

Urban Vitality

Restoring public life in Amsterdam-Noord

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Colophon

P5 report: Urban vitality - restoring public life in Amsterdam-Noord
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First life, then spaces, then buildings - the other way around never works.

Jan gehl

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Abstract

Amsterdam is a city known for its vibrancy, tolerance and diversity. In the last few decades, the city has grown immensely and is expected to continue to grow in the coming years. Therefore, it looks across the IJ-river to redevelop its northern city part. The former harbour, industry and labour-class neighbourhoods need revitalisation after years of neglect. However, current development is predominantly focused on the waterfront and does little to integrate the low-density areas beyond. After years of neglect and isolation, the existing population fear the new developments that attract people with different lifestyles to Amsterdam-Noord. As the pressure to urbanise Amsterdam-Noord increases, it is required to consider how it can be adapted to manage the densification and urbanisation. The gap between new and old (development and people) is striking and needs to be bridged. This thesis explores how by increasing urban vitality, this gap can be bridged.

Urban vitality can be experienced in the public realm. It is precisely there where people can meet and mingle. Urban vitality is a quality of cities that stimulates liveliness and liveability. It requires diversity, concentration of people and accessible and inclusive public life and functions. How to achieve urban vitality is researched in literature and by using reference cases. This is then translated into a system of patterns, and these are applied at two strategic locations on 3 sites.

The three design explorations have different approaches for increasing urban vitality. Beemsterstraat I strives to fit in the existing urban fabric and activate the nodes to stimulate urban life. Beemsterstraat II uses additions to make a residential neighbourhood more active. Finally, the kampferfoelieweg is more drastic as it incorporates many new buildings to patch up and define left-over space and forms a dynamic link between many neighbourhoods. Although these three approaches vary on the implementation, the intention is similar: to provide meeting places and link communities through public life and awareness of others at strategic locations in a regional network. Operating stakeholder relations, continuous adaptation and maintenance of the built environment, engaging and empowering the local community is crucial to preserve urban vitality.

Keywords: Urban Vitality, Amsterdam-Noord, liveliness, public space



CH1: Problem analysis

- Introduction to urban vitality
- Urgency: amsterdam as “growing” global city
- Location: Amsterdam-Noord
- Comparison
- Problem statement

Motivation

Amsterdam is a city known for its vibrancy, tolerance and diversity. Over the past few decades, the city has grown immensely (for Dutch standards) and it will likely continue to grow in the coming years. Therefore, the city looks across the river to its Northern part to redevelop. The former harbour / industry and labour-class neighbourhoods are in need of revitalisation after years of neglect. Amsterdam-Noord still has the highest percentage of social housing that are assigned to the direst cases. At the same time new developments at the river bank are sold for more than a million euros and corporation houses are sold at the private market for thousands of euros. While this happens Noord still faces many problems from its poverty that are not being solved by adding new upper-class residents and hip coffee bars. The city part lacks vitality and opportunities for its poorest inhabitants.



Figure 1: Cartoon of yuppification in Amsterdam-Noord (yup: young urban professional) (source: Kok, 2020)

Urban Vitality

An introduction

Revitalisation is often used in urban regeneration plans: but it is not something that is explicitly mentioned in literature (Liu et al., 2019; Yue & Zhu, 2019). Although Jane Jacobs is considered the author on city vitality and the urban life that is the result of urban vitality (Delclòs-Alió et al., 2019; Jacobs, 1961; Montgomery, 1998). Revitalisation of city areas is generally supposed to make it more attractive and livelier. It ought to regenerate places that have been disregarded. Instead of making beautiful plans people ought to consider why have these areas have degenerated and what ought to be done to let them regenerate. Therefore, I would like to propose that urban vitality is a capacity of urban places to regenerate inherently, instead of by artificial plans and designs. Jacobs (1961, pp. 8–12) illustrates this inherent capacity with an example of a place that was considered a slum by official organisations but as time went on the residents themselves had transformed the area; previously overcrowded blocks had been adapted and redecorated to be comfortable again, there were shops and businesses that would bring people on the streets.

Many historical places have that capacity because they have been developed according to the human scale and with walkable distances in mind (Gehl, 2010; Jacobs, 1961). Modern urban areas that have been developed with masterplans are more homogenous in set-up. While lifestyles change quickly, within generations, the built environment needs more investment – and therefore time – to adapt. Areas designed with a specific ideology are more difficult to adapt to changing demands over time. The built environment needs a certain timelessness; therefore, it needs to be heterogenous, adaptable and compact (Jacobs, 1961). These characteristics are the conditions for urban vitality. these conditions enable the processes that produce urban life and dealing with the problems that urban life produces instead of intensifying them (Tonkiss, 2013).

Urban Vitality

RELEVANCE

Places rich with urban vitality are often more liveable (Gehl, 2010; Jacobs, 1961) (Gehl, 2010; Jacobs, 1961), especially considering social aspects. Urban vitality is what attracts people to use the public realm and participate in public life. Urban vitality contributes to safety of well-used public spaces; to inclusive communities and social cohesion by providing opportunities for interaction and integration with 'other' people; to social wellbeing through walkability, accessibility and increasing opportunities for social interaction (Legeby, 2013; Oldenburg, 1989). Furthermore, urban vitality requires diversity, concentration of people and functions, and thus a certain compactness. This is environmentally friendly because it can be accessible for more people and cater public transport better.



Figure 2: Bryant Park after refurbishment has become a vital public space (source: https://www.researchgate.net/figure/shows-the-vital-Bryant-Park-after-its-refurbishment_fig1_320859436)

Urgency

Amsterdam: a global city

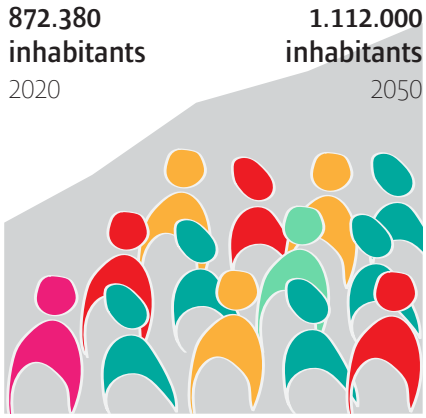


Figure 3: Expected population growth Amsterdam

Amsterdam (as a city) is attractive. Since 2008, it has a yearly growth of 10.000 people moving into the city. at January first the city counted 872.380 inhabitants. It is expected to reach 1.112.000 inhabitants in 2050 (Special: Amsterdam Groeit, n.d.). This prognosis was pre-covid-19. As the city continues to grow it looks at its edges but especially at Noord for expansion. This growth is mainly caused by foreign migration, these are skilled workers and international students. Due to the housing shortage, it is more difficult for Dutch to find affordable homes in Amsterdam, while the highly skilled foreigners can spend more on housing. The foreign migration is dependent on employment opportunities and the possibility to travel. Due to Covid-19, already this year Amsterdam started to shrink because this group stayed away (Michiel Couzy, 2020).

Amsterdam is an attractive city to live in because of its international accessibility (due to Schiphol), because it is urban enough that it is very lively while at the same time it is small enough so that you can bike everywhere, the city has a rich history which has left its tracks in the city, the city has embraced the rise of the creative class and has a good business climate for these types of companies (Milikowski, 2018). The city is known as a very diverse and tolerant city to different cultures and lifestyles (Milikowski, 2018).

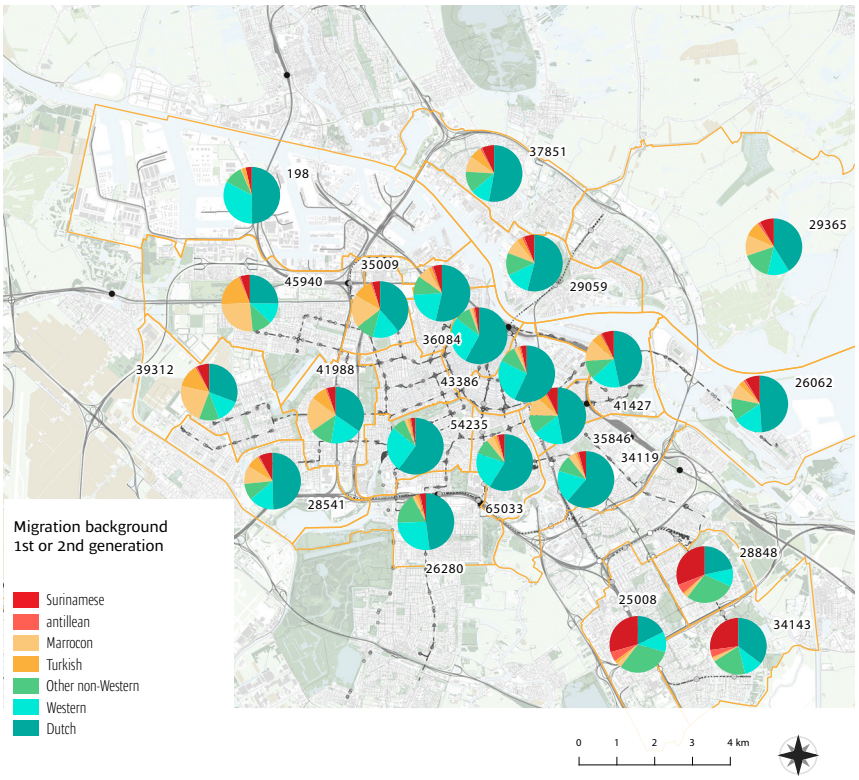


Figure 4: Multiculture Amsterdam

It has a lot of urban vitality, especially the pre-war parts of the city. These areas are dense, diverse, walkable or bikeable, they have a fine grain and are very accessible. These are the foundations for urban vitality and now that these areas are densely populated, they are very attractive and lively. There are threats that can destruct that liveliness. These treats include gentrification and global investment for short stay rentals. By being a global city, Amsterdam attracts much global investments which endanger the availability of affordable housing (Milikowski, 2018; Municipality of Amsterdam, 2020; OIS, 2019).

In the past years Amsterdam has gained attractiveness and private investments. While the city used have a lot of social housing: around 1980 90% of the housing stock was owned by housing corporations, this number has been reduced to 40% (Kok, 2020; Milikowski, 2018; Municipality of Amsterdam, 2020). While the city has grown the absolute number of corporation-owned social housing has decreased. Because it was mainly private developers who built new projects. The policy was to sell corporation houses on the market to stimulate private investments in the built environment. The downside is that in the private sector housing prices can fluctuate more.

Now that the city is popular the housing prices are (for Dutch standards) extremely high. As a result, the middle class is pushed out of the city. The middle class is not only the foundation of bridging differences in the city, but generally speaking the middle class works in vital sectors of the city (as teachers, nurses, police officers). It is not a coincidence that there is a shortage of teachers in the city (Milikowski, 2018; ter Haar, 2020). Before, they could apply for social housing. Now, these are reserved for the worst cases (Kok, 2020; ter Haar, 2020; Winterman, 2020).

Furthermore, the private rental sector is growing quickly and stimulated by global investments in properties for people that do not wish or unable to settle long term in a place: discouraging bonding to a place (Bolt et al., 2011; OIS Amsterdam, 2020a).



Figure 5: Pride Amsterdam: celebration of LGBTI+ community and diversity (source: https://www.maxvandaag.nl/sessies/themas/terug-naar-toen/pride-amsterdam-de-viering-van-seksuele-diversiteit/)

Amsterdam-Noord

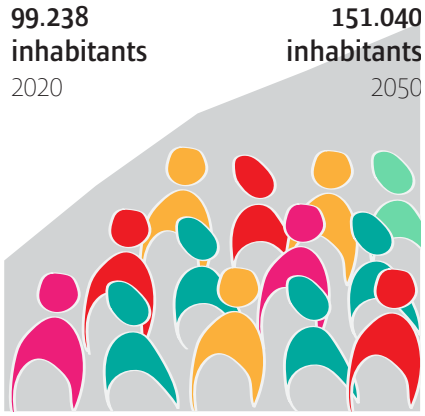


Figure 6: Expected population growth Amsterdam-Noord

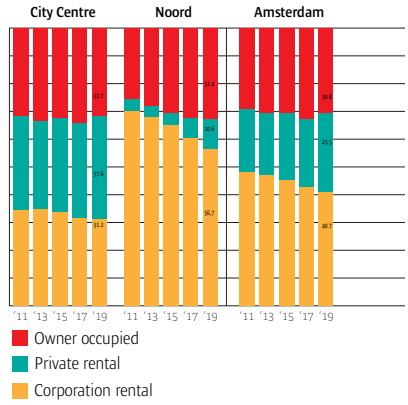


Figure 8: Recent changes in housing stock supply

As Amsterdam continues to grow, without much space left to develop within the ring road it looks outside the ring and especially across the river 't IJ to develop new housing. This leads to the location of this thesis: Amsterdam-Noord. Amsterdam-Noord as a city-part is projected to grow at least 57% to over 155.000 inhabitants in 2050 opposed to the 99.238 it has in 2020 (Special: Amsterdam Groeit, n.d.). It is the largest city part that is the least urbanised as it was always rather isolated. But to urbanise it, it needs to be integrated in the city.

In the past few and coming years certain locations are transformed from industrial to mixed (NDSM - see figure 12, Buiksloterham, Hamerkwartier - see figure 11, Overhoeks, klaprozenbuurt), some residential areas are being upgraded (van der Pekbuurt) and the malls of the high-rise neighbourhoods are redeveloped (Waterlandplein - see figure 10, Banne, CAN / boven 't ij) (Municipality of Amsterdam, 2017). While they do this, they are catering a specific target group at the cost of (or without investing in the) existing communities: By adding specific housing; by developing public functions that are only attractive to that group, excluding the existing population (Kok, 2020; Milikowski, 2018; Pol, 2020; van de Kamp & Welschen, 2019). While these areas are being redeveloped, other areas with liveability problems are more challenging to improve.

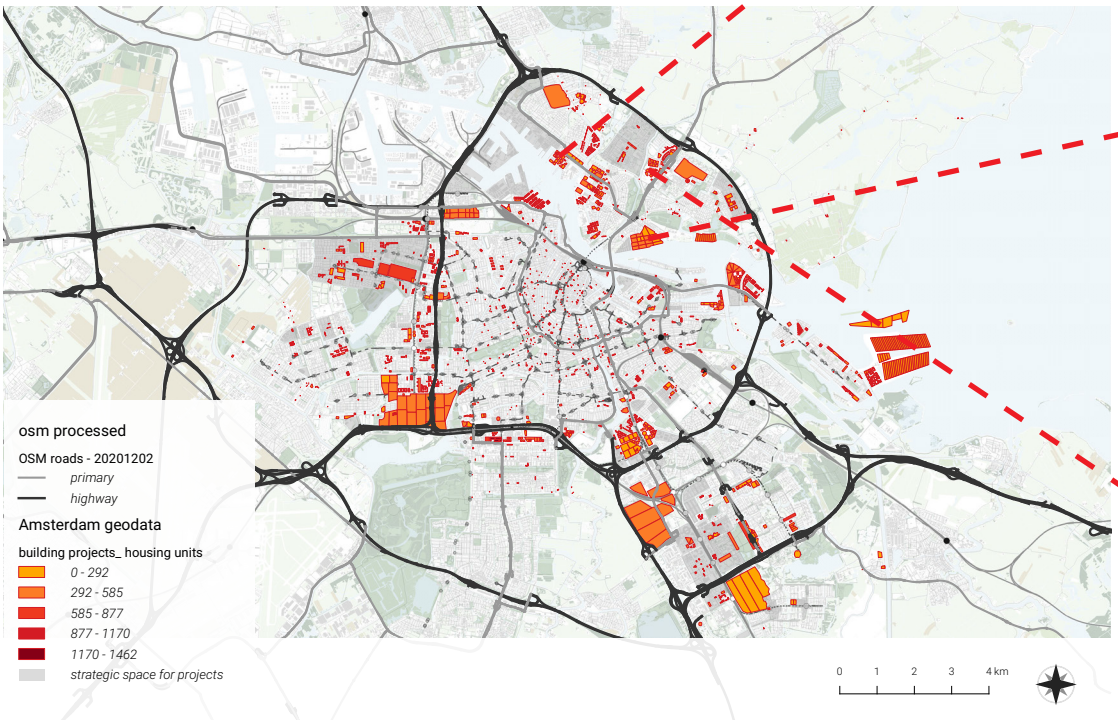


Figure 7: Recent and upcoming building projects (data source: Amsterdam geodata, 2020)

Impression of future plans



Figure 9: Photograph of Waterlandplein redevelopment plan (source: https://www.amsterdam.nl/projecten/waterlandpleinbuurt/)



Figure 10: Impression of hamerkwartie plan (source: https://www.amsterdam.nl/projecten/hamerkwartier/)

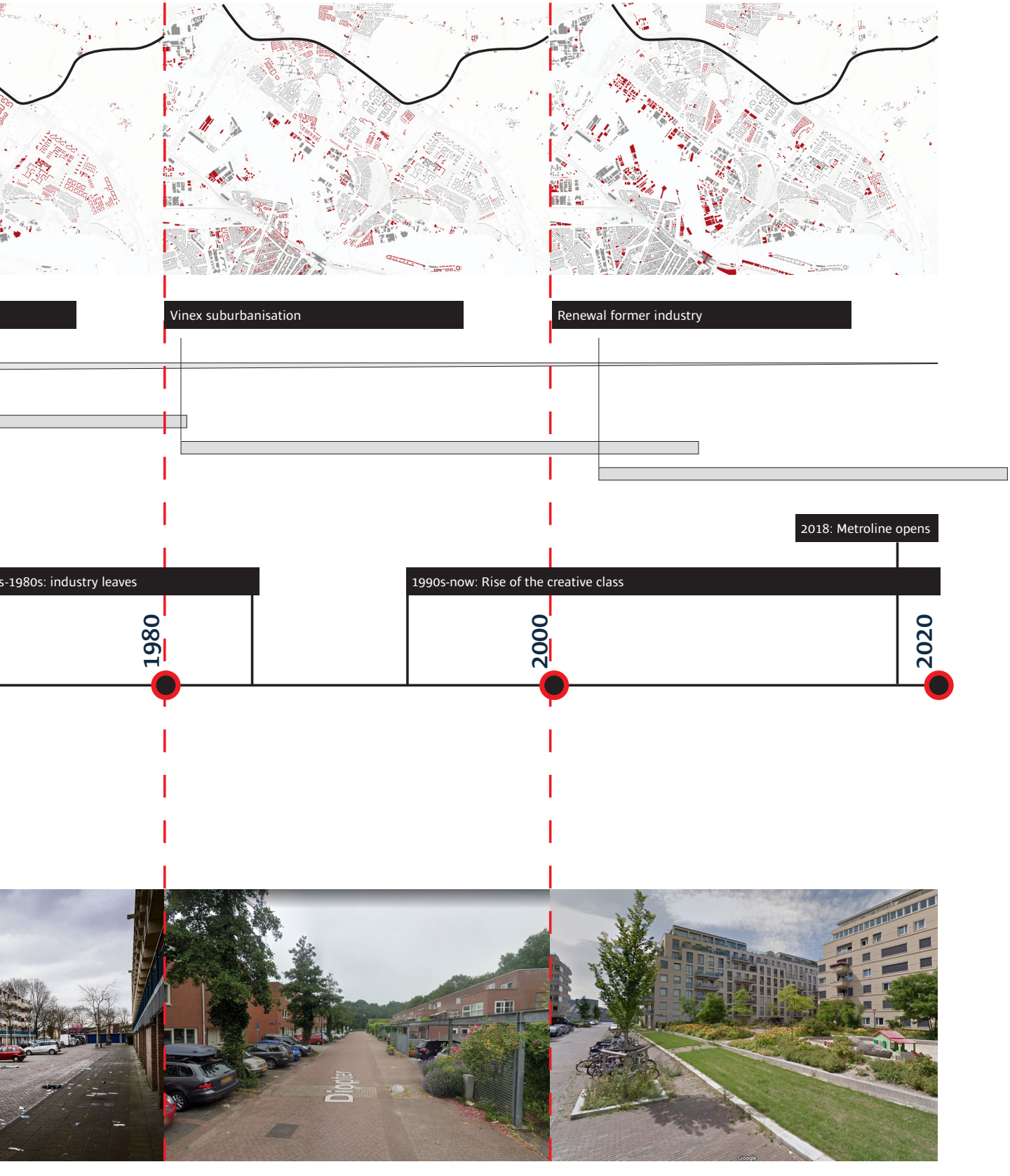


Figure 11: Impression of NDSM Wharf plan (source: https://www.amsterdam.nl/projecten/ndsm-werf/)

Historic development



Figure 12: Overview historic development Amsterdam-Noord


Vinex suburbanisation
Renewal former industry
2018: Metroline opens
s-1980s: industry leaves
1990s-now: Rise of the creative class
1980
2000
2020

Diopter

Historic development

The north embankment was not part of the city before the 20th century. It had some villages and ribbon developments along dikes where the upper-class of Amsterdam lived (Slagboom, n.d.). The tip closest to the city centre was used as a gallowfield, besides being outside of the actual city it was a warning to shippers to behave or else.

In 1921 the city of Amsterdam annexed the waterland for the development of the harbour industry. This meant that each day hundreds of labour workers were transported over the river to work there. To make this more efficient the city developed working class neighbourhoods on this side of the IJ. The garden villages had a lack of urban entertainment, and the strong emphasis on the family life, contributed to the formation of a decent, obedient character. The settlements were homogeneous and families lived there for generations (Slagboom, n.d.; van de Kamp & Welschen, 2019). The garden villages and the existing rural development set the tone for the identity of Amsterdam-Noord, which up until today is more considered a collection of villages than as part of Amsterdam (Lorianne van Gelder; & Bart van Zoelen, 2017). Also in line with the gallowfield, the set-up of the garden villages as a sort of re-education camp for the poor has shaped a character that the people in Noord where hopeless (Kok, 2020; Lorianne van Gelder; & Bart van Zoelen, 2017; Slagboom, n.d.).

The post-war neighbourhoods were in line with the modern garden city movement; high rise slabs in a green and open setting. Amsterdam-Noord was almost completely built by housing corporations. In 2000 90% of the housing stock was corporation owned and assigned as social housing (Kok, 2020; Milikowski, 2018). When the industry left in the 1970s the area fell in decline. The social housing that covered Noord was a refuge for the poor. Both former labour class and new migrants (Kok, 2020; Milikowski, 2018). Since then parts of Noord have neglected: resulting in bad living environments (OIS Amsterdam, 2020a). The physical isolation and neglect has led to social segregation.

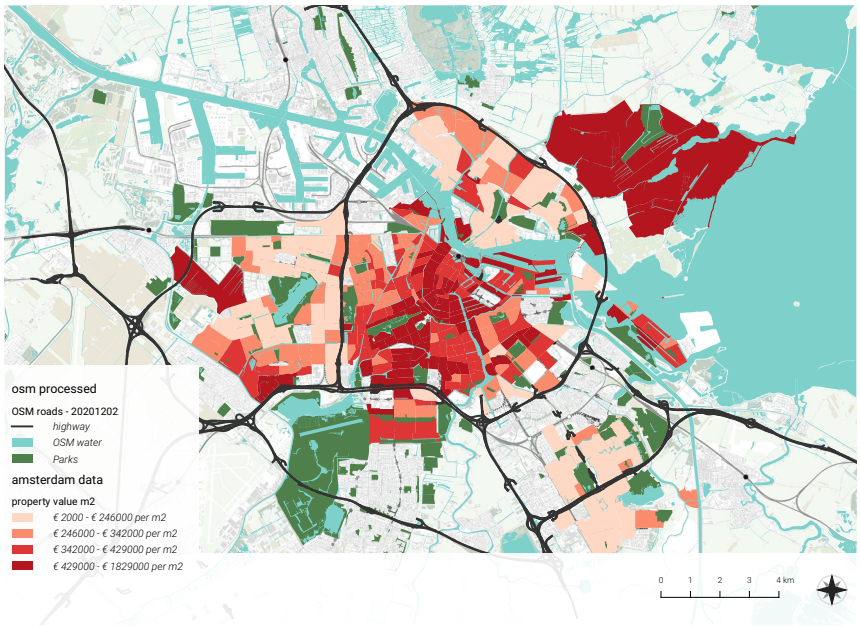


Figure 13: A10 and IJ river as wealth barrier (data source: OSM 2020, municipality of Amsterdam 2020)

Social segregation and physical isolation

The IJ river and the A10 ring road are wealth barriers which can be seen in property values in figure 13 Amsterdam-Noord is bordered by the river on the south and the ringroad on the north. The ringroad forms the barrier between the city and the open polder-landscape. The river is the barrier between the wealthy city and poor Amsterdam-Noord.

Figure 14 shows the river crossings that connect North and South and which mode of transport can use those. Within Amsterdam-Noord there are 2 waterways crossing through the area (with minimal crossings) that create east-west barriers. The recently opened metro-line has improved the isolation of Amsterdam-Noord. But it does not solve segregation for the poor as it can be too expensive to use the metro on a daily basis.

The solution is either a physical connection or providing employment and opportunities in Noord. A physical such as a bridge or a tunnel, is seemingly very difficult to accomplish and is an ongoing discussion since 1850. This discussion entails arguments for unobstructed views over the river, fairways for European shipping that require a 12.5 m vertical clearance, difficulties with fitting the landing in existing urban layouts, costs in general, social safety in long tunnels and the iconic value of the connection.

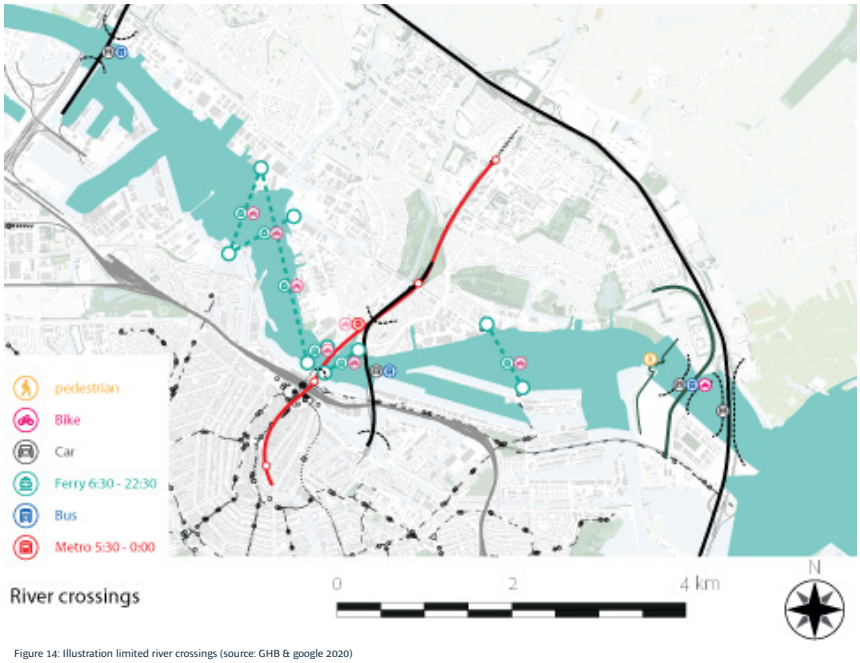


Figure 14: Illustration limited river crossings (source: GHB & google 2020)

Anti-urban image

After the annexation Noord got a bad image: it was where the white labour class lived (Kok, 2020; Lorianne van Gelder; & Bart van Zoelen, 2017; Pol, 2020; van de Kamp & Welschen, 2019; Winterman, 2020). Although the communities in Noord did not belong to the city, they belonged there and to each other. The original residents looked out for each other, participated in clubs and there was a lot of social control.

Large scale urban renewal in the 70ies meant that a lot of people from other 'problem' areas were moved around in the newly built social housing estates (Kok, 2020; van de Kamp & Welschen, 2019). Noord became more multicultural; the original residents say that this was the critical turning point for Noord. At the same time the industry left and a lot of people became unemployed and most of the area fell in decline. Noord was and still is a refuge for the poor; it still has the highest percentage of social housing and low socio-economic status (Kok, 2020; Milikowski, 2018; OIS Amsterdam, 2020a).

Due to its neglect, Noord lacks opportunities and has many liveability problems. Many neighbourhoods score bad on the maintenance of the living environment; nuisance from crime, decline and pollution; feeling safe, social cohesion and involvement with the neighbourhood issues (OIS Amsterdam, 2016, 2020a). Some of these results are shown on the next page.

The anti-urban image, shared reputation and lack of opportunities have allowed the local communities to bond very strongly (van de Kamp & Welschen, 2019). In several newspaper articles, Amsterdam-Noord is considered a collection of islands with each of these islands having strong local communities, this is strongest in the garden villages (Kok, 2020; Lorianne van Gelder; & Bart van Zoelen, 2017; van de Kamp & Welschen, 2019). The risks of these tight-knit communities are emphasized by Putnam and Granovetter (both in: (Legeby, 2013) and in the case of Amsterdam-Noord explored by van de Kamp and Welschen (2019). Their research looks at the feelings of exclusion in gentrified neighbourhoods in Amsterdam-Noord. While Amsterdam in general is quite mixed due to rental protection laws and the large percentage of social housing, there is a sense of indirect or cultural expulsion in areas where gentrifiers are moving in.\

Although the bad reputation, new people have been moving to Amsterdam-Noord, due to the rising housing prices all over the city. At the same

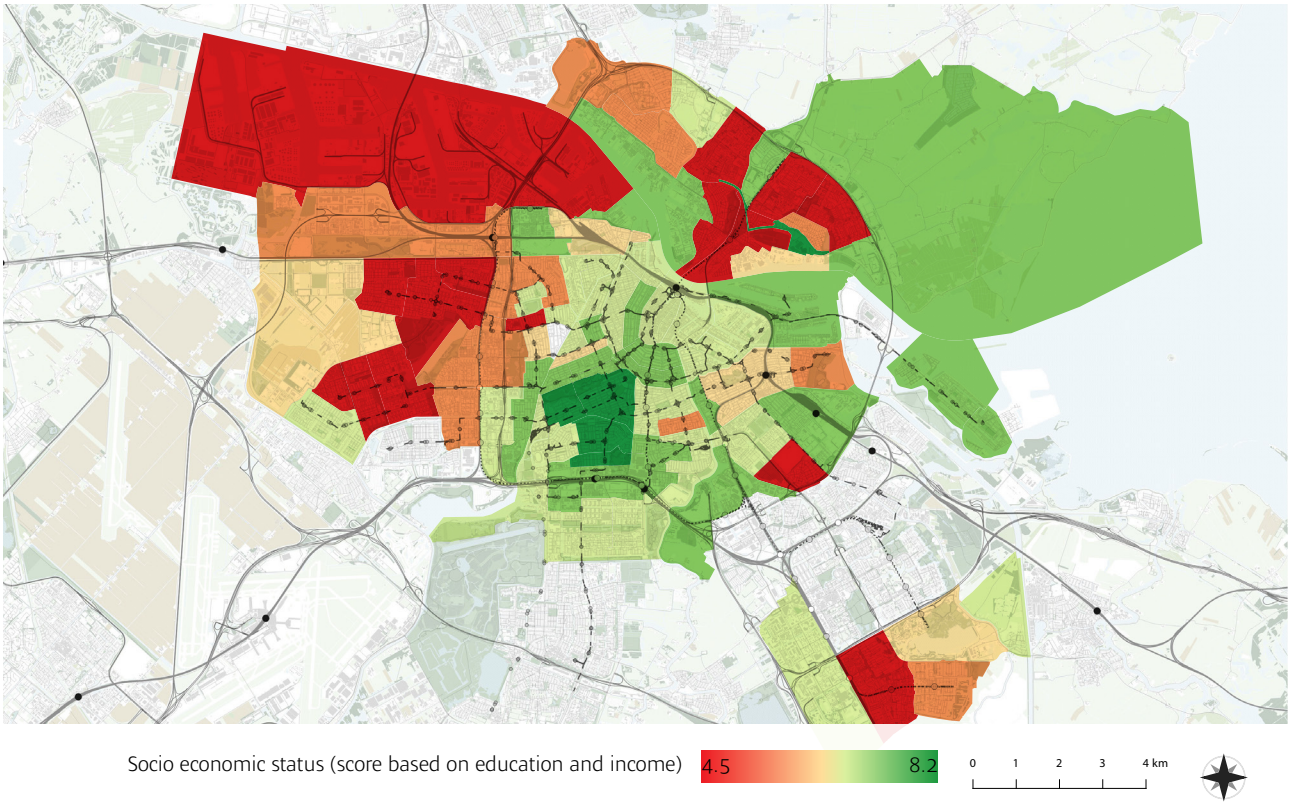


Figure 15: Socio economic status per district in 2018 (data source: OIS Amsterdam, 2020)

time people are starting to realise that Amsterdam-Noord is actually nearby the city (Milikowski, 2018). The industrial heritage and the rise of the creative class make the harbours interesting places to use and in the past few years Buiksloterham has become a sustainability hotspot, some of the old ship wharfs became creative incubators and the tip were the gallowfield used to be is transformed to a tourism hotspot. Many travelling websites have called it one of the coolest must-visit neighbourhoods of Amsterdam. Since then, it gained popularity.

There is friction between the existing population and the newcomers (Kok, 2020; Pol, 2020; van de Kamp & Welschen, 2019). The interviews used by Van de Kamp and Welschen (2019) clearly show that the existing population feels pushed out and that the actions that are now taken are unable to bridge the gap between the completely different lifestyles of the existing population and the newcomers.

Comparison

The following pages will compare different urban qualities and preconditions for urban vitality between 2 representative transects of Amsterdam-Noord and the city centre. Although the city centre is facing its own problems regarding tourism (Milikowski, 2018), it is much more vital and alive. For a better understanding of how these spatial conditions contribute to urban vitality refer to chapter3.

This comparison shows how different the spatial conditions can be just 300 meters apart. It is unlikely that Amsterdam-Noord will ever become like the inner-city of Amsterdam and perhaps not even desirable but it shows the potential of two different types of urban environments. Where one (the city centre) facilitates urban vitality much more than the other (Amsterdam North).

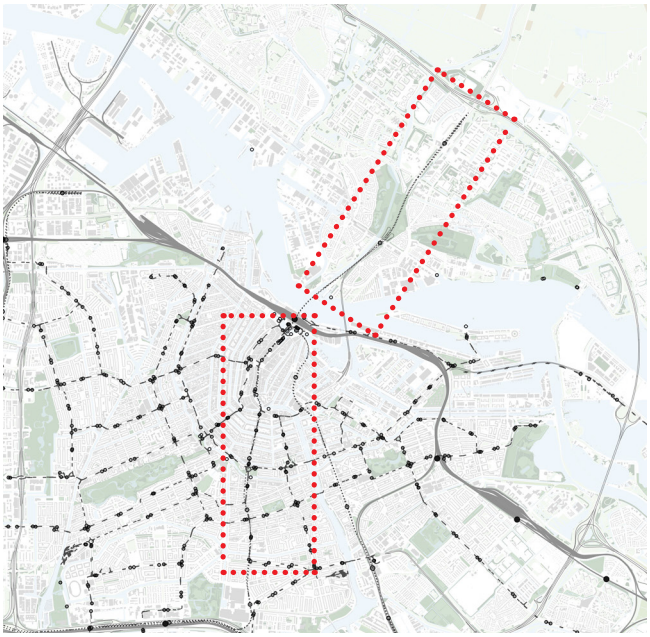


Figure 16: Transects used for comparison



Figure 17: Amsterdam inner city (source: https://www.parool.nl/nieuws/toestroom-toeristen-maakt-amsterdam-minder-sociaal~bf796d23/)



Figure 18: Amsterdam-Noord (source: https://www.yourdutch-guide.com/off-the-beaten-track-amsterdam-noord/)

Blue green structures

This analysis shows the public green and water structures. While the city is known for its canals it lacks in urban greenery. There are many small pieces of greenery and only one real park. Noord on the other hand has a lot of public greenery, including urban parks and collective gardens (or patches of grass).

Looking at the blue-green structures and activities (next page), you can see that the abundance of blue-green structures connect to mainly residential areas, likely being underused most hours off the day. Therefore they act as edges and stimulate anti-social behaviour.

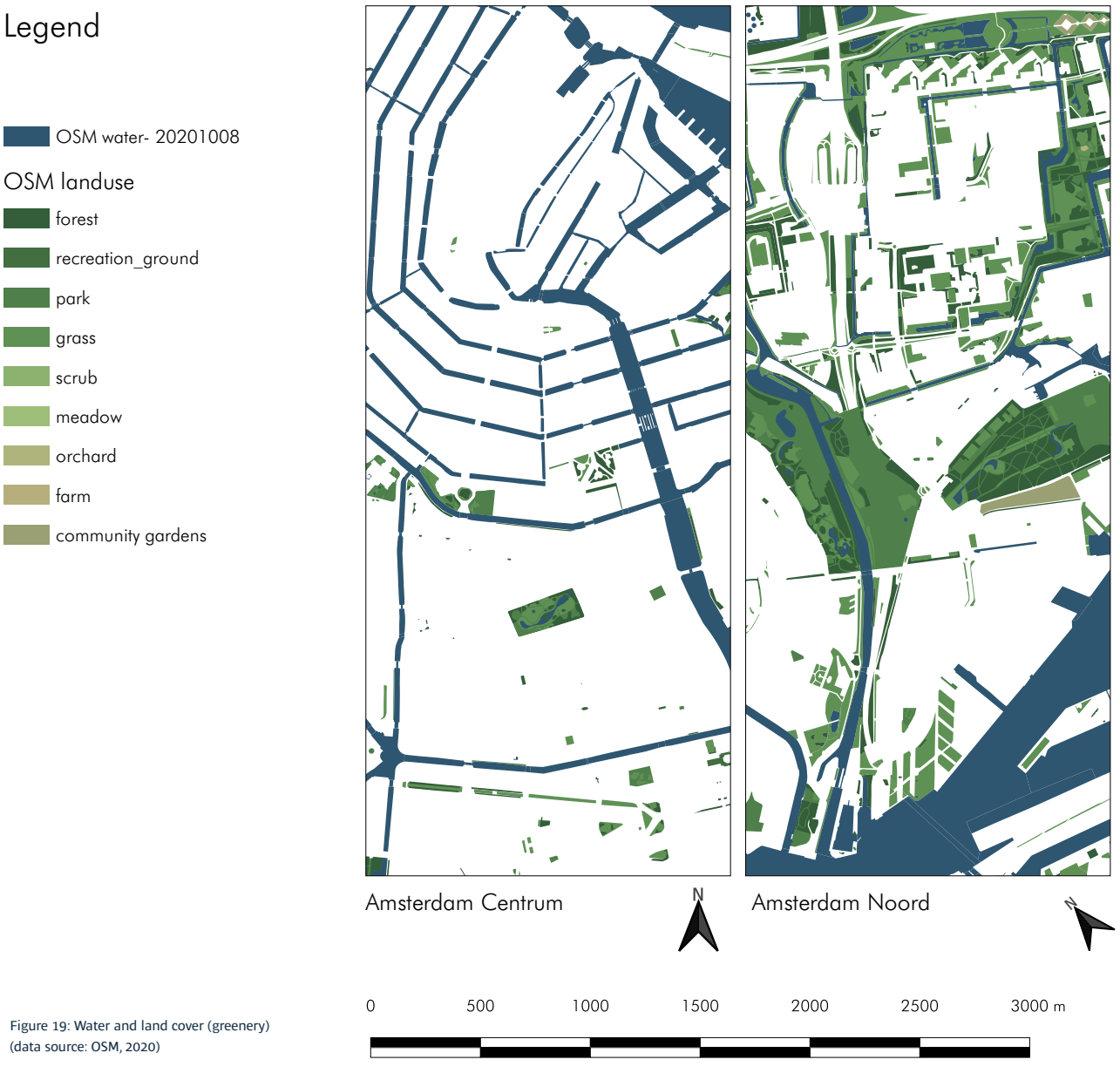


Figure 19: Water and land cover (greenery) (data source: OSM, 2020)

Public transport

This analysis shows the public transport options. Amsterdam Noord is mainly dependant on bus lines while the centre has many more options: tram, metro, busses. In the centre the public network has a grid-like structure bordering neighbourhoods. In the North the metroline (and other infrastructure) cut the city part in half, the bus lines follow the winding roads and cross many neighbourhoods. Amsterdam Noord is not directly connected to the national trainnetwork.

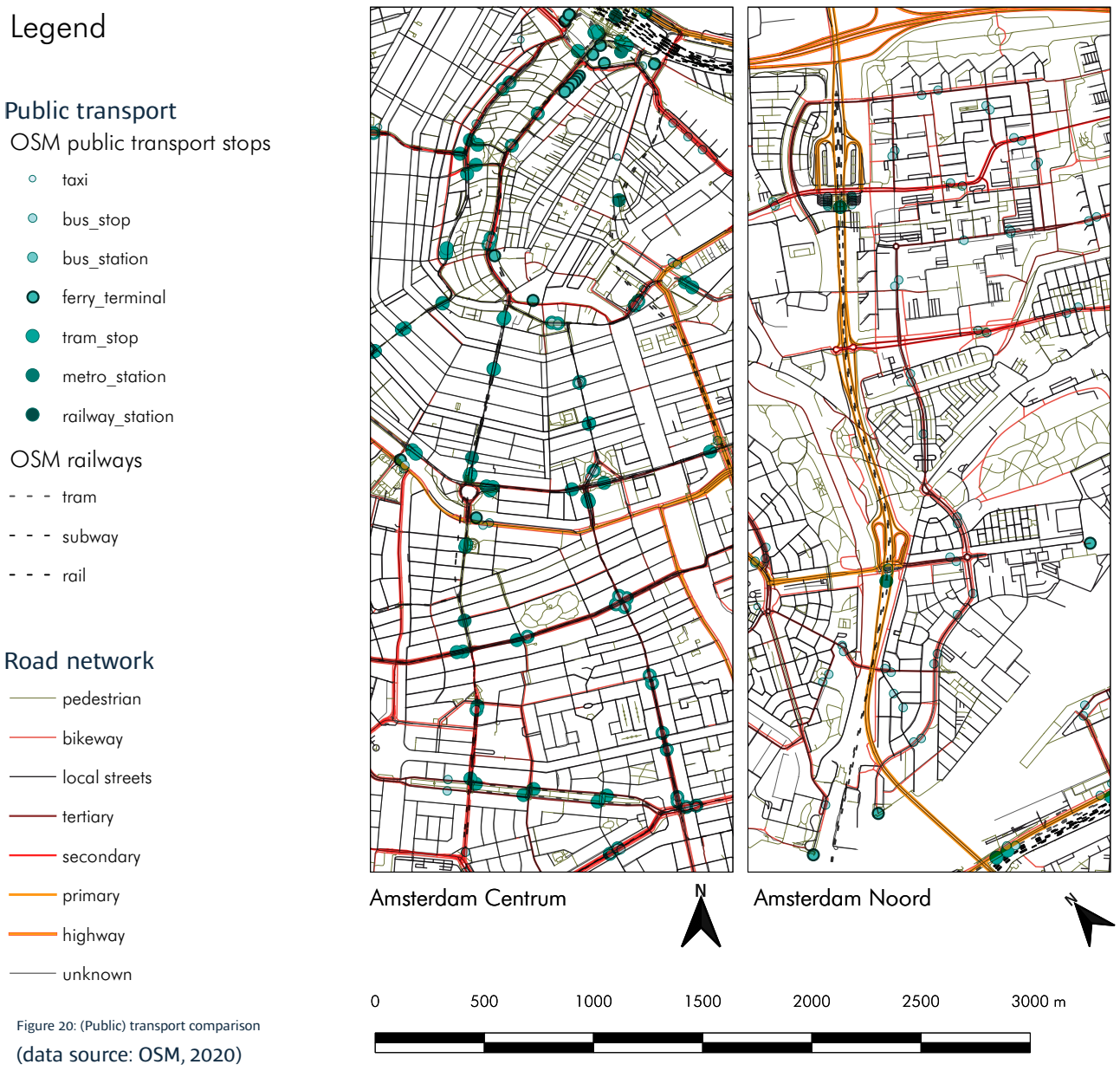
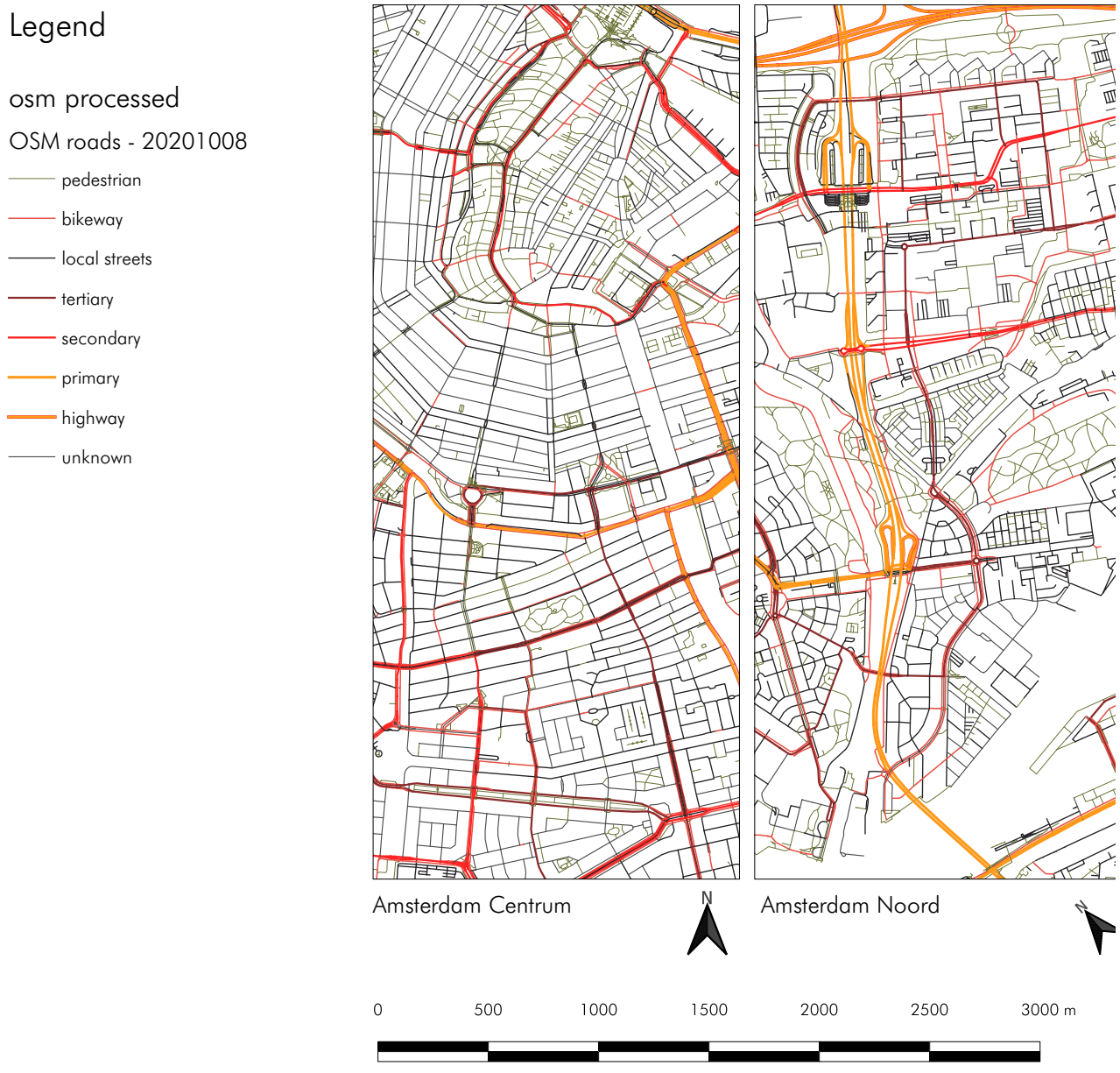


Figure 20: (Public) transport comparison
(data source: OSM, 2020)

Road network

This analysis shows the road network including pedestrian and bike lanes. The inner city has a fine-grained network of which much is pedestrianized. Around the inner city the road network follows a grid structure. This analysis follows the open street map hierarchy. Seeming randomly, some streets are more important while the grid hierarchy seems equal.

North is again cut in the middle by infrastructure and this primary road has only a few crossings. The roads are more tree-like and without the pedestrian and bike connections would have many cul-de-sacs. There are more pedestrian-only and car-only paths (the primary and secondary roads are often car-only).



Building density

This analysis shows the netto FSI of the building blocks. This is the floor-space index and is calculated by dividing the gross floor area divided by the plot footprint. The FSI indicates how intensely the space available is used. The built density gives an indication of the concentration of people. The actual concentration of people is difficult to measure because these include residents, the workers and visitors.

In Noord there are several open building blocks were only the buildings were counted, these have a high fsi (dutch standard) but the open space around them suggest that exactly the opposite is true. The medieval inner-city of Amsterdam has a relative high fsi because the built area is a lot. The buildings are not higher than 6 storeys. In general the Netherlands has a relative low density per block. However the contrast between the city centre and Noord is clear: the centre is much more dense. In North many blocks do not even have a fsi higher than 1.

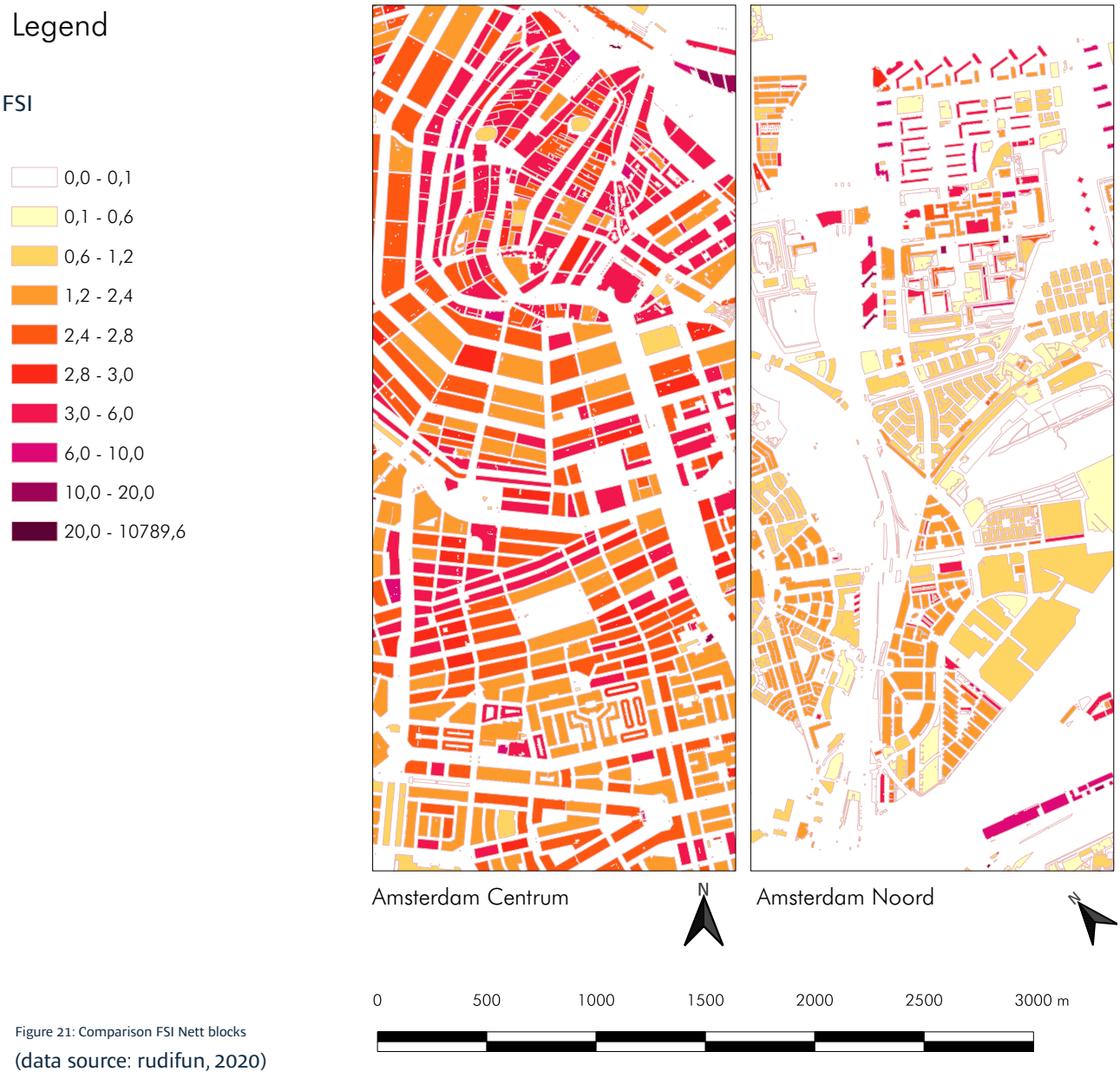


Figure 21: Comparison FSI Nett blocks
(data source: rudifun, 2020)

Mixed use

This analysis shows the mixed-use index per netto block and is calculated by dividing the residential floor space by the total floor space (Hoek, 2009). Black blocks are almost completely residential and the red blocks are not residential at all. The green building blocks show a vital mix of residential and other functions. Mixed use within the building block would mean that the block is used throughout the entire day. Completely residential areas (black) are more likely to be dull during the day when people are out working. Large red blocks are often industrial sites or business parks, these are empty at night and can attract anti-social behaviour (Jacobs, 1961). this visualisation shows the index on the block level but the importance of this index is within any walkable distance (Hoek, 2009).

The difference between the city centre and North is quite clear. North has several clusters of non-residential activities and other residential only areas, while the city centre has much more mixed use on the local level.

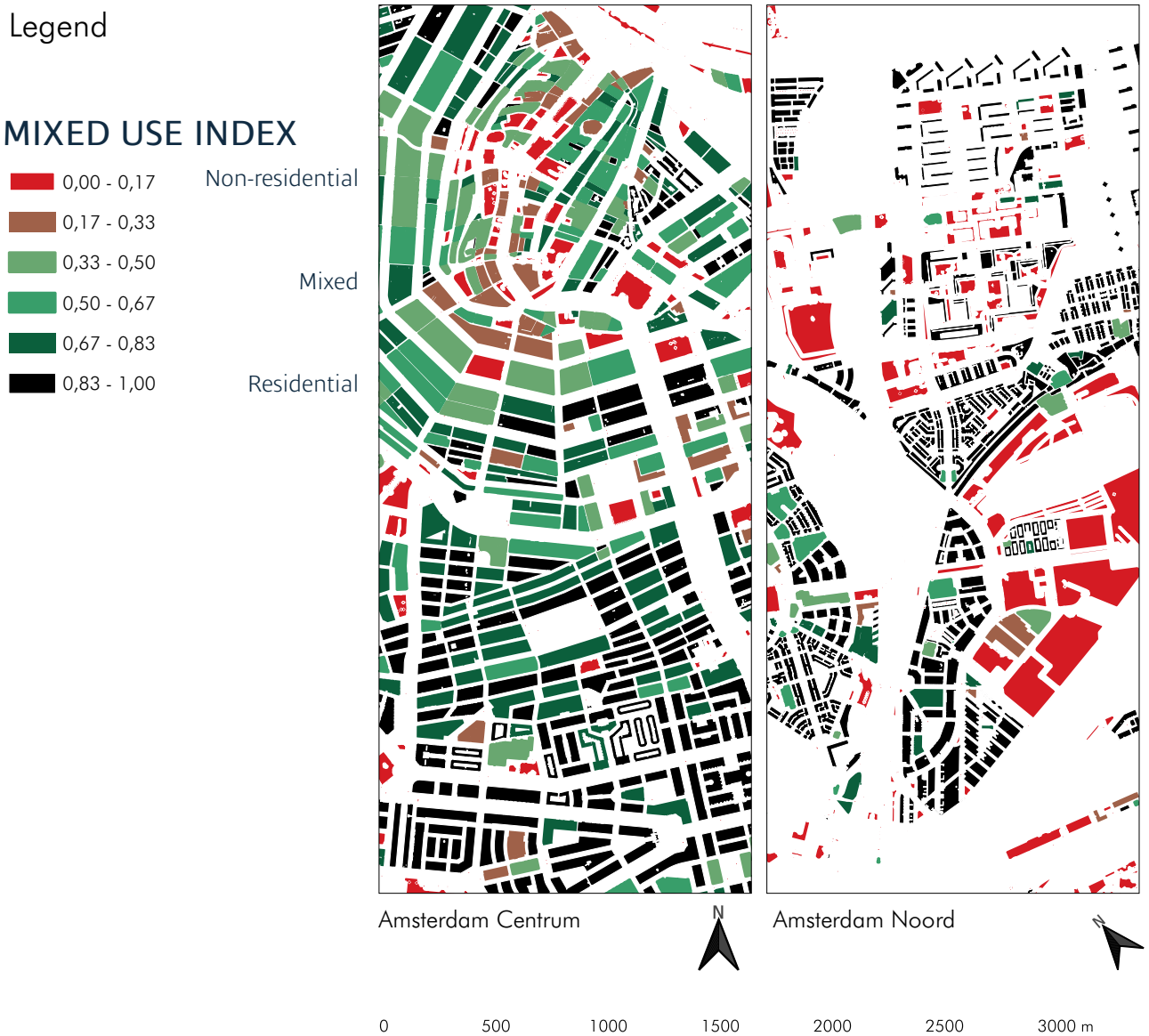
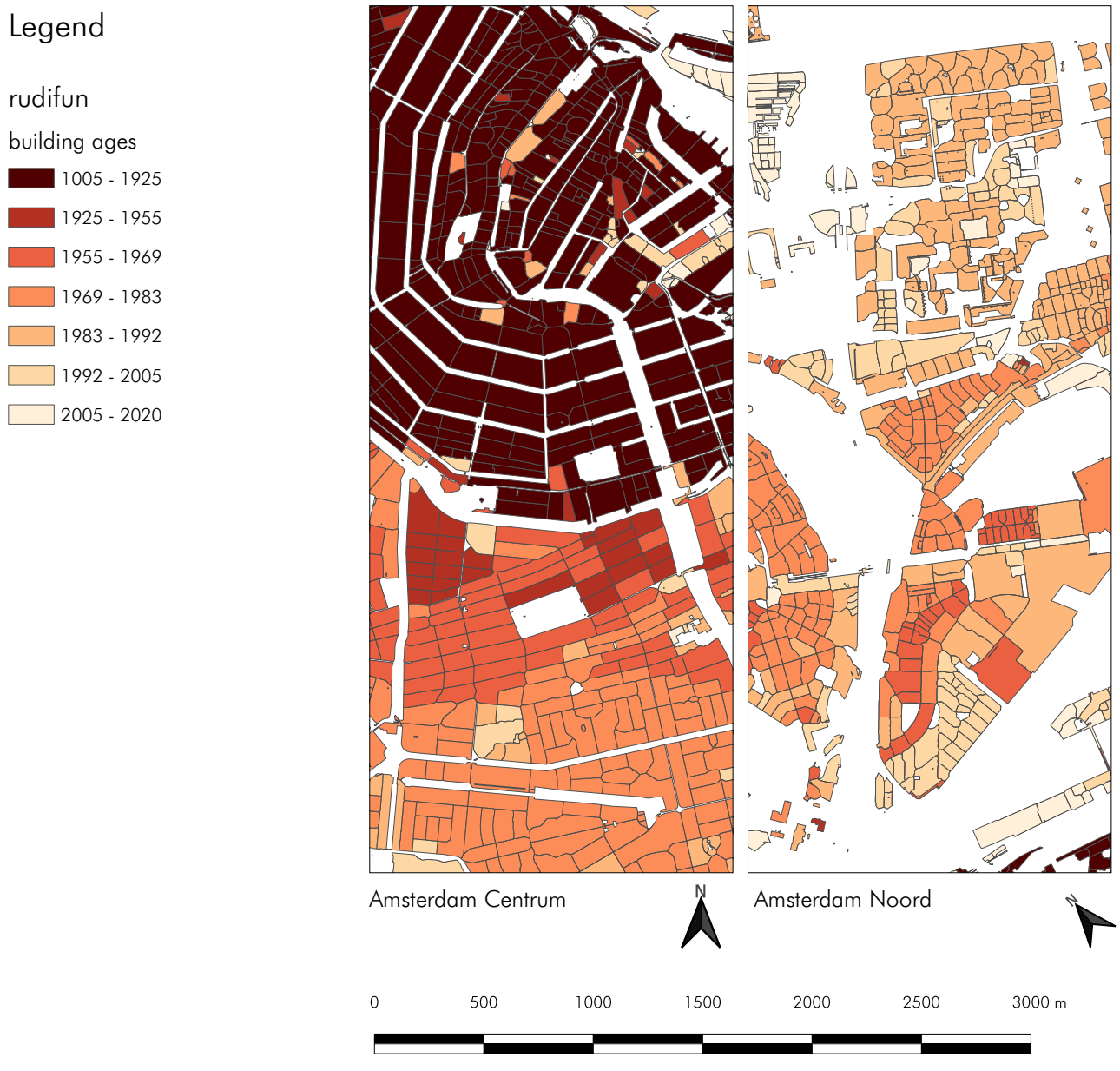


Figure 22: Comparison Mixed Use Index (data source: rudifun, 2020)

Building variety

This analysis shows the mean construction year of all buildings within a building block. The next page shows the standard deviation of the construction years off the buildings within a block. The standard deviation gives an indication (difference in years) of the variety of building ages and conditions. Renovated buildings and newly-built buildings are in a better condition and therefore more expensive. Older buildings can be cheaper and better to afford for small business-owners, students, artists etc. The variety in building ages contribute to the diversity of uses.



Building variety

The Inner city of Amsterdam is older and most buildings have been rebuilt and densified over time. Hence, there is a high standard deviation. You could say the inner city has an unfair advantage in that sense. Still, there are differences in the standard deviation (next page) in areas from the same time.



Activities

This analysis shows different functions; residential, work places and so-called third places (Oldenburg, 1989). Third places are the informal gathering places of communities and can range from bars and cafés to shops, places of education and offcial meeting places. Third places are an indication of urban vitality as they attract people and vice versa.

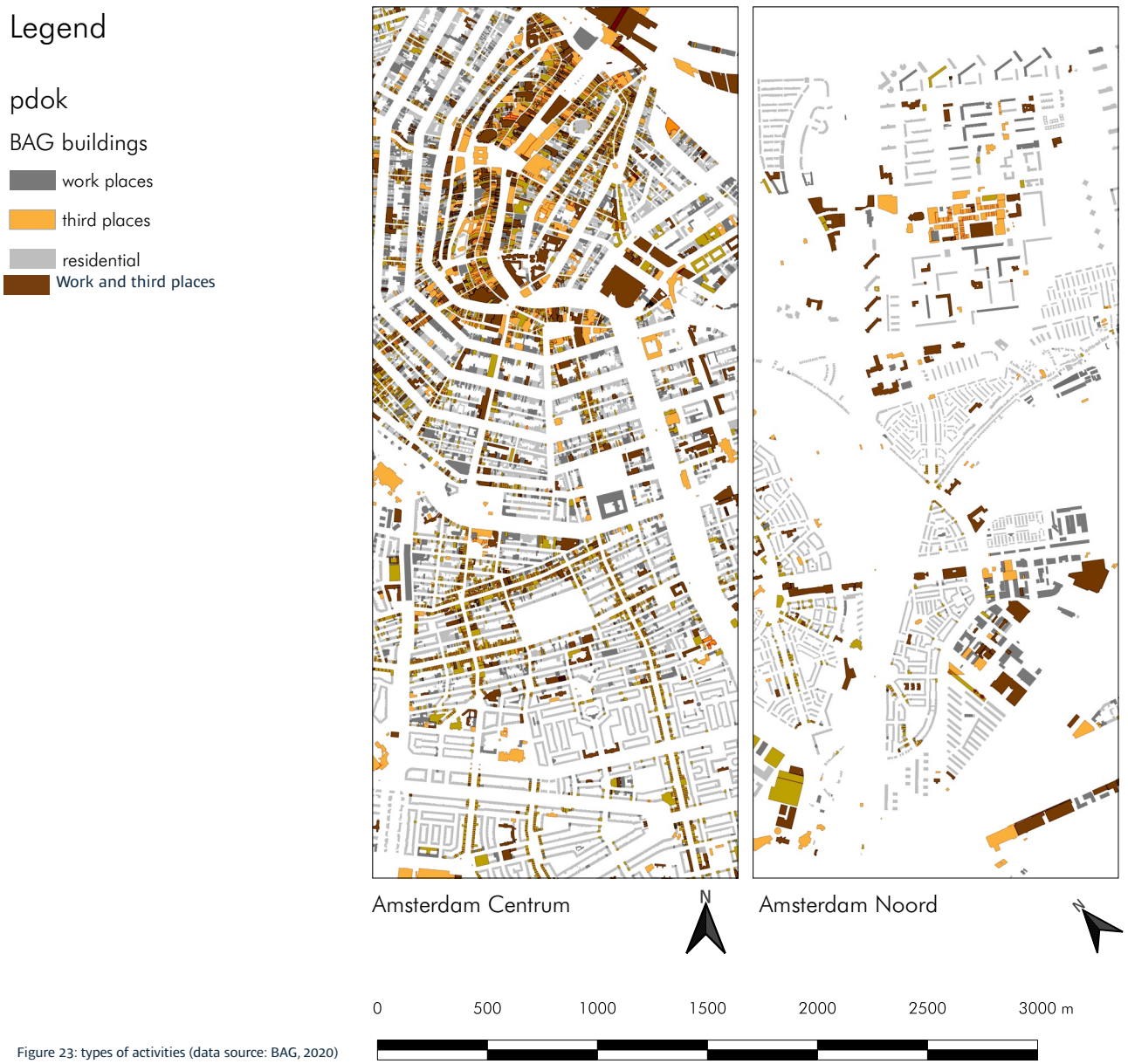


Figure 23: types of activities (data source: BAG, 2020)

Synthesis

Where the inner city of Amsterdam is especially mixed at a local scale, Noord is mixed at a district scale. This means that similar functions are clustered and surrounded by barriers (such as infrastructure and greenery). Where the inner city of Amsterdam has an almost continues urban layout, Noord does not have this. The general lack of variety in building age in Noord indicate that it lacks adaptability, it also suggests that since it has been neglected.

The low built density and separation of functions at a district level indicate that it is difficult to stimulate urban life and cross-use which requires a minimal critical mass. This also means that public functions like third places need to be clustered to be sustained.

The city centre and Noord are opposites in spatial conditions like these, in centrality and regarding reputation. Therefore, it might be interesting to compare other places as well that have more in common with Noord. his leads to the question what would a vital Amsterdam-Noord be like? What would it require and what is the environment? The new plans give the impression that certain areas in Amsterdam-Noord will be urbanized with – for dutch standards – cosmopolitan densities and increase the population much (see figure – 12). How do these plans relate to other neighbourhoods in Amsterdam-Noord, which are not that urbanized?

Problem statement

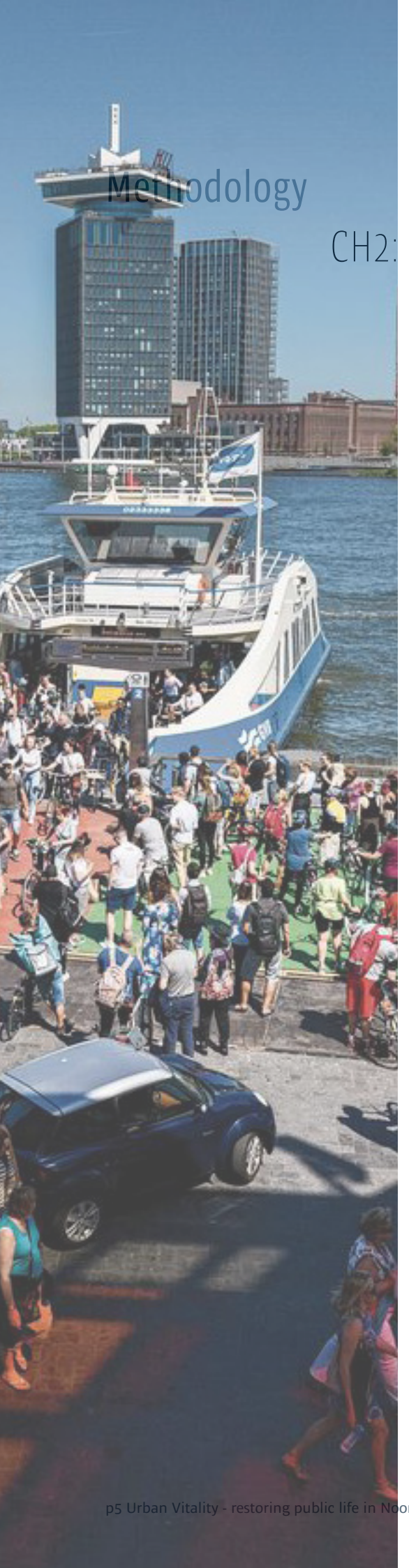
The problems described in the problem analysis such as neglect, isolation and poverty hint at a lack of urban vitality, which is a quality of cities that stimulates liveliness and liveability in general. It requires diversity, the concentration of people and accessibility to urban life and functions. When comparing Amsterdam-Noord and the centre. Noord lacks these qualities that are characteristic of Amsterdam as a city.

As the pressure to urbanize Amsterdam-Noord increases due to Amsterdam reaching its maximum building capacity, it is required to consider how Amsterdam-Noord can be adapted to manage the densification and urbanization. The gap between new and old (development and people) is striking and needs to be bridged.

The densification of Amsterdam-Noord is a place to start towards urban vitality. But to enhance urban vitality, the public realm has to be accessible and attractive for new and existing groups of populations to stimulate diversity and create opportunities for all.



Figure 24: What would be a vital Amsterdam-Noord? location: van der pekplein looking at new developments at Overhoeks (source: https://schlijper.nl/search/img/200520-img-1714-pano-amsterdam-van-der-pekplein.photo)



CH2: Methodology

- Research structure
- Conceptual framework
- Methods
- Relevance
- Planning

Research objectives

The purpose of this thesis is to understand how well-used public spaces can improve urban vitality and to understand the mechanisms of urban vitality. Therefore, this thesis turns to Amsterdam-Noord, a part of Amsterdam that is under high pressure to be densified and urbanized as it is has the biggest strategic building potential.
But in order to enhance urban vitality there is need for further change besides building new homes that stimulate public life and the use of the public realm.
Another problem that is influenced by the absence of urban vitality is the lack of social capital. It is necessary to improve social capital, to deal with the existing community and enable them to grasp opportunities and build beneficial relations with the newcomers and vice versa. Therefore, it is important to look at the places where these groups might interact: the public spaces. This thesis aims to explore how public spaces can cater a variety of activities to stimulate cross-use, diversity and healthy unforced interactions. This requires urban vitality: lively urban places.

Public spaces need the sufficient environment to do so; hence, it is important to look at the physical environment as well as the socio-economic environment to understand the local reality in specific contexts. Thus, this thesis will look at specific public spaces, it's surrounding urban configuration and the socio-economic situation: liveability, local economy, demographic built-up, the health of communities and the third places where they might gather.

THE RESEARCH AIMS OF THIS THESIS:

- To understand how urban vitality can be enhanced in order to enrich local neighbourhoods for existing and future users (residents / workers / recreational) and increase social mixing.
- To understand which urban configurations can stimulate urban vitality.
- To explore urban design patterns that induce urban vitality and urban life in the public realm.
- To find the tools to sustain urban vitality and to develop a strategy using those tools.

SUB QUESTION

PROBLEM FIELD

1) What conditions and dynamics create / enhance Urban Vitality?

2) What are the conditions leading to a lack of Urban vitality Amsterdam-Noord?

CONTEXT ANALYSIS

3) Which areas in Amsterdam-Noord can meet the conditions to become vital?

4) What are the local needs that can reinforce the use and management of vital places and stimulate social capital?

FRAME OF REFERENCE

5) Which urban configurations and patterns contribute to Urban Vitality?

DESIGN & STRATEGY

6) What structural interventions are necessary on the network scale and urban configurations that contribute to urban vitality

7) What urban design patterns can be used to improve urban vitality and urban life in the public realm?

8) How can urban vitality best be maintained?

Main research question

How can urban vitality be enhanced and maintained in order to stimulate urban life in Amsterdam-Noord?

METHODS	EXPECTED OUTCOME
Literature review	Theories essay & guiding principles
Spatial analysis /Desk research / socio-economic analysis	Identification of problem sites / understanding of underlaying dynamics & conditions
Spatial analysis / Observations / interviews or surveys	Identification of strategic intervention sites
Observations / interviews or surveys / secondary research / desk research	Identification of management strategy
Case studies / literature review	Frame of references (catalogue) & guiding principles
Design explorations / scenario building	Design experiments on the network level and urban fabric
Design explorations / scenario building	Design experiments on the block level and public space
Scenario building / governance strategy	Strategy for management, maintenance and development of the public realm

Conceptual framework

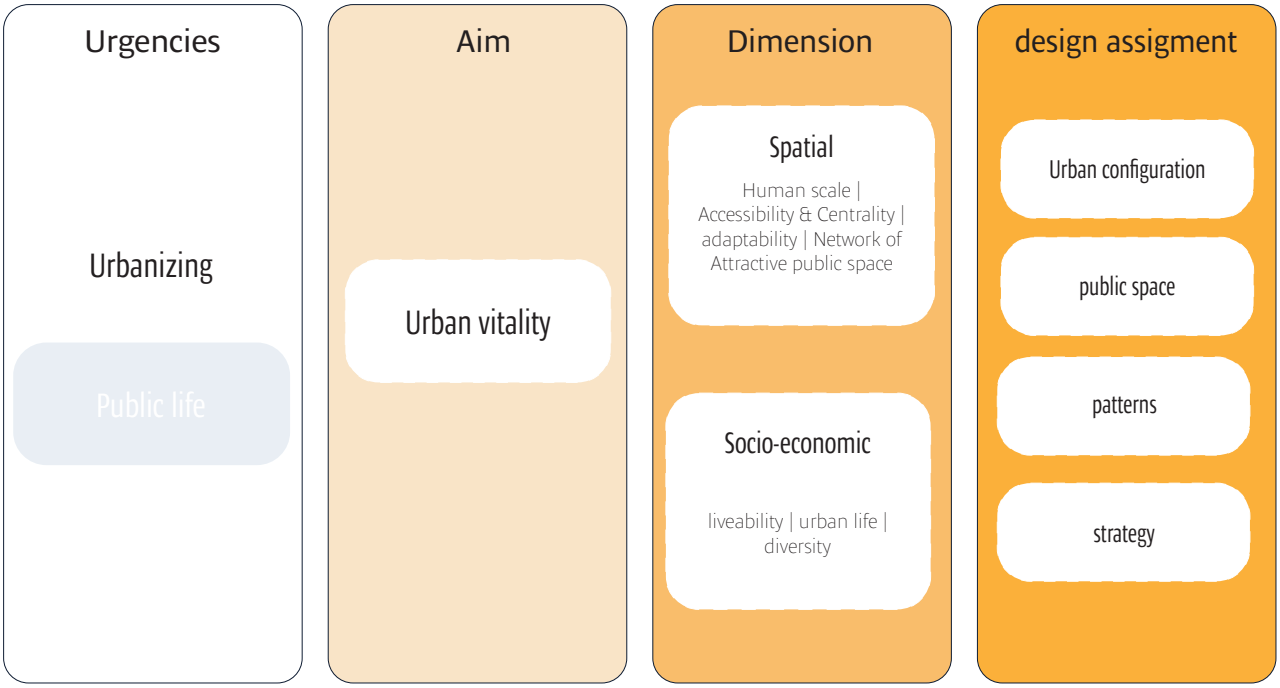


Figure 25: Conceptual Framework

This research uses the conceptual framework as shown in figure 25. Two urgencies shape the problems in Amsterdam-Noord, as explained in the problem statement. This research aims to explore how urban vitality can be used to solve these issues. This research divides 'urban vitality' into two interrelated dimensions: the spatial and socio-economic dimension. This division helps to structure related concepts, which will be explained in the next section. Different possible interventions align these specific domains, some more spatial, others strategic. The research combines the interventions in a general pattern language and applies these in a final and strategy for strategic sites in Amsterdam-Noord.

The final design will intervene on three levels through sub-questions 6, 7 and 8, considering urban structure, public space design and strategy.

The final design will intervene on three levels through sub-questions 6, 7 and 8, considering urban structure, public space design and strategy.

The following section provides the theoretic underpinning of concepts introduced in the conceptual framework and how these relate to the methods used in this thesis.

Theoretic underpinning

Urban Vitality

The literature review that accompanies this research (Appendix 1) defines urban vitality as the capacity of urban places to be lively and adapt to changing context. If urban areas meet spatial conditions are met, only then can urban vitality thrive. The most common method to measure vitality is through pedestrian activity. This evaluation often leads to the wrong assumption that too much vitality leads to overcrowding (Gehl, 2010; Jacobs, 1961; Whyte, 1980).

Urban vitality combines two concepts: vitality and urban. Urban is the city, but what makes a city urban? Cities were developed to facilitate exchanging information, goods, resources, culture, skills (Montgomery, 1998, pp. 96–97; Tonkiss, 2013, p. 56). This so-called transaction base distinguishes urban places from rural or suburban places; the lack of activities. Marriam-Webster (n.d.) defines vitality as: "lively and animated character; the power of enduring; the peculiarity distinguishing the living from the non-living; capacity to live and develop; physical or mental vigour especially when highly developed".

Places rich with urban vitality are often more liveable (Gehl, 2010; Jacobs, 1961). Urban vitality is what attracts people to use the public realm and participate in public life. Urban vitality contributes to the safety of well-used public spaces, inclusive communities and social cohesion by providing opportunities for interaction and integration with 'other' people (Legeby, 2013; Oldenburg, 1989); to social wellbeing through walkability, accessibility and increasing opportunities for social interaction. Oldenburg (1989) specifically points out the importance of places where people can meet and relax informally for personal wellbeing and inclusive communities. Furthermore, urban vitality requires diversity, the concentration of people and functions, and thus certain compactness. Compactness is more environmental-friendly because it can make public functions more accessible, cater better to public transport and reduce carbon emissions (Gehl, 2010; Tonkiss, 2013, p. 44).

DIMENSIONS OF VITALITY

Around the world, more places are urbanizing, and urban populations are growing. Urban forms and urban experiences play an essential role in urban settlements and social interactions. They are also a result of economic arrangements, social relations and divisions, legal constructions and political systems (Tonkiss, 2013, p. 10). Therefore, this thesis considers two dimensions of urban vitality: the socio-economic dimension that considers urban life and the spatial dimension that contemplates the material city.

Socio-Economic dimension

The socio-economic dimension regards the governance side and urban life. It focuses on the processes that produce urban life and liveability. Urban experiences and social interactions result from economic arrangements, social relations and divisions, legal constructions and political systems (Tonkiss, 2013, p. 10). The focus of this dimension are:

- the processes and activities that stimulate urban life, which requires safeguarding;
- promoting healthy lifestyles and liveable environments;
- nurturing and preserving diversity in the right places and times.

Therefore, the end product of this thesis includes a governance strategy to deal with these matters.

URBAN LIFE

Urban life results from the activities that attract people to the public realm in cities. Points of interest embed these activities in space and stimulate pedestrian activity on the network between these points (Hillier & Hanson, 1984; Legeby, 2013). The literature review (see appendix 1) classifies points of interest, street life and third places as urban vitality indicators. At the same

time, they are also essential in the provision of urbanity as they make up the transaction base for the local economy and exchange within the community.

third places

Third places are vital to cater the gatherings that stimulate the sense of community (Oldenburg, 1989). Oldenburg (1989) highlights the importance of (third) places that support an informal public life for the sense of community and even the personal wellbeing of individuals. Where the first place is the home, the second place is the work place, the third place is the place where one can go to contemplate or relax. He claims that the privatisation and commercialisation of urban entertainment causes mental health issues in the united states (Oldenburg, 1989, p. 36). Good third places are inclusive in nature as they are accessible for all and equalise each visitor. If there is a threshold to enter or a dominant social group as regular than this place is not a third place.

LIVEABILITY

Liveability is the degree to which a place is suitable for living. It involves several factors like the physical environment, safety, economic prosperity, educational opportunity, social stability and equity, inclusiveness, environmentally sustainable, cultural and recreation possibilities (Higgs et al., 2019; Partners for Livable Communities, n.d.). Urban vitality is not the same thing as liveability. However, it enhances liveability as it directly relates to inclusiveness, the physical environment, social stability and equity, cultural and recreational possibilities. Also, it links indirectly to economic prosperity and safety.

SOCIAL CAPITAL

Vital cities allow their inhabitants to build social networks that enable them to grow and develop. Social networks enable people to gain information and relationships, resources and opportunities. Social networks are valuable, which is called social capital (Putnam et al, 1993 in (Legeby, 2013, p. 54).

This specific example relates to a theory called the strength of weak ties by Grannovetter (1973, in Legeby, 2013, p 53); an acquaintance can become a crucial bridge between social groups. Not having those weak ties will limit the integration of people to take part in modern society. There are two types of social capital: bonding and bridging (Legeby, 2013, p. 55). 'bridging' relations are those with individuals outside a group – the group can be age, family, religion, organisation – and 'bonding' relations are those within a group. Bonding relations stimulate loyalty and solidarity within the group but can generate antagonism to outsiders. Social capital, in general, can enable people to use networks to organise and take part in civic life: speak up as a group or find the right person to arrange things.

Inclusive communities

There is a slight geographic element to social capital. People who have bonded with their living environment are more likely to invest and care for it and the local relations they built there, making better communities (Bolt et al., 2011; Montgomery, 1998). In lower-class homogenous neighbourhoods, the lack of diversity can lead to a strong sense of community within and resentment toward outsiders, making communities less inclusive (Bolt et al., 2011; van de Kamp & Welschen, 2019).

DIVERSITY

Economic and cultural diversity makes cities more adaptable to economic and societal changes. Economic over-specialisation affected many industrial cities like Detroit, the German Ruhr Valley (Tonkiss, 2013, p. 55). The same still impacts Amsterdam-Noord, segregated from the centre to contain the industry and its working force. The lack of other activities to fill the void caused much poverty when former labour-workers became unemployed. It shows that urban forms outgrow their designers' intentions over time (short term or long term). There is no end-user for urban design, just users over time (Tonkiss, 2013, p. 13). Therefore, the built environment ought to be adaptable and be able to afford more activities.

Spatial dimension

The spatial dimension is the material city or urban fabric. The conceptual framework mentions four principles derived and iterated from the literature review (see appendix 1). The spatial dimension is most important and will come together in this project's urban configuration and public space design.

Designing for urban vitality means considering the experience for people who experience the space at a slower pace, to give them movement space and options of where to walk, activate the ground floor for activities that interact with the street, by adding street furniture, to increase the experience through horizontal and vertical granularity and compactness. There has been much research into activating urban space (Gehl, 2010; Karssenberg et al., 2016; Montgomery, 1998; Sim, 2019; Whyte, 1980).

URBAN CONFIGURATION:

Urban vitality or urban life requires density, compactness and diversity (Jacobs, 1961; Tonkiss, 2013, p. 33); this relates to the urban form and layout of places; referring to urban morphology. Urban morphology consists of the layout and configuration of urban form. Morphology studies have shown how several key elements make up settlements and have emphasised the differences in their temporal stability (Carmona & Tiesdell, 2007, p. 61; Tonkiss, 2013, p. 14). These range from the buildings and their uses, to building plots (parcellation), to the most enduring: street pattern and the landscape layer, but also include the flows of people and things; patterns of mobility and urban life can change daily, seasonally and as a whole within generations. Although enduring, the street network and landscape layers can be altered, with huge impacts.

Urban morphology is divided in two fields: space morphology and typo-morphology. For this thesis space morphology plays an important role, regarding accessibility and centrality for the socio-logic of space (Hillier & Hanson, 1984; Legeby, 2013). Typo-morphology is relevant for how the building blocks are made up regarding density and concentration of people (Jacobs, 1961; Pont & Haupt, 2009; Tonkiss, 2013) and diversity of activities (Hoek, 2009; Jacobs, 1961; Tonkiss, 2013).

NETWORKS | ACCESSIBILITY & CENTRALITY.

Urban space is not just a stage for interactions; it influences and shapes social processes (Hillier & Hanson, 1984 in: (Legeby, 2013, p. 13)). It can cause segregation or integration and this can be altered by making new network connections. Deep hierarchical spatial structures limit movement and dictate interactions; open and gridlike spatial structures give more choice and freedom and a multitude of unintended encounters. The second structure advocates mixing of people – and therefore cultures, the first structure exerts more control over who meets and where (Legeby, 2013, p. 59). Therefore, the spatial configuration (how things are put together) influences social integration and urban life. there are arguments pro-mixing and pro-segregation (Legeby, 2013). In the case of Amsterdam-Noord the context of segregation has been considered problematic and previous attempts to mix groups of residents by hosting community events had been unsuccessful (van de Kamp & Welschen, 2019). Van de Kamp and Welschen (2019) advised to stimulate mixing in public space by establishing public familiarity through co-presence without enforcing actual interactions. Space syntax theory illustrates how spatial layouts can embody social patterns and movement: the urban configuration of space. It looks at the integration, centrality and accessibility of space and in particular paths (being streets or any type of linear movement).

DENSITY & DIVERSITY | ADAPTABILITY

Any human settlement is distinct from others because of their size, density and heterogeneity. Urban form is the spatial pattern of large and passive physical objects in human settlements. How these are organised can result in many different forms and degrees of complexity in urban contexts (Tonkiss, 2013, p. 33). This is typo-morphology; the studies on the physical built environment.

Space is defined by the built form and spatial networks

are populated by people living in buildings. The concentration of people or buildings in space is urban density. Density is a relational matter: too much density can lead to overcrowding which might result in contagion, pollution and disorder; too little density causes sprawl which can lead to inefficient private mobility patterns and a lack of critical mass to have the positive agglomeration effects of cities (Tonkiss, 2013, pp. 43–44). From older cities it is possible to deduct that vital cities can find the right density and balance to sustain urban life and culture as long as it remains possible to re-use and adapt the built tissue (Jacobs, 1961; Tonkiss, 2013, pp. 44, 53).

It is well-known that density and diversity are vital for sustainable development. There are different methods to define density: population density, employment density, dwelling density, FSI, GSI. All these measures have their limitations as people density should be considered through time and space, people do not spend all their time at work or at home (Pont & Haupt, 2009; Tonkiss, 2013). To measure real people density big data can be used (Delclòs-Alió et al., 2019; Liu et al., 2019; Yue & Zhu, 2019) or tracking people in public space (Gehl & Svarre, 2013; Jalaladdini & Oktay, 2012; Whyte, 1980). As mentioned, people do not spend their time at one place, they have different needs and activities. Jacobs (1961) implies that density is necessary to support a diversity of uses, users and cross-use.

Economic and cultural diversity makes cities in general more adaptable to economic and societal changes. The built environment should be able to afford different uses and activities to enable the city to adapt. In general, Urban forms outgrow their designers' intentions. There is no end-user for urban design, just users over time (Tonkiss, 2013, p. 13). Therefore, the built environment ought to be adaptable and be able to afford more activities. This can be done through small changes in the urban block that allows different activities in the front and back, different building types and conditions (building ages) are suitable for different working / living environments and styles (Karssenberg et al., 2016; Montgomery, 1998; Municipality of Amsterdam, 2019; Sim, 2019).

PUBLIC SPACE

Public space is the stage for most social processes in cities especially for those interactions that support social inclusion (Legeby, 2013). Public spaces are vital for successful cities as they help to create a sense of place and community, civic identity and culture (Legeby, 2013; Project for Public Spaces, 2012, p. 1).

What one can experience while traveling through public space is the public realm: this includes the façades and plinths of building (Karssenberg et al., 2016) and can include all indoor public functions such as third places. Third places are not limited to outdoor public space but also include public functions like libraries, shops, services and the hospitality industry (Oldenburg, 1989). Where public space ought to be accessible for all, third places can also be privately-owned functions and can be considered as part of the public realm. As an urban designer the influence on the public realm is limited but it plays an important role in urban vitality. However, the public realm should be considered when dealing with urban vitality (Karssenberg et al., 2016).

There are many types of public space: the most obvious ones are open public spaces like parks, squares and streets of various sizes but also, unpretentious things like playgrounds, courtyards, alleyways, sport fields, bridges and bus stops. Secondly there are public institutions like libraries, stations, public sport facilities. These are also very accessible but there may be conditions to enter or participate. Thirdly, there are clubs, society houses, cafés, pubs and bars etc, which facilitate informal social encounters, these can be exclusive for members of a specific social group but are very meaningful (for the members). Furthermore, there are working places and educational institutions where many people spend much time and can establish important relations. All of these spaces can host events and happenings which can be can be one-time occasions to regular events where members of communities gather (limited to group members, open to outsiders or for entire communities). Lastly there is the realm of virtual communities which is not necessarily bound to space.

Guiding principles



1) Diversity [district level / block level / soft level]

- (Cross) Use -> local economy
- People -> heterogeneous society
- Activities -> informal public life



2) Concentration of people [district level / block level]

- Density -> critical mass



3) Human scale [block level]

- Walkability -> street-life
- Permeability -> experience
- Granularity -> experience



4) Adaptability [block level / software]

- Building condition (age) -> heterogeneous society
- Diversity of uses -> triangulation / heterogeneous society



5) Accessibility & centrality [district level]

- Space syntax -> social logic of space
- Access to public functions -> street-life



6) Network of attractive public spaces [district / block level]

- Network -> social logic of space
- Physical environment -> street-life



7) Urban life [block level / soft level]

- Points of interest -> informal public life
- Pedestrian activity -> street-life
- Third places -> informal public life



8) Liveability [soft level]

- Social capital -> informal public life
- Inclusive communities -> heterogeneous society
- Local economy -> triangulation

Methods

The previous section explained relevant elements to research regarding urban vitality. The next section describes how these elements will be studied using which methods. These range from quantitative to qualitative and from local to regional methods. Urban vitality is a phenomenon best to be observed directly out in the public space where all characteristics come together. But such observation is also just a momentum in time and it does not necessary explain the underlaying conditions that make it vital. The methods that will be used in this thesis are supposed to develop a better understanding in the lack of urban vitality in Amsterdam-Noord and will look at opportunities to improve that situation.

This thesis uses a mixed methods research approach with methods ranging from analytical research, qualitative research, design research, theoretical research and descriptive research.

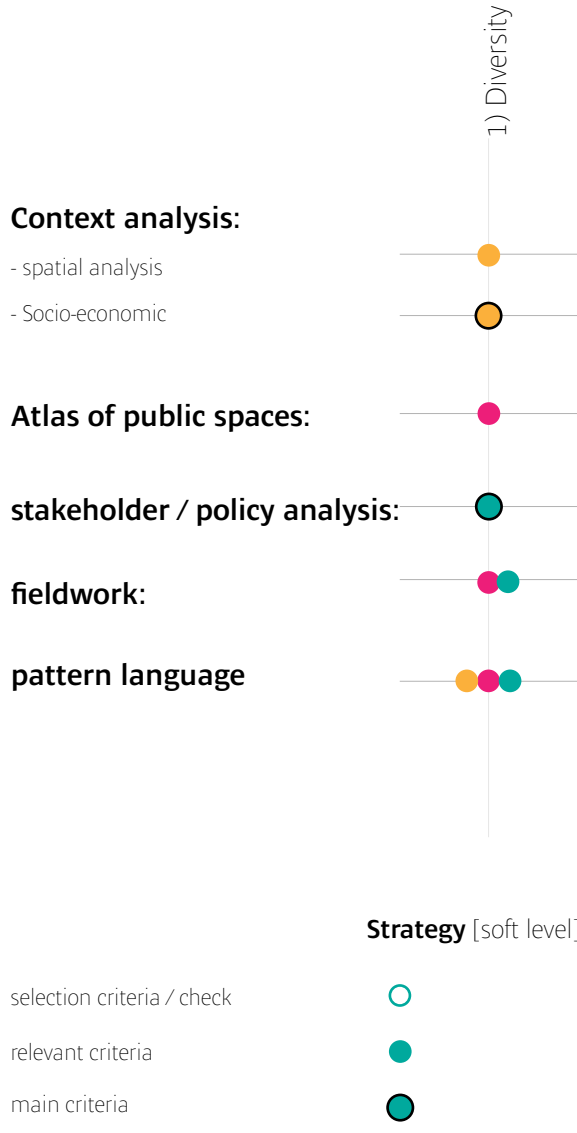
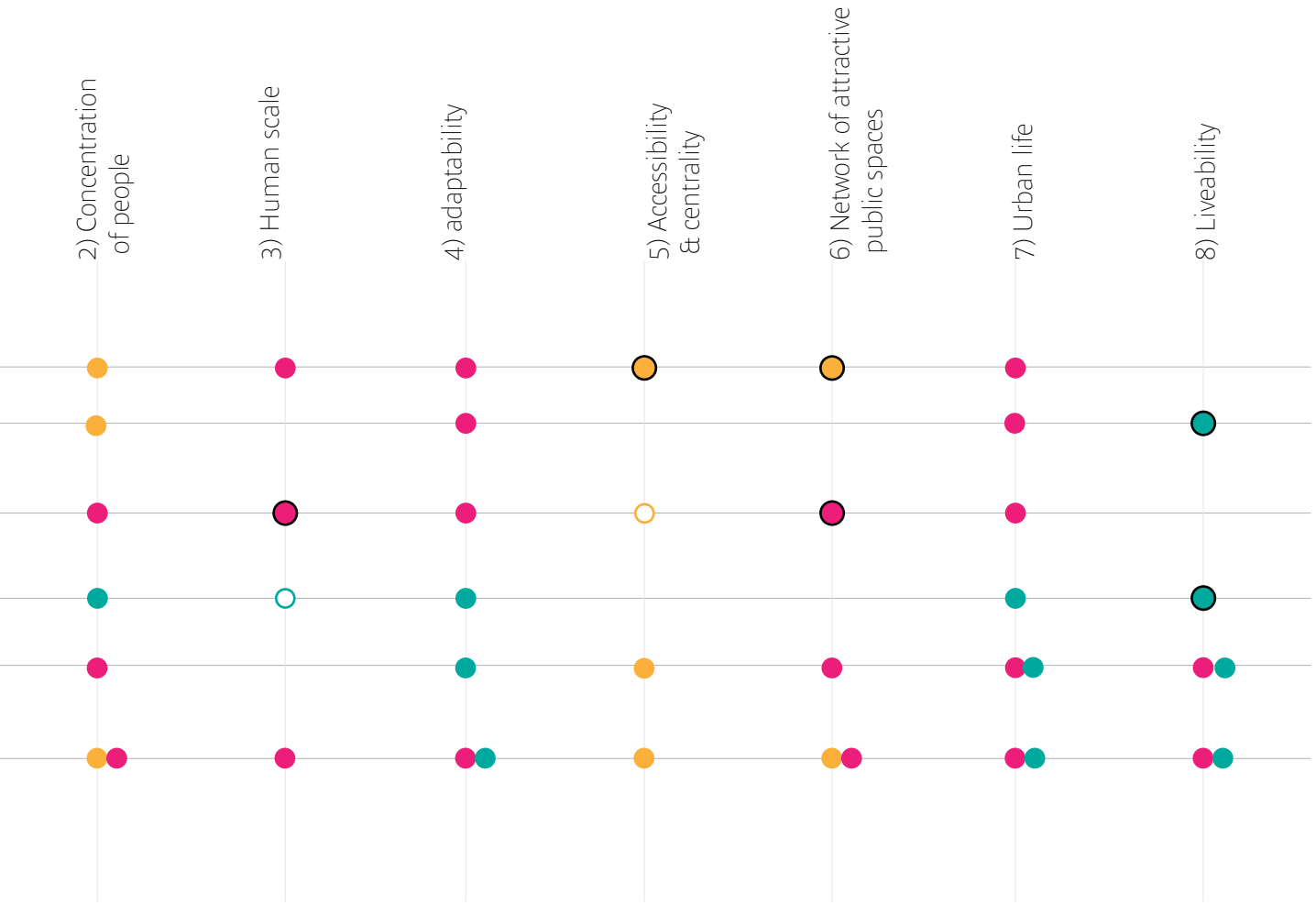


Figure 26: Scheme with methods in relation to guiding principles and final desig



Urban configuration [district]

Public space [block level]

Context analysis

Mapping and synthesising between different maps (layers) form the foundation for understanding spatial problems. The Netherlands and Amsterdam has many geographical information available which can be used through GIS for synthesis and comparison. This includes geographical basic topographical information (land use, road networks) but also buildings shapes and functions, demographic information (OIS Amsterdam, 2020b), pre-calculated densities (PBL, 2020).

This data will be used as a base for spatial analysis on urban morphology and for the inventory of public spaces used in the atlas of public spaces. It will be used for GIS analysis on integration - space syntax (Hillier, 2007; Hillier & Hanson, 1984), on density and mixed use (Pont & Haupt, 2009). It will be used for the socio-economic analysis that includes the demographic built up of the area on different scales (entire city part, districts, neighbourhoods) to look at diversity, inequality, liveability, segregation and to get a better understanding on the problems, potentials and opportunities for Amsterdam-Noord.

The analysis and synthesis of the work will help to understand why Amsterdam-Noord lacks vitality and may inform if the altered configurations may contribute to urban vitality. It also ought to direct the project towards certain intervention sites that are either in critical need of transformation or can be strategic as an opportunity for change may arise.

Fieldwork

To understand the actual use of public space on a local scale, fieldwork is the most suitable method (Gehl & Svarre, 2013). As this is a qualitative research method and very context-specific, the spatial analysis of public spaces needs to be done first to understand what public may be strategic to intervene. On the other hand, there might be discrepancy between the results of the spatial analysis and the local reality, which is why doing fieldwork is extremely valuable. This thesis will include observations of behaviour in public space. This ought to identify the local reality and find out what are the main attractions and gathering places. However, the COVID-19 situation does make fieldwork on urban life more challenging as lockdown measures restrict urban life.

Atlas of public spaces

City-making is a continues process of experimenting that has started ages ago. Therefore, it is not required to invent everything anew, but is it possible to look at other places. The atlas of public spaces entails a comparative analysis of different places (cases) that show the signs of urban vitality: streetlife, points of interest, attractive open spaces, third places. This analysis will be done twice, once for deeper understanding of local sites in Amsterdam-Noord. These will be evaluated using the urban vitality principles. Later in the process cases that have been reported as liveable or where revitalisation was successful will be analysed to extract design elements

Pattern language

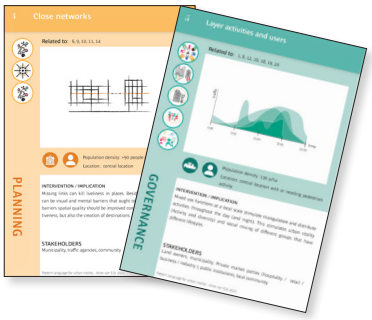


Figure 28: Patterns

The pattern language is a simplification of design research; often designers use guiding principles to bridge the gap between research and design, between theory and space. Those guiding principles can often be derived as patterns, if founded in theory and related to other patterns in a system (Alexander, 1979; Alexander et al., 1977). The relations between patterns relates to the complexity of life in spaces, but the simplification of patterns is what can make things understandable and relatable. Patterns should follow the same format. Patterns can help to make ideas explicit and transferable both in space and in governance.

Governance & strategy

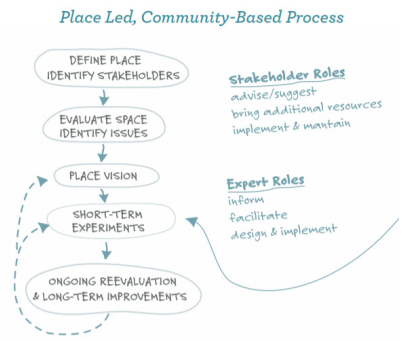


Figure 27: Example strategy for placemaking (source: project for public spaces, 2018)

Urban vitality is a result of processes and pre-conditions that make the city. These processes are a result of governance: many stakeholders and actors working together or against each other to make (use of) places. This requires management and strategies to make and maintain urban vitality (Project for Public Spaces, 2012). The management and maintenance of the public realm is a collaboration of many stakeholders: policy makers, government, entrepreneurs, developers, property owners, corporations, environmental managers, politicians, crime bosses, pension funds, asset managers and anyone who cares for a public space (Karssenberg et al., 2016; Milikowski, 2018; Project for Public Spaces, 2012; Tonkiss, 2013). It is the result of innumerable more or less conscious designs and plans that can be intentional, improvised, long term, temporal ore even incidental.

Research by design

This thesis is design-oriented: that means that the lessons learned from theory needs to be applied and tested through design. There is an explicit design phase in the later stage of the process. However, design is an iterative process and that means that lessons learned from the atlas of public spaces, spatial analysis and fieldwork will be translated and experimented with through spatial patterns and design experiments. This process is called the design feedback loop and can be tested with different scenarios and situations.

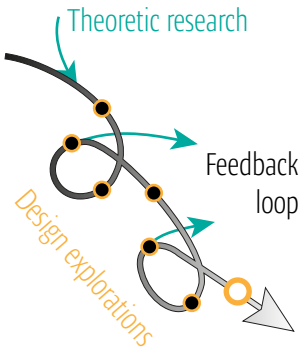


Figure 29: Illustration Research by Design



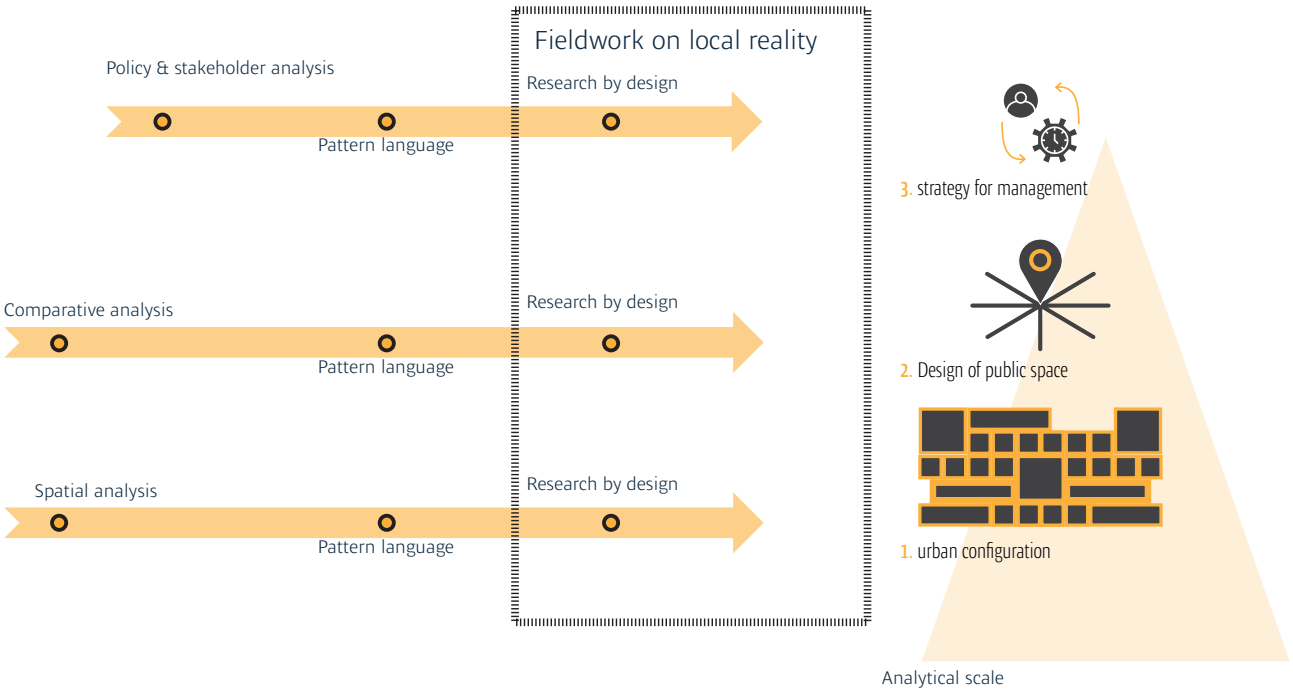
Figure 30: a-c What will be the future of Noord?

Design assignment

The lessons learned in the research will be synthesized in a final design at a specific location in Noord. Literature has shown that urban vitality can only show in places that meet certain conditions: being in the right urban configuration and the right management of the place through time. By doing a proper analysis this project hopes to determine the right kind of urban vitality that applies to the local reality of Noord.

Therefore, this project will be concluded with:

1. A proposal for a structural intervention for the urban configuration at the neighbourhood scale;
2. A design proposal for public space within that neighbourhood;
3. A strategy for the management and governance to keep that public space alive and attractive.





CH3: Context analysis

- Part 1: spatial perspective
- Part 2: socio-economic perspective
- Vision for urban vitality in Amsterdam-Noord

Part 1: spatial perspective

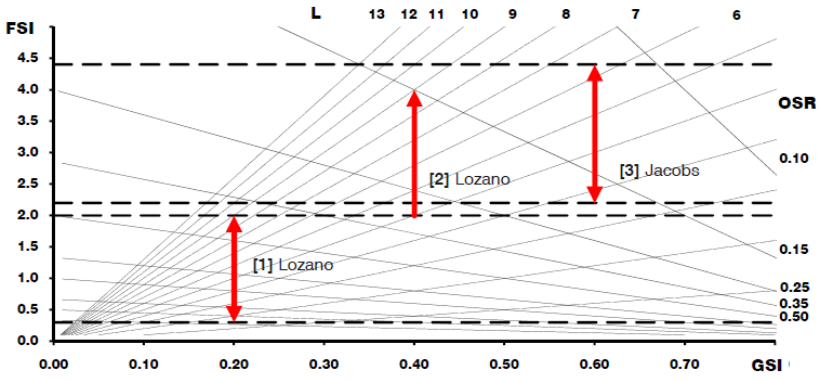
Density

FSI

In general the density is low, this analysis shows the bruto block FSI as calculated by the RUDIFUN dataset (PBL, 2020). The floor space index (FSI) indicates how much floor space is on each plot, and indicates the intensity of use. Population density and employment density would say more on the concentration of people but generate use at different times. Therefore the FSI, in combination with mixed use and coverage can say a lot about intensity of use as well.



Figure 32: Floor space intensity (Data source: PBL, 2020)



[1] thresholds for community fascilities (Lozano 1990)

[2] thresholds for a wide variety of activities (Lozano 1990)

[3] thresholds for urbanity and diversity (Jacobs 1961)

Figure 31: Thresholds for urbanity at fabric level (source: Pont & haupt, 2008)


0
0.5
1
1.5
2 km

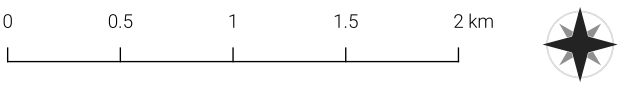
BALANCE BETWEEN OPEN SPACE AND BUILT FORM

Jane Jacobs (in Pont, 2009) advocates for a coverage between 60 to 80% within the island for urbanity. This coverage is almost nowhere met; only in new developments or industrial sites where there are many low-rise business halls.



Figure 33: Coverage (Data source: PBL, 2020)




0
0.5
1
1.5
2 km

Diversity

Mixed use

There is little function mix within building blocksl most blocks are either residential (black) or not (red). In pre-war developments there is some local mix.



Figure 34: Mixed use index (Data source: PBL, 2020)



0 0.5 1 1.5 2 km

Centrality and accessibility

Space syntax

The following pages entail a space syntax analysis. Space syntax describes how spatial systems manifest the logic of society or the configurattion of spaces, how they are put together and relate to each other. This directly relates to how people move and perceive the spatial systems of places.

For the calculations 2 datasets are used (Berghauser Pont et al., 2019): a motorised network (for car-traffic) and a non-motorised network (for pedestrian and bikes). these three methods of transport are used in the calculations. The layout of each page follows the same order as can be seen in figure 55. A 700meter walking distance is used for the calculations regarding pedestrian movement. A walking distance of 3km is used for the bike which would be a 10-minute bike ride. For the car a 5km walking distance is used.

* The ferry connections are not included in this calculation, while they actually are an important link in the city network. But this link is not permanent and closes at night. By not including the ferries especially the reach analysis will be different. As it is, the areas more to the south are already in the process of gentrification because people realise that by ferry it is only a trip of 5 minutes.

The analysis that are made:

1. Reach: is what part of the network is in reach within the assigned walking distance.
2. Angular choice: calculates the probability that a street is used. A higher probability of a street to be chosen, will likely result in publicness.
3. Angular integration: calculates how easy a space can be reached. This tells how integrated the network is.

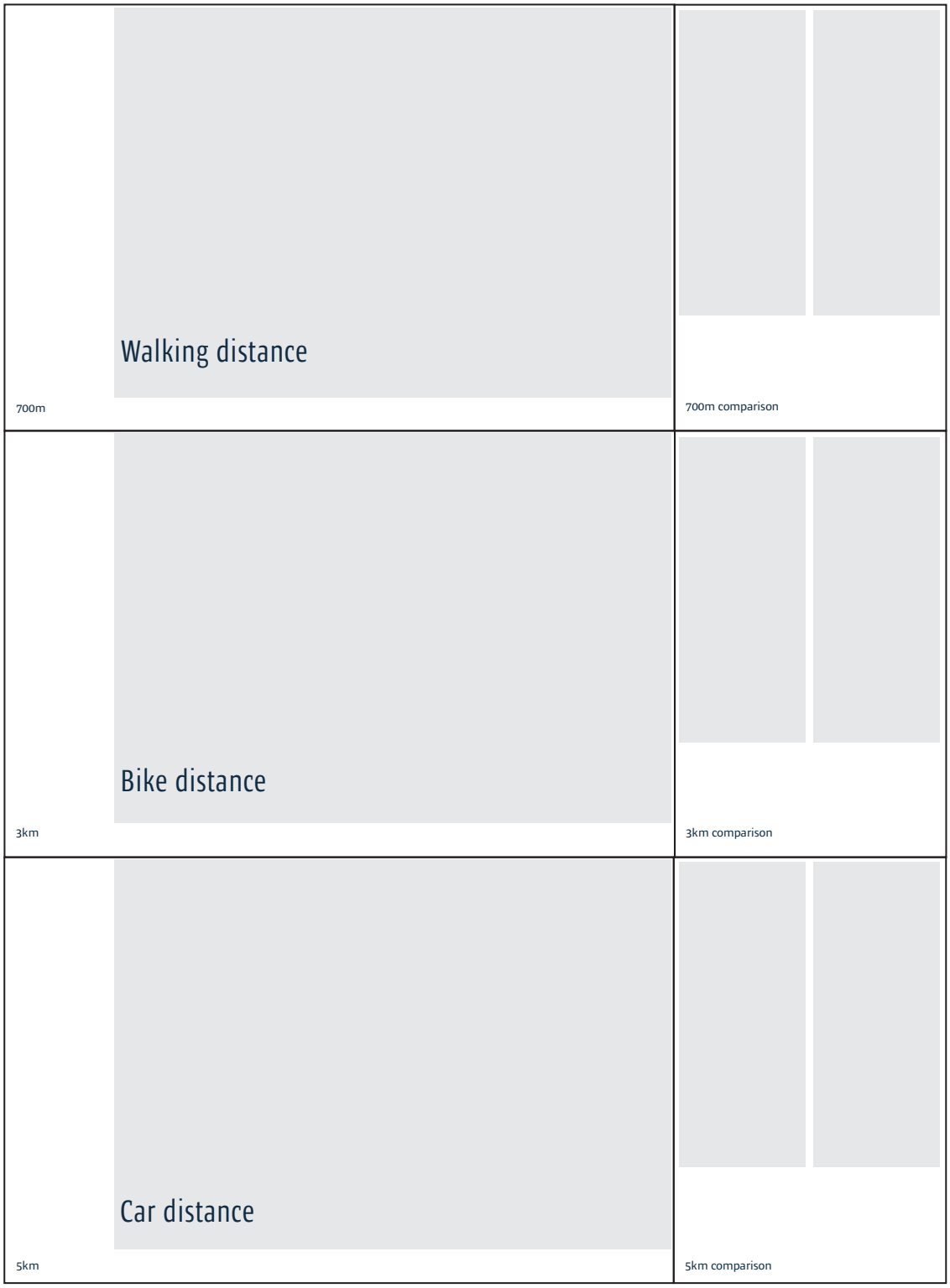


Figure 35: Space syntax analysis page layout

Reach

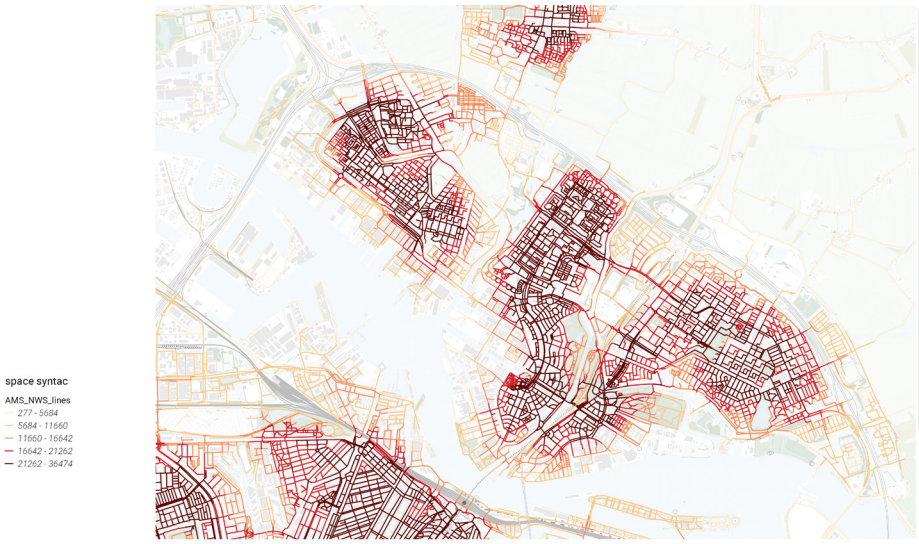


Figure 36: Reach 700 m

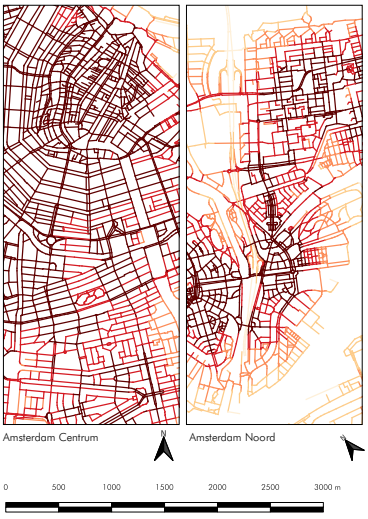


Figure 37: Reach 700m comparison

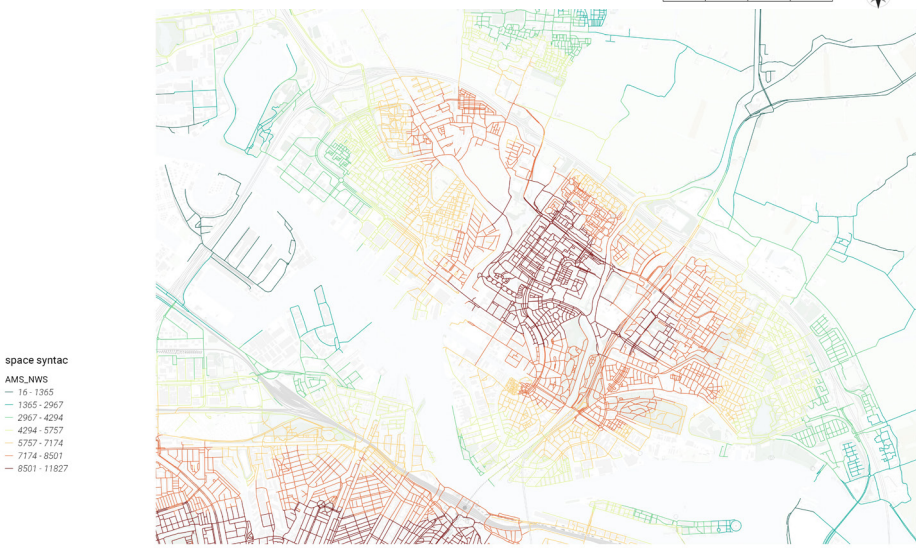


Figure 40: Reach 3km

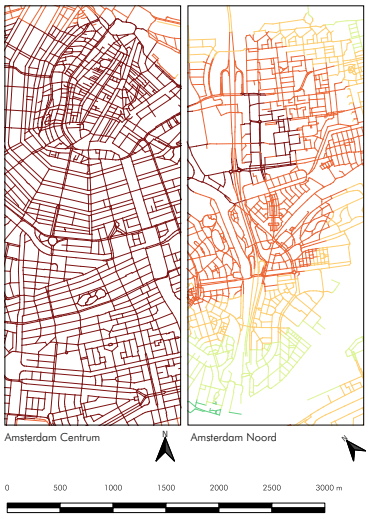


Figure 41: Reach 3km comparison

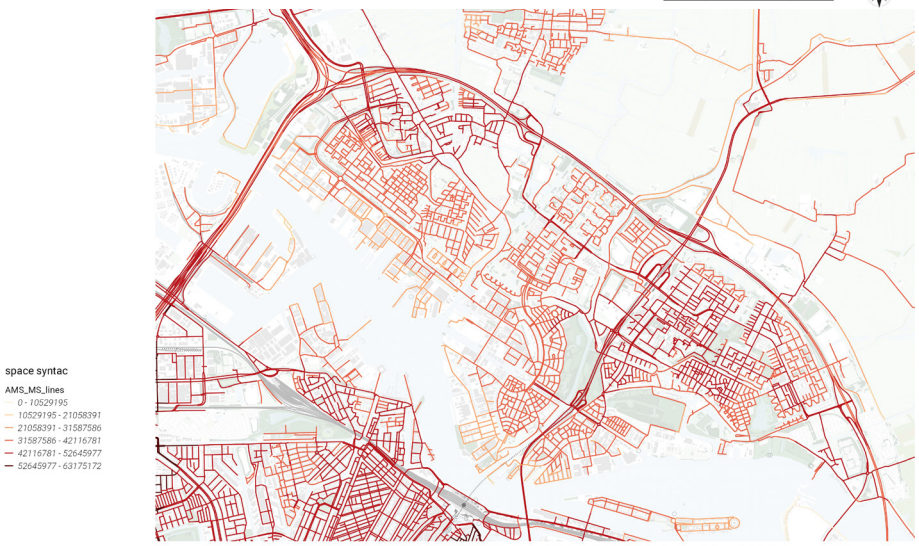


Figure 38: Reach 5km



Figure 39: Reach 5km comparison

Angular choice

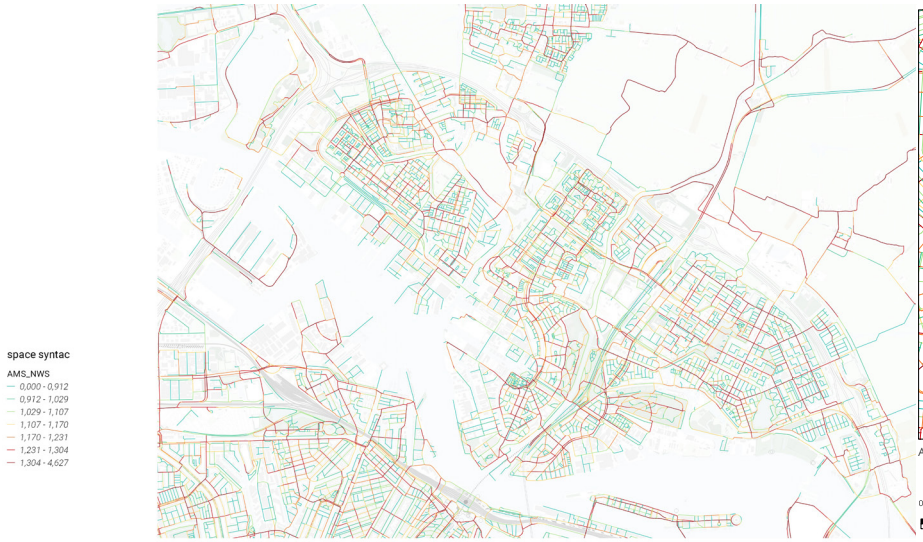


Figure 42: Angular choice 700m



Figure 43: Angular choice comparison

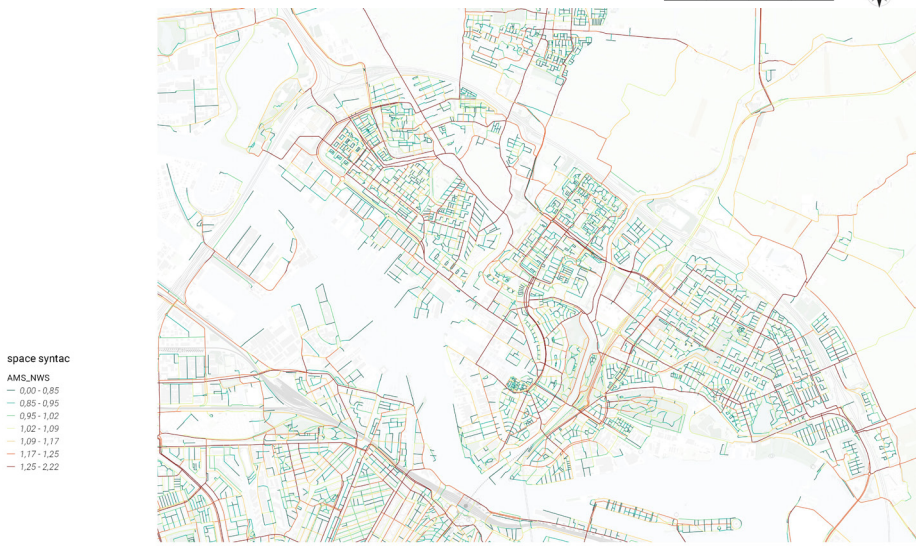


Figure 44: Angular choice 3km



Figure 45: Angular choice 3km comparison

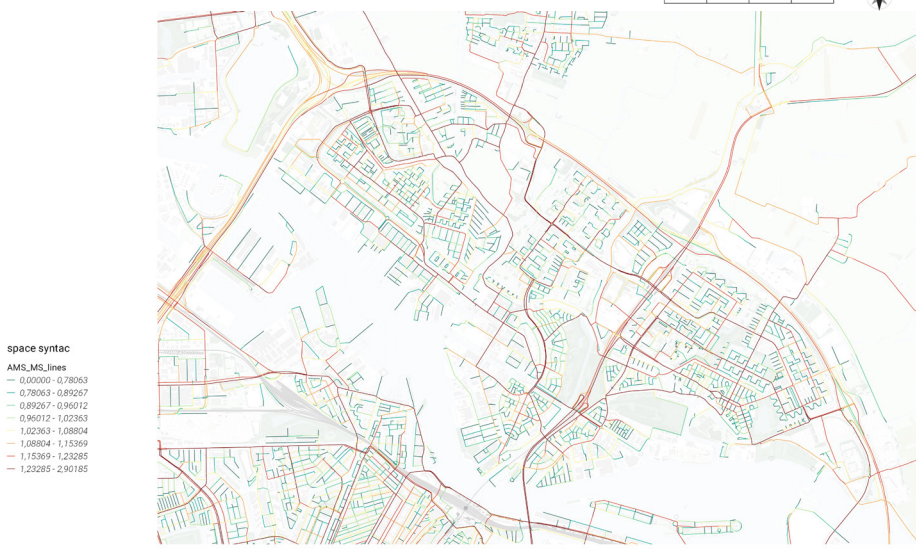


Figure 46: Angular choice 5km



Figure 47: Angular choice 5km comparison

Angular integration

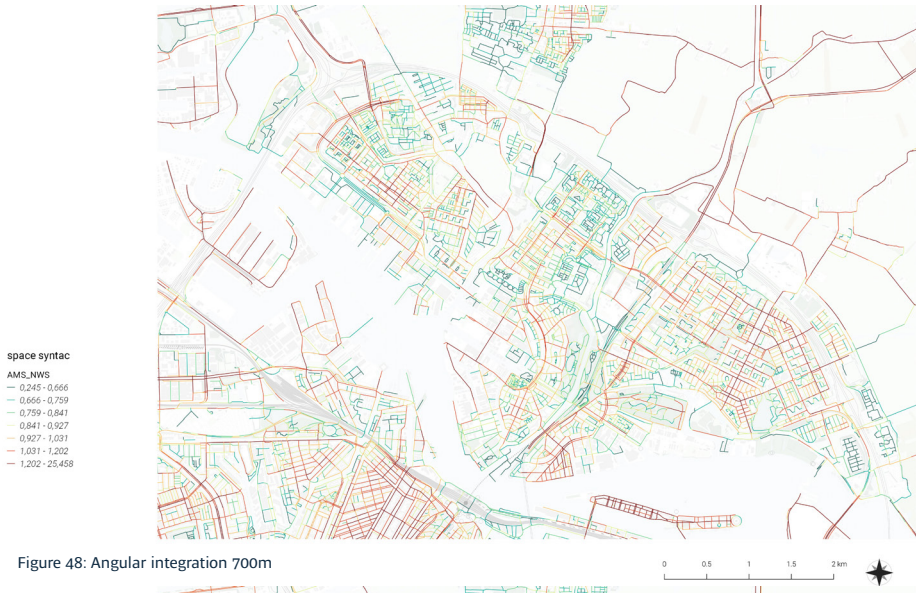


Figure 48: Angular integration 700m

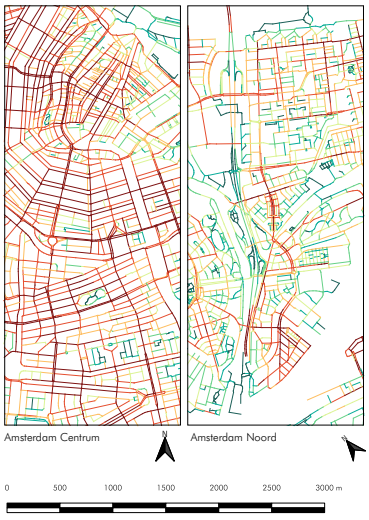


Figure 49: Angular integration 700m comparison

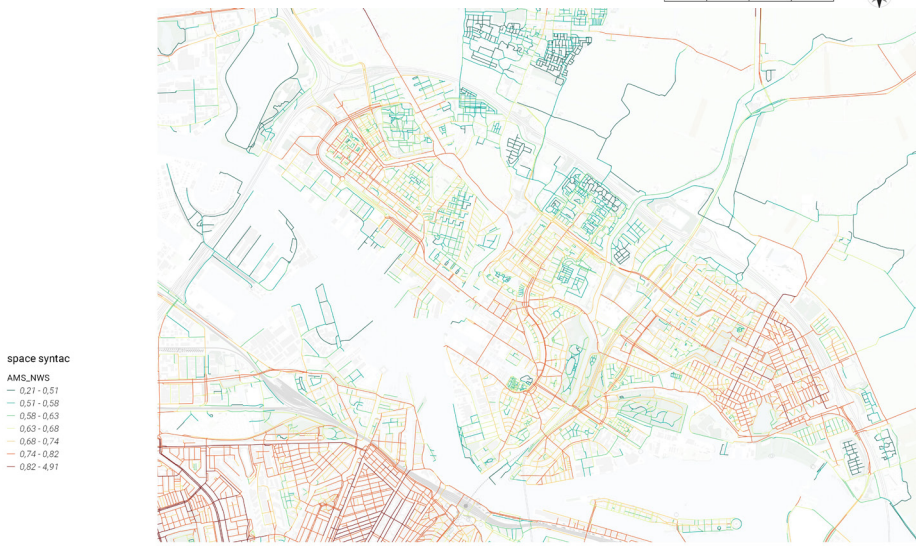


Figure 50: Angular integration 3km

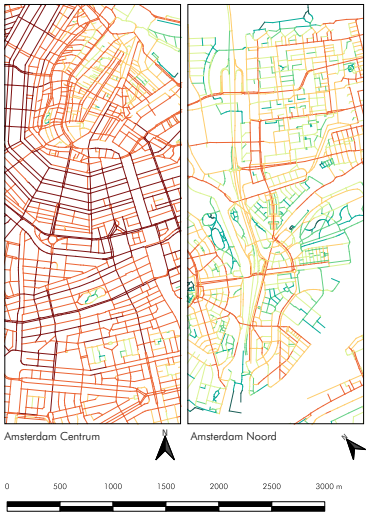


Figure 51: Angular integration 3 km comparison

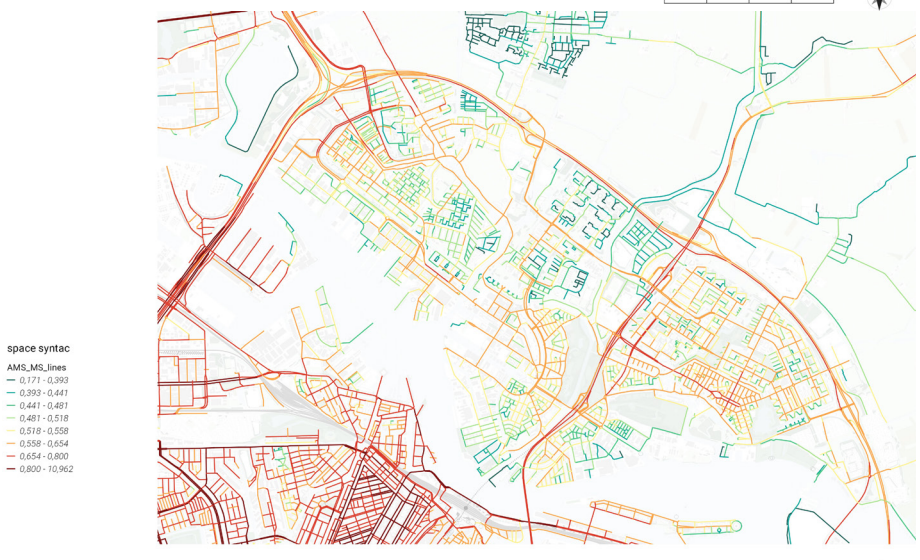


Figure 52: Angular integration 5km



Figure 53: Angular integration 5km comparison

Conclusion

REACH

In the reach analysis the effects of isolation are clearly shown in the calculations using the non-motorised networks. Where the motorised network shows a better reach towards the outer parts of Amsterdam-Noord, the non-motorised show central islands in the heart of Amsterdam-Noord. Where there is one large island for the biking range there are several islands when considering walking distance. That illustrates the lack of connections cross-neighbourhood.

ANGULAR CHOICE

The choice analysis shows the hierarchy of publicness of streets. Through all scales the hierarchy of the street network pops up. However this is not that strong for the pedestrian walking range in all cases. There is a striking difference when looking at the comparison between Noord and the centre which is the equalising ability of grid patterns. The contrast between public and private is rather harsh in Noord, while the more grid-like arranged patterns in the city centre shows an intermediate to the gradation

ANGULAR INTEGRATION

In the choice analysis the grid patterns have been touched upon but here in the integration analysis the grid street patterns really pop up. On all scales many parts of Amsterdam-Noord are poorly integrated especially within the local neighbourhoods. Where in the city centre most streets are warm (starting at orange to dark red), the warmest streets in Noord are orange or red and the majority is yellow or blue. In this analysis the difference between the motorised and non-motorised network also pops up especially in the local access-streets to the highway and the rich pedestrian network in several neighbourhoods.

FINDINGS:

The reach analysis shows different ‘Islands’, these indicate isolation and a lack of integration between areas. The difference between motorised and non-motorised considering integration indicate that there are different networks for different modalities, even this seperation of modalities hinders urban life.

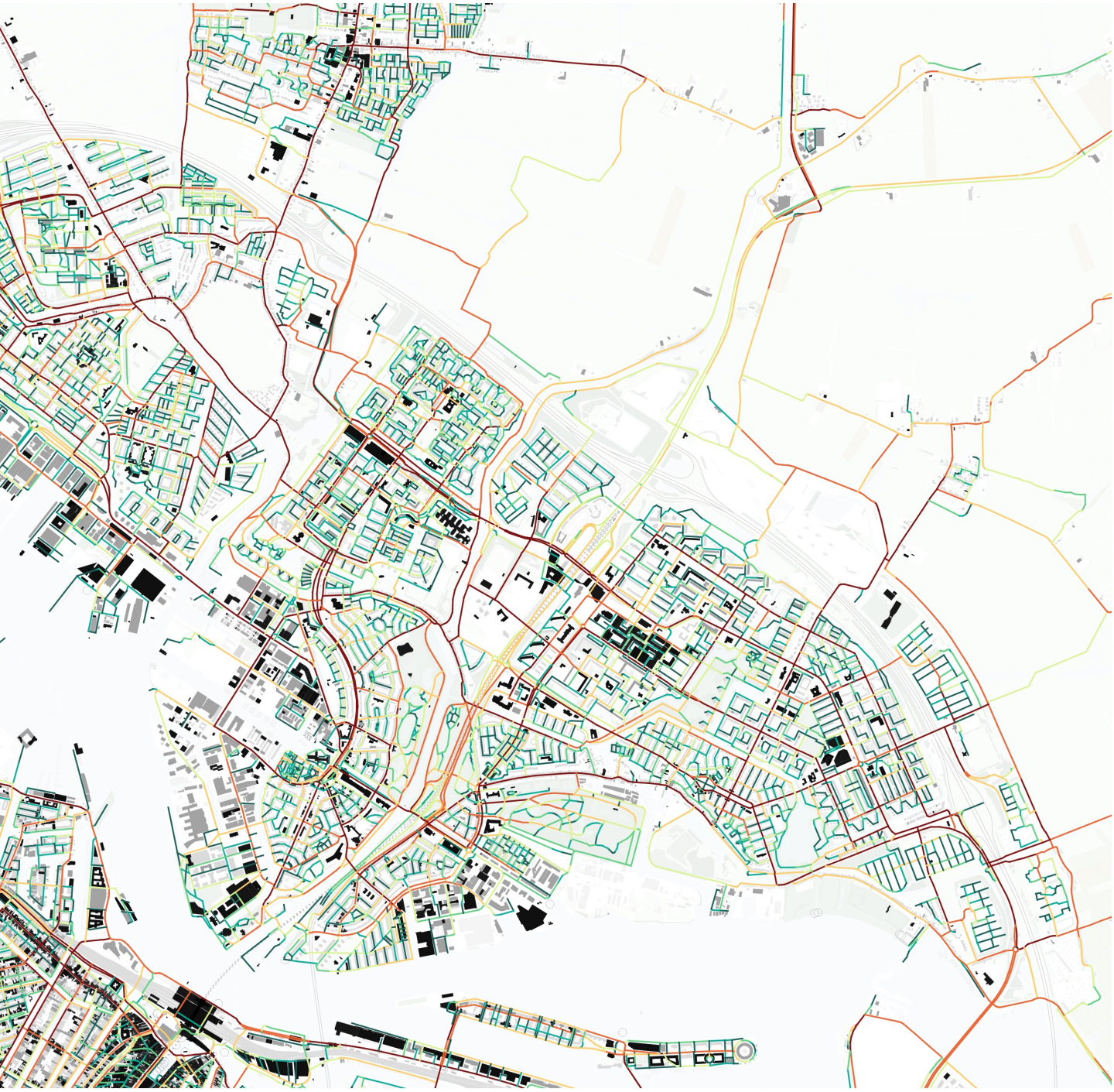
CENTRAL STREETS WITH LITTLE PUBLIC ACTIVITIES

This map shows the 3 types of activities (residential, work and third places (Oldenburg, 1989)) are added to the choice analysis. The choice analysis shows what paths are more likely to be used regarding the network, these are the streets that most likely are public streets that can cater public and urban activities. The map shows how little streets are aligned with third place activities or activities in general.

The next section will look at why there are no public functions aligning these streets



Figure 54: Angular Choice bike distance with public activities



0 0.5 1 1.5 2 km

Adaptability of built fabric

LARGE SCALE DEVELOPMENTS WITH LITTLE ORGANIC ADAPTATIONS

HISTORIC DEVELOPMENT

Together figure x and x give an indication of which building blocks have been more adaptable. A low standard deviation, such as in most of Amsterdam-Noord, indicates there is little organic development, that neighbourhoods are homogeneous, and even neglect (if not recently developed). Not all is homogenous as there is more variety in the dyke villages, industrial areas, and social housing districts currently being renewed.

FUTURE DEVELOPMENT PLANS

Development plans focus on the waterfront (see figure 56). They are primarily large development sites and change sites drastically. The danger of large-scale projects is homogeneity.

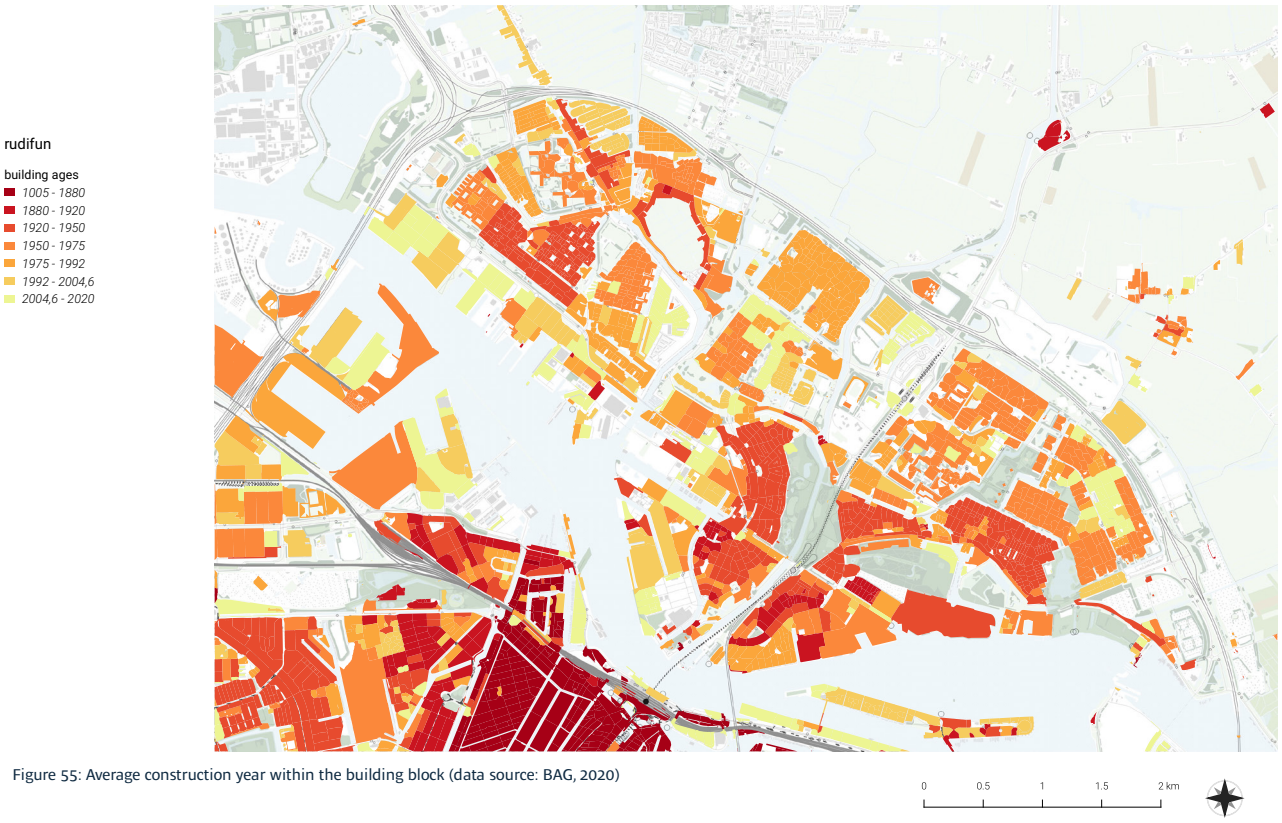


Figure 55: Average construction year within the building block (data source: BAG, 2020)

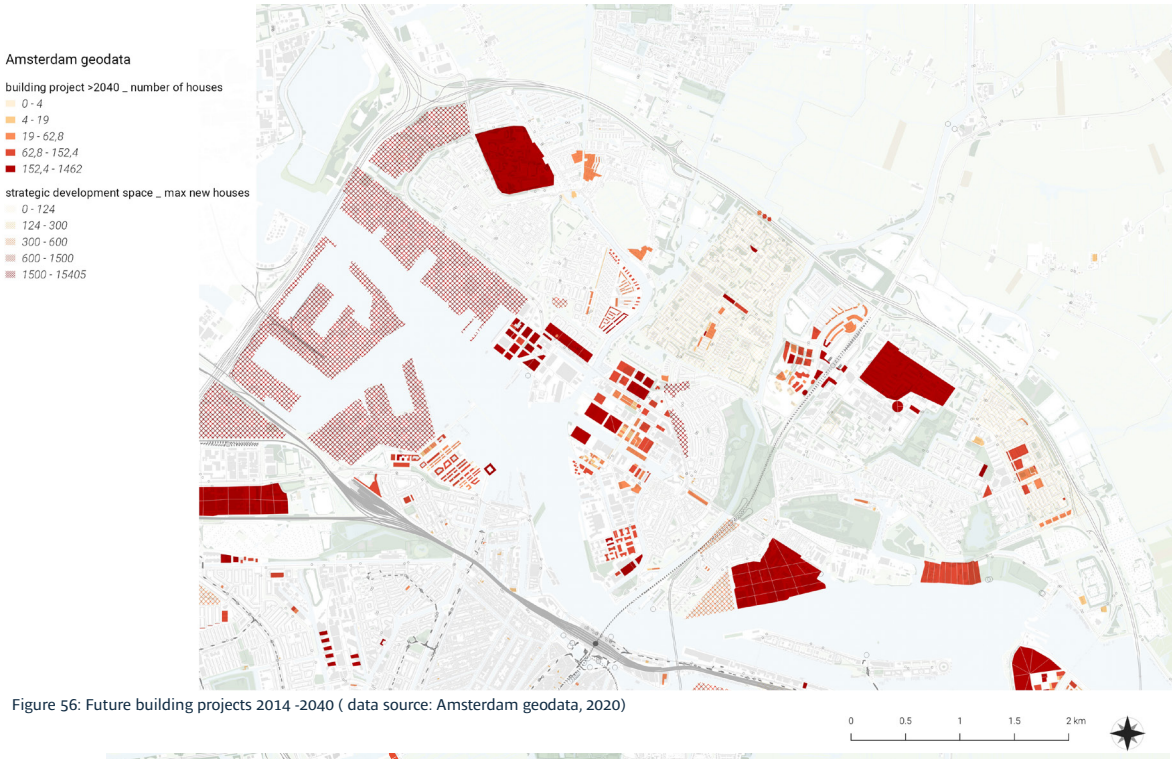


Figure 56: Future building projects 2014 -2040 (data source: Amsterdam geodata, 2020)

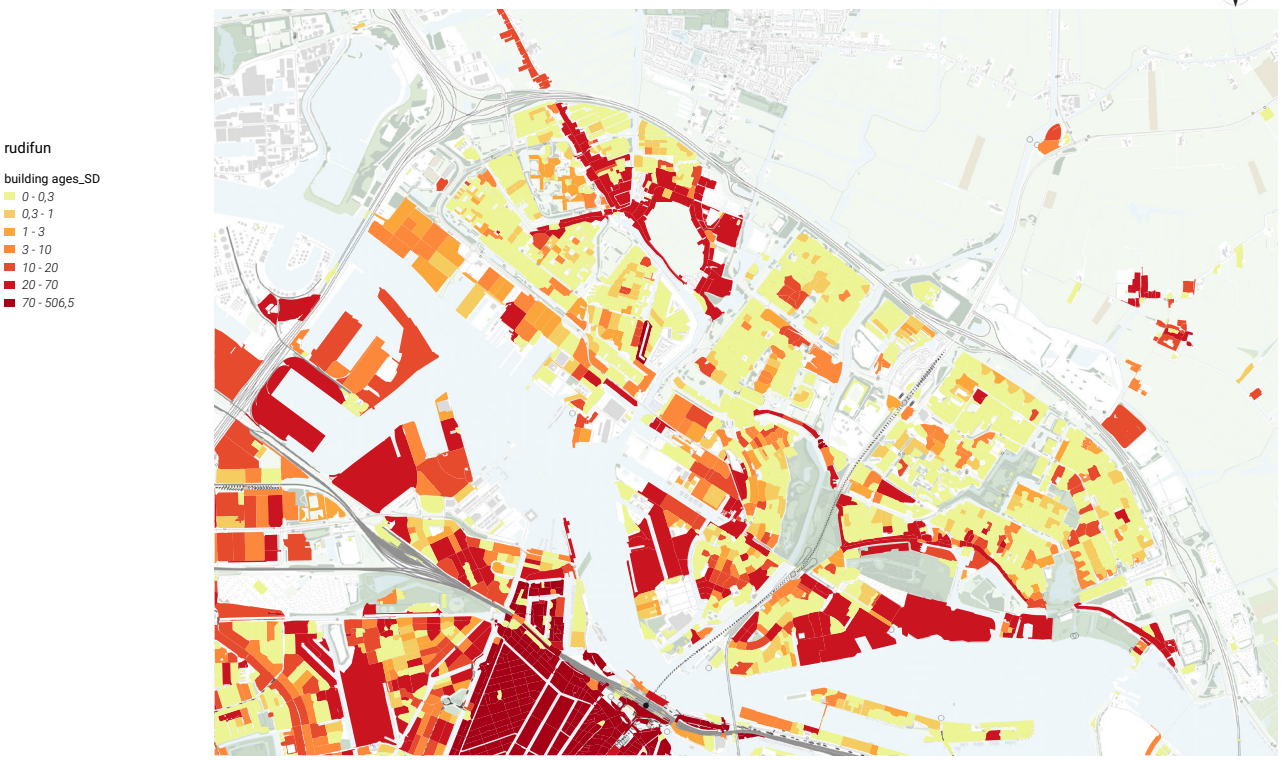


Figure 57: Standard deviation construction year within the building block (data source: BAG, 2020)

Informal social life

THROUGHOUT AMSTERDAM-NOORD THERE ARE LITTLE "THIRD PLACE" ACTIVITIES.

Third places provide activities and functions where people gather and mingle informally. When third places are available at a local scale they stimulate community-forming.

- Third places surrounding city parks are minimal
- The industrial areas have larger third places than the residential areas.
- Third places are concentrated within neighbourhoods or shopping malls and rarely connect outside neighbourhoods except surrounding the Mosveld

ACTIVITIES
- *work places*
- *third places*
- *residential*

Water

OSM landcover
- *recreation_ground*
- *park*
- *grass*



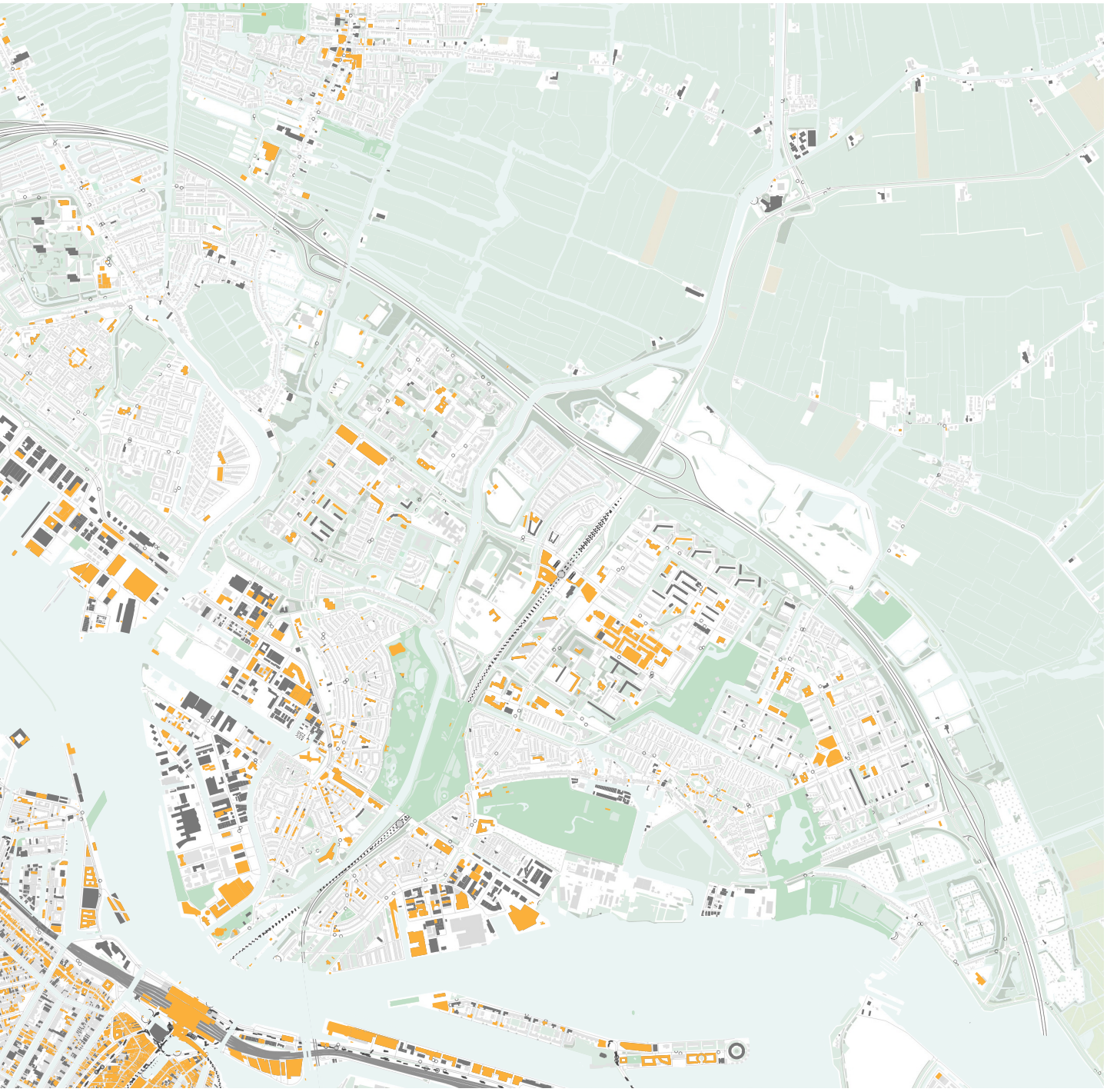


Figure 58: Activities in Amsterdam-Noord where social life takes place

1st places: living environments

Most of Amsterdam-Noord has a dominant residential function. But how these residential areas are configured varies. The following pages entail a characterization of the residential urban typologies, starting with an overview of their locations in figure 59.



Figure 59: Urban typologies in Amsterdam-Noord

Dyke development

- Car-parking in street
- Variety of single family housing types: detached, terraced
- Height difference between street (dyke) and houses
- Narrow main streets (dyke)
- No public squares or parks but good hybrid zones
- Green dykes
- There is a common architecture but from different era's gives a rich experience



Figure 60: a-f street views Dyke developments (Sources: google street view, 2020)

Garden villages

- Terraced houses / duplex appartments (beneden / bovenwoning)
- Car-parking in street
- Small parks, playgrounds and squares throughout
- Designed in architectural style



Figure 61: a-f street views garden villages (Sources: google street view, 2020)

Modernist social housing

- portico-appartments and gallery flat
- Closed plinths
- Car-parking or greenery in courtyards
- Division of functions
- Little interaction between buildings and streets



Figure 62: a-h street views Modernist former social housing (Sources: google street view, 2020)

Terraced housing

VINEX

- Single family terraced houses with private backyards
- Car parking in street and in front yards
- small parks: grass fields / playgrounds and buffer green

SUBURBAN RENEWAL

- Car parking in street
- Terraced housing mixed with appartment blocks in central streets.
- Small parks: grass fields / playgrounds and buffer green



Figure 63: a-h street views terraced housing (Sources: google street view, 2020)

- Larger appartment blocks > higher density, more attention to design of public space.
- Variety in sober modern architecture and attention to plinth design and infill.
- Tidy and neat architecture
- Buildings are introverted and although there is a commercial plinth, they generally appear closed off

Renewal



Figure 64: a-j street views urban renewal (Sources: google street view, 2020)

Synthesis

Three typologies have urban vitality qualities: the garden village has rich architecture, public spaces and compact built form. On the other hand, where the garden villages lack density, the renewal typology provides higher densities with bigger buildings in the block, it is not as compact and misses the human scale a little. The dyke village typology has various buildings and shows adaptability but does not have the built density to be urban.

Social housing

NEW DEVELOPMENTS MORE MIXED WHILE EXISTING NEIGHBOURHOODS ARE EITHER DOMINANTLY SOCIAL HOUSING OR OWNER OCCUPIED

sidenote

Where existing developments are either predominantly social housing or not, future developments will be more mixed. Due to regulations that ought to stimulate the mix of rich and poor.

Social housing occurs all over Amsterdam-Noord. Exceptions are the historic dykes, vinex developments such as Jeugdland, de Bongerd, and renewed parts of the Waterlandpleinbuurt.

The quality of vinex locations (cauliflower developments) is that they do integrate social housing without significant difference. These types of developments are dominated by single-family houses and are suburban in nature.

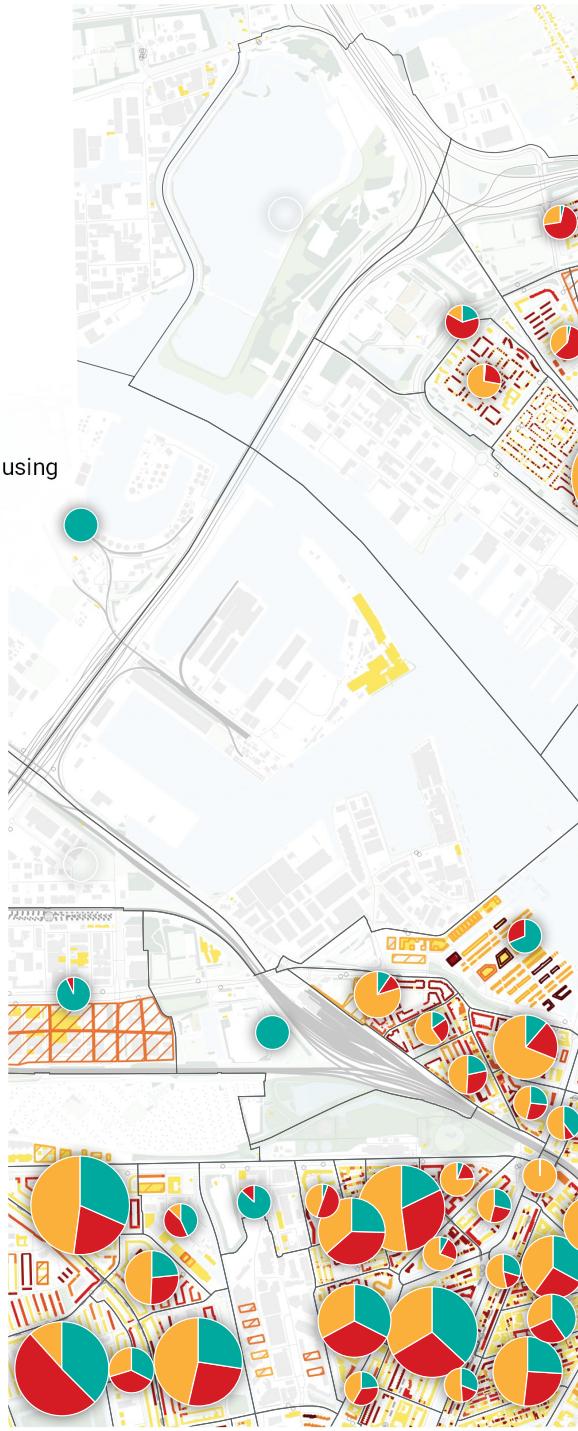
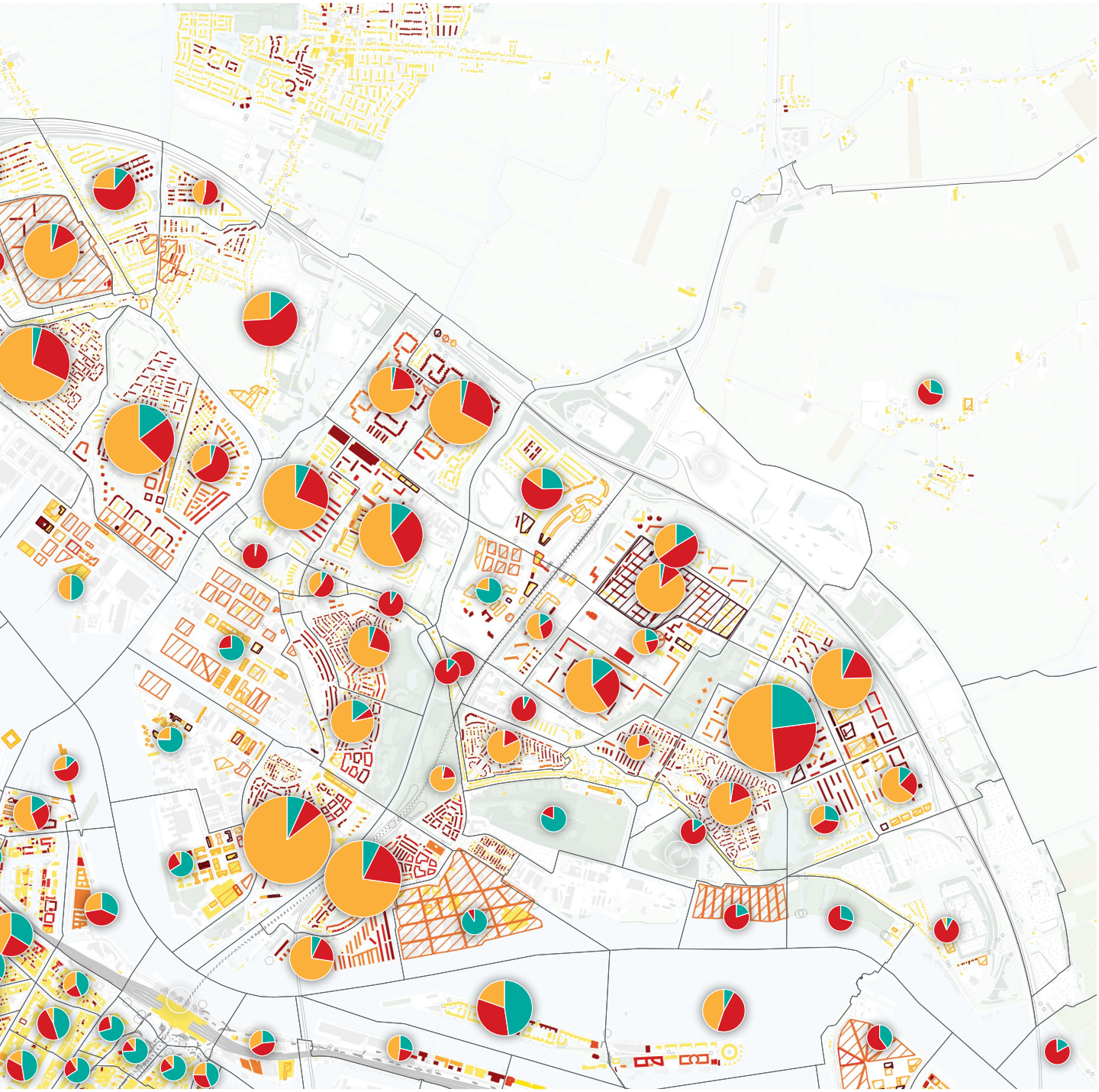
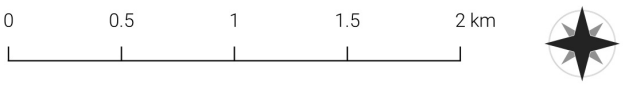


Figure 65: Current and development of social housing in Amsterdam-Noord (data source: IOS Amsterdam, 2020b)




0
0.5
1
1.5
2 km

2nd places: Working areas

Segregation of functions has led to distinct working areas: business parks for industry and workshops along the river banks and some smaller business parks. These areas have little residents living there and allow for businesses that cause nuisance: noise, dust, smells.

The built environment in these areas facilitate the industry with mostly paved surfaces for logistics, parking and transport; storage facilities; open spaces; water connections and lowrise 'grey boxes' as workshops and offices. Buildings are set back or introverted; most buildings are not very representative except for the occasional entrance.

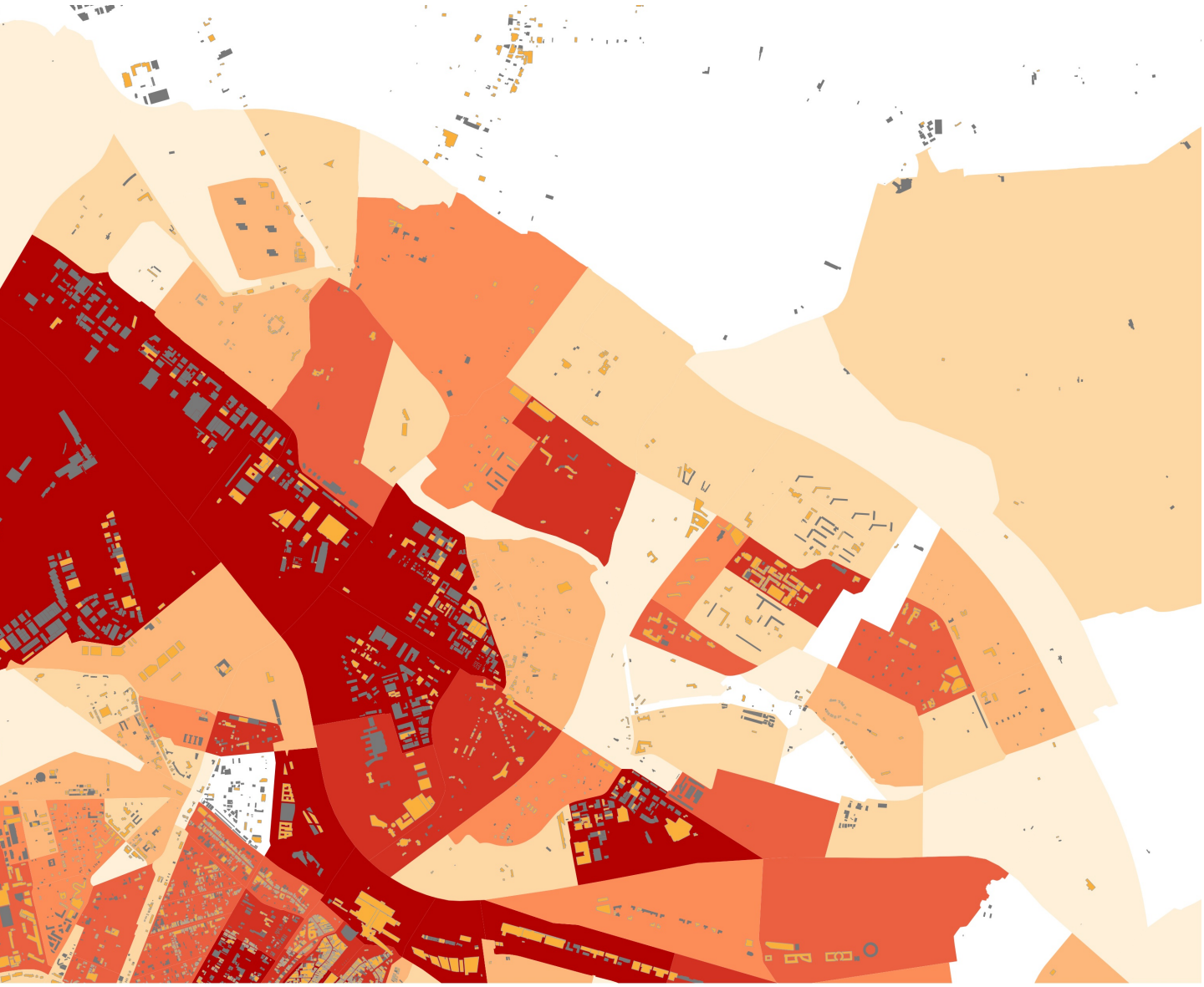
The bbga (OIS Amsterdam, 2020B) tracks socio-economic data. Regarding workplaces in the districts of Amsterdam-Noord it shows:

- Business (industrial): more than average all over Noord except for Volewijck and vogelbuurt, Kadoelen and Elzehage.
- Office: much less than average all over Noord except for Elzehage, Kadoelen; above average in IJ-oevers oost en west.
- Hospitality: less than average all over Noord except for Volewijck, vogelbuurt, IJ-oevers oost, Elzehage.
- Amenities (voorzieningen): all over the place
- Shops: below average all over Noord except for Volewijck, tuindorp buiksloot, banne buiksloot, Oostzanerwerf; above average in tuindorp nieuwerdam (purmerplein) and buikslotermeer (winkelcentrum boven 't ij).
- zzp'ers: self-employed. Dispersed offices / industry in residential areas which have a small working population and large number of one person businesses indicate a population of self-employed flexworkers with unstable incomes (Gemeente Amsterdam, 2019; OIS Amsterdam, 2019).

Amsterdam-Noord is considered not very suitable for traditional offices due to the lack of easy connections to the main city (Bas Kok, 2020). Kok implies mismanagement by local governance that hesitates with large scale office developments and improving public transport, even with good regional accessibility. At the same time, prices are relative cheap and raw edge of the former harbour is very much wanted by the creative industries.



Figure 66: Working population in Amsterdam-Noord (data source: OIS Amsterda



am, 2020b)





Figure 67: a-f street views working areas (Sources: google street view, 2020)

3rd places: Gathering places

There are little gathering places in Amsterdam-Noord, recently new gathering places have opened along the waterfront (OIS Amsterdam, 2020a, 2020b). People are dissatisfied with the lack of gathering places and the quality of those that are there (Liz van Blitterswijk & Robbert Bovee, 2020; OIS Amsterdam, 2020a; van de Kamp & Welschen, 2019; Wiebe Beckman, 2020).

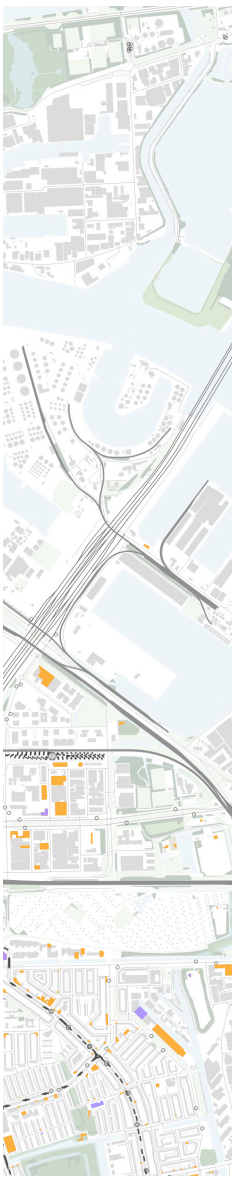
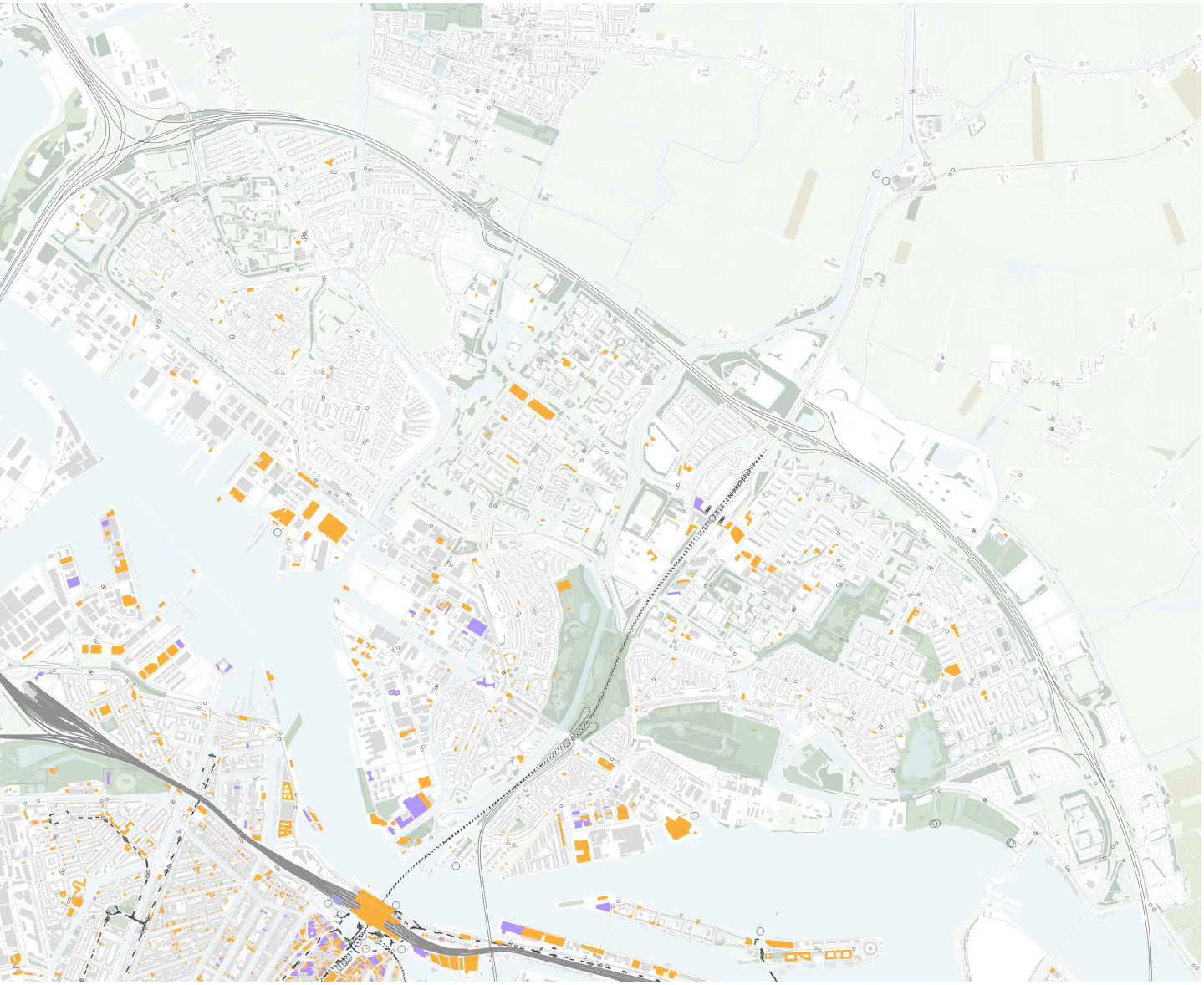
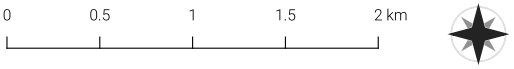


Figure 69: Gathering and accommodation places (data source: kadaster, 2020)



Figure 68: a-f street views gathering spaces (Sources: google street view, 2020)




0
0.5
1
1.5
2 km







Part 2: Socio-economic perspective











Figure 70: Collage of people at events in Amsterdam-Noord

Demographic analysis

There are many single-person households, which is in accordance with global trends (OIS Amsterdam, 2020b). There are concerns about the relative large number of single parent families as these families have hard times managing a working life and raising children, often needing financial support and living in poor quality social housing (OIS Amsterdam, 2019). There are quite some families with children living in Amsterdam-Noord, especially in the urban typologies with single-family housing. Young developments facilitate modern households: single person households such as students and urban professionals without kids in the waterfront developments and young families in more suburban neighbourhoods such as de Bongerd and Elzenhagen. As the population ages there are quite some elderly in Amsterdam-Noord, they often keep living in their former houses as that is where they have social foundations in the community. This disturbs the circulation on the housing market and influences the difficulties for starters to find new homes. Young people that could stimulate integration are hereby forced to move elsewhere or continue living with their parents. This trend is seen throughout the Netherlands but is especially problematic for poor families living of financial support when the children's allowance is cut when a child becomes of age (OIS Amsterdam, 2019).

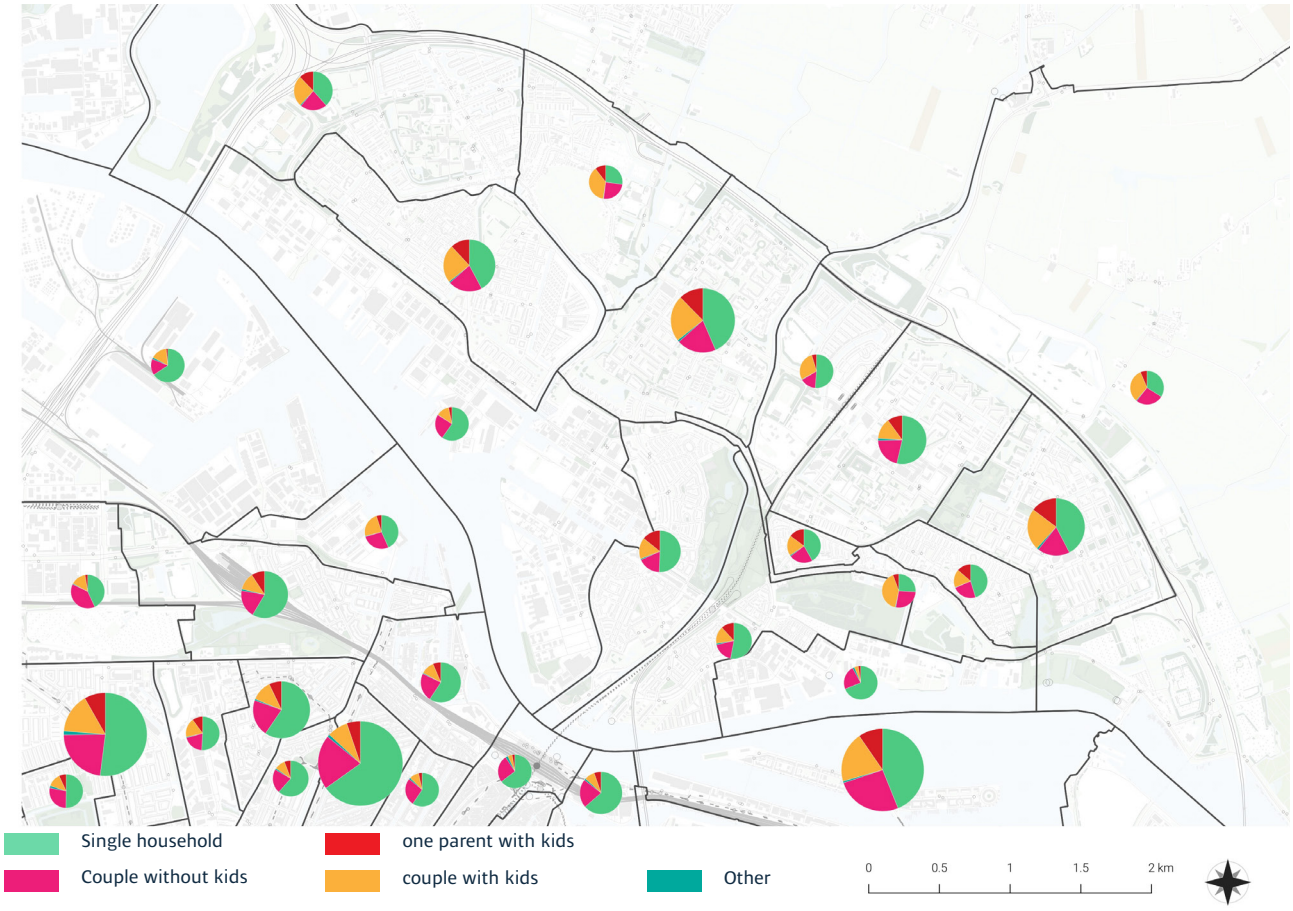


Figure 71: Household types (data source: OIS Amsterdam, 2020b)

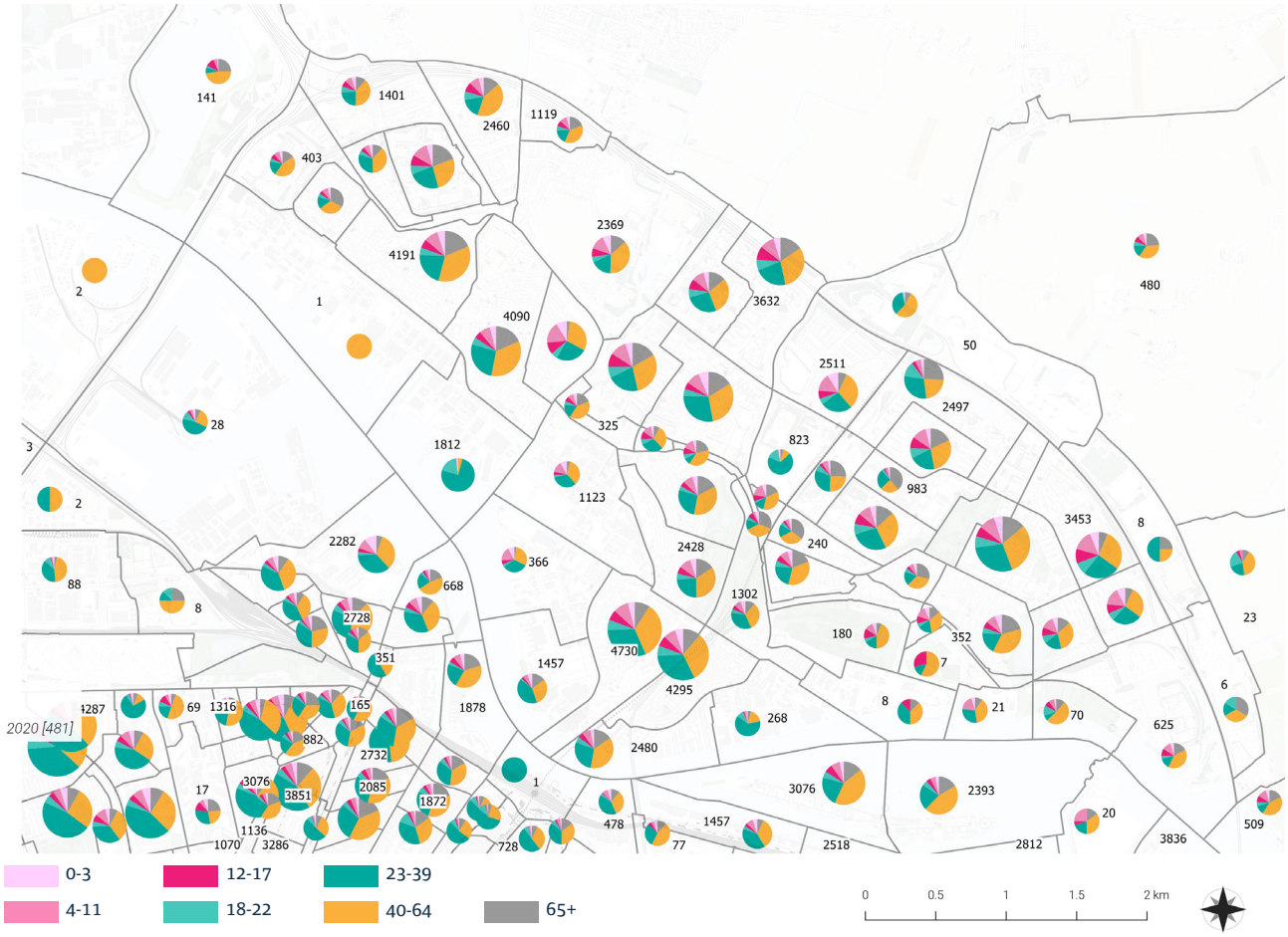


Figure 72: Age (data source: OIS Amsterdam, 2020b)

Socio-economic diversity

LOW SES AND HIGH SES SEGREGATED; IN GENERAL LOW SES IN AMSTER-DAM-NOORD

What does the attraction of high SES households mean for the disadvantaged (low SES)?

This analysis overlaps socio-economic status (SES) (score based on education [1-4] and income level [1-4]) with the diversity in migration background. The socio-economic status is a welfare indicator for successfulness. Low SES is linked to health issues and lower chances to make a career and become financially independent. (OIS Amsterdam, 2019).

The neighbourhoods with higher SES are often native Dutch or western immigrates. However, there are also predominantly native Dutch neigh-bourhoods (garden villages) that have lower socio-economic scores. The local differences between low SES, high SES and heterogenous and less diverse neighbourhoods are striking. New developments attract people with higher SES. This raises the average SES of a neighbourhood but has little influence on the people with a low SES. These people need more fitting employment opportunities, or opportunities and facilities to develop themselves as well as affordable housing. On the positive side, the newcomers increase the demand and support for facilities that can create employment opportunities and help stimulate those with low SES.

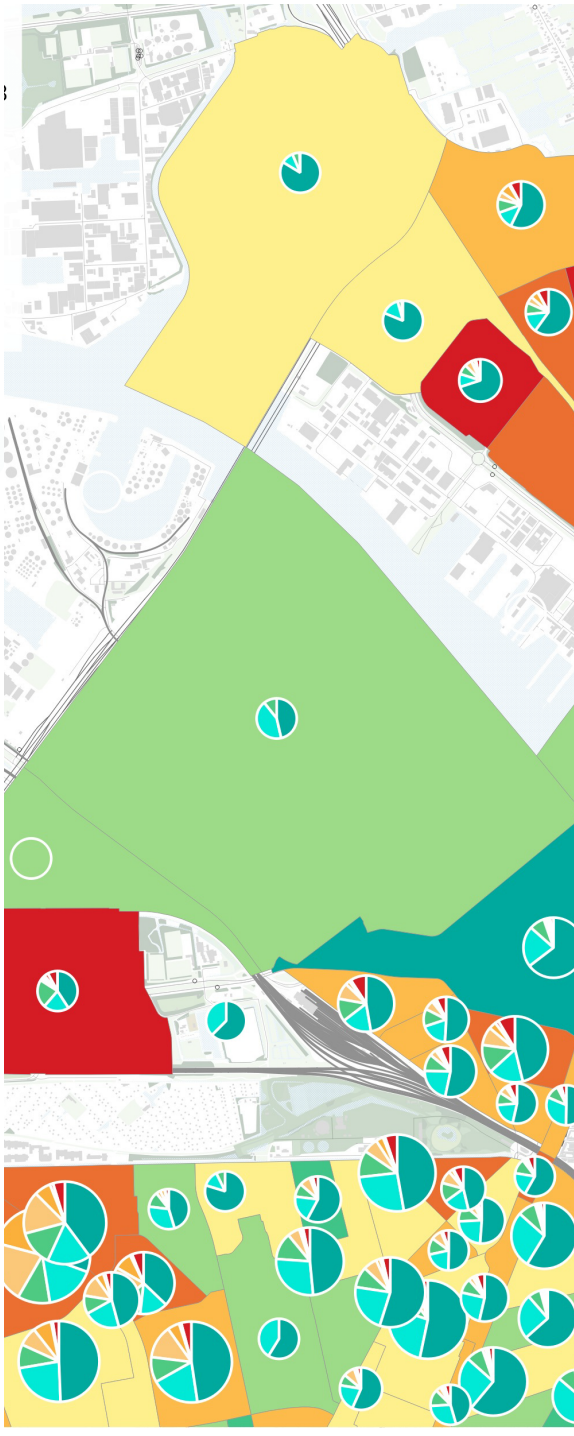
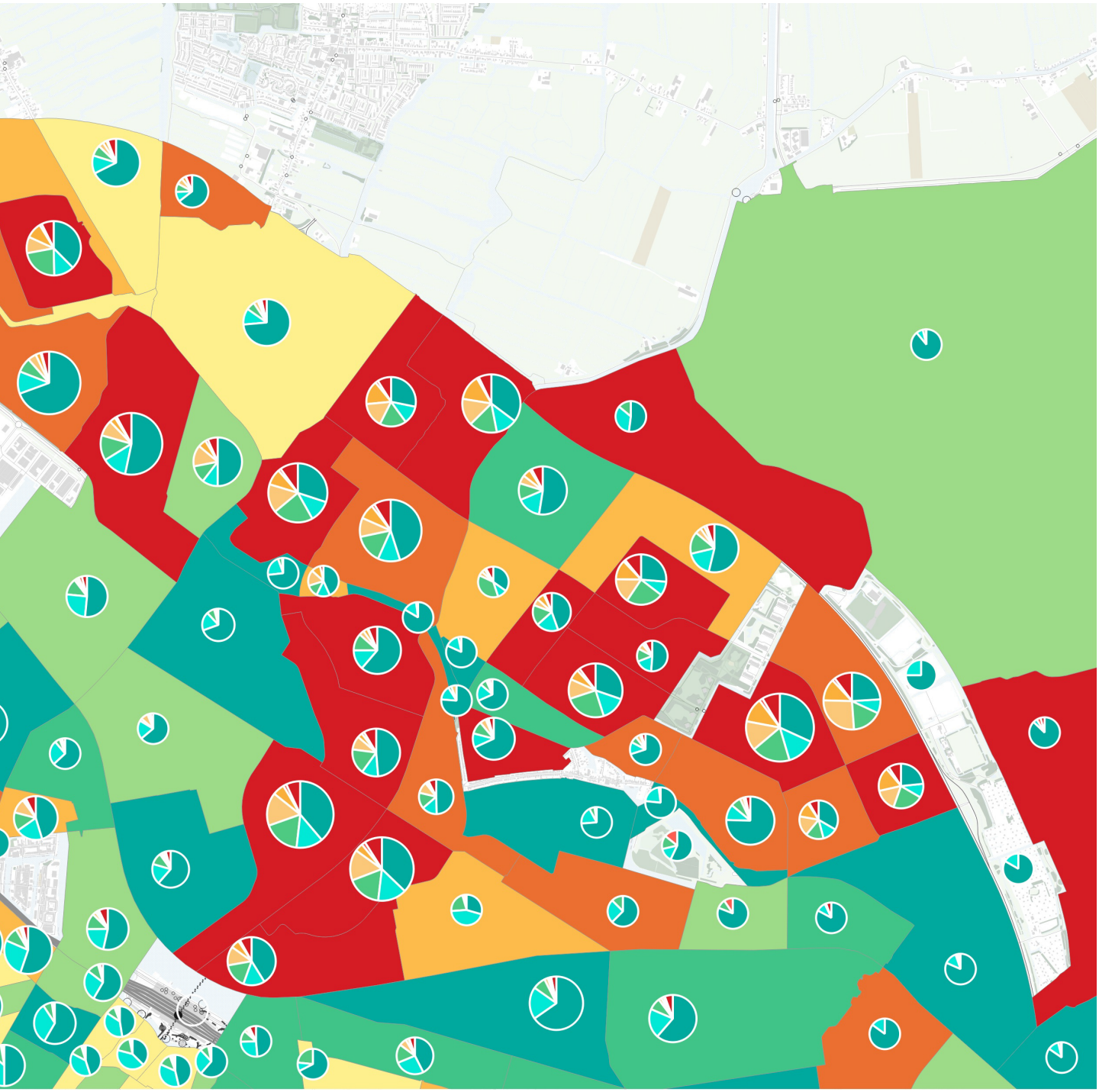


Figure 73: Socio economic status and diversity (data source: OIS Amsterdam, 20



0 0.5 1 1.5 2 km

20b)

Neighbourhood satisfaction

These maps show how satisfied inhabitants are with their neighbourhood and the progress of the neighbourhood (OIS Amsterdam, 2016, 2020a). Again the local differences are striking, the satisfaction is lowest in neighbourhoods with little gathering places, high rise apartment strips or with ongoing development. The scores on the expected developments indicate mostly that people are worried about the developments in the neighbourhood. Inhabitants have bonded with their living environment which is indicated by their worries, the scores based on feeling at home and other research (Bolt et al., 2011; van de Kamp & Welschen, 2019).

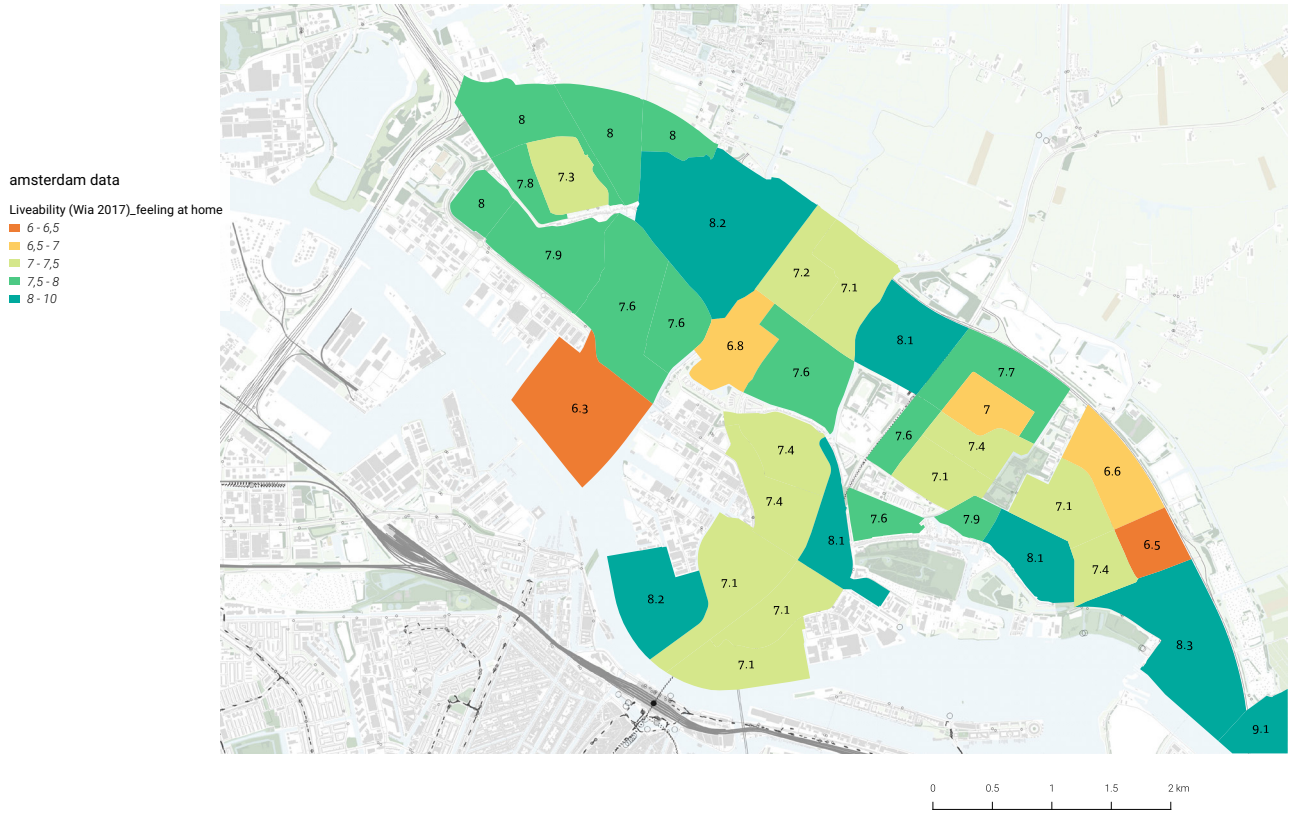


Figure 74: Score of feeling at home (Data source: OIS Amsterdam, 2020b)

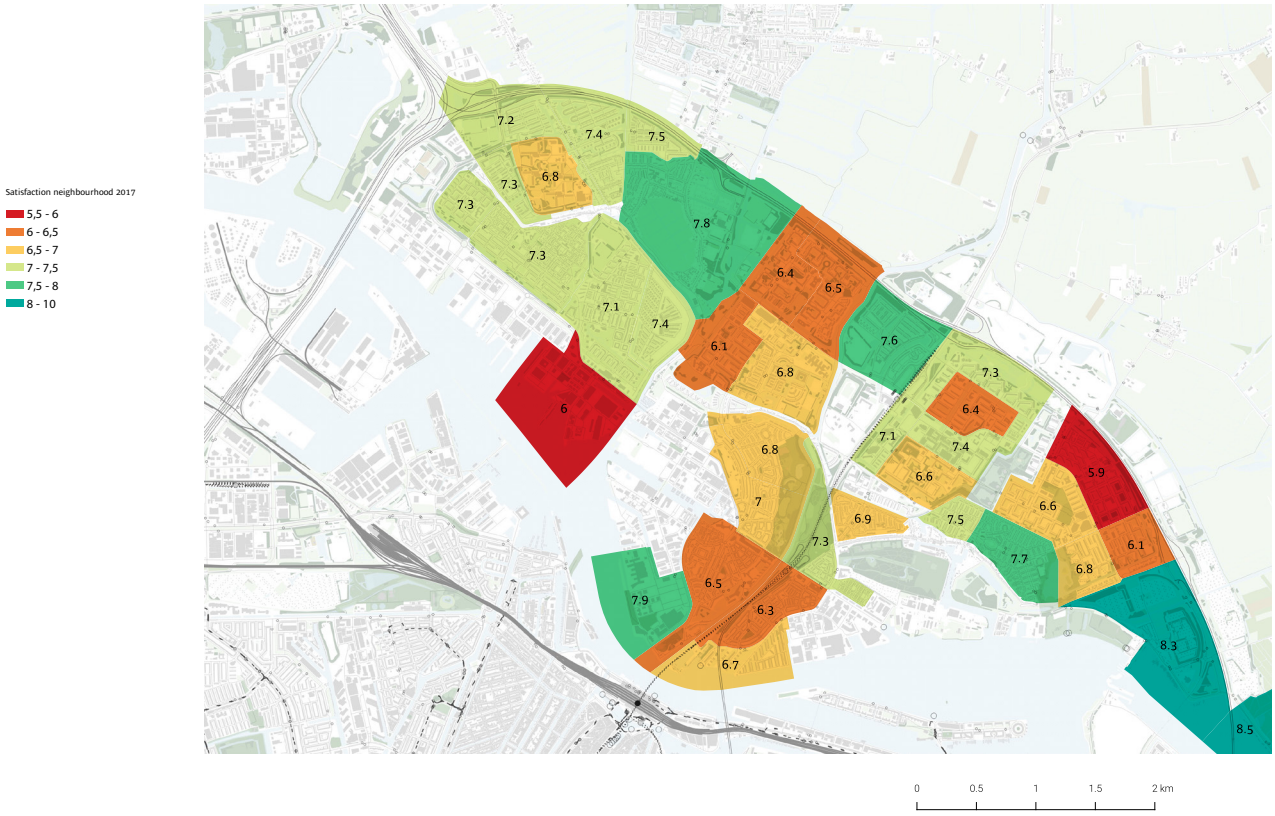


Figure 75: Satisfaction neighbourhood (Data source: OIS Amsterdam, 2020b)

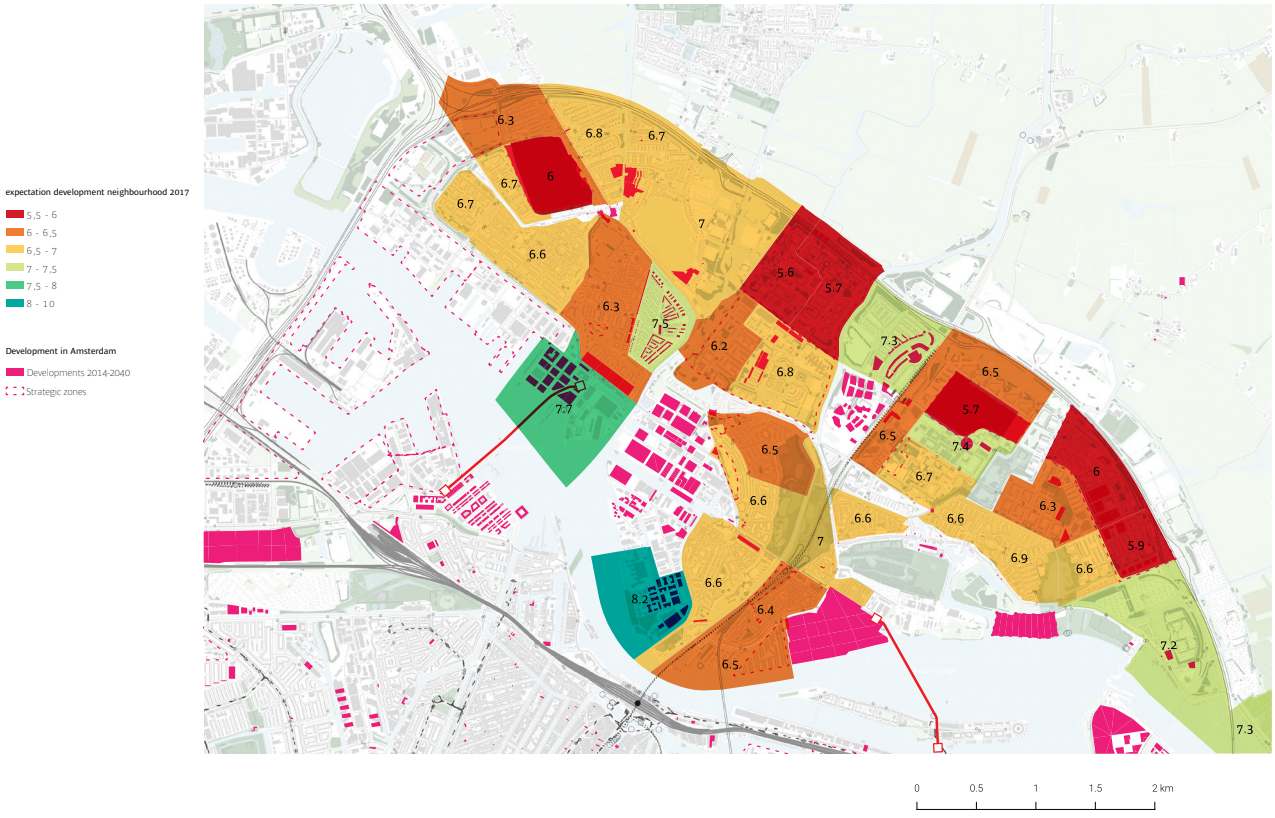


Figure 76: Expectation towards development (Data source: OIS Amsterdam, 2020b)

Persona development

The problem analysis pointed out how the developments in Amsterdam-Noord are cause for political and societal debate regarding gentrification, the housing markets and poverty. The statistical data used in the previous pages give a quantitative overview of the situation. While this overview provides a complete picture, it is based on averages, not showing the excesses. The political debate highlights the extremes.

The following section will explore several different viewpoints (stories) on the developments in Amsterdam-Noord. Based on these stories and sources (see figure 78), personas navigate the different views and represent the demographic spectrum. In the design phase, the persona's will be used to evaluate how they can mix in public space.

Inhabitants have become more vocal through modern media as the sudden interest in developing Amsterdam-Noord grew. The secondary sources depicted in figure 77 provided the information for the following stories on Noord. They are not an attempt to generalise or give a complete overview.



Figure 77: Timeline of sources used in the development of the persona's

Stories on "Noord"

STORIES FROM: VAN WIE IS DE STAD? (MILIKOWSKI, 2018)

Milikowski (journalist and geographer) looks at the development of growth in Amsterdam and all its consequences. One chapter focuses on the strong friction between the 'oude noorderling' (the existing population) and the 'nieuwe noorderling' (the people who recently moved to Noord-Amsterdam).

- Mick Sonnenfeld opened Italian café Il pecorino at the van-der-pekplein in 2012 and tried to involve and invite 'oude noorderlingen', just as Chris Keulemans who opened the Tolhuistuin (cultural centre) in the same year. By moving there, hiring locals and giving discounts they tried to involve the Noorderlingen, but they never came. Other people from south of the river did keep coming and finally they both agreed that including the 'oude noorderling' is extremely hard (Milikowski, 2018, pp. 117, 120).

- Elly Nederveld (oude noorderling) said in 2012 that Keulemans tries too hard. That the sudden pressure to integrate was too much for the 'oude noorderlingen' who are much more happy to have a simple activity, a drink, some food and nice conversation, they weren't looking for high culture. There is a vast club life where the 'oude noorderling' is active in sport clubs and volunteering (Milikowski, 2018, p. 118).

- Housing corporation Ymere set up a commission (including Sonnenfeld) to pick what entrepreneurs ought to be located at the van-der-pekplein to develop it into a city square. Large chain stores were not allowed but neither were doner companies, this meant that some leases with existing business were not renewed. Sonnenfeld confirms the selection was focused at attracting new groups and investments. However, he believed no one is being pushed out (Milikowski, 2018, p. 121).

- The 'oude noorderlingen' see this refurbishment as artificial while it attracts the 'nieuwe noorderling'. They feel that their environment and culture is taken away. The businesses that have opened there recently are targeting the new group, for example the former simple bakery is replaced by a biological bakery (Milikowski, 2018, pp. 119–120).

This refurbishment of the square can be seen as artificial and not considerate of the local culture or even as patronizing. But were there no locals with business ideas that could be involved?

READER ARTICLES IN LOCAL NEWSPAPERS

Ed van Leeuwen (2020): 'Stop met stereotypering van de oude Noorderling'. he criticises the stereotyping of the "oude noorderling" that opposes all new developments. He represents the group of born in Noord with higher education and owner of a house. He tells the story of the 'noorderlingen' in favour of the developments and welcomes the 'nieuwe noorderlingen' with all the initiatives, shops, cafés and restaurants that add liveliness to the district. He is slightly dissapointed that those developments only focus on the waterfront as behind the waterfront developments there is still nothing to do.

STORIES FROM ACADEMIC RESEARCH:

Qualitative research including interviews on social cohesion in gentrified neighbourhoods in Amsterdam-Noord (van de Kamp & Welschen, 2019). This study researches how the 'oude noorderling' experienced policies to integrate new and old and how successful the organised activities were in bridging social capital:

- Government stimulated gentrification with the purpose of developing bridging social capital: bringing more private investments and social contacts that would increase liveability and status of the existing population. However, this research concluded that it is difficult to mix the new and old population: their lifestyles and interests are too different to go to the same events.

- The interviewees underline and value social control, the bonding they have with their community was / is strong, they watch out for each other. They feel that their new neighbours would not care for them that way: "with the new neighbours you can lay death in your bed for three weeks without them noticing" (translation from Dutch: "Met de nieuwe bewoners kan je drie weken dood in je bed liggen en dan komen ze nog niet kijken", p.372).

- The interviewees experienced that certain groups were given more priority for using neighbourhood facilities: the 'nieuwe noorderling', as well as priority groups for social housing (refugees / migrants especially). In an interview someone said: "for years, all community centres are occupied by foreigners in the weekends to teach their children about their own culture" (translation from Dutch: "Alle buurthuizen in Amsterdam-Noord zijn bezet in het weekend door buitenlandse mensen, al Jaren, om de kinderen in hun eigen cultuur les te geven", p.373).

- The developments lead to more anonymity, in contrast to the strong community and identity in the neighbourhoods. Residents feel that this makes social control more difficult which they illustrate: "my sense of safety has changed now that I do not know everyone anymore. In the past when you knew everyone, you would know who to turn to if someone misbehaved (a parent, family member etc.). now that we do not know one another as good this is almost impossible (Mijn gevoel van veilighied is wel veranderd sinds ik de mensen niet meer ken. Als er eerder vreemde types waren, dan wist je wie je moest aanspreken. Ik kan zo benoemen wie er vroeger een scheve schaats reden. Dan sprak je een ouder aan, dan was het snel weer over. Maar als je elkaar niet meer kent dan werkt de sociale controle niet meer, p373.)

- Recuring topic was the missing integration of the new residents in their community and investment in getting to know the customs; introducing yourself when you move in, greeting each other in passing and things like that.

- The research advices to develop more places were the different groups would pass each other and slowly integrate through a sense of public familiarity and unforced encounters and to ensure enough gathering places that are more neutral.

STORIES FROM DOCUMENTARY: NIEUW NOORD (WIEBE BECKMAN, 2020):

4 people share their personal experience with the changes in Noord. Fred is an older business-owner, born and raised in Amsterdam-Noord. Danny moved in 2020 to Purmerend because he could not find affordable housing in Noord where he grew up. Judith moved to Noord in a self-built house in 2008.

Extracts from the documentary on the housing market:

- Fred and Judith: Housing shortage is too blame for the rapid changes and the exclusion of the population, because land value has increased so much in a short period.
- Judith: city part is constantly changing and under development. Change can be good, but not if the former population has to move.
- Judith wonders if CPO has pushed former population out (she thinks not). But the changing environment can be hard to adjust to from the former population.
- Wiro: is happy to live here, realises he is part of the 'problem' but states that social housing should be facilitated. 'they' say that is the case, but the square meter price of new housing is too high for social housing.
- Danny: if I could have sold the house for less and stay in Noord (instead of Purmerend) than I would.
- Fred: people moving to Noord buy a house for 5-700.000 euros that has the building quality of 100.000 euros. The municipality tries to get the industry to because they have other plans, they come back every day to convince them.

Extracts from the documentary on gathering places and social mixing:

- Danny illustrates the commercialisation of third places by pointing out a bar where everyone used to go at the nieuwendammerdijk (it was a simple bar where you could play games, drink beer, have fun and talk), that has changed into a pie shop (taartenwinkel).
- Danny: People do not talk to each other anymore, they do not care. This changes neighbourhoods for good or worse. People moving in need to adapt and integrate and find a way to co-exist.
- Wiro: the people living beyond the waterfront cannot afford as much and go to different shops and stores but I think that if you ensure enough facilities (accessible and affordable) then that everyone ends up using the same facilities.
- Judith: Noord is a patchwork of neighbourhoods, always has been. This means that there are not many places where different people mix. The media divides in old and new. She feels that that is more nuanced.
- Danny: once went to a bar which had more mixed people and he realised that not all those new people are bad but there was some judgement going both ways. They would say that poor people would need to work harder but not everyone can be a doctor or lawyer and in the end everyone needs a plumber.
- Wiro: there is little reason or occasion to mix people, especially if people are always angry. That is just not constructive.

Extracts from the documentary on the future:

- Judith: I hope that in ten years Noord still has green open spaces and will be more mixed. That the dynamics and circulation continues.
- Wiro: I think that in ten years a lot of the original population will have left and that is wrong.
- Danny: I think it is better to have a mixed society where everyone knows each other a little bit instead of having all those islands with people judging each other without knowing one another.

Persona's

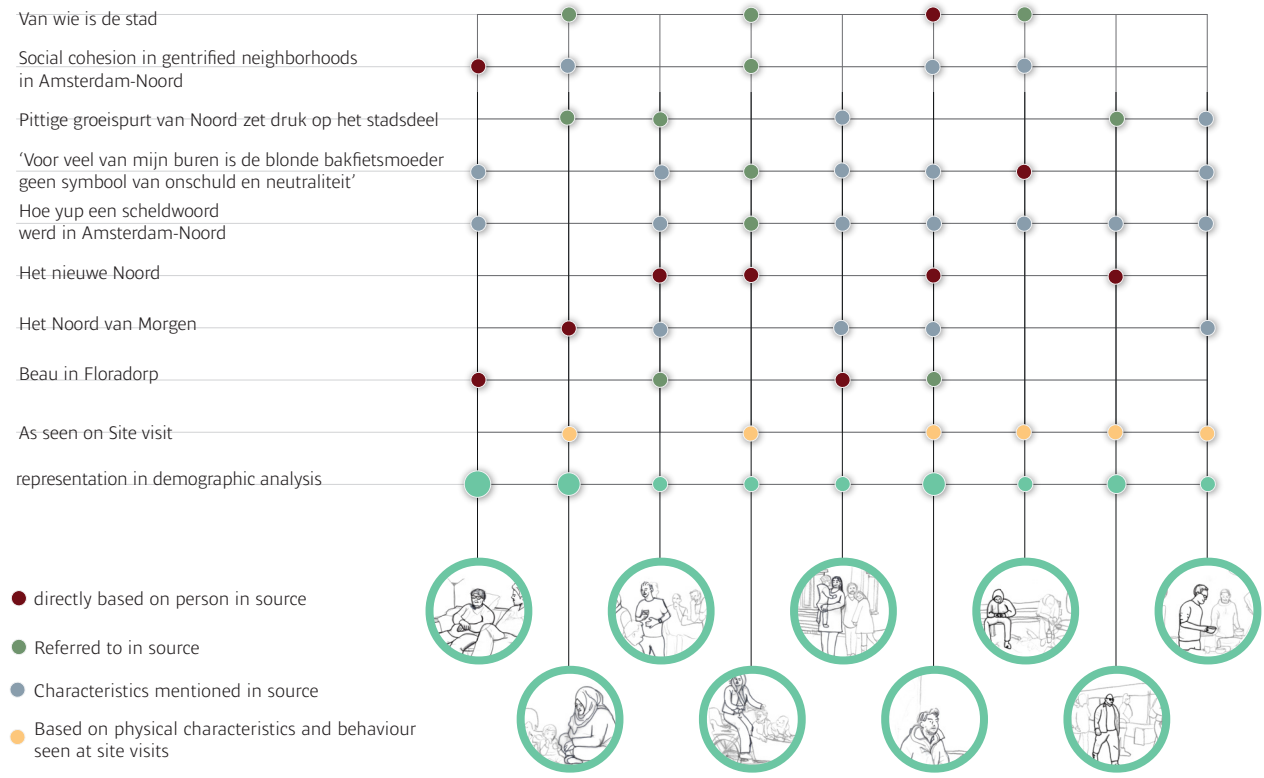


Figure 78: Sources persona development

THOMAS - **STUDENT**



Characteristics:

Age:19
Housing type: studio in NDSM
Time in Noord: 4 months, moved here from Denmark for college
Occupation: college student
Family: single family

Activities:



Values:

Freedom | Social life | Exploration

Noord is very hip but most of my daily things are in the city. I whished I could have a studio closer but the environment here is pretty cool.

ZEYNEP - **DAUGHTER OF MIGRANT**



Characteristics:

Age:24
Housing type: Gallery apartment
Time in Noord: 22 years
Occupation: parttime college
Family: living with her parents and brother (21) and sisters (18, 24)

Activities:



Values:

Family | Ambition | Safety

Being with family and helping out is important for us. This is familiair for many Noorderlingen. It is too bad that integration between all of us is so difficult. I worked hard to go to college and hopefully I can contribute that way.

MARK - **CREATIVE WORKER**



Characteristics:

Age:45
Housing type: apartment in garden village
Time in Noord: 9 years
Occupation: creative entrepreneur
Family: living with his partner

Activities:



Values:

Culture | Liveliness | Freedom

Noord is changing too fast while it has been the same for so long now. The pace is perhaps too fast for the original inhabitants but now it is a hotspot and perhaps that is a good thing.

RIET - **OUDE NOORDERLING**



Characteristics:

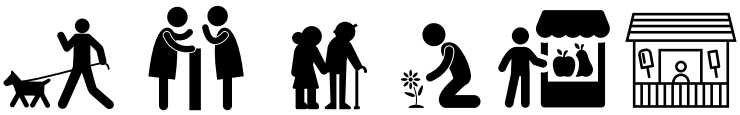
Age: 76
Housing type: row-house in garden village
Time in Noord: 67
Occupation: retired housewife
Family: Elderly couple

Values:

Looking out for each other | Community | Safety

Those new people bring nothing but trouble and they take away all our amenities and houses. In the past I knew everyone and there was social control.

Activities:



ADAM- **'YOUNGSTER'**



Characteristics:

Age: 16
Housing type: Gallery appartment
Time in Noord: 16 years
Occupation: secondary vocational education
Family: 2 parents and a brother (19)

Values:

Having fun | Diversity | Exploration

My parents worry about the changes, for us the changes mean new things to do. At the same time all those people look down upon us.

Activities:



SOPHIA - **BAKFIETSMOEDER**



Characteristics:

Age:34
Housing type: house garden village
Time in Noord: 2 years
Occupation: working mom
Family: living with her partner and 2 kids (4 & 3)

Values:

Ambition | social life | experiences over materials

My work is in the city but my home is in Noord, It is one of the few places in the city where we can afford a house with a garden. I really like the hip atmosphere in Noord.

Activities:



KARIN - **SINGLE MOM**



Characteristics:

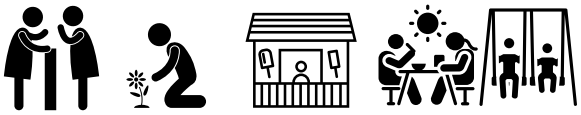
Age:39
Housing type: appartment
Time in Noord: 14
Occupation: works parttime as assistent
Family: single mom of 3 kids (8, 10 & 14)

Values:

Family | Self-reliance | Community

When my ex left I was lucky to find a corporation house here. It is quite a struggle but there is some help here and many initiatives and friendly neighbours.

Activities:



ERIK - **'SILENT MAJORITY?'**



Characteristics:

Age: 51
Housing type: single family house
Time in Noord: 30 years
Occupation: account manager
Family: divorced with 2 kids (16 & 9)

Values:

Lifeliness | Safety | Diversity

The changes in population we see now have happened before and back then everyone was angry as well. The good thing about the changes is that it brings new urban activities that have been missing for so long.

Activities:



DAVE - **OUDE NOORDERLING 3RD GENERATION**



Characteristics:

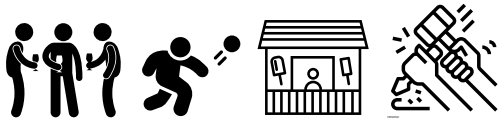
Age:29
Housing type: looking for a house where he grew up
Time in Noord: 28
Occupation: works in construction
Family: wants to settle down with his girlfriend

Values:

Living close to his friends and family | Work hard and enjoy a simple life | Social life

The changes were needed I just whished they would consider us that have lived here forever because for me it seems impossible to buy a house here.

Activities:



Public life

Conclusion spatial analysis

The analyses show there is too little density and diversity to sustain public life, caused by low-rise housing, separation of functions and even modes of transport. Public activities concentrate in small areas separated from residential areas by the car-oriented traffic system. Along the waterfront, more gathering spaces are appearing, but these are not always accessible for everybody.

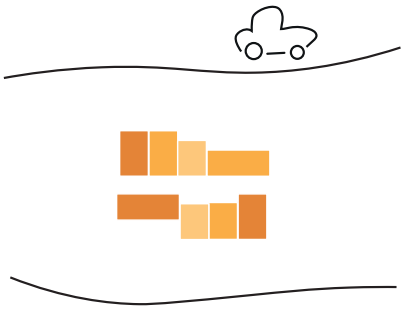
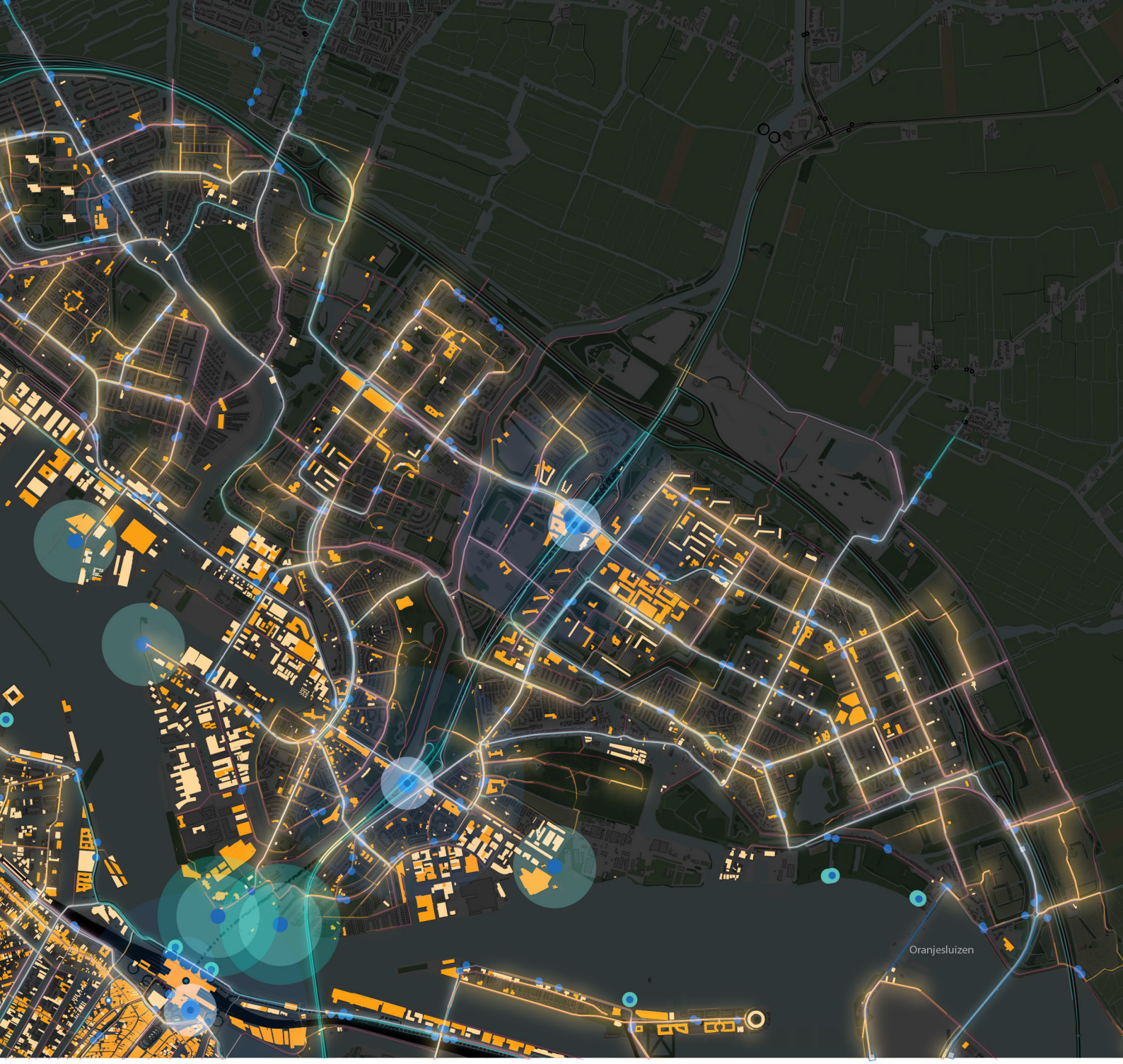




Figure 79: Conclusion large-scale analysis public life


Oranjesluizen
0
0.5
1
1.5
2 km

Demography

Conclusion spatial analysis

The demographic analysis showed many local differences and aspects of the community that influence bonding and friction between groups.

Generally spoken, there are "good" areas, "problematic" areas and something in between. This classification derives from the socio-economic analysis. Good neighbourhoods have high SES-population and neighbourhood satisfaction, while the problematic districts have lower scores.

* The waterfront developments are left grey because they are still under development..

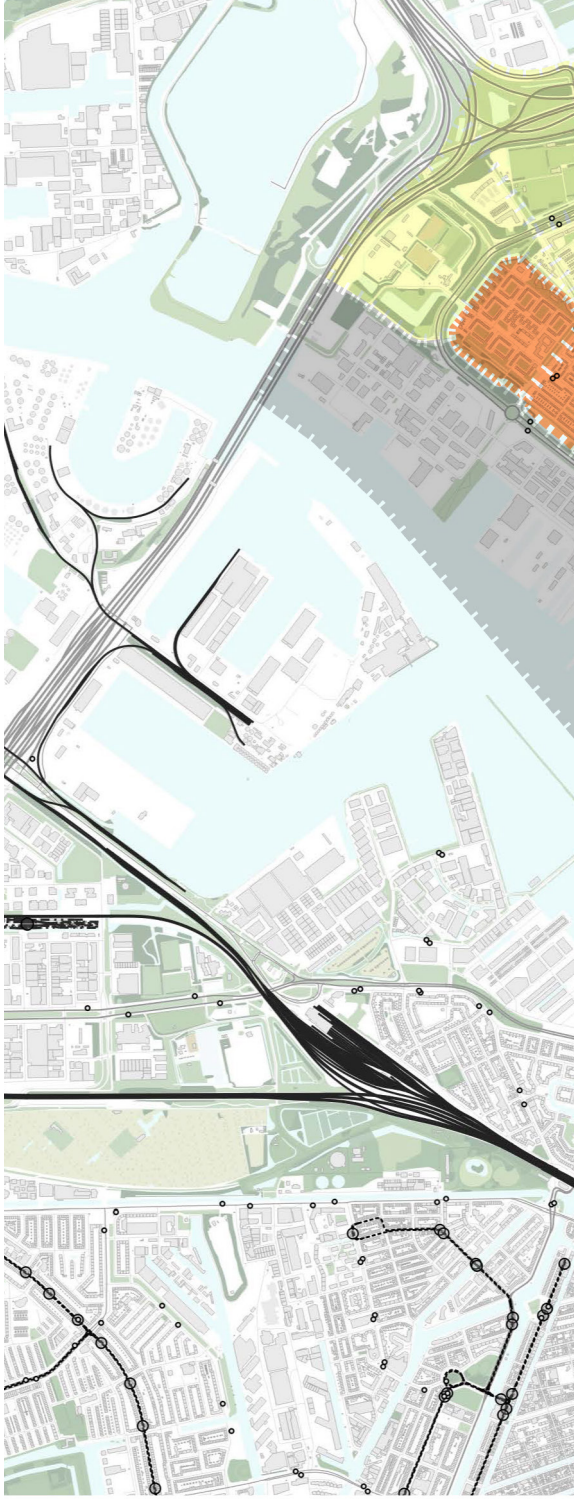
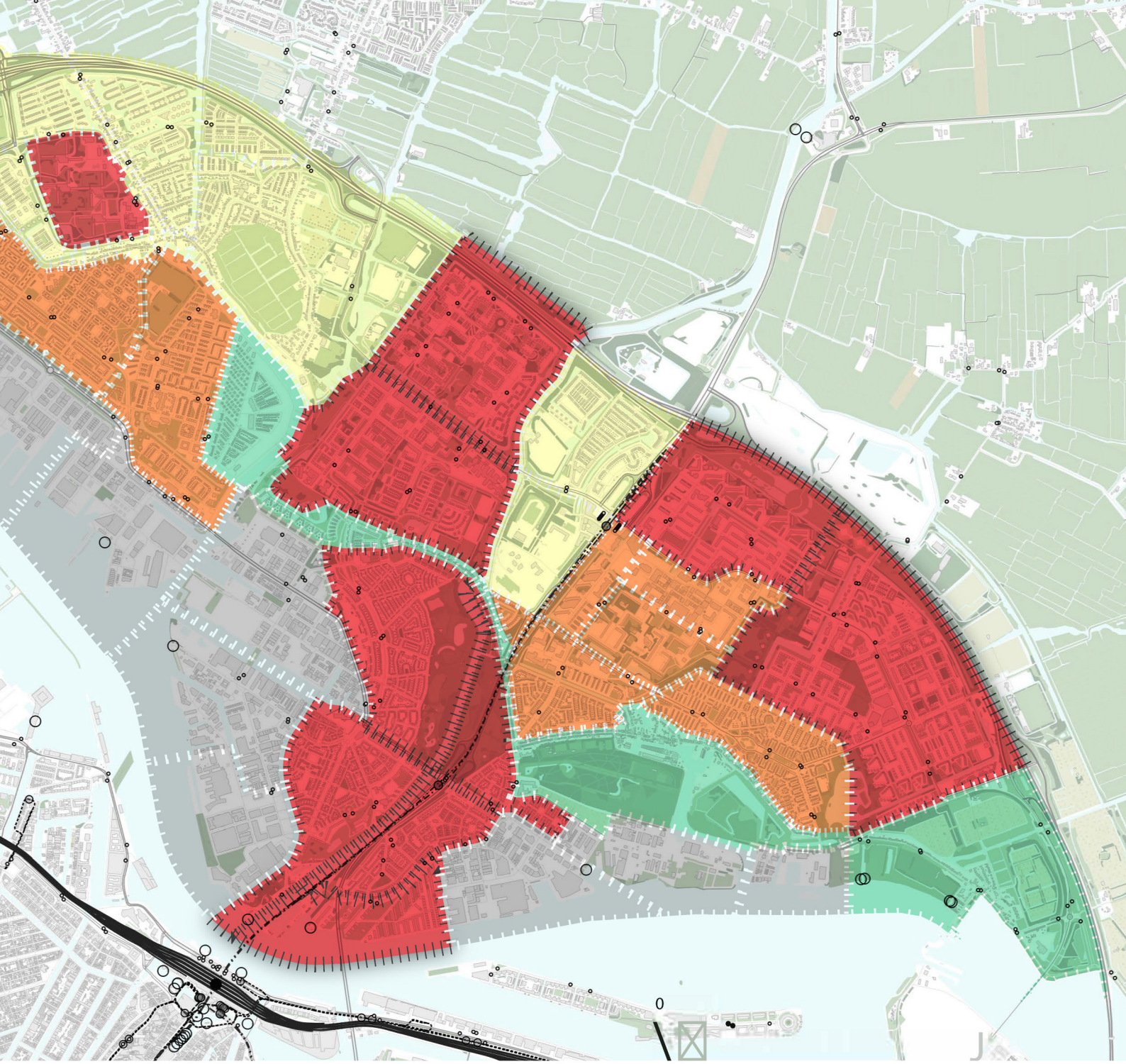


Figure 80: Demographic findings


0
0
0.5
1
1.5
2 km

Future development

Conclusion spatial analysis

Currently, redevelopments focus in the pink zones. While the redevelopment increases liveliness, support for facilities and diversity to Amsterdam-Noord, Integrating these developments with the surrounding urban fabric can be better. However, the dynamics of these developments bring more liveliness, new support for facilities and diversity to Amsterdam-Noord.

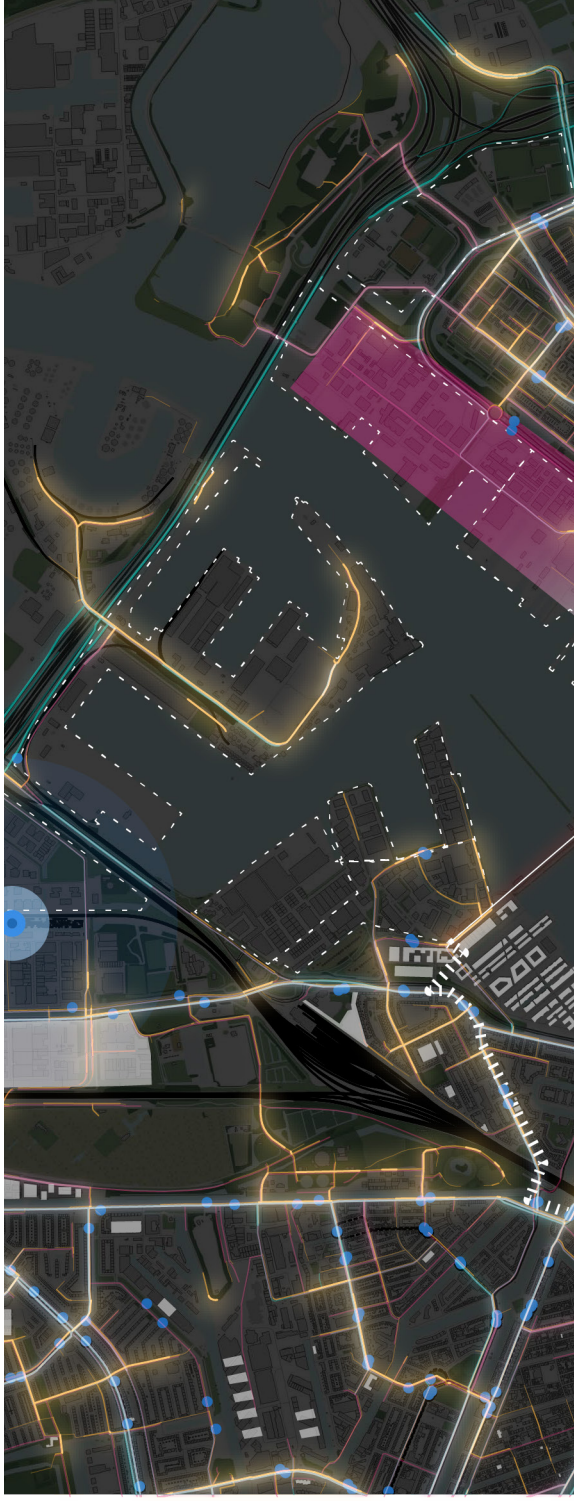
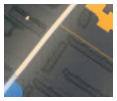


Figure 81: Redevelopment focus



High choice score car



High choice score pedestrian



High choice score bike



Development plans 2014-2040



Redevelopment focus area



Strategic redevelopment space



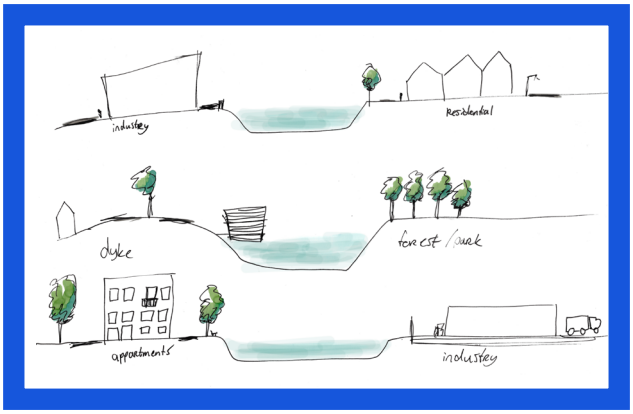
Public transport


Future bridge
Future bridge
Oranjesluizen
0
0.5
1
1.5
2 km

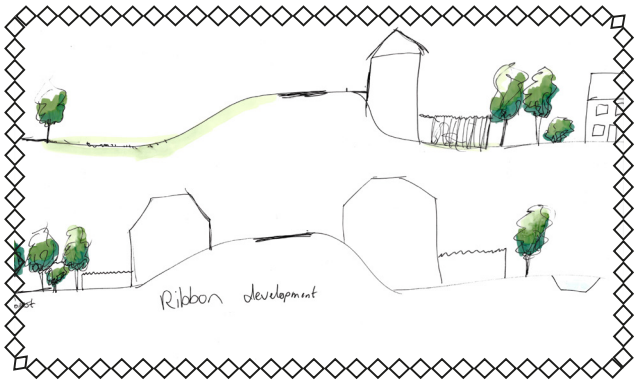
Urban fabric

Conclusion spatial analysis

Lines are legend



Water



Dyke



Roads

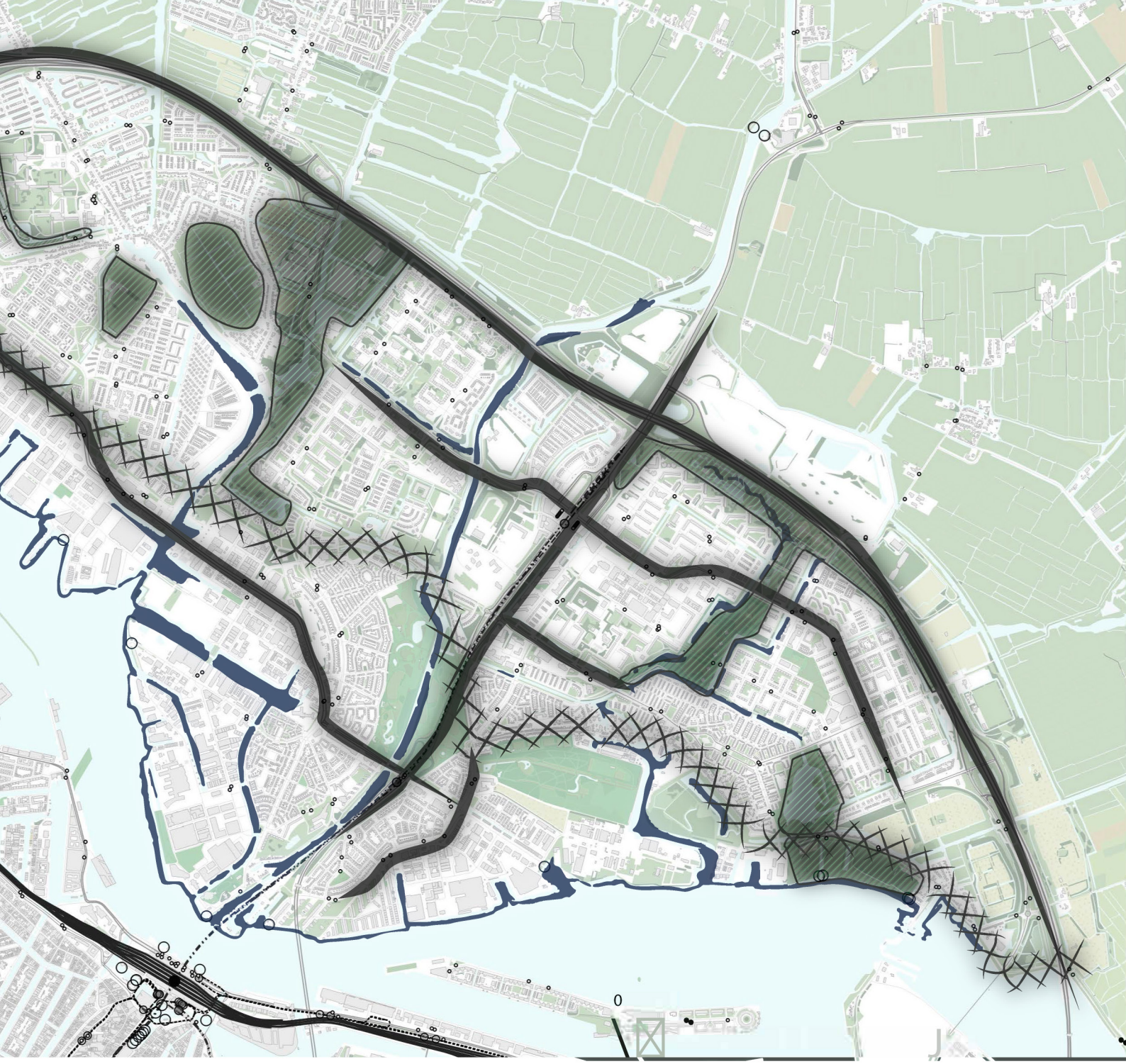


Nature

Figure 82: a-d profile sketches of barriers



Figure 83: Urban fabrics conclusion map



This conclusion map considers different types of considerable district barriers (waterways, canals, parks, infrastructure). On a more local scale, large single-use buildings, green patches and the same as above could also play a prominent role in disconnecting space, but this requires a more in-depth analysis.

The built density was in the spatial analysis by plotting the FSI and GSI on page 52- 55. According to theorists, the density in Amsterdam-Noord is too low to be ‘urban’, with some tiny exceptions in newer developments. Therefore this aspect is not included in this drawing.



Figure 54: Conclusion spatial analysis

spatial analysis _ overall

The alignment of the thematic conclusion maps shows that demographic borders align with barriers and the clusters of urban activities within neighbourhoods and few public functions along integrated streets. This means that too few public space networks and too few accessible places supporting public life. The barriers and significant demographic differences indicate that there is little interaction beyond local communities.



Vision for Urban vitality in Amsterdam-Noord

Right now, Most of Amsterdam-Noord is not dense enough to be ‘urban’ . But as it continues to grow, this is changing. However, to enhance urban vitality, this densification needs to occur beyond the waterfront in the existing neighbourhoods. Also, it is essential to respect the existing urban fabric and communities. Therefore, this vision proposes to gradually intensify the existing fabric and incorporate social mixing by diversifying the housing stock.

Another aspect of urban vitality lacking is the availability of third places, including small business and services where people can gather. These need to be embedded in the urban fabric of neighbourhoods and local culture to be accessible. Essentially all third places together cater for the entire population.

Next, there is much open green space that is not utilised. Protests about transforming the Vliegenbos and Noorderpark made clear that greenery and biodiversity are rightfully valued. However, the analysis showed that in some cases, greenery hinders access and use of public space due to limited perceived safety. Through better landscaping for visibility and generating more pedestrian flows with strategic destinations, green public spaces can be made more usable by people in the right places.



Figure 85: Vision for vital public spaces



Mix retail and residents

Respect and empower local community

Maintenance by the community

Small shops and services stimulate Urban vitality

Streets as public space

Safety design for soft modes of transport

Utilize open spaces for social activities

Develop more gathering places



Figure 86: Strategic structural vision



People can experience urban vitality in public space. The collage on the previous page indicates how urban design at a smaller scale may impact that experience. However, as described in previous sections, structural components influence the liveliness and liveability of places. Figure 86 depicts the structural vision to generate urban vitality and social mixing on strategic sites along current demographic borders where the network is well-integrated.

LEGEND

- Existing public life cluster.
- Required lively connections
- Breaking barriers
- Large green bodies
- Historic dyke
- Integrated streets
- Problem neighbourhoods
- Good neighbourhoods
- Waterfront developments



CH4: Urban vitality at site

- Spatial Analysis of potential sites
- Observation

Urban vitality at site

This chapter looks at local conditions that make places vital. Starting with the selection of 10 sites for comparative analysis and evaluation based on several urban vitality principles as shown below. Figure 87 shows the approach and methods for this analysis.

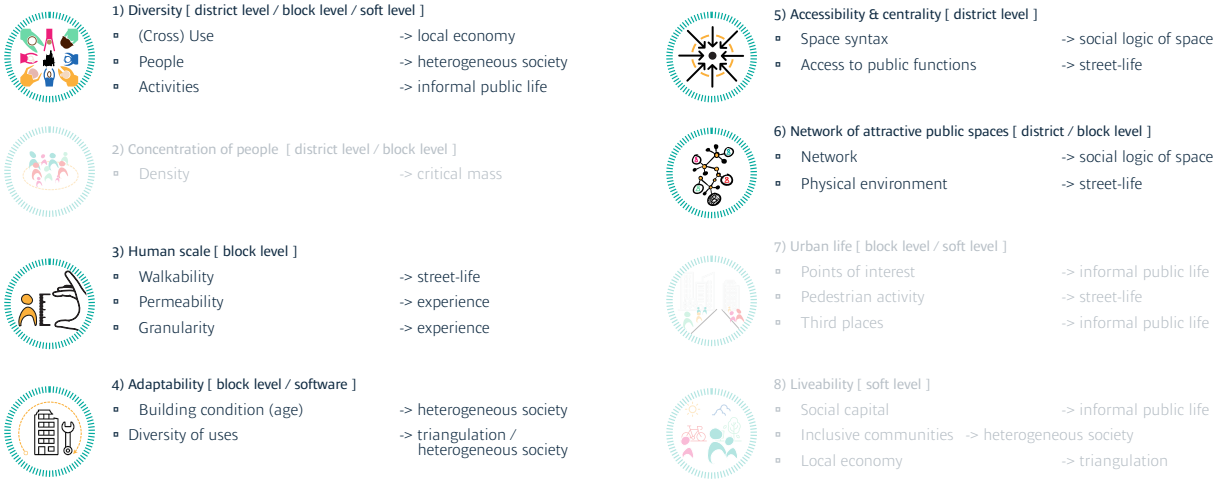


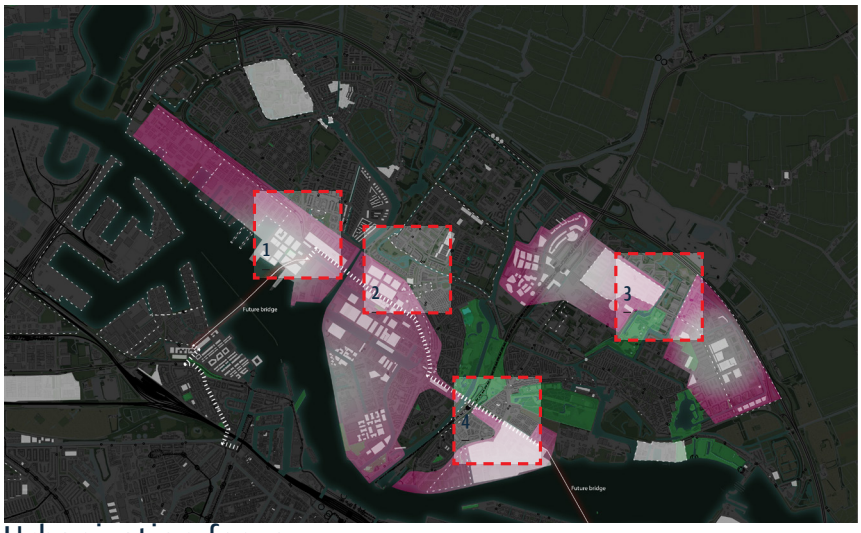
Figure 87: Evaluation criteria case study

Site selection for the atlas

1. Overhoeks : large blocks with public functions at waterfront.
2. Mosveld: local high street / square with small scale public functions. Could be extended to Noorderpark metro and park.
3. CAN / elzenhage zuid and builslotermeerplein: concentration area of public functions.
4. Beemsterstraat & waterlandplein: most public street lacks public activities: potential for urban life in residential area.
5. Tuindorp Oostzaan: garden village public squares disconnected from public streets.
1. NDSM: waterfront (cosmopolitan ambition): currently under development
2. Klaprozenbuurt: connections to other neighbourhoods (strategic zones): still in planning phase.
3. CAN / baanakkerpark / waterlandplein buurt: renovation of neglected neighbourhoods: could use an impulse other than renovation of social housing: employment opportunities.
4. Hamerkwartier integration with Vogelbuurt and parks.



Urban life



Urbanization focus

1. NDSM: barriers and different public streets for different modes of transport.
2. noorderpark: The most central park is crossed by 2 barriers (urban highway and canal).
3. IJdoornlaan Banne and elzehage: different urban fabrics come together but are seperated.
4. Beemsterstraat: one of the few radial (south-north) streets that is very public: connector of different residential urban fabrics.



Urban fabric

1. Overhoeks was the starting point of the recent urbanisation in Noord. The friction in this area is high.
2. Nieuwendam- (-erdijk, tuindorp) and what was formerly nieuwendam-noord. One line crosses all different demographic typologies.
3. place where demographically different neighbourhoods meet, all of them influenced by the urbanization in different ways.
4. Molenwijck and tuindorp oostzaan are not yet influenced by the changes in Noord



Demographic friction



Figure 88: overlay of spatial conclusion maps

The previous pages show a site selection of 4-5 sites (squares) for each spatial analysis theme. By overlapping all the sites and comparing them with the vision map (figure 86), three larger areas were more interesting. To zoom in at different public spaces, including parks, traffic spaces, redevelopment sites, the following ten sites were derived.



Atlas Cases Amsterdam-Noord

1. Mosveld: an area cut by traffic artery while at the same time being a local shopping centre
2. Overhoeks: former industrial site at the waterfront that is being redeveloped with high densities and cosmopolitan functions.
3. Beemsterstraat: a streetscape that in the space syntax analysis seems important and public, but lacks the public functions to be a lively high street.
4. Baanakkerpark:
5. Noorderpark and Vliegenbos: at this crossing these parks connect with different neighbourhoods: being the perfect place for social integration
6. Hamerkwartier: this waterfront public space is isolated by the surrounding industry, at the same time it is used as public space.
7. Kampferfoelieweg: Traffic junction in fringe space between neighbourhoods: potential for integration if better designed.
8. Klaprozenweg: a traditional buffer between industry and residential neighbourhood that results in segregeting low rise and future high rise neighbourhoods.
9. NDSM wharf: former industry that is redeveloped with cosmopolitan high rise.
10. Meeuwenlaan: overdimensioned traffic space as a barrier

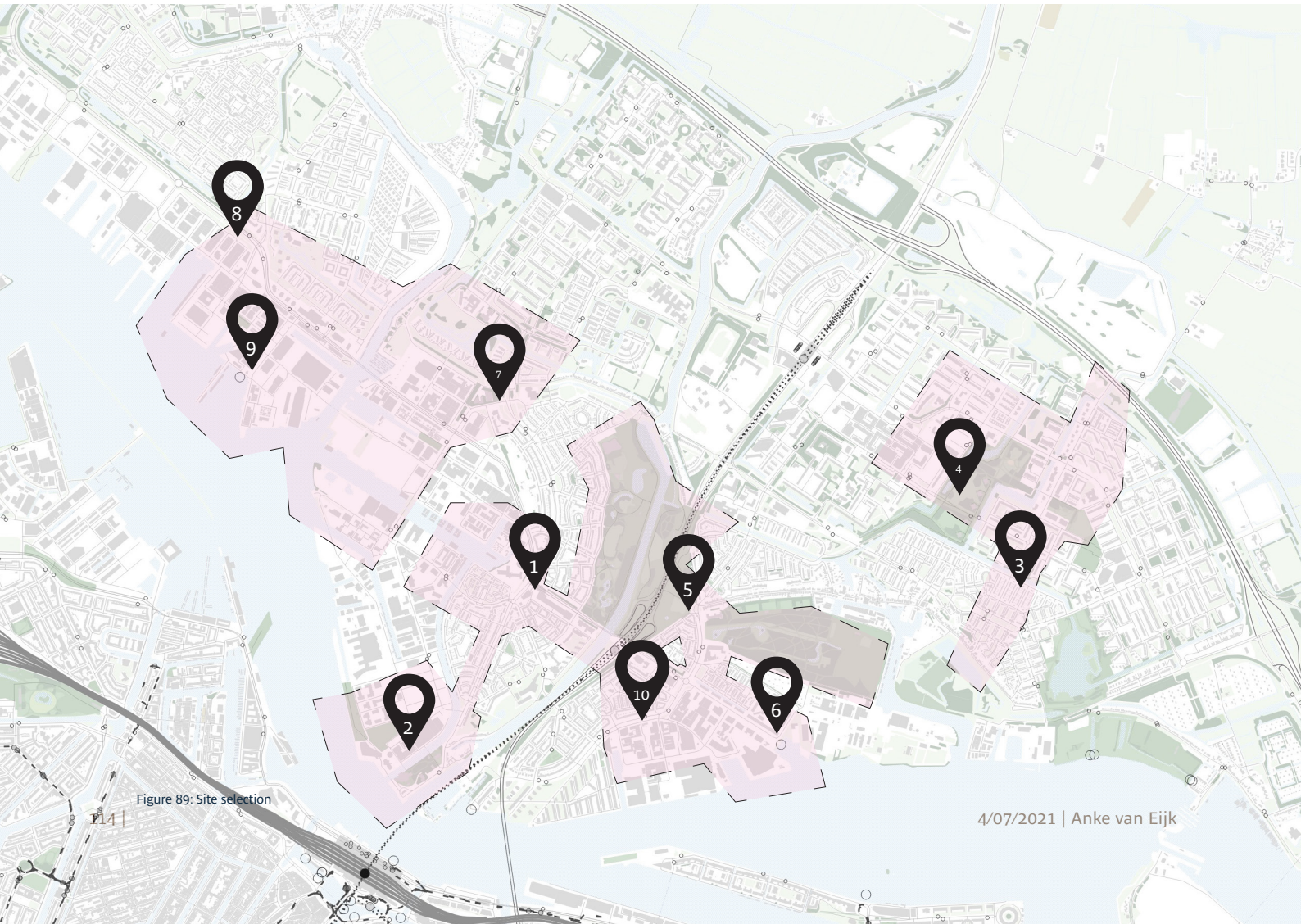
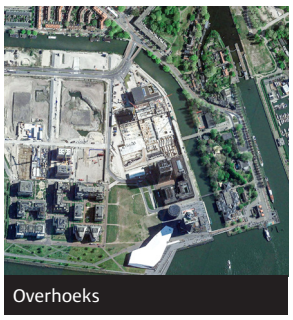


Figure 89: Site selection

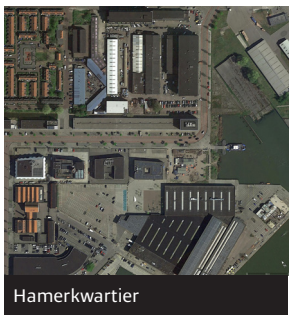

Mosveld


Overhoeks

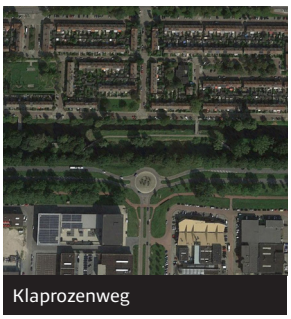

Beemsterstraat


Baanakkerpark


Noorderpark


Hamerkwartier


Kampferfoelieweg


Klaprozenweg


NDSM werf


Meeuwenlaan

Plan analysis to consider
the composition of space and
buildings, traffic flows;
how functions are mixed and how
points of interests are concentrated

Radar chart Evaluation based
on urban vitality
principles

Aerial photograph to
introduce and visualize
the type of space and
urban fabric and indicate
location of section

Large scale map to
indicate the position
in the larger network

street views to show the
experience at eye level

Section to show the
interface between public
space and buildings

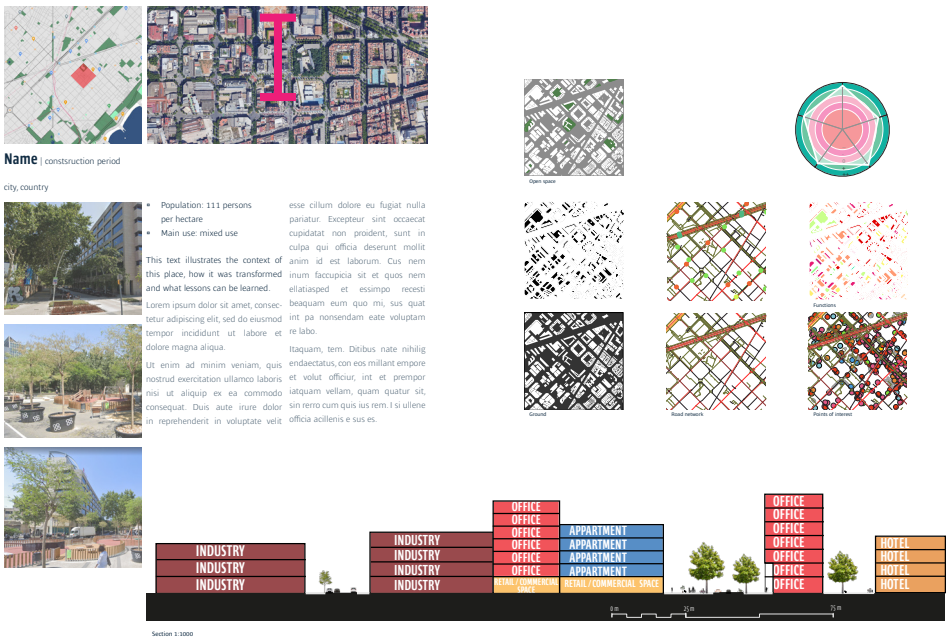
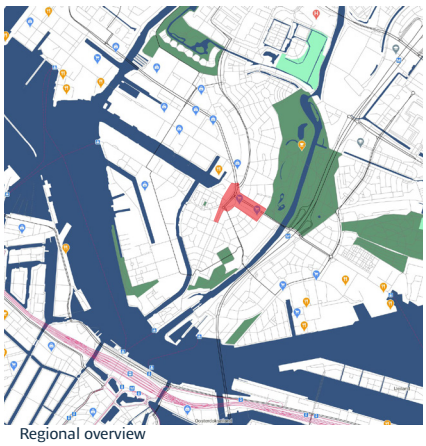


Figure 90: Layout for the analysis



Regional overview



top view

120 inhabitants per hectare

Mosveld | 1920 | 2016



Street view

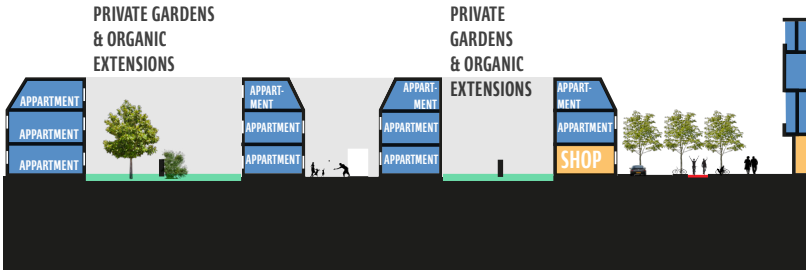


Street view



Street view

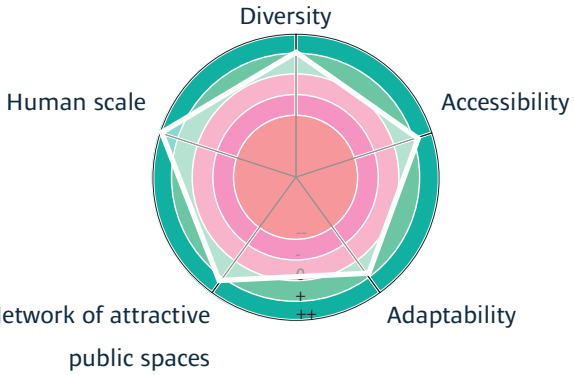
This square has different levels, functions and zones. Several traffic arteries connect here while at the same time it is the main shopping area for most of Noord. In 2016 the new block in the middle section was built and the weekly market was moved to the van der pekstraat. Although the street is still a physical barrier, from the southside it is no longer experienced as such. It is relative densely populated and built but not enough to consider as urban. It has many commercial activities and plays an important part in people's daily public life. There are many small squares in the neighbourhood and the Noorderpark is closeby.



Section 1:1000



Open space



open space
- water
- forest
- park
- grass

Traffic
- Pedestrian
- Bikelane
- Local streets
- tertiary streets
- primary street
- secondary streets
- highway
- unknown

Public transport
- bus-stop
- taxi

building functions
- appartments
- construction
- commercial
- house
- retail
- hotel
- houseboat
- industrial
- office
- mosque
- shop
- unknown

Points of interest
- public functions
- misc
- leisure
- misc
- Shopping and money



Figure



Public transport



Functions



Ground

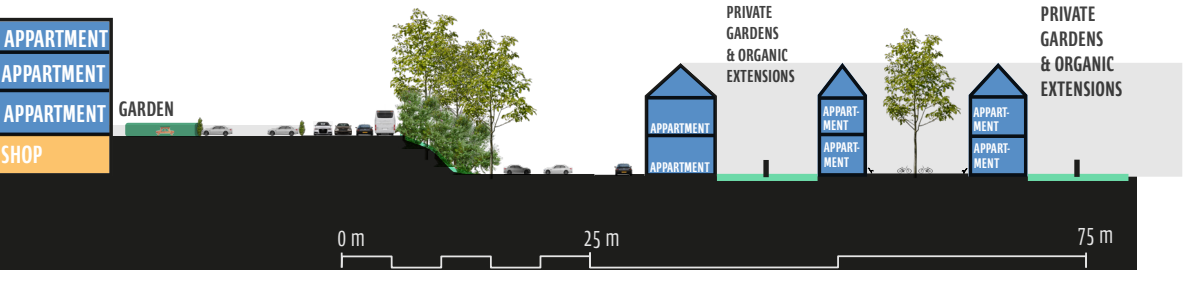


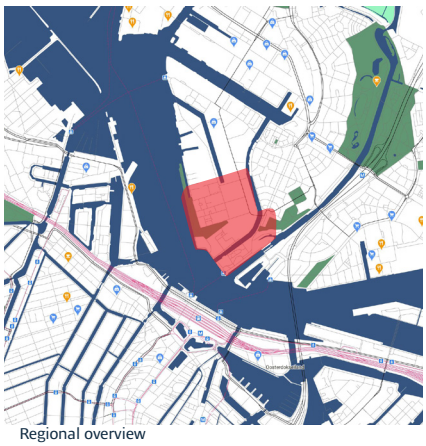
Road network



Points of interest

Plan analysis - scale 1:3000





Regional overview



top view

43 inhabitants per hectare (under development)

Overhoeks | 2006-2026



Street view

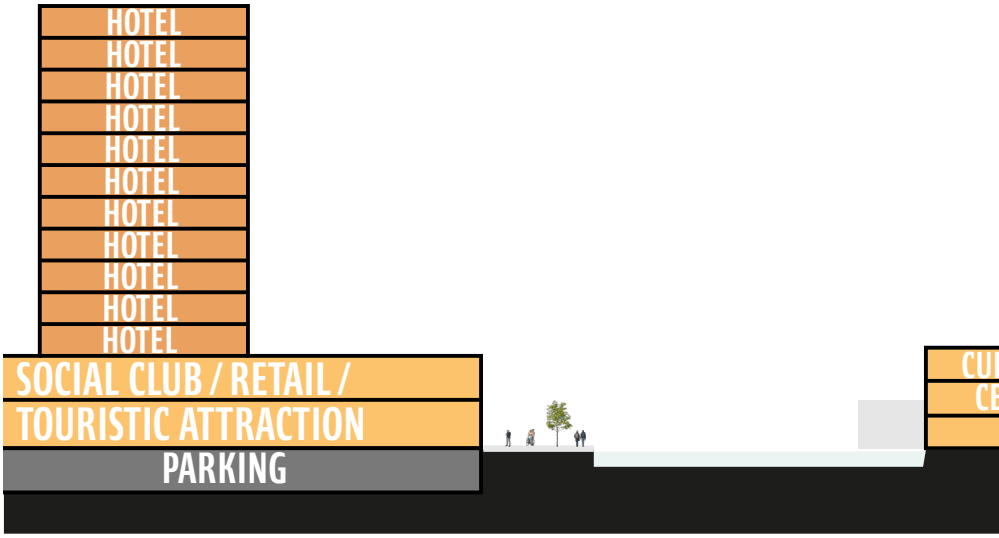
Overhoeks has some attractions that attract many visitors. There is a discrepancy between the new developments which are too big considering human scale and the existing urban fabric. There are quite some new public activities and functions, but accessibility to the existing neighbourhoods is not very good (yet).



Street view



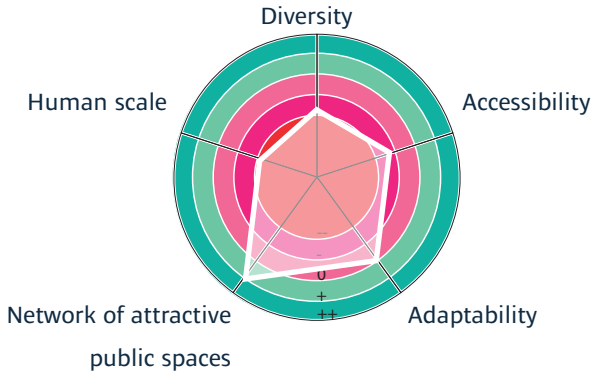
Street view



Section 1:1000



Open space





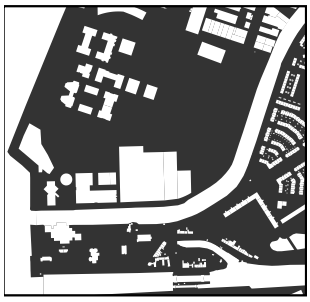
Figure



Public transport



Functions



Ground



Road network



Points of interest

Plan analysis - scale 1:3000

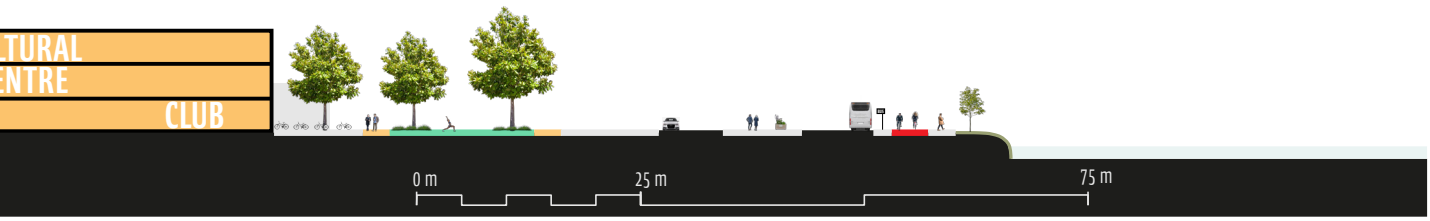
open space
- water
- forest
- park
- grass

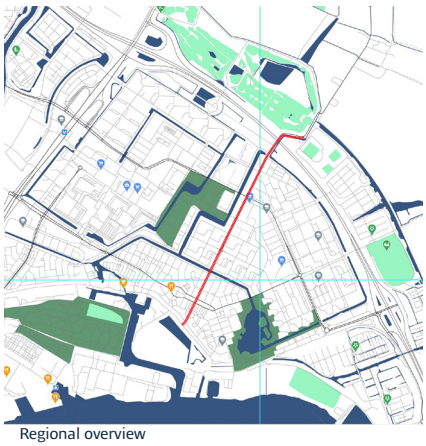
Traffic
- Pedestrian
- Bikelane
- Local streets
- tertiary streets
- primary street
- secondary streets
- highway
- unknown

Public transport
- bus-stop
- ferry
- subway

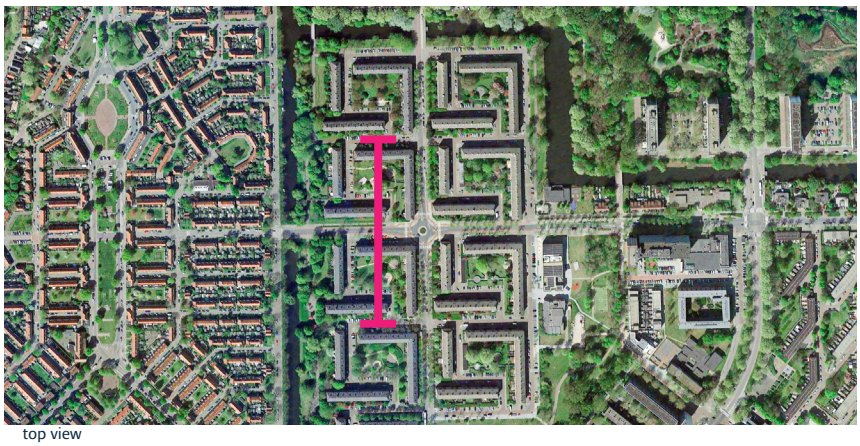
building functions
- appartments
- commercial
- construction
- houseboat
- hotel
- house
- industrial
- office
- service
- shop
- retail
- school
- sports centre
- unknown

Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism





Regional overview



top view

Beemsterstraat | 1925

108 inhabitants per hectare



Street view



Street view



Street view

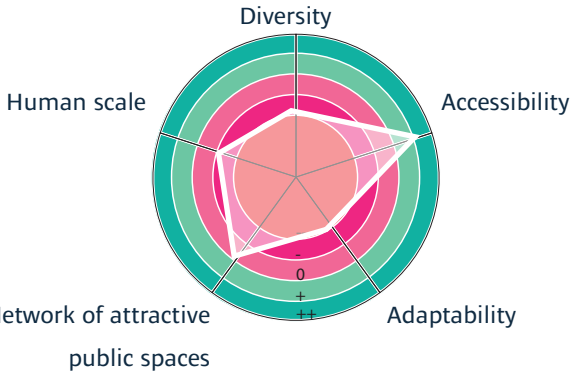
This well-integrated street passes different neighbourhoods but lacks public activities to attract people. The different neighbourhoods have their distinct architecture and set-up, within a block there is no diversity. In the northern part of the street there are more public functions and the streetscape has more variety which already makes it more interesting. However, the buildings are still set back and provide little interaction.



Section 1:1000



Open space



open space
- water
- forest
- park
- grass

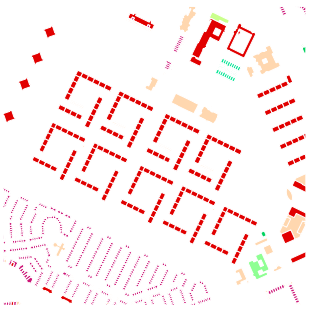
Traffic
- Pedestrian
- Bikelane
- Local streets
- Tertiary streets
- unknown



Figure



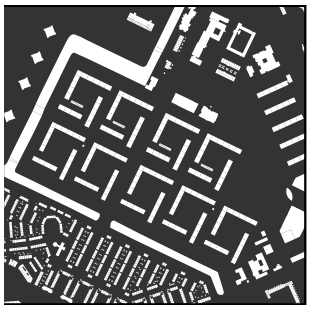
Public transport



Functions

Public transport
- bus-stop

building functions
- appartments
- construction
- commercial
- house
- retail
- school
- unknown



Ground



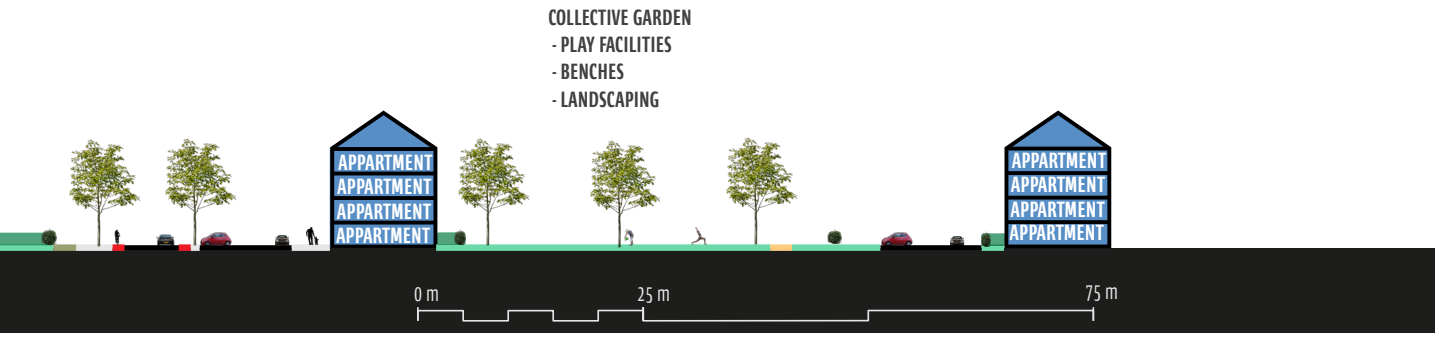
Road network



Points of interest

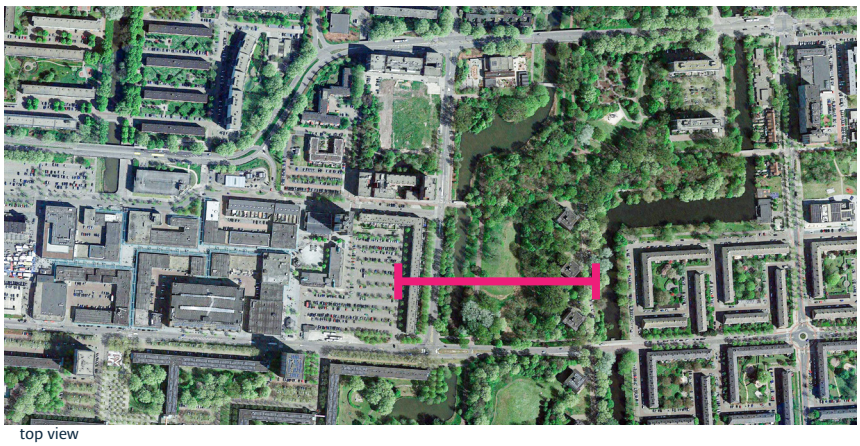
Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism

Plan analysis - scale 1:3000





Regional overview



top view

Baanakkerpark | 1963

48 inhabitants per hectare



Street view

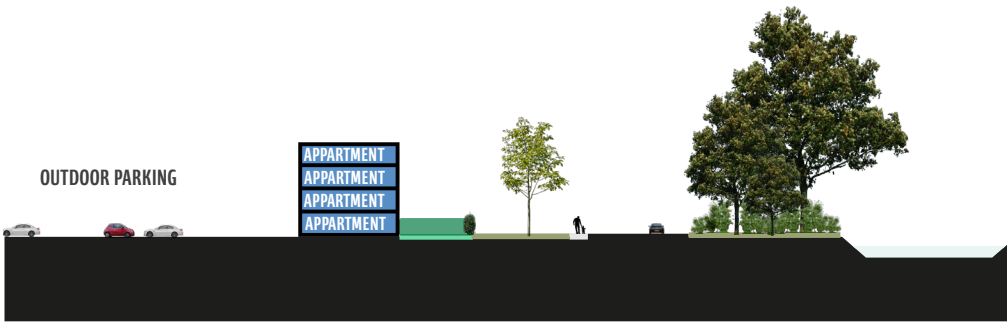


Street view



Street view

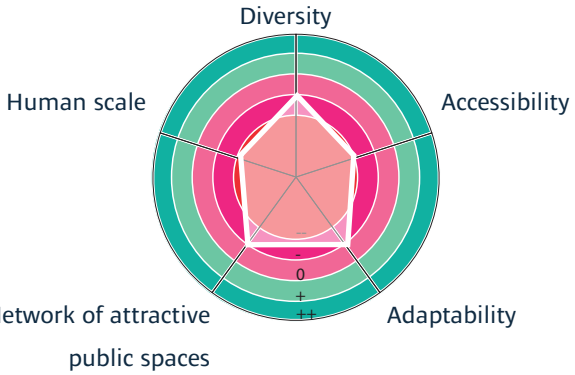
The park's edges are canals and is crossed by 2 traffic arteries, typical is that these streets are car-only, this means that slow modes go through the park, but the lack of visibility or public functions make this experience at night feel unsafe. There are some residential buildings in the park, these are high rise towers and have little interaction at street level. The buildings at the park's edges are too large and the separation of functions (even in traffic) makes this a difficult place to adapt.



Section 1:1000



Open space



open space
- water
- forest
- park
- grass

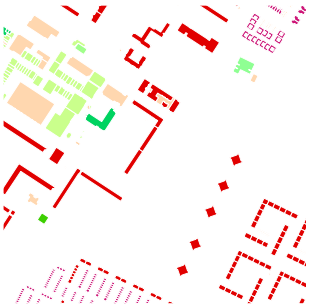
Traffic
- Pedestrian
- Bikelane
- Local streets
- Tertiary streets
- secondary streets
- unknown



Figure



Public transport



Functions

Public transport
- Bus-stop

building functions
- appartments
- church
- commercial
- house
- retail
- school
- unknown



Ground



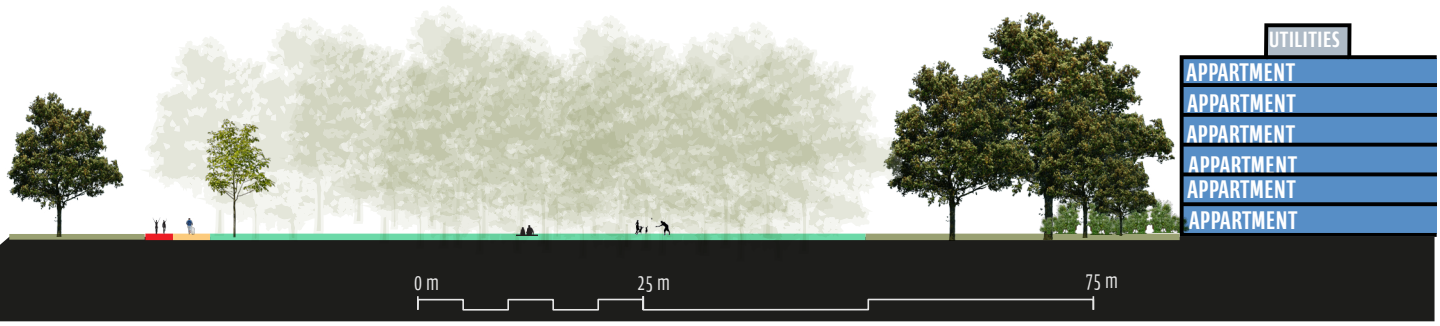
Road network

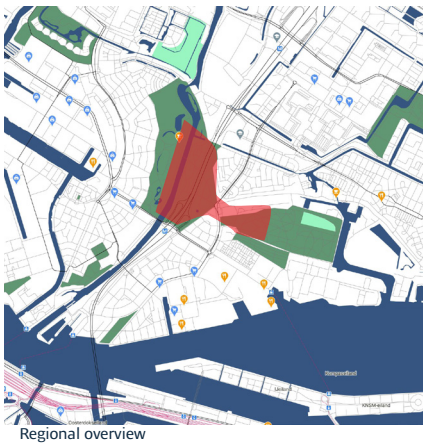


Points of interest

Points of interest
- public functions
- misc
- health
- leisure
- misc
- Shopping and money

Plan analysis - scale 1:3000





Regional overview



top view

Noorderpark/vliegenbos

16 inhabitants per hectare

1921



Street view

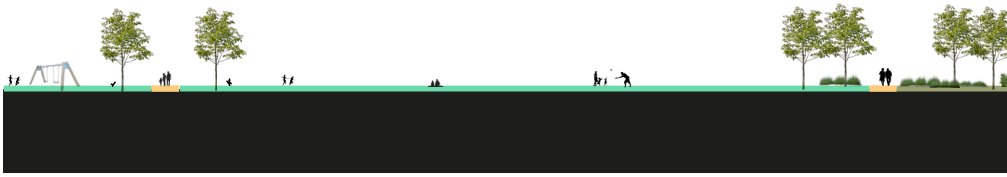
In the vliegenbos, nature and biodiversity are important. The noorderpark is designed to be used and that can be seen. The park has a couple of clearly defined entrances with public functions that may attract users. The Vliegenbos has less entrances and some functional barriers; a camping and allotment gardens. The Noorderpark is crossed by a canal and an urban highway, these decrease the accessibility to other sides of the park. In both parks and the surrounding neighbourhoods the human scale is good.



Street view



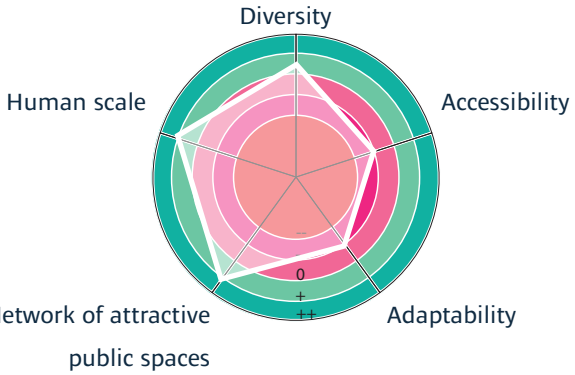
Street view



Section 1:1000



Open space



open space
- water
- forest
- park
- grass
- allotments

Traffic
- Pedestrian
- Bikelane
- Local streets
- tertiary streets
- primary street
- highway
- unknown

Public transport
- bus-stop
- metro
- rail

building functions
- appartments
- civic
- commercial
- house
- industrial
- unknown

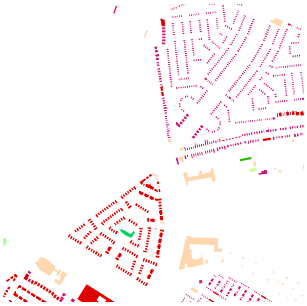
Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism



Figure



Public transport



Functions



Ground

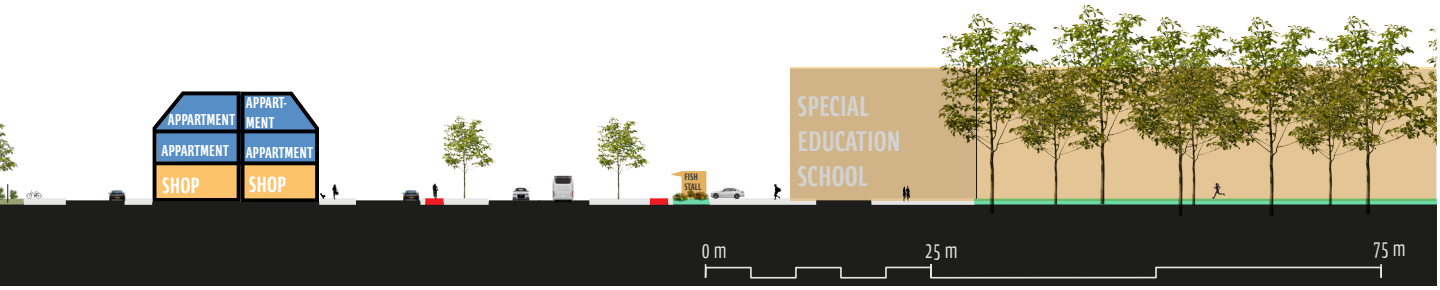


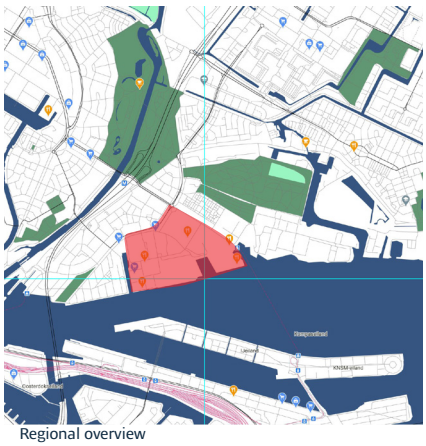
Road network



Points of interest

Plan analysis - scale 1:3000





Regional overview



top view

15 inhabitants per hectare

Hamerkwartier | 1915



Street view

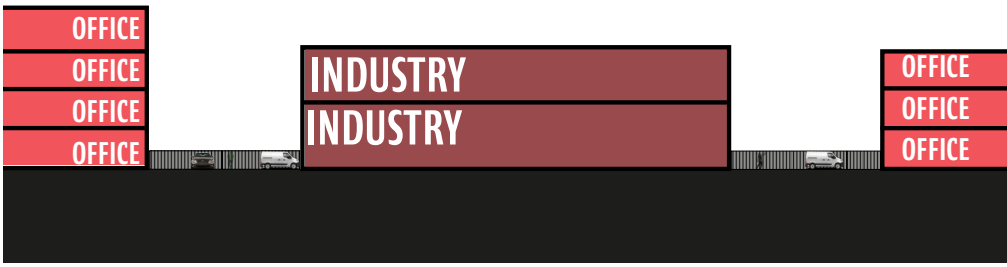


Street view



Street view

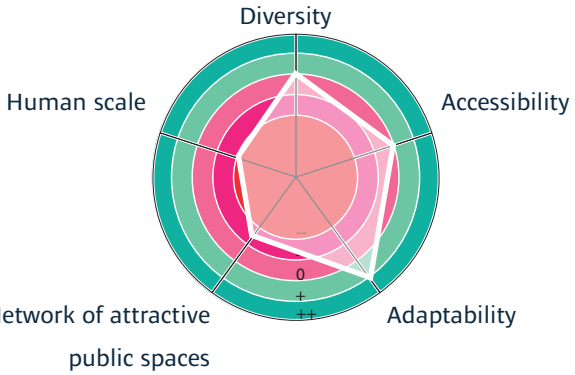
This former harbour area is under slow transformation to become more mixed. The new plans include high density city blocks. In the plan analysis the oldest garden village vogeldorp is included to show the contrast between the large low-rise industry blocks of the hamerkwartier and the human scale of vogeldorp. The hamerkwartier is filled with desolate concrete plains for industry purposes and is not a very friendly place to be. However, nowadays there are quite some hotspots at the waterfront.



Section 1:1000



Open space

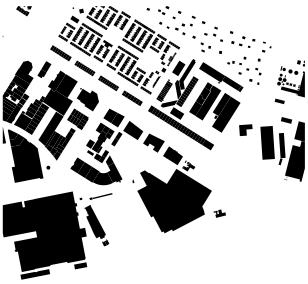


open space
- water
- forest
- park
- grass
- allotments

Traffic
- Pedestrian
- Bikelane
- Local streets
- tertiary streets
- unknown

Public transport
- ferry

building functions
- appartments
- mosque
- commercial
- house
- retail
- parking
- industrial
- unknown



Figure



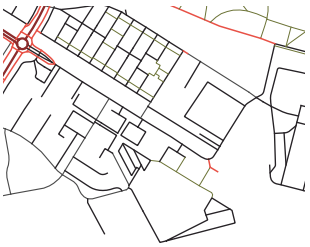
Public transport



Functions



Ground



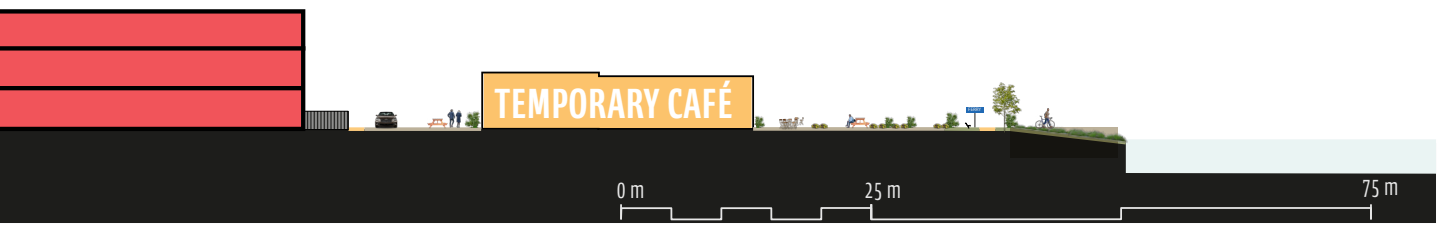
Road network

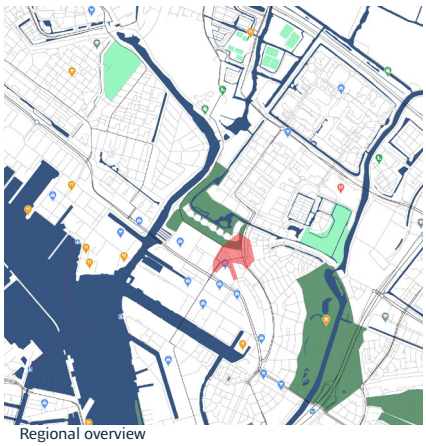


Points of interest

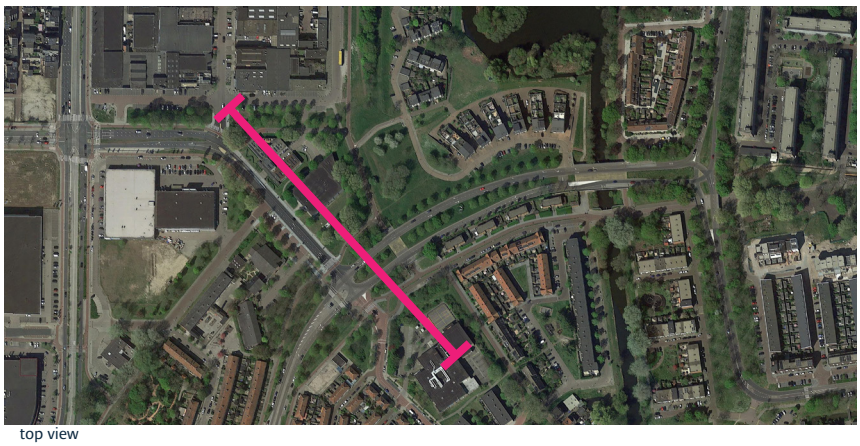
Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism

Plan analysis - scale 1:3000





Regional overview



top view

Kampferfoelieweg | 1970

108 inhabitants per hectare



Street view



Street view



Street view

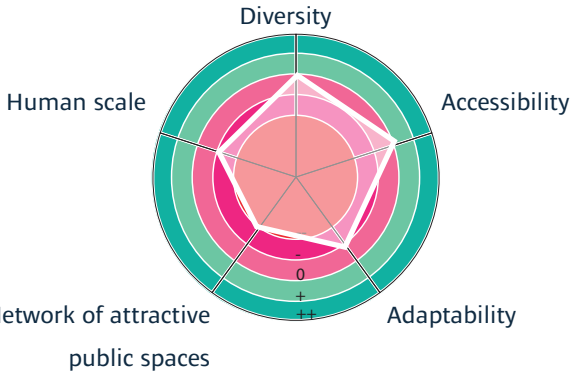
This crossing is a place where many traffic flows come together and where different urban layouts almost meet. Almost, because the abundance of green space is more of a barrier instead of spatial quality. There is a mix of functions in this leftover space between neighbourhoods but the dominance of the traffic hinders uses that stimulate urban life. The western industrial area will be transformed to a high density mixed use neighbourhood, how the design of that neighbourhood incorporates this crossing is yet unknown.



Section 1:1000



Open space



open space
- water
- forest
- park
- grass

Traffic
- Pedestrian
- Bikelane
- Local streets
- tertiary streets
- primary street
- secondary streets
- unknown

Public transport
- bus-stop

building functions
- appartments
- construction
- commercial
- house
- retail
- school
- church
- industrial
- unknown

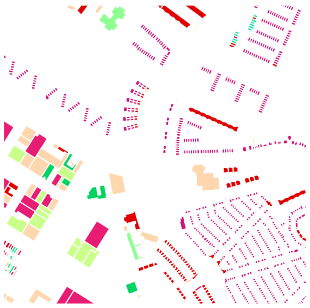
Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism



Figure



Public transport



Functions



Ground

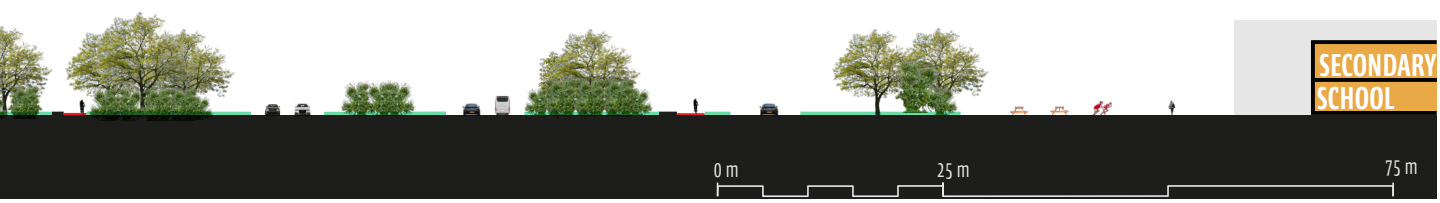


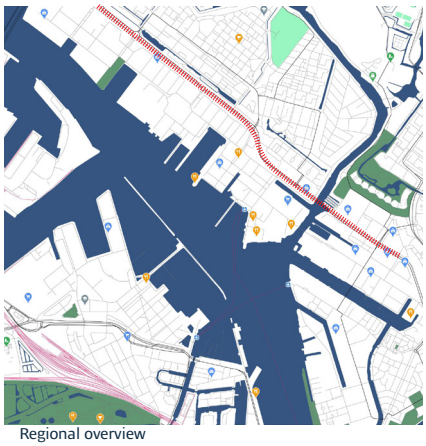
Road network



Points of interest

Plan analysis - scale 1:3000





Regional overview



top view

Klaprozenweg | 1950

39 inhabitants per hectare



Street view

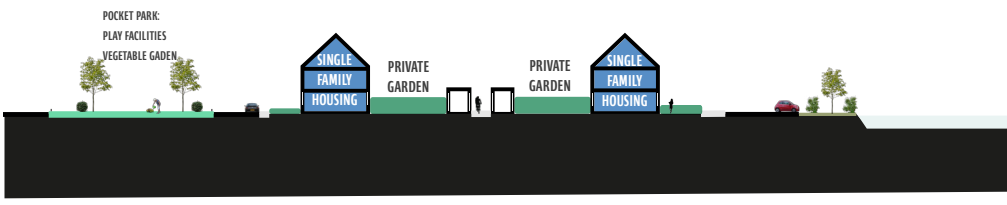


Street view



Street view

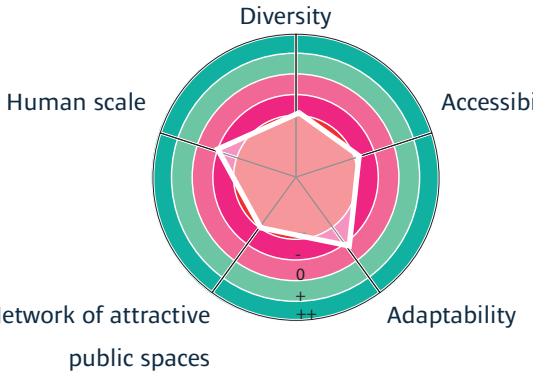
This street is a typical barrier between industry and a residential neighbourhood. The street and park strip next to it, separate two completely different urban typologies. From both sides accessibility to the other side needs a large detour. Which is not necessarily an issue if the industrial area would not change, but exactly the industrial area is transforming to a mixed use environment while the low rise residential area has not changed as a whole.



Section 1:1000

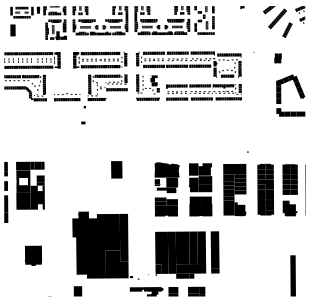


Open space



open space
- water
- forest
- park
- grass

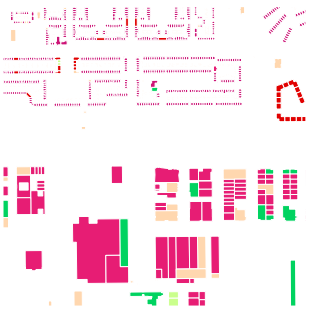
Traffic
- Pedestrian
- Bikelane
- Local streets
- tertiary streets
- primary street
- unknown



Figure



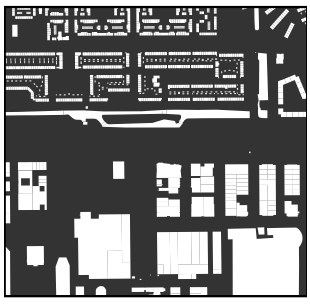
Public transport



Functions

Public transport
- bus-stop

building functions
- appartments
- church
- commercial
- construction
- houseboat
- retail
- house
- industrial
- unknown



Ground



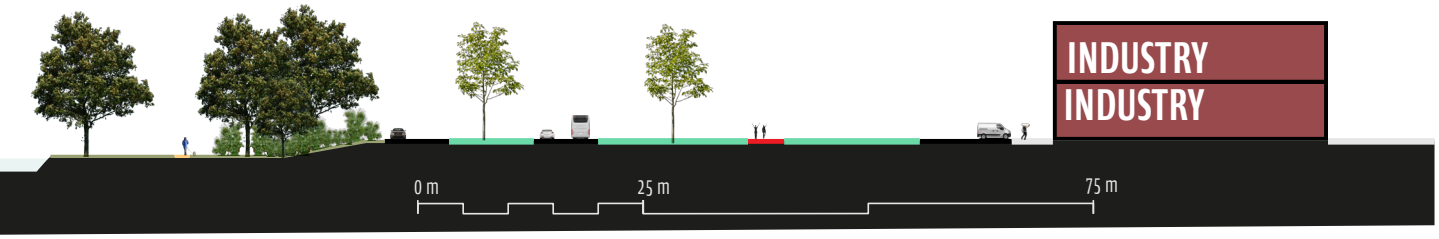
Road network

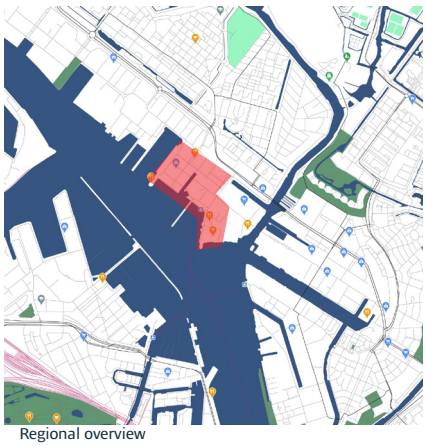


Points of interest

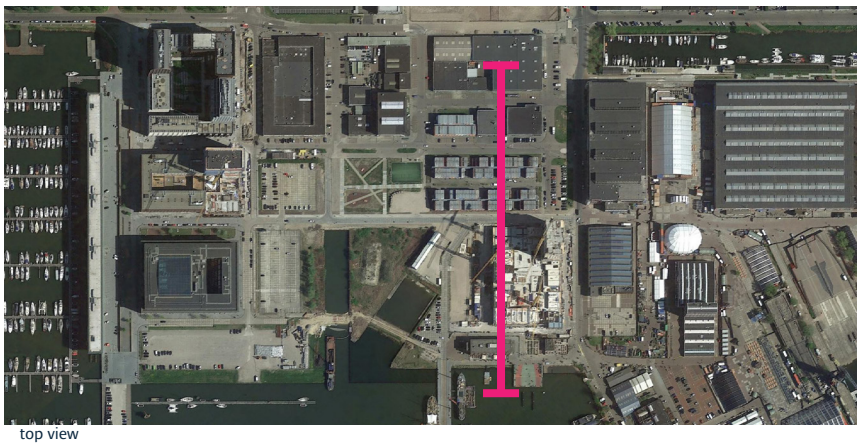
Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism

Plan analysis - scale 1:3000





Regional overview



top view

64 inhabitants per hectare

NDSM Werf | 1919



Street view



Street view

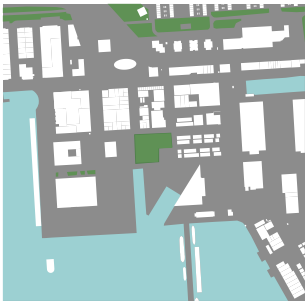


Street view

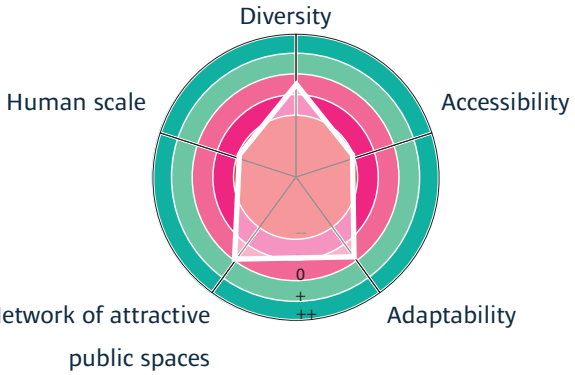
The western part of the NDSM wharf is well-known as a festival-site, for its flea market and for some of the cafes. It is one of the first places where the creative industry settled down and has a strong creative industrial identity. Now it is also a high density development site, with blocks that fit well in the large industrial grain. The klaprozenweg and water border this area and lets it be a small city on its own. While housing and other commercial functions were added in the recent developments it is still a functional industrial area.



Section 1:1000



Open space



open space
- water
- forest
- park
- grass

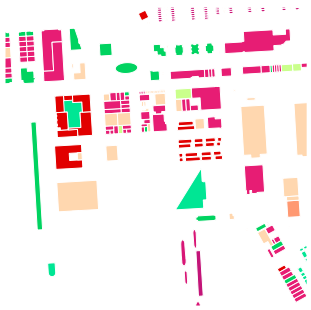
Traffic
- Pedestrian
- Bikelane
- Local streets
- tertiary streets
- primary streets
- unknown



Figure



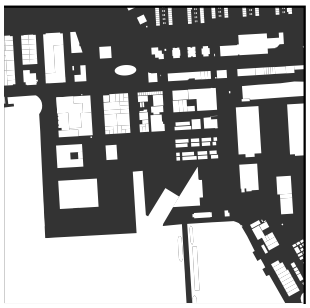
Public transport



Functions

Public transport
- Bus-stop
- ferry

building functions
- appartments
- construction
- commercial
- house
- retail
- hotel
- houseboat
- industrial
- office
- service
- unknown



Ground



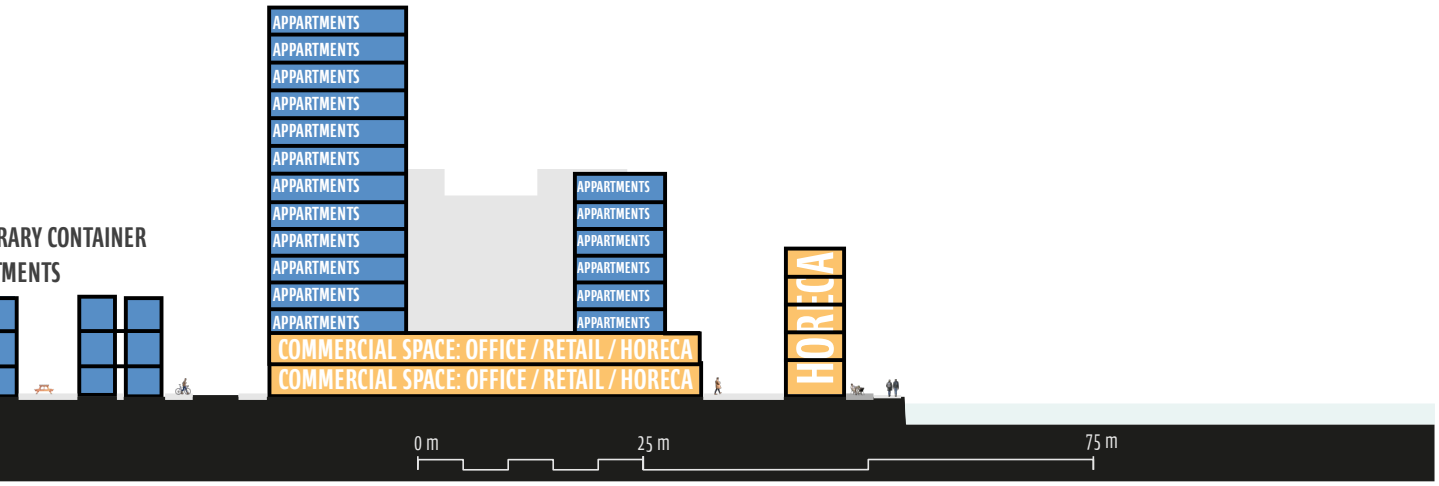
Road network

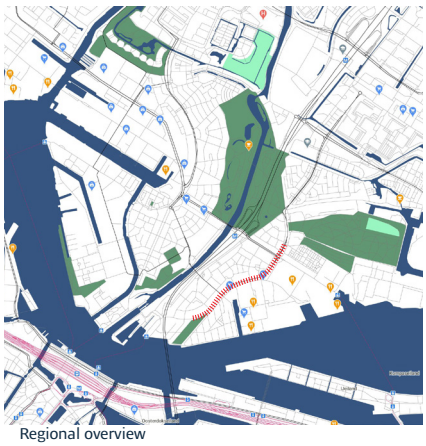


Points of interest

Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism

Plan analysis - scale 1:3000





Regional overview



top view

Meeuwenlaan | 1929

108 inhabitants per hectare



Street view

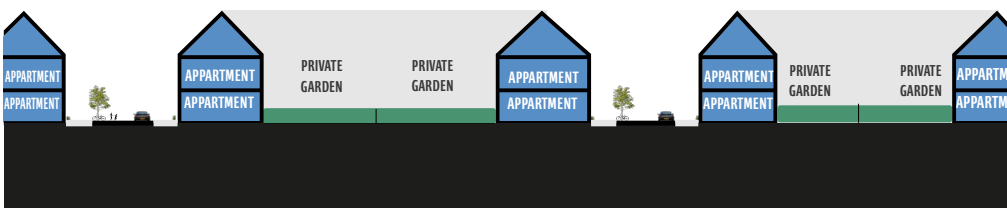


Street view

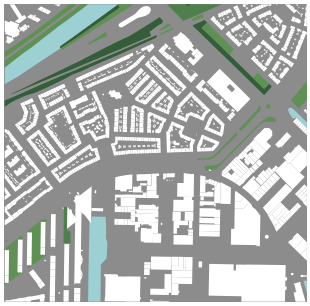


Street view

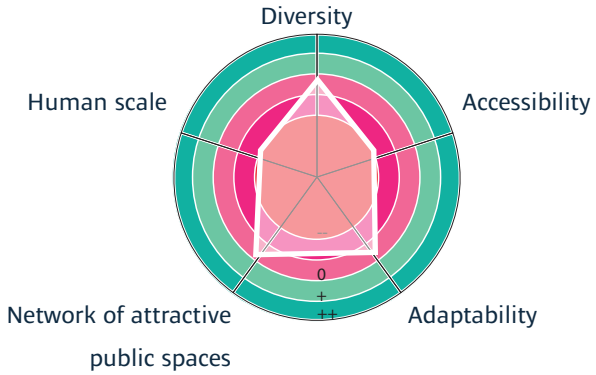
The meeuwenlaan is a barrier between industry and residential area. However, it is possible to see the buildings on the other side of the wide street. There is more interaction and integration between the 2 sides, as the side streets of both neighbourhoods align. Nonetheless, the difference between the urban typologies and its uses remain very large.



Section 1:1000



Open space



open space
- water
- forest
- park
- grass
- allotments

Traffic
- Pedestrian
- Bikelane
- Local streets
- tertiary streets
- primary street
- secondary streets
- highway
- unknown

Public transport
- bus-stop
- metro
- taxi
- subway

building functions
- appartments
- mosque
- commercial
- house
- retail
- parking
- industrial
- office
- school
- service
- unknown

Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism



Figure



Public transport



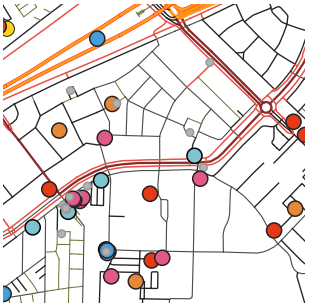
Functions



Ground



Road network



Points of interest

Plan analysis - scale 1:3000



Findings spatial analysis - Amsterdam-Noord

THE CASES:

1. Mosveld: embedded in the urban fabric and the place for daily shopping and socialising.
2. Overhoeks: slightly disconnected from the main urban fabric, with cultural programme.
3. Beemsterstraat: a street that connects neighbourhoods without the destinations to connect people.
4. Baanakkerpark: a park that is hidden by its own greenery, waterways and infrastructure.
5. Noorderpark and Vliegenbos: two green spaces (park and forest) that are very meaningful for communities and have the spatial quality, programme and (Social) infrastructure as such.
6. Hamerkwartier: gradually becoming a place people can not only work, but also recreate and live.
7. Kampferfoelieweg: A traffic crossing that could to be a square and connect neighbourhoods.
8. Klaprozenweg: a functional wall
9. NDSM wharf:city on its own
10. Meeuwenlaan: too wide to connect places

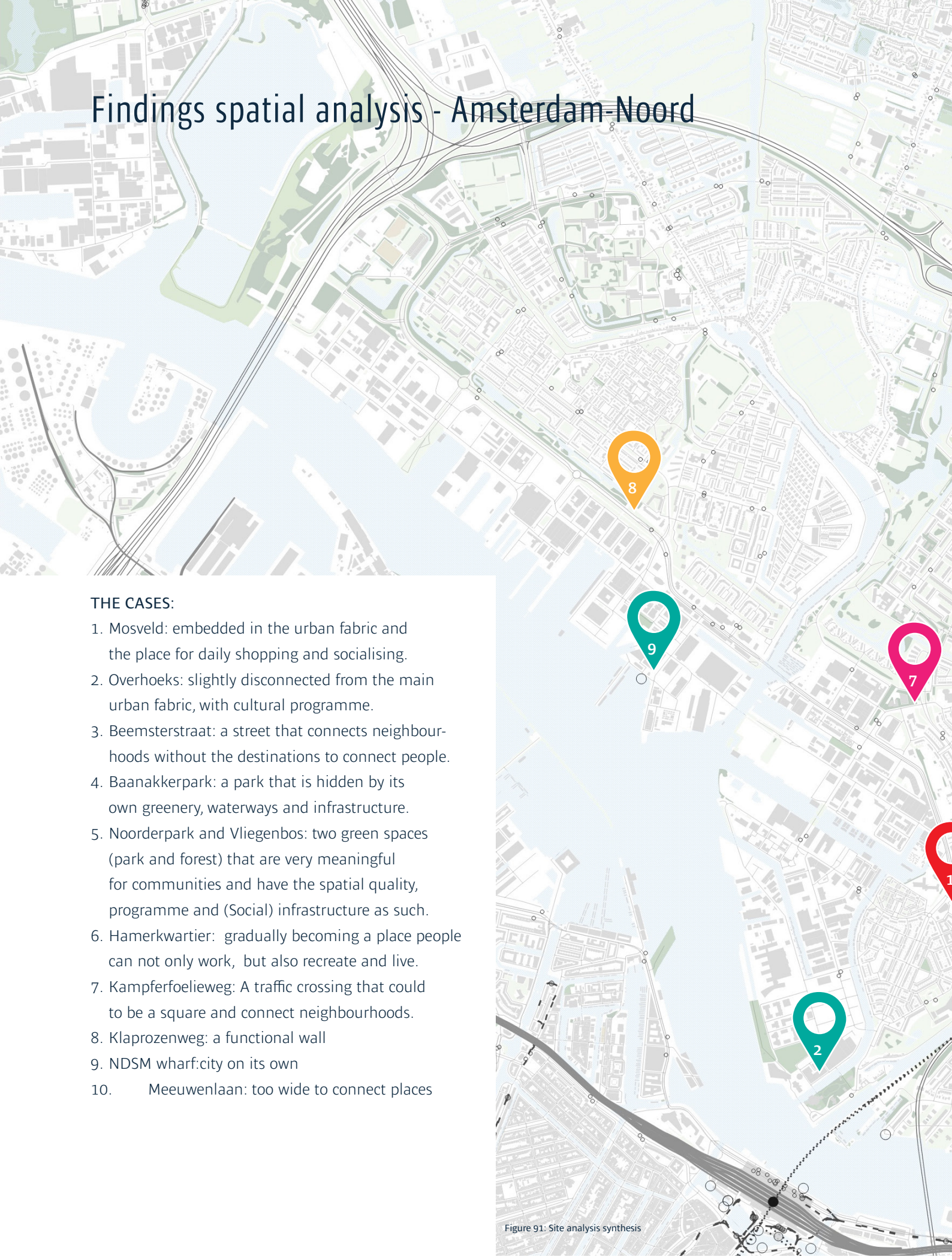


Figure 91: Site analysis synthesis

PUBLIC SPACE WITH GREAT POTENTIAL FOR INTEGRATION

PUBLIC SPACE - URBAN LIFE

Central places that are attractive and ought to play a role in the network of public spaces that generate diverse urban life.

PHYSICAL CONNECTOR ACTING AS BARRIER

INFRASTRUCTURE - MORPHOLOGY

A streetscape that segregates of neighbourhoods. Although it is an important link in the network it lacks spatial quality or program to stimulate integration.

SUBJECTIVE PUBLIC SPACE

SOCIABILITY - PROGRAMMING

This particular space is attractive. However, it is not neutral enough to be a third place and attract diverse user groups; either due to physical, socio-economic or mental barriers.

UNFRIENDLY PUBLIC SPACE

PUBLIC SPACE - STRATEGIC LOCATION

A public space that lacks spatial quality to bring people together and stimulate urban vitality. It is a strategic location at the fringe of several different neighbourhoods but does not bring people together.



Observation

SITE SELECTION

The last chapter was concluded with a clustering of the sites: public space with great potential for integration; physical connector acting as barrier; non-inclusive public space; unfriendly public space. For each of these clusters one site will be selected for further observation. This selection considers centrality and the best potential for integration of diverse user groups (being located on or within reach of a friction zone).

- NDSM werf (9): mixed use urban development project. The ferry and the possibility of the future bridge makes it an important link in the city-network. It is one of the few areas that reach a desired density for urbanity and mixes all types of functions (offices, housing, industry, hospitality).
- Kampferfoelieweg (7): This traffic square is dominated by car traffic. It is a meeting point of all characteristic urban typologies in Amsterdam-Noord. There are public functions that could generate public life alongside the different flows. However, it the over-dimensioned traffic and green space makes it more a buffer than a connector.
- Noorderpark crossing with Meeuwenlaan and Vliegenbos (5): The atlas indicates that the place has some public activity and quality public space in the parks. It is mainly surrounded by historic garden villages but new developments surrounding those could impact the use of the park.
- Beemsterstraat (3): this street is one of the few North-South streets in Amsterdam-Noord and connects different neighbourhoods. In all space syntax analysis this street is considered a central and public street. It is enclosed by buildings but does not have the public functions to be a public street.

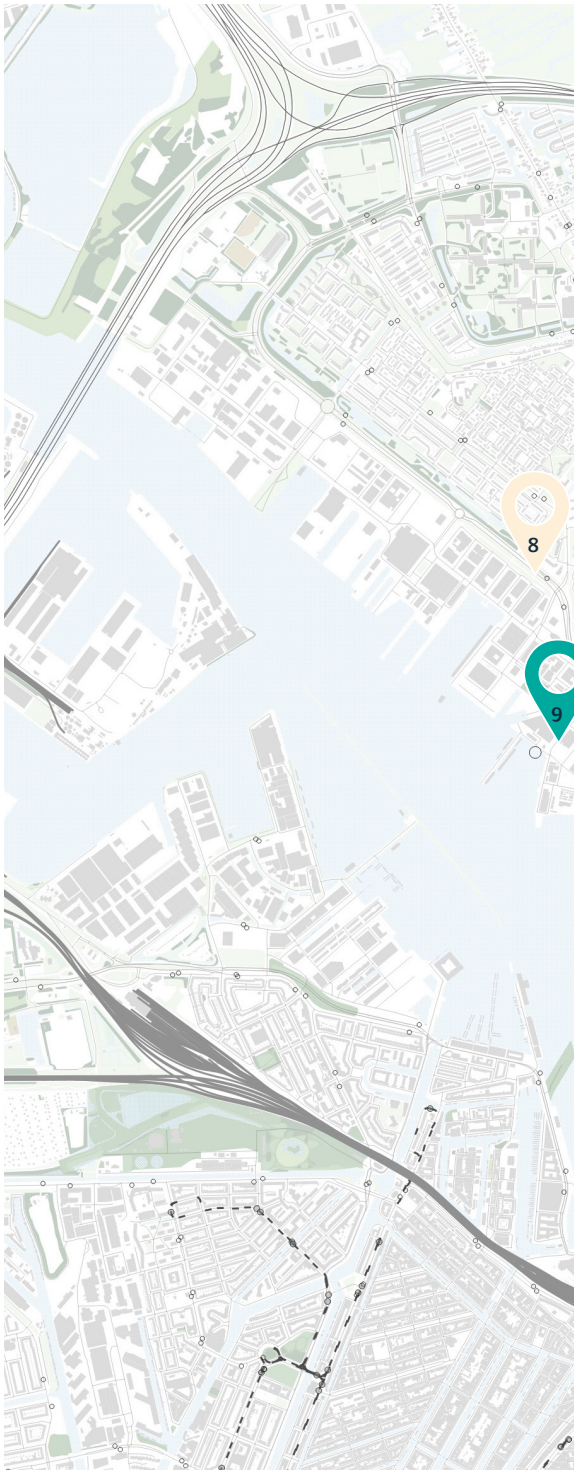
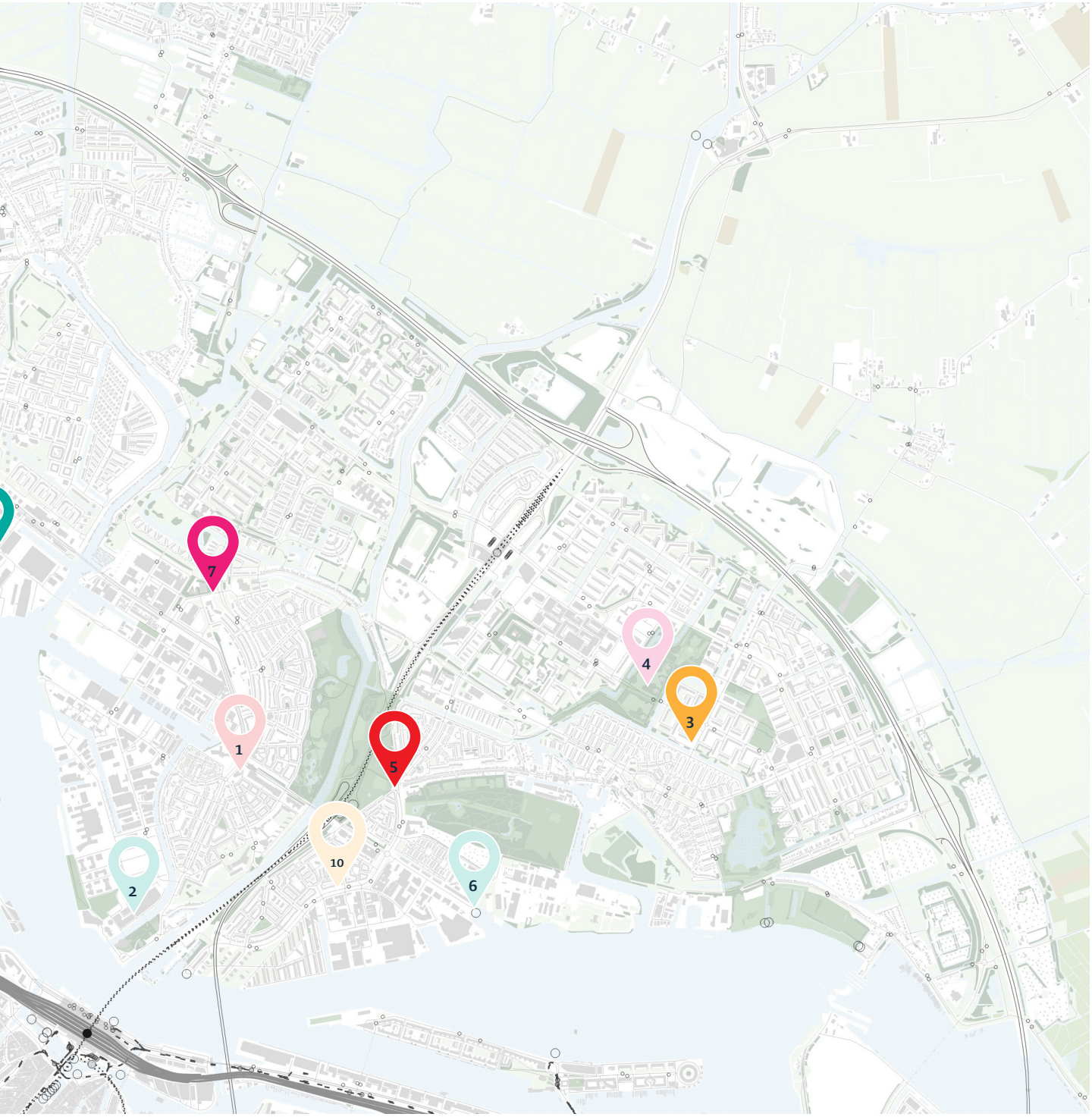


Figure 92: Location selection for site visits

OBSERVATION METHODS

- The stationary activity mapping tool from Jan Gehl
- Traces of personalisation / neglect / ownership through photographing.
- Use of public space (who what where) and Social interactions (different users) [more descriptive analysis derived from observation]


7
4
3
1
5
10
6
2

NDSM

Stationary activity mapping

POSTURES

- Standing
- Public sitting
- Private sitting
- Commercial sitting
- Informal sitting
- Lying down
- Multiple movement

ACTIVITIES

Waiting for transportation
Consuming food and beverage
Commercial activity
Conversing
Cultural activity
Recreation and play/exercise

MAIN ACTIVITIES THAT I OBSERVED:

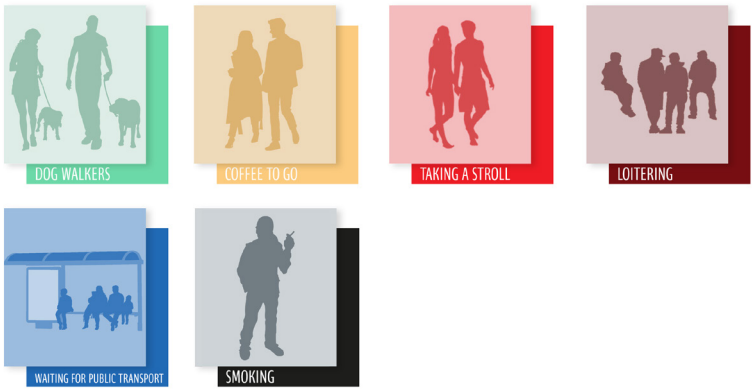
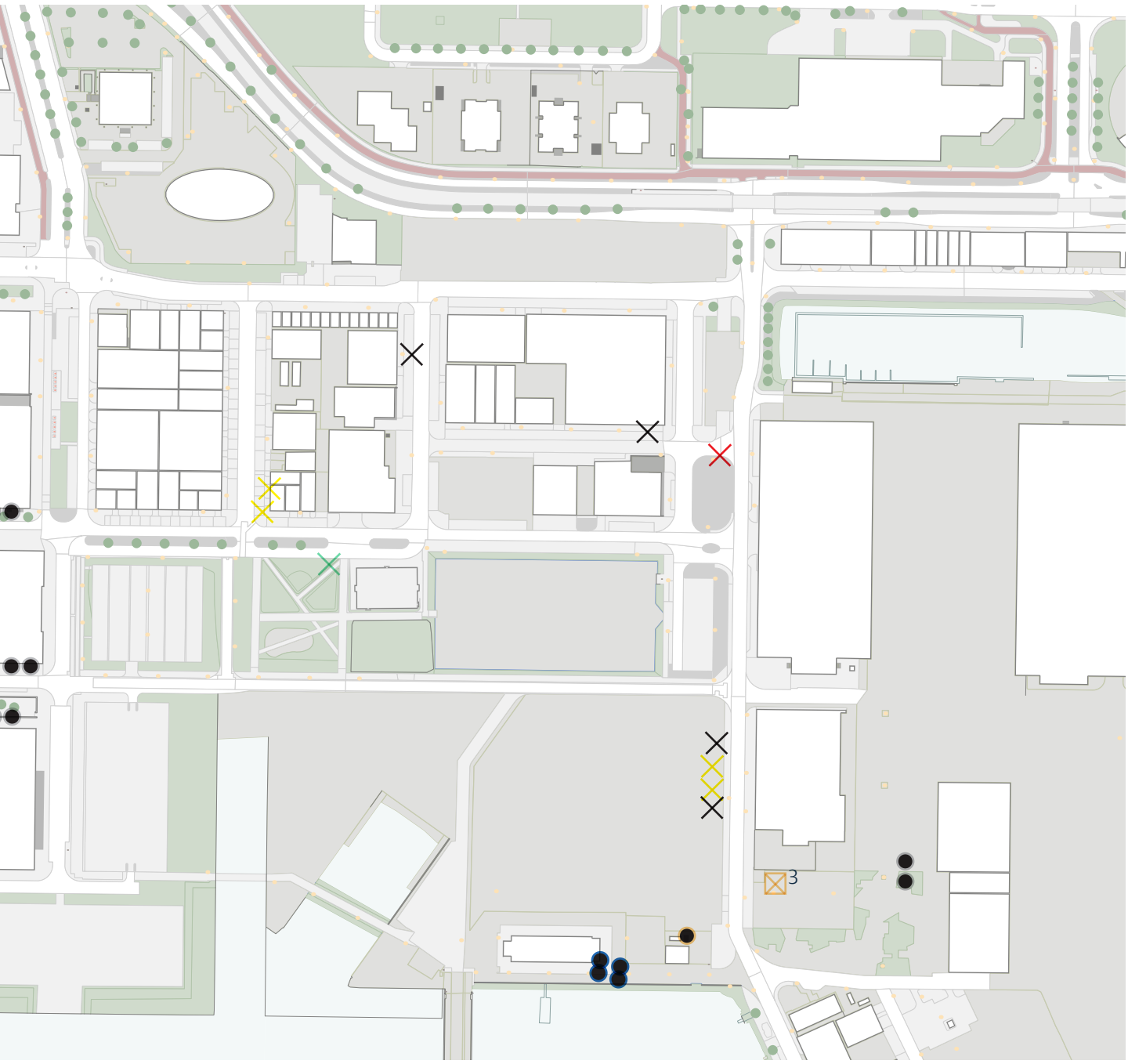




Figure 93: Stationary activity mapping NDSM



Tuesday 11:00-11:30 | weather: It had just rained, cloudy sky, 7 degrees celcius,

Photographs from site visit











My observation

TRACES OF PERSONALISATION / NEGLECT

There is a raw edge to the NDSM wharf. This is also highlighted in designated materialisation through graffitti, street materials, concrete, temporary furniture (picknick tables, plotted trees). In many places this may look like neglect but here it is done on purpose and used to define spaces.

USE OF PUBLIC SPACE

As it just had rained, the people outside were only doing essential activities: smoking, walking the dog etc. However, at the end of my stay I saw more people getting outside for a coffee, a small bite and some errands.

The public space does invite to use it, there are lots of benches, picknick tables and sittable ridges, pockets of grass.

SOCIAL INTERACTIONS

Due to construction work there was a lot happening and for those waiting for the ferry or grabbing a coffee there was a lot to see. Most interactions between different groups where passive like this.

There is a balance between working and living population that made the visit interesting: I observed people smoking in front of office buildings, walking their dogs and couples taking a stroll.

The interactions I observed where within social groups, as the environment is rather anonymous. People were watching each other but would not call on unwanted behaviour.

Kampferfoelieweg

Stationary activity mapping

POSTURES

- Standing
- Public sitting
- Private sitting
- Commercial sitting
- Informal sitting
- Lying down
- Multiple movement

ACTIVITIES

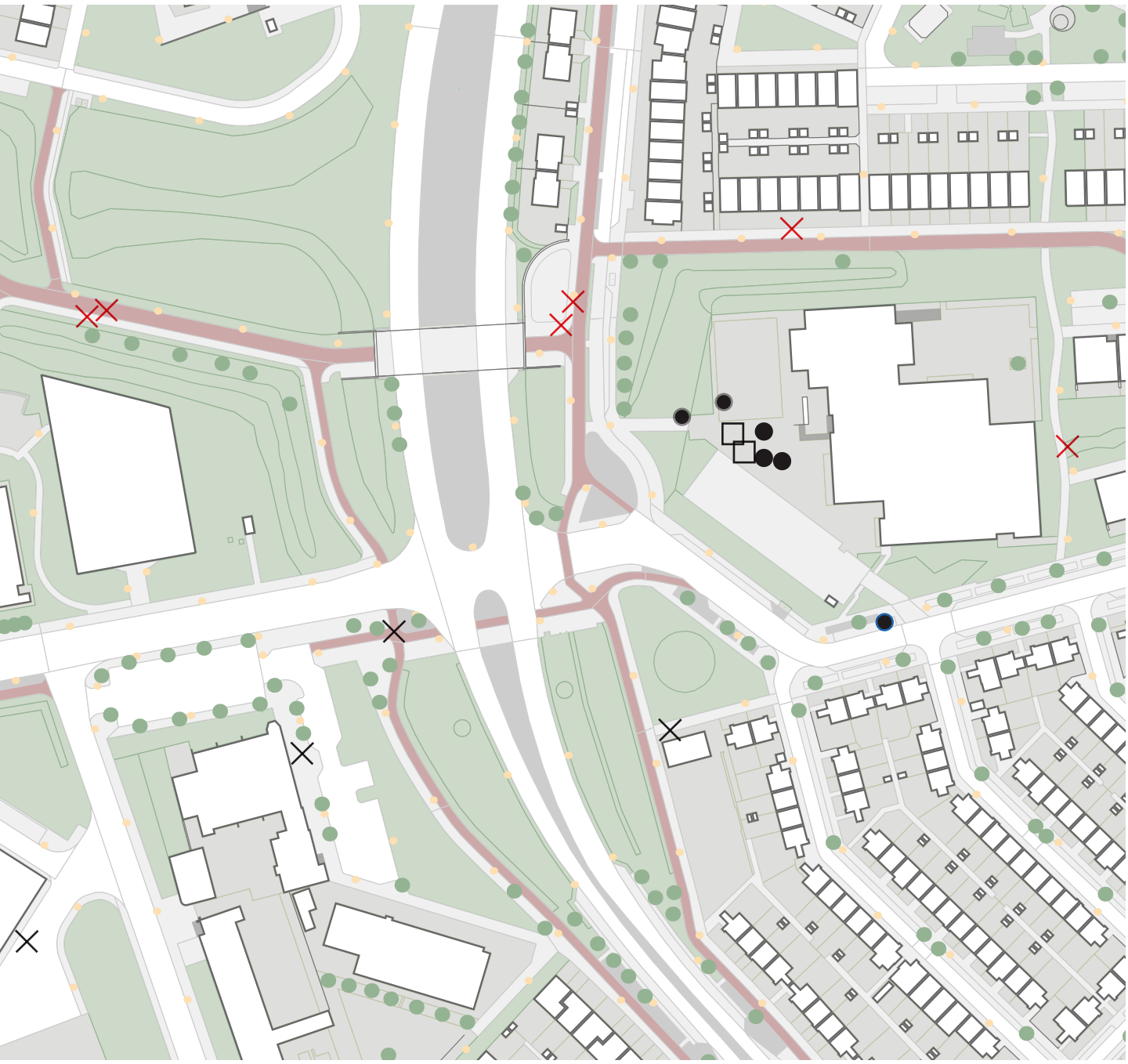
Waiting for transportation
Consuming food and beverage
Commercial activity
Conversing
Cultural activity
Recreation and play/exercise

MAIN ACTIVITIES THAT I OBSERVED:





Figure 94: Stationary activity mapping Kampferfoelieweg



Tuesday 12:00-12:20 | weather: It had just rained, cloudy sky, 7 degrees celcius,



This crossing is an important link in the larger network. But many flows are seperated (bikes and cars), sight lines are diverted. This area borders a garden village on the southeast, an industrial area that will be redeveloped completely to the west and a modernist garden city to the north. The historical dyke crosses this area and the height difference is highlighted by the lack of continuity at the crossing and the dark bike tunnel, the dyke is part of a larger regional bike network and is used a lot (flows were not part of this observation but could be used in the design).

Photographs from site visits









My observation

TRACES OF PERSONALISATION / NEGLECT

There are traces of neglect such as waste and graffiti

USE OF PUBLIC SPACE

This is a movement space and people where quickly moving through: on bikes, roller skates, taking a stroll, walking the dog. Because people are moving through the place has potential: it sees a lot of people but the large undefined open spaces are not inviting and the public functions are not inviting either.

SOCIAL INTERACTIONS

On the eastern side of the crossing and the school there is more social control, on the western side it feels like a no-man's land.

Sight lines to all different neighbourhoods make this a potential interesting public space that could have a social function along the existing traffic function.

Noorderpark

Stationary activity mapping

POSTURES

- Standing
- Public sitting
- Private sitting
- Commercial sitting
- Informal sitting
- Lying down
- Multiple movement

ACTIVITIES

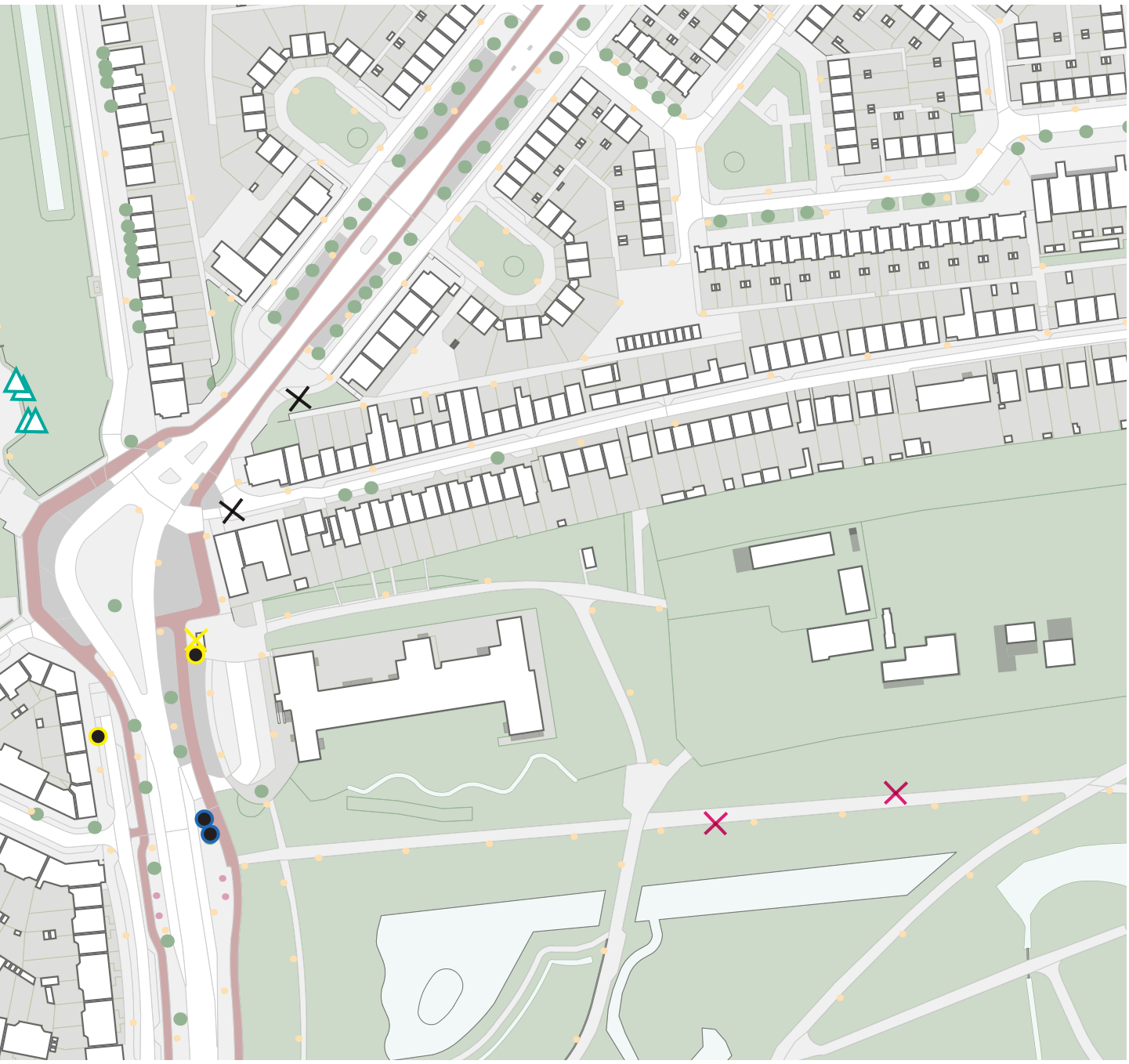
Waiting for transportation
Consuming food and beverage
Commercial activity
Conversing
Cultural activity
Recreation and play/exercise

MAIN ACTIVITIES THAT I OBSERVED:





Figure 95: Stationary activity mapping Noorderpark



Tuesday 12:30-13:00 | weather: cloudy sky, 7 degrees celcius,

N

This observation site is where the Noorderpark and Vliegenbos (forest) have their main entrances and where different neighbourhoods are connected. It is an interesting area because it is an activated edge that has the potential to connect these neighbourhoods.

Photographs from site visit









* figures 1, 2, 4 were taken on another (better) day. Although the circumstances increased the use I did observe some use of these spots (1 & 2) on the official site visit

My observation

TRACES OF PERSONALISATION / NEGLECT

There is some graffiti but most parts are well maintained, there is little personalisation except for around public functions that set out terraces in and around the park. People do personalise the space but clean up after them (picknicking)

USE OF PUBLIC SPACE

Most uses are ‘optional’ activities: kids playing, people gathering and catching up or people taking a stroll, some youngsters hanging around.. The park is a destination for those people but there are also people crossing: these are sports activities: bikes and people jogging.

SOCIAL INTERACTIONS

People meet in the park for social interaction with friends, surrounding the park at the observation spot there are several public functions that would stimulate social mixing: the fish stall, bus stops, a pizzeria, supermarket and other small stores.

Beemsterstraat

Stationary activity mapping

POSTURES

- Standing
- Public sitting
- Private sitting
- Commercial sitting
- Informal sitting
- Lying down
- Multiple movement

ACTIVITIES

Waiting for transportation
Consuming food and beverage
Commercial activity
Conversing
Cultural activity
Recreation and play/exercise

MAIN ACTIVITIES THAT I OBSERVED:



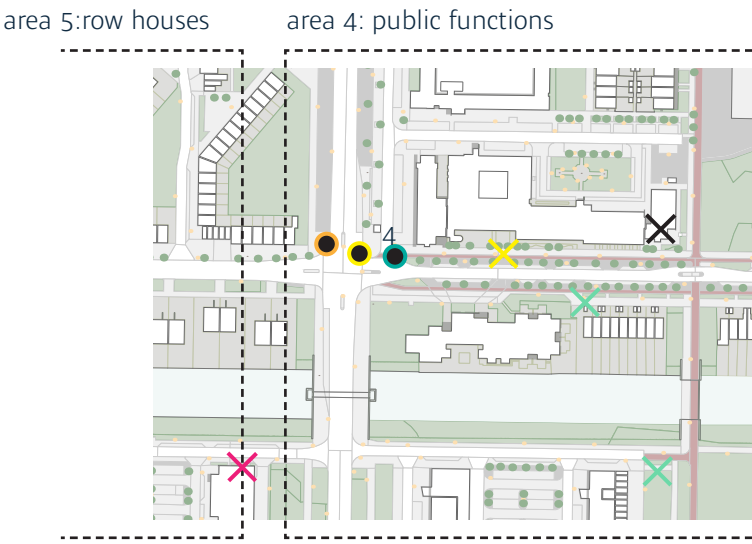
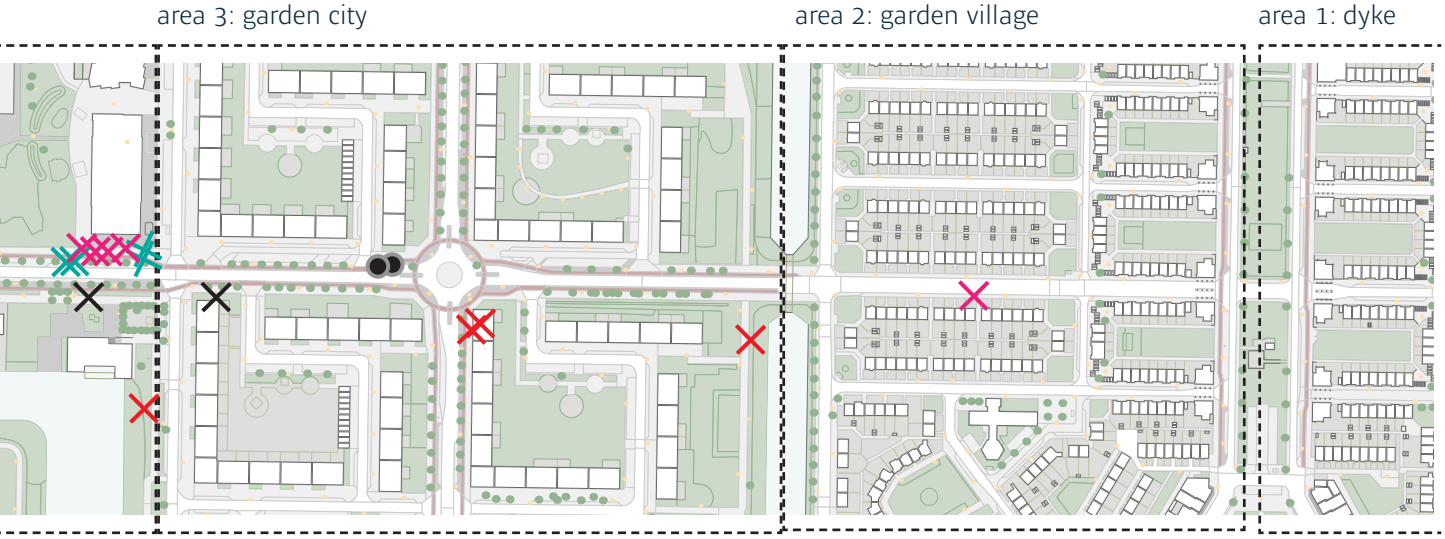


Figure 96: Stationary activity mapping beemsterstraat



Tuesday 13:20-13:50 | weather: cloudy sky, 7 degrees celcius,

The Beemsterstraat is a radial street that crosses different neighbourhoods. The street is considered a very public street according to the choice analysis and integration analysis off all different speeds (Space syntax). But it has very little public activities for a central street.

For the ease of this observation the street is divided by its distinct neighbourhoods.

Photographs from site visit











My observations

TRACES OF PERSONALISATION / NEGLECT

Area 1: People have their front yards and have personalised leftover space across the dyke.

Area 2: houses have front yards and posters stuck to their windows, leftover spaces are grown with bushes.

Area 3: in front of some of the appartments on the ground floor there are improvised front yards. The public space is well-kept but very anonymous. Between area 2 and 3 there is a waterway and small linear parkway with along it some community gardens which was well maintained.

Area 4: In this area there are several larger public functions. Again there is little personalisation of public space, but the transition zones are more diverse because of the varying public functions and their different relations with public space (schools, community centers, nursing home, supermarket).

Area 5: The frontyards were small and sidewalks larger so many people put out benches in front.

USE OF PUBLIC SPACE

Area 1: access to this part from the north is blocked by a visual barrier (see figure 1) and a physical barrier behind it (primary road), from the other side this street is one of the few that connects the linear dyke to the other areas of Noord.

Area 2: This part of the street feels like a pure residential street that is slightly over-dimensioned

Area 3: The appartment blocks are set-back from the street with either parking / a green strip / a wide sidewalk with blind walls. There is little interaction with the street, the street felt very anonymous. People were moving through the space quite quickly.

Area 4: The public functions attract more people to use the public space: parents are waiting for their kids at school, children are playing in the schoolyard, running errands around the supermarket and surrounding commercial space. These are necessary activities asssociated with these functions, at the same time I observed some optional activities that could be indirectly linnked to the functions: youngsters hanging around the supermarket, people getting flowers and going to the nursery home. Furthermore I observed some people taking a stroll (with their dog).

Area 5: again there was little use of the public space.

SOCIAL INTERACTIONS

Area 1: There is little social interaction here except for it's endpoint at the dyke where visitors were talking and walking.

Area 2: There is little social interaction except for those that have to be here.

Area 3: Residents are looking for unwanted behaviour and I couldn't observe any social encounter. People were moving through this area quickly or doing their business.

Area 4: social encounters are within the group or people with the same purpose. This space is not an intentional social space like the park.

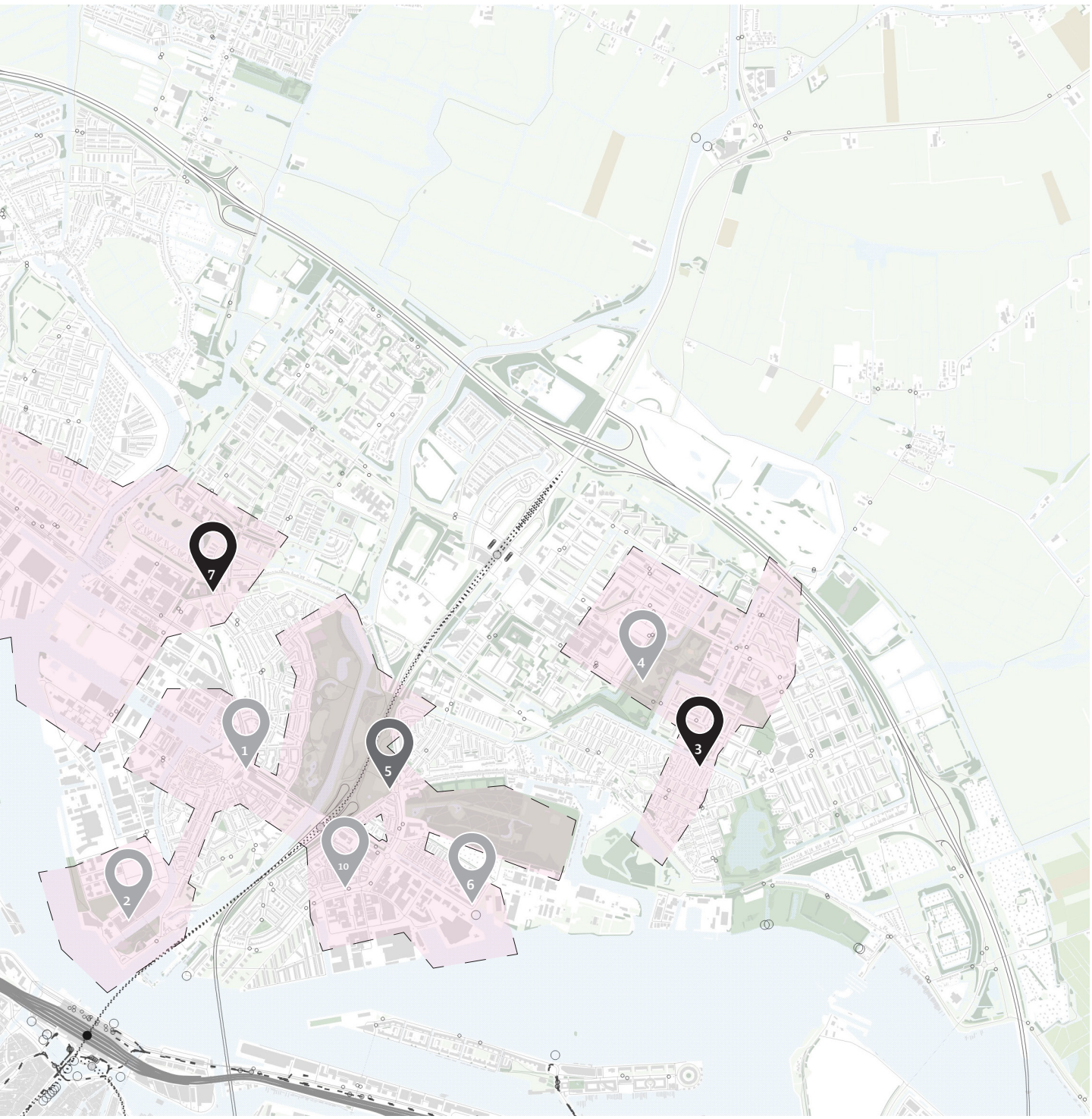
Area 5: The IJdoornlaan cuts of this part of the street and changes the atmosphere completely back to residential

Conclusion

Where the Noorderpark and NDSM wharf are quite activated and used by people. This is less the case for the Beemsterstraat and kampferfoelieweg. Both spaces had little use by optional activities and do not provide the spatial quality to stay longer than required. The Beemsterstraat and kampferfoelieweg have the most untapped potential for more interaction regarding design and spatial quality and will therefore be used as desing sites.



Figure 97: Location selection for design


7
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CH5: Frame of reference

- Spatial: Atlas of public spaces
- Governance: Stakeholder and policy

Atlas of public spaces

The next section is an exploration and analysis of public spaces using the same method as the analysis of sites in Amsterdam-Noord. Together these analysis form an atlas of public spaces. While the cases in Amsterdam-Noord were chosen to evaluate for problems, these cases will be used to extract design elements and principles to be used in the design phase. The 9 chosen cases have been reported as liveable or are known as good urban places, where revitalisation was successful. The exemplary cases are considered lively by a broader audience, have adapted to changing cultures, needs and uses. The cases include green spaces, parks, squares, streetscapes and larger redevelopments with different types of public spaces. The size of each case are different but for this analysis the same scale is used; meaning that sometimes other pieces of urban fabric are included or pieces are left out. The atlas of public spaces entails a comparative analysis of different places (cases) that show the signs of urban vitality: streetlife, points of interest, attractive open spaces, third places. For the complete overview of the analysis refer to the appendix. In the report the lesoons learned will be highlighted.

Plan analysis to consider the composition of space and buildings, traffic flows; how functions are mixed and how points of interests are concentrated

Aerial photograph to introduce and visualize the type of space and urban fabric and indicate location of section

Large scale map to indicate the position in the larger network

street views to show the experience at eye level

Section to show the interface between public space and buildings

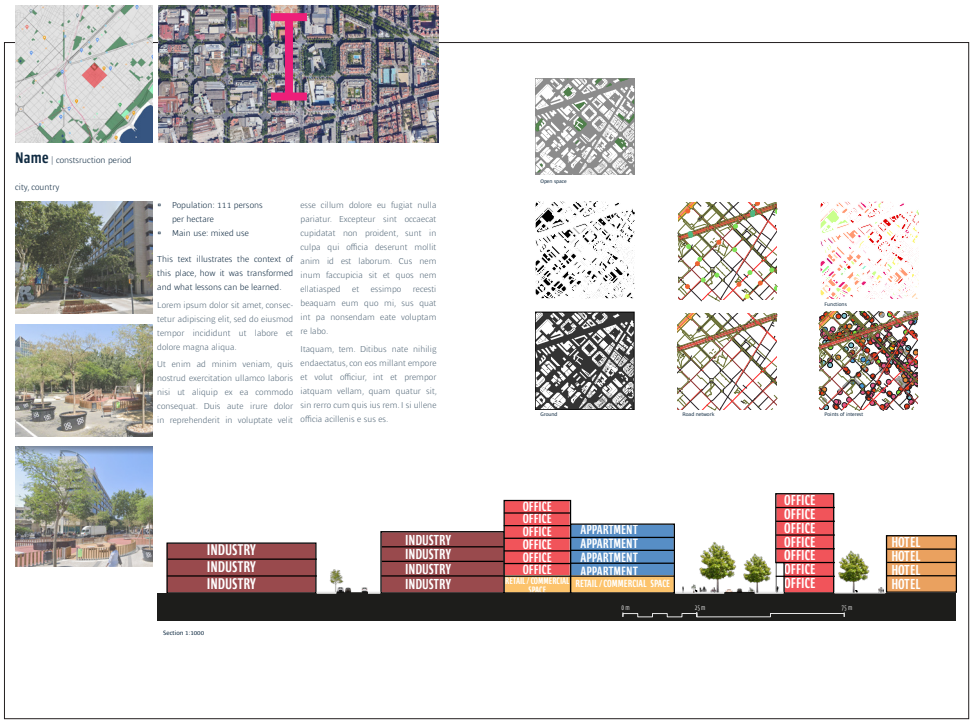
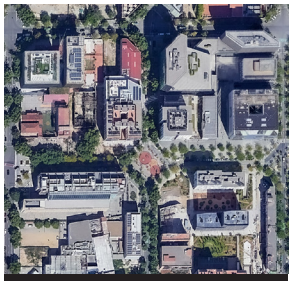


Figure 98: Approach atlas of public spaces



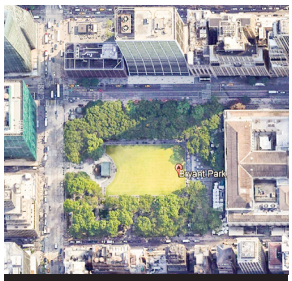
Barcelona_Superblocks

The adaptability of tactical urbanism allows pedestrians to take ownership of public space and build communities



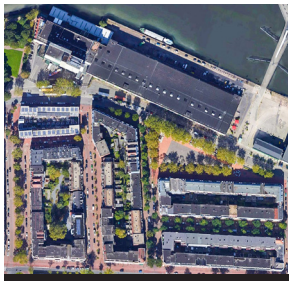
Copenhagen_Superkilen

Open spaces need furniture and activities that reach the public to be used.



New york city_Bryant park

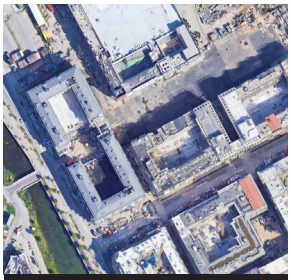
Visibility, zoning and programming are essential to stimulate use of parks.



Rotterdam_Katendrecht

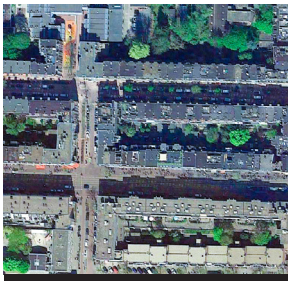
A mix of urban typologies within a district can provide the diversity required for urban vitality.

Leidsche Rijn shows how to mix old urban typologies with contemporary functionality and make it lively.



Utrecht_leidsche rijn

Compact urban fabric with active plinths leads to social interaction.



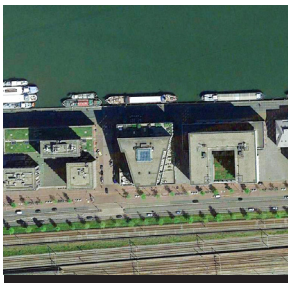
Amsterdam_Kinkerstraat

Densification of existing blocks increases the critical mass for public functions that are required for urban vitality.



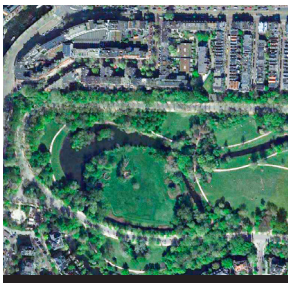
Amsterdam_Pieter calandlaan

Spatial quality is just as important as density, without it there is still no urban vitality.



Amsterdam_Oostelijke handelskade

Define and programme space to be multifunctional



Amsterdam_vondelpark

Policies & stakeholders

It is necessary to consider the process of how to achieve urban vitality using urban design and an implementation and management strategy, which stakeholders have an interest or power to use and how they can be engaged to increase urban vitality through social cohesion, participation and empowerment. This will be incorporated in the pattern language and later applied in the design and strategy at local sites.

PLINTHS ACTIVATION

Plinths are essential for the experience of urban life (Karssenberg et al., 2016). Plinth design is very important considering flexibility, visibility, logistics and functionality but there is more to it. While in city centres it can be relative easy to fill a plinth, in less central areas filling plinths with commercial activities is apparently more difficult. Although the involved parties understand the value of a good plinth, aligning the different interests of these parties makes it challenging (Municipality of Amsterdam, 2019). The profit of added value due to a civil plinth translates to surrounding buildings. Because social functions often cannot afford high rents, the owner would gain more by waiting for a function with a higher yield (when the plot is allocated for mixed us). Regulations forbid housing corporations to develop or manage commercial plinths (Municipality of Amsterdam, 2019). Different functions require different spatial conditions (office versus workshops). Starting developments lack the critical mass for commercial plinths. These issues can be managed and controlled if there is a will and enough resources, through regulations, financial policies and area management.

PUBLIC PRIVATE PARTNERSHIPS

Public private partnerships can take away management responsibilities from municipalities which often do not have sufficient resources to keep spaces activated. Private parties that are involved in these constructions are usually invested in the area; have properties around the site which value ought to rise with this partnership. For example Bryant park is managed by a private corporation (Bryant park corporation, n.d.), NDSM is managed by a foundation in corporation with a real estate developer that is now developing on the terrain (stichting NDSM-werf, 2020). Because of this corporation they can afford to have a terrain keeper and programme the area throughout the year. Public private partnerships like this can increase the use and vitality of places and stimulate interchange between existing stakeholders, hereby making the place much more valuable. Arrangements like this are suitable for larger public spaces such as parks, malls and cultural institutions or event locations.

AREA MANAGEMENT FROM MUNICIPALITIES

In important shopping streets in Amsterdam street managers influence the programming of plinths, bridging the gap between owners, entrepreneurs, chain stores and the local community. They use their network and knowledge to do so, this takes time and resources but is a valuable asset in the management of vital public spaces (Karssenberg et al., 2016; Milikowski, 2018; Municipality of Amsterdam, 2019). A successful and vital street with an active plinth can drive up prices and will push out authentic entrepreneurs, while there is a vicious cycle in degradation. A street or area manager will have to work on the case for a long time to develop a network of entrepreneurs, owners and be constantly aware of changes to adapt the street and manage flexible zoning, rents and programming (Karssenberg et al., 2016).

TACTICAL URBANISM

While area management focuses on long-term vitality, tactical urbanism can be used as a low-cost and short term incentive to activate spaces and the community. Tactical urbanism is used in the Barcelona superblock as described in the atlas of public spaces (David

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Power interest of vital urban development

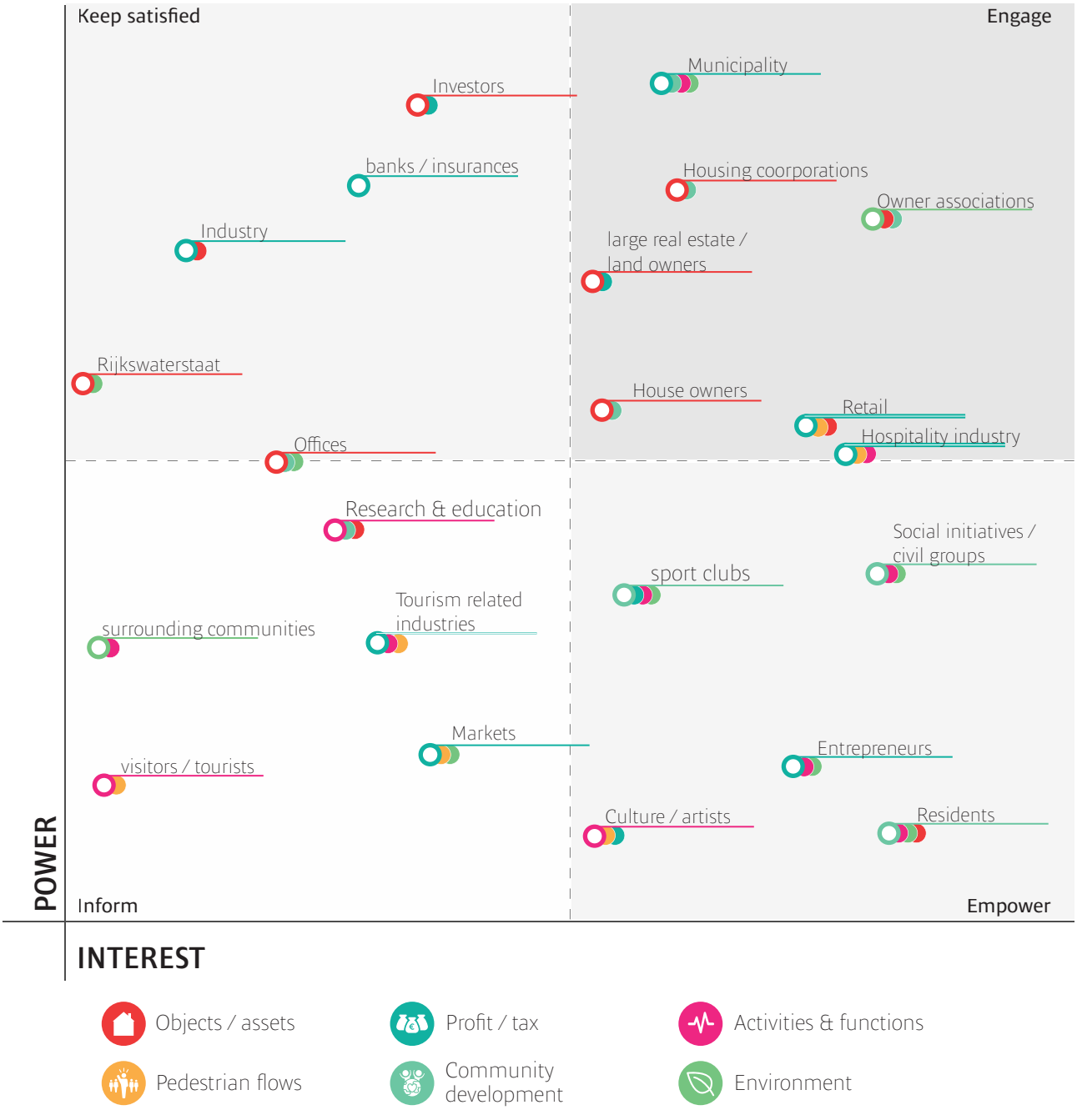


Figure 99: Inventory of possible invested stakeholders

Roberts, 2019). It is also known as DIY urbanism, urban acupuncture or urban prototyping. It refers to community building or placemaking using low-cost, short-term and scalable interventions to catalyse long-term change (Lydon et al., 2016). It can be used to inspire action, to allow people to participate in design, increase public engagement, to strengthen relationships in the community and between local business, entrepreneurs, non-profits and government agencies. It is also a method to test out design and understand local needs. Tactical urbanism is not a long term solution as it depends on low-cost flexible materials and furniture which require a lot of maintenance, which can quickly become a blemish.

HOUSING POLICIES

Housing policies can be used to regulate the housing market. There are financial, legislative, planning and organisational instruments that can be used by governments to control the housing market. This is influenced by the land policy (erfpacht, land value, zoning), tax incentives for different groups (land-owners, property-owners, entrepreneurs) for different interests (programming, renovation and densification). They can restrict developers and housing corporations, as for example housing corporations are forbidden to make profit or cannot develop commercial programme. This is written in law but can hinder urban vitality due to a lack of adaptability. If there is more flexibility it could be possible to have temporary fill-in with social entrepreneurs while the zoning plan allocated another function. Land policy and building regulations restrict vertical densification as land prices are calculated with floor spaces and hindered by zoning.

SOCIAL ENTREPRENEURSHIP

Social entrepreneurship is impact-driven entrepreneurship, profit from market-driven activities is invested to create social impact (Platform31, n.d.). an example is the verbroederIJ in the hamerkwartier, which is a community garden / café, room rental; it provides apprenticeships and daytime activities to improve (labour) participation. In urbanism it can be used in bottom-up or social initiatives, temporary fill-in (as is the case for the verbroederIJ) to stimulate social cohesion, improve labour participation, sustainability or other social issues. Social entrepreneurship and impact investment (funding by banks, funds and investors) are growing in the Netherlands and it is facilitated by public parties to achieve societal goals where they cannot provide funding.

PARTICIPATION

Participation and co-creation in urban design can be used to empower people. Especially in areas with a lot of rental housing, residents are limited in taking ownership of space. In Amsterdam-noord this difference was observed in the area surrounding the beemsterstraat where home-owners on the nieuwendammerdijk used the dyke as front yard while the apartment blocks owned by corporations lacked any form of personalisation. Participation processes are lengthy and have to include many different stakeholders. Excluding certain stakeholders can cause friction, inefficiency and delays as was the case for the development process of the klaprozenbuurt (Municipality of Amsterdam, 2020).

Pattern language for Urban vitality

As described in the methodology, the pattern language is used to synthesize the lessons learned from the reference cases, stakeholder and policy analysis. It is a system of spatial and planning instruments to induce liveliness and activate public spaces and communities to enhance urban vitality. Although the patterns may work in varying settings, the desired urban context is illustrated on each card:

- Urban environment (residential, open public space, mixed-use area or industry),
- Centrality of a location,
- Density (different thresholds for population density as discussed in the density analysis)

The cards illustrate which stakeholders are involved. These include the users, those involved in the development and owners or operators of the pattern. The colours of the patterns indicate their approach: whether the intervention is spatial design, governance or planning.

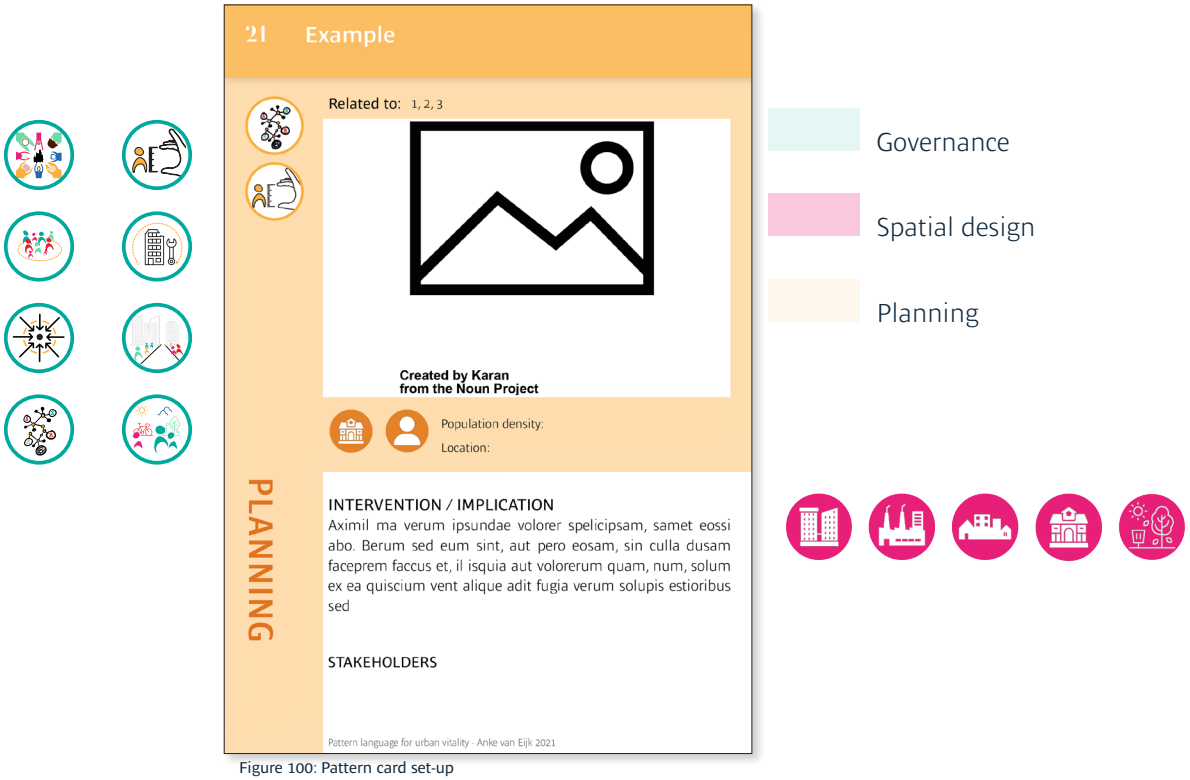
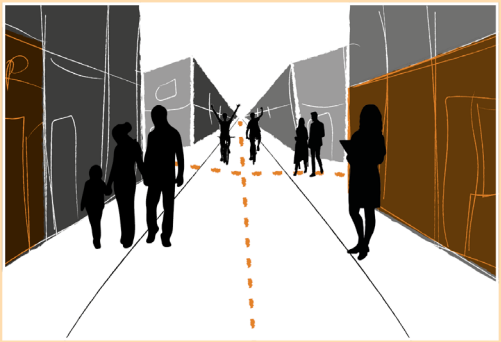


Figure 100: Pattern card set-up

1 Integrated streets as public space

Related to: 2, 3, 5, 9, 10, 11, 16, 18



Population density: 40 p/ha

Location: Central street

PLANNING

INTERVENTION / IMPLICATION

Streets that are well-integrated ought to be used as such. More people might cross them which means there is a lot of potential for retail and hospitality services. The streets are to be designed and programmed to be public and mixed use.

STAKEHOLDERS

Land-owners, investors, Street managers

Pattern language for urban vitality - Anke van Eijk 2021

The kinkerstraat inspired this pattern. Connectivity and network integration allow streets to be more public. Planning authorities should consider this and allow for more mixed-use and public functions. Pedestrian activity is essential and should be safeguarded in the public space design.





2 Provide more gathering places

Related to: 1, 6, 7, 8, 9, 12, 13, 15, 17,18



Population density: > 40 p/ha

Location: in community but also at places to meet others.

SPATIAL DESIGN

INTERVENTION / IMPLICATION

Gathering places are essential for community and public life. The design of public buildings and public spaces ought to facilitate both intended and unintended encounters and gatherings. This can be done with providing objects such as benches, pick-nick tables and ledges, but also public functions that are known as third places.

STAKEHOLDERS

Municipality, community, entrepreneurs, land-owners

Pattern language for urban vitality - Anke van Eijk 2021

Well-used gathering places are an indicator of urban vitality. Public space should at least allow for social encounters or gatherings. Along with providing the actual physical, social infrastructure (pattern 7), public spaces should be designed to stimulate optional activities by providing benches, ledges and other objects that allow people to stop (Gehl, 2010).



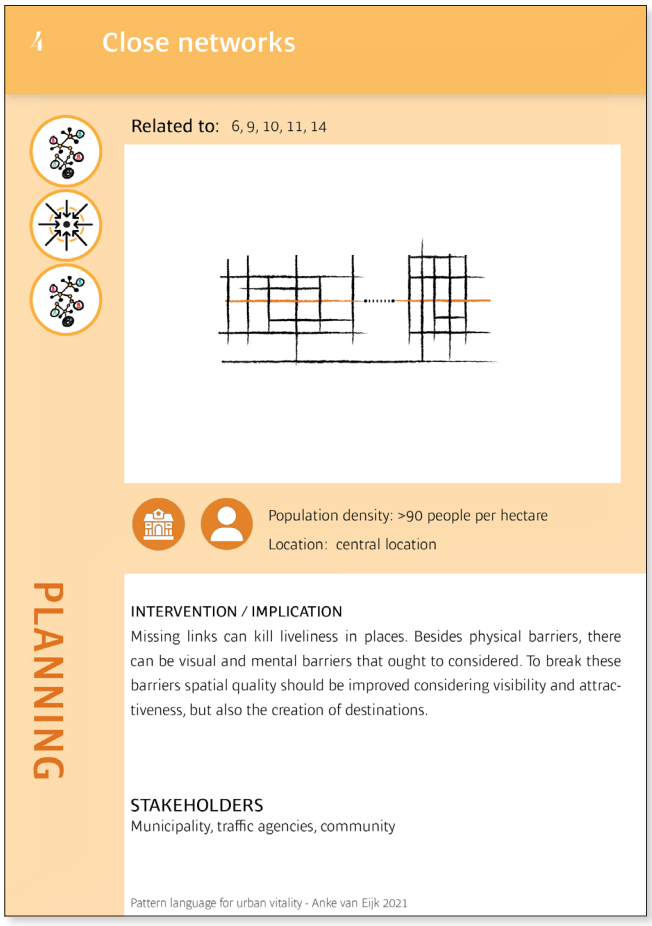




Active plinths are essential for vital public spaces. Mixed public functions attract locals and visitors alike, and quality public space lets them linger. The latter is necessary to attract secondary functions and establish urban vitality (Jacobs, 1961; Karssenberg et al., 2016). The first requires more active management (pattern 17). Active plinths were observerd in the Kinkerstraat, Katendrecht and in Leidsche Rijn centrum.

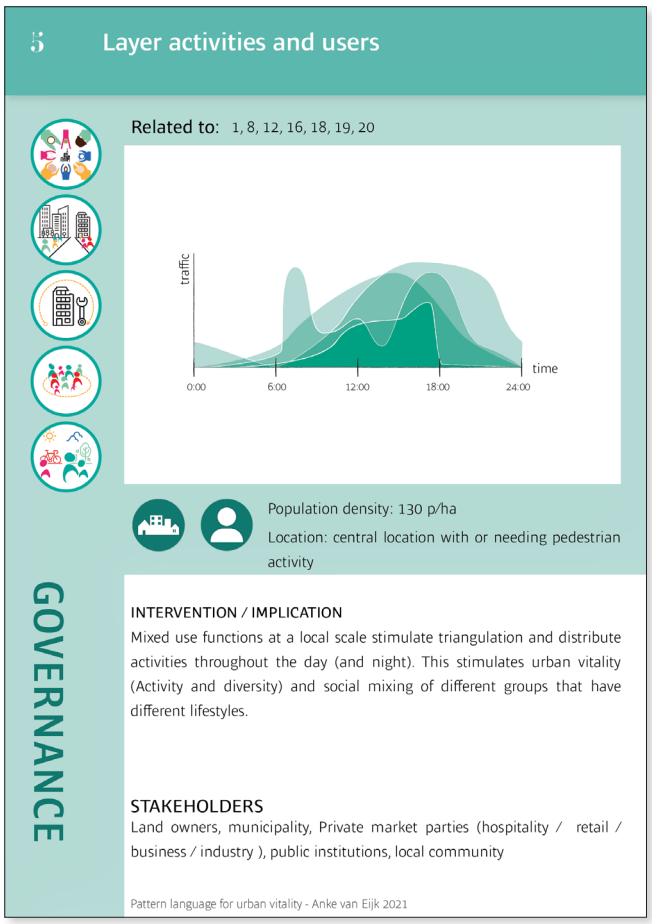






Many potential barriers limit the integration of places: actual missing links in the networks, visual obstacles or a lack of destinations that attract people to the other side. This pattern is defined as a planning instrument as it includes the consideration of hierarchy and missing links in the network, destinations' existence, and how the network can be more attractive for soft modes of transport (Hillier, 2007; Karssenberg et al., 2016; Legeby, 2013).

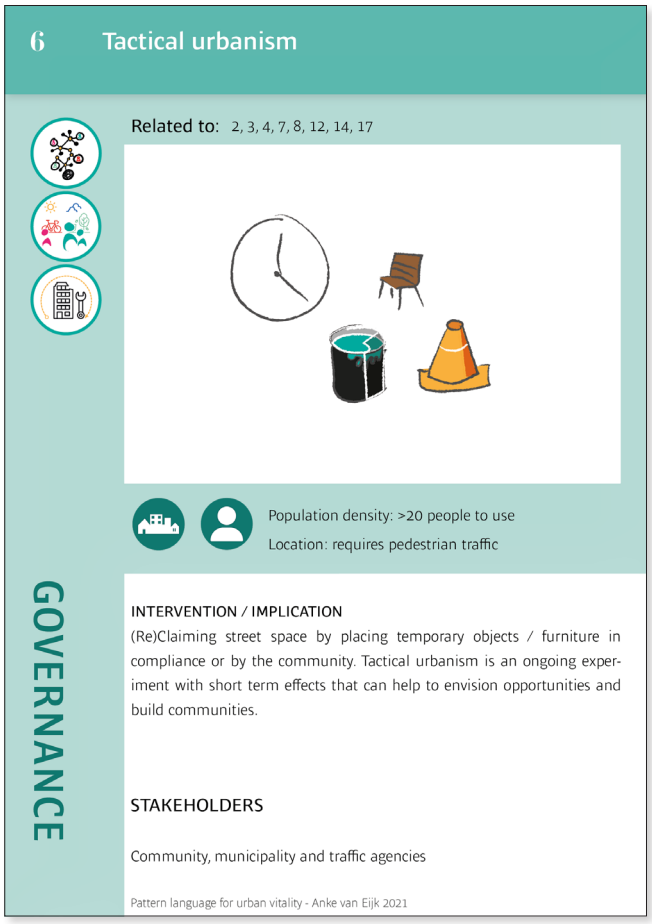




Whyte (1980) and Jacobs (1961) advocate mixing activities and layering diverse users day and night. This may require dynamic programming as done in Bryant park, multifunctional buildings or high-quality furniture for optional activities in public space like in Superkilen.







The tactical urbanism approach in refurbishing the Poblenou Superblock made it a success for the local community (David Roberts, 2019). It can empower the community to use, take pride in and care for the area, leading to more private investments and community bonding.





7 Social infrastructure for all

Related to: 2, 6, 8, 12, 13, 15, 18



Population density: > 40 person per hectare
Location: central location or at fringe to connect communities

PLANNING

INTERVENTION / IMPLICATION
Invest in accessible third places as social infrastructure for all. Ensure inclusiveness and accessibility as these public functions are essential for community development

STAKEHOLDERS
Municipality, local business, public functions, investors / philanthropy, landowners

Pattern language for urban vitality - Anke van Eijk 2021

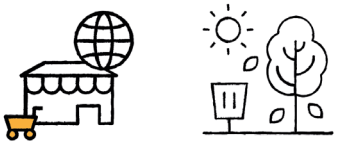
Oldenburg (1989) showed the importance of all third places and the social infrastructure provided for communities. Therefore, planning authorities should invigorate public functions such as libraries, schools, small shops, parks, and hospitality in residential neighbourhoods.





8 Mix commercial and non-commercial public activities

Related to: 2, 5, 6, 7, 11, 12, 13, 18, 19, 20



Population density: >90 person per hectare
Location: central location

PLANNING

INTERVENTION / IMPLICATION
A balance of commercial and non-commercial functions is required for diversity which needs to be managed through flexible zoning, programming, public or private investments. Commercial functions are often required to make non-commercial functions viable. At the same time non-commercial functions can attract commercial functions too.

STAKEHOLDERS
Planning agencies, municipality (local gevernment), entrepreneurs, land owners, investors / philanthropy, public institutions.

Pattern language for urban vitality - Anke van Eijk 2021

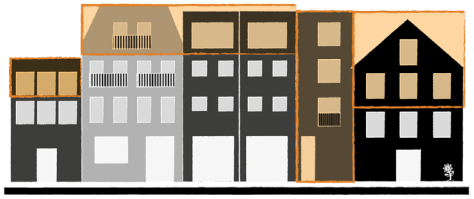
Bryant park provides facilities for non-commercial uses but also operates commercial functions. Therefore, attracting people with little to spend but also those that can pay for activities. The same counts for cultural institutions; with a small culture budget having extra revenues through hospitality is good business and attracts more potential users.





9 Small scale densification

Related to: 1, 2, 3, 4, 10, 16



Population density: < 300 p/ha
Location: not critical

PLANNING

INTERVENTION / IMPLICATION
Allow and stimulate small scale densification methods like roofstacking, extensions, re-use, splitting and connecting houses. This will bring diversity in the housing stock and can be used to activate the ground floors in residential areas.

STAKEHOLDERS
Land owners, municipality, housing corporations, residents

Pattern language for urban vitality - Anke van Eijk 2021

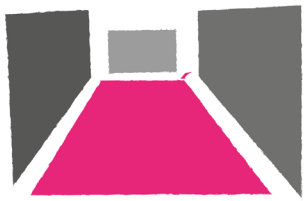
Jacobs (1961) advocates organic renewal and heterogeneous developments of inner-city blocks. This increases the adaptability of buildings within the block which is better for vitality. Even with current housing shortages, the potential for this type of redevelopment is clear in Katendrecht. However, it is complex considering various owners within buildings, regulations and nuisance.





10 Enclose spaces

Related to: 1, 4, 9, 11, 13, 14



Population density: > 80 p/ha
Location: anywhere

SPATIAL DESIGN

INTERVENTION / IMPLICATION
Define public spaces that are too open or wide with new buildings, fences or greenery as walls or canopy. This enhances the sense of the human scale and improves the quality of public space if it is also activated.

STAKEHOLDERS
Landowners, investors, municipality

Pattern language for urban vitality - Anke van Eijk 2021

The kinkerstraat, Leidsche Rijn, Bryant Park and the Deliplein in Katendrecht show the value of enclosing public spaces and how compact spaces are more pedestrian friendly. Lynch (1960) and Whyte (1980) advocate for enclosed public spaces. This can be done by creating walls with buildings, fences, or greenery that block visual and physical access or by creating a canopy of trees, for example.



Figure 101: Leidsche Rijn public square (source: https://www.duic.nl/wonen/honderden-nieuwe-huurwoningen-leidsche-rijn-centrum/)

11 Grand entrance

Related to: 1, 3, 4, 8, 10, 14, 16



Population density: > 80 p/ha
Location: anywhere

SPATIAL DESIGN

INTERVENTION / IMPLICATION
Enclosure is required for good public spaces, but visibility and defining entrances are very important to direct people to open space and to avoid unwanted behaviour.

STAKEHOLDERS
Municipality, land-owners

Pattern language for urban vitality - Anke van Eijk 2021

Good entrances define the transition between spaces and the use of the area entered. This is especially important for parks, such as the Vondelpark, Bryant park and even Noorderpark, which all have clearly defined entrances.



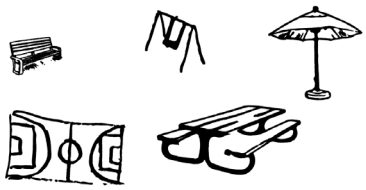
Figure 102: Bryant park entrance (source: https://livingnewdeal.org/projects/bryant-park-new-york-ny/)



Figure 103: bryant park entrance (source: https://augustjuly.com/nl/blog/vondelpark-amsterdam-lunchen-borrelen/)

12 Furniture makes space usable

Related to: 2, 3, 5, 6, 7, 8, 13, 14, 17, 18



Population density:
Location:

SPATIAL DESIGN

INTERVENTION / IMPLICATION
Furniture and objects that stimulate interaction, contemplation, sporting and playing are required to make public spaces usable. Consider that visibility is desirable to avoid unwanted behaviour and that objects can have multiple uses.

STAKEHOLDERS
Municipality, land owners

Pattern language for urban vitality - Anke van Eijk 2021

As simple as this pattern sounds, Superkilen shows how attractive a park can become by providing a richness of furniture and objects to use. Especially when it goes beyond simple benches but includes outdoor gym facilities, games, sporting, lightning, play facilities, barbeques, or even electricity sockets and free wifi (which is done in Bryant park). More furniture increases maintenance costs but generates more value for the community, and various related patterns may consider ownership and reduction of costs.





13 Activate waiting / underused spaces

Related to: 4, 6, 7, 8, 10, 12, 14, 15, 17



Population density: >40 p/ha
Location: public arteries

SPATIAL DESIGN

INTERVENTION / IMPLICATION
Enhance visibility, add furniture for physical comfort, add actual information and connect to public functions and pedestrian routes. This invites the use of public transport or the underused spaces.

STAKEHOLDERS
Transport agencies, municipality, community

Pattern language for urban vitality - Anke van Eijk 2021

Waiting spaces like bus stops are more often unpleasant. In post-war developments like those in Amsterdam-Noord, they are badly interwoven in the pedestrian network as cars and pedestrians are separated. Therefore, it is more desirable to have networked waiting spaces surrounded by public functions and amenities, which can be very practical.





14 Make buffer green usable

Related to: 4, 6, 10, 11, 12, 13, 15, 17



Population density: 90 p/ha
Location: anywhere

PLANNING

INTERVENTION / IMPLICATION
Reduce undefined open space to quality maintainable and accessible public space that can be used by people. This could be stimulated by making well-lit and visible paths along roads or waterways, putting benches on grass fields, planting flowers, cutting grass to enable pick-nicks, creating a vegetable garden.

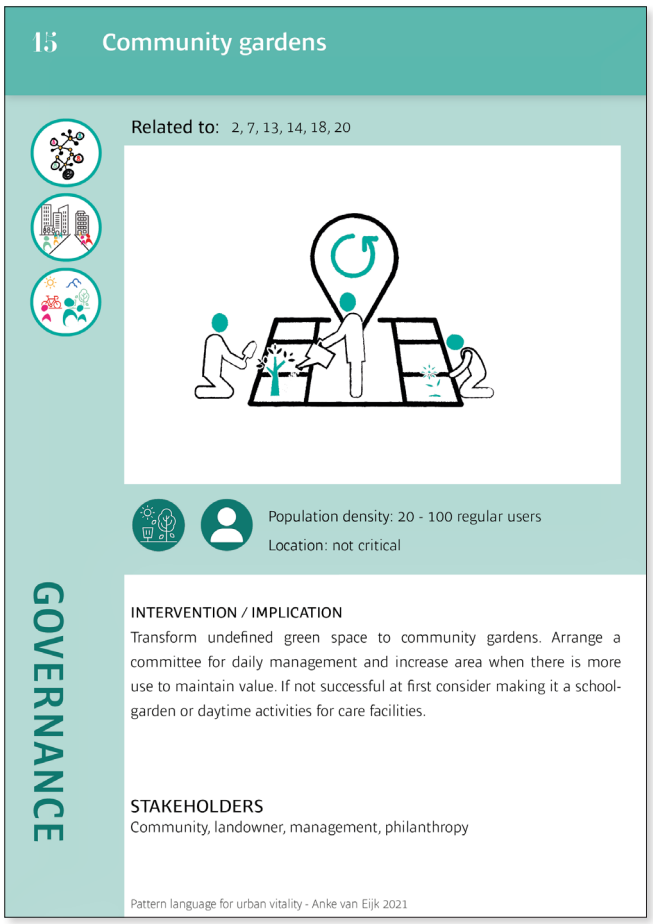
STAKEHOLDERS
Land owners, municipality, residents, traffic agency.

Pattern language for urban vitality - Anke van Eijk 2021

Greenery used as buffer space is often overgrown and limits visibility, enhancing the sense of unsafety when underused. However, there is much value in buffer green considering biodiversity. There is a balance between greenery that should not be used by people and buffer green impacted by human behaviour, which can be made more useable with maintenance, adding furniture or activities as community gardens, sports accommodation.



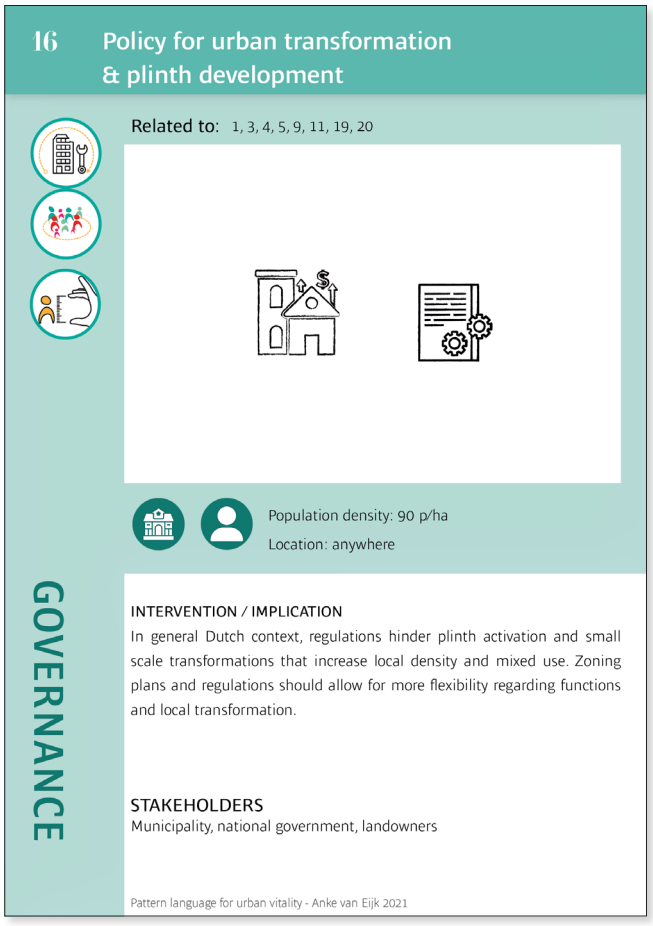




Community gardens can make buffer green usable while also improving bonding with the community as people work together. In addition, community gardens can be integrated with other social initiatives requiring freshly harvested foods. However, community gardens need active participation to manage the crops, which means it requires a committee or public function to maintain them.







The processes to activate ground floors and small-scale densification are surrounded by conflicting interests that make these processes complex. The stakeholder/ policy analysis illustrated this, but there is no clear-cut solution, but regulations and management can significantly impact how the plinth develops (Karssenberg et al., 2016; Municipality of Amsterdam, 2019).

17 Public space stewardship

Related to: 2, 3, 6, 11, 15, 18, 20



Population density: 90 p/ha
Location: anywhere

GOVERNANCE

INTERVENTION / IMPLICATION
Install operators / managers of public space that organise, programme, manage and activate the space and connect with commercial activities. The steward could be a neutral area manager or a committee representing the community. This most likely requires funding as the steward should stay updated and the contact point for various stakeholders.

STAKEHOLDERS
Community, local business, land owner, investors, municipality

Pattern language for urban vitality - Anke van Eijk 2021

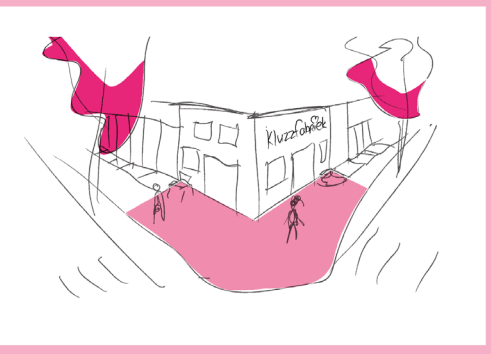
The Noorderpark, Bryant park and Vondelpark are all managed by foundations. It allows users to bond more and makes it possible to control and programme the space actively. Where governmental budget is limited in upkeep, foundations are more involved and innovative to get their funding privately.





18 Mix public space with (social) entrepreneurship

Related to: 1, 2, 3, 5, 6, 7, 8, 11, 12, 15, 17, 19, 20



Population density: >95 p/ha
Location: central in / at entrance of the community

SPATIAL DESIGN

INTERVENTION / IMPLICATION
Allow entrepreneurs, social iniatives and community associations to use and take ownership of outdoor space. This raises awareness and local identity.

STAKEHOLDERS
Landowners, social initiatives, community, investors

Pattern language for urban vitality - Anke van Eijk 2021

This pattern is inspired by de verbroederIJ, de Ceuvel and the Tolhuistuin in Amsterdam-Noord, as well as the Fenix food factory on Katendrecht. The entrepreneur activates public space while gaining more by having public space available for commercial and non-commercial (social impact generating) activities.





19 Upgrade and develop a business case for community centres

Related to: 2, 5, 7, 8, 9, 10, 17, 18, 20



Population density: >95 p/ha

Location: central in / at entrance of the community

GOVERNANCE

INTERVENTION / IMPLICATION

Upgrade buildings by adding commercial activities (workspaces, offices) and improve architectural quality of the building to stimulate a variety of uses.

STAKEHOLDERS

Land owners, municipality, operator, retail, hospitality, investors

Pattern language for urban vitality - Anke van Eijk 2021

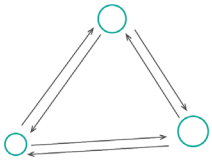
It is harder to maintain a community centre without commercial functions. Therefore, this pattern proposes to upgrade community centres by adding more (commercial) activities to generate revenue, which can be spent on improving the centre's spatial quality and embedding it in the local community.





20 Create synergies with partners

Related to: 1, 5, 7, 8, 10, 15, 16, 17, 18, 19



Population density: 130 p/ha

Location: partners ought to be close to one another.

GOVERNANCE

INTERVENTION / IMPLICATION

Synergies help to raise awareness and develop business cases for social initiatives, it stimulates the local economy and can enable initiatives to reach new groups

STAKEHOLDERS

Private market parties (hospitality / business / industry), public institutions (schools / community centres), local community

Pattern language for urban vitality - Anke van Eijk 2021

Synergies between people lie at the foundation of cities, as the interchange of resources, goods and skills need a transaction base (Montgomery, 1998). Non-commercial functions can seek partnerships to establish exchanges and empower them within the community as is done on the NDSM Werf by made-up Noord and the NDSM Werf foundation.





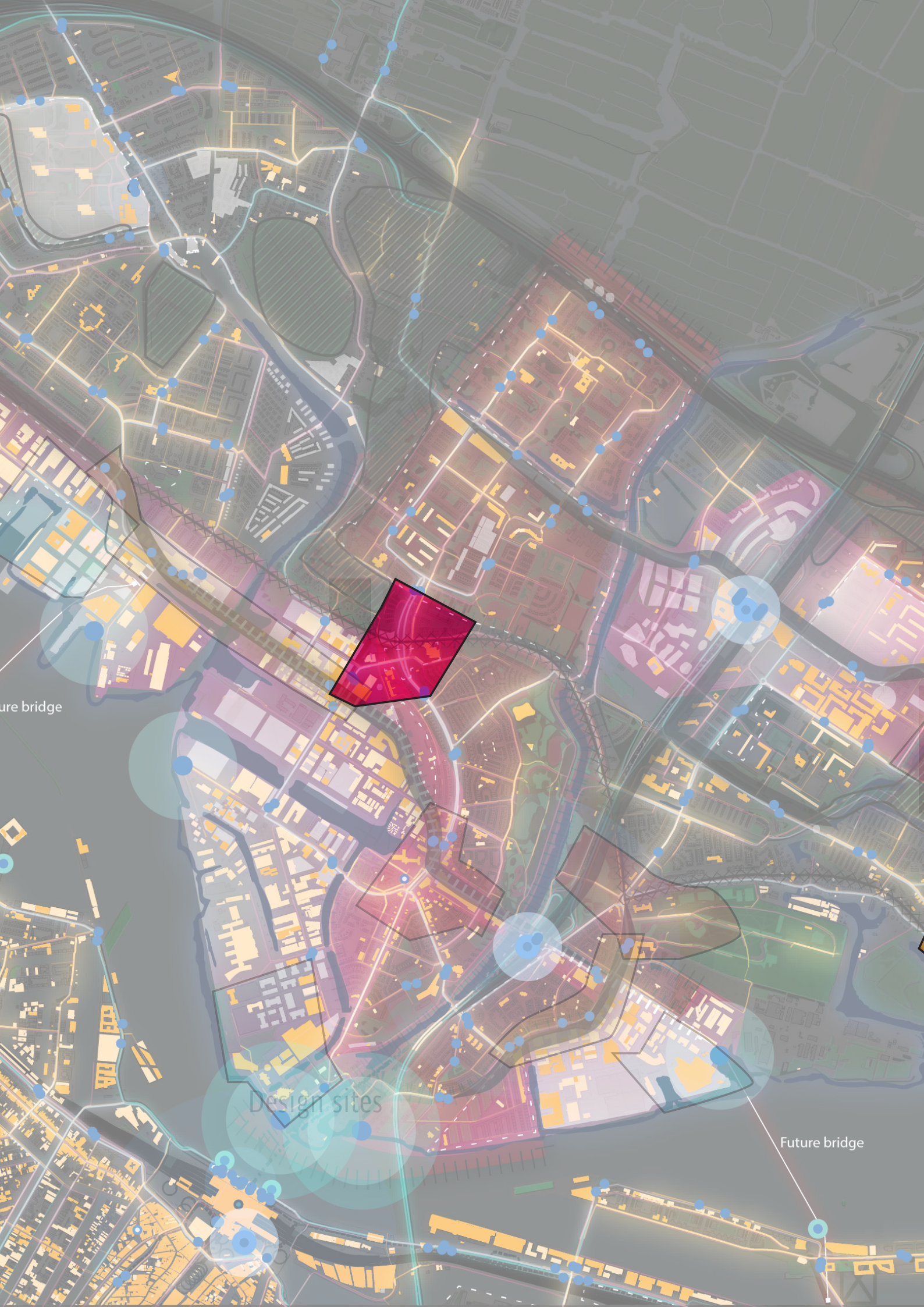
Pattern language matrix

Figure 110 depicts which patterns relate to one another and how the different types of interventions relate because spatial interventions do not exist in a spatial vacuum, nor do the planning and governance-related patterns. In the next chapter, the patterns are applied on different sites.

1	integrated streets as public space
2	provide more gathering places
3	activate building
4	close networks
5	layer activities and users
6	tactical urbanism
7	social infrastructure for all
8	mix commercial and non-commercial
9	small scale densification
10	enclose spaces
11	grand entrance
12	furniture makes space usable
13	activate waiting space
14	make buffer green usable
15	community gardens
16	policy for urban transformation
17	public space stewardship
18	mix public space with (social) entrepreneurship
19	upgrade and develop a business case
20	create synergies between partners
	Count:

Figure 104: Pattern matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Count
	x	1	1		1				1	1	1					1		1			8
	1	x				1	1	1	1			1	1		1		1	1	1		11
	1		x		1		1		1		1	1				1	1	1			9
			1	x			1		1	1	1		1	1							7
	1				x			1				1				1		1	1	1	7
		1	1	1		x		1				1		1			1				8
		1				1	x	1				1	1		1			1			7
		1			1	1	1	x			1	1	1					1	1	1	10
	1	1	1	1					x	1						1					6
	1			1					1	x		1		1	1						6
	1		1	1				1		1	x			1		1					7
		1	1		1	1	1	1				x	1	1			1	1			10
				1		1	1	1		1		1	x		1	1		1			9
				1		1				1	1	1	1	x	1			1			8
		1					1						1	1	x			1		1	6
	1		1	1	1				1		1					x			1	1	8
		1	1			1					1				1		x	1		1	7
	1	1	1		1	1	1	1			1	1			1		1	x	1	1	13
		1			1		1	1	1	1							1	1	x	1	9
	1				1		1	1		1					1	1	1	1	1	x	10
	9	**10**	**9**	**8**	**7**	**10**	**9**	**10**	**7**	**8**	**9**	**9**	**8**	**7**	**7**	**6**	**9**	**11**	**6**	**7**	


ure bridge
Design sites
Future bridge



CH6: Design and strategy

In this chapter, the explored elements of urban vitality come together in the actual context. The design sites used are the Kampferfoelieweg and two sub-sections of the larger Beemsterstraat. These two locations could potentially connect people on a structural level, but that potential is not used because the sites miss the spatial quality and attractive programme.

The design strategies are structured to show the design concept and how that contributes to urban vitality spatially. Then the approach focuses on the development process by considering potential relationships between stakeholders that can enable developments and how the pattern language is applied in the development process. The design is concluded by envisioning how the personas introduced in chapter 4 will use, experience and mix in the new urban space.

Beemsterstraat

For the Beemsterstraat, two sites are selected. The first site showed the most use in the observation. The second site is a post-war residential block that requires a different approach. The space syntax analysis showed that this street is very central but primarily residential. The design aims to add more mixed programme and improve the street's spatial quality and the connections to surrounding areas to attract more people. The street crosses several neighbourhoods and has the potential to connect them. However, this potential is currently overlooked (Gemeente Amsterdam, 2019).

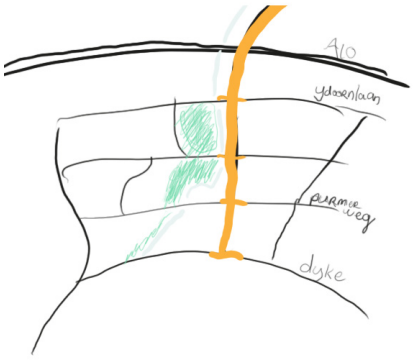


Figure 106: Interest beemsterstraat

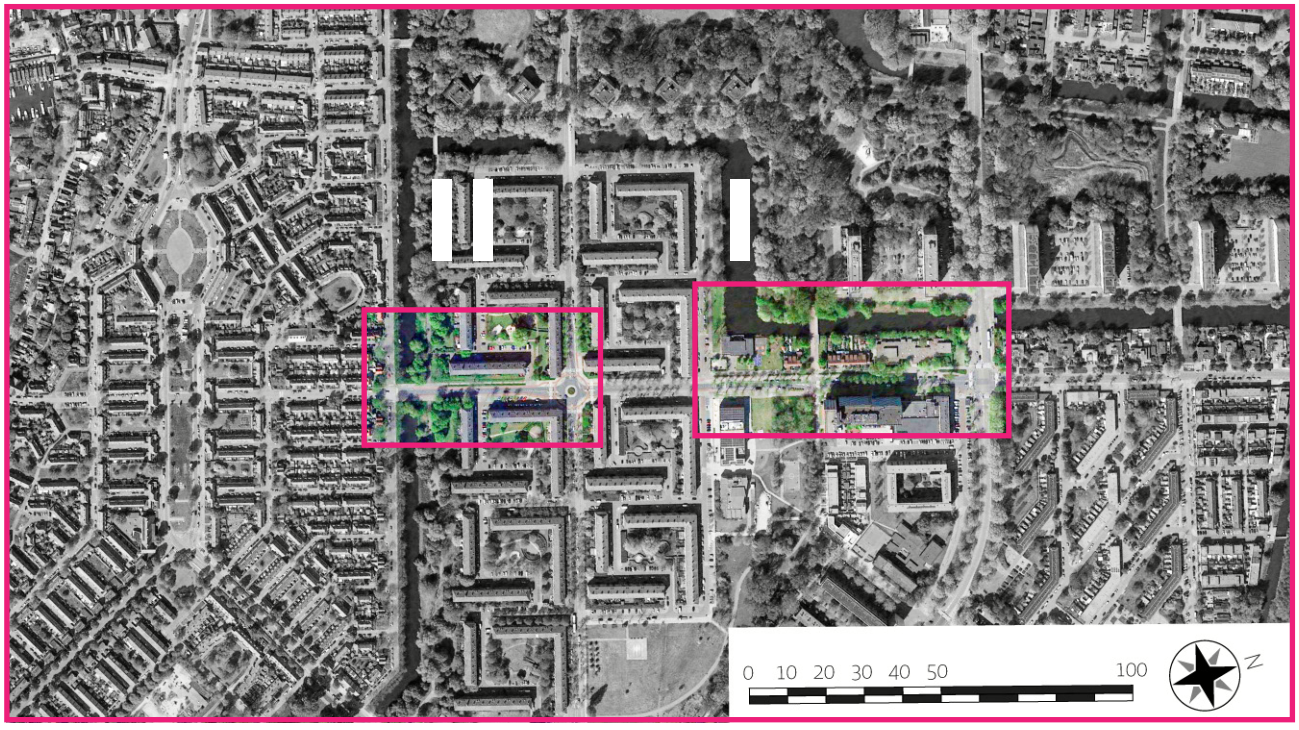


Figure 105: Design sites Beemsterstraat (source: google earth, 2020)

Kampferfoelieweg

The Kampferfoelieweg site entails a traffic square between said road and the Floraweg. Most importantly, it is an area where several neighbourhood borders (red lines in figure 108) leave an undefined open space. Scattered in this space are several introverted public functions. Like the Beemsterstraat, this space's potential to connect neighbourhoods and their distinct communities is neglected in plans (Municipality of Amsterdam, 2020). Therefore, this design aims to provide more gathering spaces and to define the area in the current urban fabric.



Figure 108: Interest kampferfoelieweg



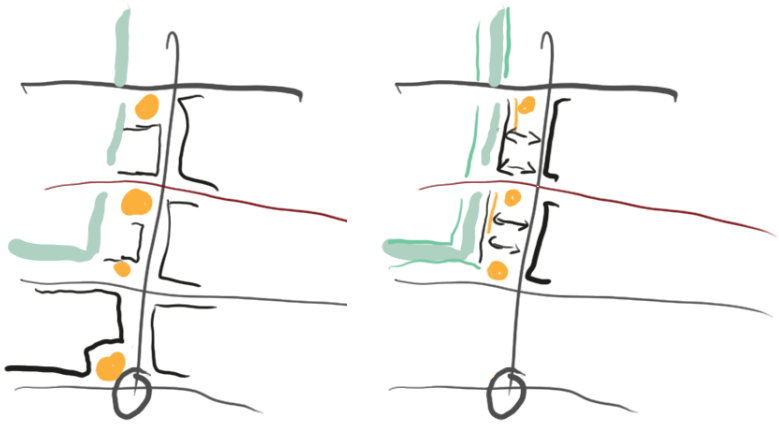
Figure 107: Design site Kampferfoelieweg (source: google earth, 2020)

Design Beemsterstraat I



Figure 110: Current situation (source: google maps, 2021)

The street is one of the few streets that connects the historic dyke, a garden village, modernist developments and the rural landscape beyond the highway in a straight line. The arteries that cross the street can be used to draw in people by placing public landmarks at the nodes. While the nodes are physically there, the design hinders changing direction. Also, the building line is pushed back from the street behind greenery and parking spaces. The buildings are also quite introverted, this leads to few interactions in the public realm. The building line of new developments should be closer to the street and the facades more dynamic and extraverted to be more public.



A) Public landmarks at nodes

B) Include canal waterfront as public space

Figure 109: Concepts beemsterstraat



Figure 111: Design proposal beemsterstraat public section

Design elaboration

(Continuation of previous page)

Currently, there are no commercial activities on the street, including workplaces or hospitality. That is partly because there are 2 district malls within walking distance (850m west, 450m east), and there is no allocated space for it now, while there are quite some self-employed entrepreneurs in the district. They could have a central place to provide workplaces, meetings and opportunities to socialize. The underused community centre could be upgraded along with the public landmarks to include these functions, including niche business and gathering places.

The canal provides an opportunity to combine biodiversity and leisure. The side of the Beemsterstraat can be used for relaxation with accessible platforms. While the other side remains green, a small walkway with vistas can make it an attractive place to stroll around.

New buildings along the Beemsterstraat are at least three storeys with various infill: apartments in the form of maisonettes, single-floor apartments, narrow townhouses, business units in the plinth as part of a work-from-home apartment or standalone unit.



Figure 112: Urban design references (image sources:)



Figure 114: Network of public spaces

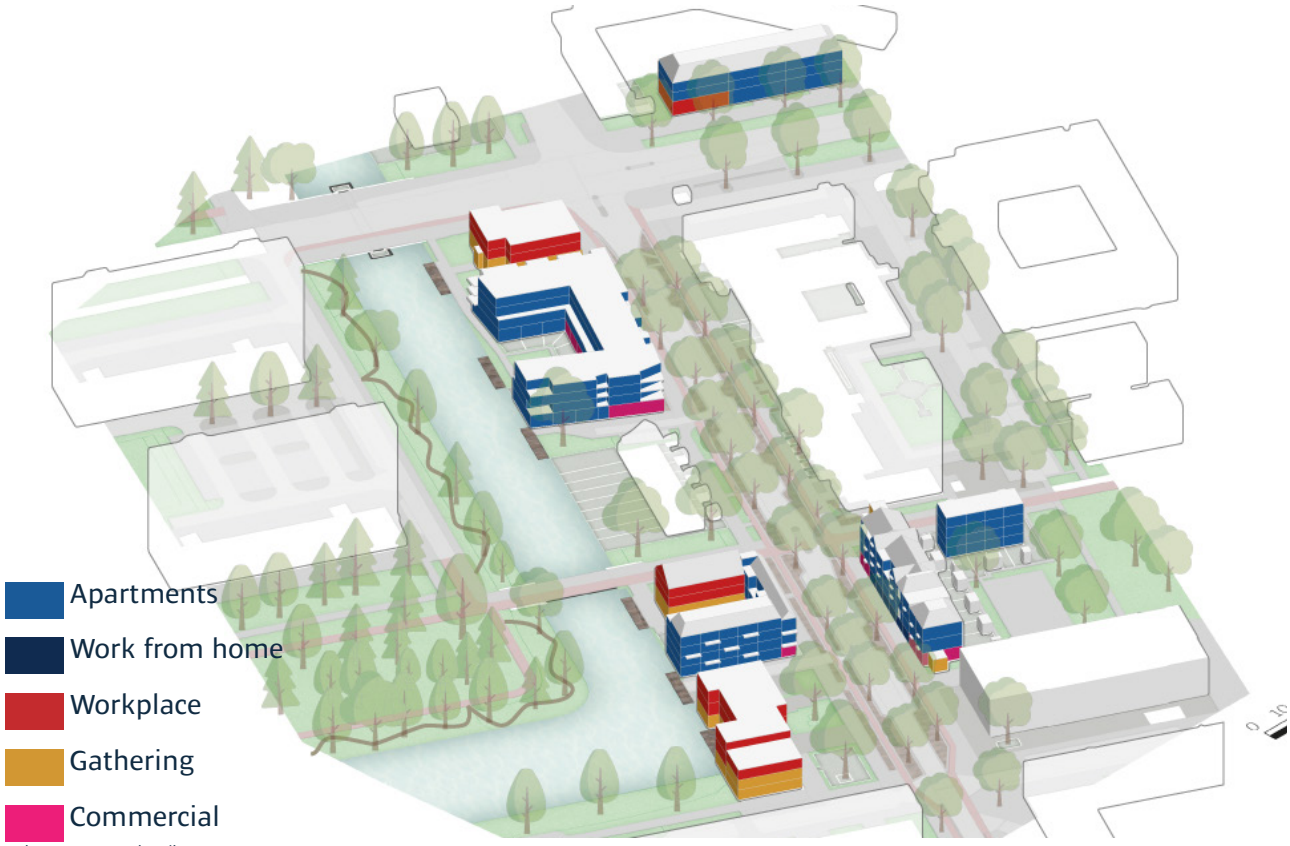


Figure 113: Functionality

Stakeholder analysis

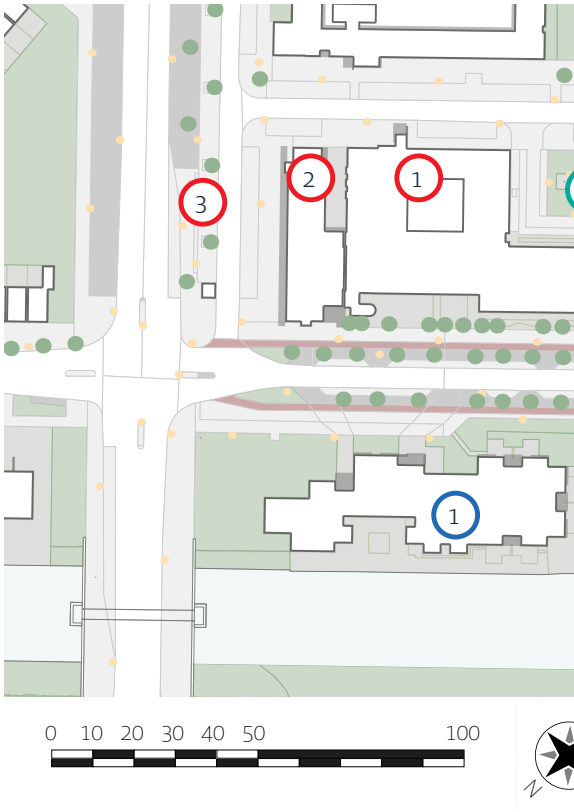


Figure 122 shows the relevant stakeholders for developing this part of the Beemsterstraat. They are put together in the relationship diagram to consider how they can contribute to this development.

Where the public landmarks can host workspaces for the many self-employed people, they may need to organise themselves to accelerate this process. In addition to workspaces, the landmarks can entail hospitality services and other services that are more publicly accessible and generate extra revenue (figure 121.a)

While the community centre will be upgraded, the events can take place at the primary school. In return, school kids can get free try-outs. It can be more pleasant to linger and wait by including hospitality services (figure 121.b).

The new developments can be costly for investors/housing corporations, especially when trying to activate the plinth of a place that is not yet lively. It may require engagement from public parties to start the activation, which can be stimulated by placing temporary activities or allocating starting entrepreneurs for lower rents (figure 121.c).



Figure 115: (A - c) Operating relationships to aid the development process

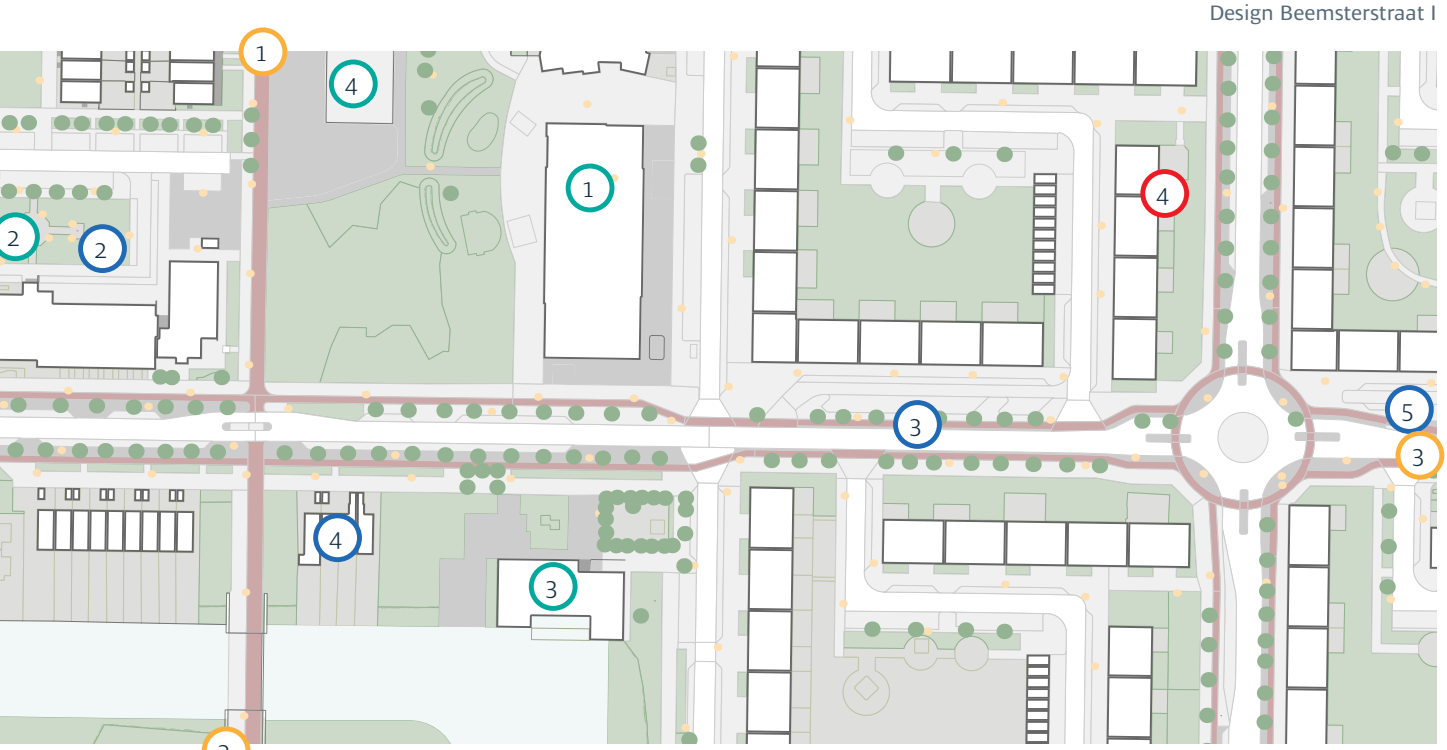


Figure 116: Stakeholder inventory Beemsterstraat

SOCIETAL

1. Primary school: Kinderrijk BSO IJdoorn
2. Nursery home care facilities: kimme
3. Community centre
4. Daycare: Tinteltuin bv
5. ROC Top: vocational education (MBO)

BUSINESS

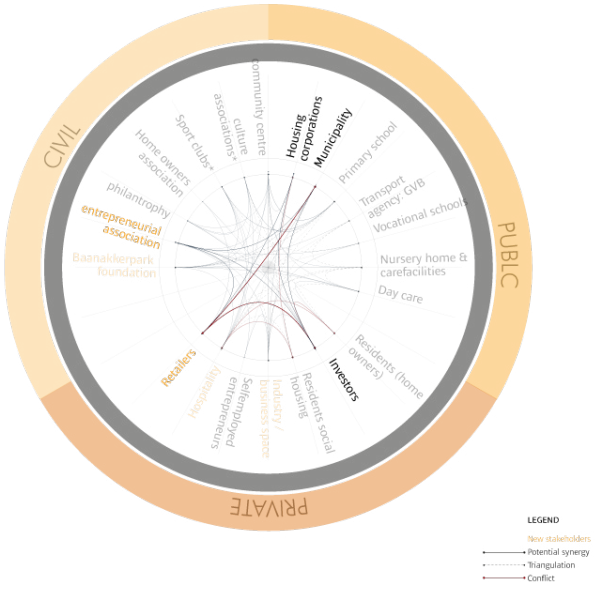
1. Hospitality: nieuwe kimme
2. Supermarket: Dirk van den broek
3. Flower stall: Annemoon
4. Small grocery store: Saya Market
5. Self-employed people

LAND OWNERS

1. Cordaan: unsure about function
2. Evean de Kimme: Nursery home and independant living for elderly.
3. Blocks north of Werengouw: partially owned by Rochdale and Eigen haard, around 50% is private property with owner assocation in charge of courtyards
4. Houses along the water in the beemsterstraat are privately owned
5. Nieuwendam: completely owned (>90%) by housing corporation Ymere.

SURROUNDING

1. Shopping mall: Waterlandplein
2. Shopping mall: buikslotermeerplein
3. Shopping square: purmerplein



Development process

The development process requires a balance of opportunities for bottom-up initiatives and traditional projects for developers/housing corporations. The process starts with low-cost interventions to generate traction with the community and attract investments.

The patterns structure this process. First, they are used to generate interest and operators from the community. Then, from step 3, they are used more to guide the process.

Activate sidewalks



Tactical urbanism to activate sidewalks and involve community in the process

Increase visibility along public spaces



Clean up greenery to increase visibility along public waterfront, bike paths and community places

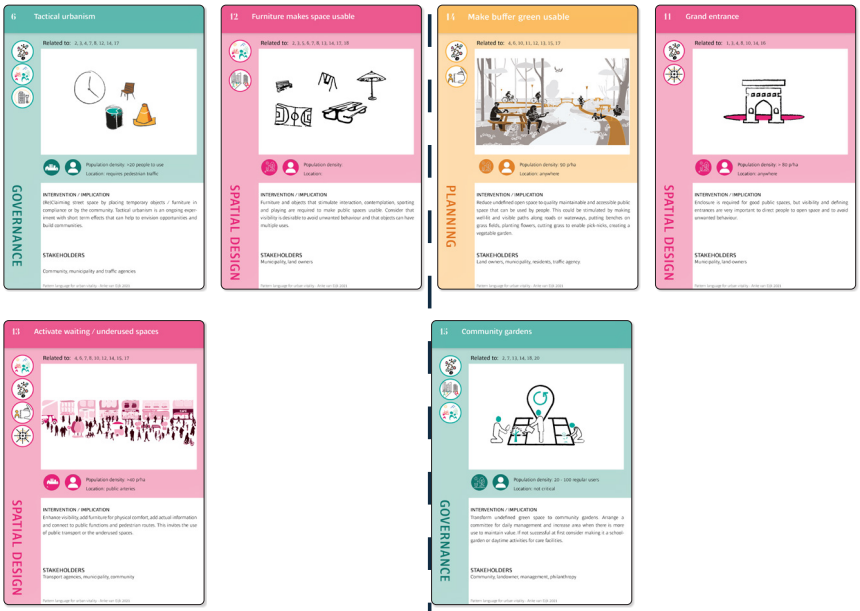


Figure 117: Development phasing

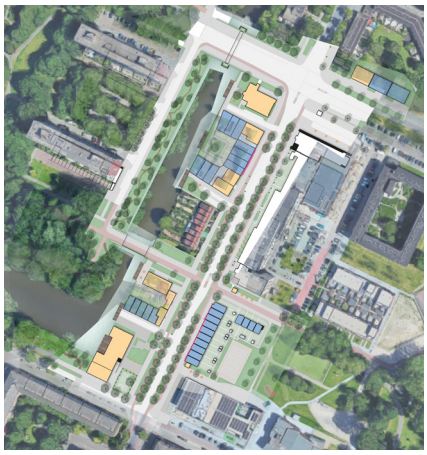
Bottom-up development underused buildings

Housing development

Final refurbishment of public spaces





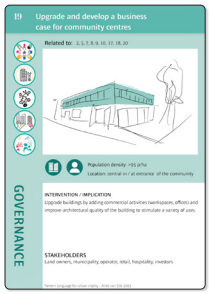


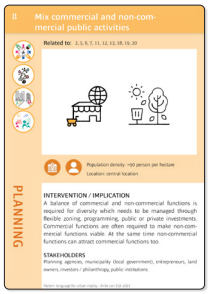
Bottom-up community initiatives in underused buildings / vacated plots

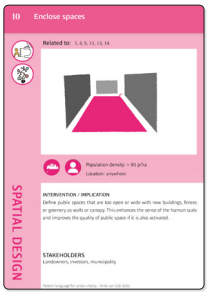
Housing development by developers and housing corporations.

* Buy-out houses south of bike-path
** regulate commercial rents in plinths

Finalize experiments with tactical urbanism with community and new entrepreneurs.



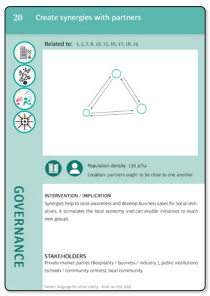


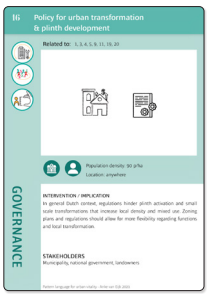


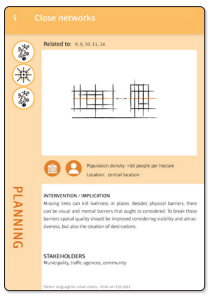












Use of space

The plinth and nodes provide the main activities where people can mingle. The personas suggest how people may benefit from this development.

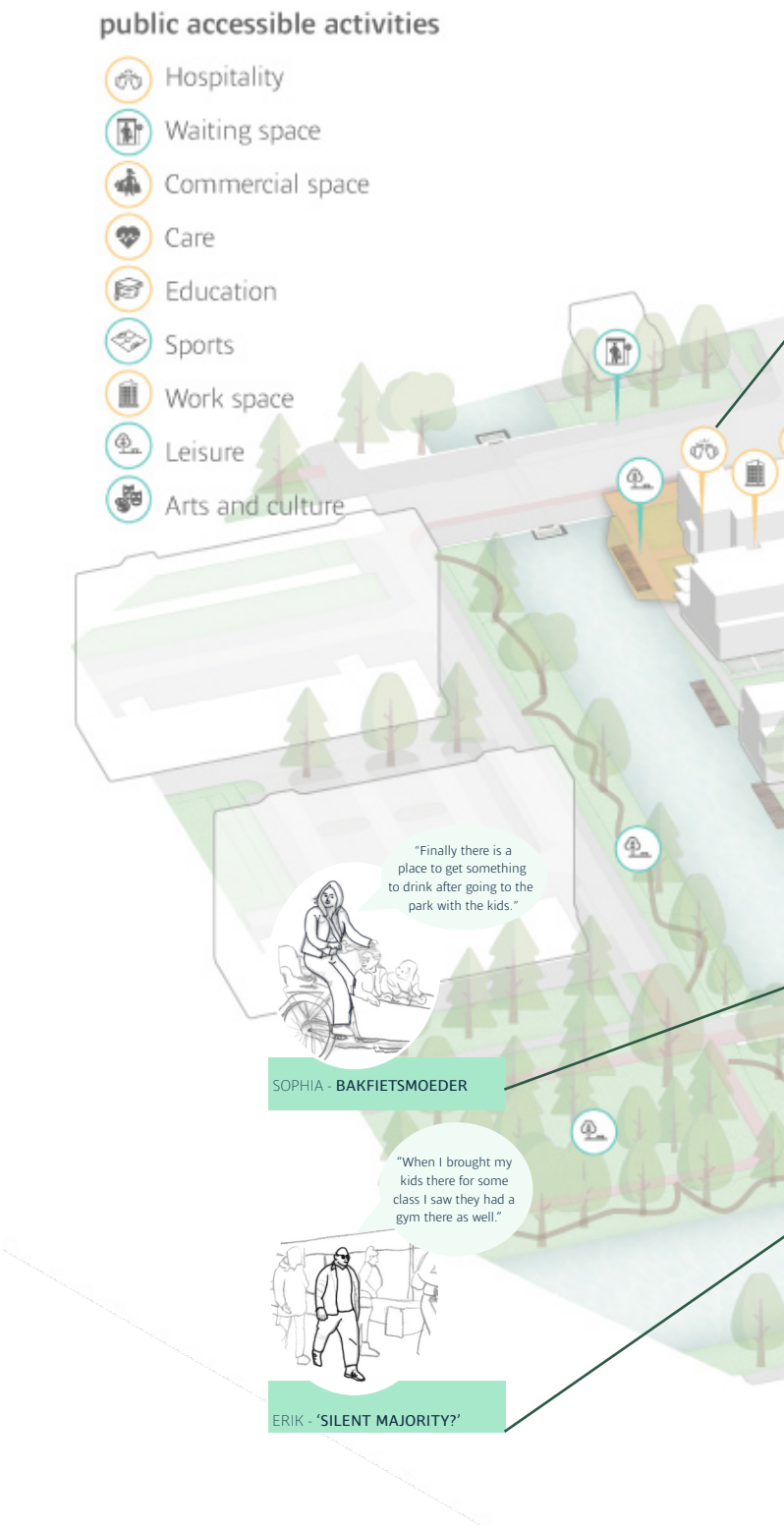
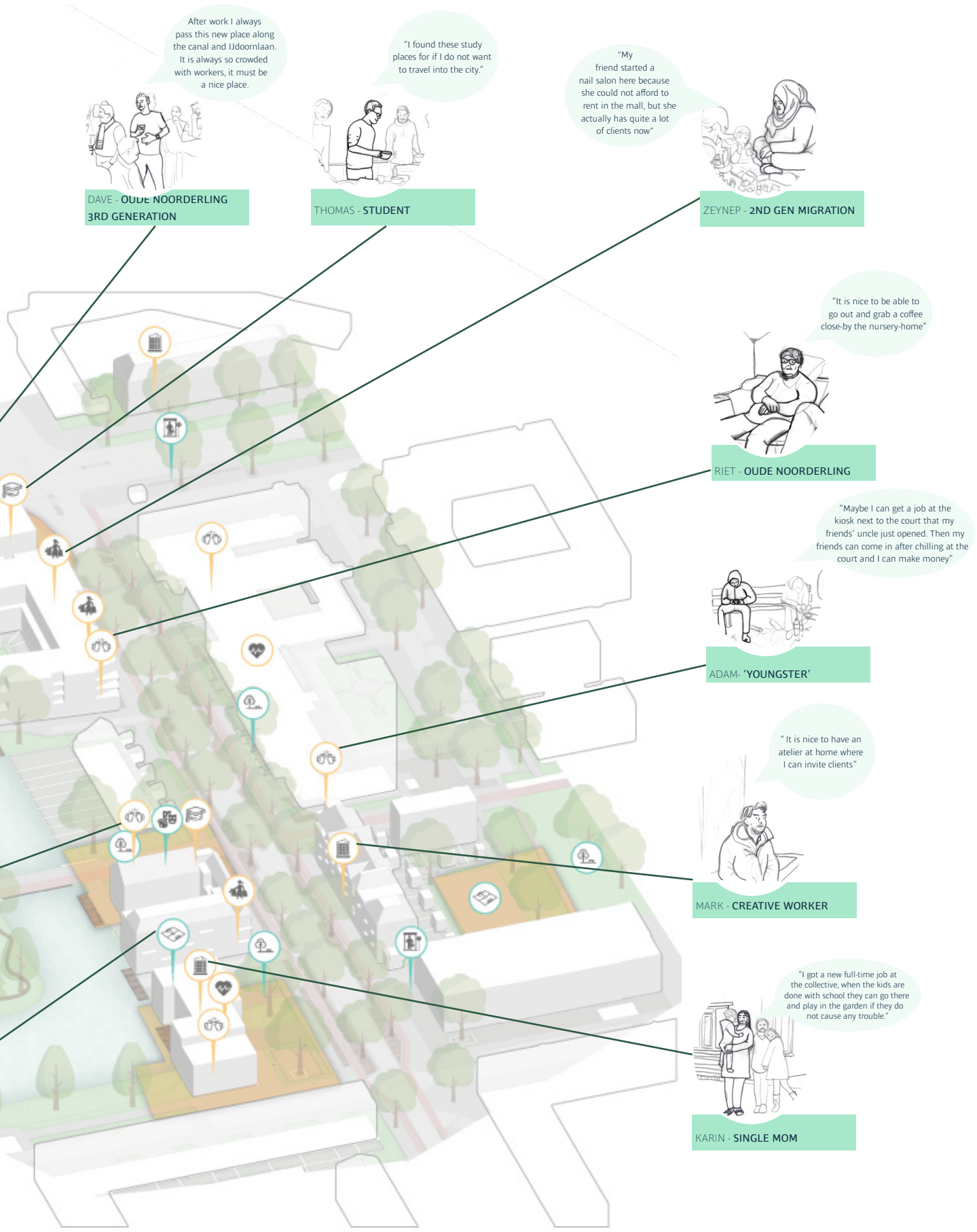


Figure 118: Use of space by personas as representation of population


After work I always pass this new place along the canal and IJdoornlaan. It is always so crowded with workers, it must be a nice place.
DAVE - OUDE NOORDERLING 3RD GENERATION
"I found these study places for if I do not want to travel into the city."
THOMAS - STUDENT
"My friend started a nail salon here because she could not afford to rent in the mall, but she actually has quite a lot of clients now"
ZEYNEP - 2ND GEN MIGRATION
"It is nice to be able to go out and grab a coffee close-by the nursery-home"
RIET - OUDE NOORDERLING
"Maybe I can get a job at the kiosk next to the court that my friends' uncle just opened. Then my friends can come in after chilling at the court and I can make money"
ADAM- 'YOUNGSTER'
" It is nice to have an atelier at home where I can invite clients"
MARK - CREATIVE WORKER
"I got a new full-time job at the collective, when the kids are done with school they can go there and play in the garden if they do not cause any trouble."
KARIN - SINGLE MOM

Design evaluation

Diversity is increased by providing additional space for (commercial) public functions and different housing types, including maisonettes, studio's, apartments with gardens, or legal workplaces. This increases the possible destinations that may attract and concentrate people to the Beemsterstraat. The buildings are pushed towards the street with only a small hybrid zone. The new developments enclose the space and balance the fragmentation between low-rise housing, the high rise nursery home, and the free-standing low rise public facilities. This design stresses the existing connectivity and makes it more publicly accessible and attractive because the nodes are now highlighted as public spaces. The greenery and waterways make this place liveable and are used for leisure. The series of interventions aid in making the area more dynamic and liveable.







Figure 119: Public functions at node



Figure 120: View at new shops and streetscape

Design Beemsterstraat II

The first Beemsterstraat design aims to highlight the nodes on the corners. This design explores how the residential blocks can be more lively without drastically changing the site. The concept proposes to add more public functions to the plinth. The street profile is wide, with significant leftover space; this is used to extend the building with additions hosting the various public functions and access points to the apartments. The block has one corner at a node: this block and the addition open to the rotunda at the node with a café and outdoor terrace. This terrace and the courtyard are the dominant gathering spaces in this block. The transformed garage boxes host new workspaces to create more use during working hours. The new workspaces facilitate business that may programme the courtyard, such as trainers, coaches.

The additions house mainly workspaces, mixed with gathering spaces, local retail and services, and some specific housing types to accommodate, for example, seniors, students, and artists at street level.



Figure 121: Current situation (source: google maps, 2021)

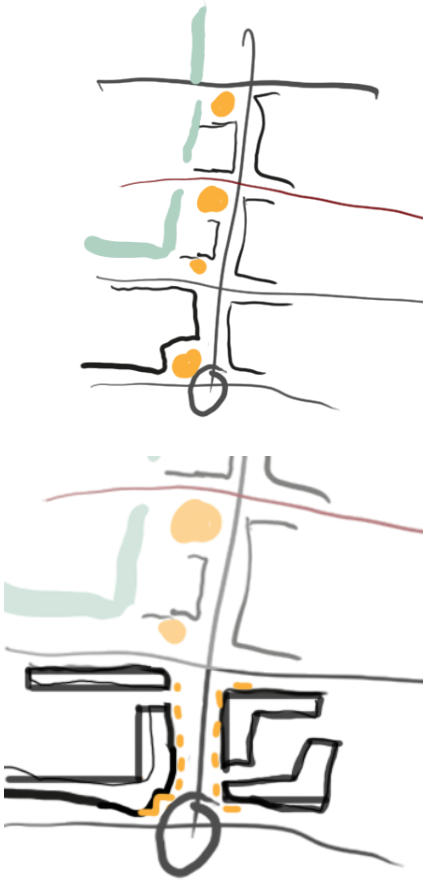


Figure 122: Concept Beemsterstraat II



Figure 123: Proposal beemsterstraat residential block

Design elaboration

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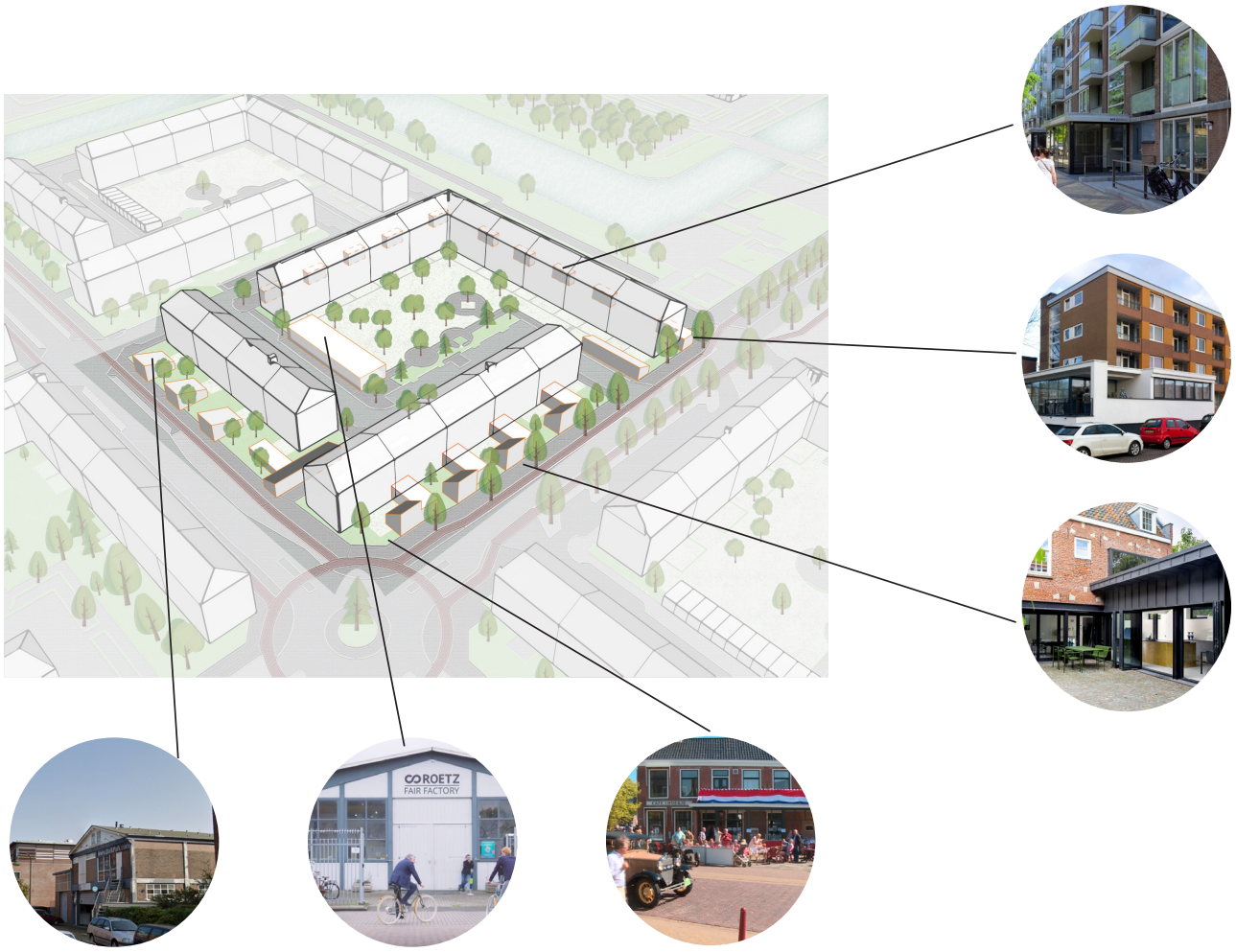


Figure 124: Design elements references

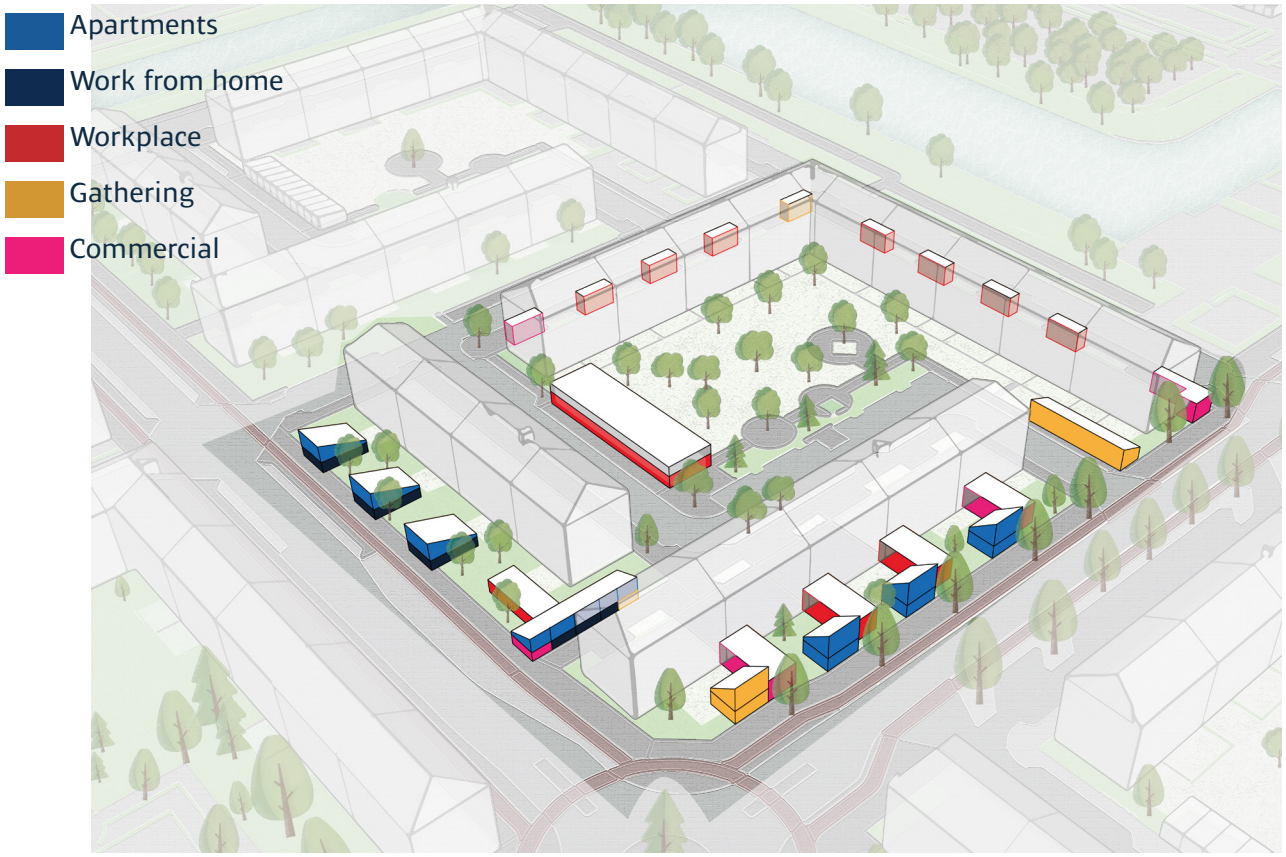


Figure 125: Functionality

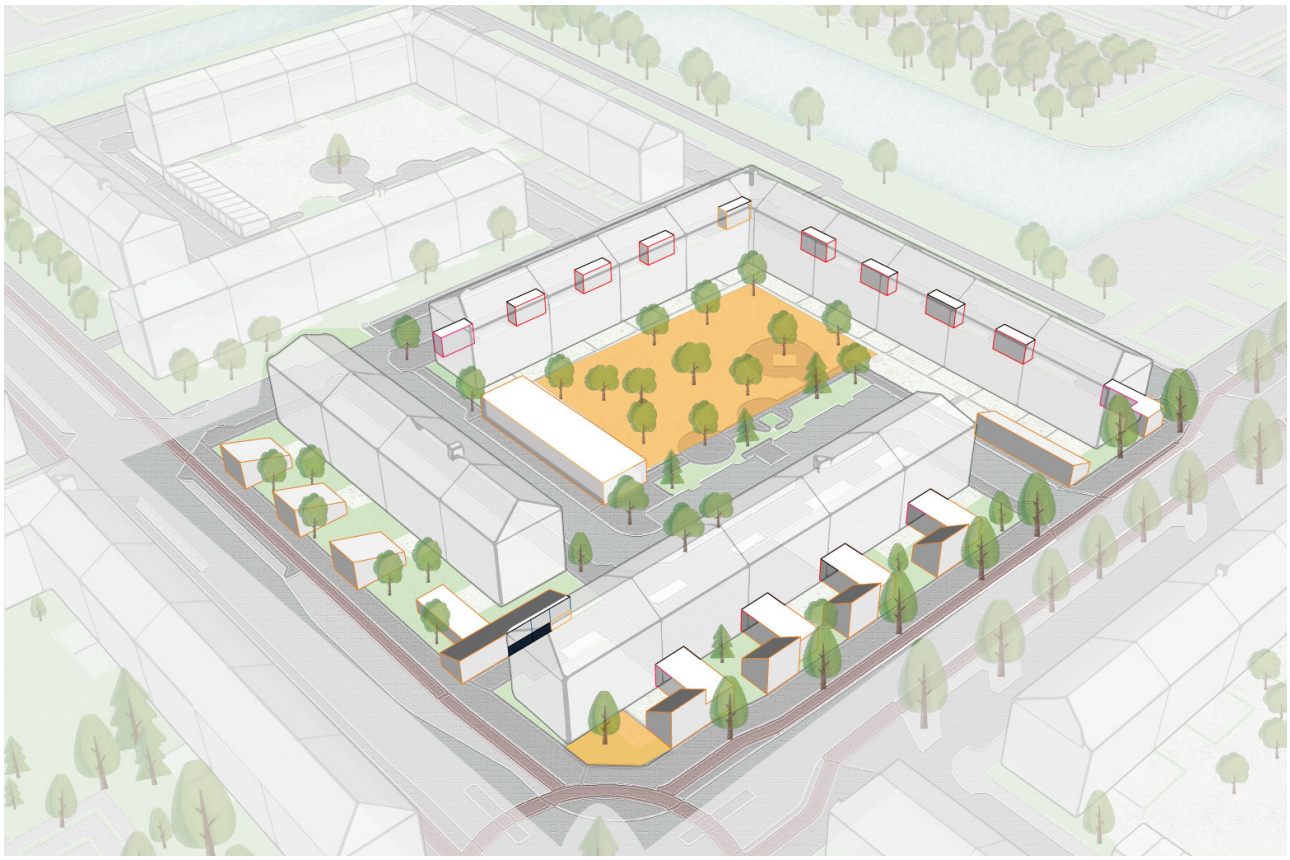


Figure 126: Community spaces

Development process

This design intervention aims to activate the building blocks by adding building extensions. Because there are multiple owners, this can be complex. An important role is then for the homeowners association, including the housing corporations, to consider where the additions can be placed and determine how it supports the existing residents. The first phase focuses on that by providing more social infrastructure on the central street side. The second and third phase focuses on layering activities on top of the residential function: adding workplaces and making the courtyard publicly accessible and usable.

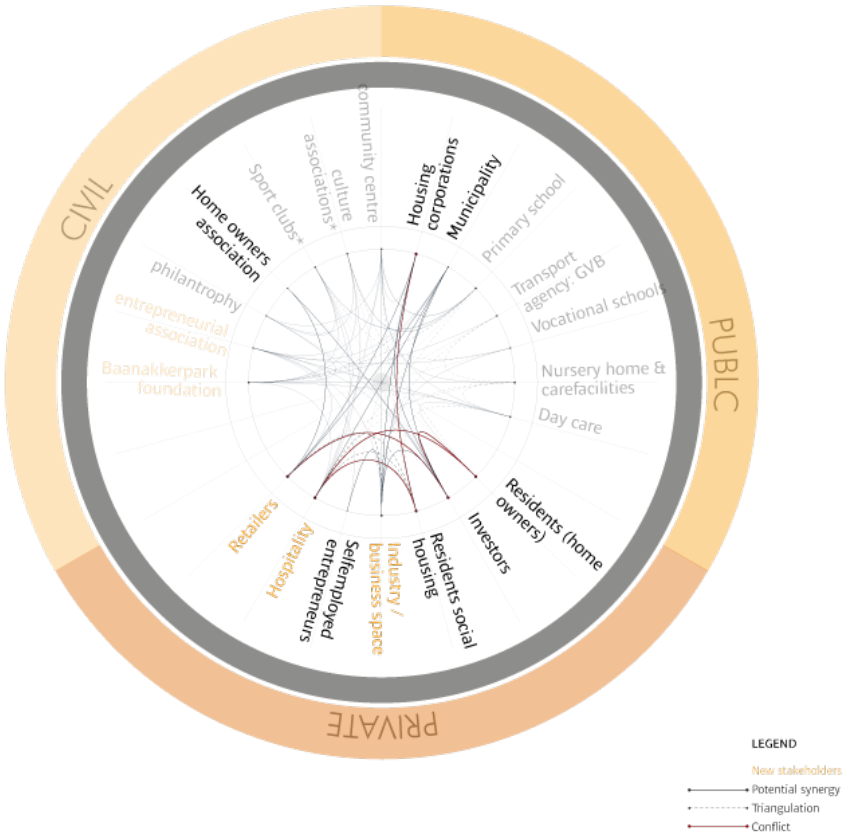


Figure 127: Operating relationships to aid the development process

Activate integrated street side

Diversifying courtyard uses

Urbanizing backside







Densification through additions on the integrated street. Current home-owners should approve and be part of this development

Fill in the gathering spaces and refurbish the courtyard for visibility and usage.

Develop new workspaces in the additions to activate the ground floor and layer various activities. The setbacks between the additions create more dynamic semi-private spaces which should be appropriated..



Figure 128: Development phasing

Use of space

The added programme should bring more urban activities and establish a social mix of residents, workers and visitors. The new functions attract people with particular needs to this area: services and working with clients. The gathering spaces added are mainly for local use by residents. The personas suggest how people may benefit from this development.

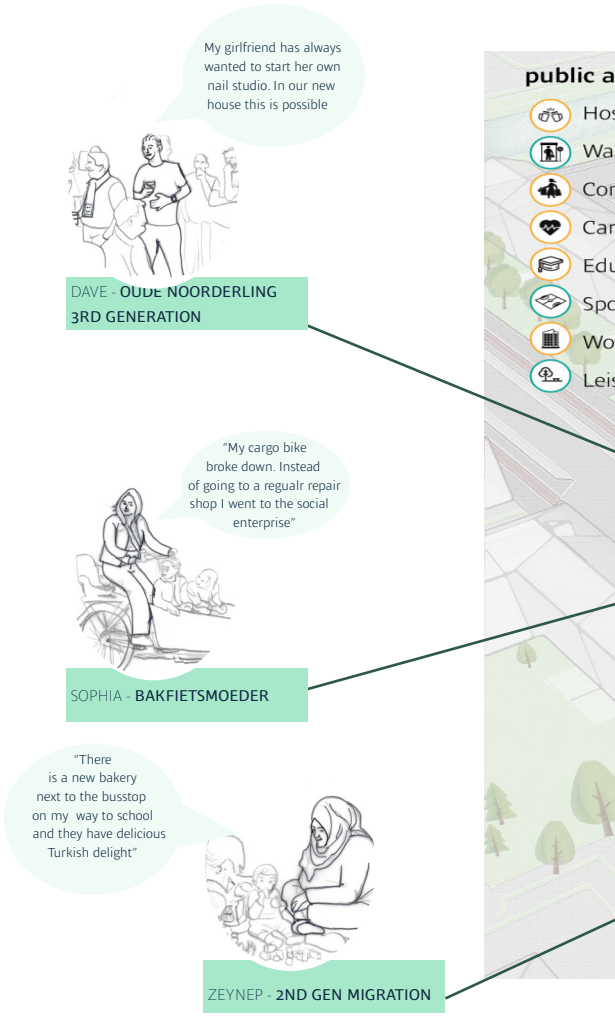
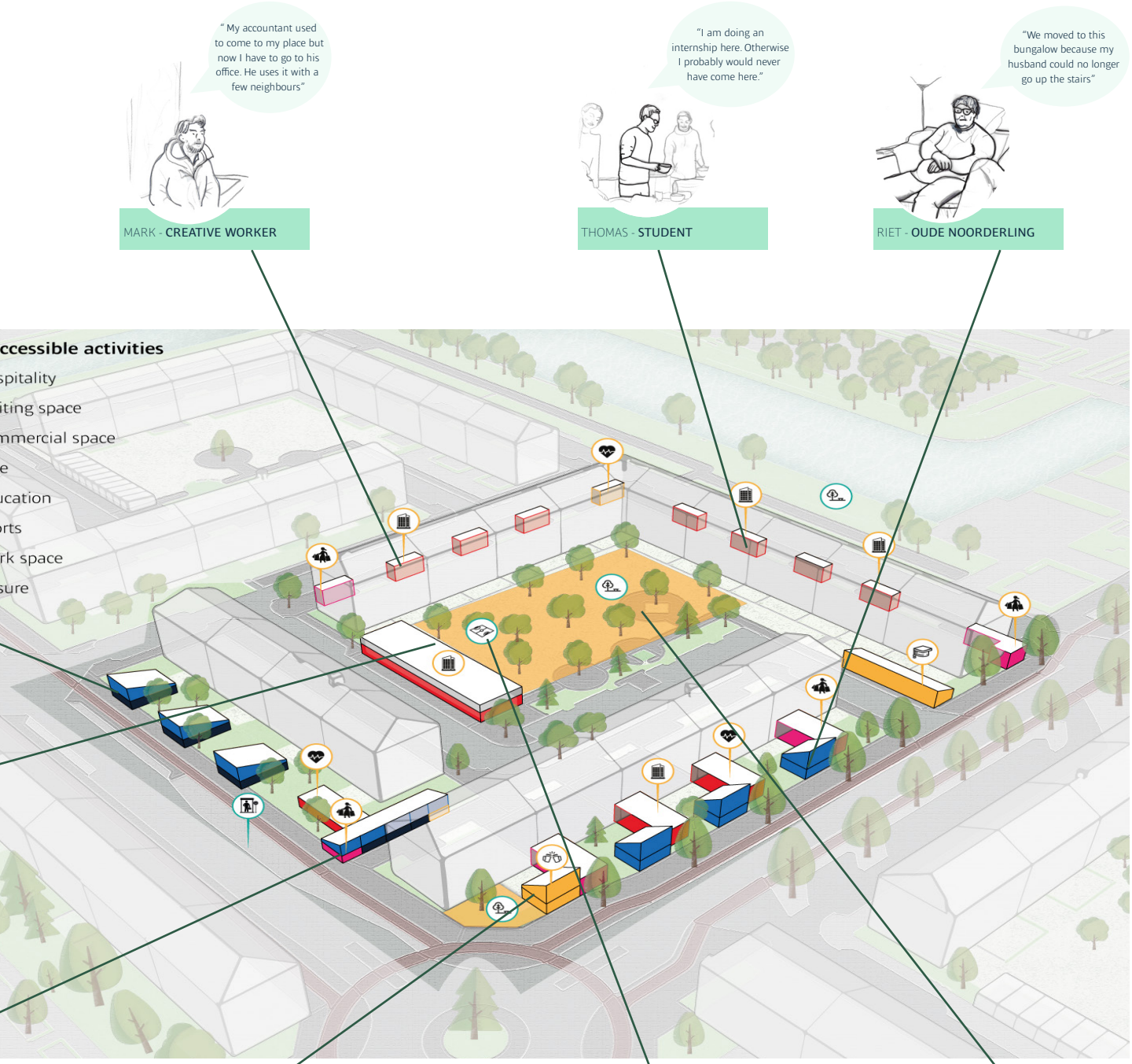


Figure 129: Use of space by personas as representation of population


" My accountant used to come to my place but now I have to go to his office. He uses it with a few neighbours"
MARK - CREATIVE WORKER
"I am doing an internship here. Otherwise I probably would never have come here."
THOMAS - STUDENT
"We moved to this bungalow because my husband could no longer go up the stairs"
RIET - OUDE NOORDERLING
ccessible activities
spitality
iting space
mmercial space
e
ucation
orts
rk space
sure
"I guess I am a regular at the new corner café. It's a nice meeting place. The owners are nice, beer is good."
ERIK - 'SILENT MAJORITY?'
"One of the youth workers gives boxing classes in the courtyard and if I help him with all the material I can join a class for free"
ADAM- 'YOUNGSTER'
"Now there are more people in the streets and less loitering youths I dare to let my kids play outside when I am back from work"
KARIN - SINGLE MOM

Design evaluation & use of space

The new uses bring more and various people to the block. However, the block itself does not change drastically. Instead, this design shows an opportunity for additions which can be done because there is much open space. The additions make the street experience more dynamic and enhance the human scale, as shown in figures 130 and 131.



The proposal places functions that require more centrality, such as retail and gathering spaces on the central side. On the other side, it places the destinations that people seek out, such as workplaces and specific services. Instead of pure residential, the transformed block provides opportunities for urban life to thrive. More people on the street enhances social control, and when the local community appropriates the new semi-private spaces, it can increase liveability.





Figure 131: View at new shops and streetscape



Figure 130: Public functions at node

Design Kampferfoelieplein

At first, the intention was to design the traffic crossing as one public square, which lead to the name of this design: Kampferfoelieplein (plein is square in dutch). However, considering the current building lines, this would lead to an enormous space without human scale. So instead, the proposal entails a network of compact public spaces. New developments enclose spaces and highlight the connections and existing sightlines, which are currently weakened due to the abundance of open space.



Figure 132: Current situation (source: google maps, 2021)

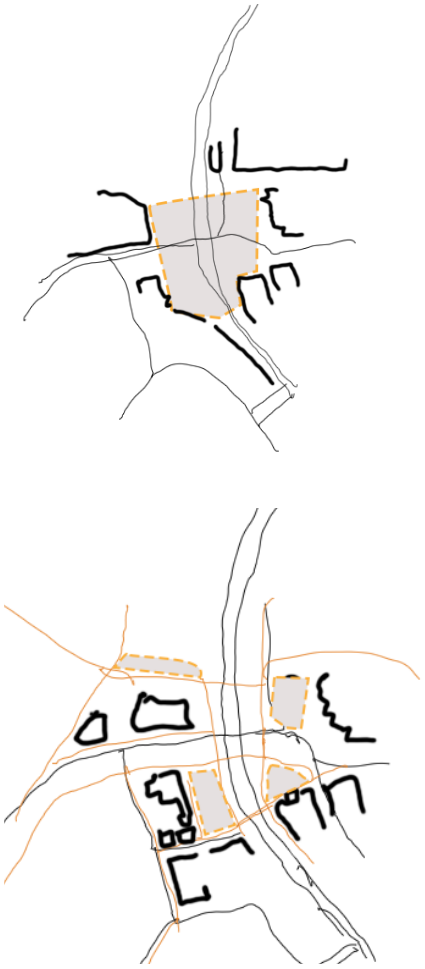


Figure 133: Concept development kampferfoelieplein



Figure 134: Design proposal Kampferfoelieplein

Design elaboration

(Continuation of previous page)

The new public spaces incorporate surrounding functions: a town square in front of the church, the culture square and sports field from the school are connected, a community garden for the existing garden village, the urban streetscape of the floraweg connects the existing eastern neighbourhoods and the future klaprozenbuurt with new services and office space, traditional park social infrastructure activates the historic dyke and invites riders to take a break.

The new buildings are a smooth transition between the low-rise garden village and the future compact klaprozenbuurt (Municipality of Amsterdam, 2020). The development includes many apartments but also commercial functions such as offices, services and retail space. In addition, the mixed-use building blocks house public institutions such as a new education centre (primary school, daycare, open classrooms) and the housing corporation office.



Figure 135: Design elements references



Figure 136: Building functions



Figure 137: Community spaces

Stakeholder involvement

Because surrounding functions directly use the public spaces, these functions can invest in the quality and development of the areas. Individual residents or even communities may perhaps not fund the development, funding might be founded elsewhere through philanthropy, the municipality or investors. Figure 138 show how the various stakeholder relationships are operationalized.

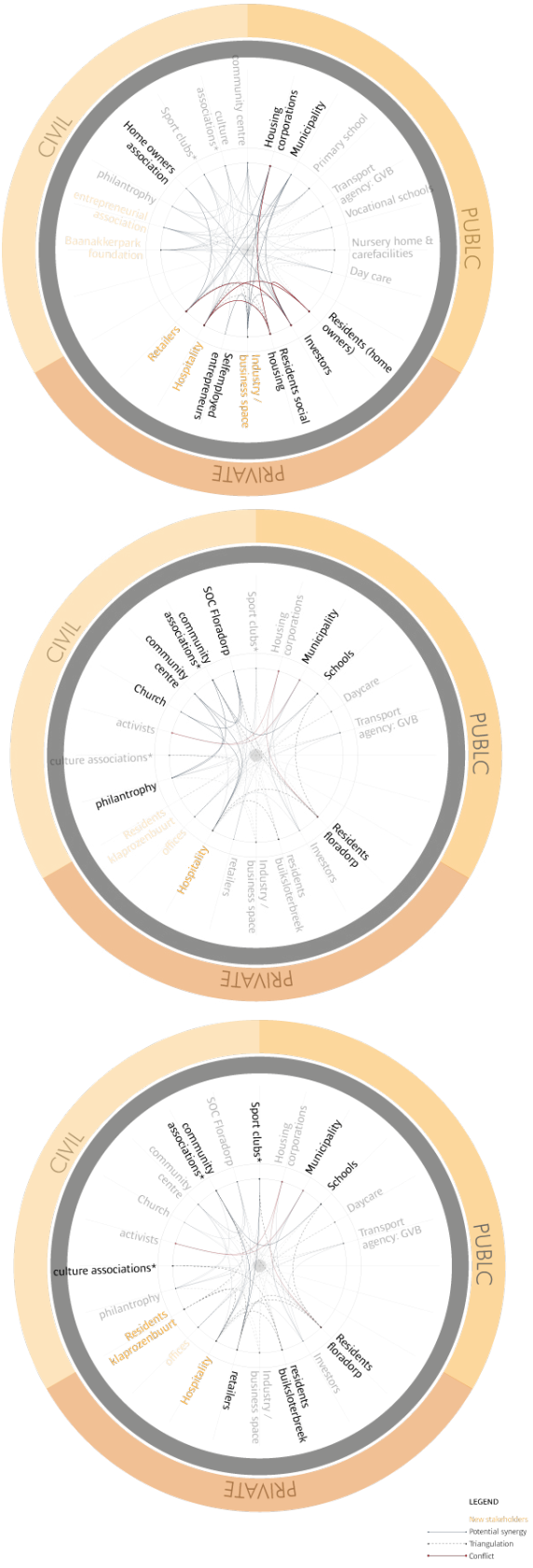
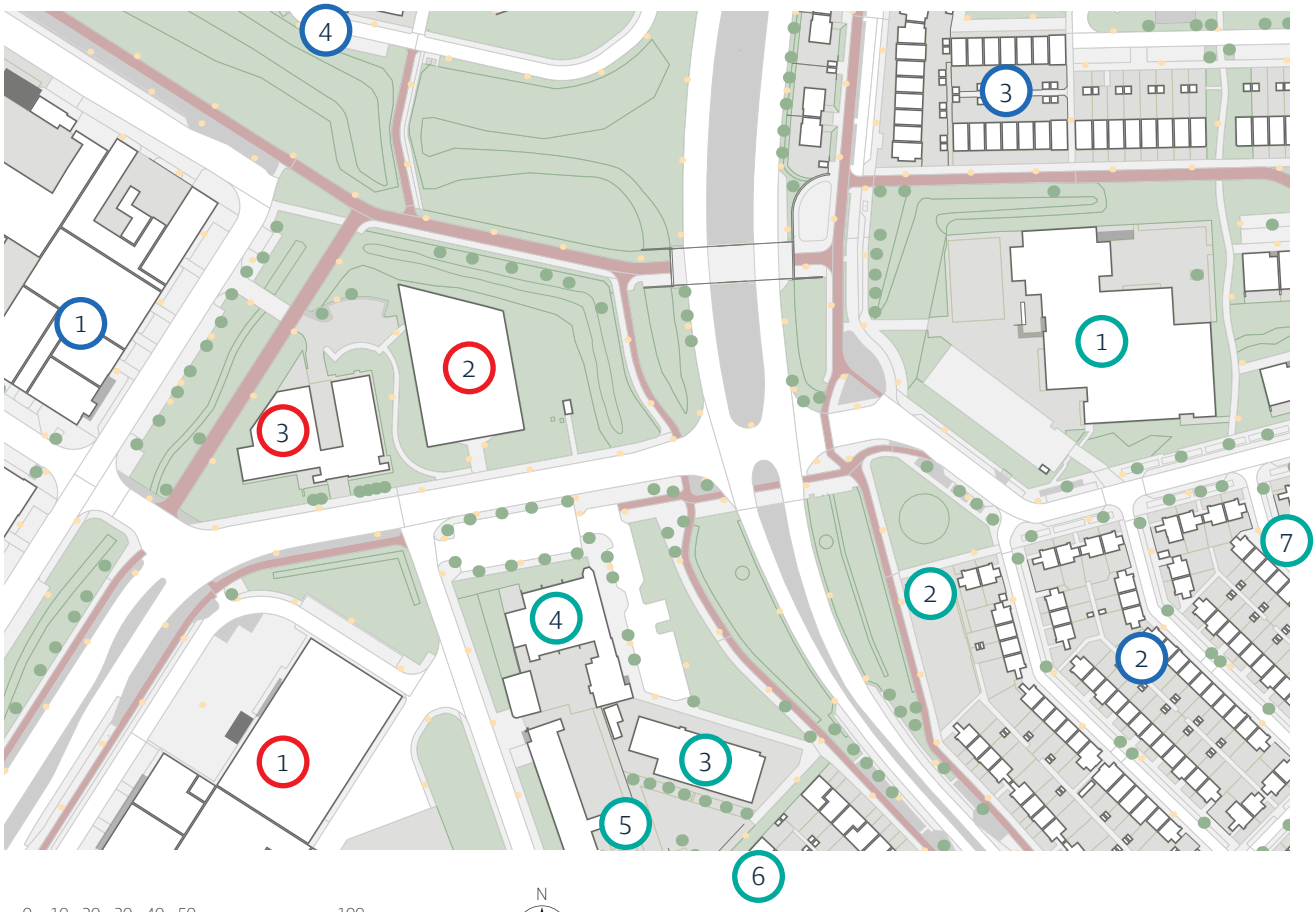


Figure 138: a-c: Operating relationships to aid the development process



SOCIETAL

1. School: over Y college (mavo / havo)
2. Youth work: kluzzfabriek
3. Community centre: antoniushuis
4. Church: Augustinuskerk
5. Daycare: moppetoet with playground.
6. School gardens.
7. SOC floracentrum

BUSINESS

1. Handy / furniture stores: Gamma / praxis.
2. Party centre: M&M plaza
3. Office: Ymere housing corporation
4. Small entrepeneurs with home office.

LAND OWNERS

1. Industry park: many different owners
2. Bloemenbuurt: almost everything is corporation owned (Ymere)
3. Marjoleinbuurt: 50% of the houses is owner-occupied
4. buiksloterbreek: everything owner-occupied

Residents (of surrounding neighbourhoods) that cross here.

Development process

Engage existing community spaces

The first phases are about engaging the community in the redevelopment to generate traction and opportunities for investment. Then the development of the larger blocks takes place. This requires the transfer of public functions to the new buildings. During the development of the klaprozenbuurt, the new urban activities stimulate social mixing, meaning that phase 4 happens simultaneously with the development of the entire industrial area.



Upgrade existing public spaces and combine with social initiatives (kluzzfabriek, over Y college, relocate soc floracentrum, church and community centre).

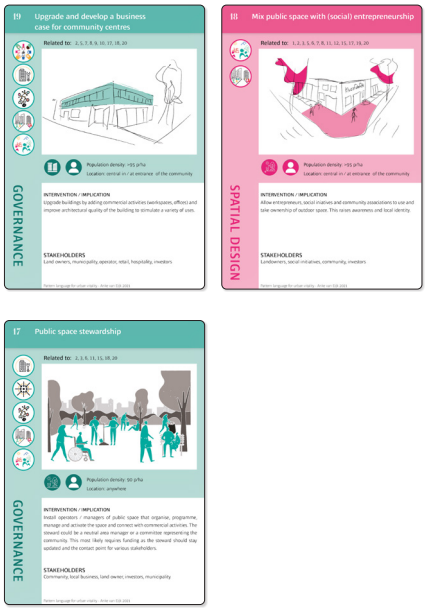


Figure 139: Process phasing

Connect community spaces

Develop new urban spaces

Develop public programme



Refurbish the current pedestrian network to be more attractve



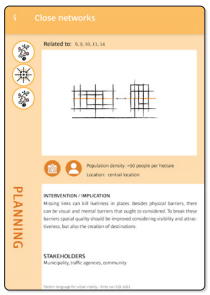
Develop new commercial buildings.

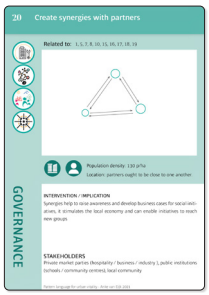
Refurbish public spaces using tactical urbanism to form a cohesive materialisation to fit the needs of the population

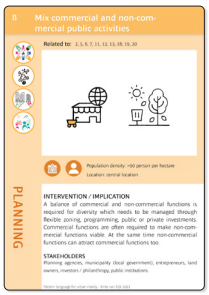


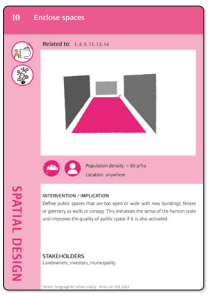
The public functions that require a larger population will be developed lastly.

The tactical urbanism experiments will be finalized as well.





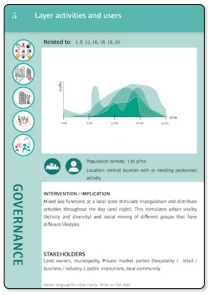


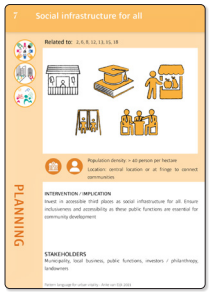












Use of space

The redevelopment of this area brings many new urban activities. The various specific public spaces cluster activities and like-minded people. The network connects these and creates awareness of others. New people and the mix of functions (commercial and non-commercial) urbanizes the area. The personas suggest how people may benefit from this development.

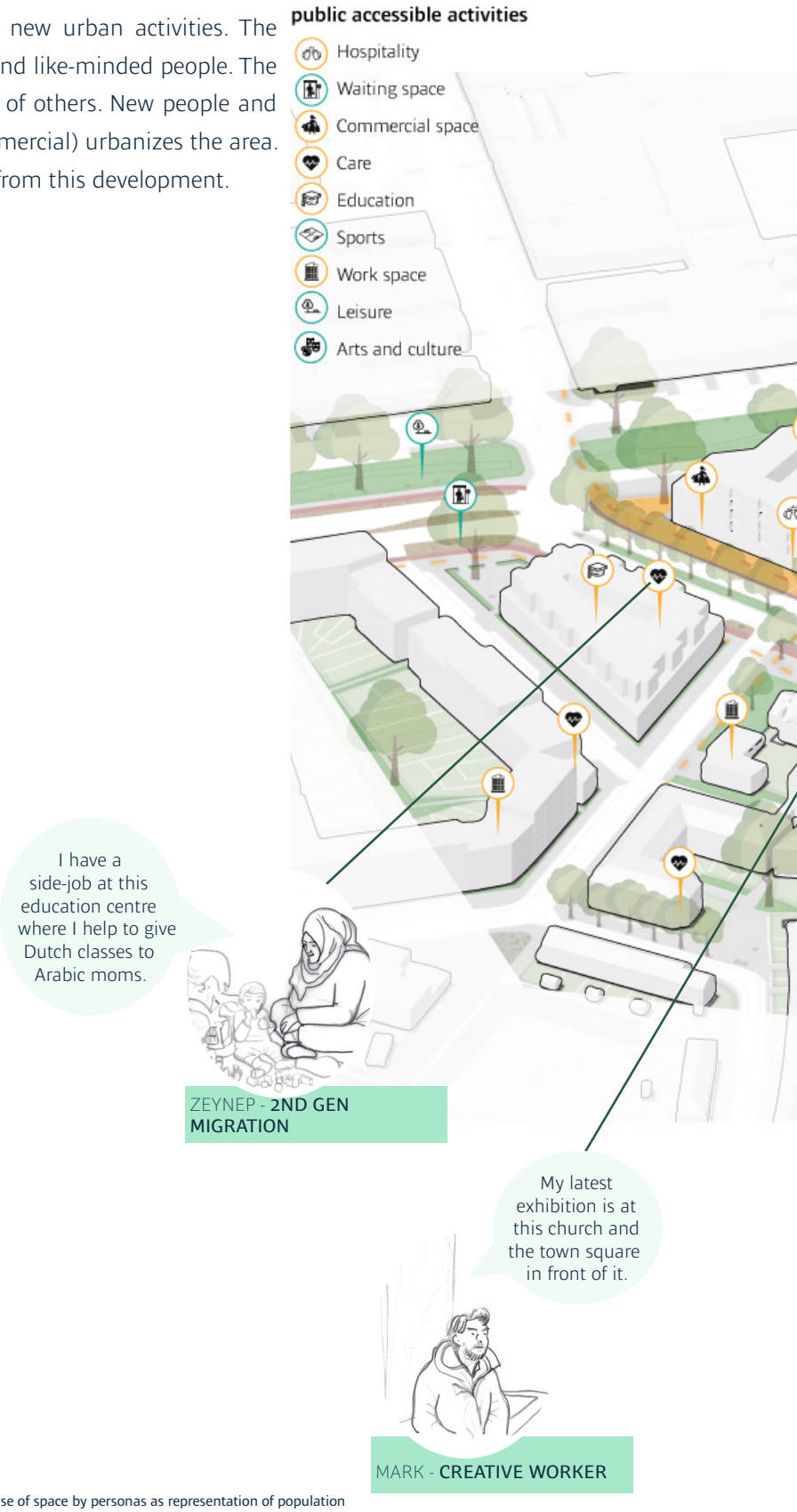


Figure 140: Use of space by personas as representation of population



My friends meet here when we make bike tours because it connects to the larger bike network and we can close of with a beer



DAVE - **OUDE NOORDERLING 3RD GENERATION**

This is an amazing place to chill on in-between hours from school.



ADAM- **'YOUNGSTER'**

The kids love the theatre classes and it's so practical next to school



KARIN - **SINGLE MOM**

The new office I work at is much more lively and central.



ERIK - **'SILENT MAJORITY?'**

When it's raining I like to take the bus to school which stops in front of my new studio



THOMAS - **STUDENT**

Once in a while we eat out on the new town square. I think it is a bit basic but the kids adore it



SOPHIA - **BAKFIETSMOEDER**

What I like about the community garden is that it's a meeting place where you can harvest free vegetables



RIET - **OUDE NOORDERLING**

Design evaluation

This design is the most drastic. As the adjacent neighbourhood will be more urban, it requires a transition to embed it. This proposal forms that gradual transition. Defining public spaces and allocating functions along the public space creates an interactive and lively public realm. This design is less outspoken about how it provides a housing mix to attract diverse households but is straightforward about how different public spaces target other population groups. In defining the public spaces, much programme is added. The human scale is safeguarded by providing compact public spaces and granular materialisation on larger blocks (as depicted in figure 141). The added commercial space provides gathering spaces and amenities which can be mutually beneficial for non-commercial activities in the neighbourhoods (bloemenbuurt especially).





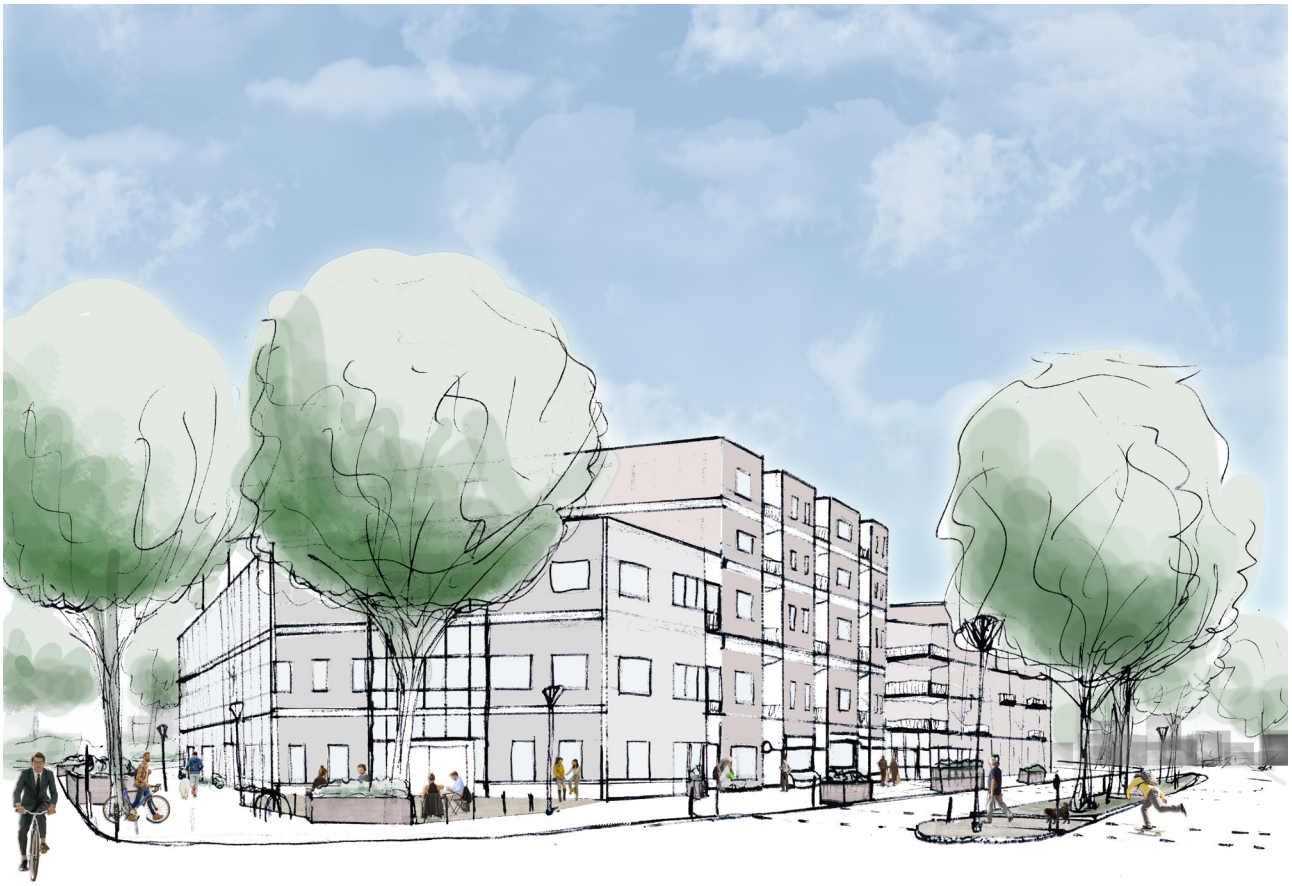


Figure 141: Traffic artery



Figure 142: Public square



CH7: Conclusion



- Conclusion & Discussion
- Reflection

Conclusion

This thesis explored how the concept of urban vitality can be used to stimulate urban life in Amsterdam-Noord. The main research question that guided this exploration was: How can urban vitality be enhanced and maintained to facilitate urban life in Amsterdam-Noord? Urban life and urban vitality are needed to reverse the harmful effects of isolation, neglect and poverty and bridge the gap between old and new.

Through literature review, guiding principles for urban vitality were defined: diversity, the concentration of people, human scale, adaptability, accessibility and centrality, the network of attractive public spaces, urban life and liveability **(subquestion 1: on conditions and dynamics for urban vitality)**. These principles directed the analysis of Amsterdam Noord. This analysis identified that demographic borders align with spatial barriers and limit interaction beyond the own community. Due to low density and separation of functions, public life clusters only in limited areas. Central streets connect neighbourhoods but have no destinations to connect people **(subquestion 2: on those conditions and dynamics in Noord).**

Local site analysis revealed an abundance of unsafe green space hindering pedestrian use, too few gathering places for informal public life and over-dimensioned traffic spaces. At the same time, there is literally much space to improve urban vitality. This is envisioned in a structural vision and vision collage for the use of public space. Central streets and open green spaces provide opportunities for more community functions. The borders between demographically different neighbourhoods can be used to strategically locate commercial activities that increase social mixing **(subquestion 3: on which sites can be used in the design).** A lack of informal gathering places, workplaces, public functions, support and fulfilment for low-SES groups, and a need for integration can stimulate public space use and maintenance by developing business cases for social entrepreneurs, tactical urbanism and community bonding **(subquestion 4: on local needs).**

The frame of reference indicates that for urban configurations to stimulate the use of public space, they need to be compact, heterogeneous, and include various public functions. There ought to be space, activities and active plinths for pedestrians to linger. Strategies need to incorporate these functions and processes that enable active plinths, social entrepreneurship and flexibility **(subquestion 5: on the frame of reference).**

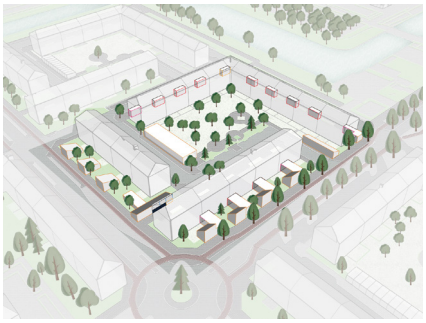
The selected intervention sites are links in a network, but this network is not pedestrian-friendly or urban enough. The urban configuration should include destinations and quality public space **(subquestion 6: on required structural interventions)**. Urban design should focus on enclosing space, creating eyes on the street and improving visibility, placing furniture in public space and other elements to activate it **(subquestion 7: on the role of urban design)**. Urban vitality reflects the community and ought to be maintained by inclusive and empowered communities, which can be achieved by programming for community bonding and social entrepreneurship. The pattern language provides tools to engage the community and stakeholders in the development process.

The three design explorations have different approaches for increasing urban vitality. Beemsterstraat I strives to

fit in the existing urban fabric and activate the nodes to stimulate urban life. Beemsterstraat II uses additions to make a residential neighbourhood more active. Finally, the kampferfoelieweg is more drastic as it incorporates many new buildings to patch up and define left-over space and forms a dynamic link between many neighbourhoods. Although these three approaches vary on the implementation, the intention is similar: to provide meeting places and link communities through public life and awareness of others at strategic locations in a regional network. Operating stakeholder relations, continuous adaptation and maintenance of the built environment, engaging and empowering the local community is crucial to preserve urban vitality. These designs are a synthesis of the research and an answer to the main research question.








Discussion

Certain limitations influence this project. Firstly, Amsterdam-Noord was a large city part as a starting point for this thesis. Therefore, the step towards local analysis and design can seem slightly random. Honestly, other sites with similar circumstances could have been used just as good. The development of the pattern language and the layout for the site analysis enables this easily. Second, the role of the urban designer or planner is limited, especially in existing places where properties have many different owners and so many actors are involved. City making is a social process that involves many actors far more influential than a designer, even more so when the ambition is a social phenomenon like urban vitality.

The built environment outlasts many human ideologies on space as we have seen with modernist legacy, societies and culture changes. Sixty years ago, cities were overcrowded nasty places, and everyone tried to move to the suburbs. Until 2020 the opposite was true, and the city was popular. When I started this thesis the impact of COVID-19 was expected to be limited. However, after a year of lock-down, the population started shrinking already. The question remains what will happen after the lockdowns, especially regarding the international attraction of the city. Also, would it be bad if international migrants stay away? Maybe the middle class can return, but what happens with all the plans already made? These are my speculations but illustrate possible uncertainties that require adaptability. At the same time, the problems in Noord do not go away with the COVID-crisis. It may even highlight the importance of public life for people's mental health: the need to escape the home and work.

The pattern language is in part based on the reference cases but also by the observations on site. However, the same issues can be found in many anti-urban neighbourhoods, where they still apply.

Reflection

URBAN VITALITY AS A SCIENTIFIC UMBRELLA

The central theme in the project is urban vitality: there is a limited body of knowledge that directly refers to this concept. Those that use the term (including me) refer to influential authors of urban design and planning. Vitality refers to being healthy and alive; it is an abstract term for cities as the built environment itself is exanimate. However, the city ebbs and flows with people, information, objects, resources, events and interactions. As such, I define urban vitality as the capacity to generate and balance these ebbs and flows that makes cities alive.

As cities are built as homes for and by people, urban vitality directly relates to people. Therefore, people are at the core of this thesis. Although the built environment influences how people interact with each, this influence is limited. It goes beyond the architecture of a building or the design of a street. It is the complexity of the system that stimulates closeness, awareness and interaction with other people. Therefore, the complexity of urban vitality is much more than just the built environment. It touches upon socio-economic processes studied in social sciences and geography, but nevertheless relevant for this thesis. It is shaped by the historical development of places and societies and how they are confronted with 'others'. I argue with this thesis that this confrontation is shaped by urban design and planning and is essential for an open society. The interactions and exchanges between people distinguish urban from rural, by providing space and activities where this can happen, places become more urban and vital.

This thesis approaches urban vitality by the analysis of two dimensions: spatial configurations and socio-economic processes using methods such as space syntax analysis and spatial analysis, the demographic analysis and the development of personas for the socio-economic processes involved. But when zooming in more detail, this distinction starts to blur, for example during the field work I observed how public spaces were used, by whom and for what purpose. That influenced me to adapt the personas. This alternation of methods allowed and stimulated me to iterate the findings constantly. Urban vitality as a theme is like an umbrella that collects multiple theories from different fields (lively cities, activities, third places, social cohesion, diversity, inclusiveness, centrality). The derived principles from theory (figure 1) shaped the silver lining of the narrative regarding urban vitality.

SPATIAL DESIGN OF URBAN VITALITY

Urban vitality for me starts with the physical environment, but goes beyond beauty. Places must be functional and useable within their local context. A beautiful empty square is not what makes a place, it is the people and their liveliness that fills it. This thesis researches what attracts people to areas and how the strategic locations can be designed and organised to be attractive. Different phenomena, design scales and strategies play roles for that.

I intended to use key public spaces derived from the large-scale spatial analysis for further analysis and design experiments. The large-scale city network impacts the use of public space, and therefore the relation between those are essential. The chosen sites for the atlas and further investigation are representative of Amsterdam-Noord's problems, but there are more fringe spaces that could be interesting for this project. I selected these mainly for the overlap of issues that made these locations remarkable.

SOCIO-ECONOMIC PROCESSES OF URBAN VITALITY

the socio-economic processes relate to social aspects of city life. It considers how to design for people and interaction between different groups, which relates to the social pillar of sustainability. The social pillar of sustainability is the least developed and ambiguous of the three; the ecological and economic pillars overshadow the social pillar(Partridge, 2014). When the social pillar is included in the global context, it is often done when looking at poverty and climate problems in undeveloped countries. In the developed world, it relates to injustice, equity, quality of life. There is little consensus on how to define social sustainability. Literature covers the previously mentioned themes as crucial and access to services, equity between generations, cultural justice, and political participation. The societal value of urban vitality and this project is how urban vitality can induce these themes. Amsterdam is known as a tolerant, diverse and inclusive city. However, the current developments in the housing market and society endanger these qualities. It causes the city to lose its diversity and middle class, like many global cities. The rich social housing tradition protects many people but makes differences more significant. Public space can level these differences if people feel welcome and communities are shaped. Community forming entails events, activities and governance. The best way to do that is to empower people in the city-making process and have places where they can take charge and interact.

The developments in Amsterdam-Noord are controversial and politically loaded. Many organisations like Verdedig Noord, vrienden van het vliegenbos, made up North; have concerns regarding new plans that could impact the industry, open space, communities and greenery. For me this, and covid-19 were ways that interviews could increase the bias; not being able to speak freely or have a representative sample. Furthermore, there is a sentiment under the original inhabitants of Amsterdam-Noord that, due to gentrification, they are and will be excluded from new developments (van de Kamp & Welschen, 2019).

They may consider studies and changes as threatening for their living environment. Their fears are reasonable: when their neighbourhood gets renewed and property values increase, they will not benefit as they are not property owners. In hindsight, I preferred to have gained better knowledge beyond my observations on which spaces are used more, and to have spoken with more locals that are currently underrepresented to some extent. These considerations are valuable for stakeholder analysis and governance.

TRANSFERABILITY

The methods used in this thesis are not uncommon and can be used by most urban designers. However, connecting social elements and spatial elements under urban vitality can be a valuable way to deal with social sustainability and community building, to grasp the intangible of an open society in space. Therefore, this thesis proposes to start designing considering life first, then space and finally the buildings that host the necessary functions for urbanity, just as Jan Gehl suggests in the quote on the opening page. The site selection should empower like acupuncture, connect to networks and be placed on demographic and spatial boundaries.



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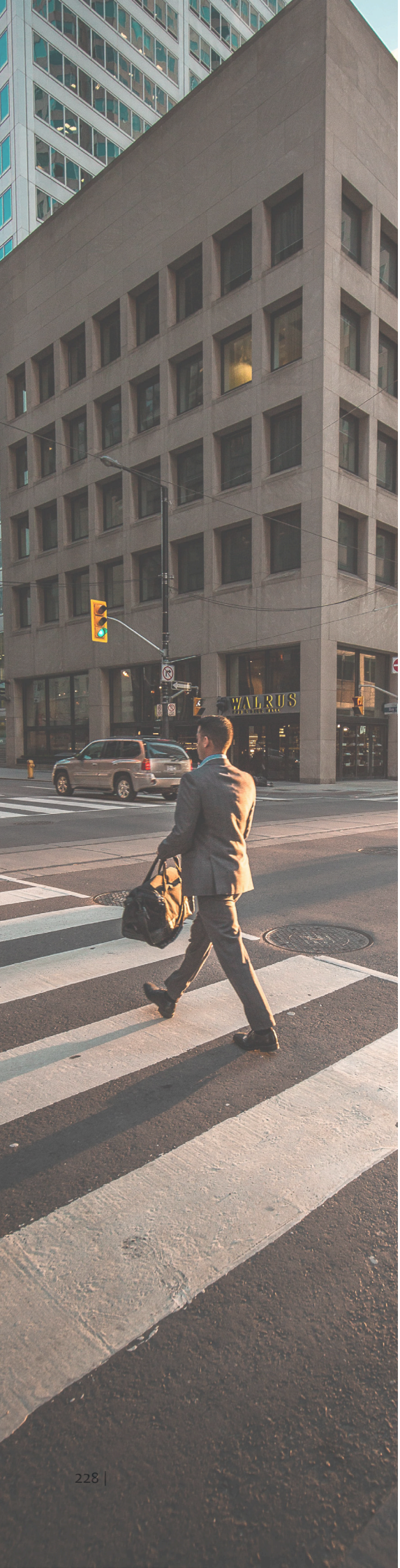


Appendix

Literature review

HOW URBAN VITALITY BRIGHTENS CITY LIFE

Untangling the socio-spatial dimension of what attracts people to cities.

Anke Van Eijk | 4443063 | 25-11-2020

AR3U023 Theories of Urbanism | literature paper

Abstract

Urban vitality is one of the many reasons why people are attracted by cities. Some even call it the raw power of cities. but what is it and how can it be spatialized? There are various studies that try to capture the essence of urban vitality and related phenomena. However, vitality is a complex phenomenon that interweaves with liveability, pedestrian activity, public life, place-making, community building, diversity, density, safety, and social cohesion. Therefore, it is a challenge to truly define it. Urban vitality provides a quality of life that attracts people to urban environments. On the contrary, dullness leads to many social problems that take place in, and even increase the lack of urban vitality in public spaces.

In this paper, I try to gain a deeper understanding of urban vitality, it's origin, it's influences on the liveability of places and most importantly its spatial conditions. By doing this I hope to find the tools to discover where urban vitality is missing and needed. As mentioned, urban vitality has been a research topic of many disciplines: urban geography, economy, sociology, design, and planning. Therefore, the starting point of this paper is to align and compare some of those views. By doing so, I hope to bring forth a perspective on how urban vitality relates to and influences the quality of life. Just as, a lack of urban vitality causes problems that reduce the quality of life in places. Furthermore, I hope to discover some tools of establishing spatial patterns and trends of urban vitality, through the review of case-studies into the subject.

Keywords: Urban vitality, public space, urban design, liveability

Introduction

In urban transformations designers often talk of revitalising. What exactly is meant by vitality in the context of urban design, or urban vitality as it is called in this paper? Merriam-Webster (n.d.) defines vitality as: "lively and animated character; power of enduring; the peculiarity distinguishing the living from the non-living; capacity to live and develop; physical or mental vigor especially when highly developed".

The word urban refers to the city or in this case an urban place. Urban vitality can be considered on many different scales but can best be experienced at the eye level in streets and public spaces. Vitality can be considered as the liveliness of places or the capacity to adapt to changing needs and situations. To understand the liveliness of urban places we need to look at the living users of the built environment and their changing needs, as the built environment itself is not alive . Urbanity is a quality that allows activities to take place unintended by the design??? (Tonkiss, 2013, p. 56)

At this moment there is not one main adapted definition of urban vitality. It may be that there is a better term to describe the phenomenon but in my humble opinion urban vitality is the best definition: urban defines the context of the living thing: here being the city. Sadly, Vitality is often considered as the intensity of people using a space, like pedestrian intensity (Liu et al., 2019; Montgomery, 1998; Yue & Zhu, 2019). This introduces negative connotations such as overcrowding. This may be the case for several locations. However, extensive studies (Gehl, 2010; Jacobs, 1961; Whyte, 1980) have shown that people are attracted by other people, the capacity of places is self-regulating and that the liveliness of places is what makes them attractive. Therefore, urban vitality is much more than the intensity of people it is also the capacity of places to develop, endure and adapt.

In the first section different authors that have written about vitality will be discussed. Some have mentioned urban vitality specifically and have tried to translate it to design guidelines (Gehl, 2010; Jacobs, 1961; Montgomery, 1998), others may have implicitly written about it or have written something I find relevant. The urban design reader (Carmona & Tiesdell, 2007) refers to many of these authors in regard of the social dimension (Gehl, 2010; Jacobs, 1961; Oldenburg, 1989). This will be summarized in a final definition and necessary conditions to sustain urban vitality.

The second section will explore how urban vitality influences liveability of cities. This section will state the relevance to design for urban vitality as it relates to social sustainability and liveability or the social (Carmona & Tiesdell, 2007, p. 141). The arguments provided reinforce the need for urban vitality.

The third and final section explores different approaches and methods to asses urban vitality. This section ought to help in making urban vitality more tangible and connect to the physical environment. So that it can be analysed or designed for. This section will end with a collection of guiding principles to achieve urban vitality.

Review of authors

JANE JACOBS – CITY VITALITY

The most influential author on urban vitality is Jane Jacobs (Carmona & Tiesdell, 2007). In 'The Death and Life of Great American Cities' (1961) she observed city life that has rich vitality and argued what was wrong with modern city planning - at the time. She describes the elements, processes and conditions that makes a city alive. At the heart of her argument is the importance of street life for vitality and what produces street life is "an intricate and close grained density of uses that give each other constant mutual support, both economically and socially." (Jacobs, 1961, p. 14). As critical that she is of modern planning she believes that through planning vitality can be achieved.

According to her, sidewalks are the stage for vitality and where it is most easily recognised. Sidewalks matter because of safety, contact and children, but they have been neglected as public space. Active streets with good sidewalks weave webs of social control through "eyes on the streets"; as many people intuitively know that well-used streets are safe streets. Furthermore, well-used and active streets provide a public and neutral place to meet both strangers and friends without intruding in private space.

City areas need diversity to sustain urban vitality. the mixture of uses will strengthen all the uses because of employment opportunities, rich catchment areas, local interchange, and creative innovation. This is what can make a city sustainable and is why urbanisation is happening at a global scale. She gives four generators of diversity: First, diversity of primary uses will ensure that the people go outside and have different schedules and different purposes and lifestyles. Secondly, she advocates the use of small blocks as long blocks are self-isolating. Small blocks will give users more options when travelling through and enriches the experience. Thirdly, she proposes the need for buildings with different ages, sizes, and conditions. This would enable a variety of uses and economic yields (real estate values). Older buildings are generally cheaper to rent for small business owners and new buildings bring wealthier and spending neighbours. Lastly, to promote vital city life there ought to be a concentration of people or so-called critical mass to sustain the variety of uses and needs.

The second half of her book focusses on the processes that induce and destruct diversity and vitality. the vital city is always evolving and the processes that destruct vitality can later be used to bring it back. Vitality is the continuous process of seeking balance between diversity and uniformity, between attraction and repellence .

JAN GEHL – CITIES FOR PEOPLE

Another significant author on urban vitality is Jan Gehl (Carmona & Tiesdell, 2007, p. 141; Gehl, 2010). His work is based on years of professional observations and has been very influential in the city where he works as an urban designer: Copenhagen. As a result, the city is very liveable. According to Carmona & Tiesdell (Carmona & Tiesdell, 2007, p. 141) he illustrates how the environmental quality of public spaces affect the intensity of use. He introduces the concept of the lively city (Gehl, 2010, pp. 62–89) starting by illustrating full versus empty theatres: intuitively people know that something is wrong in the case of an empty theatre. The same counts for urban places. Gehl (2010, pp. 67, 69) mentions several key principles to stimulate city life:

- Compact, direct, and logical routes establishing acceptable walking and biking distances
- Modest space dimensions and compact city structures;
- A clear hierarchy of important spaces;
- Reasonable population density or minimum critical mass;
- Density (quantity) must be combined with quality city space.

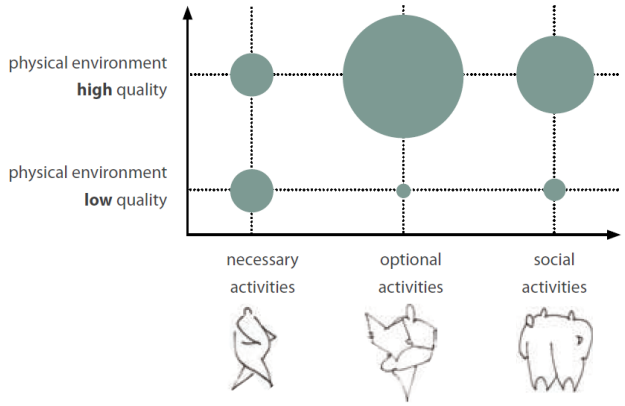


Figure 143: Representation of connection between physical environment and types of outdoor activities (source: Jan Gehl, 2010)

Gehl sets out how the city is a meeting place and how walkable environments enhances the use of public space for social and recreational activities, this illustrated by Figure 1 (Gehl, 2010, pp. 19–29). These types of activities are an expression of urban vitality. Necessary activities happen no matter what, but good physical environments make them more enjoyable. These activities include: going to work or school, doing errands etc. Under good conditions optional activities can take place outdoors: taking a stroll, enjoying the sun, children playing. Weather conditions play a role, but more important is the quality of the space: the space should provide security, reasonable space, protection, furniture, and visual quality. Social activities are those where people interact in public space. Like Whyte (1980) and Jacobs (1961), Gehl gives special attention to the activity of people watching. People turn to others for information and entertainment, social control is exerted through people watching (and judging). Social activities in public space range from passive people watching and spontaneous conversations to planned events or even demonstrations. The importance of these activities for society will be discussed in the second section of this paper. Good urban environments facilitate and stimulate these activities that contribute to public life.

RAY OLDENBURG – THIRD PLACES

Where Gehl focuses on outdoor activities as a sign of public life, Oldenburg (1989) looks at public functions that support informal public life and attract many people. He calls them third places, where the first place is the home and the second is the working place. The third place is the core stage for informal public life and signifies many public places that host gatherings beyond the home and work (Oldenburg, 1989, p. 41). examples are: community centres, coffee shops, cafes, bars, pubs, restaurants, stores, malls, markets, hair salons, barbers, beauty shops, pools, movie theatres, churches, schools, colleges, clubs, libraries, parks, playgrounds, and other outdoor recreational places. They are at the heart of inclusive communities and because they attract many people. Therefore, they are very important for urban vitality. Listed below are the quality characteristics that distinguish third places (Oldenburg, 1989, pp. 45–62):

- Neutral ground: Occupants of third places are not obliged to be there and they do not invade the private space of the people they meet.
- Leveller: In third places someone's socio-economic status does not matter much.
- Conversation as main activity: it may not be the only activity but it is essential to consider it as a third place.
- Accessibility and accommodation: They are nearby and open throughout the day to fulfil social and relaxation needs.
- The regulars: Third places serve community when regulars return and relationships are formed. These range from familiarity to intimate friendships. Furthermore, they are the entry point for newcomers.
- Low profile: this is what makes third places inclusive. Only good third places are modest and accept all types of individuals, from various classes, ages, and genders. Modesty is what lets users relax because people do not need to pretend.
- The mood is playful: so that people relax and socialize, only then do people come back.
- A home away from home: Despite the publicness third places provide psychological comfort and social regeneration like a home. People feel possessive and care for third places.

JOHN MONTGOMERY – SENSE OF PLACE AND VITALITY

The design of good places results in city life or urban vitality. Montgomery (1998) has reviewed several theories and conducted a model of urban design for good places. The model brings forth 3 main concepts that shape good urban places which can be seen in Figure 2. Urban vitality is considered part of this tripod in activities that provide good urban places through the physical design for urban vitality and good image.

Urban vitality

Vitality is the result of diversity and activities on a local scale and it is what elevates good places from the rest. Lively places cannot be taken for granted, it can be stimulated through programming, and the combination and interaction of primary uses. Montgomery (1998) refers to Jane Jacobs work (Jacobs, 1961).

Image:

Part of what makes great places is the mental image of these places: people knowing them and using them. The image of a place is based on one's experience, feelings, and perceptions of the place. From the strongest images people make their mental maps of cities and are more likely to return if the image is good. For this section Montgomery (Montgomery, 1998) refers to Kevin Lynch's work (1960): the image of the city. Lynch defines elements that contribute to such mental maps: paths, edges, districts, nodes, and landmarks. These are used to navigate through the city and shape the understanding of the city. Over time successful places give users a sense of belonging or ownership. Places like this are more likely to be respected and cared for.

Physical form:

The last question that Montgomery asks is whether the city form can be designed to stimulate activity and positive image, resulting in a strong sense of place? He gives 12 conditions necessary for making a city but states that a living city it should be able and allowed to develop and grow (Montgomery, 1998). In short, the conditions are:

- Development intensity;
- Mixed use;
- Fine grain;
- Adaptability;
- Human scale;
- City blocks and permeability;
- Streets: contact, visibility, and horizontal grain;
- Public realm;
- Movement;
- Green space and water space;
- Landmarks, visual stimulation & attention to detail;
- Architectural style as image.

DEFINING URBAN VITALITY

To conclude, urban vitality is the liveliness of urban places. Places with a lot of urban vitality are inclusive, attractive, diverse, modest, accessible, safe and have an active public and community life. They can regenerate and adapt to new circumstances without huge investments. Perhaps urban vitality is the sense of place that allows it to be successful and attract people. urban vitality is a result of a continuous process to restore diversity and public life, it is a matter of balance between vibrancy and tranquillity (Carmona & Tiesdell, 2007, p. 38; Gehl, 2010, p. 89).

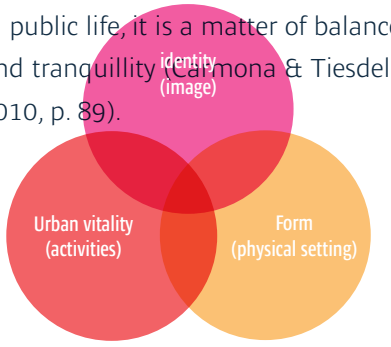


Figure 144: Holistic approach for good urban places (adapted from: Montgomery , 1998)

Urban vitality regarding liveability

In a way urban vitality can be considered as the liveability in cities when looking at the dictionary definition of vitality. Which is the liveliness of urban places. However, as explained before, urban vitality is wrongly considered as the crowding of places.

Liveability is the degree to which a place is suitable for living in and is the sum of several factors like the physical environment, safety, economic prosperity, educational opportunity, social stability and equity, inclusiveness, environmentally sustainable, cultural and recreation possibilities (Higgs et al., 2019; Partners for Livable Communities, n.d.). Urban vitality contributes to the social domain of the built environment and relates to liveability in several ways.

INCLUSIVE COMMUNITIES

Firstly, it helps community-building through active public life in all parts or the public realm: in outdoor spaces and public functions that are known as third places. Oldenburg explains how third places are vital for community life, physical wellbeing and social regeneration (Oldenburg, 1989). He even relates the lack of third places and the informal public life they provide as cause for stress-related problems; modern urban life is stress-inducing but the necessary urban places to relax are either forgotten or exclusive consumption goods (Oldenburg, 1989, pp. 36–37). Moreover the levelling and gathering functions of third places and the active public realm in general help to reinforce democracy and inclusiveness (Gehl, 2010, p. 29). However, besides the availability of space there needs to be a diversity of functions, users, and cross-uses to achieve that. Hereby reflecting the diversity in society: different lifestyles, classes, incomes, ages, intelligences and needs.

Oldenburg and Montgomery both mention the image, sense of identity and place that can be stimulated by both attractive physical environments and third places. These feelings may result in a sense of belonging and ownership to the place and vice versa. This means also that people are more likely to respect and look after the place, it roots people to the community (Montgomery, 1998; Oldenburg, 1989). Bolt et al. (Bolt et al., 2011) mention three aspects of social cohesion that links to the neighbourhood: social contacts in the neighbourhood community, the sense of belonging to a place and similar values and norms within the community. The above-mentioned things correspond with these three aspects of social cohesion.

The diversity of uses need a critical mass of population to be continued (Gehl, 2010; Jacobs, 1961). Only if this critical mass is available, cities can provide enough economic, cultural, and educational opportunities. The same counts for public transport which can be used more in compact and dense places. The private car has improved the action radius for many people but it has congested public space and polluted the environment. This makes the compact city model – that by concentrating people and functions contribute to urban vitality - the only desirable model for liveability (Gehl, 2010, pp. IX, 25–28, 55).

HEALTH

Furthermore, the dense and vital places with a variety of uses stimulate the use of sidewalks and walkability. Walking is healthy and everyone who walks contributes to public life, is more likely to shop or have a social interaction. Well-used sidewalks and other public spaces are considered more safe (Gehl, 2010; Jacobs, 1961). These things taken together active public spaces contribute to urban vitality and the wellbeing of the users regarding safety, social interaction, and health. This is also in line with changing demographic trends globally: the shrinking household sizes and privatisation increase the need for social contacts outside the home. This increases the need for an attractive public realm (Gehl, 2010, p. 28).

Spatial distrubution of urban vitality

Urban vitality is rather intangible. This section explores methods / principles to make it more tangible; many of these are qualitative and require more effort. From the reviewed literature guiding principles shall be deduced. Moreover there have been several case studies using specific methods to find urban vitality in real places (Delclòs-Alió et al., 2019; Jalaladdini & Oktay, 2012; Liu et al., 2019; Yue & Zhu, 2019).

CASE STUDIES METHODS

The first project that will be considered is the case-study by Jalaladdini and Oktay (2012): Urban Public Spaces and Vitality: A Socio-Spatial Analysis in the Streets of Cypriot Towns. They consider vitality as the success indicator of public spaces. Their analysis focuses on social attributes (being: user types, social groups, variety of activities, active times, interactions and safety), physical attributes (such as: physical forms, amenity of the street space) and variety of the functions within the street (Jalaladdini & Oktay, 2012). By observing and comparing 2 streets they look at the social value of these streets.

The second paper that will be considered is the case-study by Liu, Zhang and Long (2019): Urban vitality area identification and pattern analysis from the perspective of time and space fusion. They consider urban vitality as the concentration of people in space over time. They use big-data (one week of mobile phone data) of the city-region of Nanjing. A self-organizing map model is used to recognise statistical patterns. They analysed these patterns with the land use through Points-of-interest density to look for correlations with urban vitality. this study establishes correlation between diversity of uses (points-of-interest density) and urban vitality

The third paper that will be considered is the case-study by Yue and Zhu (2019): Exploring the Relationship between Urban Vitality and Street Centrality Based on Social Network Review Data in Wuhan, China. This quantitative study measures urban vitality through social network review data of food facilities (big data) and compares it with street centrality (closeness, straightness and betweenness in walking and driving mode) in the city of Wuhan. They created a fine square mesh to convert both datasets into one unit for analysis. They found that for walking mode betweenness affected urban vitality the most, for driving mode this was straightness.

The final paper that will be considered is the case-study by Delclòs-Alió, Gutièrrez, Miralles-Guasch (2019): The urban vitality conditions of Jane Jacobs in Barcelona: Residential and smartphone-based tracking measurements of the built environment in a Mediterranean metropolis. They analysed Jacobs (1961) ideas of urban vitality in the Barcelona Metropolitan Region at two different spatial scopes: the participants neighbourhood residential buffer and their daily walking (which was tracked through a mobile phone app). The data was spatially related to the conditions Jacobs (1961) that were required for urban vitality (concentration, diversity, contact opportunity, building age and 2 accessory conditions: accessibility and border vacuums). Different urban morphologies resulted in different degrees of urban vitality in the context of the Barcelona Metropolitan region.

GUIDING PRINCIPLES

The table on the next page shows the essential conditions that are required for urban vitality and the indicators that point to vital places or which can be used as principles in design and planning.

ESSENTIAL CONDITIONS

Diversity of uses:

As mentioned by many (Delclòs-Alió et al., 2019; Gehl, 2010; Jacobs, 1961; Liu et al., 2019; Montgomery, 1998). Ranging from primary uses (work, errands, shops, work and third places) to secondary and more selective uses.

Concentration of people:

To sustain the diversity of uses there needs to be a minimum number of people throughout the day: residents, visitors and workforce combined. Jacobs (1961, p. 211) proposes a minimum of 100 dwellings per net acre (250 dwellings per hectare).

Human scale:

Compact urban fabric, walkability and building height to street width ratios, small blocks, open space are things to consider that make spaces more people friendly (Gehl, 2010; Montgomery, 1998).

Permeability and small blocks:

This part focuses on the block and, permeable structures, smaller blocks surrounded by streets and entrances to the inner-block, this will increase movement and accessibility.

Different building ages:

Variety of building ages to cater divers uses: small businesses / students can afford the older buildings while brand stores and families may want newer buildings. Consider both, average building construction year and standard deviation (Delclòs-Alió et al., 2019). the standard deviation indicates the spread throughout time.

Fine grain:

Include horizontal and vertical grain. Fine-grained plots contribute to diversity and adaptability within blocks. Smaller plots are more likely to attract small business because they are unable to afford big plots. Units within the block can be merged and fitted to house bigger functions to increase diversity if needed.

Accessibility:

Distance to public transport (Delclòs-Alió et al., 2019) and public amenities and whether they are within walking distance.

Centrality:

Yue and Zhu (2019) showed that central places are more likely to attract people and becoming vital. Central places are the opposite of Jacobs' (1961) border vacuums which repel vitality.

Network of active streets / public spaces:

Jacobs (1961) argues for networks of street neighbourhoods: an active street / public space catering the surrounding neighbourhood. The network connects the vital streets and shapes the district and shows what the hierarchy is (Gehl, 2010).

INDICATORS OF VITALITY:

Street life: Street life or pedestrian activity can be discovered through observations (Gehl, 2010; Gehl & Svarre, 2013; Jalaladdini & Oktay, 2012) and quantitative methods using big data (Liu et al., 2019; Yue & Zhu, 2019) or tracking (Delclòs-Alió et al., 2019; Gehl & Svarre, 2013).

Points of interest: These are places that attract people and include: primary uses, third places. Interesting places are those with local meaning or that can host events and large gatherings.

Attractive open spaces: Vitality is a balance of energy and rest therefore quality open spaces like parks are necessary. Jacobs (1961, p. 95,129) argues for parks and squares that are integrated in the network of active streets so that they are used for good instead of anti-social behaviour.

Comfort / physical environment: As Gehl (2010) points out an attractive physical correlates with optional and social activities. People are more likely to slow down and actively participate in public life.

Third places: By mapping out possible third places it is possible to see where a community can gather. Observations are necessary to see how they constitute to community and liveability (Oldenburg, 1989).

Liveability: A lack of urban vitality can lead to social problems regarding: social wellbeing, social cohesion, and inclusive communities. Socio-economic statistics can show these problems and might be related to urban vitality.

Conclusion

The dictionary definition of vitality refers to the liveability. Therefore, urban vitality can be considered as the liveability of urban places. Urban vitality is often measured through pedestrian activity, which leads to the implication that too much vitality is bad, it is considered as overcrowding. Good public spaces have the capacity to regulate the amount of people. Which brings me to an important aspect of urban vitality: it is a continuous process of places to restore and sustain diversity and public life. Like life, it is a matter of balance between crowding and rest. It is important to safeguard urban vitality; to give places the physical environment and time to undergo the process of attraction and repel. The biggest treat to urban vitality is monotony, because large scale monotony is hard to adapt.

Urban vitality plays a role in the social domain of liveability, as it implies the manner of interactions between people. Urban vitality is what attracts people to use the public realm and participate in public life. urban vitality contributes to safety of well-used public spaces; to inclusive communities and social cohesion by providing opportunities for interaction and integration with 'other' people; to social wellbeing through walkability, accessibility and increasing opportunities for social interaction. Furthermore, urban vitality requires diversity, concentration of people and functions, and thus a certain compactness. This is environmentally friendly because it can be accessible for more people and cater public transport better.

Methods to study urban vitality range from observation, tracking, mapping, and using big data from cell phones. The qualitative methods like tracking and observation enable a better understanding of the qualities required for the physical environment and who exactly is using the space on a very local scale. The quantitative methods using big data show pedestrian activities related to diversity, centrality, and configurations of the urban fabric at a large scale.

The final goal of this paper was to gain a spatial understanding of urban vitality. The conditions on the previous 2 pages are essential to stimulate urban vitality. The indicators are the signs of vitality and can be stimulated to success in case the essential conditions are met. If a certain place does not show these signs it is possible that the area is in degeneration. Not all places should be crowded and it is okay if places lack in urban vitality occasionally, if other vital places are accessible.



Atlas of public spaces

Atlas of public spaces

City-making is a continues process of experimenting that has started ages ago. Therefore, it is not required to invent everything anew, but is it possible to look at other places. The atlas of public spaces entails a comparative analysis of different places (cases) that show the signs of urban vitality: streetlife, points of interest, attractive open spaces, third places.

CASE SELECTION

The first 9 cases have been reported as liveable or good urban places, where revitalisation was successful. The exemplary cases are considered lively by a broader audience, have adapted to changing cultures, needs and uses. The selection includes green spaces, parks, streetscapes and larger redevelopments with different types of public spaces.

Second part of the atlas contains 10 sites in Amsterdam-Noord that were determined in the spatial analysis. While the global cases are initially good examples, these are not.

APPROACH

All cases have the same layout and will be evaluated by the theoretic principles as illustrated on the next page.



1) Diversity [district level / block level / soft level]
- (Cross) Use -> local economy
- People -> heterogeneous society
- Activities -> informal public life



2) Concentration of people [district level / block level]
- Density -> critical mass



3) Human scale [block level]
- Walkability -> street-life
- Permeability -> experience
- Granularity -> experience



4) Adaptability [block level / software]
- Building condition (age) -> heterogeneous society
- Diversity of uses -> triangulation / heterogeneous society



5) Accessibility & centrality [district level]
- Space syntax -> social logic of space
- Access to public functions -> street-life



6) Network of attractive public spaces [district / block level]
- Network -> social logic of space
- Physical environment -> street-life

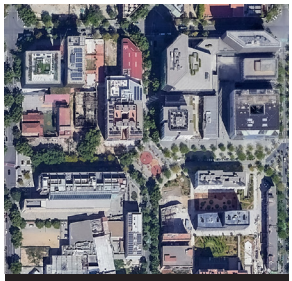


7) Urban life [block level / soft level]
- Points of interest -> informal public life
- Pedestrian activity -> street-life
- Third places -> informal public life

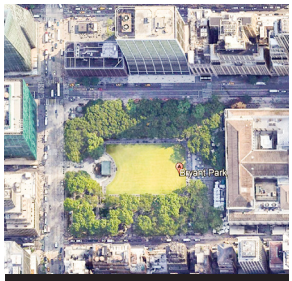
8) Liveability [soft level]
- Social capital -> informal public life
- Inclusive communities -> heterogeneous society
- Local economy -> triangulation

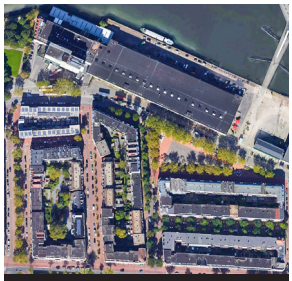
Case selection

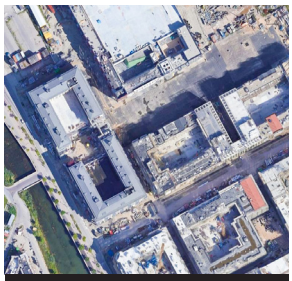
BEST PRACTICE CASES


Superblocks (Barcelona)


Copenhagen_Superkilen

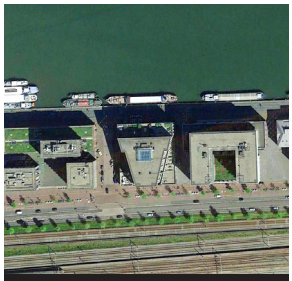

New york city_Bryant park

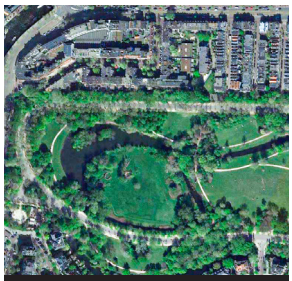

Rotterdam_Katendrecht


Utrecht_leidsche rijn


Amsterdam_Kinkerstraat


Amsterdam_Pieter calandlaan


Amsterdam_Oostelijke handselskade


Amsterdam_vondelpark


Mosveld


Overhoeks

CASES OF INTEREST

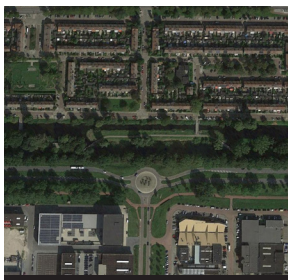

Beemsterstraat


Baanakkerpark


Noorderpark


Hamerkwartier


Kampferfoelieweg


Klaprozenweg


NDSM werf


Meeuwenlaan

City-making is a continues process of experimenting that has started ages ago. Therefore, it is not required to invent everything anew, but is it possible to look at other places. The atlas of public spaces entails a comparative analysis of different places (cases) that show the signs of urban vitality: streetlife, points of interest, attractive open spaces, third places.

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Second part of the atlas contains 10 sites in Amsterdam-Noord that were determined in the spatial analysis. While the global cases are initially good examples, these are not.

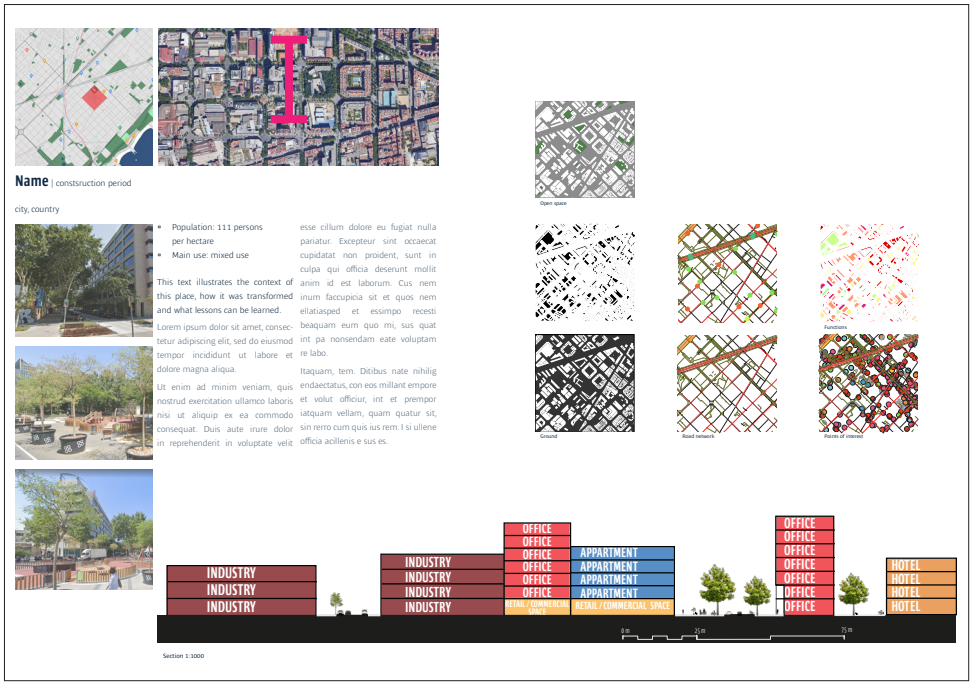
Plan analysis to consider the composition of space and buildings, traffic flows; how functions are mixed and how points of interests are concentrated

Aerial photograph to introduce and visualize the type of space and urban fabric and indicate location of section

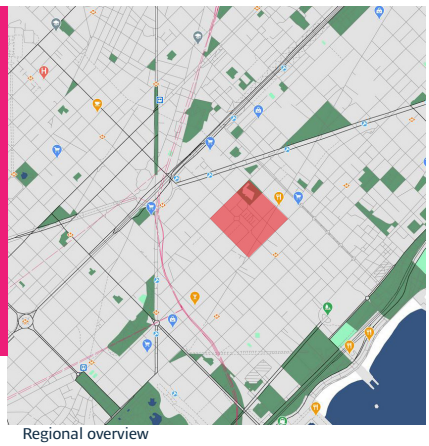
Large scale map to indicate the position in the larger network

street views to show the experience at eye level

Section to show the interface between public space and buildings



BEST PRACTICE CASES



Regional overview



top view

Superblocks | 19th century

Barcelona, Spain

The adaptability of tactical urbanism allows pedestrians to take ownership of public space and build communities

111 persons per hectare (David Roberts, 2019)



Street view



Street view



Street view

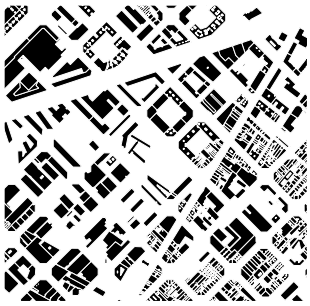
The Poblenou Superblock is one the first blocks of Barcelona where the inner-streets have been pedestrianised. It was designated as pilot project due to its relative lower population density with less traffic that would be hindered. The pedestrianisation was implemented via tactical urbanism solutions, conceived by students at several schools of architecture, for example the reversible application of signs painted on the ground, temporary street furniture, and trees planted in mobile containers. These solutions are cheap and enable modifications in accordance with results of a participative process with local residents (David Roberts, 2019; PublicSpace, 2019). The relative low population density, the fact that large parts are still under construction and that it is surrounded by traffic arteries and high streets contribute to the area seeing little (pedestrian) traffic; this may have resulted in the success and rise of more residential use of public space with playgrounds, sports areas, picnic and ping-pong tables, even though the area itself is more mixed use.



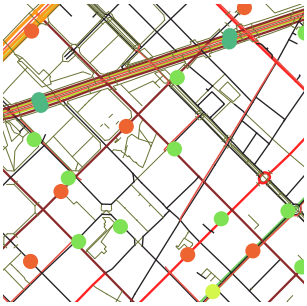
Section 1:1000



Open space



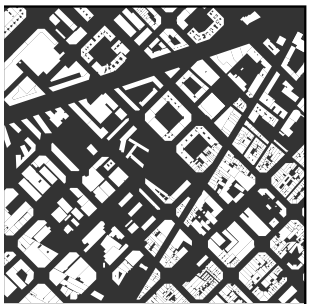
Figure



Public transport



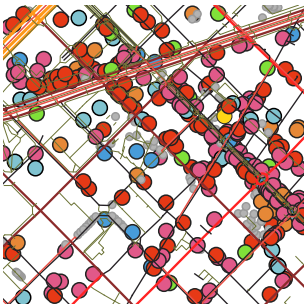
Functions



Ground



Road network



Points of interest

open space
- water
- grass
- park

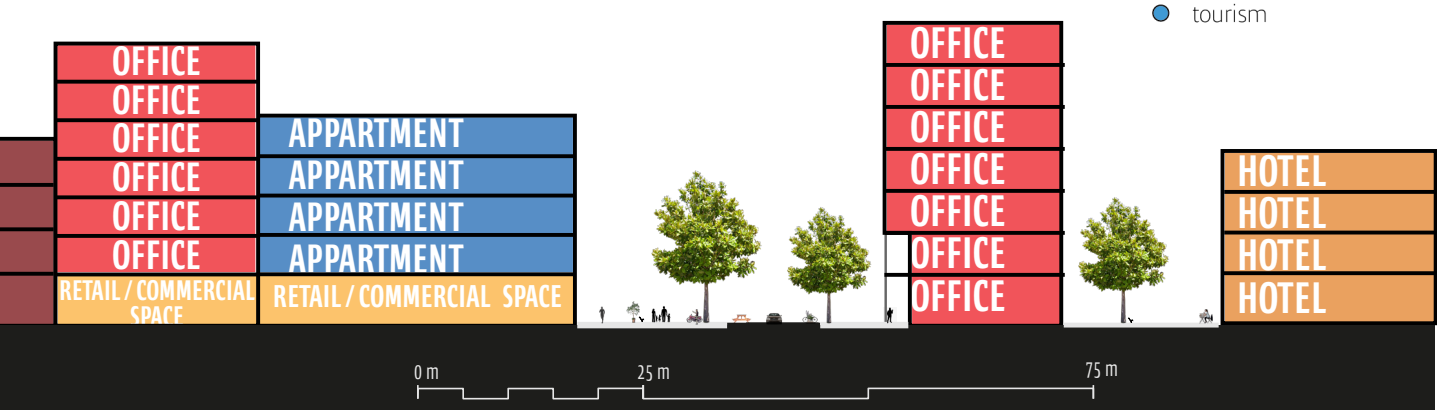
Traffic
- Pedestrian
- Bikelane
- Local streets
- tertiary streets
- primary street
- secondary streets
- unknown

Public transport
- bus-stop
- railway station
- taxi
- tram
- subway
- tram

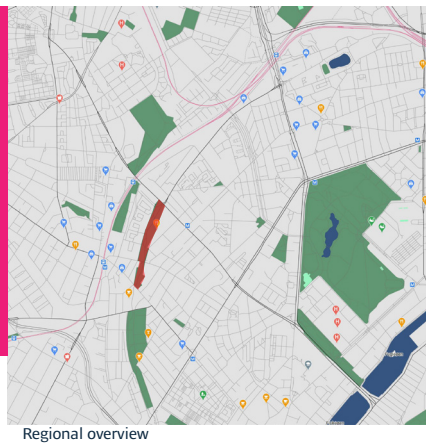
building functions
- appartments
- church
- construction
- garage
- hotel
- house
- industrial
- office
- public
- residential
- retail
- school
- shed
- university
- unknown

Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism

Plan analysis - scale 1:3000



BEST PRACTICE CASES



Regional overview



top view

Superkilen | 2012

Copenhagen, Denmark

Open spaces need furniture and activities that reach the public to be used



Street view



Street view



Street view

184 inhabitants per hectare

Superkilen is an urban park with 3 distinct zones wedged through one of the most ethnically diverse and socially challenged neighbourhoods in Denmark. The transformed park contains objects, furniture and plants from over 60 nationalities to bring together all backgrounds of the population; providing many different activities and landmarks in the park (street bbq, sports, playing facilities, lights, benches, games, music). The red square acts as an extension of the sports and cultural activities at the Norrebrohall. A weekly market attracts people from all over Copenhagen. The black square acts as an urban living room for the locals, hereby connecting the surrounding neighbourhoods with the right facilities. The green park is designed for playing and sporting and is more like a true park. It is part of a larger urban renewal plan (a partnership between the Municipality of Copenhagen and the private philanthropic association RealDania). The park's pedestrian paths and cycle routes provide better connections between the artery roads that border the park. Open space is used for parking and collective gardens, the little public functions are clustered along the artery roads and along the park. These are therefore the main meeting places for people and not the residential streets.



Section 1:1000



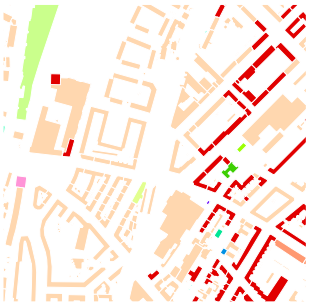
Open space



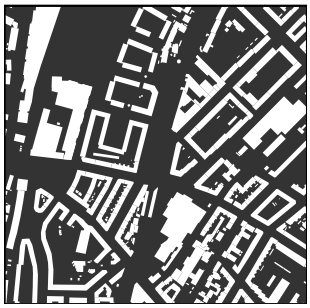
Figure



Public transport



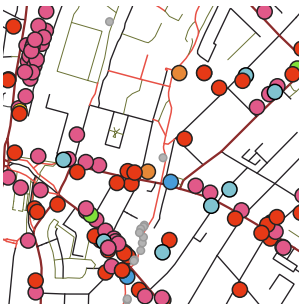
Functions



Ground



Road network



Points of interest

Plan analysis - scale 1:3000

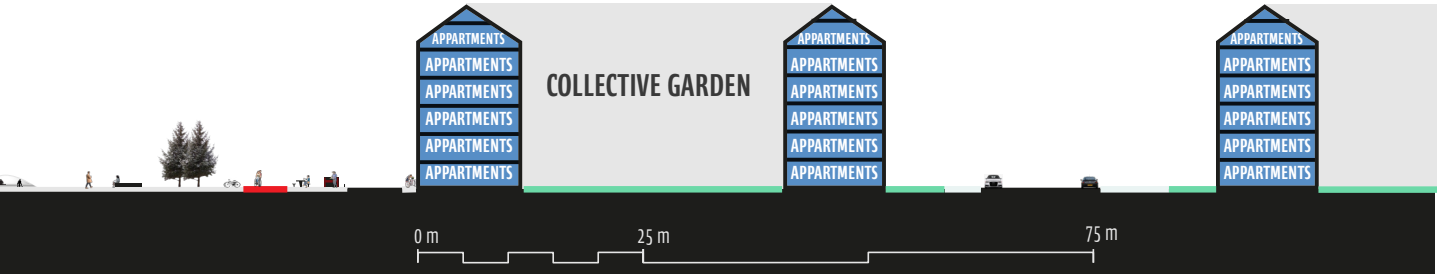
open space
- water
- forest
- park
- grass

Traffic
- Pedestrian
- Bikelane
- Local streets
- Tertiary streets
- unknown

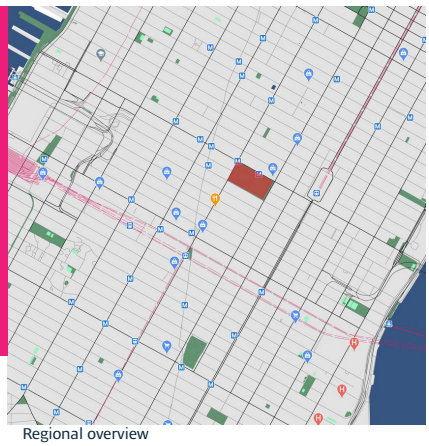
Public transport
- bus-stop
- railway halt
- railway stop
- light rail
- subwau

building functions
- appartment
- carpot
- church
- construction
- detached
- garage
- office
- residential
- retail
- service
- train station
- unknown

Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism



BEST PRACTICE CASES



Regional overview



top view

Bryant park | 1847 | 1992

New York city, United States of America

Visibility, zoning and programming are essential to stimulate use of parks



Street view



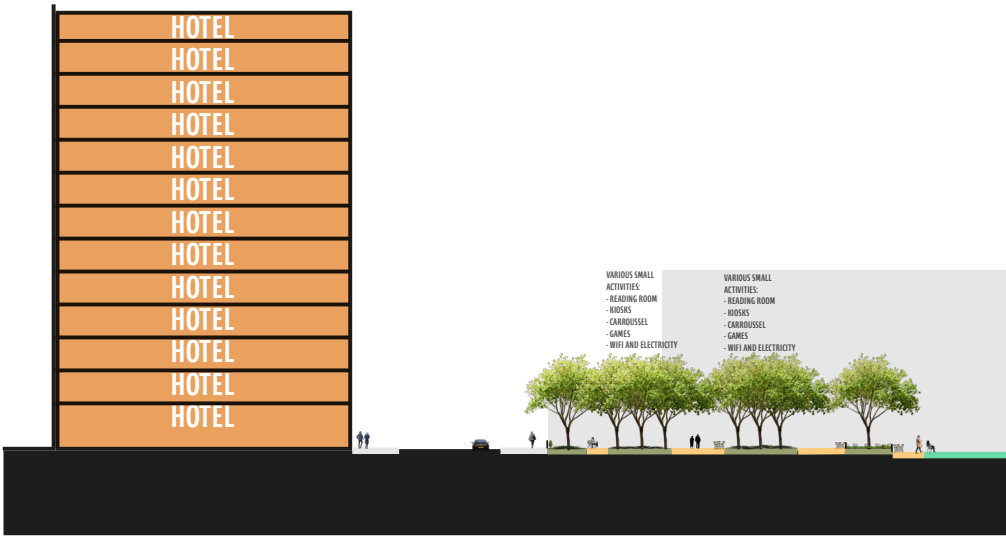
Street view



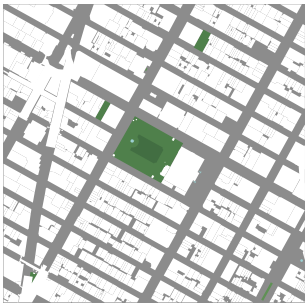
Street view

1.200 people per hectare.

Bryant park is a success story for private partnerships and place-making as it is managed by a non-profit corporation. It is located in midtown Manhattan business district, an area dominated by skyscraper offices and little residents. The park offers many amenities and regular events while also being an oasis in midtown New York. The park has free Wifi, public restrooms, open air library, carrousel, an ice rink in winter, game areas, a cafe, (food) kiosks, newsstands, large lawn and 2,000 movable chairs. In the 1980s the park was unkept and unsafe, there was little to do and most of the park was hidden from the street. They removed shrubbery, installed lights and added entrances to make the park safer and visible. Later, activities and catering were facilitated to attract more people. The park is still actively managed in order to stay popular (Project for Public Spaces, n.d.). Bryant park shows the importance of visibility from the street but also a clear edge of the park, it shows that parks can thrive under right management and highlights the need for both, non- and commercial activities.



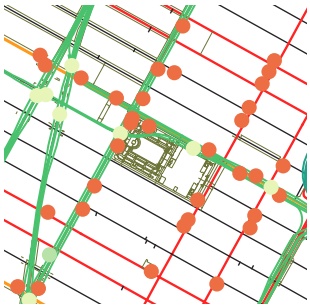
Section 1:1000



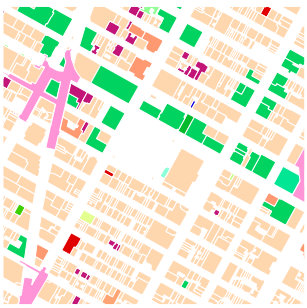
Open space



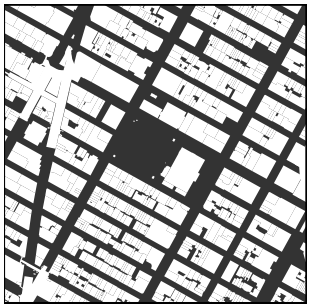
Figure



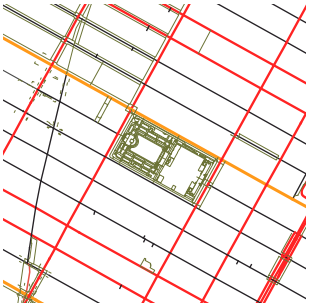
Public transport



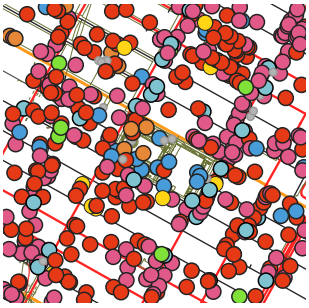
Functions



Ground



Road network



Points of interest

open space
- forest
- park
- grass

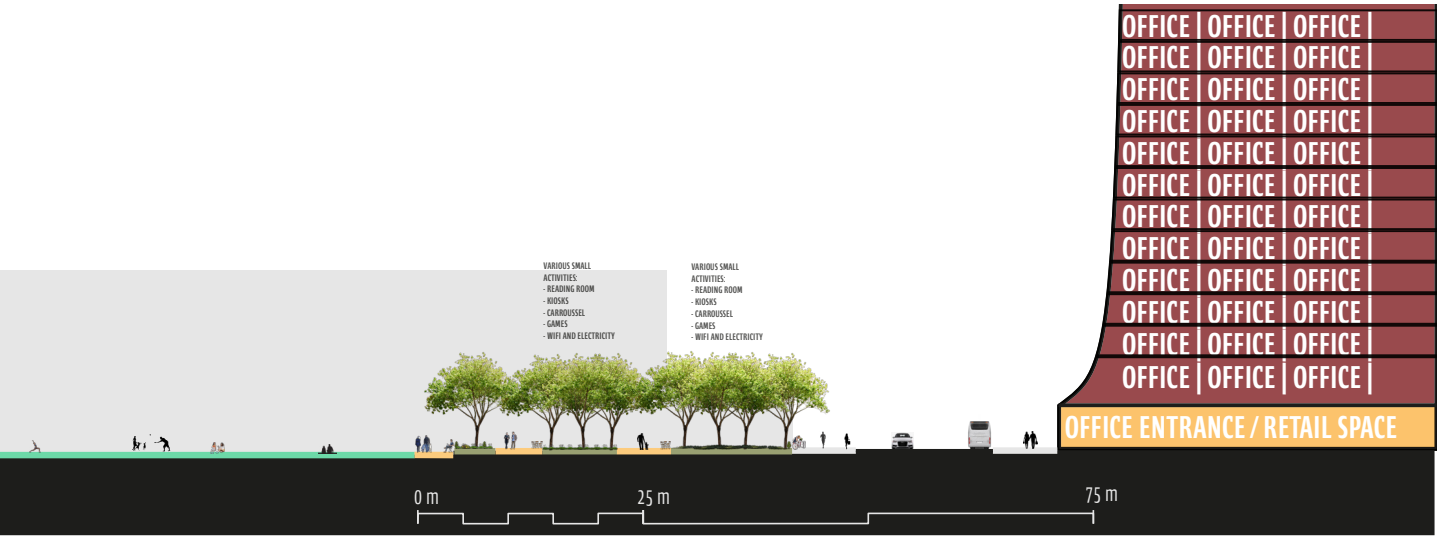
Traffic
- Pedestrian
- Bikelane
- Local streets
- primary streets
- secondary streets
- unknown

Public transport
- bus-stop
- railway station
- taxu
- light rail
- subway

building functions
- appartment
- college
- church
- commercial
- construction
- fire station
- office
- hotel
- retail
- service
- train station
- parking
- unknown

Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism

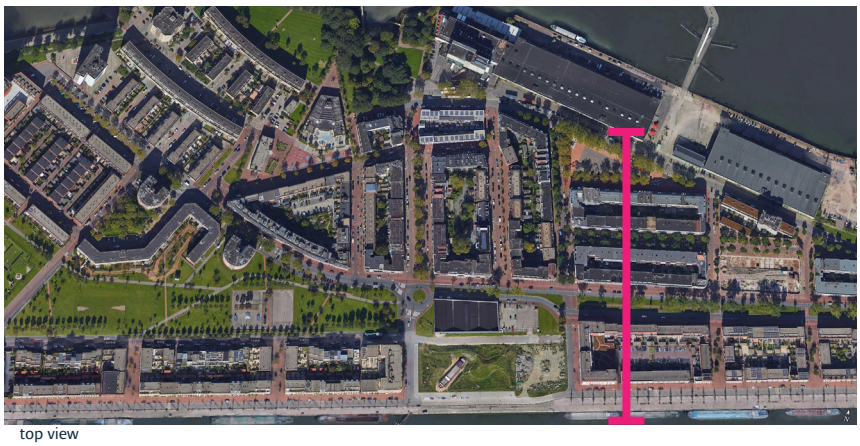
Plan analysis - scale 1:3000



BEST PRACTICE CASES



Regional overview



top view

Katendrecht | JAAR

Rotterdam, Netherlands

a mix of urban typologies within a district can provide the diversity required for urban vitality

101 inhabitants per hectare



Street view



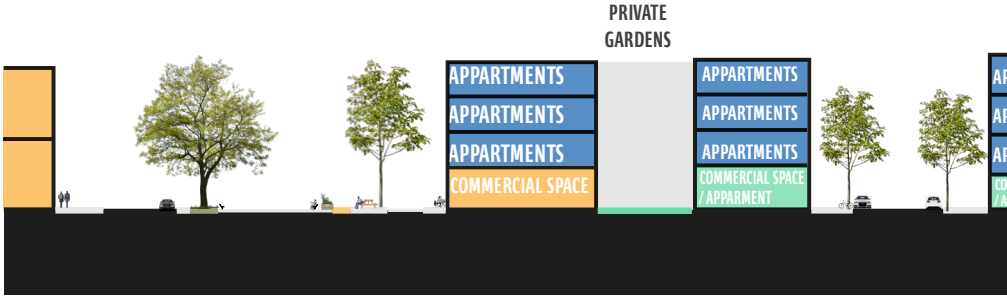
Street view



Street view

Katendrecht has a rich (harbour-related) history and identity as chinatown and red-light district. Recent renewals has made the peninsula very desirable for families.

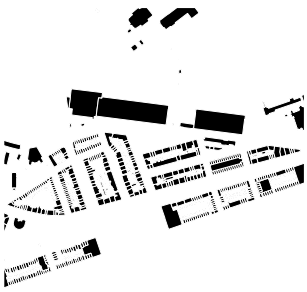
The mix of old streets, industrial heritage, new housing and attractive green public spaces make it very interesting.



Section 1:1000



Open space



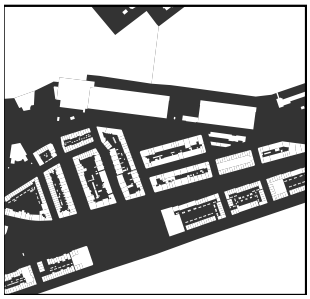
Figure



Public transport



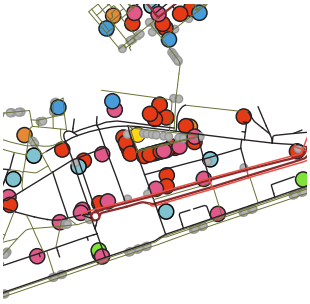
Functions



Ground



Road network



Points of interest

open space
- water
- forest
- park
- grass

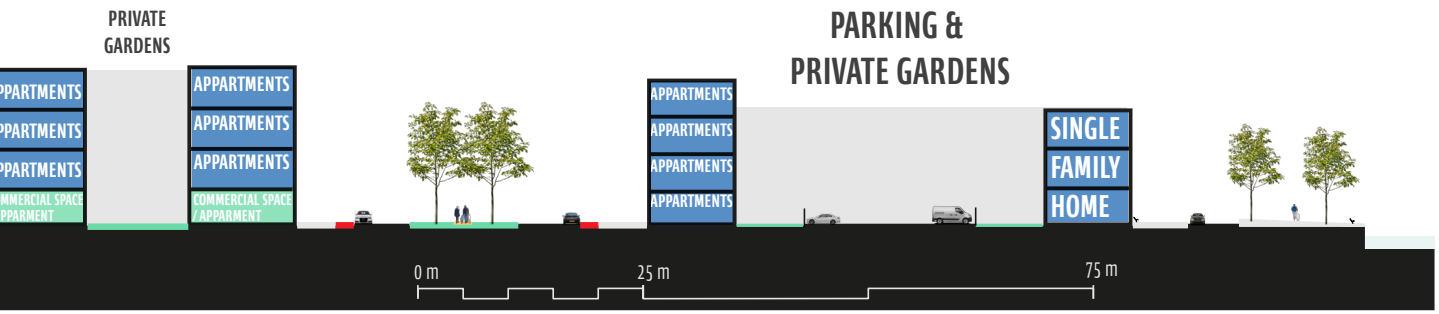
Traffic
- Pedestrian
- Bikelane
- Local streets
- tertiary streets
- primary street
- secondary streets
- highway
- unknown

Public transport
- bus-stop
- water-taxi

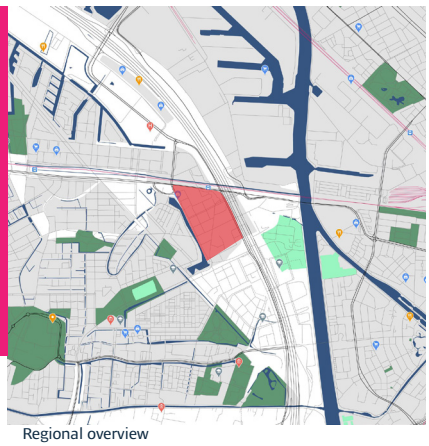
building functions
- appartments
- school
- service
- house
- industrial
- unknown

Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism

Plan analysis - scale 1:3000



BEST PRACTICE CASES



Regional overview



top view

Leidsche Rijn | 2018

Utrecht, Netherlands

Leidsche Rijn shows how to mix old urban typologies with contemporary functionality and make it lively.

38 inhabitants per hectare (under development)



Street view



Street view

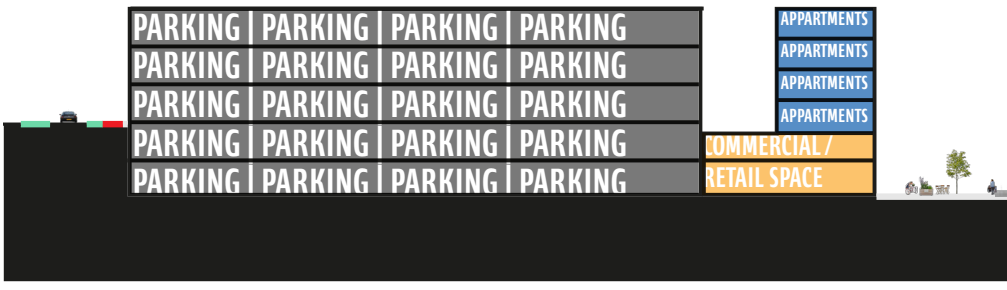


Street view

Leidsche Rijn Centrum is the heart of the vinex district of Leidsche rijn in Utrecht. The Urban design is based on European capital cities; with compact city blocks, squares, avenues, singles and pedestrian paths. The quality and materialisation of the public spaces are very luxurious and the area already attracts visitors from the surrounding suburbs.

Large part of the area is still under development. It is a very young area with so far little diversity and little people living there.

It is an interesting project because it is a recent development that tries to include central functions and densities to stimulate a traditional-European lively inner-city atmosphere while including modern-day functionalities like parking, public transport, good housing and commercial functions.



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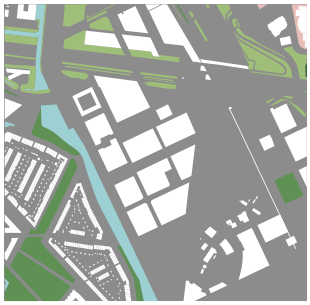
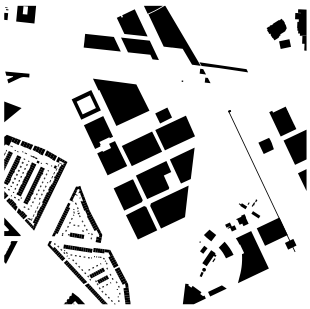


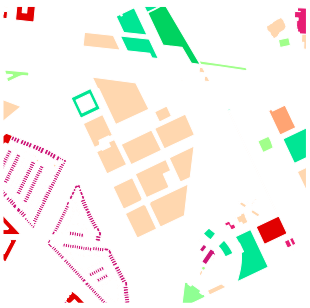
Open space



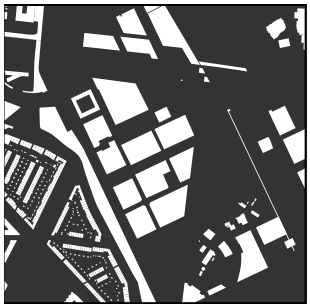
Figure



Public transport



Functions



Ground



Road network



Points of interest

open space
- water
- forest
- meadow
- grass

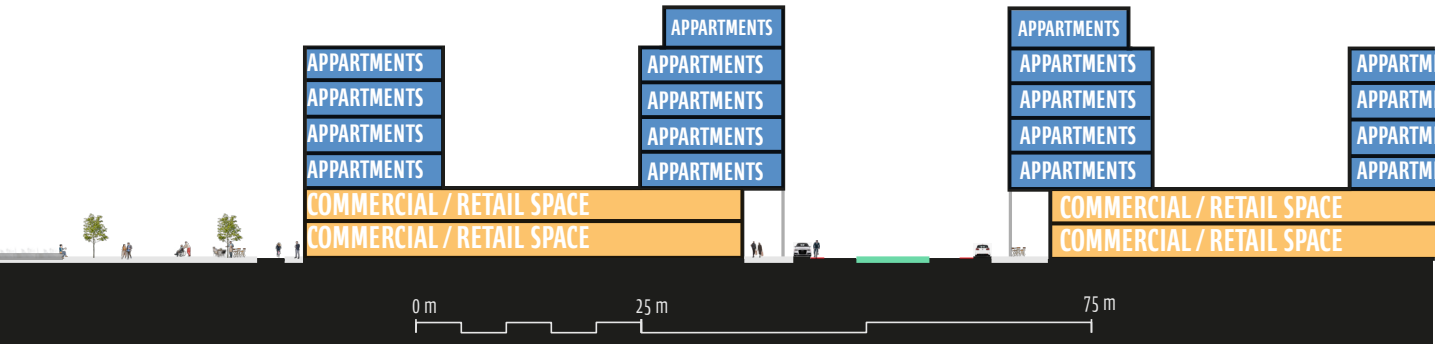
Traffic
- Pedestrian
- Bikelane
- Local streets
- tertiary streets
- primary street
- secondary streets
- highway
- unknown

Public transport
- bus-stop
- railway station
- rail

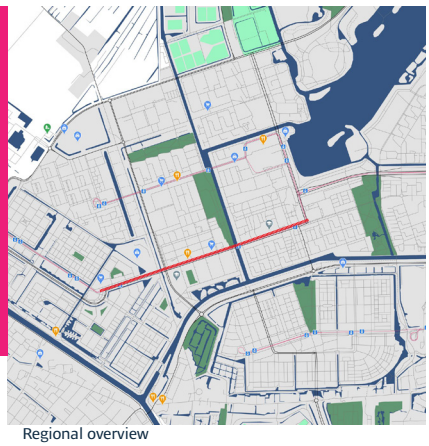
building functions
- appartments
- construction
- commercial
- house
- retail
- school
- parking
- industrial
- office
- service
- unknown

Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money

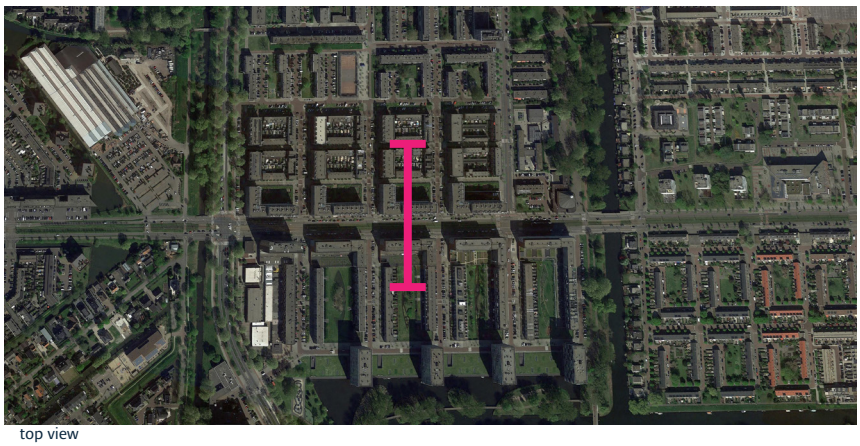
Plan analysis - scale 1:3000



BEST PRACTICE CASES



Regional overview



top view

Pieter calandlaan | 1955

Amsterdam, Netherlands

Densification of existing blocks increases the critical mass for public functions that are required for urban vitality

155 inhabitants per hectare



Street view

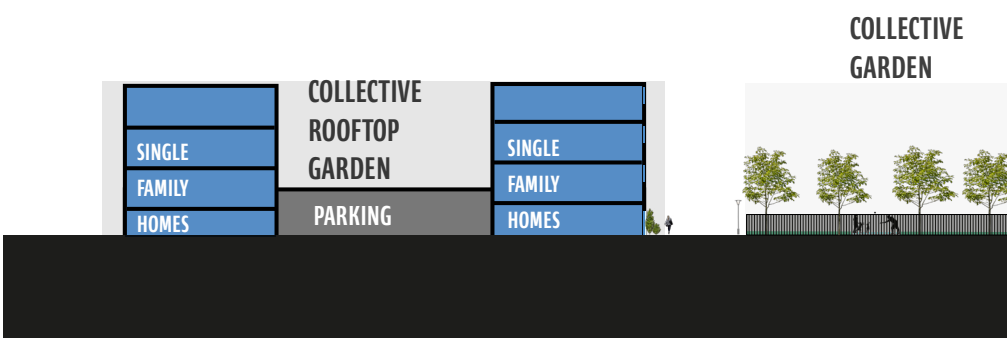


Street view



Street view

On the city scale, the Pieter calandlaan is an important traffic artery. In an attempt to make the street more urban the former strips were transformed into blocks and new storeys were added on this side of the street. The street itself is quite wide with a fenced tramway in the middle that makes it nearly impossible to cross the street. The plinths are slowly filled with amenities, public functions and some commercial functions. The densification strategy was to keep the existing green but to add new houses that would attract higher income groups without excluding the existing social housing. The neighbourhood as it was is quite similar to areas in Amsterdam-Noord, therefore this type of densification could be used if more attention would be brought to spatial quality in the streetscape, regarding plinth design.



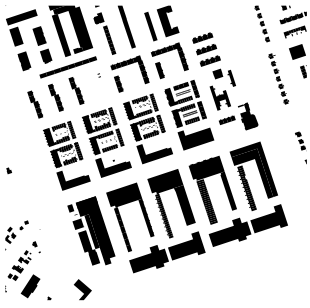
Section 1:1000



Open space

open space
- water
- forest
- park
- grass

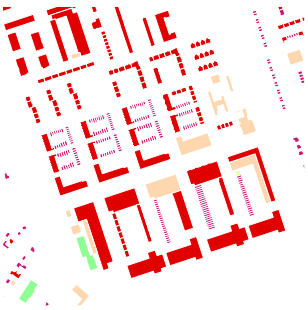
Traffic
- Pedestrian
- Bikelane
- Local streets
- Tertiary streets
- secondary streets
- unknown



Figure



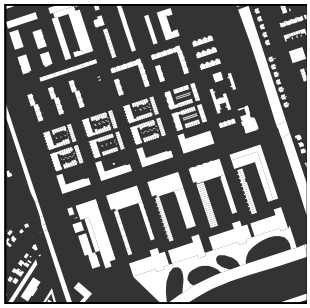
Public transport



Functions

Public transport
- bus-stop
- tram-stop

building functions
- appartments
- house
- retail
- school
- unknown



Ground



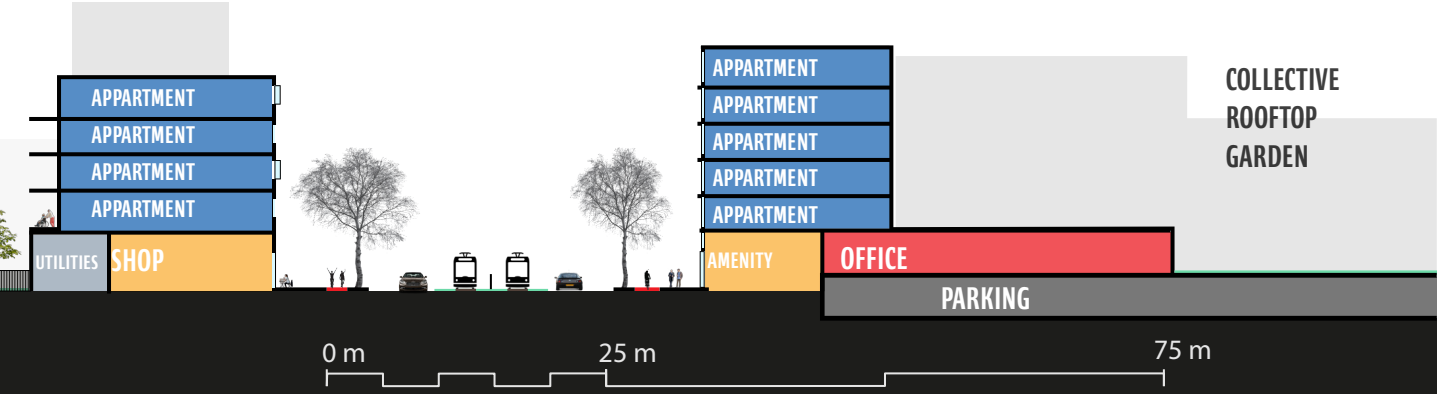
Road network



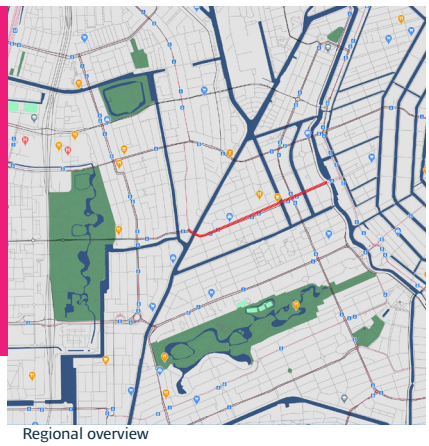
Points of interest

Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism

Plan analysis - scale 1:3000



BEST PRACTICE CASES



Regional overview



top view

Kinkerstraat | 1896

Compact urban fabric with active plinths leads to social interaction

Amsterdam, Netherlands



Street view



Street view



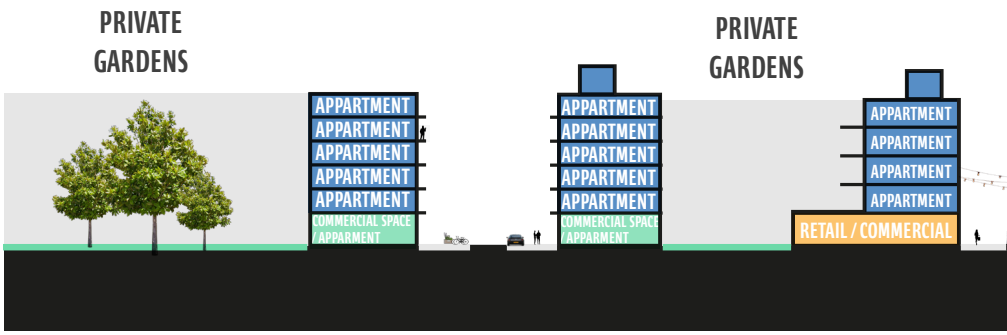
Street view

247 inhabitants per hectare (under development)

The kinkerstraat is the heart of the kinkerbuurt which is bordered by water. The street is a multimodal link in the city network but also has local importance as a local high street. The street has chain stores as well as many independent stores owned by small entrepreneurs.

The neighbourhood is upcoming and under the influence of gentrification but there is still a diverse street-scape, with these brand stores as well as small retail units. Although most buildings have no more than 6 storeys, there is a high density. Buildings are narrow and deep, there are many front doors; for each building, there is at least one door.

The street is quite narrow, especially considering all the different modalities using it. This causes many conflicts and leaves the street with very little greenery. At the same time this does not seem to hinder public life, it thrives because of it.



Section 1:1000



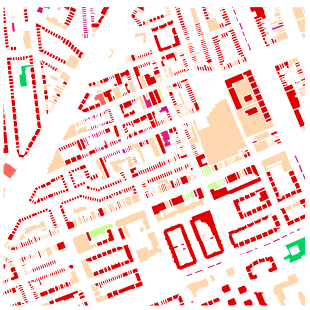
Open space



Figure



Public transport



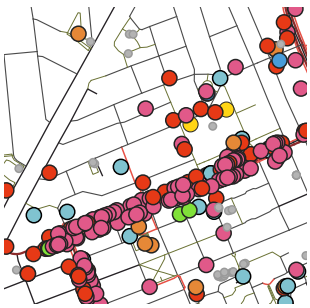
Functions



Ground
Ground



Road network
Road network



Points of interest
Points of interest

open space
- water
- forest
- park

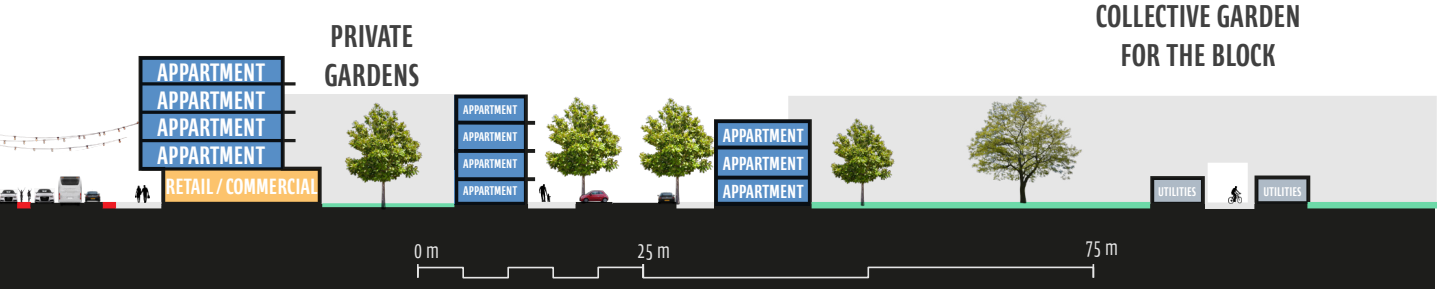
Traffic
- Pedestrian
- Bikelane
- Local streets
- Tertiary streets
- unknown

Public transport
- bus-stop
- tram
- rail

building functions
- appartments
- mosque
- commercial
- house
- retail
- parking entrance
- houseboat
- industrial
- static caravan
- unknown

Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism

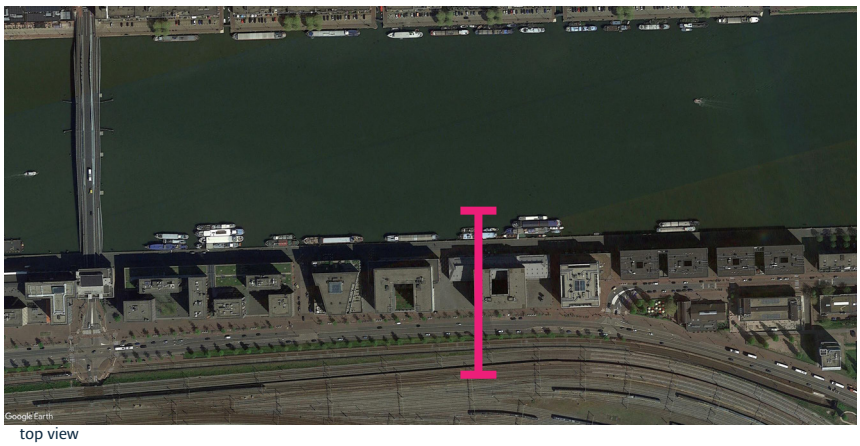
Plan analysis - scale 1:3000



BEST PRACTICE CASES



Regional overview



top view

Oostelijke handelskade

Spatial quality is just as important as density, without it there is still no vitality.

1880 | 1990 - Amsterdam, Netherlands



Street view



Street view



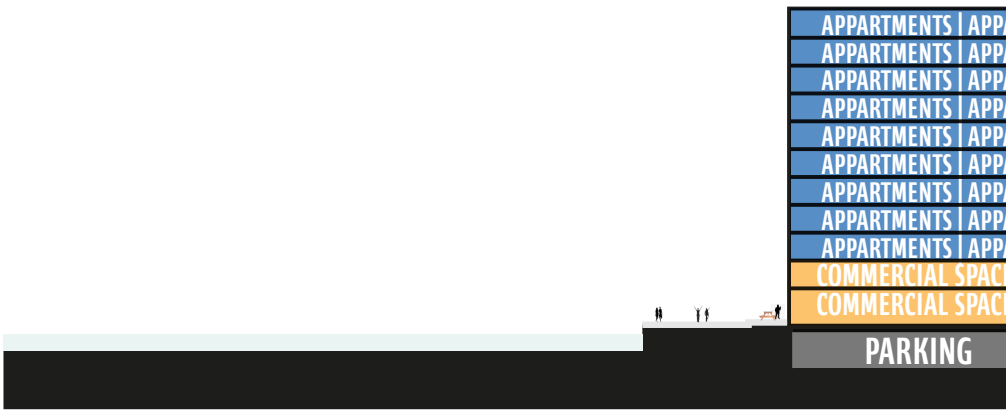
Street view

113 inhabitants per hectare

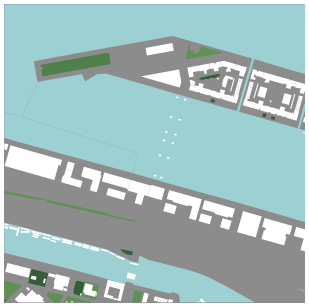
This piece captures the oostelijke handelskade and part of java-eiland which belong to the eastern docklands of Amsterdam. The former harbour has been transformed since 1990. It has been densely built. The water is considered the main quality with the quays as main public space.

The oostelijke handelskade has mostly large office blocks, hotels and appartment blocks, they do have other commercial functions in the plinth. These large blocks are introverted and provide little interaction. Java-eiland has more spatial quality and variation in the streetscape.

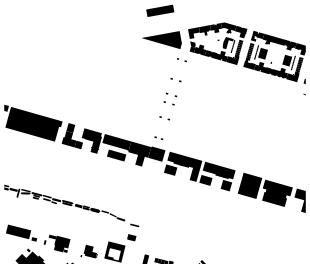
Most surfaces are very harsh: buildings and paved surfaces are wide and dominant. Java-eiland is predominantly residential. Both parts are enclaves as they are surrounded by barriers: water and infrastructure.



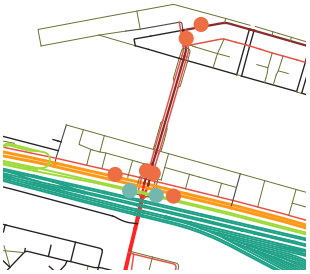
Section 1:1000



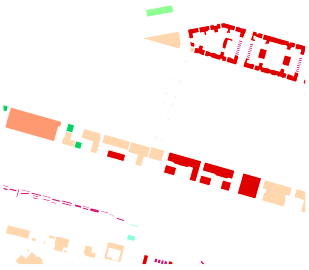
Open space



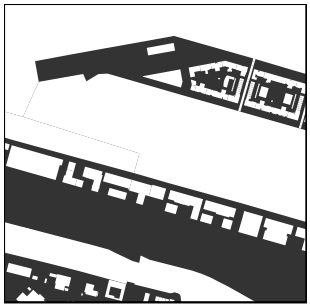
Figure



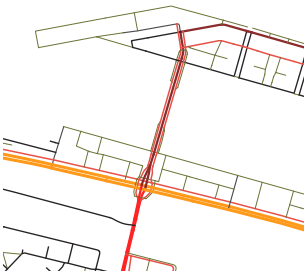
Public transport



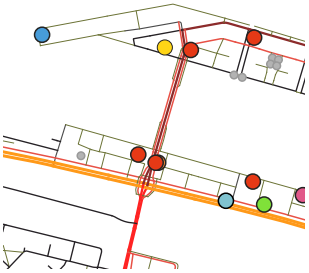
Functions



Ground
Ground



Road network
Road network



Points of interest
Points of interest

open space
- water
- forest
- park
- grass
- meadow

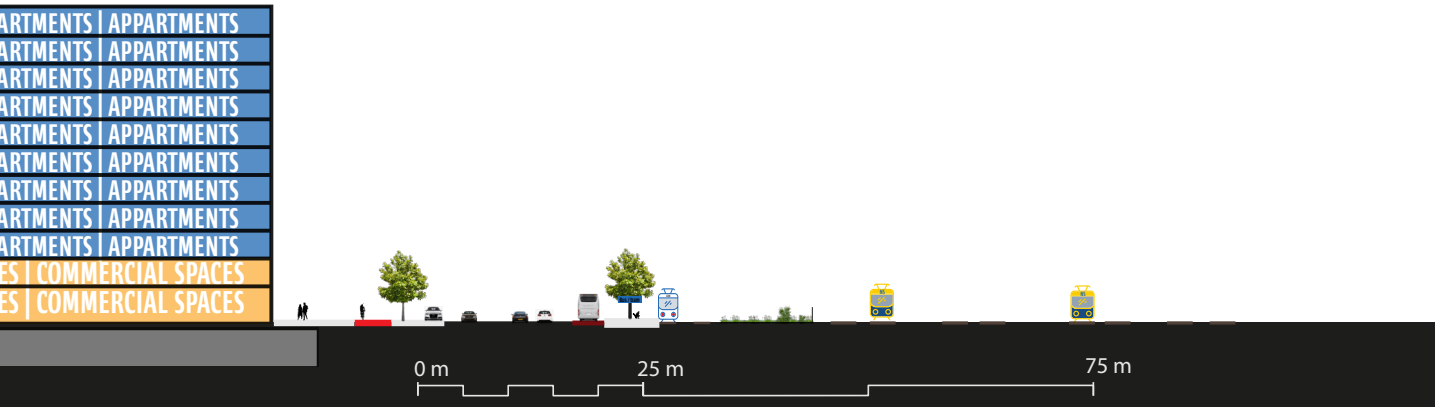
Traffic
- Pedestrian
- Bikelane
- Local streets
- tertiary streets
- secondarystreet
- primary street
- unknown

Public transport
- bus-stop
- tram stop
- rail
- tram

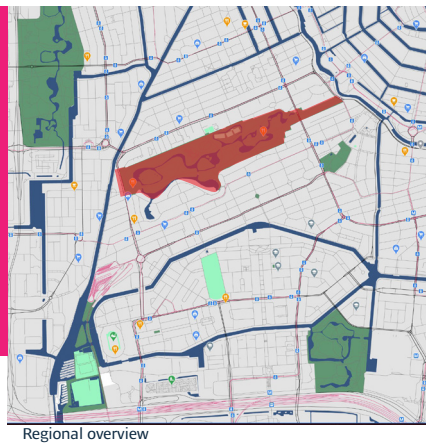
building functions
- appartment
- commercial
- house
- houseboat
- office
- school
- service
- unknown

Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money

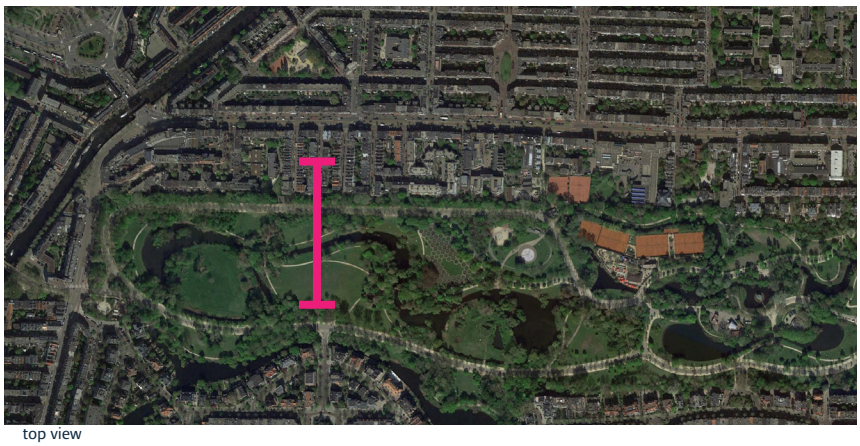
Plan analysis - scale 1:3000



BEST PRACTICE CASES



Regional overview



top view

Vondelpark | 1865

Amsterdam, Netherlands

Define and programme space to be multifunctional

78 inhabitants per hectare (under development)

The popular city park of Amsterdam has over 10 million users each year. It was developed at the city edge, just before the neighbourhoods surrounding it were built, to heighten the value of the surrounding land before it could be built. Like Bryant park it is managed by a foundation. There are cultural institutions and sport clubs in the park. The plan analysis focuses at the western edge of the park and surrounding neighbourhoods which is less loaded with programme. The park is designed in the English garden style with promenades and meandering alleys and paths opening up to large grassfields, ponds, playgrounds in this part of the park. The promenades which were designed for promenading are now used by bikes and joggers while the secluded paths are used for wandering or going towards the more private zones.



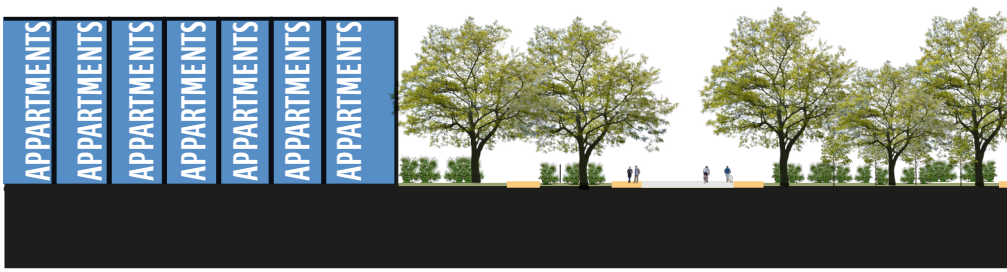
Street view



Street view



Street view



Section 1:1000



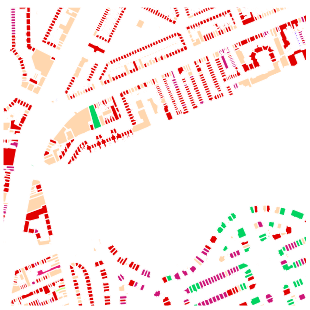
Open space



Figure



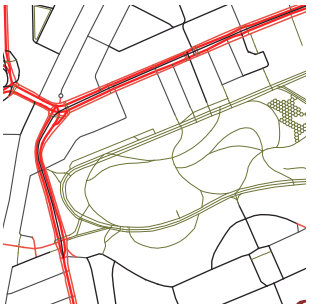
Public transport



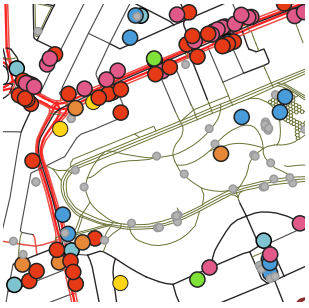
Functions



Ground



Road network



Points of interest

open space
- water
- forest
- park
- grass
- meadow

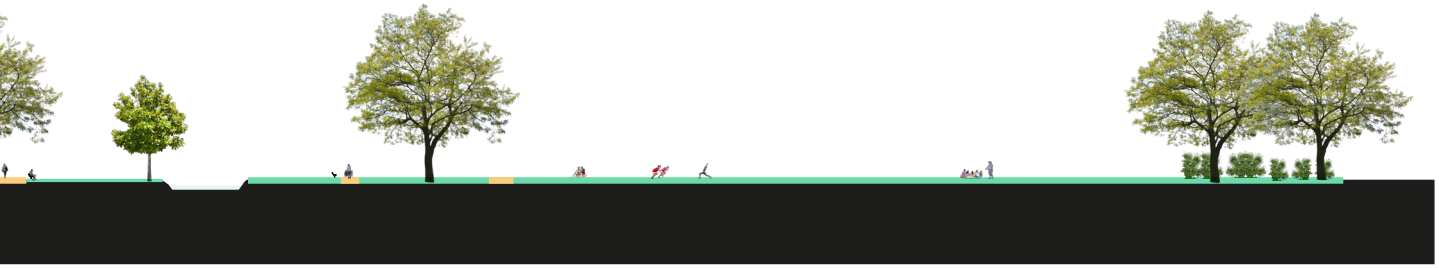
Traffic
- Pedestrian
- Bikelane
- Local streets
- tertiary streets
- secondarystreet
- unknown

Public transport
- tram-stop
- rail

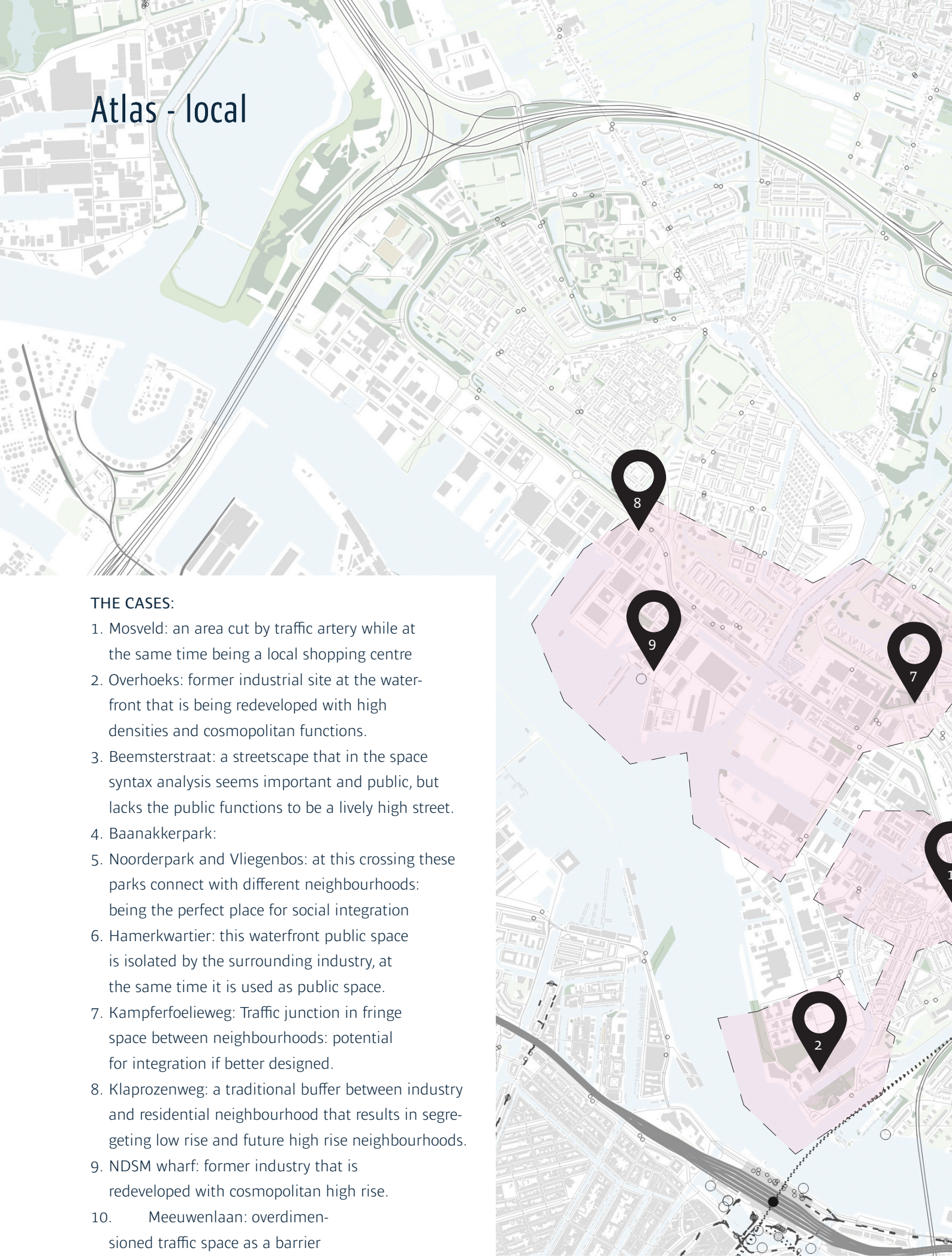
building functions
- appartments
- garage
- commercial
- house
- retail
- static caravan
- industrial
- unknown

Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism

Plan analysis - scale 1:3000

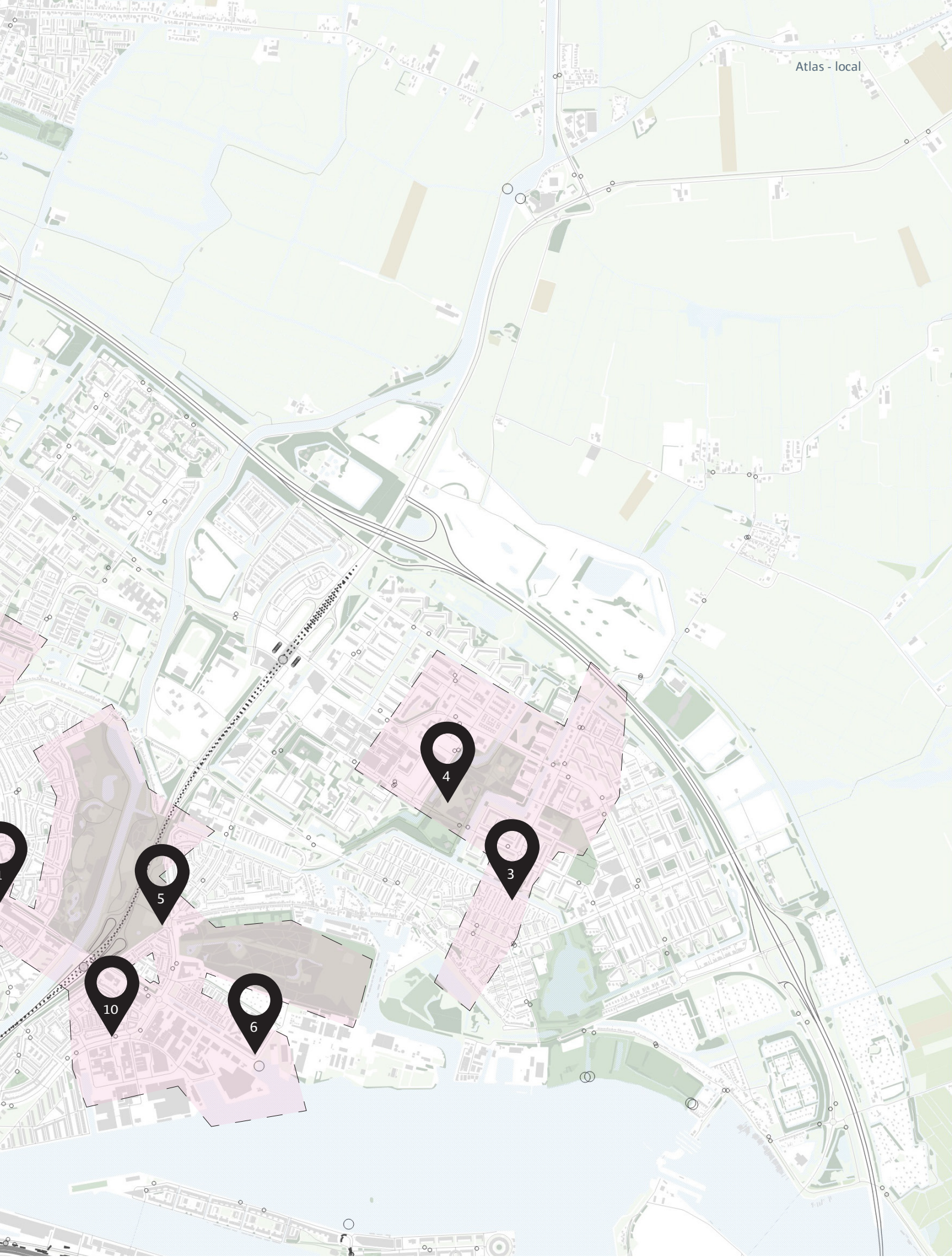


Atlas - local



THE CASES:

1. Mosveld: an area cut by traffic artery while at the same time being a local shopping centre
2. Overhoeks: former industrial site at the water-front that is being redeveloped with high densities and cosmopolitan functions.
3. Beemsterstraat: a streetscape that in the space syntax analysis seems important and public, but lacks the public functions to be a lively high street.
4. Baanakkerpark:
5. Noorderpark and Vliegenbos: at this crossing these parks connect with different neighbourhoods: being the perfect place for social integration
6. Hamerkwartier: this waterfront public space is isolated by the surrounding industry, at the same time it is used as public space.
7. Kampferfoelieweg: Traffic junction in fringe space between neighbourhoods: potential for integration if better designed.
8. Klaprozenweg: a traditional buffer between industry and residential neighbourhood that results in segre-geting low rise and future high rise neighbourhoods.
9. NDSM wharf: former industry that is redeveloped with cosmopolitan high rise.
10. Meeuwenlaan: overdimen-sioned traffic space as a barrier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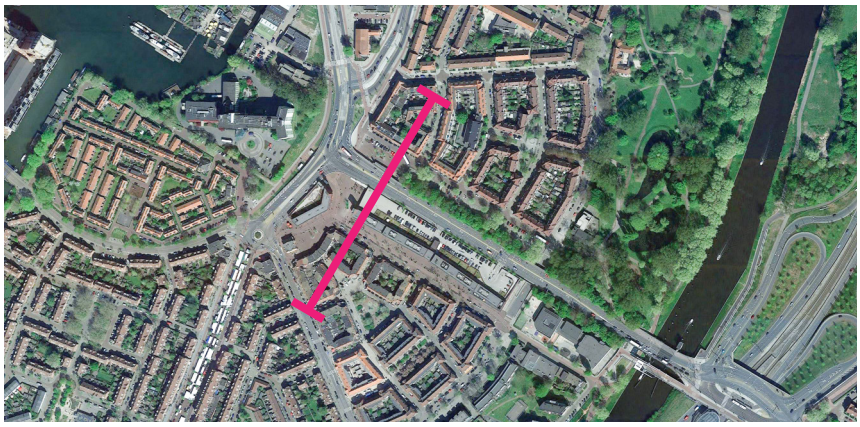


Mosveld | 1920 | 2016

120 inhabitants per hectare

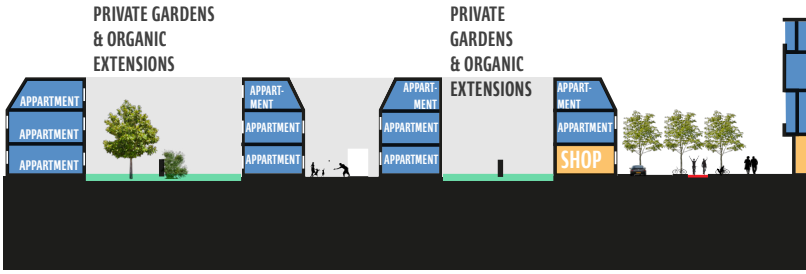
Amsterdam, Netherlands







This square has different levels, functions and zones. Several traffic arteries connect here while at the same time it is the main shopping area for most of Noord. In 2016 the new block in the middle section was built and the weekly market was moved to the van der pekstraat. Although the street is still a physical barrier, from the southside it is no longer experienced as such. It is relative densely populated and built but not enough to consider as urban. It has many commercial activities and plays an important part in people's daily public life. There are many small squares in the neighbourhood and the Noorderpark is closeby.



Section



Open space



Figure



Public transport



Functions



Ground



Road network



Points of interest

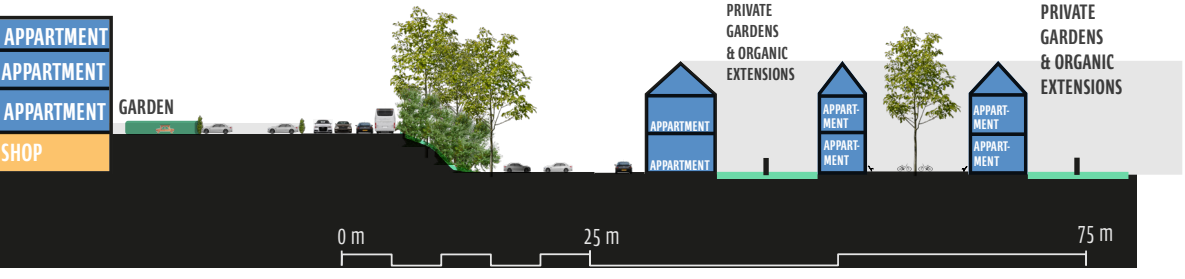
open space
- water
- forest
- park
- grass

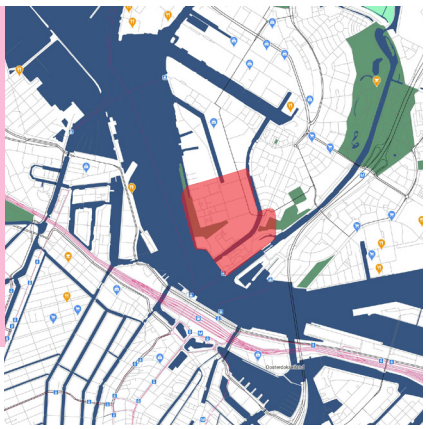
Traffic
- Pedestrian
- Bikelane
- Local streets
- tertiary streets
- primary street
- secondary streets
- highway
- unknown

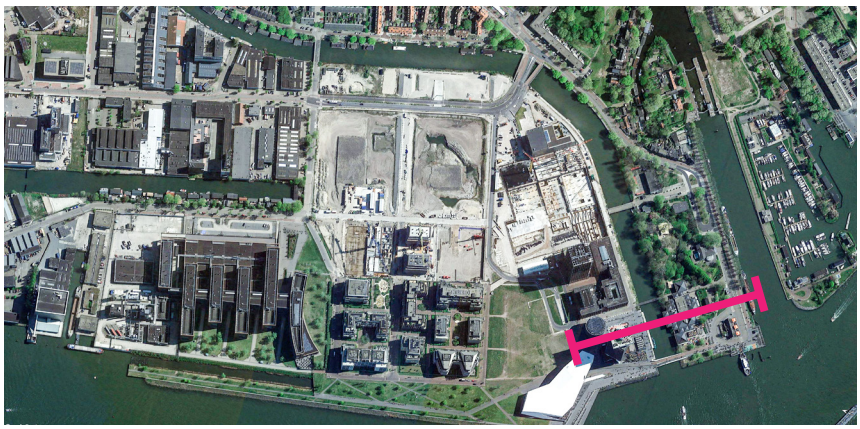
Public transport
- bus-stop
- taxi

building functions
- appartments
- construction
- commercial
- house
- retail
- hotel
- houseboat
- industrial
- office
- mosque
- shop
- unknown

Points of interest
- public functions
- misc
- leisure
- misc
- Shopping and money







Overhoeks | 2006-2026

43 inhabitants per hectare (under development)

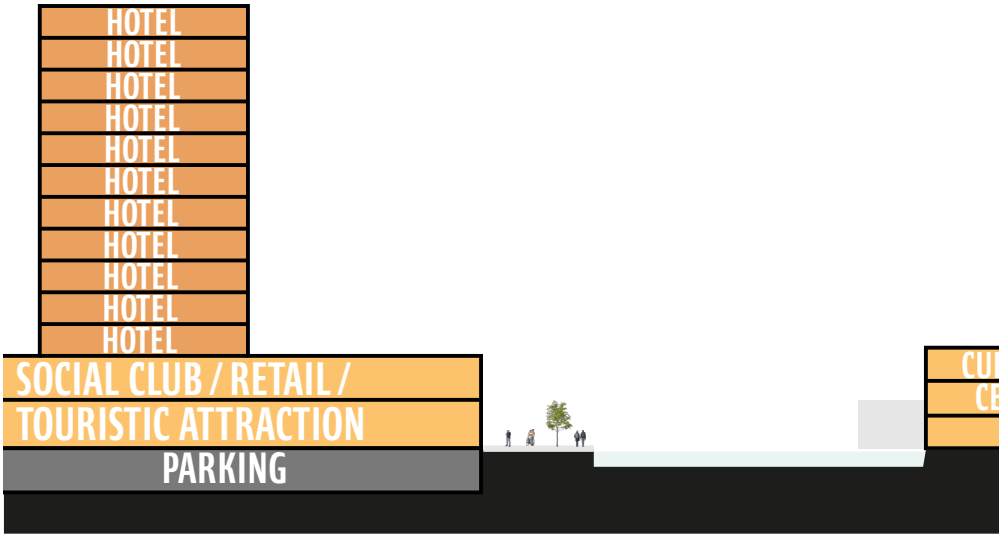
Amsterdam, Netherlands



Overhoeks has some attractions that attract many visitors. There is a discrepancy between the new developments which are too big considering human scale and the existing urban fabric. There are quite some new public activities and functions, but accessibility to the existing neighbourhoods is not very good (yet).







Section



Open space



Figure



Public transport



Functions



Ground



Road network



Points of interest

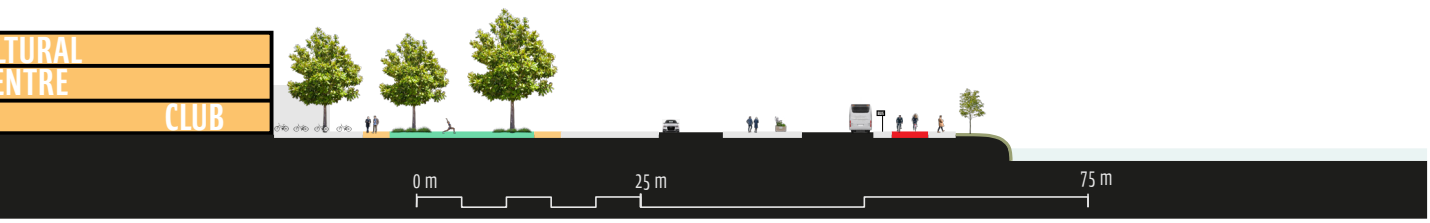
open space
- water
- forest
- park
- grass

Traffic
- Pedestrian
- Bikelane
- Local streets
- tertiary streets
- primary street
- secondary streets
- highway
- unknown

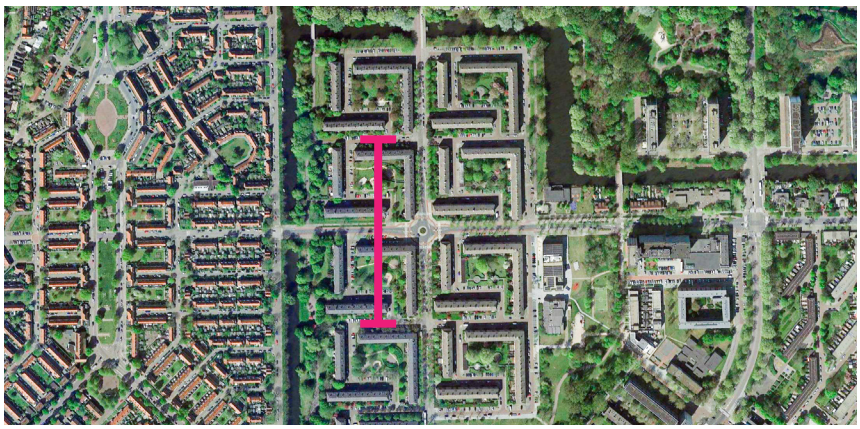
Public transport
- bus-stop
- ferry
- subway

building functions
- appartments
- commercial
- construction
- houseboat
- hotel
- house
- industrial
- office
- service
- shop
- retail
- school
- sports centre
- unknown

Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism







Beemsterstraat | 1925

108 inhabitants per hectare

Amsterdam, Netherlands







This well-integrated street passes different neighbourhoods but lacks public activities to attract people. The different neighbourhoods have their distinct architecture and set-up, within a block there is no diversity. In the northern part of the street there are more public functions and the streetscape has more variety which already makes it more interesting. However, the buildings are still set back and provide little interaction.



Section



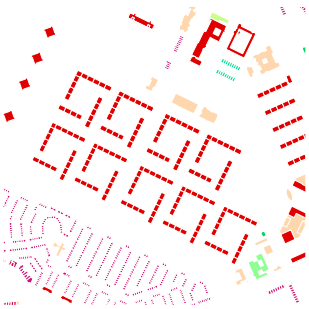
Open space



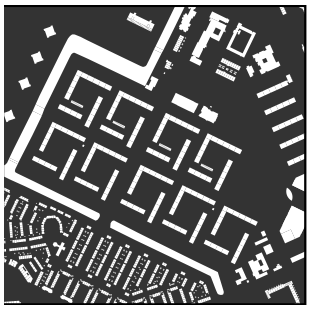
Figure



Public transport



Functions



Ground



Road network



Points of interest

open space
- water
- forest
- park
- grass

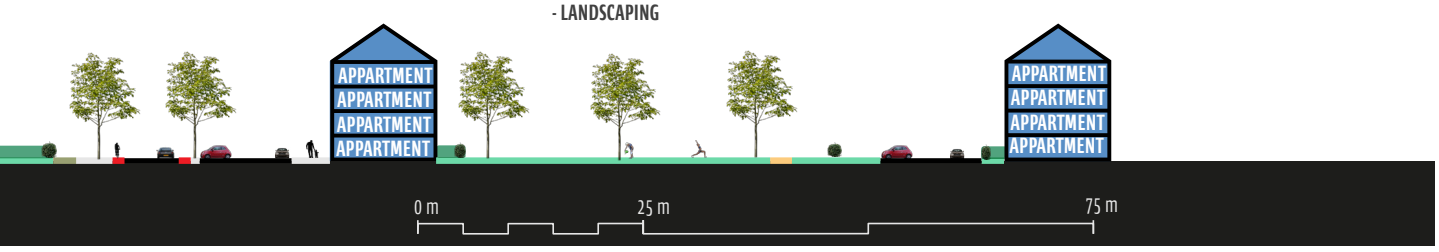
Traffic
- Pedestrian
- Bikelane
- Local streets
- Tertiary streets
- unknown

Public transport
- bus-stop

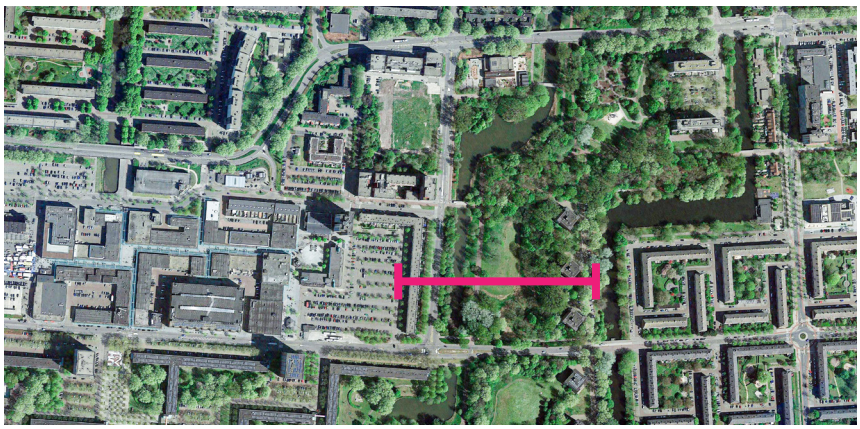
building functions
- appartments
- construction
- commercial
- house
- retail
- school
- unknown

Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism

COLLECTIVE GARDEN
- PLAY FACILITIES
- BENCHES
- LANDSCAPING







Baanakkerpark | 1963

48 inhabitants per hectare

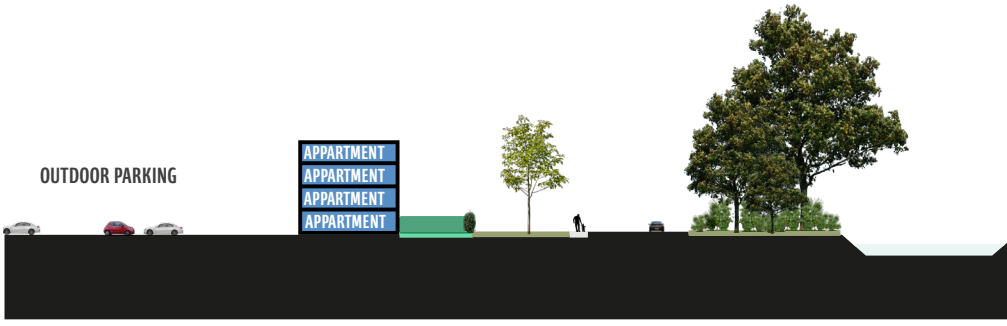
Amsterdam, Netherlands



The park's edges are canals and is crossed by 2 traffic arteries, typical is that these streets are car-only, this means that slow modes go through the park, but the lack of visibility or public functions make this experience at night feel unsafe. There are some residential buildings in the park, these are high rise towers and have little interaction at street level. The buildings at the park's edges are too large and the separation of functions (even in traffic) makes this a difficult place to adapt.







Section



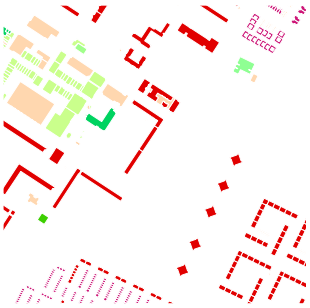
Open space



Figure



Public transport



Functions



Ground



Road network



Points of interest

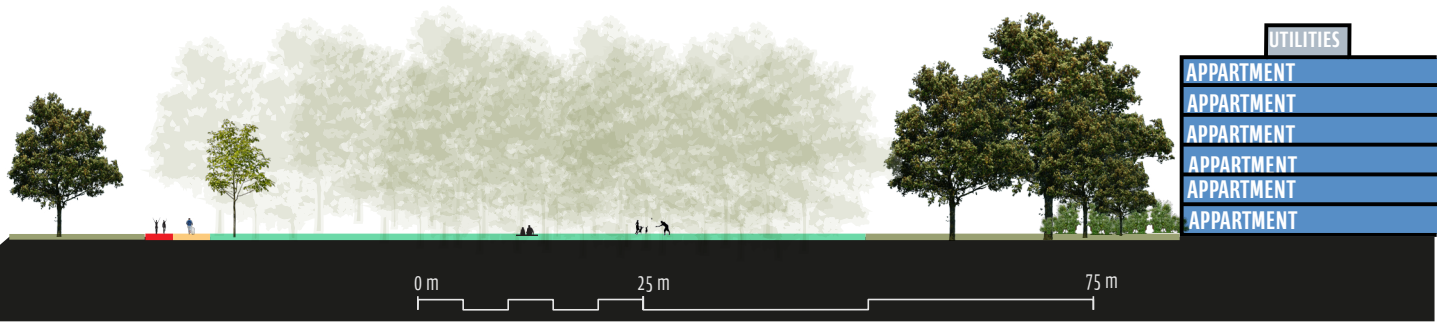
open space
- water
- forest
- park
- grass

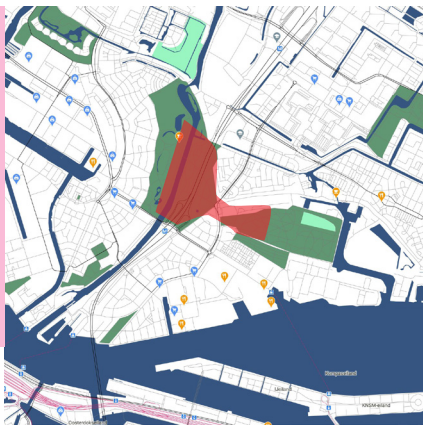
Traffic
- Pedestrian
- Bikelane
- Local streets
- Tertiary streets
- secondary streets
- unknown

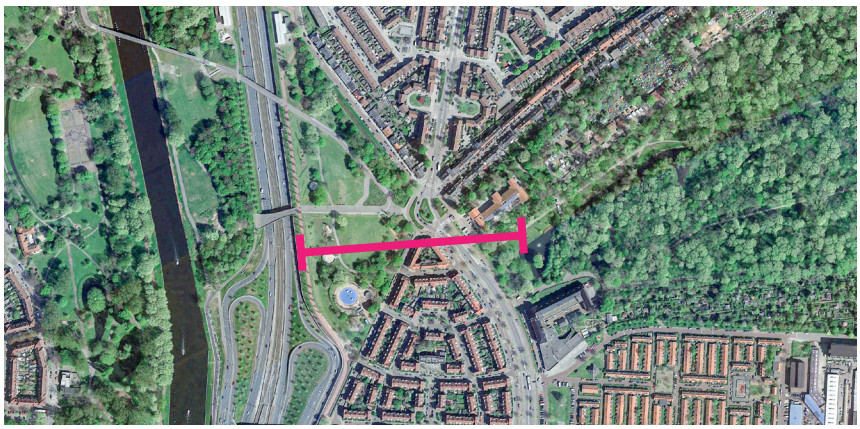
Public transport
- Bus-stop

building functions
- appartments
- church
- commercial
- house
- retail
- school
- unknown

Points of interest
- public functions
- misc
- health
- leisure
- misc
- Shopping and money







Noorderpark/vliegenbos

16 inhabitants per hectare

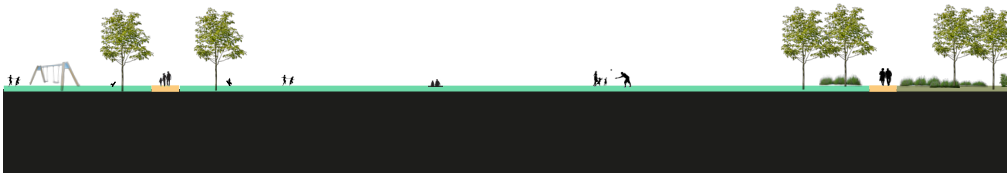
1921



In the vliegenbos, nature and biodiversity are important. The noorderpark is designed to be used and that can be seen. The park has a couple of clearly defined entrances with public functions that may attract users. The Vliegenbos has less entrances and some functional barriers; a camping and allotment gardens. The Noorderpark is crossed by a canal and an urban highway, these decrease the accessibility to other sides of the park. In both parks and the surrounding neighbourhoods the human scale is good.







Section



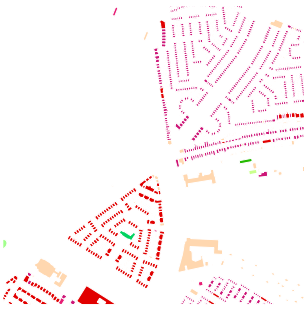
Open space



Figure



Public transport



Functions



Ground



Road network



Points of interest

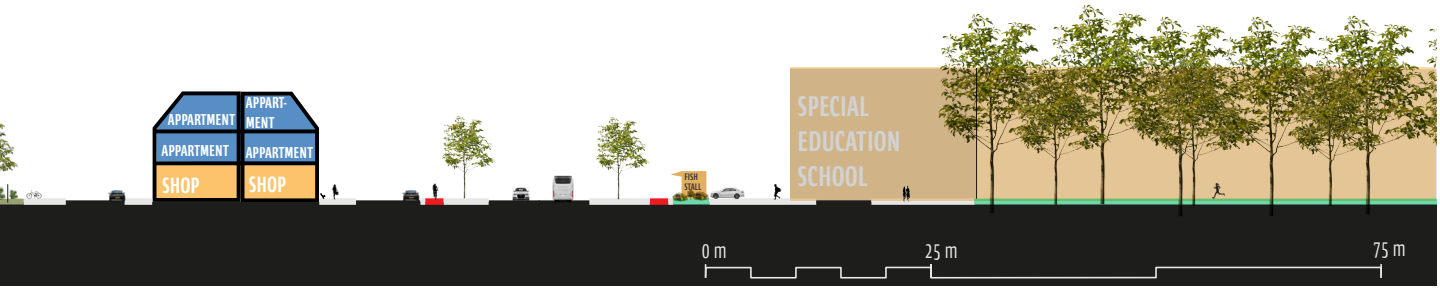
open space
- water
- forest
- park
- grass
- allotments

Traffic
- Pedestrian
- Bikelane
- Local streets
- tertiary streets
- primary street
- highway
- unknown

Public transport
- bus-stop
- metro
- rail

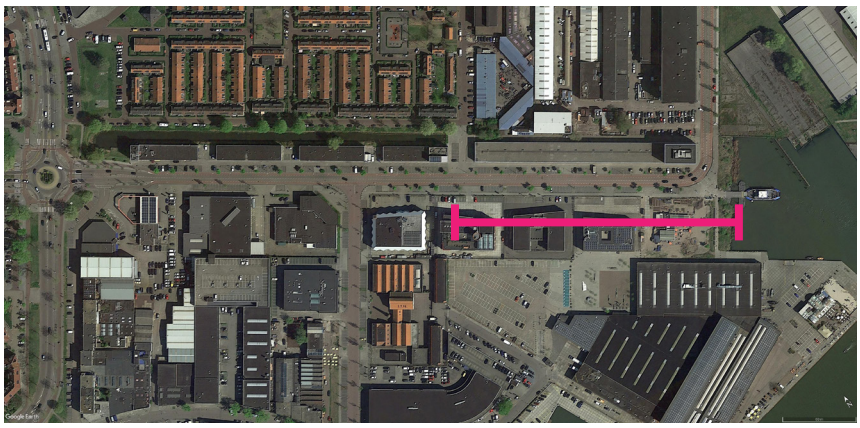
building functions
- appartments
- civic
- commercial
- house
- industrial
- unknown

Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism



CASES OF INTEREST





Hamerkwartier | 1915 | 2018 15 inhabitants per hectare (under development)

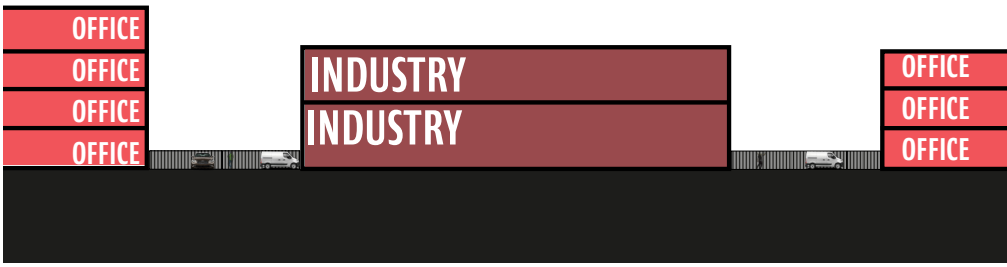
Amsterdam, Netherlands



This former harbour area is under slow transformation to become more mixed. The new plans include high density city blocks. In the plan analysis the oldest garden village vogeldorp is included to show the contrast between the large low-rise industry blocks of the hamerkwartier and the human scale of vogeldorp. The hamerkwartier is filled with desolate concrete plains for industry purposes and is not a very friendly place to be. However, nowadays there are quite some hotspots at the waterfront.



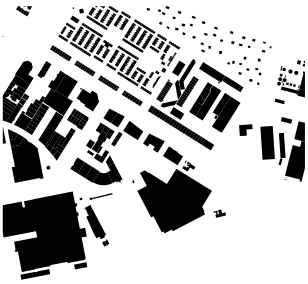




Section



Open space



Figure



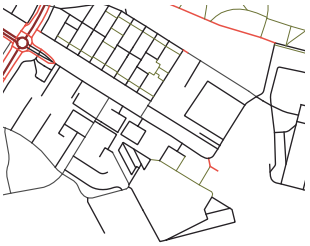
Public transport



Functions



Ground



Road network



Points of interest

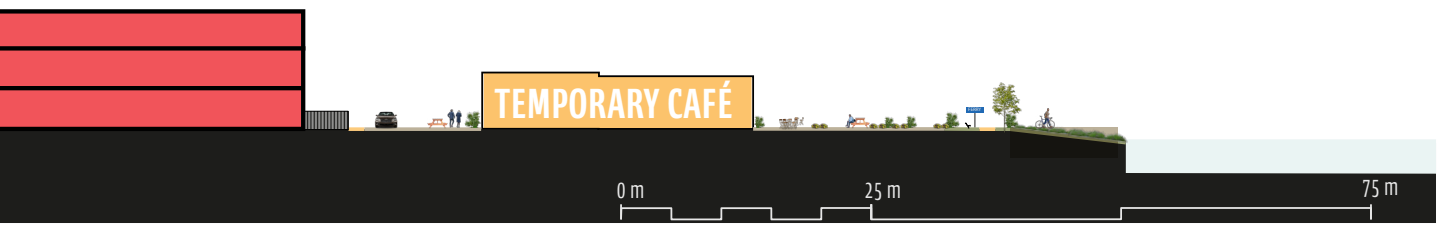
open space
- water
- forest
- park
- grass
- allotments

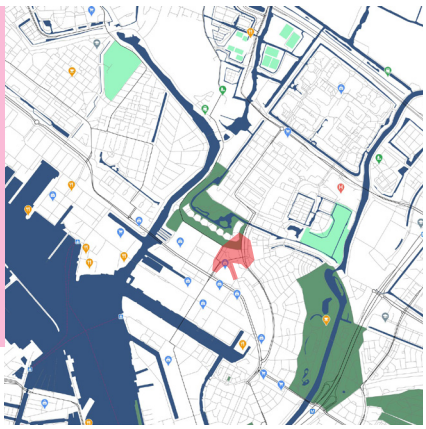
Traffic
- Pedestrian
- Bikelane
- Local streets
- tertiary streets
- unknown

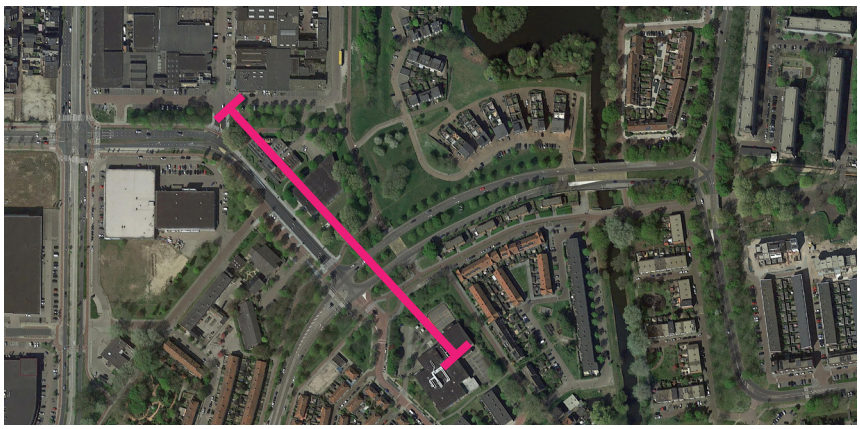
Public transport
- ferry

building functions
- appartments
- mosque
- commercial
- house
- retail
- parking
- industrial
- unknown

Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism







Kampferfoelieweg | 1970

108 inhabitants per hectare

Amsterdam, Netherlands



This crossing is a place where many traffic flows come together and where different urban layouts almost meet. Almost, because the abundance of green space is more of a barrier instead of spatial quality. There is a mix of functions in this leftover space between neighbourhoods but the dominance of the traffic hinders uses that stimulate urban life. The western industrial area will be transformed to a high density mixed use neighbourhood, how the design of that neighbourhood incorporates this crossing is yet unknown.







Section



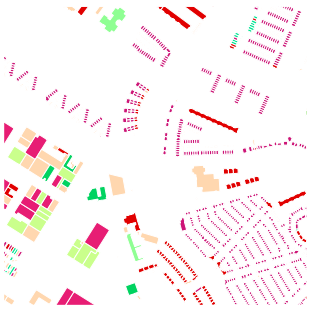
Open space



Figure



Public transport



Functions



Ground



Road network



Points of interest

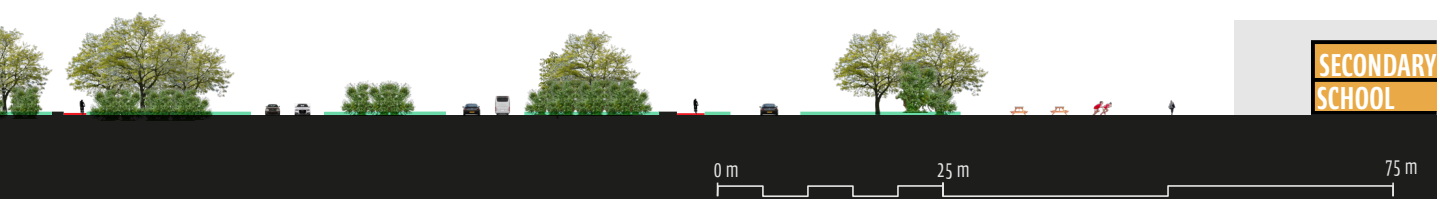
open space
- water
- forest
- park
- grass

Traffic
- Pedestrian
- Bikelane
- Local streets
- tertiary streets
- primary street
- secondary streets
- unknown

Public transport
- bus-stop

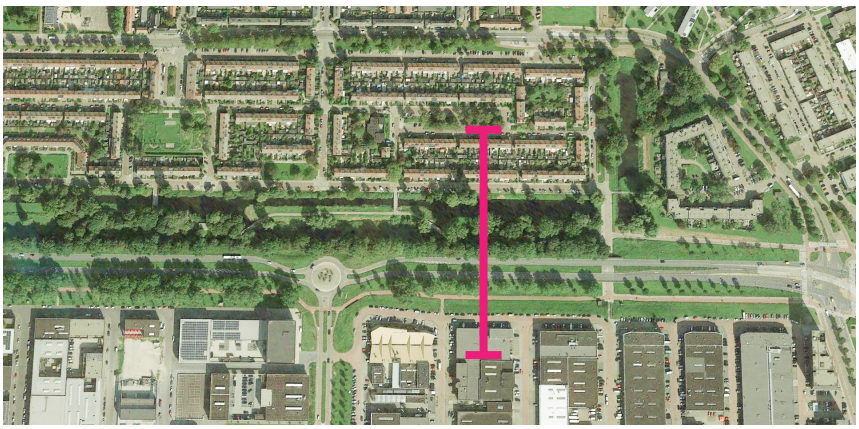
building functions
- appartments
- construction
- commercial
- house
- retail
- school
- church
- industrial
- unknown

Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism



CASES OF INTEREST





Klaprozenweg | 1950

39 inhabitants per hectare

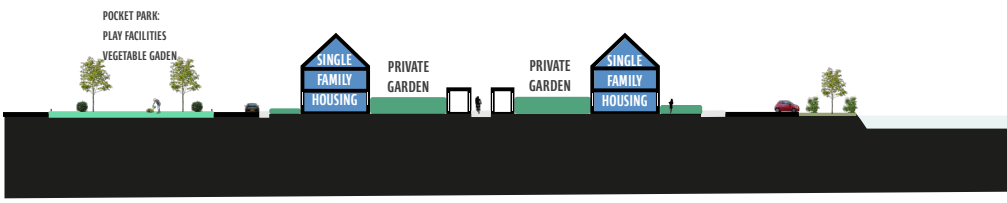
Amsterdam, Netherlands



This street is a typical barrier between industry and a residential neighbourhood. The street and park strip next to it, separate two completely different urban typologies. From both sides accessibility to the other side needs a large detour. Which is not necessarily an issue if the industrial area would not change, but exactly the industrial area is transforming to a mixed use environment while the low rise residential area has not changed as a whole.



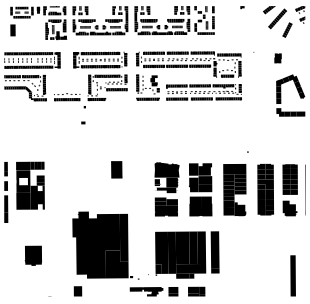




Section



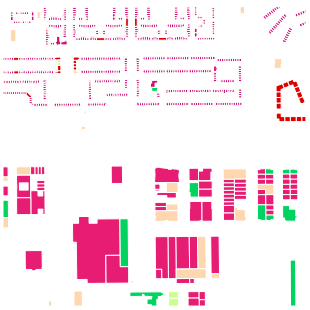
Open space



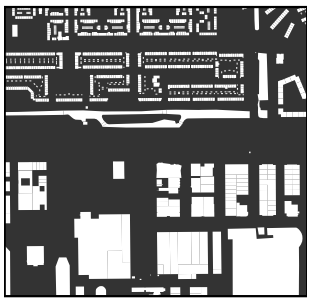
Figure



Public transport



Functions



Ground



Road network



Points of interest

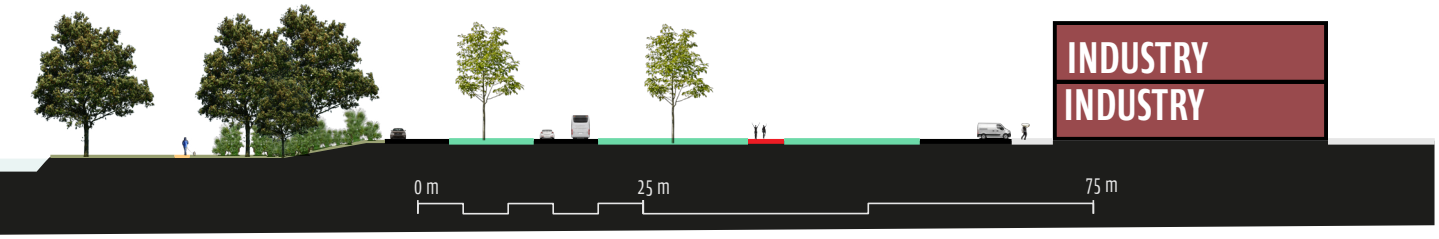
open space
- water
- forest
- park
- grass

Traffic
- Pedestrian
- Bikelane
- Local streets
- tertiary streets
- primary street
- unknown

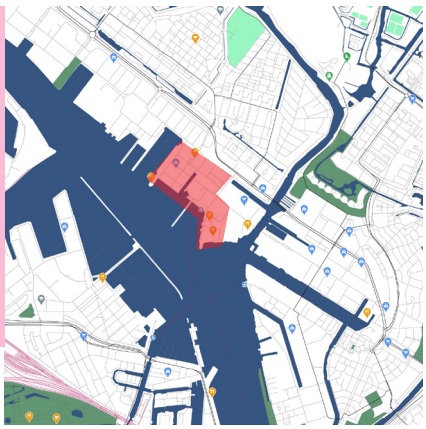
Public transport
- bus-stop

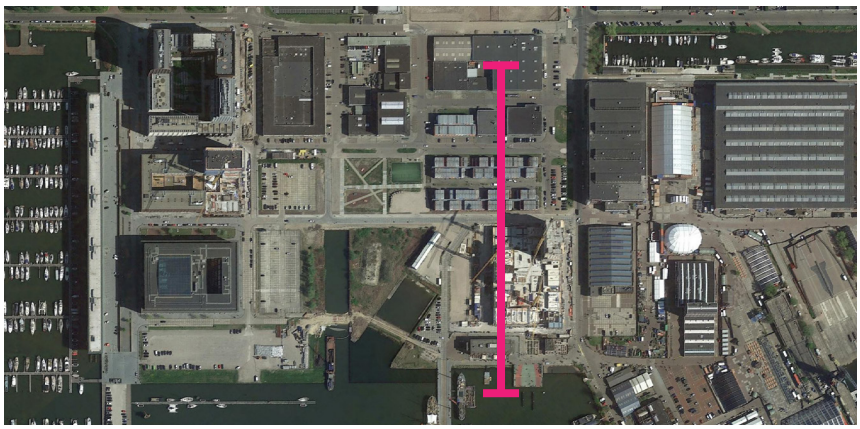
building functions
- appartments
- church
- commercial
- construction
- houseboat
- retail
- house
- industrial
- unknown

Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism



CASES OF INTEREST





NDSM Werf | 1919

64 inhabitants per hectare (under development)

Amsterdam, Netherlands



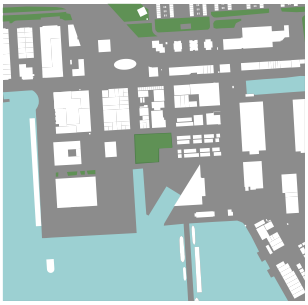
The western part of the NDSM wharf is well-known as a festival-site, for its flea market and for some of the cafes. It is one of the first places where the creative industry settled down and has a strong creative industrial identity. Now it is also a high density development site, with blocks that fit well in the large industrial grain. The klaprozenweg and water border this area and lets it be a small city on its own. While housing and other commercial functions were added in the recent developments it is still a functional industrial area.



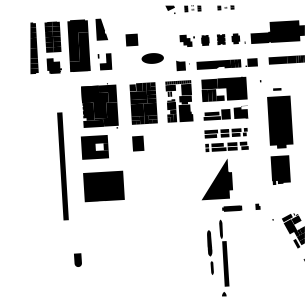




Section



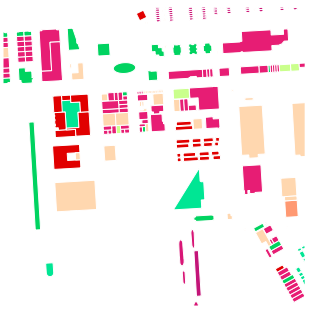
Open space



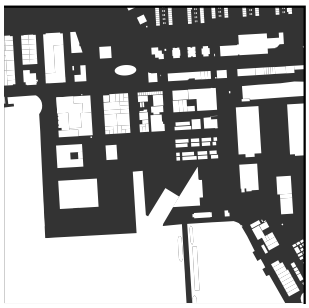
Figure



Public transport



Functions



Ground



Road network



Points of interest

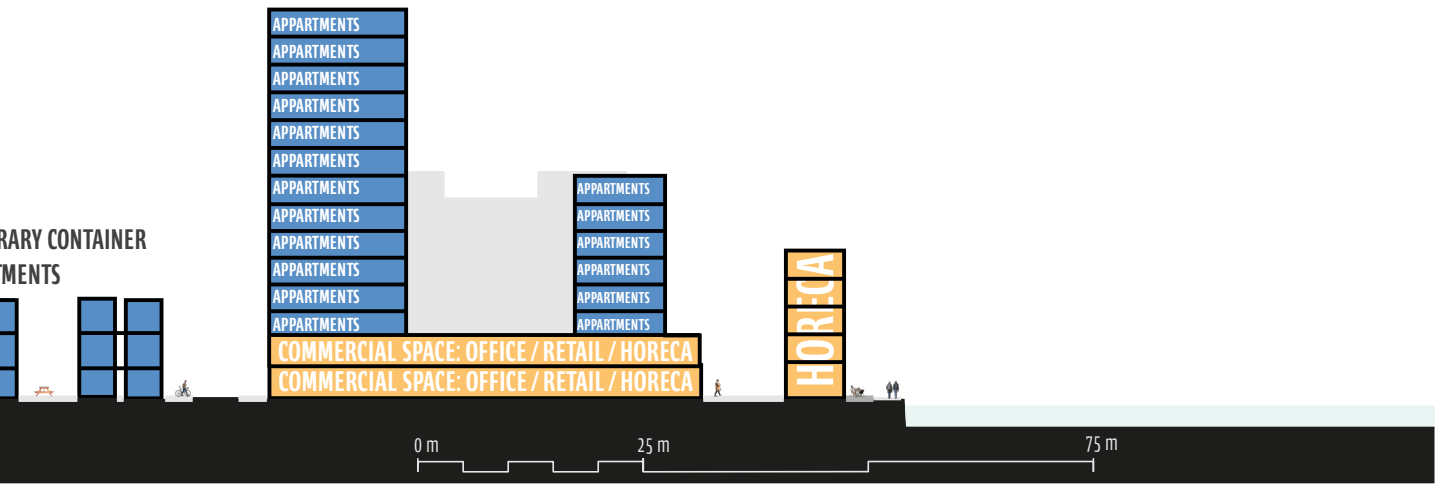
open space
- water
- forest
- park
- grass

Traffic
- Pedestrian
- Bikelane
- Local streets
- tertiary streets
- primary streets
- unknown

Public transport
- Bus-stop
- ferry

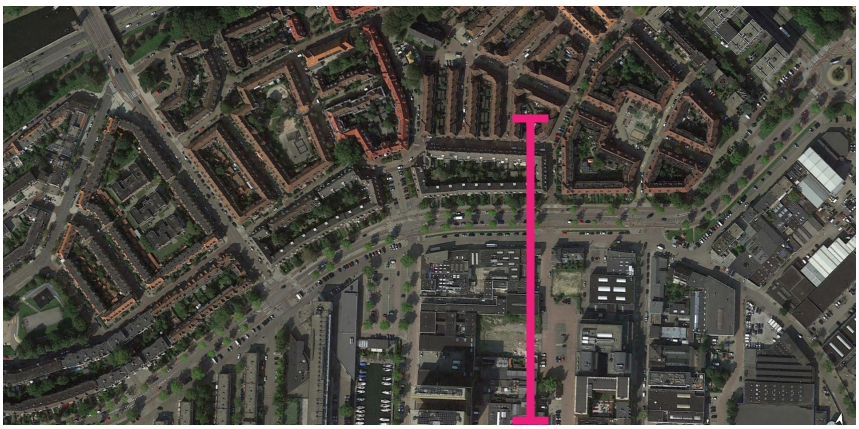
building functions
- appartments
- construction
- commercial
- house
- retail
- hotel
- houseboat
- industrial
- office
- service
- unknown

Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism



CASES OF INTEREST





Meeuwenlaan | 1929

108 inhabitants per hectare

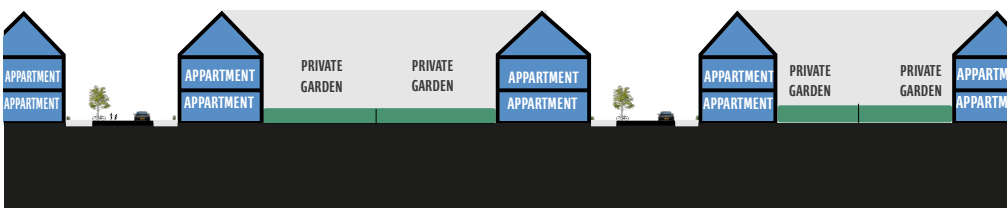
Amsterdam, Netherlands



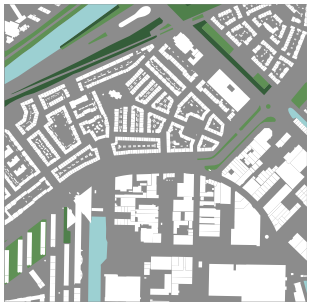
The meeuwenlaan is a barrier between industry and residential area. However, it is possible to see the buildings on the other side of the wide street. There is more interaction and integration between the 2 sides, as the side streets of both neighbourhoods align. Nonetheless, the difference between the urban typologies and its uses remain very large.







Section



Open space



Figure



Public transport



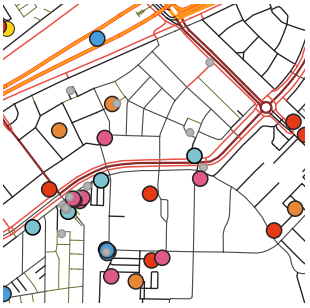
Functions



Ground



Road network



Points of interest

open space
- water
- forest
- park
- grass
- allotments

Traffic
- Pedestrian
- Bikelane
- Local streets
- tertiary streets
- primary street
- secondary streets
- highway
- unknown

Public transport
- bus-stop
- metro
- taxi
- subway

building functions
- appartments
- mosque
- commercial
- house
- retail
- parking
- industrial
- office
- school
- service
- unknown

Points of interest
- public functions
- misc
- health
- leisure
- catering
- Shopping and money
- accomadtion
- tourism

