTOWN
Since the 70s Detroit planners devised a strategy of investing in the riverfront, the downtown, natural landscapes and the east side as a catalyst to enhance the city’s image and stimulate its economy; thus arose the Renaissance Center and in more recent years big stadiums and casinos. Nevertheless, these efforts failed and the city now is facing the problem of an high percentage of vacant office space in the downtown (25%). A similar process took place in Rotterdam and is now object of severe critiques.

The strategy used in both cities to revitalize the downtown consists, in fact, in a sort of “relocation market”, with the construction of iconic projects, image operations, that absorb the program available in the city, in the attempt to re-launch the centre image and attract residential and commercial development. Instead it resulted in an increasing accumulation of offices emptiness, an “urban obesity”\(^1\): despite the huge volume of space in the city, speculation driven construction continues at full speed adding tens of thousands square meters every month. Till the current days, with the availability of 300.000 m\(^2\) (9% already) of vacant office space within the Rotterdam downtown, despite the fair condition of the buildings themselves. Furthermore, these advertising actions are becoming less feasible, in time of crisis, because of the need of big initial investments.

DUAL SOCIETIES
The process of shrinkage lead to the definition of an unbalanced social tissue, with clusters where the weakest sectors of the population are concentrated. This also makes the city as a whole suffer from higher rates of poverty, unemployment and crimes. For instance, in the Metropolitan Detroit the unemployment rate is 11.1\% but in the Municipality of Detroit is the 19\%; analogously, in Rotterdam it counts the 10\% while in the Ranstad hardly reaches the 6\%.

\(^1\) [www.zus.nl](http://www.zus.nl)

Unemployment rate in rotterdam and the netherlands (source: Rotterdam Urban Vision 2030)
Average income in Detroit neighborhoods

- > 42,000 $
- 34,000 - 42,000 $
- 28,000 - 34,000 $
- 22,000 - 28,000 $
- < 22,000 $
Average income in Rotterdam neighborhoods
Vacant houses in Detroit (source: www.shrinkingcities.com/)
VACANCIES
The biggest evidence and most serious consequence of the described processes in Detroit lies in the huge amount of vacant lots spread throughout the city (equal to 28% of the total number of lots), that together reach the dimension of about 100 km². Almost all these patches are now property of the Municipality, since people that abandon them simply stop paying the tax revenues. This causes a lot of additional costs, such as the investments needed for the demolition of ruins (houses in fact are often burned in order to receive the insurance, which is higher than their effective market price) otherwise used as hiding places for drug dealing and the maintenance of almost unused streets.

The presence of vacancies can be found in Rotterdam as well, but of course with different characteristics. One derives from the nature of housing typology; here a vacant apartment within a 5-6 storey blocks does not lead to the demolition of the building itself, avoiding the creation of the 'urban prairie' typical of American cities. Another difference lies in the distribution of the vacancies. In fact, while in Detroit they coincide with the most deprived areas, in Rotterdam the phenomenon involves houses in different areas of the city and even seems to be more related with the richest clusters and to the most expensive typologies. As a proof of the decreasing quality of the image of the city, for which people that still can afford a certain standard of housing anyway prefer to move in the suburb.
Vacant lots in Detroit (source: Bing maps)
Detroit vacancies in relation with the average income in neighborhoods

- vacant lots
- > 42,000 $
- 34,000 - 42,000 $
- 28,000 - 34,000 $
- 22,000 - 28,000 $
- < 22,000 $
Rotterdam vacancies in relation with the average income in neighborhoods

vacant houses

- > 42,000 €
- 33,000 - 42,000 €
- 28,000 - 33,000 €
- 24,000 - 28,000 €
- < 24,000 €
deficits
actors & political dynamics
potentials
This ‘urban prairie’ still seems to retain a certain attraction; a growing stream of artists, writers and entrepreneurs have been moving to Detroit in recent years, drawn to ridiculously low housing prices. For them this abandoned industry town is actually a source of inspiration. Thus, the condition of shrinkage created an open laboratory for social and physical experimentation that attracts hardy residents, expanding corporations, self reliant urban pioneers. There are already large scale urban experiments, urban farming enterprises, guerrilla gardening food cooperations and co-housing enclaves. Inner city vacant lots and derelict buildings are adaptively reused and converted to productive new forms.1

The necessity was to use this belt of high concentration of vacant land proposing feasible projects, minimum interventions and investments that could involve existing actors taking advantage of the potentialities of the site. Among the solutions proposed, the possibility to relocate residents from the more sparsely populated neighbourhoods, presenting the highest fire and crime rate, and the conversion of unused space to extensive agriculture, but also the “farm-a-lot” program, that encourages people to grow food on empty lots, since side yards are as common as backyards.

Another potential to not be underestimated is the capillary presence of buried creeks that due to climate change effects will need to increase the flow capacity with unsustainable costs and maintenance. The possibility to re-open them, given by the frequent overlapping with the vacant lots can be both a solution to prevent floodings but also an expedient to add programs and spatial qualities to these new landscapes. An operation that improves environmental performance locally, so that infinitely larger systemic benefit would occur through feedbacks to and from the regional water system and ecologies. Furthermore, the involvement of citizens gives an added value for the necessity to decrease the unemployment rate and give Detroit a more various economy after the failure of the car-oriented management of the city.

Map of vacant lots (orange) and buried creeks (black)

Scheme of actual situation  Strategies: arrangement street grid  extensive plots  daylighting buried creeks

Programs: biomass /parks  space for water  urban farming  extensive agriculture
Last Census (2010) data seem to confirm the success of these initiatives, with the increase of white population for the first time in 60 years (from 8.3 to 13.9%). The new renaissance can be built on a network of productive landscape (of energy, food, leisure), focusing on those intermediate neighborhoods, between the downtown and the periphery, were the most urgent issues of the city are concentrated.
Overlap of the three layers: low income and high unemployment and immigration.
In order to apply the tools taken from the Detroit case and create a system of intermediate areas as network of renewed spaces, connecting two different dimensions of the city, it is necessary to recognize the weakest areas in Rotterdam, in order to concentrate interventions in the most profitable locations.

The definition of such boundaries has been carried out by considering those areas where overlap three conditions, that are symptomatic of the urban quality and perspectives of development: low income rate and immigration rate > 60%, unemployment rate > 10%.

1 source: www.cos.rotterdam.nl/
3rd SECTION
URBAN REGENERATION IN ROTTERDAM
Location of intermediate areas within the city

Built-up age stratification
The areas identified as “Intermediate Rotterdam” have been highlighted according to the analysis of socio-economical factors. But they can also be read in relation with other aspects at the urban scale such as their location between centre and periphery, the historical built up stratification, the green system and the future areas of transformation and expansion of the city.

**Location**
The Intermediate Rotterdam is located between the downtown and the periphery and along the main corridors of mobility; such situation makes these areas an obligatory route for the commuters in their everyday crossing between places of living and places of work. The current poor urban quality has the consequence that these areas nowadays are just bypassed by the main infrastructures and the flow of people between centre and periphery and between the wealthier surrounding neighbourhoods, giving a bad image for the city as a whole. On the other hand, a strategic urban renewal, together with the enhancement of the existing potentials and especially the position of these neighbourhoods close to the centre, will lead to the creation of a very specific urban environment that can result attractive to first time buyers and creative industries. Furthermore, it will improve the image of the city as a whole, with a positive effect on the surrounding neighbourhoods where, despite the higher status of housing and the more balanced population, most vacancies are now concentrated.

**Buildings age**
The Intermediate Rotterdam is composed by an highly variegated urban tissue in terms of age and typologies. Here, in fact, is located the majority of the architectural heritage built between the 17th and the 20th century that survived the bombing of the 1940, together with examples of “grands ensembles” and other post war insertions within the historical tissues. This coexistence of typologies and conditions, with old terraced houses along the canals beside modern social housing blocks, is to be read as a potential for the area and its regeneration. It gives the possibility for specific interventions and opens up the neighborhood to a wide range of population.

**Green structure**
Despite the fact that in terms of quantity Rotterdam is one of the greenest big Dutch cities (although not always experienced as such) it is evident that these areas are lacking green public spaces for leisure, sport and recreation. Furthermore, the quality of the existing public space here is not always remarkable but sometimes consists in that “residual green” or “green to look at” which is not a reference neither for the local community nor for the urban users. The proximity of the big urban parks gives the occasion to imagine that the improvement of the green and public space system in terms of quality and connectivity in the Intermediate areas can be a benefit for the whole system.
Industrial areas as future urban expansions

The industrial and especially the inner port areas are going to be abandoned for the need of bigger and more appropriate locations for new technologies and models of production and transhipment. For this reason, they have been indicated as those possible fields were new residential neighbourhoods can be built, in order to attract again the middle class thanks to the suggestive relation with the water and the history of the city and the available space for the proposal of suburban typologies within the city borders. But this goal can be just achieved in the long term, because the intervention in such areas would need, for their vastness and for the complete dismissal and reclamation from uses that are not compatible with housing, large investments and a long time. Since such conditions are not favourable in time of economical crisis, in the meanwhile an alternative is needed for the creation of attractive spaces. In fact, the time span in which the Municipality of Rotterdam, which is now suffering the vicious circle of the “selective migration” described above, can benefit from the increasing of population and housing demand is esteemed in 15 year¹. Furthermore, the majority of industrial and transformation areas are located beyond the intermediate belt, detached from the city centre. The regeneration of the spaces within the Intermediate neighbourhoods can be a feasible solution for the short term, as a first phase for a bigger future development, thus avoiding in the future the creation of new wealthy clusters, close to the problematic ones, and providing a more connected and continuous tissue.

All these reflections reinforce the idea of the necessity to intervene in the highlighted areas. The concept of Intermediate City initially conceived as a buffer between different social clusters and urban environments is enriched with many other aspect. It takes into consideration the location of these areas and the possibility to bridge between very different situations, such as the downtown and the periphery and the now disconnected ecological system. But also it represents a metaphor for the need of a new model, that has to be intermediate in terms of scale, time and financing of interventions, in order to cope with the conditions raised by the crisis and build the basis for a more sustainable future development.

¹ Waterplan to Rotterdam
Plan of the neighborhoods of Agniesbuurt, Oude Noorden and Crooswijk
THE SITE
The case study is a portion of the defined belt northeast of the downtown, that includes the neighbourhoods of Agniesebuurt, Oude Noorden and Crooswijk. The area is mainly characterized by the presence of important water bodies; the river Rotte which runs north-south towards the centre, together with the Noordsingel to the left and the Crooswijkse- ingel to the right. The main infrastructures mark the separation with the other parts of the city, especially the highway to the north which is part of the Ring surrounding the city, that defines the boundary with the outskirts.

Among the main problems there is the concentration of ghetto-like communities, a general poor maintenance of public spaces and housing and a substantial presence of dwellings considered as “vulnerable” in the housing market such as small, staircase-accessed flats that no longer meet the current standards.

In general, there are some 100,000 vulnerable dwellings spread throughout the city and the plans of the Municipality are to tackle half of the total amount while the rest that can serve specific target groups like starters and residents. Since the aim of the municipality is to create an attractive residential city and make place for 56,000 new dwellings between 2005 and 2020 within the city limits in order to counteract the selective migration and further the number of middle and high income groups, the interventions cannot be limited to the provision of high quality housing stock.

Creating an attractive residential city requires more that the provision of suitable typologies; beside the type and the size of a home is the quality of the residential environment that plays a role in the consumer’s choice. The presence and the quality of educational, sports, playground facilities and shops in the direct vicinity first of all, but also community safety and ready accesses (by private and public transport) are important ingredients that constitute the image of the neighbourhood. Therefore is not possible to imagine a city renaissance without a regeneration of the weak areas such as the Oude Noorden, that can allow the infill of a new population and activities tough maintaining its identity and potentials.
Built-up age stratification

Images of the new plan (source: http://www.west8.nl/projects/urban_design/nieuw_crooswijk/)
NEED OF A NEW APPROACH

One strategy of regeneration carried out in this same area has been proposed by Adriaan Geuze (West 8) with the masterplan for the “New Crooswijk”. The main goal of the design is to stop middle-class residents relocating from Rotterdam to the suburban areas; the means through which this will be achieved is the demolition of 85% of the existing pre-war housing (1,800 units of the 2,100) dating back to the late 19th and early 20th century. The new residential blocks will contain owner-occupied dwellings in the medium and high price categories including 450 dwellings in the subsidised rental category will be built. The design also provides for quality public space, plenty of play areas for children and few cars on the street. The street pattern will also change in order to be more oriented towards the water, and a new square will be built along the quay.

The controversies raised by this project are related not just by the fact that it is the biggest inner-city demolition and construction site in the Netherlands and it will increase the renting values after reconstruction (while now the 95% is rented at affordable prices) causing the relocation of hundreds of families that currently live there. Another critical point is the long delay in the reconstruction, due to the uncertain economic climate and the global credit crisis, while large parts of the areas are already demolished, thus affecting in a negative way also the surroundings.

The failure of this kind of strategy makes necessary to conceive another model for regeneration, that shifts from the substitution of consistent parts of the urban tissue in the neighbourhood towards more sustainable and specific interventions, with a flexible plan that can face with the double crisis condition: in the economical and population sense. The tools derived from the speculations about the “spontaneous city” and from the analysis of the Detroit case can be the basis for the creation of a more sustainable approach, that starts working on the neighbourhood attractiveness, taking advantage of existing potentialities and actors and solving specific problems. This methodology should be more open in terms of participation, giving space for bottom-up transformations, but also in terms of plan, allowing multiple possible final outcomes as well as a variety of financing and development policies.
City scale: barriers

City scale: unused spaces
Neighbourhood scale: lack of permeability

Neighbourhood scale: low quality public spaces
Block scale: monofunctionality

Block scale: dull streetscape
Plot scale: abandoned buildings and plots

Plot scale: vacant buildings
<table>
<thead>
<tr>
<th>Scale</th>
<th>Issues</th>
<th>Problems</th>
<th>Potentials</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td>Accessibility</td>
<td>Barriers</td>
<td>Green and water structure location</td>
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<td></td>
<td>Urban façade</td>
<td>Ghetto-like communities</td>
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<td></td>
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<td>Unused spaces</td>
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<td>Neighborhood</td>
<td>Permeability</td>
<td>Lack of facilities</td>
<td>Existing facilities</td>
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<td>Low quality public space</td>
<td>Public transport</td>
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<td></td>
<td>High quality public space</td>
<td>Dead ends</td>
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<td></td>
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<td>Closed façades</td>
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<tr>
<td>Block</td>
<td>Various street scape</td>
<td>Parking</td>
<td>Change of street section</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Monofunctionality</td>
<td>Policies for new typologies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dull streets</td>
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<td>Building/property</td>
<td>Change of use</td>
<td>Vacancies</td>
<td>Free plots</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Old typologies</td>
<td>Policies for new activities</td>
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<td></td>
<td>Renovation</td>
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</tbody>
</table>

Synthesis of issues highlighted at each scale
KEY ISSUES
The preliminary action for the formulation of a new approach was the highlighting of those key issues that characterize the urban environment of the site throughout the scales, so that very different and specific questions could arise tough being always embedded in a larger context.

At a city scale, the key points are the importance of accessibility to and through the area and the need to start re-thinking a new image of the neighbourhood starting from local potentials. Currently the big infrastructures act as a barrier between the neighbourhood and its surrounding: the centre and the periphery, but also the wealthier areas. The flow of commuters has to face every day the rear of these neighbourhoods that indeed could offer a more attractive façade if the potential elements such as the historical water courses that cross the district would be fully exploited as connective and high quality public spaces.

Within the neighbourhood the aim must be to ensure an high degree of inner permeability and the presence of high quality public space that can be a reference for the local and urban community. The interventions should be oriented to solve the lack of porosity due to dead ends streets and continuous façades (thus considered if longer than 200 m) and lack of quality and representative effect of many existing public and green spaces.

At a closer scale, the main problems are the lack of mixed population, given by old, outdated blocks and typologies that resist changes of uses and spatial configuration, and the dull streetscape due to poor public space design with large areas consigned to parking. These conditions raise the need for polices that facilitate the transformation of blocks and as a result a more various streetscape with space for many users.

Finally, at the property level the issue is the proposals of programs and “weak” interventions that can stimulate the re-activation of plots and buildings that now lie abandoned; whether they are vacant or degraded plots without plans of renovation or vacant properties in good condition that need a change of use and actually suffer from the lack of profitable border conditions.
Representation of the two strategies in relation to key issues and scales

<table>
<thead>
<tr>
<th>Scale</th>
<th>Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td>accessibility, urban façade</td>
</tr>
<tr>
<td>Neighborhood</td>
<td>permeability, high quality public space</td>
</tr>
<tr>
<td>Block</td>
<td>various street scape, change of typologies</td>
</tr>
<tr>
<td>Building/Property</td>
<td>change of use, renovation</td>
</tr>
</tbody>
</table>

centralities
contingencies
TWO STRATEGIES
The univocal goal of this research is the delineation of a strategy assuring the creation of an attractive environment and the feasibility of interventions in a critical juncture. But the aim for a more open and spontaneous renovation is not the result of a precise asset, but can be driven by several processes. For this reason, according to the key issues highlighted for this area across scales, two strategies have been planned, in order to represent different dynamics and relations between structural elements, actors, financing and flexibility of the plan.

The first, defined as “centralities strategy”, is based on those issues emerging at the bigger scales and consists of a coherent series of public space improvements as a clear framework that will guide the transformations at the minor scales.

On the other hand the second, synthesized as “contingencies strategy”, is based on specific situations given by typologies, vacancies or local needs that can be initially solved with limited investment initiatives and that, if successful, can be spread at higher scales.
Gallery along the Rotte
PROCESS
Both strategies are based on a precise asset that articulates the design evolution in different phases. The existence of current dynamics and stakeholders is taken into account and allows each participant to take the lead in a precise phase of the evolution. This dynamics are represented by two different processes that characterize the two strategies (see following pages for schemes).

In the centralities process, firstly is the municipality that, aware of the issues of accessibility and need of a more attractive environment, elaborates a general strategy (phase 01), that will be realized by means of a series of separated interventions, with a precise character an in precise sites. Every centrality is realized as a framework, with a fix design developed in order to answer and solve immediately the problems of the site (phase 02). By improving the attractiveness and the urban quality this new framework will generate the interest of developers and citizens (phase 03) that will be allowed and stimulated to transform or substitute the existing tissue according to simple principles set by the municipality itself (phase 04).

On the contrary, the basis of the contingency strategy is the initiative of citizens that, also through the municipality accordance and control (phase 01), are allowed to solve in an informal way some issues at the very local scale. If these experiments or pilot projects will result successful by fulfilling the gap of local facilities, then a larger segment of community will be attracted by these policies and ask for their implementation (phase 02). At this point the municipality can invest on already tested principles by reshaping or spreading them at larger scales (phase 03), providing again a framework for future transformations (phase 04).

DESIGN
Although trough different processes, the design part in both cases is based on the creation of a fixed part of the plan and a tool box of rules and principles that will promote transformations in flexible way (see following pages for scheme). The framework creates the condition for a set of rules (related to densification, change of uses, ground coverage, expansion of façades, permeability, new plots, etc.) that will guide the transformation in different condition of scales, investment and desired character of the area.
Scheme of the process for the evolution of the two strategies
public intervention

framework as implementation

municipality of Rotterdam

private interest

driven projects

process

phase 02

phase 03
Scheme of the common open design development
Concept: slow, continuous network of high quality public spaces that promotes accessibility to and through the area
04 CENTRALITIES STRATEGY
NETWORK OF “IDIORRHYTHMIC SPACES”¹

Concept
The concept behind this strategy is the accessibility to and through the area by means of an alternative system of high quality public spaces as new carrying structure for flows that now are mainly concentrated along the main traffic axes alongside the neighborhood. These work as catalysts for the generation of investments and transformations at different scales. The result is a new urban façade, (at the neighborhood, block or simple building façade level) that works as an interface between local and urban/commuter flows and between old tissue and new interventions.
Because “the idea of going back to live in the city should not be driven from a nostalgic idea of community” and “only the possibility to find idiorrhythmic spaces within the urban tissue can attract young families inside parts of the city in which the majority of the population speaks a not European language and has forms of relation that belong to different cultures¹”.

Existing carrying structure
Carrying structure
The spatial plan is hooked up to large scale elements that although nowadays already represent the main potentials of the districts (such as water courses and successful streets and squares but also a former railway that can be easily reconverted, parks and large free plots) but that still result fragmented and not connective enough.

carrying structures:

demolished buildings
parks
commercial axis
neighborhood squares
pedestrian boulevard
central square
former railway
water system
Blueprint framework: project of projects. (1. green niche, 2. no parking singel side, 3. no car singel side, 4. new tram track, 5. renewed singel along residential axis, 6. court on Rotte, 7. green traverse, 8. no parking decks along Rotte, 9. new street section, 10. park on water, 11. facilities axis, 12. new waterfront)
Final “blueprint framework”

The resulting carrying structure is composed by a collection of very heterogeneous projects as activating tools with a “relative autonomy”, based on the high quality reconfiguration of public space with minimum demolitions and that, tied together in a wider strategy, address the long term of the urban layout.

Every centrality can consist in the link between two existing potential elements such as the river and the existing squares, creating a continuous urban park where is possible to imagine new typologies along the edges and a slower mobility crossing through (example A). In other cases a simple renewed design of the street along the quay can open up possibilities for a more hectic waterfront environment with a mix of activities and users (example B). In other parts the car and tram mobility can be moved to the edges of a new park, obtained with the demolition of old warehouses, thus releasing the singel waterfront form the traffic and creating a more exclusive environment for the renovation of housing typologies (example C, that will be further developed in order to show the dynamics of transformation).
Poor quality of public spaces

Rear of warehouses towards the central square

Unused singel side
DESIGN OF A NODE

Issues
The node taken into consideration is inserted between the Noordsingel, the tree lined pedestrian boulevard of Teilingerstraat and the former railway, parallel to the singel that now hosts cafés and little shops and after reconversion can easily become a distinctive element of the neighborhood. However this profitable location is not fully exploited; the existing public space consists in a fenced soccer field and a patch of grass that face the rear of big old warehouses without special architectonic value. Also the singel section in this area is below the standard, with little interaction between the houses and the waterfront and much space left for parking while the uncomfortable sidewalk along the water body makes impossible an active fruition of it or just a simple walk.
New framework view

New framework: park edge detail

New framework: central street detail

New framework: waterfront detail
**Framework and rules**
The strategy aims to revitalize and open up new possibilities for a different and more exclusive waterfront fruition by diverting the tramline and the road behind the blocks that face the water and along a new park that finds space through the demolition of six housing units, a kiosk and an old warehouse.
The designed framework outlined for the new waterfront, the park side and the main street is provided with a set of principles and rules that will guide the following steps, in order to allow densification and transformation while ensuring pleasant proportions and a certain degree of permeability.

![Diagram showing framework and rules](image)

**Rules and principles applied to the framework structure**
- form back to front, policies for new activities facing the park
- densification
- ensure permeability in case of substitution
- definition of new plots with max GSI= 0.5
- max height of buildings along the park and permeability
- possibility of expansion towards the waterfront
- possibility of expansion for the plots thanks to the new street section
- densification

---

**park edge:**

**waterfront:**

**central street:**
Outcome 01: many little developers
Open design
As already described, this approach allows different dynamics of transformations; here declined in two possible outcomes (see pictures in the following pages).

In the first case the transformation is mainly carried out by the same owners or little developers that use the rules to change, extend and densify the existing typologies, provide them with private courtyards or adapt them to other uses than the residential ones.

In the second outcome the hypothesis is that especially big developers see the opportunity created by the reconfiguration of the public space thus interpreting the guidelines in completely different ways. For instance with a new outline of the block that, pushed to the new allowed limits towards the boulevard on one side and the waterfront on the other, can provide space for a big private courtyard and a completely renewed front along the park.

But other results and multiple combinations are equally possible.
Outcome 01: waterfront

Outcome 01: central street

Outcome 01: park edge
Concept: informal spaces as pilot projects that can be spread at higher scales
The concept is based on the suggestions given by informal places sporadically present in the site. It is a series of urban situations that inspired informal usage through different models. Informal spaces are found at hidden places in the city, at the back side of main streets and squares. They are maintained by people who live around it and often their function has changed through time. They encourage people to undertake activities, spontaneously and sometimes together.

This strategy cannot be represented through a spatial plan, at least not to explain the starting phases. The urban contingencies in fact are the combination not just of spatial conditions but also of bottom-up initiatives, local needs, proposal and policies that make such situations appear; in a street or in a plot that indeed could be any street or any other plot throughout the district. The main feature of this strategy is the empiricism and the process-oriented approach of the very first phases and the consequent possibility to make this new model spread at larger scales. For this reason is necessary to describe through plausible hypothesis the ideal development of the plan in two examples.
Phase 02: success and pilot project as catalyst for further investment

Phase 01: informal public space

Actual situation
The first case is the analysis of very typical situation: an inner residential street flanked by postwar terraced houses with large sidewalks on both sides (actually oversized in relation to the current flow of people) and a double row of parking. In this case, as it already occurred in a street nearby, it can happen that the residents, due the general lack of accessible public spaces and leisure facilities, ask and propose the municipality to reclaim a couple of parking spaces in order to equip a small square with greenery, benches and a playground. This solution could be successful among the community that can ask for an extension along the whole street.

In this case the Municipality can intervene with a more conspicuous investment for the complete renovation of the street section, with the elimination of parking spaces (that will be replaced nearby or in a parking building) to make room for a common garden and a bike lane. This framework is provided with a toolbox of principles to guide the evolution of the blocks thanks to the added value of the park. In this way a residential inner street can become a reference for the surrounding areas, with little shops, space for creative industries and leisure facilities. But it can also become a model, to be repeated in other streets in the same neighborhood, thus opening up the possibility for the Municipality to re-invest in a similar way in multiple sites and at the larger scale of the main street.

View of the case study

Reference: informal use of sidewalk
Phase 03: municipality intervention with the creation of a fix framework

densification

possibility of expansion for the plots thanks to the new street section

policies for permeability in case of substitution

Phase 03: set of principles and rules related to the main framework
Phase 03: possible outcome

Phase 04: implementation at larger scales
Phase 01: informal public space

Phase 02: success and pilot project as catalyst for further investment
EXAMPLE VACANT PLOT

The second example investigates on the possibility to leave residents enjoy with weak programs, such as playfields, temporary installations or fairs, the vacant plots that otherwise would lie unbuilt and unused behind the wooden fence. Again, the Municipality takes advantage of the eventual success of this initiative and by buying few other plots can decide to expand the public space across the block, with a framework that on one hand allows to open the courtyard to more public uses and on the other hand regulates processes of densification and new limits for façades, bringing to a more various program and to the creation of new housing along the square.

Also in this situation, the local conditions can be considered in order to eventually expand the investment and the intervention. In the specific case, by linking, trough the repetition of the same model, several courtyards to the existing square to the north, thus providing a continuous sequence of public spaces as an alternative slow network between the two main traffic lines.
Phase 03: municipality intervention with the creation of a fix framework

Phase 03: set of principles and rules related to the main framework
Phase 03: possible outcome

Phase 04: implementation at larger scales
As stated by Philipp Oswalt in the “Shrinking Cities Project”, it is necessary a shift from the idea of urban decay to the concept of shrinking city as a normal process of development as growth, with its advantages and disadvantages. This leads to the exclusion from forms of globalized large scale capitalism, replaced in shrinking cities by local micro-enterprises, long-term plans that can also be carried out with little capital. Shrinking cities have to make a different use of the space within the urban tissue, to offer something completely different from other realities, to become more attractive for middle classes and creative industry, thus bringing new blood into the area instead of demolition.

The two strategies are the attempt to develop new tools of planning and building in order to shape processes of shrinking and indicate new ways. Not densification but an attractive environment, more green and liveable, is the starting point to leave space for changes, focussing on how what already exists can be perceived, used and changed. They pursue, through different processes, the common purpose of creating condition for more private bottom up initiatives with a framework that guides clearly what is allowed in order to regenerate the most deprived areas, promoting new businesses, new typologies and new population. Each project consists of a ‘real’ part and the potential of further development, according to the necessity to develop the lower scale but always connected to the bigger questions of the shrinking city as a whole.

Furthermore, the possibility to achieve this goal by means of different financing methods and political processes -and in the specific case, the chance to merge the two complementary strategies – is an added value. It answers to the need of flexibility and maximum variety of investments and initiatives and re-embeds architectural and urban projects in the highly specific context of a location, user and program. This straightforwardness of the site-specific project could be a solution for the failure that big plans paradigm of the production of an “instant city” brought in similar cases of urban renovation.

And, as Crimson Architectural Historians explain for their nine ‘Facts on the Ground’ in Rotterdam, “making a small plan in no way means having small ambitions. Being precise about the feasibility and the effectiveness of a plan means being completely accountable, a risk that very few makers of big plans are willing to take. Equally crucially, such projects set an example by showing what can be done, how it makes a difference, and that you can actually do it”.

Finally, this does not mean that the city of Rotterdam has to abandon the possibility to expand with an exclusive suburban-like residential environment in the former port areas. On the contrary, the regeneration of weak areas is the basis for these future important developments, that will be carried on with a more stable economy, integrated in a more mixed and socially balanced city.
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