CITY IN TRANSITION
ENHANCING URBAN VITALITY IN ENLARGED CITY CENTER AREAS OF AMSTERDAM

P2 THESIS PLAN
PUI-YI KONG 4056043
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Design of the Urban Fabric
first mentor: Birgit Hausleitner
second mentor: Egbert Stolk
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The city of Amsterdam has gone through a development path with several ups and downs... The fastest growth took place during the years of the Golden Age in the 17th century through the success of colonial trade and economic innovation. After the glorious age, the city lost its international status when the economy stagnated in the 18th and 19th century, wherein the city dealt with an almost ‘locked in situation’ (Musterd & Murie, 2010). However, the power of colonial trade recovered by the end of the 19th century. Accompanied to trade the city also became the center of knowledge and the city started to grow again. The city reached its maximum population size around 1960 with almost 900,000 inhabitants. In the 1960s and 1970s, Amsterdam faced the consequences of economic and spatial restructuring of suburbanization. The population was no longer centered in the city but was spread out over the polycentric region of Amsterdam. After a long period of suburbanization which began in the late 1980s, cities around the world have once again become popular and have been growing again as well as the revaluation of historic cores.

Until now, despite the economic crisis, the city centre of Amsterdam remains strong in its economic position. The unique balance between living, working and leisure is an essential aspect of the attractiveness of the inner city. That mix of functions has played an important part in maintaining the city center as a lively and dynamic district. Because the historic core includes besides homes and jobs, also many attractions that attracts many tourists and visitors. Over the past years, the centre attracted more and more businesses, institutions and visitors. As a result of the intensification of usage of space, there is increase of prices and limited supply of residential and work space. The municipality's Trend Report 2012-2013 describes an extension of the city centre just outside its boundaries due to the rising prices and limited stock of residential and commercial premises. Startups and creatives opt for locations outside of the centre where premises are much more affordable. This happened firstly in the 19th century neighbourhoods adjacent to the city centre, and then in the ‘20s and ‘30s belt around those neighbourhoods.

In the meantime, urban development is changing in the city of Amsterdam. We don’t see merely top down planning where governmental de-
This chapter consists of two parts. First I will describe the extension of the city centre where I will describe the different neighbourhoods of the city, and secondly I’ll zoom in on the chosen design location.

2.1 PROBLEM ANALYSIS: EXTENSION CITY CENTER AMSTERDAM

2.1.1 STRUCTURE VISION 2040

In structure vision 2040, the goal of Amsterdam is to develop towards an economically strong and sustainable city to maintain a leading position in the worldwide economy. Accompanied to this goal there will be four ‘major thrusts’ that forms the framework for the structural vision. One of them is the extension of the city center by designating areas beyond the borders of the city center to house program that usually are related to the city center; the so called “rolling out of the center”. This results in multiple small scale investments and developments which ‘initiates mix of functions and the embellishment of public space’. (Gemeente Amsterdam, 2011)

The designated areas are mainly suburban mono-functional post-war residential areas, which are located near the highway A10 in West and East, the Zuidas and the northern bank of the IJ. The major part of the areas are part of the ringzone, in which the core strategy is to densify, as the city wants to develop 70000 houses. Recreational areas and parks will become more centralized in the city.

Figure 2.2 Core aspects: Ringzone and densify (own images)

Figure 2.1 Visie uitrol centrumgebied 2040 (Gemeente Amsterdam, 2011)
2.1.2 DIFFERENT NEIGHBOURHOODS

The ring A10 plays a important role in the general distribution of Amsterdam, this is the mental image of the city for inhabitants. Inside the ring is the attractive and economically strong area of the city. Outside the ring is socially vulnerable, monofunctional postwar area. The ringzone is diverse with a variety of different neighbourhods. Here we see infrastructural nodes including train and metro, accompanied by highrise and business parks like Slotervaart, Amstel and Zuidas recreational areas mainly in the western part, also parks and sports. If we look at urban typologies, we see postwar stamps in the west and south, row houses in the north. Over all, it is the connecting zone between center and postwar areas.
So what can we find in the neighbourhoods of Amsterdam? This part consists of a more detailed qualitative as well as quantitative analysis of the different neighbourhoods based on the statistics of Amsterdam, with a focus on the ringzone.

**LIVING ENVIRONMENTS AND TYPOLGIES**

Apart from urban typologies, the municipality speaks of the division of living environments in different categories, which gives a quick overview of the local housing stock and population. If we look at the ringzone we see mainly the two categories: ‘aged garden city’ and ‘transition’. The ‘aged garden city’ refer to areas with an average socio-economic status in the city with mainly postwar garden city blocks, which remained as much as possible in its original state. The population, as the name already tells, consists mainly of aged people which have been living in the same area for over twenty years. The ‘transition’ areas refer to areas with a high flow rate, and large scale housing stock is mainly developed by housing corporations. The population consists of mainly ethnic minorities and big families, in socio-economic conditions below average.

**Socio Economic Conditions**

The lowest incomes are in North, Southeast and Nieuw West, here is also where the amount of people who receive social assistance is the highest of the city, whereas as expected, the higher income households can be found in the city center as well as Amsterdam south.
Again in nieuw west, north and southeast there is the highest amount of ethnic minorities, This is also the part of the population that scores the lowest on educational level and work rate, which reflects the vulnerable socio economic status of the area.

As the city scores a 7,3 as an average, the lower scores are again mainly to be found outside the ring in West, North and Southeast. The neighbourhoods around the city center are the ones that have experienced the biggest improvement in the last few years. The ringzone is the area between these two different categories, therefore there is the belief that this area is most likely to follow the movement of improvement as well.

The livability index is based on evaluation of the physical, social, and nuisance aspects. The higher the livability index means the worse the performance on livability. This time not only Nieuw West and North, but also the inner core of the city center and parts of East are performing badly. This is mainly due to the high rate of nuisance, criminality and bad safety conditions.
2.2 PROBLEM ANALYSIS: FOCUS LOCATION RINGZONE WEST

If we look at the population of the city, we see the highest amount of people resided in the area of Nieuw West, therefore the extension of the city center will concern most people in that part of the city, hence my choice for ringzone West.

2.2.1 REGIONAL POSITION

The position of Nieuw West in the regional context goes beyond the border of the city. Nieuw West is not just the edge of Amsterdam, but has a strategic position in relation to the Airport Schiphol, Haarlem, western harbour area and Zuidas. Despite the strategic location of the area, the embedment in the region and the city is of discussion. The proximity of the important areas around is still not fully exploited. The connections could be found on the levels of highway and train on regional and national level, and metro and trams on the city level, but not in the most effective way.

Figure 2.12 Population (adapted from O+S Amsterdam, 2013)

Figure 2.13 Regional position Nieuw West, adapted from Toekomstvisie Nieuwwest 2040
2.2.2 AUP PLAN

As a response to the major growth of the city through the annexation of suburbs from late 19th century on, the AUP plan was established in 1934 for the city of Amsterdam, led by urbanist Van Eesteren [Agricola et al., 2013]. The plan was initiated to solve the problems of the city at that time, mainly related to health and housing conditions in the former parts of the city. The housing shortage together with lack of funds resulted in a plan of cheap and small houses in a modernist layout of repetitive strokes and open blocks. The three key aspects were open air, light and leisure. The building blocks are set in a spacious composition with the presence of green everywhere. The western garden cities were built as a residential area. The only economic activities in this area were neighbourhood-oriented amenities such as shops, schools, churches and other public services. From the 60s on, due to change in society by technological and economical innovations, the green model of Van Eesteren was no more relevant. There was the revaluation of the city center areas and the development of new locations, which resulted in a deflation of population in the area. Immigrants, guest workers and their families slowly were replacing the original inhabitants.

From the previous analysis maps of the city we can see multiple vulnerabilities in the area of Nieuw West. The city recognizes the problematic of this area, so the several restructuring plans are developing in order to improve this area.

2.2.3 VISION NIEUW WEST

One of the restructuring plans is the vision for Nieuw-West 2040, which shows similarities with the Structural Vision of Amsterdam. The main proposal is to achieve an over all better reputation, by exploit its strategic location by adding connections, highlighting the aspect of green of the area, and stimulating economic activity by creating attractive conditions for businesses, in contrast with the

Figure 2.14 AUP Plan (stadskantoor Amsterdam)
mainly residential function of Nieuw West. In their vision, Nieuw west is divided into three different living environments. The ringzone is designated as the dynamic development area aligned with the structural vision with key aspects of connectivity, density, mixed functions, big attractors and ‘stadstraten’, main urban arteries that connects this area with the city center.

Figure 2.15 Three types of living environment (adapted from Vision Nieuw WESt)

Figure 2.16 Vision dynamic for ringzone west (Vision Nieuw WESt)

Figure 2.17 Aspects vision dynamic for ringzone west (own image)
2.2.4 CURRENT SITUATION RINGZONE WEST

The ringzone West is divided into three neighbourhoods: Kolenkitbuurt in the northside, Overtoomse Veld in the middle part, and Westlandgracht in the southern part. The DRO describes the area as a “left over dump space” for all kinds of facilities like schools, a hospital, offices and retirement homes (as cited in Van den Boomen, 2014). The main characteristic is the presence of barriers formed by the train and metro track and the highway A10. The population consists of differentiated inhabitants, with the biggest groups of Turkish and Moroccan origin.

Currently, transformation projects of vacant offices are taking places. Creative industries and other incubator organizations have found their way to this part of the city, because of cheap rents and an excess of available space. And new housing developments are dominating the area. The Kolenkitbuurt was the first developed area of the AUP, as part of the Bos and Lommer garden city. The area was called the most problematic area of the whole country in 2009, with main factors as criminality caused by problem youth, unemployment and poverty. Restructuring programs have started here, with demolition of the obsolete building blocks planned.

This area is connected to the center through the ‘stadstraat’ of Bos en Lommerweg that reaches to the neighbourhood of Geuzenveld in the far west of the city, with continuously shops and services located on the first floor, which keeps the street lively and vibrant. The Overtoomse Veld is a dynamic area regarding demolition and construction. This is dominantly visible throughout the entire area, characterized by vacant sites and development of new buildings. The area is being densified and restructured, as it wants to attract higher income people and businesses in the area. The amount of schools and churches is relatively high in this area, as originally planned in the AUP. Also this area has a bad reputation and scores low in the index of livability. The connection with the city center, although there is the urban street of Postjesweg, is blocked by the park Rembrandtpark that excludes the area entirely from the other side. Finally, Westlandgracht is the area that connects to the south of Amsterdam. Again, restructuring and new developments are taking a dominant place in the area. And some big businesses such as the world fashion center are situated here. Compared to the other areas, this part of the ringzone currently attracts the biggest part of higher income groups, as the housing prices are much lower than before the ring in south, but they can still use the facilities of south because of the proximity.

![Figure 2.18 Some demographic statistics (O+S)](image1)

![Figure 2.18 Ringzone West (own image)](image2)
2.2.5 PROBLEM STATEMENT

The extension of the city center as described in the structural vision, is primarily initiated to relieve the city center. The designated areas are socially vulnerable areas of the city with a low socio-economic status. The areas differ in spatial and socio-economic conditions from the city center. In order to become the extension of the city center. At the same time, new urban development tools are arising from changing relations between citizen and government, in the context of transitioning city, the following question needs to be answered:

Which spatial transformations facilitate the development of urban vitality in enlarged city center areas of transitioning Amsterdam?

2.3 SOCIAL RELEVANCE

This research aims to tackle the following social aspect. As the designated areas are socially vulnerable areas, the chance of conflicts with new developments is rather high. This project will use city gaming to involve the important stakeholders of the area, to avoid the conflicts in the socially segregated area of Nieuw West.
3.1 QUESTIONS

Main question

WHICH SPATIAL TRANSFORMATIONS FACILITATE THE DEVELOPMENT OF URBAN VITALITY IN ENLARGED CITY CENTER AREAS OF TRANSITIONING AMSTERDAM?

Sub questions

1. WHAT ARE SPATIAL CHARACTERISTICS AND PROGRAM OF THE CITY CENTER AND DESIGNATED NEIGHBOURHOODS?
   a. How did the city grow and transform in the past?
   b. What are the positions of the different neighbourhoods and how are they interconnected? (functional)
   c. What is the structure of the neighbourhoods? (physical)

2. HOW TO ADAPT TO THE MOVEMENTS OF THE TRANSITIONING CITY OF AMSTERDAM?
   a. Which transition is taking place?
   b. How is this transition affecting the neighbourhoods?
   c. How can the transition be used as a tool for urban development?

3. WHAT CONSTITUTES URBAN VITALITY?
   a. Why is vitality important for the neighbourhoods in Amsterdam?
   b. How does vitality relate to social, economical and physical aspects?
   c. How can vitality be measured?
### 3.2 Methods

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<th>Sub Question</th>
<th>Methods</th>
<th>Outcome</th>
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| 1. What are spatial characteristics and programs of the city center and designated neighborhoods? | - Historical analysis growth and transformation
  - Mapping of urban form, spatial structures.      | An understanding of the physical as well the programmatic structure of the city and its adaptability to change and growth in order to take a position in the transformation process of the city. |
| 2. How to adapt to the movements of the transitioning city of Amsterdam? | - General observation, collective news.       | An overview of the dynamics taking place in the city and an understanding of the transition in order to develop a toolbox for the design assignment. |
|                                                      | - Interviewing municipality, urbanists, inhabitants. |                                              |
|                                                      | - Literature studies on transition and new ways of urban development. |                                              |
| 3. What constitutes urban vitality?                  | - Literature studies in urban vitality.       | Gain knowledge about urban vitality in order to develop evaluation criteria to evaluate the current situation of design area and products of the design assignment. |
|                                                      | - Municipality documents studies.             |                                              |
|                                                      | - Site visit, observing inhabitants.          |                                              |
|                                                      | - Snapshots.                                 |                                              |
|                                                      | - Depth analysis.                            |                                              |
This theoretical framework aims to address the problematic of joining two different areas in a transitioning city, while facing the presence of social and physical barriers in-between. Through the FOP-framework, the aim is to generate a set of criteria in order to evaluate the design area, as well as to develop a toolbox for facilitating the spatial transformation in order to achieve the desired performance, which is urban vitality. In this phase of the project, the criteria for vitality are not developed yet. This chapter rather show indicators of urban vitality in a hypothesis through a detailed analysis.

### 4.1 Cities in Transition

Transitions in the urban context are mostly being associated with sustainability aspects. The climate change is to be seen as a ‘wicked problem’ (…), which may cause events occurring which are unprecedented and surprising (Roggema, Vermeend, & Dobbelsein, 2012). The degradation of environment and the limited supply of resources have forced cities to seek new pathways to a sustainable and livable future by optimizing climate adaptation strategies. According to Roggema et al., these pathways are incremental, transitional or transformational, referring to respectively a functional, a structural or a fundamental change. To rigorously solve the climate change problem as it worldwide could have dramatic negative effects on the long term, the current system is required to change substantially i.e. transformational. In terms of decision-making regarding urban development in general, Rotmans describes the city as a complex system in transition. The financial crisis is not a ‘wicked problem’; it is rather a degradation of fulfillment of society’s wishes and needs. In this sense, a transitional pathway to change is more likely to be achieved.

#### 4.1.1 Definitions of Transition

‘A transition is a radical, structural change of a societal (sub) system that is the result of a co-evolution of economic, cultural, technological, ecological, and institutional developments at different scale levels’ (Rotmans & Loorbach, 2009). It is like ‘a fluent line up to a certain point where chaotic circumstances appear. A new fluent line emerges. The system itself is not fundamentally transformed. The same system reached a new stable state of higher complexity or quality’ (Roggema et al., 2012). From here it is clear that the new stable state of a system after the transition is an improvement on the one before. For transitions happen when a former system failed to meet the current and upcoming needs of society, when a crisis has been experienced, and an improved version of the system is needed to sustain. This explains the emergence of studies on transition management.

#### 4.1.2 Transition Management

In the past decades, a new field of research emerged to understand the dynamics in the process of restructuring societal systems. Transition management studies support the ability of influencing the direction and pace of societal change. ‘The idea is that a better insight into the functioning of societal systems provides insight into the possibilities for directing these systems’ (Rotmans & Loorbach, 2009). That is to say, a transition of societal system involves dynamics between multiple actors on multiple levels, and transitions studies aims to understand and capture these dynamics. The authors state that transition management is strongly associated with the view of the city as a complex system, ‘that run through cycles of relatively long periods of equilibrium, order, and stability interspersed with respectively short periods of instability and chaos (…). Complex systems are open systems that interact with their environment and constantly evolve and unfold over time. Complex systems contain many diverse components and interactions between components’. Directing societal change means managing the city system’s complexity and thus we need to understand the multiple levels of the complex system and their interrelationships thoroughly. The understanding of a socio-technical system’s changes could be found in the ‘multi-level perspective’ of Geels (2007) on transitions. A socio-technical system refers to a system with the interrelatedness of people and organizational structure, so this term is applicable on societal systems. Geels’ perspective depicting transitions shows the interplay between three dominant levels equivalent to scales. The existing set of practices, rules and technologies is represented as the meso scale, a ‘dynamically stable socio-technical regime’, sustained by the macro scale, a ‘socio-technical landscape that highlights the technical,
physical and material backdrop', and accompanied by the micro scale, small networks of actors which form the 'niche-innovations'. 'The sociotechnical landscape forms an external environment beyond the direct influence of niche and regime actors'.

The landscape puts pressure on the existing regime while creating opportunities for niche innovations to break through. For landscape developments on the macro scale are hardly to be influenced, the main focus of transition management is set on the tangible small networks of niches. Niche development is a priority for transitions to be established, therefore Rotmans and Loorbach (2009) describe the following steps in steering transitions aiming at adjusting the existing regime: create space for frontrunners, form a coalition around these niche players, steer their activities in a shared direction, and put societal pressure on regular practices of the regime with this new force.

Figure 4.1 Multi-level perspective on transitions (Geels & Schot, 2007)

4.1.3 DYNAMICS IN THE CITY

To put these steps in practice, there is the need to understand which dynamics the city is currently facing. These are the down force of pressure of the landscape that the regime is experiencing. The transitional pathway towards a new improved state of the societal system will be a sum of several dynamics taking place in the city. In this paragraph I will briefly highlight the dynamics that directly affect the processes of urban planning and development: of shifting powers, temporality, and digitalization.

SHIFTING POWERS

The financial crisis has gained mistrust by citizens in the capabilities of their government. ‘From the crisis years on, governments began to be seen as obstacles to progress, rather than the forces that prompt positive change’ (Beekmans & Boer de, 2014). The current organizational structure of cities has been questioned because of its vulnerabilities and failures in past years. ‘Careful planning, intervening and regulating are government duties when trying to provide basic necessities and amenities for their populations. However, over the years this process has resulted in an extensive, bulky system of city making and city management’ [Haydn & Temel, as cited in Miazza & Kee, 2014]. This extensiveness of the system is at the expense of the adaptability. The traditional way of urban planning is centralized and focused on zoning plans, blue prints of large-scale interventions, usually referred as a top down manner of acting, limited in flexibility to change. This is in contrast with a so-called bottom-up power of citizens that deals with social issues in a self-organizational way (more on self-organization in chapter four). ‘Planning needs to respond to changing and uncertain social environment but is also a process for changing that social environment and creating more certainty’ [Abbott, 2005]. There is the strong belief in engaging local citizens in the urban development process to create more certainty, because ‘citizens that are embedded in the local contexts tend to have a better understanding of the problems and needs of the whole community, compared to people who are not from the area’ [Miazza & Kee, 2014].

In UK’s economic landscape this movement is called the civic economy: ‘an attitude that questions all aspects of supply chains and makes them more equitable; an approach that enables citizens to be co-producers and investors instead of just consumers; and an opportunity to unlock and share the resources we have more effectively’ (Ahrensbach, Beunderman, & Johar, 2011). It focuses on localities and collaborations, rather than on the macro system and authorities. According to Rotmans (2014) this focus on neighborhood level is a result of the decentralization of government’s tasks to munici-
palities and localities.

In recent years several publications and articles enhance the importance of bottom up activities and stimulate governments to seriously consider these bottom up movements as an essential part of policies. Besides the positive voice about citizen engagement, there are also some critics. Governments possess long term networks of stakeholders and the communicative tools to bring together interests of different parties into a coherent whole. Urban development that relies purely on citizen's power could therefore be too ambitious. On the other hand, Rotmans (2014) argues that this movement is mainly supported by highly educated and self sufficient people, comparable to the creative class of Florida (2004), which can create even more social inequalities. This could lead to more social inequalities, especially in disadvantaged neighborhoods, which is conflicting this new movement. Rotmans proposes the following question: how could the new movement of transition facilitate social equality in vulnerable neighborhoods in big cities? The challenge is to find a balance between top-down and bottom-up planning and meanwhile facilitate equality in urban development processes.

TEMPORALITY

Another effect of the financial crisis is the increase of temporary use of spaces. Temporality has always played a role in the city, as no development is intended to last forever. However, in this paper temporary use refers to ‘temporary activation of vacant or underused land, or buildings with no immediate development demand. [...] Traditionally temporary uses have been associated mostly with land-use conversions where opportunities emerge in-between former primary uses and redevelopment of the area for new primary uses, for example, in former industrial and harbor areas’ (Lehtovuori & Ruoppila, 2012). There is the division between primary and in-between uses, whereas the latter is not equal to the former or next planned function of a place or a building. On the other hand, the character of temporary use can be divided into planned and unplanned, formal and informal. In the past, this happened mostly in an unplanned way. With little financial resources pioneers settle themselves in these temporary vacant spaces. Ongoing trends of flex working, increased vacancy rates by financial crisis, or simply by the move of industry after the change to a knowledge based society are just a few examples that resulted in the emergence of temporary use.

DIGITALIZATION

The emergence of the Internet in the 90s (for non professional use) and the way digital services are embedded in the society has resulted in the phenomenon of the digital city (prior to and not to be confused with the phenomenon of the smart city). In recent years, there is a boom of social networks and digital tools (e.g. Facebook, Maps, Four-square) [Oswalt, Overmeyer, & Misselwitz, 2013], redefining how public space is used and enforcing our capability to navigate in the physical world. The introduction of data flows influence not only the way cities are used, but also the way of organizing planning and decision-making processes. Innovative technologies allow governments to use big data sources and analytics about urban life, ranging from activity to environmental aspects, to improve their urban development strategies in a top down manner. At the same time, digital networks as well as the number of people who are connected to these networks are ever growing.

Digital relations between people are overpowering physical contact as it allows more flexibility and efficiency and therefore the productivity (Beekmans & Boer de, 2014). ‘Citizens are actively involved not only in digital city implementation, but especially in the daily use of digital facilities: therefore the role of citizens is not only to receive or to enjoy the results and benefits of a digital city strategy, but to participate to its concrete functioning’ (Dameri, 2014). The capacity of citizens to make use of digital services is the main driver in maintaining the strong position of the digital city. This digital knowledge of citizens empowers the opportunities to reorganize planning processes for urban development by citizen engagement through through digital platforms. While technology certainly has its limitations, it is important that the technology enhance, not replace our physical relationships.

4. 2 FORM, OPERATION, PERFORMANCE

To understand the effects of transition on spatial outcomes and to be able to evaluate the de-
sired conditions, a framework of Tzonis [1991] will be used. In this sense, transition is considered to be a possible tool in urban development. The FOP-framework that aims to represent design knowledge about artefacts, whether an object, machine or building. This analysis method presents three fundamental aspects of artefacts: form, operation and performance. According to Tzonis [1991] the form explains how an artefact is made, by describing its spatial composition and configuration, operation explains the working of the form, the way the form controls and or channels the user [people, objects], and the performance is the artefact’s conditions or qualities, related to its context.

![Figure 4.2 FOP framework Tzonis (1991)](image)

The three aspects are interrelated with each other through the concept of causality. This interrelationship can be expressed in constraints that state which performance of a building may result from which operation and, in turn, which operation may result form which form, a rule chain whose links are neither deterministic nor closed’. Tzonis describe three ways of interpretation of the FOP-framework: diagnosis, evaluation and generation.

Guneys [2014] has carried out a different interpretation of the FOP framework, mainly used in architectural precedents analysis, which is based on the concept of affordance, an interrelationship between the aspects that has the meaning of providing: indicating possibilities for one another to act in a certain way [Gibson, 1979]. This concept presents the framework in two directions, the process of design synthesis, comparable to the design generation interpretation of Tzonis, and the process of design analysis. Guneys interpretation supports the relationship between men and environment: the way men perceive and take action in their environment

![Figure 4.3 Interpretations of Tzonis, adapted from Tzonis (1991)](image)

Figure 4.4 Interpretation of Guneys (2007)

The next step is to find an interpretation of the FOP framework that is connected to urban design, regarding the city as a conceptual object as well. In this theoretical framework, we take “city in transition” as the artifact. This framework tend to answer

![Figure 4.4 Interpretation of Guneys (2007)](image)
three fundamental questions for the design assignment: what has to be made [which form should be transformed], how will this be done [which tools will be used for operation], and why [to achieve which performance]? In this project the operation will be the final design assignment, and thus this part is still of experimental character. The following paragraphs will describe each aspect in the following order: performance, form, with a feedback on the performance through an analysis, and operation.

4. 3 PERFORMANCE: VITALITY

The performances of a city is described by Lynch (1984), 'vitality, sense, fit, access, control, efficiency and justice.' For this research, the focus is placed on vitality. The most influential contribution to the discussion about the relation between the urban fabric and the generation of diversity, was put forth fifty years ago by Jane Jacobs (Jacobs 1961). More specifically, she pointed out four major criteria that, according to her, were necessary for the development of diverse urban public spaces: small blocks, mix of primary uses, aged buildings and concentration of people.

- 'Most blocks must be short; that is, streets and opportunities to turn corners must be frequent [...] Frequent streets and short blocks are valuable because of the fabric of intricate cross-use that they permit among the users of a city neighbourhood. [...] Frequent streets are effective in helping to generate diversity only because of the way they perform.'
- 'The district, and indeed as many of its internal parts as possible, must serve more than one primary function; preferably more than two [...] The more successfully a city mingles everyday diversity of uses and users in its everyday streets, the more successfully, casually [and economically] its people thereby enliven and support well-located parks that can thus give back grace and delight to their neighborhoods instead of vacuity.'
- 'The district must mingle buildings that vary in age and condition, including a good proportion of old ones so that they vary in the economic yield they must produce. This mingling must be fairly close-grained.'
- 'The district must have a sufficiently dense concentration of people, for whatever reason they may be there.'

Diversity is seen as the primary generator of urban vitality because it increases interactions among multiple urban components. A 'close-grained' diversity of uses provides 'constant mutual support'; and planning must, Jacobs argued, 'become the science and art of catalyzing and nourishing these close-grained working relationships'.

Montgomery [1998] describes the 'elan vital' of a place: animation, people on the streets at different times, human variety. In other words, activity and transactions and diversity' (Montgomery, 1998). The follow notions on urban vitality is stated in Montgomery's work:

- 'The most lively and interesting parts of cities are places of complex variety, where very often small-scale business activity is well represented. The key to successful city places is therefore again diversity, supported by relatively high numbers of people with different tastes and tendencies, in other words, a relatively high population density. This diversity both reflects and is expressed by layers of activity and transaction'.
- 'The notion of urban vitality and the related concept of the evening economy is about opening up the possibilities for transactions to take place in longer and more extended segments of time. It is important to recognise that the urban public realm has a cultural and symbolic significance in the life of cities: it represents memory and symbolises what places are all about'.
- 'The key is to encourage more interaction between activities and the public realm. For it is the public realm and associated semi-public spaces which provide the terrain for social interaction and therefore transactions.'

4. 4 FORM: TYPOMORPHOLOGY

In the urban context, the notion of form is also called the urban morphology. The study of morphology is a well-known approach that has been applied to urban studies as well as architecture. Studies in urban form search for explanations of the physical formation of urban areas in order to gen-
erate specific knowledge about the physicality and spatiality. In existing literature, several authors have explained morphology and form, and it seems to be a difficult task to have a concrete description. A few will be mentioned here.

4.4.1 DEFINITIONS OF FORM

Lynch (1984) found it difficult to make the cut to decide what the urban form consists of. Next to the physical environment, there are also accompanied the quantities and qualities of people and perceptions. He finally views the urban form as ‘the spatial flows of persons, goods and information, and the physical features which modify space in some way significant to those actions’. So the dynamic characteristics of the city come first, and the physical configuration follows. Urban morphology is a field of knowledge that describes the form and the change of form over time by abstracting the city into several layers. Urban form is ‘the contribution that built and unbuilt make to the fabric of the city’. And the urban fabric is the notion in which ‘buildings are solid and streets are voids, together with yards, gardens, squares, parks, empty lots, and much else not covered by a building’ (Bosselman, 2008). Çalışkan (2013) makes a clear division of the abstract domain and the physical world, thus respectively a clear division of morphology and urban fabric. The domain of abstraction includes the way of perceiving and conceiving the physical world. Morphology is ‘the study of the abstract interrelations between components of any form creating a composite whole’, and urban fabric ‘broadly refers to the physical expression of the control and regulation patterns in urban space’. Morphology is the ‘interface between the existing built environment and the design image’ (see figure 4.8).

An important addition to this is the notion of the urban fabric as underlying for transformation processes, and thus not the form a priori, but as a process that occurs over time, during which the life of building unfolds, together with its successive transformations’ (Pardo, 2014). The emphasis is on studying urban areas in their physical domain, buildings, open spaces as well as their way of formation and transformation, as the city is dynamic and these physical objects are ‘constantly used and hence transformed through time’ (Moudon, 1997). Moudon called these studies the ‘typomorphology’. Typhemorphological studies explain how the built environment is produced by classifying systematically the elements which structure the physical form of cities over time’. She considers the scale of physical element as interrelated to the scale of resilience to change. The bigger the scale, the more resilient the element is to change.

According to Moudon (1989), the contribution of typomorphology to form studies lies in the fact that

- 'it gives an explanation for traditional human habitats'
- 'it addresses the interrelation between all scales of the environment'
- 'it recognizes the temporal continuities and discontinuities in the environment.'

![Figure 4.5 Framework of morphology, adapted from Çalışkan (2013)](image-url)
4.4.2 SITE ANALYSIS

Through a detailed analysis of the form together with social, economical and physical analysis, some spatial as well as functional conditions for vitality could be extracted. This part focuses more on the planned, form of the area. Further research should be done of the unplanned activity, the transactions in the area. 'It should be noted that planned programs and quality space themselves are valuable conditions, but not indicators.' [Zhou, 2012]

STREETS

The main street network is mainly orien-
tated from west to east. As mentioned earlier in the problem field, the area is not sufficiently exploiting its strategic location. The connections of city streets to the center however, are one of the strong points of the area and gives potential to generate the flow of people which is desired for the area. In the AUP plan the design includes a hierarchy system for green and infrastructure, to create a gradual transition with a continuous experience of green from the smallest scale to the city scale. What distinguishes the garden city from the traditional city, is the scale in be-
tween: the park stroke and the green stroke, the traditional city consists only of gardens, courts, and parks [Agricola et al, 2013]. The system shows different typologies of green and infrastructure.

In the ringzone, we don’t see much of the hierarchy of the green and infrastructural system. This is due to the barriers of train and highway, and also the barrier of the park, whereby it loses the continu-

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Figure 4.8 Green and water (own image)

Figure 4.9 Main street network (own image)

Figure 4.10 City streets (own image)
ity of the so called gradual transition.

The typologies of the AUP are based on scale and program, whereas the topology by space syntax are based on quantitative data on connections with other streets, thus the accessibility. There is certainly some overlap. For instance, city or urban streets, are the streets that connects to the center, which are mainly coloured orange or red in the space syntax map. However, this map does not tell the density of activity. Some orange or even red lines, indicating their well integrated position, are not lively at all. They just serve as a connection between different destinations. Good integration doesn’t indicate vitality, other factors are profile, location, and program, but they do have the potential to densify. These could be found in the area as ‘borough streets’ and sometimes ‘neighbourhood streets’, as their difference is hard to find in the area. In Bos en Lommer area the hierarchy system was not applied, we see mainly ‘residential streets’ and blocks with courts. Based on both typology and topology, a combination map is made.
The city or urban street concept is highly supported by the visions of the municipality. Through the analysis of two different streets, Bos en Lommer en Postjesweg, indicators could be developed for what aspects of the streets are determined for the vitality.

The Bos en Lommerweg is a street with a variety of shops, which continuously is present through the whole street. The building blocks at the north side are set up in strokes, with their heads pointed to the street, which gives an open structure of the blocks, as Jacobs described as small blocks, and Montgomery described as permeability. Also the blocks on the south side are permeable at a few places, which creates a connection to the neighbourhood behind the block.

The highway is on the same level as the street, the highway is not a barrier, and the building blocks here are big blocks with some main functions for the area. This causes a high concentration of people here. The strokes and shops continues towards the train track, while slowly diminishing.

Through the street there is a tramline, which also supports the accessibility and the flow of people going to and from the city center.
The Postjesweg is located centrally in the Ringzone. Obviously, the continuous line of the street is blocked by the Rembrandtpark for about 500 meters before the highway. The highway is elevated and therefore the continuous line is blocked again by a viaduct. After the highway, we enter the neighbourhoods with shops and services on both sides, but the variety and density is limited.

In the street profile we see a very wide road with multiple car lanes, that could resemble a boulevard. However, in this case, both sides are blocked from each other because of the trees and the distance.
The blocks could be divided into three main groups: open block, strokes and solitary blocks. In the traditional city we can find mainly closed block with fully private courtyards. The AUP plan got rid of this layout, resulting in blocks with semi or fully public courts. This has impact on the use and perception of space. Montgomery addressed the fine grain structure as a principle for vitality. Except for Bos en Lommer, all blocks are quite big and placed in a rather open structure, thus we cannot speak of fine grain blocks in this area.
There is a great diversity of buildings in the area. However, we can again find three main groups: the original building blocks of AUP, public and societal buildings, and new developed buildings. Jacobs addressed the essence of a diversity in age, type, size and condition of buildings. The architecture of the new developments are in big contrast with the original AUP buildings, and the public buildings differ much from both in size. So we can certainly speak of a diversity of buildings. The building blocks of the AUP are of bad condition, and consists mostly of blind walls on the ground floor. Therefore, there is the lack of ‘eyes on the street’ in certain parts of the area. On the other hand, the new developments have integrated plinth functions.
PUBLIC SPACE AND FUNCTIONS

The public space map together with the functions map could indicate the amount of activity on the streets. In central part of the area we can see the open courtyards of the AUP blocks, and just one central square, the August Allebeplein. We see a concentration of shops here in the function map. The other shops in the area are foreign-based shops. The rest of the functions are mainly schools, buildings that are only in use during daytime. There is a lack of program that ensures a continuous flow of people on the streets, for instance restaurants, cafes, cinemas or events and parties, which are mainly found in the city center of Amsterdam.

The Rembrandtpark has a dominant position in the area. However, the Groenonderzoek 2013 indicates that this park is bypassed the most because of unsafety. Jacobs indicated that successful parks never serve as a barrier or as interruptions.
4.5 OPERATION: TRANSITION

Operation, as described earlier, is the way an artefact achieves the performance. While traditional urban planning still continues to exist, new urban development tools are already emerging. Following tools are proposed as a response on the dynamics mentioned in chapter 4.1.

4.5.1 PARTICIPATION

As stated earlier, the involvement of citizens in planning processes is an effective way of creating solutions for the urban space with shared desired outcomes. Participatory planning lies on the decentralization of governmental tasks and the capability of community to deeply understand what their needs are (the embedment) and to actively wants to translate these needs into practices. A form of participation can be found in the multi agent method of city gaming, firstly introduced by Portugali (1999) as a response to the notion of the city as a self-organizational system. Tan (2014) then describes games with the following characteristics: ‘games support learning, are collaborative, multi-agent, evolve incrementally, support open communication, and run on rules’.

City gaming intensively involves several stakeholders with different backgrounds, from major to local business, in the design process by coming together at one place and directly negotiating while generating the design. According to Tan this concept of co-designing is viable, because the stakeholders constantly interact by exchanging information, negotiate and learn form each other, through a ‘jargon-free communication’. The outcome take into account the different needs of stakeholders while accepting the restrictions coming from e.g. policies. The chance of implementation in the planning process could be rather high for its practicality and efficiency; it accepts the role of top down institutions as valuable co-creator and involves planning as well as design.

In ringzone West there are four potential groups of different profiles which could be selected for the game: people related to societal services such as schools, the hospital and by far the most important player, the district council who is initiating the future plans for the area; people from the multiple businesses in the area including hotels, fashion center and the several small scale businesses; local inhabitants or community workers who could represent the current needs of the inhabitants; and finally, which is rather optional, the organizations that recently pop up and deals with all kinds of temporary use of vacant spaces in the area. They could give insights to the selection of buildings and the possible future users of the spaces.

4.5.2 TEMPORARY USE

Recently, temporary use has been incorporated into official planning processes and policies. This sets a new challenge for decision makers. ‘Traditionally, planning begins by formulating an end result and then proceeds to consider how that result can be achieved. With temporary use, this relationship is reversed: one begins by asking how a dynamic can be endangered, without defining an ideal final state’ (Oswalt et al., 2013). This leads to experimen-
tal character of development, which maybe is con-
sidered as the success factor in former temporary
projects. Temporary uses are seen as tools of em-
powerment for revealing the possibilities of space.
‘Facing increasingly tight budgets, city administra-
tions hope that by cooperating with pioneers from
civil society they will be able to stabilize socially
weak neighborhoods, reactivate vacant sites, and
create new public spaces, all without any significant
financial expense’ [Oswalt et al., 2013]. Small events
can have a big impact, they can actively change how
a place is perceived (Haydn & Temel, 2006). In this
sense, temporary use can be seen as a tool, which
with minimal effort can bring new life to a place.

4.5.3 DIGITAL CITY MAKING

The digital city offers new methods to inter-
vene directly in city making processes. The book
Pop-Up City provides insights into several methods:
[Beekmans & Boer de, 2014]

- ‘Service-oriented digital platforms are capable
  of filling in the spatial gaps and tying together
different social realities’. Low threshold online
platforms must become tools of transparency
and trust building for both government and citi-
zens; they serve as mediators of a conversation

- Another use of digital media is to raise fund on-
line for urban projects to directly involve locals
so their choice ensured. ‘Crowd funding makes
projects possible that would otherwise not be of
interest to government agencies’.

- City bloggers give a chance to people to expe-
rience a place to which they never have been
before. ‘City blogging does not contribute to the
physical environment, but rather helps shift the
discourse about a neighborhood or the city as a
whole’.

Digital place making is evolving, whether
through community platforms, crowd funding, gen-
erating social momentum, or giving insights into
physical space by city bloggers, all are based on the
flexibility and possibility of instantly sharing ideas by
different people through digital media.

As mentioned before, several organizations
are active in the area in managing vacant spaces.
The vacant spaces are used as incubators, but also
as flex working spaces as well as events like mar-
kets, festivals, and parties. These activities attract a
young and vibrant user group to the area, which on
the long term will have an impact on the area.

The components of the FOP are summarized on
the next page. The three are interrelated and could be
used in different reasoning patterns. The one used
in this chapter is the diagnosis. From the existing
form, the normative performance is being evaluated.
4.6 SCIENTIFIC RELEVANCE

As the FOP framework is mainly being used in architectural precedent analysis, this project aims to structure an urban project through the framework. An urban area, as well as a city as the artefact, is complex in its scale. The operation part is the dynamic part in the framework, these urban development tools are rather new and all publications on these topics are published recently. This research aims to take a position in the current debate on the city and urban development in transition. Through this project, the tool of city gaming will be tested in practice.
5.1 PLANNING

In the following months, the analysis should be finished to have a complete overview of the FOP framework. Patterns will be extracted from the analysis and function as rules in the game. Right after that, the main task is to set up a game and select the stakeholders to participate. The outcome of the game will give a preliminary design proposal for the area.

The design proposal should be evaluated by the stakeholders again. A meeting for feedback is required. Continuously, the FOP framework is used as the evaluation tool for the concept of urban vitality.
5.2 CONCEPT

The city game could be played on two scales, one is the linear and local approach of the ‘city street’, and the other one will focus on the areas adjacent to the city street. The street of Postjesweg is a city street that performs not so well on vitality. The design will then be generated from the results of the game, with emphasis on the program, the profile, as well as the needs of the future users of this area. The same approach is used for the design of the adjacent areas, the neighbourhood scale.

Figure 5.2 Concept

Figure 5.3 Stakeholders: potential participants for the game


