Advancing the traditional Dutch marketplace:

ensuring access to food

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01

ABSTRACT

This thesis explores the ways in which marketplaces and urban agriculture, can impact access to healthy, affordable food in Bospolder-Tussendijken, a neighbourhood in Rotterdam. With the rise of prosperity-related diseases attributed to poor nutrition, particularly in low socio-economic areas, food prices are increasing. To address these challenges, marketplaces and the integration of food production into urban settings could play an important role in mitigating this issue.

Through a combination of literature review and interviews, a framework was developed to analyze current practices regarding marketplaces and urban agriculture. Additionally, site visits and observations provided typological insights.

The research reveals that historically, marketplaces have been key drivers of urban growth, emphasizing social functions and affordability of food. However, in recent years, there has been a shift towards valuing experience over food itself. Regarding urban agriculture, its primary functions appear to be social, educational, and employment-related. Food production remains predominantly located outside or on the periphery of urban areas. By proposing the creation of a partially covered, multifunctional marketplace, the position of traditional week markets can be preserved for future generations, ensuring continued access to affordable, healthy nutrition.

keywords: marketplace, food market, affordable food, health, urban agriculture


Primera

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CONTENTS

02
CONTEXT

2.1 Introduction

Ever since the increase of general food prices in the Netherlands, differences in access to healthy food between various socio-economic classes have become more apparent. It has impacted supermarkets, week markets and market halls, driving up the costs of nutrition. However, week markets can still be considered the odd one out, as they are able to offer a more affordable price. During the COVID-19 epidemic, there were instances where individuals found themselves unable to afford basic nutrition, particularly when local markets, known for their affordability, were prohibited due to safety measures. This situation left people with no alternative but to rely on comparatively more expensive supermarkets, increasing the financial strain on those already facing economic hardship. Simultaneously, there has been a surge in prosperity-caused diseases linked to bad nutrition, primarily affection citizens in low socio-economic neighbourhoods.

Insights into the functioning of traditional marketplaces, combined with food production, could prevent the decrease in health within these neighbourhoods. The scope of this research will be mainly focussed around Europe and the United States, as market culture and food production is most similar in these western parts in the world. By zooming in on the Netherlands, specifically Rotterdam, typological insights and starting points can be formed.

According to Sezer & Van Melik (2022), marketplaces could be considered to be the main drivers of urban growth. The traditional marketplace, as described by Janssens (2017), serves as a social space where the focal point revolves to a greater or lesser extent revolves around food. The idea of affordable food being a crucial part of marketplaces, is underlined by Dijstelbloem (2013). In Rotterdam, 67 % of visitors cite food and vegetables as their main reason for visiting the market (Boer, 2016). A trend where the focus shifts from price/product to value/experience, can be witnessed globally (Roth, 1999; Van de Wiel & Hospers, 2015; Dijstelbloem, 2013). The role of food within the Dutch landscape has been one that is primarily taking place outside of cities (Dijstelbloem, 2013; Henneman, 2021). The enormous production capacity of these outer city farms, both national and global, means that urban agriculture is primarily used as a way of connecting citizens to nature and farm (Henneman, 2021) while also creating social cohesion and jobs (Mougeot, 2005; Hardman, Clark, Sherrif (2022).

Although research on marketplaces is plentiful, a clear distinction between traditional open air week markets and contemporary market halls becomes apparent. This thesis can introduce practical information on the topic of food and marketplaces, focussing on a more hybrid, fluid form. By using a case study of a traditional week market, that will be observed and analysed, architects, city planners and municipalities are offered typological starting points for creating future-proof marketplaces.

Chapter 2 describes the context for this thesis, starting with an introduction to the case study, followed by a problem statement and methodology. In chapter 3 the topic of marketplaces is explored, using literature review and interviews. Chapter 4 introduces the topic of urban agriculture and contemporary methods by literature review, and map based analyses. Subsequently, chapter 5 consists of an interview with Rotterdam's food garden, providing an example of urban agriculture within Rotterdam's urban landscape. Furthermore, Chapter 6 consists of site specific observational analyses, utilizing intuitive sketches. In chapter 7, an interview Ivo Montijn of WMO Radar offers insights into Pier80, the square's current main building. Following the interview, chapter 8 explores observational insights on three different week markets offers exemplary background information on Dutch Marketplaces. To conclude the research, chapter 9 and 10 answer all research questions and therefore ends the scope of this research. Finally, chapter 11 shows all literature and figures used.

2.2.1 History of **BoTu**

Bospolder-Tussendijken, commonly known by its abbreviation 'BoTu', is a fusion of two distinct neighbourhoods in Rotterdam West, situated within the district of Delfshaven.

Originating in the early 20th century, BoTu's history traces back to its time as part of the municipality of Schiedam before being incorporated into Rotterdam. Initially designated for a new to be built slaughterhouse, the municipal transaction obligated the construction of a 40m wide road connecting Marconiplein to Aelbrechtsluis. However, the slaughterhouse was never realised due to concerns surrounding the potential nuisance of smell that could be caused by the potential abattoir (Whermijer, 1993).

Following the construction of the main road, a masterplan for the neighbourhood was devised, and dwellings began to emerge. Concurrently, the docks south of BoTu were being constructed. The focal point of this paper will be the most adjacent ones, commonly known as M4H. These docs consist out of 'Merwehavens' and 'Vierhavensgebied'. Merwehavens was, and still partly is, used as a fruit dock. The latter primarily housed trans-shipment and a large gas-factory.

Another major part of BoTu's history is the 'forgotten bombardment' of 1943. During the second world war, a large part of the neighbourhood was unintentionally destroyed by allied bombers, killing and wounding hundreds of citizens. After the bombardment, the destroyed area found a new function with Park 1943 and Visserijplein. A monument was placed in the park to commemorate the disaster. Every Thursday and Saturday, a market is held on Visserijplein. The market has 176 stands and is known for its multicultural and varied offer.

2.2.2 Present day **BoTu**

Currently, BoTu stands as a paradigm of a socio-economic delicate area undergoing active revitalization. The Neighbourhood houses roughly 14.000 citizens, of whom more than half belong to the lowest income classes (CBS, 2023). In response to the vulnerability, and other problems such as unemployment, the municipality has been taking action. In 2019, a program by the name 'veerkrachting BoTu 2028' was initiated. This program aims to transform BoTu into 'the first resilient neighbourhood of Rotterdam' (veerkrachting BOTU, 2023).

2.2.3 Future of **BoTu**

BoTu, like other parts of Rotterdam, experiences ongoing spatial and societal transformation. However, a distinctive influence shaping its future is the Merwevierhavens (M4H), visible from the elevated 'dakpark',. Part of a larger masterplan for Rotterdam M4H aims to establish a ' Makers District' surrounding the docks. The five main aims, as outlined by M4H (2019), include attracting innovative companies, creating employment, fostering an open innovation environment, creating an urban living space, and serving as a showcase for the circular future. The integration of existing citizens and qualities of BoTu with the emerging makers district presents a significant opportunity for the neighbourhood's evolution.

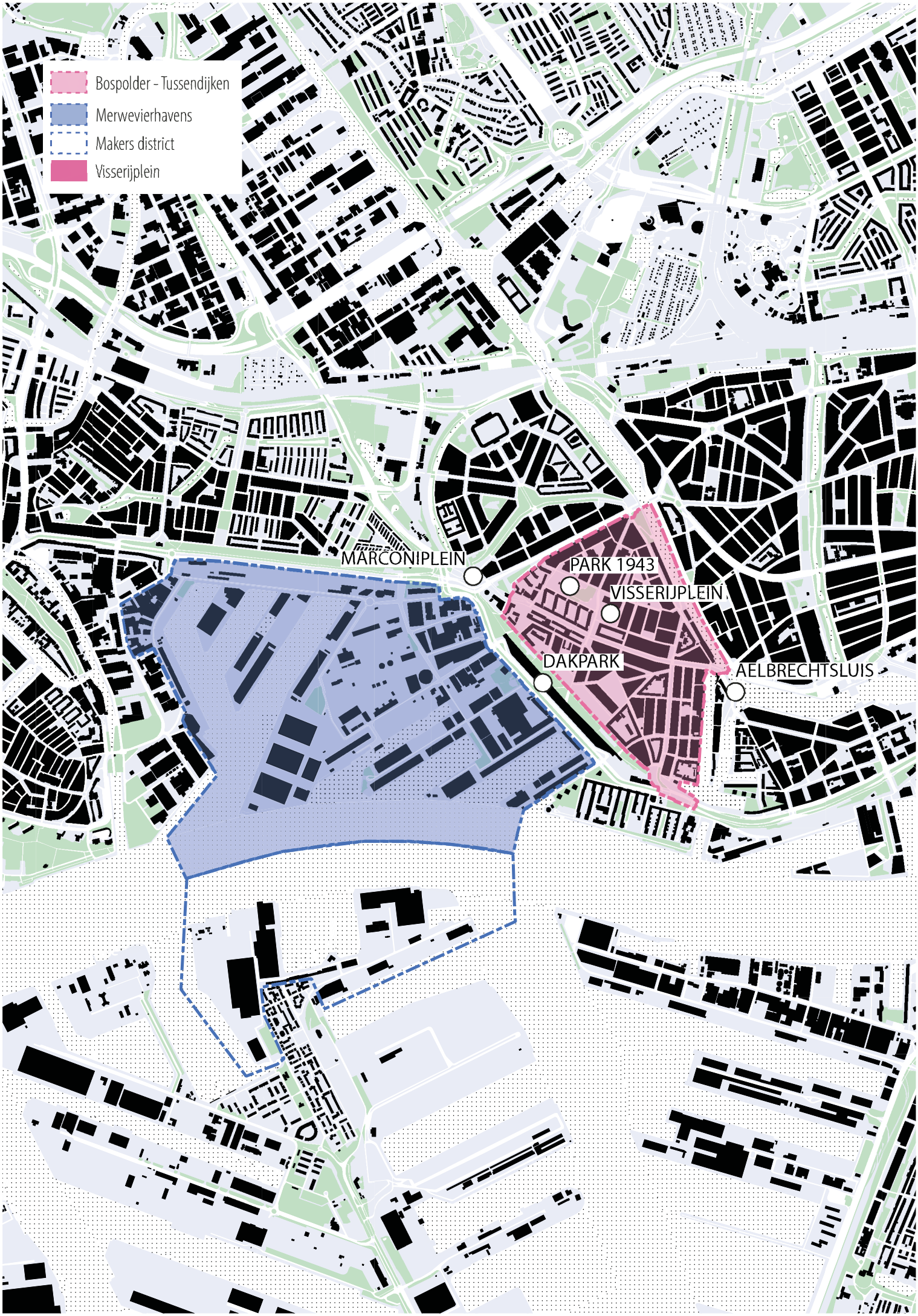


fig. 2.1; map showing context of BoTu and Merwevierhavens

2.3.1 Problem statement

The emergence of modern stylish and trendy markets- and market halls is a global phenomenon observed in small towns and larger cities. These contemporary spaces offer a permanent, more curated and comfortably covered version of traditional week markets, often situated in central, vibrant locations with high ground prices, making them attractive to city planners and developers (Janssens, 2017).

While this shift in modern market culture can be seen as part of the cities' organic growth and renewal, it is crucial not to overlook the valuable qualities of traditional week markets. These markets offer a more widely accessible source of affordable, healthy food (van Baren, 2010). This source of food is of high importance to a large group of lower-income households and should therefore be strengthened as the amount of new market halls is growing. Additionally, traditional week markets serve as significant social spaces, fostering community connections (Janssens, 2017).

In the context of the Netherlands, it is essentioal not to forget the absence of a traditional style in covered market halls, in contrast to the well-established Souther European market traditions (van de Wiel & Hospers, 2015). This absence could potentially impact the quality of the newly constructed Dutch market halls.

Despite the Netherlands being the second largest agricultural exporter in the world (Blonk, et al. 2007), the general population seems to lack information as to what this enormous industry actually looks like (van Lohuizen, 2022). The substantial scale of this industry in such a small country, demands a huge amount of technological efficiency of the production process (Hausleitner, et al. 2018). Consequently, the connection to the way food is produced within the Netherlands is a topic that is becoming more abstract and harder to grasp for the general population.

Examples of introducing food production in a smaller community scale as a tool for education, participation, and consumption are plentiful around Rotterdam. However, these initiatives often face challenges, including a lack of continuous funding and an overall deficit of participant support (Bronsveld, 2014).

Although food plays a substantial role in the Dutch landscape, prosperity-caused diseases in low socio-economic neighbourhoods as a consequence of bad nutrition are on the rise. Simultaneously the price of food, especially sold in supermarkets, has grown substantially. As a consequence, access to healthy nutrition has become harder for low-income households.

2.3.2 hyothesis & questions

A multifunctional building that enhances the position of the weekly market held on 'Visserijplein', can simplify access to affordable, nutritious food. Therefore it could contribute to the overall health status in the 'Bospolder-Tussendijken' neighbourhood and its surroundings.

The research questions that will be used to explore the hypothesis are as follows:

1. What is the role of marketplaces in the current urban (Dutch) landscape?
2. What existing urban farming methods are being utilized to secure access to food?
3. How can the market on Visserijplein be utilized in creating a market hall?

2.4 Methodology

Question 1: Initiating the research process, an in-depth exploration of the history of marketplaces is conducted through literature review. Subsequently, directly observing daily practices at marketplaces, essential aspects influencing the functioning of these markets were analyzed. Additionally, interviews, both informal and detailed, enable the extraction of usable input from professionals in the field.

Question 2: Similar to the approach in question one, the methodology for question two involves literary research on urban agriculture and food related practices within the urban context. To supplement and/or enhance current knowledge, interviews with professionals are used, in combination with the visitation of reference projects in Rotterdam.

Question 3: Commencing with an exploration of historical background context through literature review and general architectural site analysis, a combination of site visits, resulting in observational drawings and pictures, portrays a clear picture of the situational problems at hand. By testing the design concept on the citizens of BoTu in the later stages of the design process, pros and cons of the proposed design can be analysed and refined.

Additionally, collective research into the 'productive city' will serve as valuable information on the implications of creating work opportunities within neighbourhoods. The part used for this thesis will mainly be centred around the logistical side, as this is a critical part of markets. The research will additionally lead to an article that may be published.

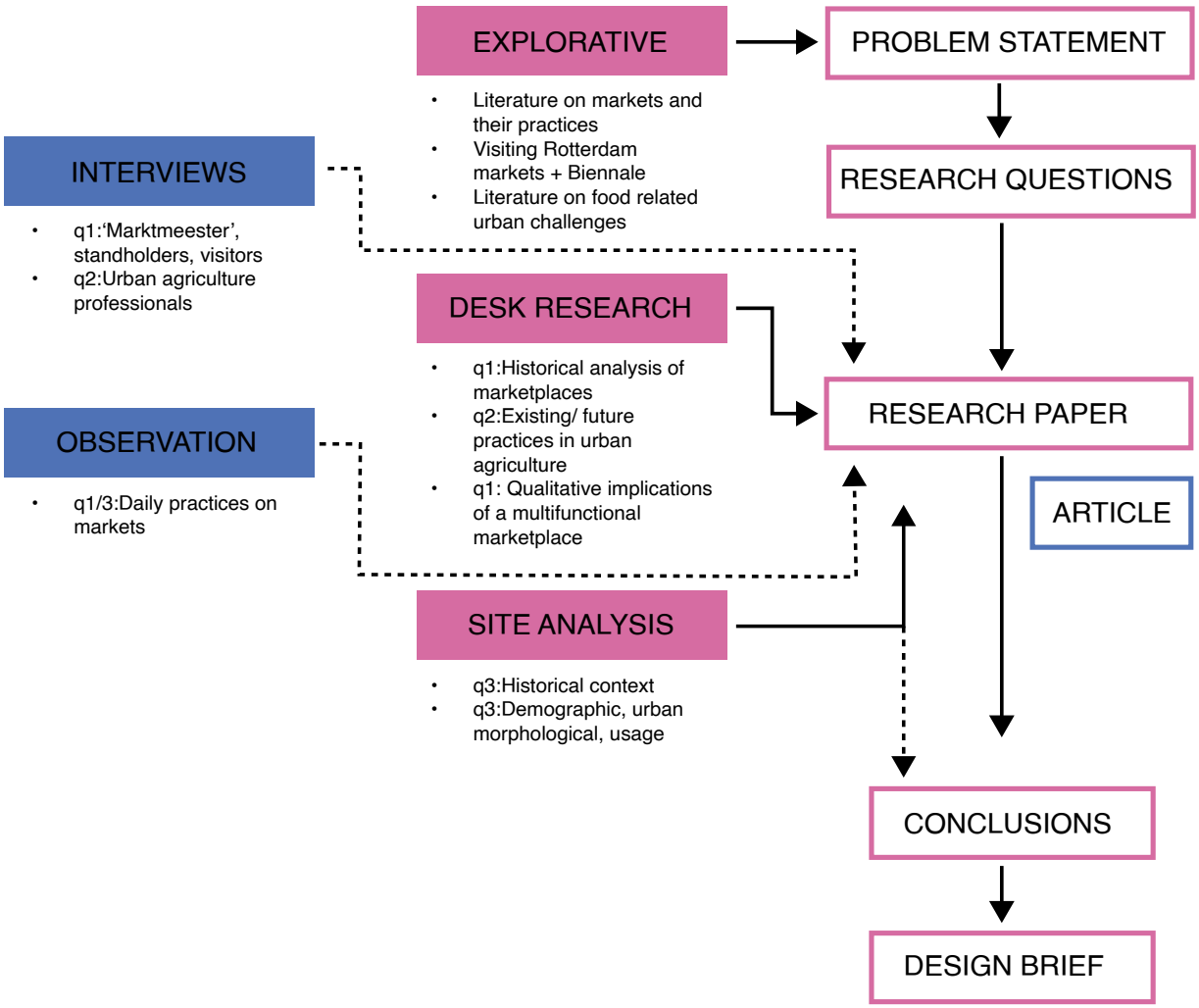


Fig. 2.2; Schematic methodology

03
MARKETPLACES

fig. 3.1; collage of tradtional open air week markets in Rotterdam & Amsterdam

3.1 History of **marketplaces**

The history of open-air marketplaces can be traced back as far as 9000 – 6000 B.C., marked by the inception of transactions involving agricultural goods (Ross, 2019). Notably, marketplaces could even be considered to be the main driver behind urban growth. After all, they have historically always served as places where goods vital for the improvement of cities are exchanged (Sezer & Van Melik, 2022).

Originally situated in central areas with a consistent flow of passersby, marketplaces underwent a transformative shift around the late 17th century. This area marked the emergence of open-air and covered shops, where merchants would set up static shops concealed behind glass windows (Galema & van Hoogstraten, 2005).

In contrast to several European counterparts, the Netherlands did not experience a strong surge in the prevalence of covered market halls. An explanation could be that the explosive population growth following the industrial revolution, in countries like England, did not transpire on a comparable scale in The Netherlands (van de Wiel & Hospers, 2015).

3.2 Food-focussed **marketplaces**

Dutch researcher Janssens (2017) defines marketplaces as dynamic entities embedded in relational networks of products, people, and ideas. These urban and ambulatory settings serve as tangible nodes where potential buyers and sellers can engage in actual interactions. Notably, the focal point of these marketplaces revolves to a greater or lesser extent around food, showcasing a diverse array of appearances—from open-air street markets to covered market halls.

Another perspective is offered in a Dutch research paper regarding a market hall in Amsterdam. This paper highlights the idea of marketplaces being centred around food as well. Dijstelbloem (2013) states, that the concept of the 'Central Market hall' in Amsterdam, was designed to centralize centralizing provision sales, whilst creating a space that's open to the public. This marketplace, originally functioning as an open-air market in 1895, was transformed into its contemporary covered version in 1934. This modification aimed to help regulate and decrease the nuisance associated with its former state.

Expending on Dijstelbloem's statement, van Baren (2010) underscores that the main part of vegetables and fruit that is sold on 'day markets', including the central market hall, consists out of mostly inexpensive remainders. Boer (2016) re-enforces these statements through a questionnaire focused on describing Rotterdam's market visitors, when queried about their primary reasons for visiting the market, 67 % cited food and vegetables as their main reason for visiting. Furthermore, Rotterdam's head of markets noted that non-food items are becoming less attractive to sell at markets in the Netherlands, attributing it to chains like Primark and Action. This trend however, is not exclusive to non-food related items, as the growing delivery society in the Netherlands also impacts the attractiveness of food-related stands (G. Giuliano, personal communication, december 8 2023).

3.3 Contemporary **marketplaces**

A research paper from the United States on the revival of urban marketplaces, as highlighted by Ali (2007), underscores that the function of contemporary markets is primarily centred around direct, face-to-face transactions. Ali (2017) further notes that a significant part of the products sold in these markets can be traced back to surrounding areas. Concurrently, the importance of personal experience also seems emerge as a pivotal aspect of contemporary marketplaces in the USA. This signifies that a shift in focus from price/ product, to value/ experience is taking place (Roth, 1999).

The emerging trend of a growing emphasis on value/ experience-based orientation in marketplaces is also evident in Dutch literature. An example of this modern interpretation of marketplaces is the 'Markthal' in Rotterdam. Van de Wiel & Hospers (2015) assert that

the main purpose of this market hall revolves around creating an exclusive, appealing environment tailored for direct consumption. A parallel transformation is observed in the current version of the earlier mentioned central market hall in Amsterdam. The municipalities reason for the renovation, as outlined by (Dijstelbloem, 2013) was to 'bring back the public character'. However, this public character is translated into a trendy, direct consumption-based food hall.

3.4 Social marketplaces

In addition to their primary function in providing food for consumers, markets are strongly bound to social interactions (Ali, 2020). Agnew's work, *'Worlds apart...'* (1986) delves into the multifaceted function of social spaces in marketplaces by comparing them to theatres. Agnew claims that as they are both spatial and cultural stages, they operate as *"... the threshold of exchange between different social worlds."*

Facilitating this exchange requires a combination of movements from traders, customers, goods, and stalls, forming a ' knot', as described by Breines et al. (2021) (see fig. 3.2a). They go on to highlight that when movement is restricted, an example being the COVID-19 lock downs, sanitized places emerge, lacking their usual social qualities (see fig 3.2b).

When querying Rotterdam's market visitors on reasons for visiting the market, 46 % answered social reasons. Oddly enough, 47 % of the participants who felt the market was an unsafe place, identified crowdedness as their primary concern. Additionally, when asked how the market could be made more attractive, 35 % answered that the market should be set up in a more spacious way, to counter the current crowdedness (Boer, 2016).

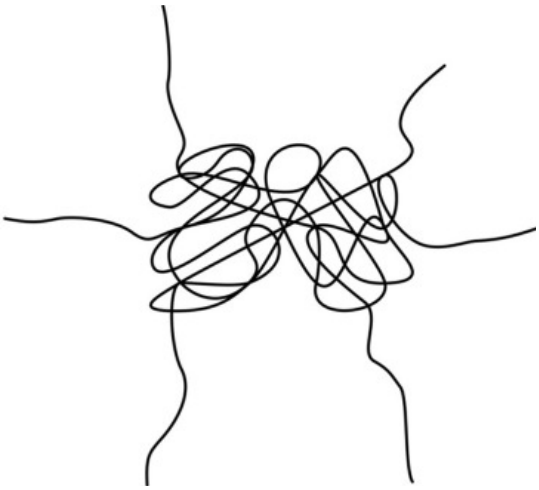


fig. 3.2a; randomized movement

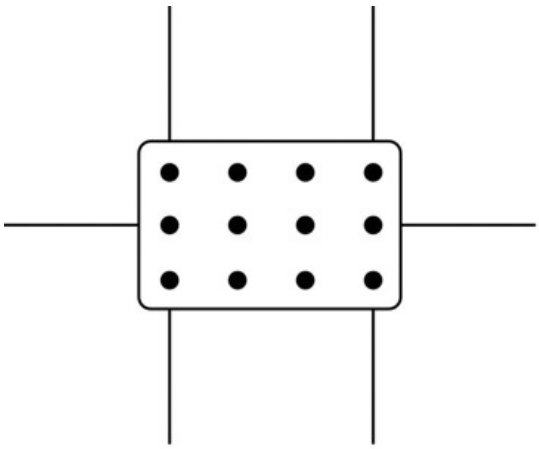


fig. 3.2b; static marketplace


huisartsen

04
FOOD LANDSCAPES

4.1 Historical urban agriculture

To conduct a thorough analysis on the topic of urban agriculture, the definition of the term needs to be made clear first as it is often employed too loosely. Despite its current prominence in contemporary architectural and urban-planning-oriented projects, the practice of farming within urban areas has deep historical roots, dating back to the late Aztec period, where the Aztecs cultivated small man-made islands to grow various kinds of crops within the urban landscape (Ebel, 2020).

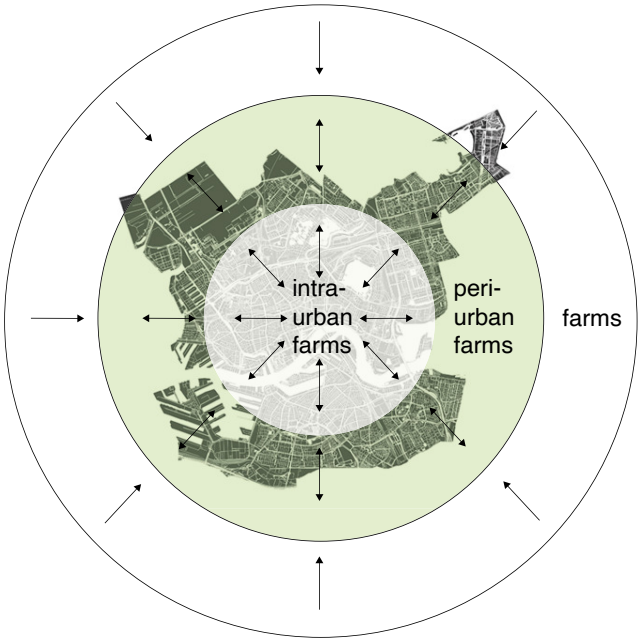
In The Netherlands the traditional space for large-scale food production has always occurred on the agricultural grounds that are situated outside the city borders (Dijstelbloem, 2013). This historical pattern underscores a distinct divide between the urban landscape and the countryside, which is also evident within the Dutch political and sociological landscape. Subsequently, The Dutch Ministry of Nature and Agriculture, primarily sees urban agriculture as a way of connecting consumers to nature and farmers (Henneman, 2021).

The notion that urban agriculture is a proven way to bridge the gap between consumers and producers is underlined by various other researchers. They continue that it can simultaneously be used to create social cohesion and jobs within neighbourhoods (Mougeot, 2005 & Hardman, Clark, Sherrif, 2022)

The city of Rotterdam defines a comprehensive definition of urban agriculture, encompassing both intra-urban and peri-urban contexts (fig. 4.1), with a scope ranging from commercial to non-commercial practices. Their definition further encompasses the trade, processing, and distribution of produce. Additionally, they note the reciprocal relationship between city and farm. Farms use the cities resources and subsequently deliver products and services back to the city (Stadsontwikkeling, 2012).

Diehl & Kaur (2022) adopt a similar definition of urban agriculture, although they offer more extensive sources such as that of Veenhuizen

fig. 4.1; farms and their urban relation - Blom, 2024



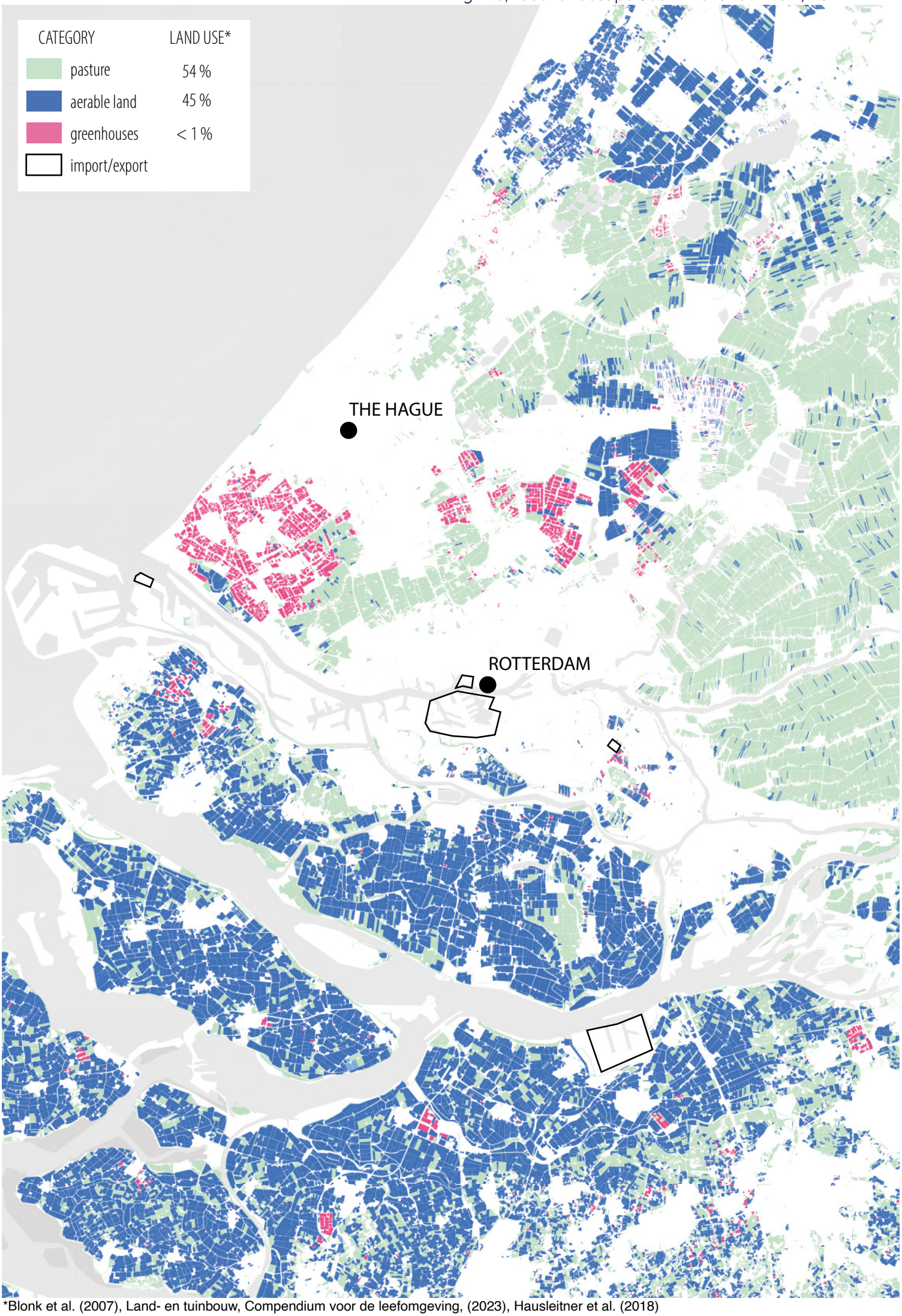
(2006). They expand on the definition by defining 'products and services' characterizing them as integral components of the urban economic, social, and ecological system. According to them, urban agriculture relies on urban resources, produces for urban citizens, is shaped by urban conditions, and exerts influence on the urban context, impacting food security, poverty, and health aspects.

4.2 Vertical agriculture

A contemporary form of urban agriculture that has emerged in recent years, is a more technical one called 'vertical farm' or 'plant factory'. This refers to an intensive way of producing plants indoors, by vertically stacking plants in shelves or inclined structures (Butturini & Marcelis, 2020). For the purpose of this research paper, the term vertical farm will be used, as this is more common in Europe. The term appears to be favoured due to the association of freshness with 'farm' as opposed to the industrial character of 'factory'.

Graamans (2021) contributes technical intricacies to the definition, characterizing vertical farms as closed production systems aimed at maximizing, productivity, efficiency and density. Key factors in this process include lighting, temperature, C02 and humidity.

fig. 4.3; food landscape South Holland - Blom, 2024



*Blonk et al. (2007), Land- en tuinbouw, Compendium voor de leefomgeving, (2023), Hausleitner et al. (2018)

Conceptual examples of these indoor farms in the Dutch landscape can be found in a web publication by a Rotterdam-based architecture firm. They underscore that 'indoor farming' is the future of urban farming. This approach allows crops to be cultivated anywhere at any time with minimal land use (Indoor Farming - Shift, 2015). They describe four different scale levels of these farms that serve multiple purposes (fig. 4.4).

However in an interview with *Growy,* Dutch market leader in vertical farming, adds some nuance. While acknowledging the global potential of vertical farming they argue that The Netherlands might not be the main focus to commercialize this contemporary form of farming. This assertion is based on the existing production landscape and the cheap food costs it creates, along with the (currently) expensive costs of producing of vertical farming. They emphasize that it might be more logical to focus on places where less advanced food landscapes are in place (L. van de Kreken, personal communication december 11 2023). She adds that the development and education are still best suited here, as the Netherlands is known for its knowledge-economy surrounding farming practices.

Another market leader in vertical farming called Infarm, serves as an example of the uncertainties surrounding this technology. Despite receiving various large investments and making promises of imminent produce, the company suddenly vanished. It appeared that the technology they were claiming to inhabit was non-existent, highlighting the unpredictable phase of vertical farming (Partington, 2023).

A critical drawback associated with vertical farming, is the lack of social value it creates. For instance, van de Kreken, (2023) states in an interview that although their R&D team consists out of about 60 people, their newest and largest farm, will require manual labour from a maximum of five people. This reliance on AI and other technological implementations to minimize production costs, raises concerns about the social implications of widespread adoption of vertical farming.

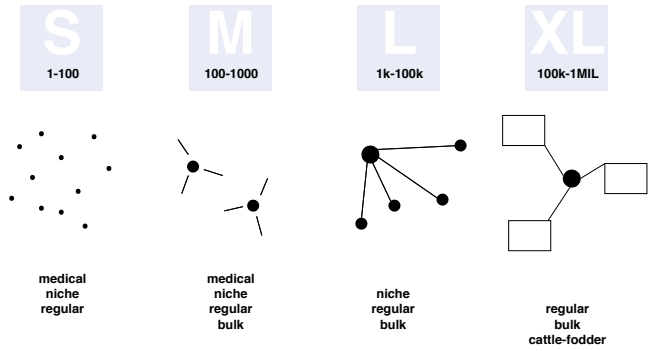


fig. 4.4; categorized vertical farm sizes according to Shift, (2015). - Blom (2024)

4.3 Food landscape

Two thirds of The Netherland's total land area is dedicated to pasture and agricultural purposes (Blonk et al., 2017). The land area can be categorized into pasture, arable land and greenhouses. Figure 4.3 visualizes these categories in the region surrounding Rotterdam, with a crucial note that the percentages are based on the complete Netherlands, not just the visible area in this figure.

Upon closer inspection of the map, it becomes evident that a substantial portion of food production surrounds the city of Rotterdam and other cities in the Western Randstad. To the South, the predominant agricultural produce consists out of potatoes, grain, and similar crops. North of Rotterdam, vast expanses of pastures and other grassland can be found, complemented by a small share of arable land. To the North- and North-West, the region called 'Westland' emerges. Despite its relatively low footprint, the region hosts some of the most advanced production facilities in the world (Hausleitner et al., 2018). In contrast to the other agricultural areas, almost all production here is focussed on horticulture and takes place in giant greenhouses.

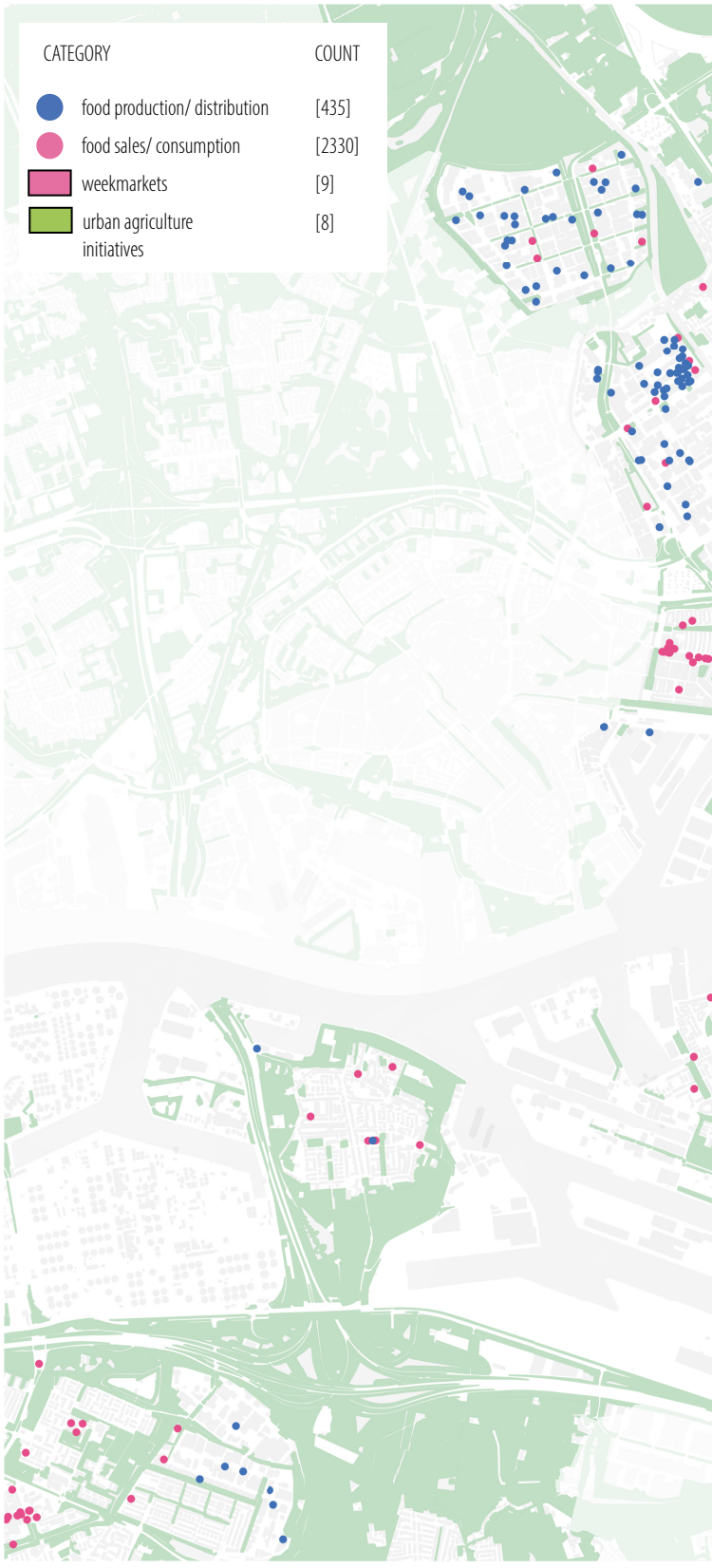
While the Netherlands hosts an enormous amount of food production capacity, a significant proportion of the land used for this purpose is designated for export rather than domestic consumption. Blonk et al. (2007) report that approximately 15 % of agricultural land used for Dutch consumption, with the vast majority used for export. The land needed for Dutch food consumption is estimated at 4,1 million hectares (PBL, 2012). This translates to roughly the same size as the total land mass of the Netherlands.

4.4 Rotterdam

By changing scale to Rotterdam, a completely different landscape arises to the surface. In figure 4.5 facilities surrounding food production (wholesale, manufacturing, production equipment) and consumption (shops, supermarkets, commerce, restaurants) are visualized using dots. Additionally, places where week markets and larger scale urban agriculture takes place are marked.

For the city of Rotterdam, it becomes apparent that most food production takes place on the borders of the city and around its docks. Consumption on the other hand, is mainly centred along the axis' of main streets leading into the city centre. Number wise, the consumption based companies vastly outnumber production numbers.

Furthermore, the relatively sparse number of urban agriculture initiatives within Rotterdam stands out.



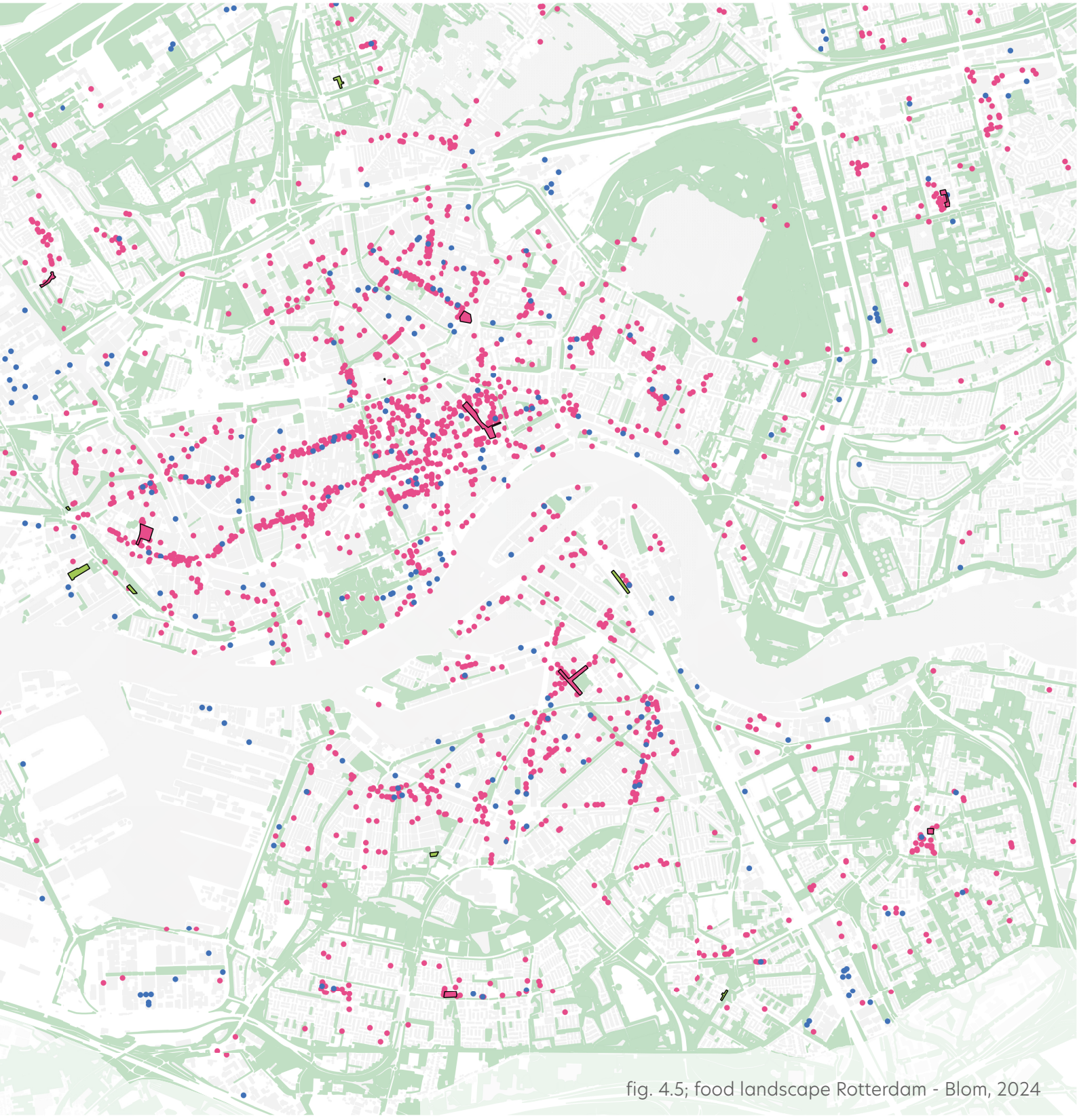


fig. 4.5; food landscape Rotterdam - Blom, 2024

#05
STICHTING VOEDSELTUIN

During the economic crises of the 2010's, an initiative was started in Merwevierhaven to enhance access to fresh food for Rotterdam's citizens. Adjacent to the Netherland's first food bank, a vacant lot was transformed into a vegetable patch. Traditionally, small-scale vegetable patches across the city were harvested and sold their yields seasonly, resulting in a temporary surplus' of goods at certain times, making it complicated to sustain a steady flow of goods to the food bank. The allotment was instigated so that these logistical problems would be minimized, while alsof fulfilling an important social role. Despite its apparent simplicity, the organizational complexities surrounding distribution and logistics remained. Or as Tineke van der Burg noted: "...it's a brilliant plan, but it gives rise to extremely complicated logistics."

In partnership with 'Stichting Gek op Werk', the Rotterdam food garden sought to cultivate fresh produce while simultaneously offering a structured program for individuals with psychiatric backgrounds and a distance to the job market. Engaging in manual labour is extremely helpful in offering these people a day task. As Tineke puts it: "As the plants grow, the people do too." Fourteen years later, a total number 75 individuals from diverse societal backgrounds volunteer in the garden, divided over five mornings of work per week.

Over the years, logistical challenges have arisen. For instance, new regulations prohibited the food garden from supplying the food bank without packaging their produce. In response, the foundation began distributing their own produce directly, albeit briefly, as they were forced to comply to European laws mandating proper refrigeration for food distribution. Presently, the solution to these challenges entails dividing the produce over various stands and shops around Rotterdam. Additionally, a collaboration with FoodUnion allows chefs to harvest fresh herbs from the garden.

The total yield of the garden remains unclear, deemed unnecessary by the foundation as they do not operate commercially. Unlike many other food gardens that have disappeared due to financial problems, this garden has persevered through a combination of subsidies, partnerships and sponsorships. Nonetheless, its future remains uncertain, with its contract subject to temporary extensions every two years.

fig. 5.1; Voedseltuin - Stichting wijkcollectie (2023)

fig. 5.2; Voedseltuin - Stichting wijkcollectie (2023)


"Niet alleen de plantjes groeien,
maar ook de mensen."

06
VISSERIJPLEIN

6.1 Intro

Visserijplein and its surrounding areas change within their urban context throughout time. While the vast majority of changes is naturally random and hard to pinpoint, certain patterns could be found by visiting the area at multiple hours and days throughout the timespan of roughly a month. Throughout this research, Tuesday, Wednesday and Thursday were used as a reference point.

The observational methodology employed capturing pictures during multiple visits. Subsequently, these images were analysed utilizing sketches that highlight various points of interest. The visual representations, presented in figures 5.1 through 5.4 illustrate the contextual changes on both Tuesday and Wednesday, outside the market's operating hours. It is therefore important to underscore the distinctive utilization of the square, which is especially contrastive on Thursday and Saturday compared to the rest of the week.

Wednesday morning

Starting from Delfshaven subway station, the main streets seem to be fairly filled with cars and some pedestrians on the sidewalks. Starting at position one, the only usage of space seems to be taken by cars that are parked along the road. Continuing to the square, a handful op pedestrians can be seen crossing the open space or walking along the roads. The square is being prepared for the market on Thursday, about 4 men can be seen unloading the market stands. Pier80 seems to be open and is being used as a meeting space by a handful of women that are conversing inside.

Thursday morning

After turning the same corner from Delfshaven as the day before, the streets seem to have changed. Even though the sun has not come up yet, there are people in line at stands that are not even fully stocked yet. The area is buzzing with both busy market salesman unloading their wares and throwing around anti-freeze salt while seemingly regular customers are conversing with eachother. It is a coming and going of cars, some large and some small. On the corner at point 2 there seems to be a stand handing out free products. There are about 20 people trying to get their hands on these wares.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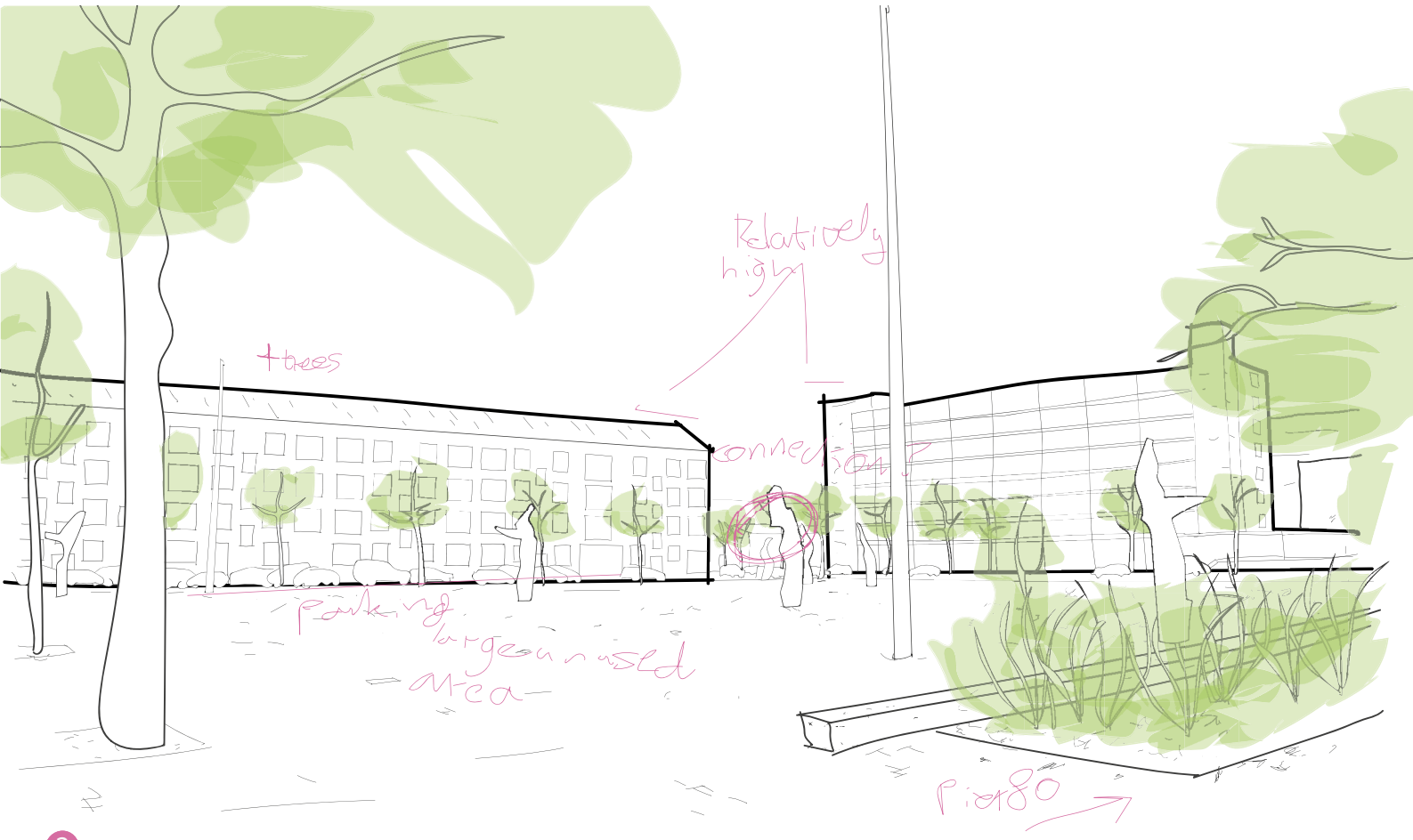
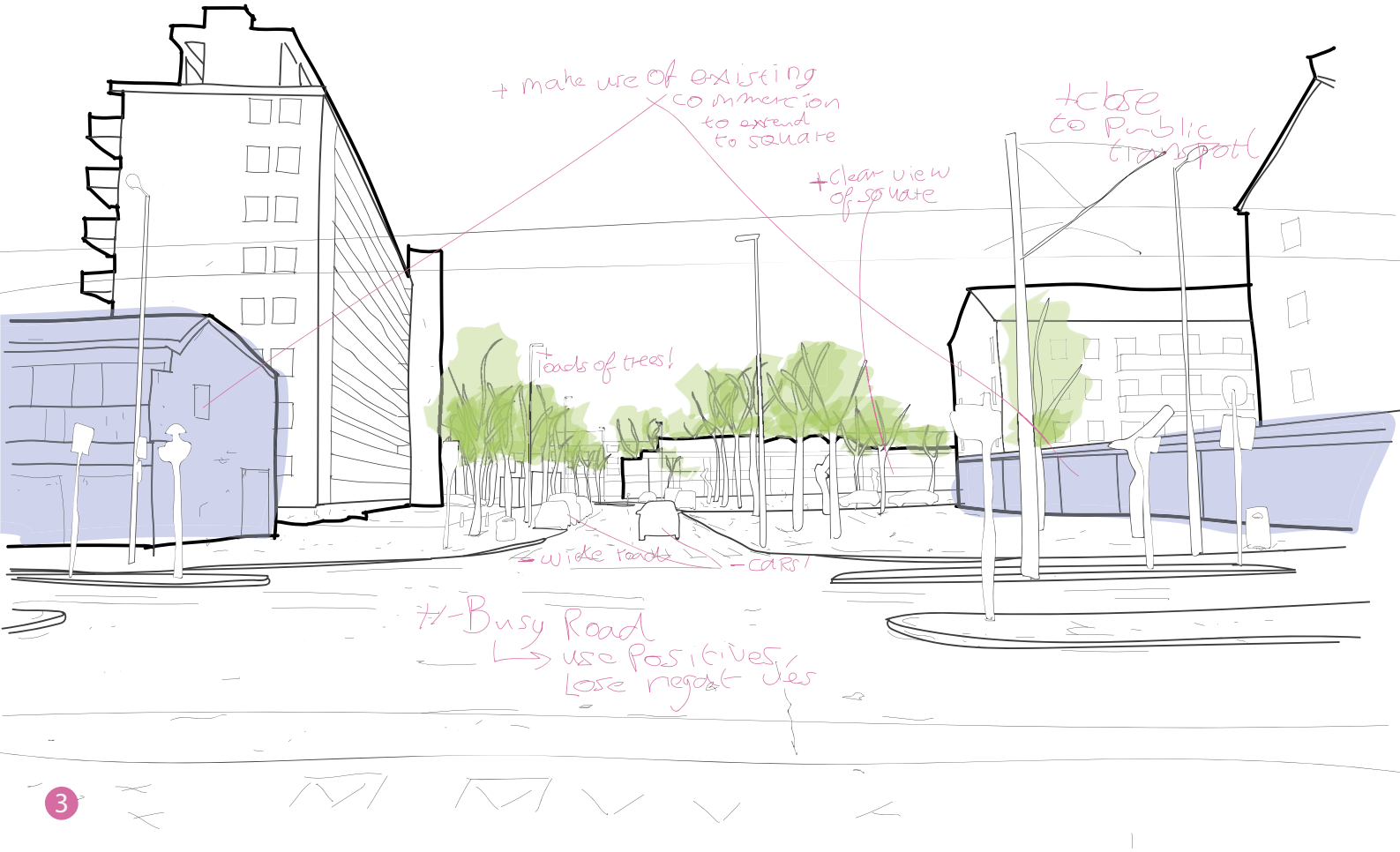

Relatively high
trees
connection?
parking
large unused area
P+R 180

2


+ make use of existing commercion to extend to square
+close to public transport
+clear view of square
+loads of trees!
-wide roads
-CARS!
#-Busy Road
use positives, lose negatives

3


+ logistic
Headmability
- loads
of rubbage
- too much
parking
+ trees
- lots of unused
space

4

#07
WIJKGEBOUW PIER80

The neighbourhood building on VIsserijplein, has been a central part of the square since the 1950's. However, the structure itself has undergone several transformations. The current building was built in the 1980's and underwent renovations in 2015. ADditionally, the organisations housed within have changed throughout the years. Since 2013, WMO Radar, an organisation active in 'social management', has utilized it as it's 'huis van de wijk' or 'neighbourhood house'. The building is run by volunteers, ensuring clean spaces, organising activities and various daily tasks. Alongside social management, Pier80 accomodates other entities such as youth and elderly services, house visitation programs, a library and sports facilities.

Before 2015, themunicipality controlled the building, primarily focussing on sports and cultural activities. Ivo Montijn, head of social management, describes the prior state of the building less than desirable; "Before WMO Radar;s occupancy, the building resembled more of a disguised sports canteen. Alcohol consumption was permitted, leading to individuals lounging outside with a bottle of Heineken at 10' o clock in the morning." He also highlights the narrowness and unused spaces that are found throughout the building; “It’s layout is extremely awkward, with its useless, narrow hallways and dark spaces.”

To adress these shortcomings, the renovation necessitated demolishing walls to create a more open space. The ground floor’s open layout organically caters to the diverse needs of various groups. According to Ivo, you can clearly observe the different nationalities congregating; "You've got the native Dutch, a large Surinamese group, Hindu's, Turkish, Marocan and a Croation group. [...] There's a large number of Bulgarians that don't seem to come in, they probably have their own spaces". Another group that does not utilize the building is youngsters, as they have their own building across the street.

Regarding Pier80’s expansion, Ivo emphasizes its possibilities and constraints. While a terrace facing south might seem appealing to the average person, it could exacerbate existing issues. He explans, "Normally, drug-users, dealers and large group of men arrive alongside the market. If we would allow alcohol use on a terrace I'm sure there would be drunk people laying around the square." As for the feasibility of an alcohol-free terrace, Ivo underscores the volunteer-driven nature of operations, suggesting that expecting them to manage such a space as a professional café staff would be unrealistic.

fig. 7.1; Pier80 - Stichting wijkcollectie (2023)

Regarding Visserijplein, there have been discussions regarding improvements to the square. A proposal to relocate the market from the square to Grote VIsserijstraat got significant backlash from BoTu residents. This resistance may stem from the street's vital role in providing access to various schools in the area, along with he reluctance from the street's shops to endorse such plans.Additionally, the market setup on Wednesday and Friday, creates noise concerns that would arise setup occurred before the market opens on Thursday or Saturday.

In addition to noise and infrastructure issues, logistical challenges faced by market workers need attention. For instance, the current sanitary solution is a pee-column directly in front of the building. Not only does this create unappealing visual image, it also discriminates against women that are forced to utilize the toilets inside of the building. This becomes problematic when the building remains closed while people are already present on the square.

Proposals to enhance market quality have encountered opposition from users and operators alike. Concerns arise that improved quality leads to higher prices, potentially excluding those reliant on the market for affordable produce. Ivo emphasizes the importance of preventing increased costs. He notes, "I could imagine something more alike a Moroccan market, where you've got simple canopies keeping the people dry and creating covered spaces without costing too much."

fig. 7.2; Pier80 - Stichting wijkcollectie (2023)

“En vooral in de zomer heb je ook groepen mannen die dan zitten te zuipen voor de deur, daar zijne we met handhaving echt elke zomer mee bezig van jongens, doe hier wat mee want het is geen aangezicht voor ons.”

08

MARKET VISITS

8.1 Market visits

In addition to the desk-research employed throughout this research paper, field observation has been utilized on the topic of week markets. This chapter aims to provide a descriptive account of the contextual details derived from a varying amount of visits to markets spanning from September 2023 to April 2024. The frequency of visits is shown beside the subtitles. The visits have yielded insights, used to the final design and structure of this graduation project. Four markets were observed thoroughly:

Binnenrotte Rotterdam (tue&sat), Visserijplein Rotterdam (thu&sat), and Afrikaandermarkt Rotterdam (wed&sat). The varying times at which these markets were visited offer a well-rounded perspective on market culture in Rotterdam.

8.1.1 Binnenrotte (8 times, mainly morning hours)

The Binnenrotte market is one of the Netherland's largest, drawing in a considerable number of visitors every Tuesday and Saturday, bad or good weather. To dodge the busiest hours, it is best to visit the market either before 11:00 or after 16:00. Structurally, the market is set up in a linear way leading to a central crossroad that offers a well structured, though sometimes inefficient way of transportation. This linear setup is likely used to minimalize conjunction due to the high number of visitors. However, this does hinder the possibility of easily crossing from one side to the other.

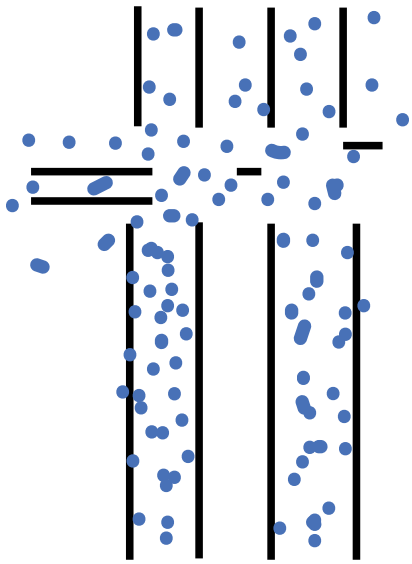


fig. 9.1; Schematic layout of Binnenrotte market - Blom (2024)

Demographically, the market's visitors seem to mostly consist out of older people from a diverse range of cultures and countries. Overheard conversations hint that younger demographics may not frequent the market as much. "I don't think young people really go to the market." is a quote that was picked up while eavesdropping behind two ladies, presumably a mother and her daughter. Despite its popularity, prices at the Binnenrotte market tend to lean towards the higher end, partly attributed to the prevalence of organic produce stands compared to other markets.

8.1.2 Visserijplein (10x, various hours)

The focus of this graduation project lies on Visserijplein, a vibrant hub within the Bospolder-Tussendijken neighbourhood. While many market stalls here mirror those found at the Afrikaandermarkt, Visserijplein's smalerl scale fosters a distinct of social dynamic, providing avenues for low-level engagement among local residents and those from surrounding neighbourhoods. Even in winter with sub-zero temperatures, the market is visited from as early as 07:00. Although peak hours seem to align with other markets, the prevalence of early morning foot traffic appears to be relatively high.
Structurally, the market is characterized by a vertical axis leading to a central square, where stalls are arranged in a perpendicular manner. The stalls also appear to be more scattered and are not setup in the most 'neat' way that can be seen in other markets. Although this leads to a less logical layout, it does create a lively square, buzzing with pedestrians bumping into each other at various corners.

A notable observation is the influx of individuals to the neighbourhood building 'pier80', prompted by the market's precense. In an interview with Ivo Montijn, the building's manager, concerns arise regarding the presence of thieves and other less-desired individuals who gravitate towards the market and congregate in front of Pier80. Additionally, the limited the sanitation facilities, exemplified by a singular 'pee-column' erected on market days right in front of the building's entrance, raises questions about the adequacy of sanitary provisions within the building.

The prices on Visserijplein leans towards affordability, with minimal offerings of organic produce. Notably, a stall that attracts most attention is one that offers incredibly cheap products at the far corner of the market. This results in a perpetual queue of bargain hunters.

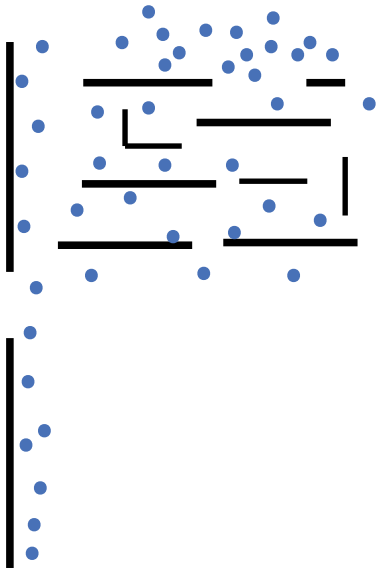


fig. 9.1; Schematic layout of Visserijplein market - Blom (2024)

8.1.2 Afrikaanderplein (5x, mainly lunch time)

This market is situated in the Afrikaanderwijk of South Rotterdam The neighbourhood is often characterized by its social and economic challenges, leading to what can be termed as 'research fatigue' among its inhabitants. Much like Binnenrotte, it ranks among the largest markets of the country, drawing visitors from across Rotterdam. Its primary demographic reflects the multicultural heritage of the neighbourhood, mirrored in the stalls showcasing a diverse array of colourful imported foods. While peak hours typically span from 11:00 to 16:00 significant foot traffic can be observed in the morning as well.
The square on which it is held is in the central area of the neighbourhood and consists out of a large green patch surrounded by a tiled stroke on which stalls are placed. This layout creates an L-shaped market with continuous stalls akin to Binnenrotte, creating a strongly influenced walking pattern. However, the presence of crossroads in the corners and narrower walking paths give the market a more organic feel. Although prices seem to be relatively low, a woman looking at children's clothing could be heard complaining about a dress costing € 15,- stating "even the prices of clothing are out of control nowadays".

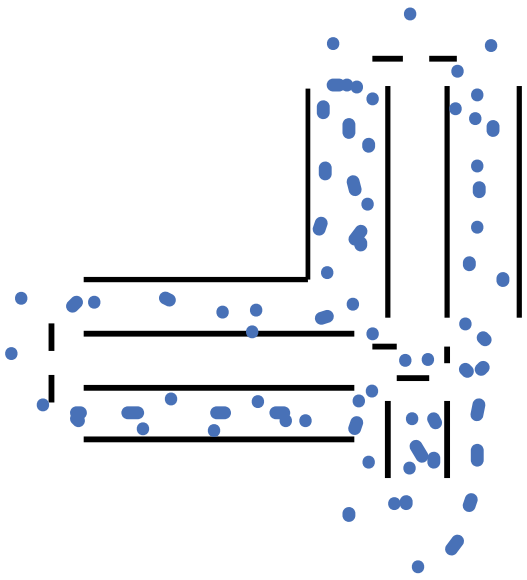


fig. 9.1; Schematic layout of Afrikaanderplein market - Blom (2024)

09
CONCLUSION

The research aimed to offer relevant background information, to eventually form spatial starting points regarding a new multifunctional building on Visserijplein.

The research questions used were as follows:
1. What is the role of marketplaces in the current urban (Dutch) landscape?
2. What existing urban farming methods are being utilized to secure access to food?
3. How can the market on Visserijplein be utilized in creating a market hall?

Globally, marketplaces have evolved into key drivers of urban development. In contrast to their European counterparts, the Netherlands has not witnessed a significant increase in covered market halls. This divergence can be attributed in part to The Netherland's absence of comparable exponential population growth. The traditional, essence of Dutch marketplace, as defined by Janssens, revolves around 'dynamic entities embedded in relational networks of products, people and ideas, with a primary focus on food'. However, both in the USA and the Netherlands, a noticeable transition is evident, shifting the focus from food to emphasizing value and experience. Moreover, marketplaces serve as important social spaces, akin to 'cultural stages', as described by Ali and Agnew, facilitating exchanges between different social worlds. In Rotterdam, Boer's research reveals that its market visitors view crowdedness as a concern for safety, with a significant portion expressing a desire for more spacious market set-ups.

Historically, the Netherlands has maintained a clear demarcation between urban and rural landscapes. The Dutch Ministry of Nature and Agriculture perceives urban agriculture primarily as a means to bind consumers to nature and farmers. Research indicates that urban agriculture can be utilized as a way of fostering social cohesion and job creation. The evolution of urban agriculture in The Netherlands predominantly revolves around technical innovations, such as vertical farming. The technique is praised for its intensive and space-efficient production methods. However, the lack of needed manpower to produce, leads to a strong decline in its social effects. Furthermore, there is uncertainty about its viability in the Netherlands, given the country's highly productive and cost-effective conventional food landscape. Rotterdam's consumption-focussed food production, mainly occurs on the city's periphery and around its docks. Urban agriculture initiatives in Rotterdam are generally not considered to be an alternative for high-yield conventional peri-urban farms.

The market serves as a vital resource for the citizens of BoTu, attracting potential buyers even before sunrise in freezing temperatures, offering affordable food and various other commodities. However, the square it is held on appears to lack any distinct function or identity outside market days. Similarly, Pier80, serving as a valuable communal hub for the inhabitants of Botu, seems outdated and underutilized, failing to use the location's full potential. Therefore, its functions should be retained in the complete transformation of the square. Furthermore, the arrival of M4h offers a worthy opportunity to attract new visitors and ensure the resilience of Visserijplein.

10
DISCUSSION

This paper employs a combination of literary research, interviews and observational research to offer insights into spatial strategies regarding a multifunctional building aimed at enhancing food security in the Bospolder-Tussendijken (BoTu) neighbourhood. The conclusion of this paper can be characterized as a hybrid generalized case study. While the first two research questions delve into Dutch marketplaces and various methods of urban farming at different scales, it becomes evident that the overreaching topic extends beyond BoTu. However, the third research question narrows its focus exclusively to Visserijplein, with its findings applicable solely to the specific observed location. By combining various sources and actors from different research fields, this study establishes validity through its broad subjection to different perspectives.

The implications of a multi-functional building combined with urban farming on food security appear to be of more complementary function and subject to perspective. On one hand it could be argued that an additional building to a weekmarket, can serve as a 'catalyst' to ensure the position of the VIsserijplein market in the broader food landscape, as is underscored by I. Montijn (2024) and G. Giuliano's on the declining position of Rotterdam's market (personal communication, December 8, 2023). On the other hand, there seems to be a natural tendency of creating a marketplace that is focussed on 'food-experience', as discussed by Van de Wiel & Hospers (2015), Ali (2007) and Roth (1999). Additionally, the social factors of a weekmarket emerge as crucial, as emphasized by Ali (2020) and Boer (2016).

Urban farming, while of no direct value to actual food production, is invaluable in its abilities in social binding, as claimed by Mougeot, (2005), Hardman, Clark, Sherrif, (2022), a nation reaffirmed by T. van der Burg (2024) in an interview on Rotterdam's food garden. From the Dutch government's perspective, urban farming serves as a 'bridge' between farmers and consumers (Henneman, 2021). However, contrary to currently wide held conceptions of vertical farming, the method seems to offer limited promises in the contemporary urban Dutch landscape. Whereas Shift (2015) offers it as a solution to current food-related problems, van de Kreken (2023), an actual stakeholder, offers a more reserved viewpoint. This is emphasized by partington (2023) who once again offers the viewpoint of the uncertain phase the technology is in.

While the results offer a wide perspective on the topic of marketplaces and urban forming, certain limitations hindered the depth of the study. The lack of cooperation from the municipality of Rotterdam, a large stakeholder, and the reluctance of market stand owners to share insights, restricted access to direct information. Another limitation was the constrained timeframe and last-minute change in site-determination which led to less thorough research possibilities. Addressing these limitations, the involvement of a willing stakeholder, such as the municipality or market authorities, would be crucial to follow-up research.

This study offers an insight in spatial starting points for both Visserijplein and similar areas within the Netherlands. To prevent further deterioration of marketplaces and additional food security problems, ensuring the position of the weekmarket asks for a catalytic intervention such as a market building.

Follow up research on the economical challenges of marketplaces could provide a more realistic understanding of the real-world feasibility. Furthermore, typological analyses of existing market buildings could be of use in defining ideal architectural designs and spatial set-ups.


PINNEN
JA GRAAG

11
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- all other photographs with no mention: Blom 2023/2024

12
REFLECTION

The 'Resilient Delta' Graduation studio by Veldacademie is characterized by its emphasis on the human and social side of architecture. To explore these topics, it is essential utilize various forms of fieldwork alongside expert interviews while simultaneously navigating the social, political, economic, natural and spatial layers within the city . This year's focus was on 'health and well-being in the Built-Environment.' The interpretation of this topic is broad, as health and well-being can be viewed from a wide range of angles. Within the scope of this project, health and well-being were primarily considered from a food-based perspective, hypothesizing that ensuring access to healthy, affordable food underlines is crucial. Additionally, social health was emphasized by ensuring Visserijplein, more specifically Pier80, continues to provide a place for strong social bonds within a vulnerable neighbourhood.

This graduation project touches on various standard topics within the realm of architecture and urbanism. On a large scale (1:1000), Visserijplein presents a complex urban design challenge due to its context, which merits independent research. This led to a site-design that could be considered to be at a less-detailed stage than the projected building designs. However, its context in the urban landscape, along with the usage throughout the days, including the weekly market and neighbourhood building it houses, was explored as detailed as possible within this project´s scope. Through observation, interviews, market visits and desk-research, a well-rounded understanding of the square was formed, establishing the backbone of its projected urban design, whilst being aware of the shortcomings that would need further research.

On a smaller scale (1:100), the project examines three different buildings, each at varying levels of detail. The most abstract building, is the recycling station in the south-east corner of the square. This building plays a crucial role in closing the loop of food-consumption, production and waste by being used as a station where all 'waste' generated by the market(building) and Pier80 can be collected for reuse, aligning with the growing trend of a circular economy. However, the actual design of this building will be kept mostly abstract as it falls outside of the assignment for the simple reason of time-shortage.

The second building is the new neighbourhood building, replacing the original Pier80. This building functions as a social hub within the complex urban context of BoTu. The input for this design was largely gained from an interview with Ivo Montijn, current manager of the building. The level of detail within this building can be considered high compared to the recycle station, but is to be considered secondary in comparison with the market hall. By studying the context of BoTu in desk-research, combined with observations and interviews, insights were gained that shaped the current design.

Lastly, the market building will be reviewed. This building can be considered as the primary focus of design and research, and therefore is the most detailed aspect of the project. . Initially, the hypothesis centred on using urban farming, particularly vertical farming, on a large scale to address food issues within the urban context. However, desk-research and various interviews revealed that urban farming cannot be used as an actual means of food-production. It merely serves a social function, whilst creating job-opportunities and a better connection to food. Nonetheless, it can be considered to be of importance to improve health and well-being by offering strong social relations, education and an overall appreciation of nature. Therefore the only use of urban farming within the scope of the graduation project is that on the roof of the neighbourhood building.

Ultimately, the building will be functioning as an addition to the conventional week market, whilst offering a strong alternative on non- market days. This approach emerged from having multiple conversations with market stands holders, Rotterdam's market manager, literature, feedback from the mentors and a personal appreciation for the role and charm these traditional markets hold in the urban landscape.

Whilst the Resilient Delta studio is considered to be Design-driven, the initial weeks leading up to P2 were primarily focussed on research and analyses opposed to designing. The final design evolved significantly from the initial concept, which aimed to incorporate numerous functions within a single building on the square to serve as a covered neighbourhood centre/market hall. However, critical feedback prompted the reforming of the concept as a whole. Firstly a smaller building with less functions was considered, this was still not fitting on Visserijplein and was therefore thrown out once again. Eventually, the concept came to the dissection of all functions, in combination with cutting in the actual functions needed. By using the research in deciding which functions where necessary, the main ground rules for the current design were formed.

The iterative process of writing and drawing that followed in the weeks leading up to P3, lead to a better understanding of the scientific framework, with field observations significantly influencing the subconscious aspect of designing. The combination of fieldwork (observation, interviews, site visits) and desk-research therefore provides a transferability of typological insights along with a theoretic framework for situations where strengthening conventional weekly markets and improving access to healthy nutrition is sought.