# Neighbour Fighbour

Designing for raising food awareness in the city



Ioanna Tzavella Msc Graduation Thesis TU Delft University of Technology



#### Preface

This document is part of my graduation thesis called 'NeighbourFOOD: designing for raising food awareness in the city', as a student of the studio *Architecture & Dwelling: Stronghold Amsterdam*, of the master track Architecture at the Tu Delft University of Technology. I was engaged in researching and writing this thesis between September 2017 and January 2018.

My fascination about this thesis topic gradually started a little bit over a year ago, when I started reading the book of Carolyn Steel, 'Hungry City'. The book is talking about the history of food systems around the world and how they evolved since the ancient years.

The research was difficult, but conducting extensive investigation has allowed me to answer the research questions that I formulated. I believe that this thesis could be interesting for architects and specifically those who have an interest in the more socially driven and sustainable side of architecture. It could also be interesting for people outside of the architecture field, who are looking for examples of a more sustainable way of living in metropolitan environments.

I hope you enjoy your reading.

Ioanna Tzavella, Delft 2018

# Table of Contents

Chapter 1.	Introduction	
	<ul> <li>1.1 Introduction</li> <li>1.2 Problem statement <ul> <li>1.2.1 Aging Amsterdam</li> <li>1.2.2 Overpopulation and Food</li> </ul> </li> <li>1.3 Relevance <ul> <li>1.3.1 Elderly</li> <li>1.3.2 Food awareness</li> </ul> </li> <li>1.4 Manifesto</li> <li>1.5 Research questions <ul> <li>1.5.1 Methodology</li> </ul> </li> </ul>	12 13 16 16 17 18 20
Chapter 2.	Research studies	
	<ul> <li>2.1 Elderly <ul> <li>2.1.1 Age range</li> <li>2.1.2 Moving motives</li> <li>2.1.3 The housing of elderly in the Netherlands</li> <li>2.1.4 Living preferences of the elderly</li> <li>2.1.5 Conclusions</li> </ul> </li> <li>2.2 Starters <ul> <li>2.2.1 Age range</li> <li>2.2.2 Living preferences of starters</li> <li>2.2.3 Conclusions</li> </ul> </li> <li>2.3 Food systems <ul> <li>2.2.1 From prehistory to present</li> <li>2.2.2 Supplying the cities</li> <li>2.2.3 Sitopias</li> <li>2.2.4 Food systems in practice</li> <li>2.2.5 Conclusions</li> </ul> </li> </ul>	26 26 27 28 31 32 34 35 35 36 37 38 38

Chapter 3.	Design	research	and	analysis
------------	--------	----------	-----	----------

Chapter 3.	Design research and analysis	
	3.1 Case studies / Elderly & Starters -specific	44
	3.1.1 - 3.1.4 Case studies	47
	3.1.5 Conclusions	78
	3.2 Case studies / Food-specific	78
	3.2.1 - 3.2.10 Case studies	80
	3.2.11 Conclusions	122
	3.3 Site analysis	124
	3.3.1 History	132
	3.3.2 Demography	138
	3.3.3 Morphology	142
	3.3.4 Mobility 3.3.5 Climate	153
Chapter 4.	Design Brief	
	4.1 Target groups	164
	4.2 Dwelling types	166
	4.3 Additional function	168
	4.4 NeighbourFood system paths	170
Appendix 1	l. Bibliography	174
Appendix 2	2. Graduation Plan	175



# Chapter 1. Introduction



- 1.1 Introduction
- 1.2 Problem statement
  - 1.2.1 Ageing
  - 1.2.2 Food awareness
- 1.3 Relevance
  - 1.3.1 Ageing
  - 1.3.2 Food awareness
- 1.4 Manifesto
- 1.5 Research questions 1.5.1 Methodology



#### 1.1 Introduction

A very hot topic in the Dutch newspapers the last few years, has been the population aging in the country. Together with the latest news about the financial cuts in the elderly health-care system, this results to more and more elderly people, who are going to settle on big cities like Amsterdam.

Another issue of the modern society is the general world overpopulation. Until 2050 almost 5 billion people will live in the cities and therefore more people will need to be fed. Considering the fact that food production covers almost 70% of earth's environmental footprint, new sustainable ways of production need to be found. And if we imagine that these ways are found, people need to learn how to produce food. However, in the 21st century people seem to have lost their connection with the food that comes to their table, let alone with the production of it. Architecture can play a valuable role in the elimination of these trends, by designing in such a way that food awareness can be raised among the people, who live in the cities.

The aim of this thesis is to find how architecture, and specifically architecture of the elderly, can come up with solutions, which can engage people more with their food that they choose to consume in a daily basis. Thus the following research question has been raised: How can the architecture of an elderly complex contribute to a better food awareness for people?'. In order to answer this question and a number of sub-questions that I had set up during the research phase, an extended research study has been made. The research study includes literature studies, case studies analysis, target group analysis and location analysis.

The research resulted to a number of outcomes related to elderly housing and people's better engagement with their food. The outcome of literature study together with the case studies of elderly housing projects is that generally speaking, the majority of elderly people are willing to live independently as comes to the fact of living

alone or in a nursing home. Furthermore, the neighbourhood is also very essential for the elderly, as these people are willing to be very social interactive but also keep a level of privacy. Living is a neighbourhood where a mixture of age groups and household composition exists, is also essential. And here is where the topic of food awareness The social comes in. contacts relationships among the neighbours are going to be introduced through a number of activities, which are closely related to food knowledge. In this way the first steps on a more sustainable way of living in an urban environment can be achieved, before start talking about greater food initiatives in a city level.

All in all, the hypothesis of the thesis is that collective living between elderly people but also people of other age groups, with the same interest of raising food awareness, can lead to an urban environment where people can engage better with their food and where a more sustainable system of food supply can function.

#### 1.2 Problem Statement

In the following sub-chapter, the two problem statements of the thesis are going to be introduced.

In the first part, the problem of the increasingly amount of the aging population in the Netherlands is explained. Further, the problem of the current failing food system in the Netherlands is going to be described.

#### 1.2.1 Aging Amsterdam

is growing. Since 2008 the Amsterdam number of inhabitants of Amsterdam has increased by more than 50,000. Never before in the history of the city did the population grow so fast. In 2012, the 800,000th Amsterdammer was greeted. The charts above (see fig.1) show how the population has developed since Growth is expected to continue in the coming years. Especially higher educated people opt for the city. They come for work, for education, for culture and not least for each other. On November 27, 2012, the city welcomed its 800,000th resident. According to the prognosis, there will be 922,000 inhabitants of Amsterdam in 2050.

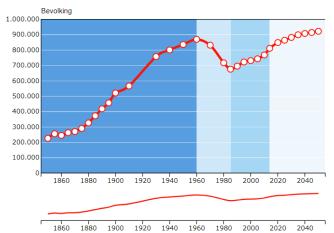


Figure 1. Amsterdam population. Source: CBS

Except from the fact that Amsterdam is growing, Amsterdam is aging as well. But aging is more than a process of aging population. Indeed, by 2060, a quarter of the population will be over 65 (see fig.2,3,4).

But the new generation of older people is on average higher educated, more prosperous, more vital, more mobile and more active than earlier generations of older people. That continues in the housing market, the leisure activities, mobility, use of space and the regional economy. The increase in the number of elderly older people (75+), who will have a maximum of about ten years taking flight, involves considerable spatial tasks. This increase leads to new quality requirements for the (existing) housing stock, and requires stricter requirements on the accessibility and security of public space and the traffic infrastructure. The living environment must already become

aging-proof made. In the short term, aging will contribute to a further blockage of the local population and regional housing market. The 'new elderly' are indeed very active, but not on the housing market. Moving mobility among older people has always been small and is the in recent years, partly because of the increased home ownership among the elderly, even further decreased.

In 1995 there were still 65 per 1,000 people over 65 years of age; in 2011 this is only 48. The government's goal of allowing older people to live independently for as long as possible (healthcare policy) is therefore at odds with the housing policy focused on the flow in the housing market. The strongest effect of the however, the age structure of the population on the housing market is already changing from fifteen, twenty years ago, when the bulk of the baby boom generation was already in a phase of life in which little is being relocated (van Dam, et al., 2013)

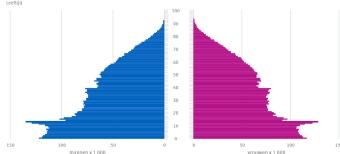


Figure 2. Aging pyramid 1960. Source: CBS

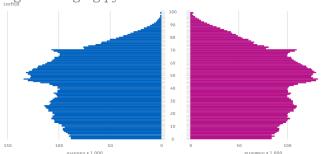


Figure 3. Aging pyramid 2017. Source: CBS

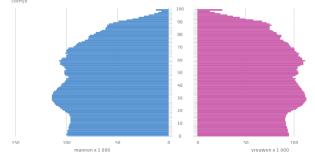


Figure 4. Aging pyramid 2060. Source: CBS

It is a fact that world's population is increasing due to industrialization and globalization, which results in an explosive expansion of the import and export of agricultural goods. By 2050, almost 9 billion people will live in the cities and thus the demand for food production will be 70% more that today. That means that in 30 years, our food production systems, which are already insufficient, are going to have to find a way to feed an additional 3 billion people (see fig. 5).

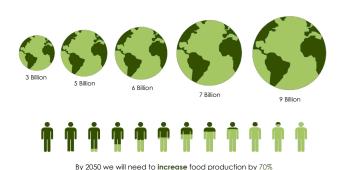
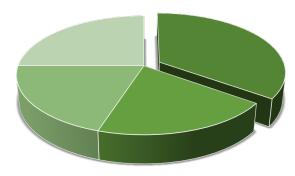


Figure 5. World population growing. Source: own illustration

If we also take into consideration the fact that food is taking almost 1/3 of the environmental footprint (see fig. 6), it is fair to say that finding new ways and locations for production is urgent.



Nutrition Housing & Energy Private transportation Other Figure 6. Environmental footprint. Source: own illustration

According to a recent article in National Geographic the Netherlands has the second biggest export of agricultural goods, just after the United States. Obviously, that is very remarkable for such a small country. Although our good position in agricultural business, the current food system is not a sustainable solution for the future. The world is having difficulties feeding our population, food production has a huge environmental impact due to the high CO2 emission,

public health is in danger because of production methods and the use of pesticides, the infrastructure to transport the food is polluting, and so on. The awareness of our unsustainable way of feeding ourselves is growing but it is complicated to change the system on a bigger scale.

Furthermore, more and more people's relationship with their food is being lost. Nowadays people don't really have an idea how the products that they consume are being produced, from who they are produced and how they arrived in their table. Supermarkets are the biggest example of this situation, as the majority of people use them daily for their groceries. In a city as Amsterdam supermarkets have taken over the sale of food since the 80's and 90's. This development is one of the reasons for loosing the relation and contact with our food, what makes it harder to feel responsible for it.



#### 1.3 Relevance

The next sub-chapter is an attempt to explain why the problem statements are relevant in theory and practice for this graduation thesis.

#### 1.3.2 Elderly

The topic of architecture and the elderly, and its relevance to the project has different perspectives. The most important attributes which are in connection with the relevance (except from demography, which was discussed in the previous sub-chapter) are politics, economy and society. All these topics are related to the housing for the elderly and their needs.

In a political level, nowadays the current policy about the elderly people in the Netherlands defines that these people should be living home independently, for as long as possible. These policy changed from the past years, when it was common for the elderly people to move to a care centre. However, nowadays only people with a very big need can live in care centres. Thus, elderly people are expected to receive care at their homes by professionals, or family and friends (Rijksoverheid, 2015). Ageing in place becomes a present situations and this means that the existing housing stock for the elderly needs to be adjusted to their new needs.

Moreover, the new political situation for the elderly people of the Netherlands, is closely related to an economical aspect. The last few years, there have been many financial cuts in the Dutch health- and home care system. This puts the elderly in a very precarious situation, where these people still need to receive enough care, even though the financial support from the government has been decreased.

Finally, regarding the part of the problem connected with society, we can say that between 5 and 20 percent of the Europeans feel lonely(Dykstra, 2009, p. 93). These numbers include people from all age groups, but loneliness is especially a problem for the elderly(Hazer & Boylu, 2010, p. 2083). Feeling lonely is a negative stage in which no person would like to find itself and therefore something should be done in order to decrease this amount of loneliness, particularly among elderly people.

#### 1.3.1 Food awareness

Since more and more people are migrating to cities we have to question ourselves what the role of cities and architecture can be in improving the current food system. Because awareness is such an import aspect it is necessary to pay attention to the more social influence of architecture in the city. People need an incentive to change, so it is crucial to get them to understand why we have to change. To get people more in contact with their food, initiatives like urban and vertical farming are a good start for cities like Amsterdam. The Vertical Farm Project, led by Dickson Despommier claims that one vertical farm with an architectural footprint of 100 by 100 meters and rising up to 30 stories (approximately 300.000 m2) could provide enough nutrition (2.000 calories/ day/person) to comfortably accommodate the needs of 10.000 people employing technologies currently available. For a city the size of Amsterdam 85 of these towers are needed. That is, obviously, something that only can be imaged. But it doesn't mean that the concept is worthless. In the city of the future a combination of rural an urban farming can be used.

Furthermore, our food system is a hot item in the media. Last couple of years a lot of start-ups come up with ideas to improve the food system in urban areas. Although improving our food system would be a step towards a more sustainable way of living, it is remarkable that the government of Amsterdam does not pay a lot of attention to this subject. In terms of sustainability the municipality of Amsterdam has a lot on her agenda. According to documents describing the future plans to make Amsterdam more sustainable, renewable energy, clean air, circular economy, climate-resilient city and a sustainable municipality are high on the agenda. Unfortunately there are not that many concrete plans on how to improve the food system on a big scale within the boundaries of Amsterdam, but the municipality does have plans for increasing the amount of urban farming on small scale, improving the food-awareness and bringing together farmers and consumers.

#### 1.4 Manifesto

#### Who, for whom and why.

NeighbourFOOD is a new residential complex for ca. 70 people, situated in the centre of Amsterdam. The complex is meant for people of two target groups, who are willing to live collectively under the same roof. 70% of the residents are elderly, thus people over 55 and 30% are starters, thus people between 25-30 years old. The household composition of these people is either single or couple-households. We are talking about a group of people, where some of them is still working and some of them are just retired. These people are not satisfied from their current living situation and they are ready to move out from their dwelling in order to live in a new complex, where food awareness creates a sense of community between the residents.

Their common characteristics as community is that all of them are very socially and physically active as whereas they share the same interest of raising food awareness and spreading their knowledge for a sustainable food system, in urban environments. The community is willing to spread this knowledge to other people who are willing to adopt the same way of living by accomplishing a number of activities taking place on the housing complex itself.

As already said the current food system is inefficient and unfair. Just to participate, even small, local producers have to feed into the global supply chain. NeighbourFOOD is trying to stop the killing of locally grown food system by engaging participation between the residents, the neighbourhood and the city of Amsterdam. This engagement can be achieved when the premises are working as a place where people can learn how to connect better with the food that they choose By learning how to locally to consume. produce food in urban environments, how to cook their production in a healthier way and perfect their culinary skills, the engagement between people and people with food can be accomplished.

This is the first step towards a future scenario for the future of Amsterdam, where bigger urban agriculture initiatives, like selfsustained complexes and neighbourhoods could be realised. Because nowadays it is not easy to take a group of people who have no connection with their food and toss them in a sort of 'food factory-housing complex" where they should work as real life farmers on a daily basis. One should first learn how a sustainable food system operates in an urban environment and what the advantages of such a system are. Then these people can be a part of a more sustainable food system and therefore a more sustainable way of living.

NeighbourFOOD is also achieving to disrupt the current system. They try to empower the local farmers and themselves as urban farmers and cut out the middleman. They are achieving fairer prices for the consumers Crops that are produced in the complex can be bought in the site based amenities. People can also taste these crops by learning how to cook healthy local grown crops in a commercial kitchen based on the site. In this way, the residents are the farmers and tutors of the complex for the activities which are taking place there.

The following diagrams are trying to illustrate the aims of this projects, as well as the connections between that are created between the community and the city of Amsterdam through the food knowledge (see fig. 7 & 8). A list of the benefits of such an urban cultivation community, divided in health, social, economical and ecological level, are presented in figure 9.

#### A cultivating community through urban agriculture

#### BETTER FOOD

Access to fresh produce

#### **BETTER BODIES**

Home-cooked, all day, every day

#### **BETTER COMMUNITY**

Collective living under a common interest

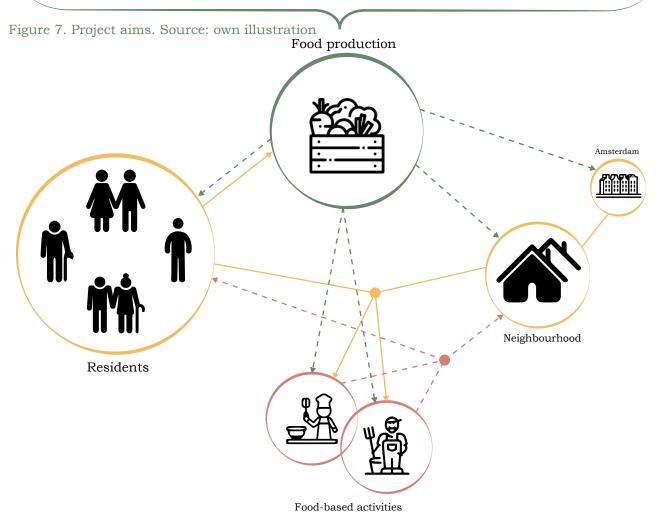


Figure 8. Connections between food, community and Amsterdam. Source: own illustration

Urban Argriculture Benefits				
Health	Social	Economic	Ecological	
- Access to healthy food	- Empowerment & mobilization	   - Local economic   stimulation	- Awareness of food systems ecology	
- Food-health literacy - Healthy eating	<ul> <li>Youth development</li> <li>education</li> <li>Food security</li> </ul>	Job growth Job readiness	- Stewardship - Conservation	
- Physical activity	- Safe spaces	   - Food affordability    -	- Storm water management	
	- Socially intergrated aging		- Soil improvement - Biodiversity & - habitat improvemen	

Figure 9. The benefits of urban agriculture. Source: own illustration

#### 1.5 Research Questions

Based on the problem statements, which were already pointed out on the previous paragraphs, a research question had to be formulated. Therefore the research question of this thesis is: How can the architecture of a elderly complex contribute to raising of food awareness for people?

A number of sub-question has been also formulated in order to get a better insight of the main question. The sub-questions are:

- 1) What kind of amenities the specific target groups would be willing to share in their immediate living environment, long-term?
- 2) What are the living preferences of the specific target group in dwelling and neighbourhood scale?
- 3) Which dwelling typologies fit to the specific target group?
- 4) Which types of urban agriculture could be added to the urban fabric of Amsterdam?
- 5) What kind of activities can raise food awareness between a group of people?
- 6) How can the design of a building host these food-based activities?

In order to be able to give answers to these research questions, I need to follow a methodology on how and what to research. From the research phase I will draw some conclusions, which will help to take design decision in the late design process.

For these reasons the methods that I decided to use for my thesis research are analytical research of location and target group, case studies analysis, typological researches and literature research. The following diagrams illustrate how the research and design phases are divided and also connected to each other.

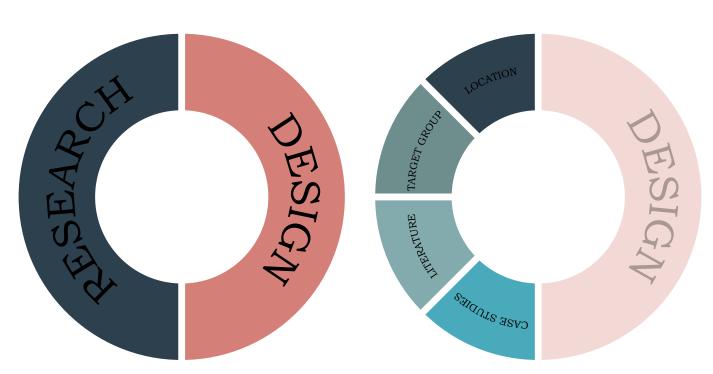
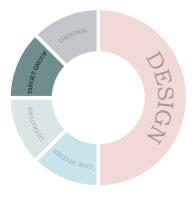


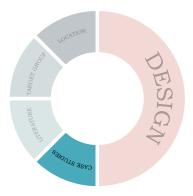
Figure 10. Relationship diagrams between research and design. Source: own illustration

#### 1.5.1 Methodology

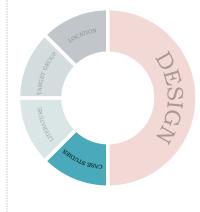
#### 1) What kind of amenities the specific 3) Which dwelling typologies fit to the target groups would be willing to share specific target group? in their immediate living environment, long-term?



- Literature studies on books and articles. Keywords like: elderly, housing and living preferences have used to find literature material.



- Case studies of elderly housing in the Netherlands are going to be analysed.

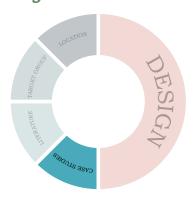


- Case studies of elderly housing in the Netherlands are going to be analysed.

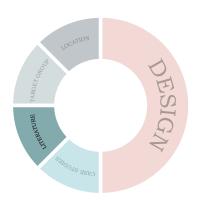


- Literature studies on books and articles. Keywords like: elderly, housing and living preferences have used to find literature material.

#### 2) What are the living preferences of the specific target group, in dwelling and neighbourhood scale?

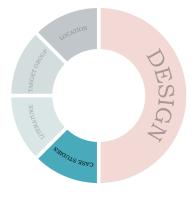


- Case studies of elderly housing in the Netherlands are going to be analysed.



- Literature studies on books and articles. Keywords like: elderly, housing and living preferences have used to find literature material.

#### 4) Which types of urban agriculture could be added to the urban fabric of Amsterdam?

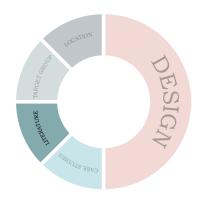


- Case studies of elderly housing in the Netherlands are going to be analysed.



- Literature studies on books and articles. Keywords like: elderly, housing and living preferences have used to find literature material.

### 5) What kind of activities can raise food awareness between a group of people?



- Literature studies on books and articles. Keywords like: food, food awareness, food supply, food communities and urban agriculture have used to find literature material.



- Case studies of communities specified on food and food production are going to be analysed.

# 3) How can the design of a building host these activities?



- A location analysis of the chosen plot has to be analysed based on different themes like: morphology, demography, climate, etc.



- Case studies of communities specified on food and food production are going to be analysed.





# Chapter 2. Research Studies



#### 2.1 Elderly

- 2.1.1 Age range
- 2.1.2 Moving motives
- 2.1.3 The housing of the elderly in the Netherlands
- 2.1.4 Living preferences of the elderly
- 2.1.5 Conclusions

#### 2.2 Starters

- 2.2.1 Age range
- 2.2.2 Living preferences
- 2.2.3 Conclusions

#### 2.3 Food systems

- 2.3.1 From prehistory to present
- 2.3.2 Supply of the cities
- 2.3.3 Future sitopias
- 2.3.4 Food systems in practice
- 2.3.5 Conclusions

#### 2.1 Elderly

In this sub-chapter, the target group of elderly people and their living preferences will be researched based on literature studies. Keywords like, 'elderly', 'elderly housing', 'living preferences' and 'dwelling' have been used for the collection of the literature material. This literature research will be a starting point in order to set a list of requirements, for the later design phase of this graduation. These requirements will work as a design 'tool-kit'.

#### 2.1.1 Age range

When an architect is doing research and design about a specific target group, the age range of this group needs to be specified. In the case of elderly people they are different opinions on the topic of when someone is starting to be an elder. And this is a result of the fact that the death rates are varying between first, second and third world countries.

Most developed world countries have accepted the chronological age of 65 years as a definition of 'elderly' or older person, but like many westernised concepts, this does not adapt well to the situation in third world countries. While this definition is somewhat arbitrary, it is many times associated with the age at which one can begin to receive pension benefits. At the moment, there is no United Nations standard numerical criterion, but the UN agreed cut-off is 60+ years to refer to the older population (http://www.who.int/healthinfo/survey/ageingdefnolder/en/).

As already mentioned in the introduction chapter, this thesis is emphasized on people between the age of 55-65 years old. Then it is fair to say that these people belong to the age group of elderly and to be more specific, they are young elderly. In order to distinguish better the age range of this people, we could say that people between 55-65 belong to the 3rd stage of life, the mature adulthood, and the people of 65+ belong to the 4th stage of life, the late adulthood. A research made by Kullberg and which played an important role in my literature research about elderly people and their living preferences, acknowledges also as elderly people over 55 years old.

#### 2.1.2 Moving motives

The majority of 90% elderly people in the Netherlands are very satisfied from their current dwelling situation (Kullberg, 2005, p.25). However this remaining unsatisfied 10% should not be forgotten. This unsatisfied group of people, together with the reasons of dissatisfaction and their living preferences are very important for the design of housing, which is specified for elderly.

Almost 19% of elderly people in the Netherlands is keen on moving in a new dwelling. From this 19%, the 14% is thinking of moving and 4% is absolutely sure that wants to move to a new dwelling (Kullberg, 2005, p.25). The reasons why these people are willing to move, are varying.

For example physical limitations of elderly people is one of these reasons. Kullberg (2005, p.25) in her article states that of 135.000 people who are willing to move almost 46.000 of them are having moderate or severe physical difficulties and they are also living in a dwelling which is not designed according to their physical limitations needs. Although the combination of physical limitations and an inappropriate property is an important catalyst for wanting to move, almost three quarters of people over 55, who are in such a situation certainly do not want to move.

Another important motive for moving is the unattractive social living situation in the neighbourhood. This reason for relocation is not specific for the elderly, but it weighs so heavily that she undermines the proverbial homogeneity. We can find a bad living environment, mainly in cheaper rental neighbourhoods and among older people with lower incomes. For the elderly who want to move, there are 33,000 who are very dissatisfied with the social quality of their neighbourhood (inconvenience; to deal with each other; the population composition of the neighbourhood). They wish for the most part to move to another neighbourhood. About a third of them also have physical limitations and an unsuitable home. The number of households that wants to move

due to physical limitations and/or an unsuitable home. The same issues arise from the moving motives. Below the younger elderly, people are still moving on a modest scale because of their employment career or family circumstances (divorce, marriage) (Kullberg, 2005, p.26).

# 2.1.3 The housing of the elderly in the Netherlands

The history of care for the elderly is particularly traceable since the Middle Ages. Relevant are the moments of revolution and the phases that have developed over the years in the history of the housing of the elderly care. In this sub-chapter there will be, per important phase of the development of the elderly housing, a substantiation provided. The Zeitgeist was very decisive for the elderly housing and the matching types, concepts and living forms. There is also decided to divide history into periods.

#### The prehistory of the elderly housing

In the period before the thirteenth century, by far the most elderly people lived in homes that did not belong to the regular housing construction distinction. Small communities for elderly emerged from the 13th century onwards. These communities were founded by legacies of wealthy citizens. The typical courtyards were recognizable by their urban setting. In the late 17th century the courtyards were changed by the mercantile way of thinking to so-called workhouses. The view was that unproductive citizens were seen as a social problem. From the Renaissance until far into the 20th century, the society went in this way with her elderly. Until the beginning of the 20th century In addition to the courtyards, no specific elderly housing forms had been developed. Until the beginning of the 20th century there was a large class difference. For example, elderly people with sufficient income does not have to worry, while the vast majority of poor elderly people were dependent on the cheaper and worse homes. This often happened also with the support of ecclesiastical or private charity. From the beginning of the 20th century, pension houses were created for the first time. The concept of retirement homes consists of a large number of especially designed apartments for the elderly, joined together in a complex that also has communal facilities.

#### The prehistory of the elderly housing

In the period before the thirteenth century, by far the most elderly people lived in homes that did not belong to the regular housing construction distinction. Small communities for elderly emerged from the 13th century onwards. These communities were founded by legacies of wealthy citizens. The typical courtyards were recognizable by their urban setting. In the late 17th century the courtyards were changed by the mercantile way of thinking to so-called workhouses. The view was that unproductive citizens were seen as a social problem. From the Renaissance until far into the 20th century, the society went in this way with her elderly. Until the beginning of the 20th century In addition to the courtyards, no specific elderly housing forms had been developed. Until the beginning of the 20th century there was a large class difference. For example, elderly people with sufficient income does not have to worry, while the vast majority of poor elderly people were dependent on the cheaper and worse homes. This often happened also with the support of ecclesiastical or private charity. From the beginning of the 20th century, pension houses were created for the first time. The concept of retirement homes consists of a large number of especially designed apartments for the elderly, joined together in a complex that also has communal facilities (Mens & Wagenaar, 2009, p.17-32).

#### 1945 - The emergence of the health care

With the arrival of the new system of social security, there is an evolution in elderly care originated. There was no distinction made in terms of prosperity and background. Social security has been introduced to prompted by the aftermath of the First World War. The elderly care was included in the social security scheme and a benefit should be funded from the premiums paid during working life. In 1947 there was income insurance. By introducing the Old Age Services Emergency Act a transitional arrangement was introduced that was to lead to a system with premium payments. The premium system was never introduced, but the Emergency Law was one great milestone in the pursuit of social justice. By now having the relationship with poverty separated from the elderly care for all elderly. A step had to be taken for this to improve the living conditions that were dramatic at the time. (Mens & Wagenaar, 2009, p.35-55)

# 1963 - The health care system emphasizes on the living aspect

In the sixties people started thinking about housing construction differently. Housing was no longer seen as the first life need. The new starting point in the reconstruction was therefore also living to develop. Points like hygiene in health care and social, technical and urban development problems came to the order. A start was made in the early sixties for the solution of housing shortage and the integration of the elderly housing within it urban planning framework was central to the design. There had to be affordable housing created. The characteristic of this time was that the elderly housing should not merge with the masses in the city. They fitted better with the small scale of a village. Living was more than offering shelter, it had to contribute to personality and community development. Different types of housing arose on the basis of family size and living standard. Districts were created from large modules where the different types were combined and sport, recreation, shops and medical facilities were added. The new idea about housing construction also affected the housing of the elderly. Now that the elderly had been discovered there had to be suitable housing types are looked at. At the end of the sixties this development occurred in rural environments for the first time, because the agricultural areas such as Friesland, Groningen and Zeeland lacked behind housing the elderly. In the 1950s, 1960s and 1970s, a number of types for housing for the elderly were developed. This architecture for the elderly and care was retained until well into the years seventy. These various types of housing were: Old people's homes, pension houses, nursing homes, combination pension houses with "independent" old people's homes, service flats and elderly housing that fits in the

neighbourhood idea (Mens & Wagenaar, 2009, p.57-113.

### 1991 - The separation of health care and living

Care became a stand-alone function, which gave the nursing home more the character of living. The nursing home turned out to be a dynamic type with many possibilities. Suddenly came an enormous interest in the healthcare sector, but the construction of this sector really started when the AWBZ (the Exceptional Medical Expenses Act), provided a financial foundation. With this development in the nineties the aim was to define a characteristic own function. For example, it looked specifically at specific housing types for elderly people with dementia. There was a policy of small-scale living. This was possible at neighbourhood level but also at organizational level within a large institution.

A separation between living and working buildings arose. The architecture became the director in healthcare, not only in the Netherlands but everywhere in the world. Several care models arose due to the emergence of the healthcare sector. It started with it medical model. The emphasis was on treatment and not on the stay. Under this model fell two types: the hospital and the rehabilitation model. Residence departments were the equivalent of nursing departments in regular hospitals. This model was characterized in its collective character.

In the eighties, the separation of both psycho-geriatric and somatic institutions became less common and the patients were increasingly seen as residents. The nursing homes became more and more like houses and the design changed more to architecture with urban planning principles. The year eighties stood for collective building and little was looked at at the individual. There was already quite no possibility to express the architecture. Housing was uniform, but in the years nineties changed this. By the

disappearance of the standardized public housing and the anchoring of hospital construction stopped the anonymous, collective social housing. The nursing home continued to exist as a separate type.

Eventually they went to a small-scale living form. The housing component of the care fell under the regime of the Hospital Facilities Board. Independent living was seen as an intermediate area. This part of the care fell under the regular housing construction. The difference of this intermediate area is in the 24-hour care of homes and the care plan for living independently. The idea to go small-scale care was created when companions with small groups went into summer houses during the holidays. This worked so well in a familiar environment that this was pushed through and large scale changed into small scale.

The construction of care homes will continue due to the aging population and the need to replace older buildings. Because of this development there were nursing homes with several categories of patients under one roof. There is therefore a demand for a new hybrid building type, the nursing homes as living and working buildings. Because there are elderly people who do not need heavy care yet have been housed, combinations with housing corporations were made. The healthcare institutions also received parts that were not used as a hospital facility. Because of this all of them, there is no sense of "collection of hopeless cases" among the elderly. In the In the seventies, nursing homes stood for a certain urban dynamic. Now they stand for simplicity. The architecture is now much more focused on sustainability and a high level of finishing. The nursing homes are now to a certain extent generic, representative and public buildings. The hybrid buildings are certainly not easy to develop, because there are several parties at the table. There must be account be held with care providers, housing corporations, province, municipality, the state, care offices and stakeholders. It is surprising that housing corporations invest in this

in this type of complexes because the rental income of the departments that are supported by the AWBZ are not cost-effective (Mens & Wagenaar, 2009, p.115-135.

#### 2.1.4 Living preferences of the elderly

#### **Dwelling**

The current dwelling situations of elderly people in the Netherlands can differ a lot. The vast majority of the 4 million people over 55 live independently, that means not in an institution. This applies, of course, to the younger elderly. However even at a very old age, many older people still live independently. Based on statistics, given by CBS, 96% of all people over 55 live independently. Of the 4% who are permanently staying in a home (more than 150,000 elderly people), the majority lives in a nursing home. About 20,000 elderly people live in psychiatric patients hospitals, housing for the mentally handicapped or monasteries. Even for people between 90-94 years old, half of them live also independently. Only after 95 years does the majority prefer to live in a nursing home (De Klerk, 2004, 114-115).

As the group of elderly people is so heterogeneous, the housing preferences among these people can vary a lot. Some of them are, for different reasons, not open for elderly-specific housing, while others tend to have no problem with living in a dwelling building with such 'elderly' label on it. It can be said that it is important for elderly to have the choice about what type of dwelling they would like to inhabit, especially when they reach a certain level of dependency.

De Jong et al. in her article Housing of Preferences an Ageing Population, examined the immobility of Dutch older adults, by analysing the stated preferences of Dutch older adults for bundles of housing characteristics. In addition, this study tried to improve the estimation of housing prefer ences by offering insight in the relative importance older adults give to various housing attributes. The study had shown a number of results regarding the dwelling si ze and composition, circulation system and neighbourhood characteristics.

Starting from the dwelling, De Jong et al. (2005, p.25) states that people over 55 show a preference for a bigger house. Kullberg &

Ras (2004, p.7) also state that elderly people prefer to live in a dwelling with no less than two 2 rooms. Furthermore, the study of De Jong shows a strong disliking towards non-detached houses. Given a choice, elderly people would prefer to live in an apartment with or without a garden. This result correlates with the fact that elderly express a preference for dwellings that require less or non maintenance. Their dwelling preferences is further illustrated by their desire to live in a dwelling in which the living room, kitchen, bathroom and at least one bedroom are located on the same floor.

The entrance of the dwelling is a significant housing attribute. The study of De Jong (2005, p.16) shows that access by elevator is strongly preferred by people over 55, to a dwelling with an entrance on street level. As regards the internal accessibility of the dwelling Kullberg & Ras (2004, p.86) indicate that a large share of people over 55, although they want a well-accessible home, it should not be intended especially for the elderly. From all moving elderly people, 70% want an internally and externally accessible home, and this percentage increases to 90% among the people over 75. People with moderate or severe physical limitations are more likely to want a fully accessible house.

#### Neighbourhood

Neighbourhood is another important factor for the living preferences of the elderly. The environment around elderly people live is crucial for their independence, social contacts and quality of life (Medical Delta, 2013, p.38). Although social features of the neighbourhood environment are influential for elderly people's satisfaction, the physical characteristics of the neighbourhood are less influential (Kullberg & Ras, 2004, p.7). With regard to the location of the neighbourhood, elderly people show a strong preference for neighbourhoods, which are not located at the edge of the city but near the centre (De Jong et al., 2012, p.26).

When it comes to the neighbours, older adults prefer to live in a neighbourhood,

#### 2.1.5 Conclusions

where a mixture of single households, families and older adults exists. However, an environment with only families is the least preferred situation for elderly people.

These results show that elderly people are open for sharing their neighbourhood with other age groups and people that have a different household composition than themselves. Apart from that, they also enjoy sharing their neighbourhood with people from the same age and with the same household composition. What they see as an advantage of this, is that they can organise care facilities together and that they can exchange help with each other(Delta, 2013, p. 41). The desire to live among people of the same age increases together with age (de Jong et al., 2012, p. 16). All together, it seems that variation in the neighbourhood, in the case of inhabitants, has the main preference among older adults.

De Klerk argues that facilities are essential for the level of satisfaction regarding the living situation of the elderly (2004, p.116). Older adults prefer to have daily amenities (i.e. daily supplies, care facilities and public transport) in the vicinity (i.e. walking distance) of their home transport (De Jong et al., 2012, p.25). Easy accessibility to shops and public transport increase the satisfaction of elderly people regarding their living environment (Kullberg & Ras, 2004, p.7). This preference can most probably be explained by the physical state of elderly people, which is in general lower than average. In case a person is not able anymore to, for example, walk long distances or drive a bike, it is logic that such person would like to have amenities nearby home which are relatively easy to reach (Kullberg, 2005, p. 116).

From the literature research over elderly people, and especially the young elderly that has been accomplished, the sub-question 4) What are the living preferences of the specific target group?, can now be answered.

Elderly people in the Netherlands are mostly keen on living as much independently as possible. Even if these people have some physical limitations, living independently and not in a nursing home is desired. Design attributes regarding the dwelling itself are more important for elderly over the age of 80. However, internal and external circulation of the dwellings is something which is important for the young elderly as well. Accessibility with elevator and no internal staircases are preferred. This means that apartments, where all the rooms are on the same level, is the dwelling typology that fits this target group the best. Furthermore, elderly find it important to live in a dwelling that has no less than two rooms. A further analysis on elderly case studies will be done in order to get more information on the size and the internal composition of the dwellings.

The neighbourhood social climate is also important for the elderly. From the research we can conclude that the neighbourhood that they choose to inhabit should have a mixture of ages and household compositions. Moreover daily facilities and public transport should be easy accessible and in a walking distance from their dwellings.

Finally having in mind that nowadays the health care system in the Netherlands is becoming more and more divided from the living environment, we can conclude that health care services in the immediate surroundings are influential for their satisfaction. When we are talking about young elderly, maybe this is not a very important factor for their living preferences. But as these people are getting older, this factor is going to become a priority. For these reason, the ability to realise groups of health care in the neighbourhood is important.



#### 2.2 Starters

The target group of starters is going to occupy almost 30% of dwellings, and therefore a literature research on their needs and housing preferences need also to be included in this thesis. Keywords such as 'starters', 'starter's living preferences', 'one-person households', 'young couples' and 'dwelling' have been used in search engines in order to find the correct literature material.

#### 2.2.1 Age range

People that fall into the target group of starters, are people between the age of 20-30 years old. Starters can be people of different backgrounds, with different household composition and income.

When talking about starters, as already the target group name refers, we mean people who are setting their first steps in living independently. These people can be students (university or college), interns, people who just got their first job or people who are already working for a couple of years. Their household composition in its majority comprises of single households. Couples can also fall into the target group of starters.

#### 2.2.3 Conclusions

#### **Dwelling**

Recent CBS statistics have shown that more and more single and two-person households are willing to live in the city. From these people, the target group of starters occupy a big percentage. Together with the fact that the housing market of Amsterdam does not provide enough affordable housing for starters, these people end up to buy or rent new forms of dwelling. Micro apartments is a very common example of affordable housing stock, for cities such as Amsterdam that deal with this kind of problem.

People are willing to live smaller, as long as it is in the city, so they are less dependent on the car and can use the bicycle or public transport more often. This makes the location more important than ever. Thus starters are willing to attach less value to their property and desire to share more with other people. The city is seen by them as second living room and the car is exchanged for a carsharing subscription. Sharing amenities in a building is a solution to deal efficiently with space and dwellings prices. This can be also seen as a quality for starters, while these people seem to find social interaction very important for their daily life. By sharing amenities in your immediate environment, these kind of social contact can be easier achieved (Platform 31, 2016).

#### Neighbourhood

neighbourhood location is important for starters because it affects the need for additional facilities. In the centres of large cities like Amsterdam, there are already many facilities in the area and the need to provide communal and public facilities is smaller. As with any residential building, it is important that the building has a lively plinth. Traditionally this means that in the street facade there are no storage or blind walls visible. The street should be lived. With this project it is important to house as much as possible in the plinth of the communal and public facilities. So that the building can enliven the streets and establish a relationship with the neighbourhood and city (Platform 31, 2016) The main conclusion about the living preferences of starters is they prefer to live in smaller apartments or studios because their budget is not enough to afford an average size apartment in the centre of Amsterdam. This together with the fact that is a target group that is willing to create social contacts with the neighbourhood, leads us to the conclusion that starters find very important to inhabit a building, where a variety of collective amenities are present. And finally regarding the neighbourhood environment, everyday facilities do not necessarily have to be in a walking distance, as starters are very active people. However, a very lively plinth is important for them as they believe that active streets can endure relationships between the residents and the neighbourhood itself.

#### 2.3 Food system

The next sub-chapter presents a literature review over different aspects of food and its production. History of food system, food supplying systems of cities, future scenarios of food systems and different types of urban agriculture are some of the themes that are going to be discussed. The books that have been used for this part of the research are: 'Hungry City' by Carolyn Steel and 'Farming the City' by Francesca Miazzo and Mark Minkjan.

#### 2.3.1 From prehistory to present

Carolyn Steel in her book *Hungry city: How food shapes our lives* (2008) tries to make the reader look more closely at the way urban life and systems of food metabolism are intertwined, at the role of food marketing, storage, and distribution in the longue durée, from prehistory to the present.

The earliest central places where humans clustered together in permanent dwellings sprang up at just the time and in just the places where human beings were developing a communal economy based on food storage, allowing some people to specialize in crafts, trading or curing instead of farming. The growing towns and villages of the Neolithic period were built around grain store rooms, and over time as the towns grew bigger, large areas of the first temples and palaces were given over to storing food to tide the populace over in times of shortage or conflict. Control over food supply gave new ruling elites a kind of power over the populace they had never before enjoyed, but also made them subjects to the power of hungry mobs when they failed to provide what was expected. Eventually, governments allow markets of many kinds to take the major role in provisioning cities, though they never gave up their penchant for trying to control and regulate the quality, quantity and price of food. In Steel's historical narrative, most of the themes and issues that emerge today in urban food supply had already appeared in antiquity; the interdependence between town and country, the problem of providing adequate quantity while maintaining quality, and the endless possibilities that urban life opens up for the invention and elaboration of new cuisines and food fashions (Steel, 2008).

### 2.3.2 Supply of the cities

Steel, details the steps, often motivated by public health and technological innovation which brought us from chaotic urban street markets to homogenized supermarkets run by corporate giants. In the process the whole world has become a larder, feeding raw materials into the everyday diet, with drastic consequences for the economies of producing countries.

She states that "In the modern food industry, small producers, suppliers and retailers all share the same problem. They are relics of a bygone era. Cities in the past were fed by thousands of individuals - a plethora, if you like, who either brought produce to market themselves, or sold it on to suppliers to take it for them. The food supply was so vitally important to cities that most had laws in place to prevent anyone from gaining a monopoly in the trade, either by getting too large a share in the market for any one food, or by operating in more than one stage of food chain."

Nothing could be further from the way cities are fed today. Most of the food we eat now is produced and distributed by vast conglomerates, described by the American social scientist Bill Hefferman as 'food clusters', 'firms that control the food system all the way from gene to supermarket shelf'. Modern food companies don't just deal in one aspect of the supply; they spread their operations up and down the food chain, using merges and acquisitions to achieve socalled 'vertical integration' within the supply system (the very thing the 18th century laws were put in place to prevent). People might have heard of 'food clusters' before, but they will certainly be aware of their end product: supermarkets, Steel states.

Supermarkets were invented in the early 19th century by American food processing companies looking for ways to sell their high-volume, long-life products as cost-effectively as possible. Today, the fact that most of us buy our food from supermarkets has changed the way we inhabit cities fundamentally. Instead of heading into town

to buy food, we drive out to large, anonymous boxes. The civic aspect of food selling has disappeared, and along with it, much of the character and purpose of our town centres. That's more than just a shame. Those who control food, control us, and when you consider that that 80 percent of the grocery trade in Britain is controlled by just four supermarkets, that gives them incredible power, not just over our wallets, but over our bodies too. The latest trend is for large supermarkets like Tesco to become urban developers, offering local councils incentives to allow them to build large chunks of city with mega-stores at their core - effectively creating captive markets for their business.

The issue here is not just one of choice – it goes to the heart of what a city is, and the public life that has always been its essence. In 1994, the New Jersey Supreme Court ruled that shopping malls had replaced town centres as the place of free speech, since they were the only places where people actually went any more. I find that scary, because malls – and supermarkets – are not public spaces. They are private property, there for the sole purpose of making money for their owners.

### 2.3.3 Future Sitopias

The compound word 'sitopia' comes from the words 'sitos' (Greek word σίτος) which means wheat and the word 'utopia' (Greek word ου-τόπος) which means the no-place.

The final chapter of the Hungry City, Steel uses the word sitopia to describe the world shaped by food. She suggested that sitopia could serve as an alternative to utopia, as a way of addressing the dwelling problem. Unlike utopia, which seeks perfection and is thus unattainable, sitopia is already with us, albeit in a severely compromised and negative form. She also states that, by thinking and acting through food, people could create better forms of sitopia.

Central to that idea is the question of value. Since food is essential to life and consists of living things, its value approximates to that of life itself. Food has inherent worth, which gives it unique potential as a metaphor and tool. All we need to do, is to recognize food's true value, in order to release its create potential.

For Steel, the democratisation of food is essential, not just for global political stability, but also for addressing the wider injustices and destruction caused by the current food systems. But thinking and acting through food is not just about protest. Is is about rediscovering our relationship with the natural world, and the value, and pleasure of living in harmony with it. Responding to the changing of seasons, the smell of earth, the taste of good food, the company of friends and family, working with our hands, growing, cooking, appreciating and sharing food with love cost us nothing, other than willingness to seek a life lived well.

### 2.3.4 Food systems in practice

In order to be able to make fundamental changes to the whole (city) without influencing its elements, a deep understanding of the system and network is required. Especially when one has to design for resilience, the elements of the living environment are very important. Urban agriculture is a way to create new connections in the urban ecosystem, by connecting fields such as health, food, energy, waste management and real-estate. In this way, better responsiveness and flexibility within the overall network is achieved (Miazzo & Minkjan, 2013, p.35).

Urban agriculture is a very well-established practice in many developing countries, which is working in a very powerful cyclic way. In these cases, the people are making the city resilient while at the same time the people are making a living. This potential for social empowerment, combined with benefits, environmental makes agriculture a tool worth investigating. Many inspiring examples from around the world have been adapted to suit local circumstances. The Dutch example is one of the most used ones. In the Netherlands, the local government is a potential ally that wants to engage citizens, improve their health and living conditions, boost the city's environmental performance and reduce maintenance costs; all potential benefits that urban agriculture can help deliver. But regulatory frameworks, silo thinking and risk-averse management practises create barriers to cross-disciplinary entrepreneurial initiative. Competition over scarce land resources - potentially with more valuable uses - makes the search for available space problematic. Furthermore, the prospects of making a living from urban food production are much lower in countries such as the Netherlands due to an advanced commercial agricultural sector that produces quality fresh food comparatively close to the city.

Urban agriculture projects, in order to be successful need to involve a number of different roles and designers such as architects, landscape architects, urban designers, planners and farmers as well. This group of people have to develop urban planning and design strategies that support and guide urban farmer's initiatives that benefit the city. For these reason it is very important that these people have a deep understanding for the processes of urban agriculture, and how to work with them. Because it is a design process that integrates water, minerals, nutrients and organic material in a system that will deliver a desired outcome, usually the cultivation of both edible and non-edible products. Urban agriculture is about facilitating these natural processes in the city; adjusting them to the urban conditions, needs, wishes and desires, and enabling them to be as beneficial to the city and its inhabitants as possible (Miazzo & Minkjan, 2013, p.35).

### Types of urban agriculture

According to Paul de Graaf, the tyoes of urban agriculture can be defined as cultures (ways of cultivation) or combinations of culture (poly-cultures) complete with their defining special characteristics. Their difference occurs due to the level of connection to the soil and the building environment, their relationship with the essential flows of the city and the impact they have on public space, socially and aesthetically). Figure 11 represents an overview of the relevant types of professional urban agriculture. These types match agriculture and urban needs (see tab. 1). On the one end, the spectrum represents the forest gardening, which is a soil-bound and largely self-managing food forest. The other end represents controlled indoor substrate cultures such as hydroponics and aquaponics, with fresh produce available year-round. In between the spectrum we find more or less soil-based cultivation from ground level soil cultivation, to raised beds or soil layers found on rooftops. This type fits the image most people have about urban agriculture, in form of allotment gardens. These four basic types represent different values: from the importance of healthy soil to the need for affordable food production in sufficient quantities (Miazzo & Minkjan, 2013, p.41).

In summary, the above literature research was made as an attempt to answer the research sub-question 2) What kind of activities can raise food awareness between a group of people? From the review there were a number of conclusions drawn.

Firstly, it is clear that if people want to reshape the way food is produced, sold and consumed, we must first understand the patterns characterising food-related practice in the 21st century, along with the theoretical underpinnings of the new food framework we aim to introduce.

Furthermore, we can conclude that food can be used as a tool for urban development in a number of different ways. First of all, food can be used to re-plan the existing built environment. If people want to create a food network, which is sustainable and functions in a local level, looking at what is already available and making every possible use of that is very important. Under-used urban areas, façades, roof terraces, are all places where future food production can take place. Secondly, food can make the gap between urban citizens disappear. Food as a connector. The implementation of innovative ways to produce, transport and package local food creates opportunities for employment and fosters cohesion within communities. And lastly, food can increase offline cohesion. Urban agriculture should be not only seen as an economic paradigm. Producing food in a local level, is one of the most powerful forces ro re-establishing communities and encouraging people to engage more with what they consume. There are countless examples of the positive effects of food cultivation on physical and psychological health. It is doubtless what potentials the local food systems have in educational and social level, by humanising and socialising our urban environment.

### Agricultural needs (Demand)

- -Sunlight / daylight
- -Nutrition / fertilizer / irrigation
- -Soil /substrate
- -Micro-climate / environment
- -Space
- -Loading capacity (integrated in buildings
- -Labour (intensive / extensive)
- -Market

### Urban supply

- -Plenty of sun-exposed surface
- -Waste flows (nutrition, irrigation, substrate, heat)
- -Micro-climate
- -Vacant space / niche space / temporary space
- -Underused constructive capacity
- -Labour force (employees)
- -Customers

### Urban needs (Demand)

- -Public green design & management
- -Ecosystem services
- -Education (nature, food, life skills)
- -Therapeutic work
- -Appropriate jobs
- -Waste storage
- -Climate control (cooling / heating) at building and neighbourhood level
- -Water improvement, soil and air quality
- -Waste treatment and management

### Agricultural supply

- -Aesthetics
- -Relative biodiversity
- -Experience of seasons / hands-on leaning / work experience
- -Therapeutic work
- -Skilled and unskilled labour
- -Water intake and evaporation
- -Evaporative cooling
- -Purification of water, soil and air
- -Organic waste treatment

Tabel 1: Matrices of supply and demand of agriculture and the city

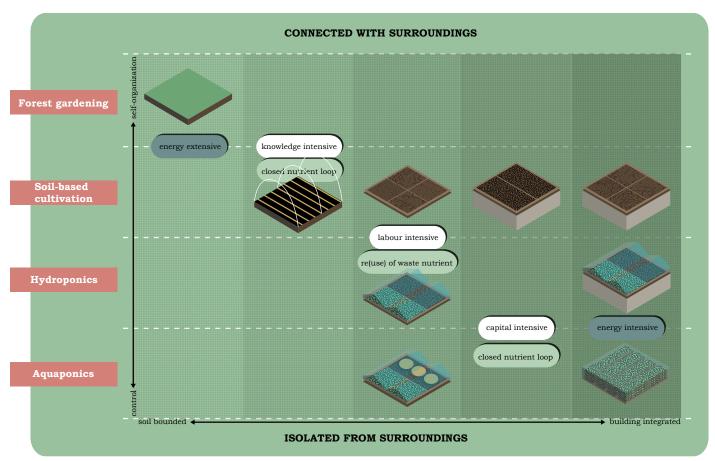
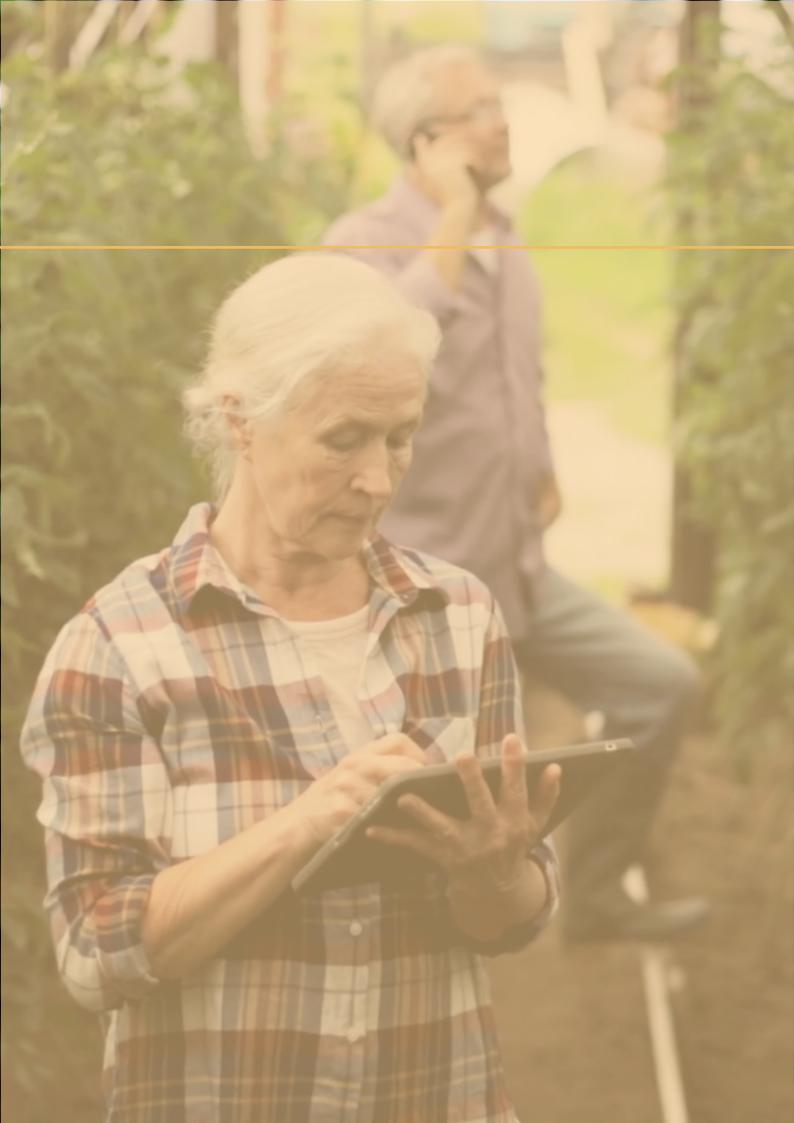


Figure 11: Matrix of promising types of urban agriculture





### Chapter 3. Design Research & Analysis

- 3.1 Case studies / Elderly & Starters -specific
  - 3.1.1 De Drie Hoven
  - 3 1 2 WoZoCo
  - 3.1.3 Johannes Enschede Hof
  - 3 1 4 Carmel Place
  - 3 1 4 Conclusions
- 3.2 Case studies / Food-specific
  - 3 2 1 The People's Supermarket
  - 3 2 2 Incredible Edible
  - 3.2.3 From Your Own City
  - 3.2.4 CERES
  - 3.2.5 Common Good City Farm
  - 3 2 6 DemoTuinNoord
  - 3.2.7 Forage Kitchen
  - 3.2.8 HK Farm
  - 3.2.9 Zuidpark Urban Farming Rooftop
  - 3.2.10 Rijp en Groen Tolsteeg
  - 3.2.11 Conclusions
- 3.3 Location site analysis
  - 3.3.1 History
  - 3.3.2 Demograpny
  - 3.3.3 Morphology
  - 3.3.4 Mobility
  - 3.3.5 Climate

### 3.1 Case Studies / Elderly-& Starters specific

The following case studies have been selected to be analysed in order to be able to give answers to the sub-questions 1) What kind of amenities the specific target groups would be willing to share in their immediate living environment, long-term? and 3) Which dwelling typologies fit to the specific target group?

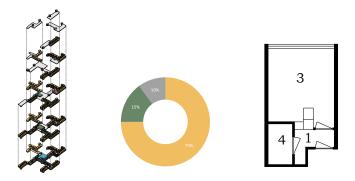
Books such as *De Architectuur van de Ouderenhuisvesting and Housing for the Elderly: New Trends in Europe* have been used for the selection of the case studies. All the reference projects are situated in the Netherlands, but they were built in different time periods.

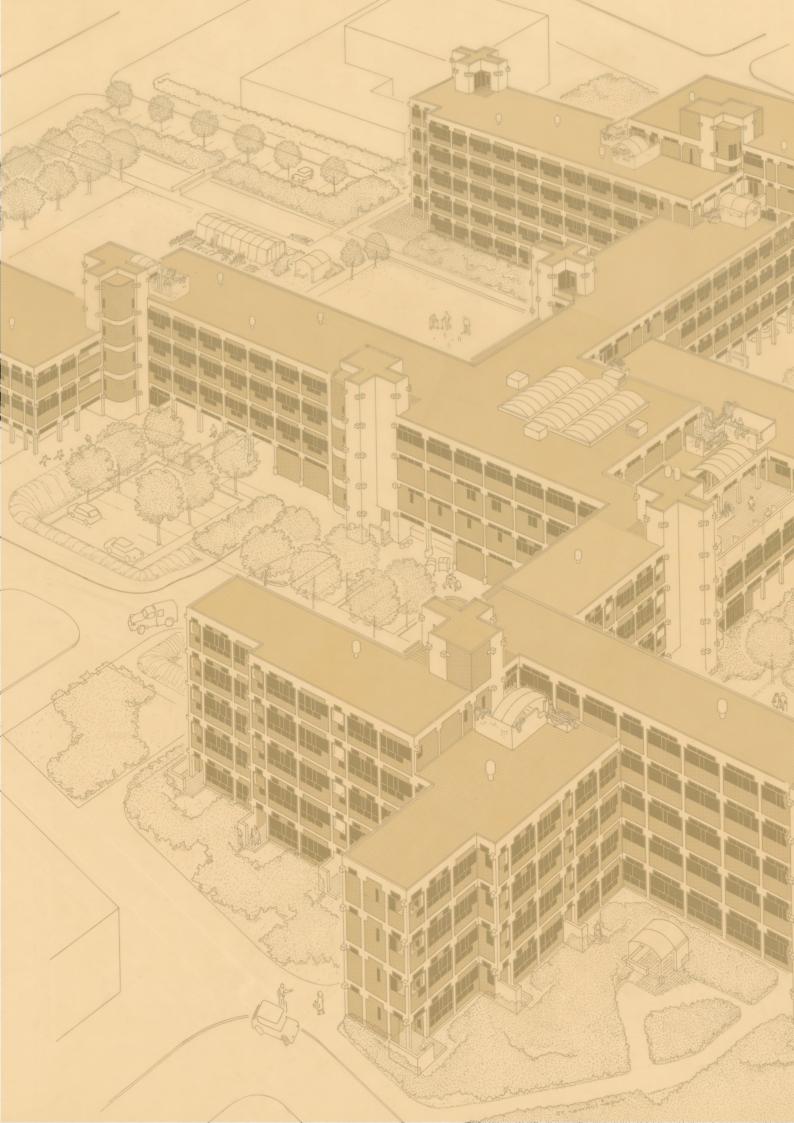
A case study of starters housing has been also analysed in order to also get an insight on the living preferences of this target groups, which will also be present in the project but in a small percentage.

### Case Studies Strategy Infographics of Key Dynamics

In order to be able to draw conclusions about the dwelling typologies and the shared amenities regarding the elderly, a specific strategy should be followed. There is a number of design attributes, of the following reference projects, which are useful for the answer of the raised research questions. Such attributes are: the percentage of shared spaces in compare with the private units, the kind of shared spaces, the typologies of the private units and their size. These attributes are going to be compared in the conclusion paragraph and in order to be able to compare these case studies all the drawings should drawn in the same way.

Exploded view drawings have been chosen to illustrate the different functionalities inside the buildings. Pie charts will present the percentages of shared and private spaces. And finally plan views have been drawn to show the different typologies and sizes of the private units.







### 3.1.1 De Drie Hoven

Architect: Herman Hertzberger

Location: Hugo de Vrieslaan 3, 1097ED

Amsterdam, The Netherlands

Date: 1957

De Drie Hoven is intended for physically and mentally handicapped elderly people. The complex consists of a centre building with four building sections spread out from the four corners. The first building part comprises 55 houses for married couples. The second is a house with 171 units for 190 people, each unit consisting of a room with sanitary facilities and cooking corner. The third part of the building is a nursing home with 250 beds for the long-term sick and mentally disturbed and is made up of nursing units of 25 beds, accommodated in single, double and quadruple rooms. The fourth component is the staff house with 21 two-room apartments with kitchen facilities, three guest rooms, ten flats for managers, sixteen rooms for nurses, board rooms and a house for the head of technical services.

In the centre building, where the various building components come together, various central functions are housed, such as a central meeting space for multifunctional use, shops, a pub, library, ax space, hairdresser, laundry, kitchens, workshop and storage. The central hall functions as a sort of village square. The corridors as a

Number of dwellings: 136 Building surface: 3.300 m2

Client: Nederlandse Centrale voor Huisvest-

ing van Bejaarden (NCHB)

system of inner streets. This is to enable meetings and combat loneliness. At the entrance to the houses the streets are spread out, creating a forecourt, which belongs to the area of the house as well as to the public street.

The entire complex is based on a grid system of which the smallest module is a unit of 92 cm. The staircases in the various components are placed on a grid that has a multiple of 92 cm as a size. A building system of prefabricated concrete elements has been used: columns, supports and floors. The sizes of these are also derived from the measurement system.

Source: Mens, N., & Wagenaar, C. (2009). Architectuur van de ouderen-huisvesting.







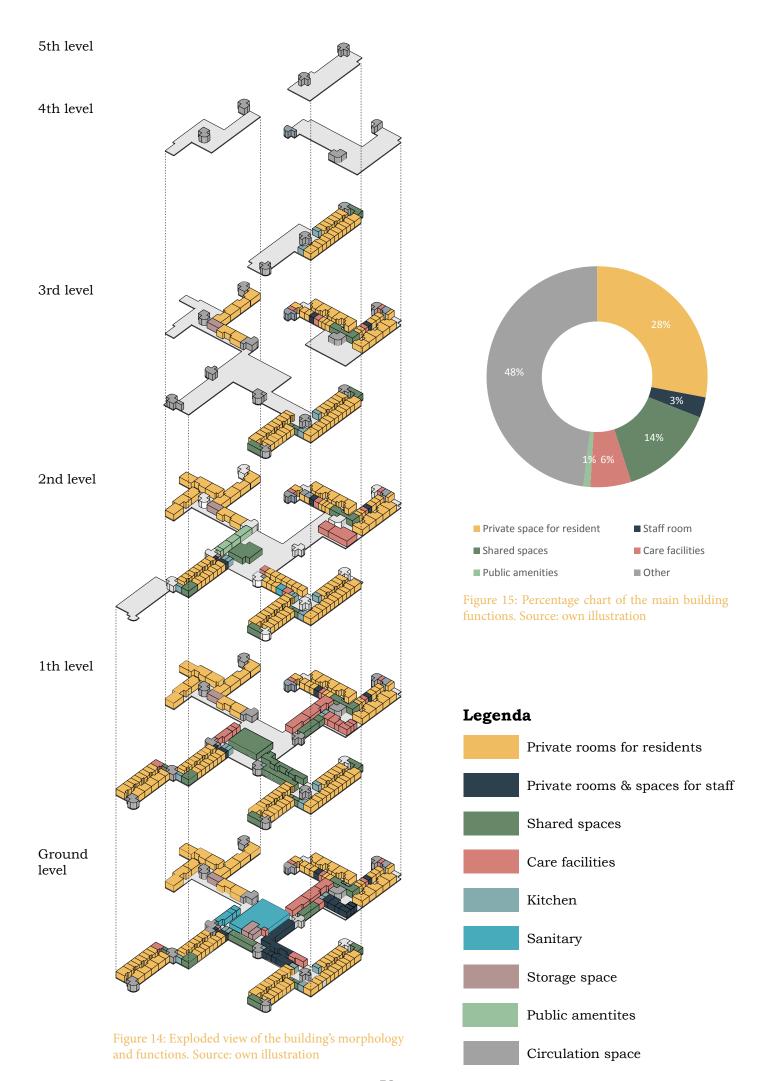




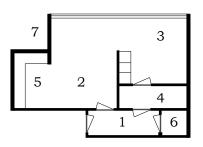




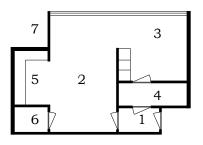




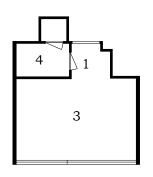
### Unit plan views



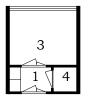
Type H | 46m<sup>2</sup>



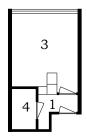
Type J | 49m<sup>2</sup>



Four-bed room | 49m<sup>2</sup>



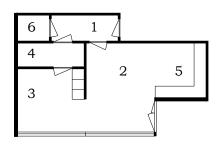
One-bed room | 15m<sup>2</sup>



Type A | 19m<sup>2</sup>



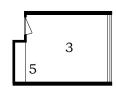
Type B | 34m<sup>2</sup>



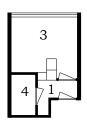
Staff room | 49m<sup>2</sup>



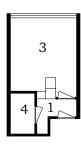
Type G | 34m<sup>2</sup>



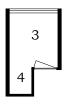
Sickroom | 16m<sup>2</sup>



Type E | 16m<sup>2</sup>



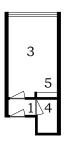
Type F | 20m<sup>2</sup>



Dayroom | 9m<sup>2</sup>



Isolation room | 9m<sup>2</sup>



Guest room | 14m<sup>2</sup>

### Program

- 1. Entrance
- 2. Living room
- 3. Bedroom
- 4. Bathroom/WC
- 5. Kitchen
- 6. Storage
- 7. Balcony





### 3.1.1 Woonzorgcomplex 'WoZoCo'

**Architect: MVRDV** 

Location: Louis Bouwmeesterstraat 377,

1065 NS Amsterdam, The Netherlands

Date: 1994-1997

This building was the first housing complex realized by MVRDV. The client, a large housing corporation, wanted 100 units for elderly people with a gallery-type circulation. The units however did not fit the site in an acceptable way, so MVRDV were invited to solve the problem. At the first meeting, a half joking solution whereby the houses that would not fit inside the gallery block were glued to the outer side of the volume drew attention. The client saw the potential and so MVRDV make it work. MVRDV realized the residential care complex in Het Oosten in Amsterdam. The complex is intended for seniors who, with the help of home care, could live independently for as long as possible. The 'WoZoCo' is the termination of a strip of facilities for the elderly, including a nursing home and a series of sheltered accommodation.

The location is located in one of the Western Garden Cities of Amsterdam, which have been realized according to the General Expansion Plan (AUP) of Van Eesteren. New construction had to be carried out Number of dwellings: 100 Building surface: 10000 m2

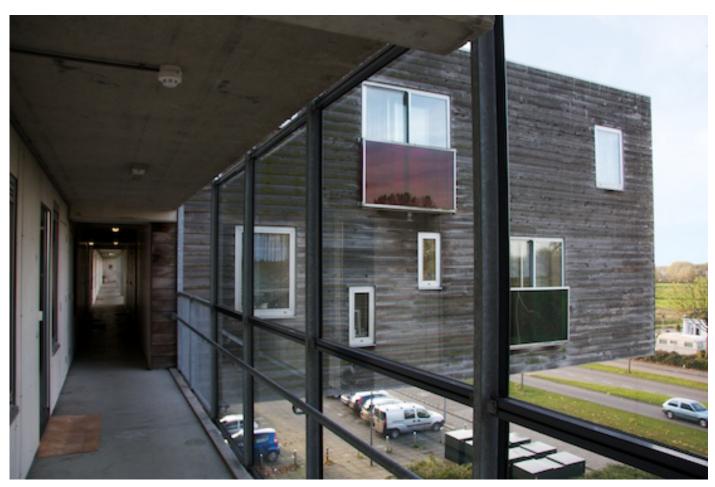
Client: Woningbouwvereniging Het Oosten

(Stadgenoot)

according to the guidelines of this plan. The envelope provided for in the urban plan was too small for the hundred homes requested. The building could have a maximum of nine on the south side and only six floors on the west side. The architects designed a gallery flat, but a very exceptional one. 87 northsouth oriented homes were accommodated in a long drive. The entrance with elevator and staircase is located on the west side, at the head of the building. The remaining 13 dwellings are divided over the five blocks that hang on the disk. There are two deep blocks with two dwellings next to each other and two dwellings on top of each other, two blocks with two dwellings next to and two dwellings on top of each other and a block with a dwelling. The deep blocks are more than eleven meters long. Galleries on the north side of the flat open up both the dwellings in the disc and those in the hanging blocks.

Source: Mens, N., & Wagenaar, C. (2009). Architectuur van de ouderen-huisvesting.

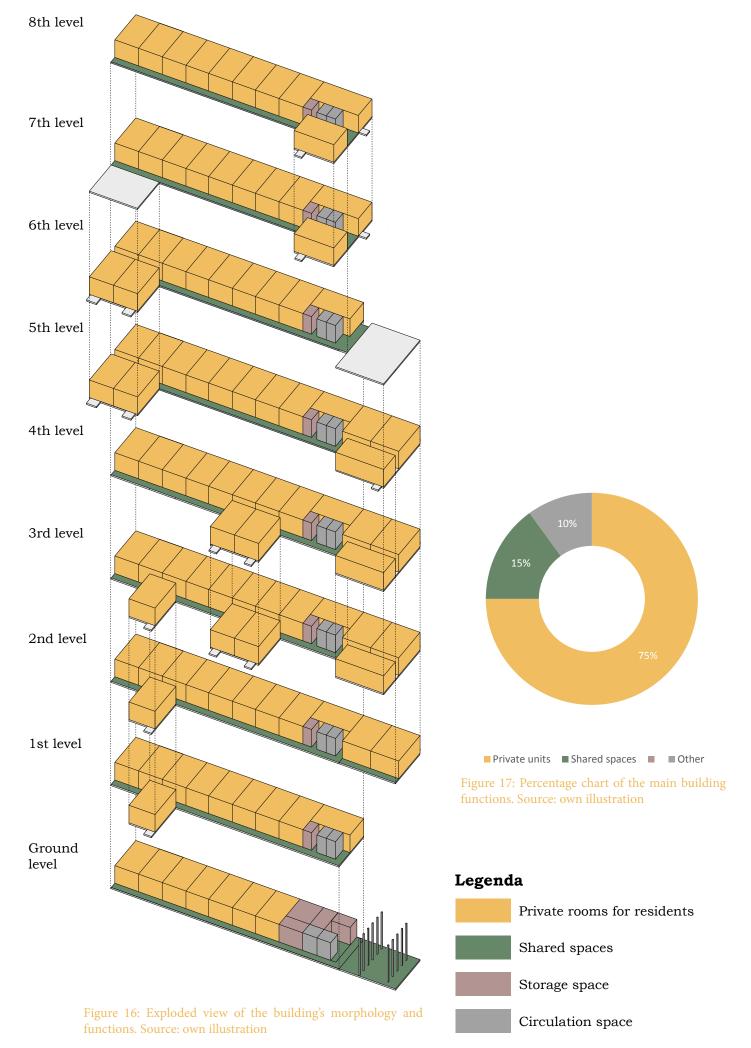






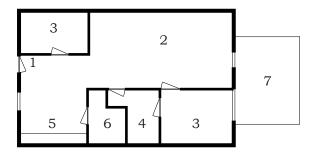




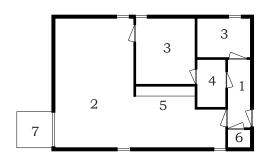


-60-

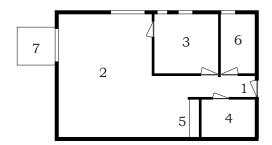
### Unit plan views



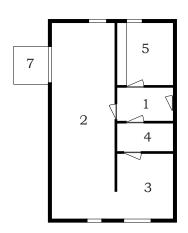
Type A |  $104m^2$ 



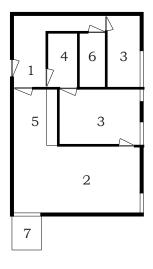
Type B | 90m<sup>2</sup>



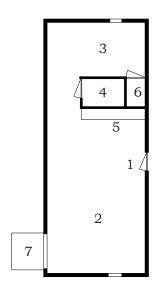
Type C | 90m<sup>2</sup>



Type D | 90 m<sup>2</sup>



Type E |  $90m^2$ 



Type F | 79m<sup>2</sup>

### **Program** 1. Entrance

- 2. Living room
- 3. Bedroom
- 4. Bathroom/WC
- 5. Kitchen
- 6. Storage
- 7. Balcony



# Case studie III - Johannes **Enschede Hof** Haarlem, the Netherlands -63-

### 3.1.3 Johannes Eschede Hof

Architect: Doll-Atelier voor bouwkunst Location: Korte Begijnestraat 40, 2011 HC

Haarlem, the Netherlands

Date: 1999-2007

The Johannes Enschede Hof is located next to the Hof De Bakenesserkamer dating from 1395. This initiative has been taken by the Regents of the Hofje together with Woonmaatschappij Haarlem. Henk Döll designed the courtyard collaboration with the Haarlem designer Joost Swarte.

The U-shaped building encloses an indoor garden and has only two storeys on the side of the Bakenesserkamer, so that it has as little shade as possible from the new building. Characteristic of the courtyard shape is small scale, safety and protected living with care for each other. Living in the city center is not only popular with young people, but also among the elderly. It is important that they can have service and professional care to continue living independently for as long as possible. The other side, bordering the Korte Begijnstraat, has three storeys. Five maisonettes are housed in the lower part,

Number of dwellings: 10 Building surface: 720 m2

Client: Woonmaatschappij Haarlem en Re-

genten van de Bakenesserkamer

in the higher part five apartments, storage rooms and a washing machine area. There is also a lift in this part. The houses have been built adaptable and therefore suitable for the elderly. They become assigned to single elderly, but are also spacious enough for two-person households.

The façades on the outside of the courtyard are largely made of brick, the façades on the inside of wood. Graphic artist and cartoonist Joost Swarte designed a stained-glass window, a fence and a terrain partition in which he thematically represented the forbidden nature of art and nature. He also contributed to the design of the façade on the Begijnstraat. It is slightly curved and provided with windows and coloured objects at apparently random locations.

Source: Mens, N., & Wagenaar, C. (2009). Architectuur van de ouderen-huisvesting.









## 2nd level 1st level Ground level

Figure 18: Exploded view of the building's morphology and functions. Source: own illustration

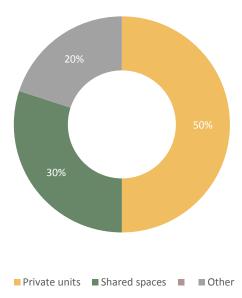
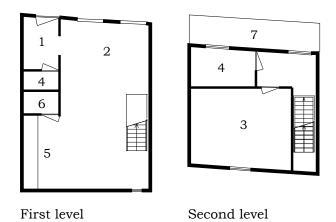


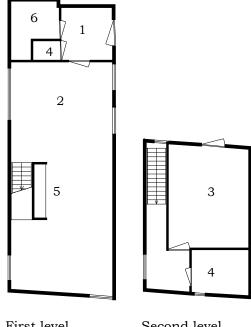
Figure 19: Percentage chart of the main building functions. Source: own illustration

### Private rooms for residents Shared spaces Storage space Circulation space

### Unit plan views

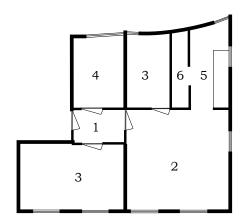


Type A | 65m<sup>2</sup>

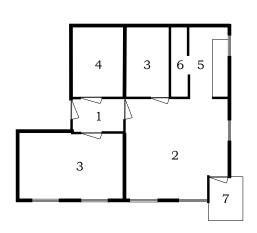


First level Second level

Type B| 80m<sup>2</sup>



Type C |  $60m^2$ 

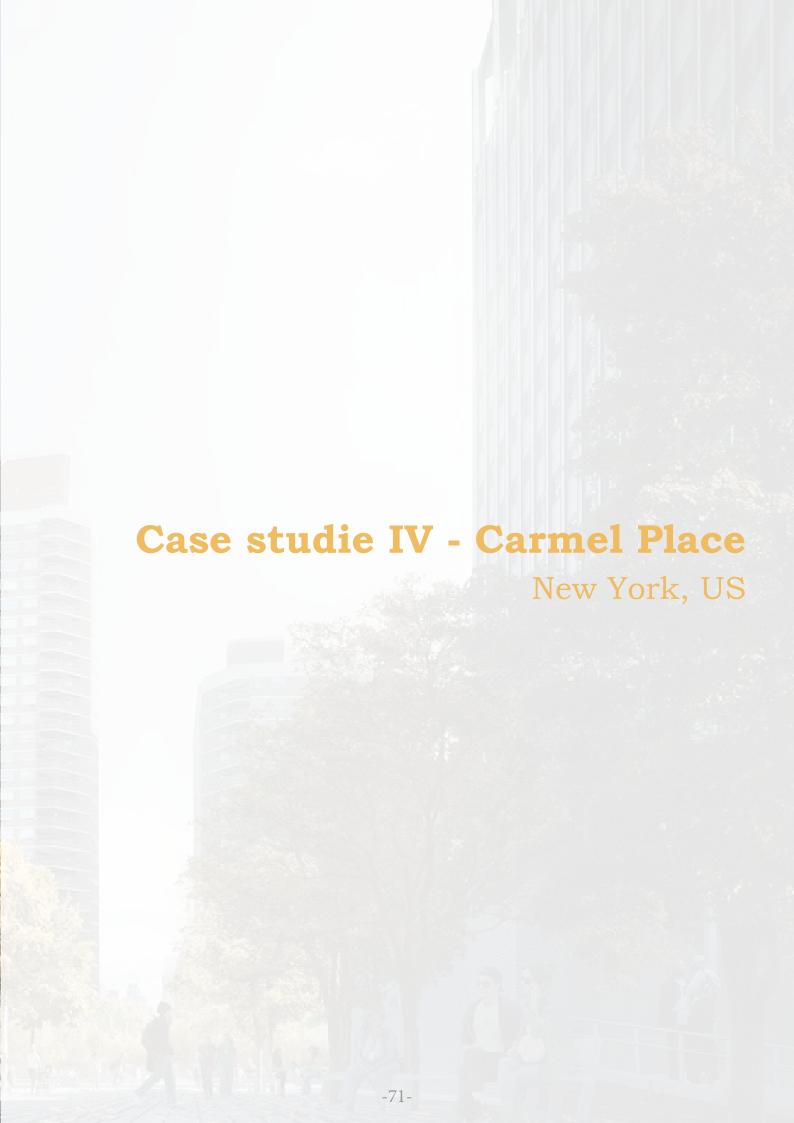


Type C1 |  $63m^2$ 

### **Program**

- 1. Entrance
- 2. Living room
- $3.\ Bedroom$
- 4. Bathroom/WC
- 5. Kitchen
- 6. Storage
- 7. Balcony





### 3.1.4 Carmel Place

Architect: nArchitects

Location: 335 E 27th Street, Kips Bay,

Manhattan, New York, USA

Date: 2013 - 2016

nARCHITECTS' Carmel Place (formerly known as My Micro NY), is the winning proposal in the adAPT NYC an initiative to accommodate the city's growing small household population. The building was granted several mayoral overrides to allow this prototype to be built, including a relaxation of the minimum unit size, and the maximum density, or number of units permitted in a building. The now completed Carmel Place provides 55 loft-like rental apartments, ranging in area from 25-33m², and complemented by generous shared amenities, setting a new standard for microliving.

nARCHITECTS designed the exterior and interior spaces of Carmel Place, conceived as a microcosm of the city skyline, the building's exterior resembles four slender "mini towers", connecting the concept of micro-living to the form and identity of the building. 22 of the 55 rental units at Carmel Place are dedicated for affordable housing, reserved for formerly homeless US

Number of dwellings: 55 Building surface: 3,250 m<sup>2</sup>

Client: Monadnock Development / NYC Department of Housing Preservation and Development

veterans (these apartments are provided with complementary integrated furniture). The remaining 33 units are market rate; half of which include furniture and concierge services, an upgrade made possible for any of the units.

Carmel Place's communal amenities are accessible to all residents, enhancing the tenants' active connection to the community. In addition to containing lounge spaces with built-in seating, a lobby opens to a large street-level and fully glazed gym. In the cellar, residents have access to a den, storage, bike storage and laundry, while at the 8th floor, a community room with a pantry leads onto a public roof terrace with sweeping city views. Spaces typical of a home are dispersed throughout the building, thereby encouraging residents to interact with their neighbours throughout their daily routine.

Source:http://narchitects.com/work/carmel-place/









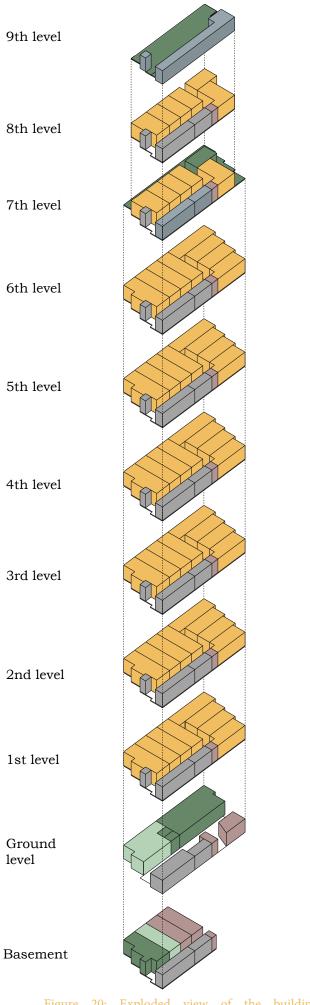


Figure 20: Exploded view of the building's morphology and functions. Source: own illustration

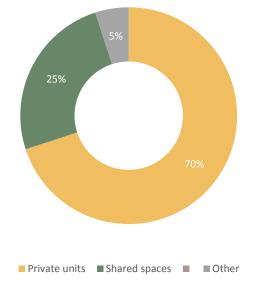
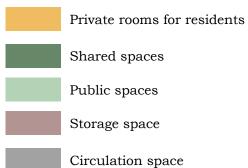
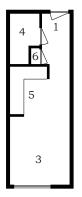


Figure 21: Percentage chart of the main building functions. Source: own illustration

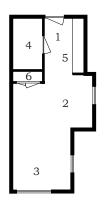
### Legenda



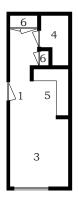
### Unit plan views



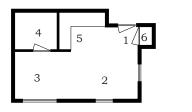
Type A | 28m<sup>2</sup>



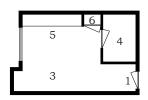
Type B  $\mid$  32m<sup>2</sup>



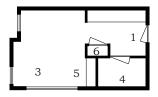
Type C |  $28m^2$ 



Type E | 30 m<sup>2</sup>



Type F | 25m<sup>2</sup>



Type G |  $27m^2$ 



Type D | 33m<sup>2</sup>

### **Program** 1. Entrance

- 2. Living room
- 3. Bedroom
- 4. Bathroom/WC
- 5. Kitchen
- 6. Storage
- 7. Balcony

### 3.2.4 Conclusions

As already mentioned in the beginning of this sub-chapter, a number of elderly housing case studies have been chosen to be analysed, in order to be able to answer to the research questions: 1) What kind of amenities the specific target groups would be willing to share in their immediate living environment, long-term? and 3) Which dwelling typologies fit to the specific target group? The three selected case studies were designed and built in different periods. The reason behind this decision came through the literature study on elderly and specifically on the elderly care system. By analysing reference projects of different periods, I can draw conclusions about how the living preferences of the elderly changed throughout the years in the Netherlands.

### **Elderly**

From the analysis of the 'De Drie Hoven' case study, it is clear that the concept of elderly housing changed a lot from the 60's till now. Elderly people then, were living in complexes specifically designed for them, the so-called nursing homes. Nursing homes are big scale sheltered housing schemes, where health care is also provided to the residents 24/7. People who live is such residential buildings share a lot of amenities. In the case of the "De Drie Hoven' the percentage of private units is 31%, as whereas the percentage of the shared/public amenities is 69%. Therefore it is obvious that the elderly housing in the Netherlands was earlier closely connected with the care system. The design of the buildings was based more on the care and the amount of sharing. This becomes also clear when one is looking on the plan units of the private rooms. The units are very small, almost like studios. The biggest room is 49m<sup>2</sup> and includes 4 beds, the average room is 16m<sup>2</sup> and the smallest one is 9m<sup>2</sup>. Kitchens, shops, pub, library, storage, workshops, meeting spaces enz. are some of the amenities where the residents were sharing in the complex.

Moving forward to the next case study, 'WoZoCo', which was designed in the 90's,

it is evident that elderly housing becomes completely divided from the care system. Elderly are starting to live more and more independently. The presence of facilities inside the building is not evident anymore. However, the residents are groups in order to receive health care in their space. Furthermore, the amount of shared spaces is also decreased. In the 'WoZoCo' the percentage of shared spaces is 15% against the percentage of the private units which is 75%. In this case the residents are sharing amenities like storage, bicycle parking and a laundry room. The division of living and care is also clear from the fact that the private units are becoming bigger in size. An average unit in 'WoZoCo' is almost 90m<sup>2</sup>, the smallest one is 79m<sup>2</sup> and the biggest one is 104m<sup>2</sup>.

The last case study 'Johannes Enschede Hof' which was designed in the late 90's but it was built in the 00's is also an example of elderly housing, where the residents prefer to live very independent. However the scale of the project is way smaller that the other two. This reference project has 10 dwellings, as whilst 'WoZoCo' has 100 and 'De Drie Hoven' has 134. In the case of 'Johannes Enschede Hof' the percentage of shared spaces is increasing a bit in comparison with 'WoZoCo'. Here shared spaces occupy 30% of the building and the private units occupy 50% of the building. A central courtyard, storage spaces and laundry room are the amenities which the residents are sharing. The most common dwelling of the project is 65m<sup>2</sup>, while the smallest one is 60m<sup>2</sup> and the bigger one is 80m<sup>2</sup>.

Finally we can give answers to the raised research questions by saying that nowadays elderly people are preferring to live independently and not in a nursing home. Furthermore, amenities like storage, laundry room, kitchen and collective outdoor spaces are the most preferred ones. Regarding the dwelling typologies that they prefer and their sizes, we can say that one level apartments are the most desired ones. The size of the apartments can vary

from **60m<sup>2</sup> up to 100m<sup>2</sup>**, based on the household composition.

### **Starters**

In the case of Carmel Place, we are talking about micro-apartments. It is a medium scale project, as it provides 55 dwellings with a variety of shared amenities. The building has a very well balanced percentage between private units and shared amenities. The dwellings occupy 70% of the building and the shared spaces occupy 25% of it. However, because the size of the dwellings is extremely small and varies between 25-33m<sup>2</sup>, it is fair to say that the amount and variety of shared amenities in the building is an important quality of the buildings program. Amenities such as a gym, storage space, laundry room, community space, roof garden are provided daily to the residents.

In conclusion, and in order to answer to the research question of these chapter, we can say that the target group of starters prefers to live in smaller dwellings, mainly because of their budget. Dwelling typologies such as studio's and small apartments between **25-40 m<sup>2</sup>** are desired. Because the dwellings that they prefer are small in comparison with the elderly typologies, starters find the presence of shared amenities in the building very essential. Daily amenities like laundry room, storage space, gym and community rooms are also desired. In this way starters can also interact with other people, as they are a target group which has a lot of need for social contact.



### Elderly

Dwelling typologies:

Dwelling size:

Budget:

Social contacts:

Shared amenities:

Kind of amenities:

- 1 level apartements
- 60-80 m<sup>2</sup>
- \$\$
- Important
- Desired
- Laundry room, storage space, parking, collective outdoor space



### **Starters**

Dwelling typologies:

Dwelling size:

Budget:

Social contacts:

Shared amenities:

Kind of amenities:

- Studio, apartement
- 25-40 m<sup>2</sup>
- \$ or \$\$
- Very important
- Very desired
- Laundry room, storage space, parking, communal spaces.

### 3.2 Case Studies / Foodspecific

In order to connect theory and concept to action and practise, a number of inspiring case studies had to be reviewed and analysed. These reference projects illustrate one or multiple ways in which food can impact positively on urban development. Moreover these projects can give me an insight on how food can play a positive role in the development of urban economics and the social and political fabric of cities. The case studies were selected from the book 'Farming the City: Food as a tool for today's urbanization.' written by Francesca Miazzo and Mark Minkjan.

### Case Studies Strategy Infographics of Key Dynamics



The project create or strengthens communities and social ties, and/or supports communication and cohesion.



The project creates jobs, supports local economic activity and/or promotes a viable business model.



The project teaches food skills and promotes awareness about food, health and the environment.



The activities are sustainable or beneficial to the environment in terms of nature, waste, energy, soil, water and air.



The projects provides affordable, nutritious, fresh and healthy food and supports a positive public health agenda.



The projects contributes to the food infrastructure in terms of growing sites, transportation, community platforms and/ or planning.



The projects creates interactive spaces, helps to reduce antisocial behaviour and provides urban amenities from cultural events and cafes to attractive and edible green space.





### 3.2.1 The People's Supermarket

Location: 72-76 Lamb's Conduit St, Hol-

born, London WC1N 3LP, UK

Date: 2010

### Key Dynamics



The People's Supermarket vision is to create a commercially sustainable, social enterprise that achieves it's growth and profitability targets whilst operating within values based on community development and cohesion. Their aim is to provide an alternative food buying network, by connecting an urban community with the local farmer community. The supermarket is a sustainable cooperative that responds to the needs of the local community and provides healthy, local food on reasonable prices. TPS members join the supermarket for various reason, but all agree that the project exists to provide an alternative. The members want to make consumers ore aware of the various simple things they can impact on their local urban environment. The community is passionate about food, but understands that food is mainly a tool used to reach out to urban consumers, urging them to reconnect with the way their food is produced.

Source: www.thepeoplessupermarket.org



















## Case studie II - Incredible **Edible** Todmoren, UK -87-

### 3.2.2 Incredble Edible

Location: 5-6 Cockpit, Walsden, Todmorden

OL14 6LY, UK Date: 2008

### Key Dynamics



Source: www.incredible-edible-todmorden.co.uk

Incredible Edible in Todmoren, UK, is a group of passionate people working together for a world where all share responsibility for the future well-being of people and planet. By working together, using the common language of food, they can cross cultural, social and economic barriers to create a more sustainable community.

The community aims to provide the neighbourhood with fresh and locally grown food. They also promote the learning from field to classroom to kitchen. Incredible Edible supports local businesses, and through apprentice schemes, helps to train the food producers of the future.

The past couple of years have thrown up many initiatives that can bring people closer to their food and their production.

The community's suggestions are: 1)make growing a performance indicator for well-being across all public services; 2)insist all new houses have ready-to-grow spaces; 3) encourage all social landlords to allocate space for growing; 4)create a charter for truly local markets - support local producers and farmers; 5)make sure public bodies like schools and health authorities have producing local food as a priority; 6)invest in food skills for the future.















### Case studie III - From Your Own City

Rotterdam, The Netherlands

### 3.2.3 From Your Own CIty

Location: Marconistraat 39, 3029 AG

Rotterdam Date: 2014

### **Key Dynamics**



From Your Own City is a commercial urban food growing and preparation concept that aims at a complete vertical integration of the food chain. Everything grown from the group, can be bought at its shop, and a part of the produce is also used in its restaurant, along with a part of a regional produce.

The restaurant varies daily, depending on the ingredients coming from the garden. Fruit, vegetables and herbs are grown, chickens scratch freely around the site and fish in an aqua-ponic system.

From Your Own City is relevant for a new urban development paradigm because it integrates as many aspects of the food system as possible into a local production and consumption cycle.

Commercially this is beneficial since there are few intermediates. In terms of freshness, taste and nutrition, food goes directly to consumers

The collective is looking to deploy its professional food production chain to less connected urban location throughout the Netherlands, creating local food hubs in various cities.

Source: www.uitjeeigenstad.nl

















# Case studie IV - CERES Melbourne, Australia

-95-

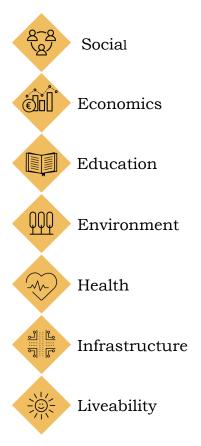
3.2.4 CERES Environmental Centre

Location: Stewart St & Roberts St, Brunswick

East VIC 3057, Melbourne, Australia

Date: 1982

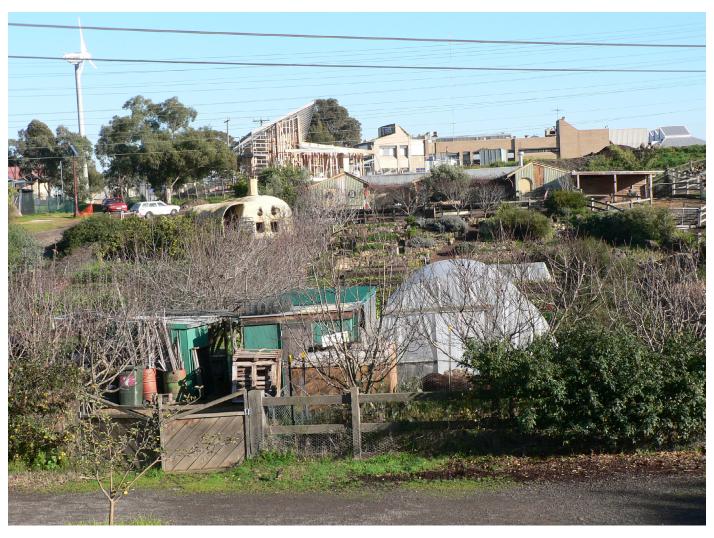
### **Key Dynamics**



Ceres (Centre for Education & Research in Environmental strategies) is a thriving 12acre environmental education centre, set on a rehabilitated landfill site in inner city Brunswick, just 7km from Melbourne. This unique city farm feeds and inspires urban farmers and eaters of all ages, abilities and backgrounds. The farm encourages people to get 'hands-on' with its demonstration local food system that includes a plant nursery, organic market, gardens, a commercial aquaponics system, bees, a food market, a local organic home delivery service, community gardens, a chicken group, a local in-season catering service, an organic cafe and an urban orchard produce swap - all of which offer training and volunteer opportunities for schools and the public. Ceres functions as an education centre and also a kind of sanctuary. As many as 400.000 people, including 70.000 school children, visit each year to take courses, to volunteer or simply to visit, wanting somewhere peaceful and positive, to bring young children. The community employs more than 180 people from all backgrounds. Ceres also grows and sells its own produce in two market gardens and a commercial aquaponics project it has built for research and training purposes.

Source: www.ceres.org.au





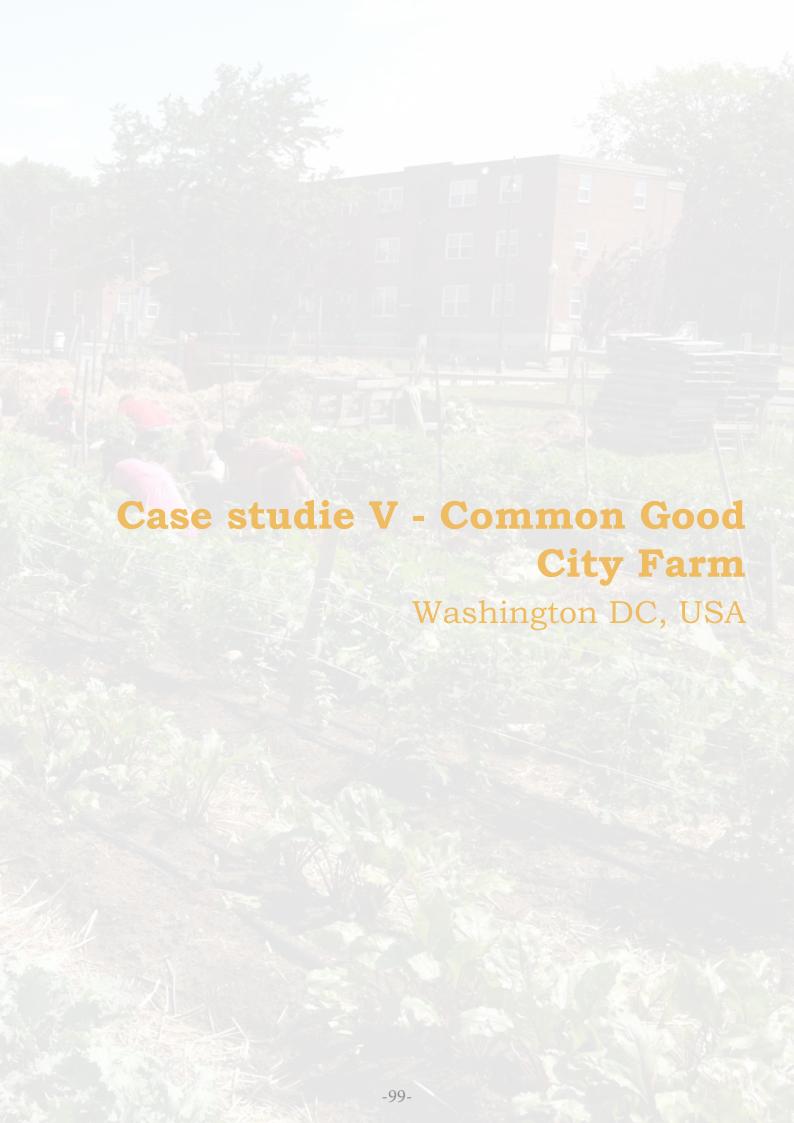












3.2.5 Common Good City Farm

Location: 334 V St NW, Washington, DC

20001, USA Date: 2007

### **Key Dynamics**



Common Good City Farm's emission is to grow food, educate and help low-income DC community members meet their food needs. It aims to serve as a replicable model of a community-based sustainable urban food system.

The community's educational programmes and learning workshops provide hand-on training in food production, healthy eating and environmental sustainability. The Farm itself serves as a demonstration site for individuals, organisations and students. The site and the people integrate people of all ages, classes and races to create vibrant and safe communities.

The Farm is located in the heart of the city and its a perfect example of how we can improve health of our environment in urban areas. Farming is done using sustainable methods. Common Good serves as a source of fresh fruit and vegetables in a food desert: in this neighbourhood, the nearest grocery store is over a mile away. The farm engages young people in environmental education, getting them involved in growing food and healthy eating. It is important to have places like Common Good City Farm, to show tat urban areas can develop sustainability, improve their environment and strengthen their communities.

Source: www.commongoodcityfarm.org

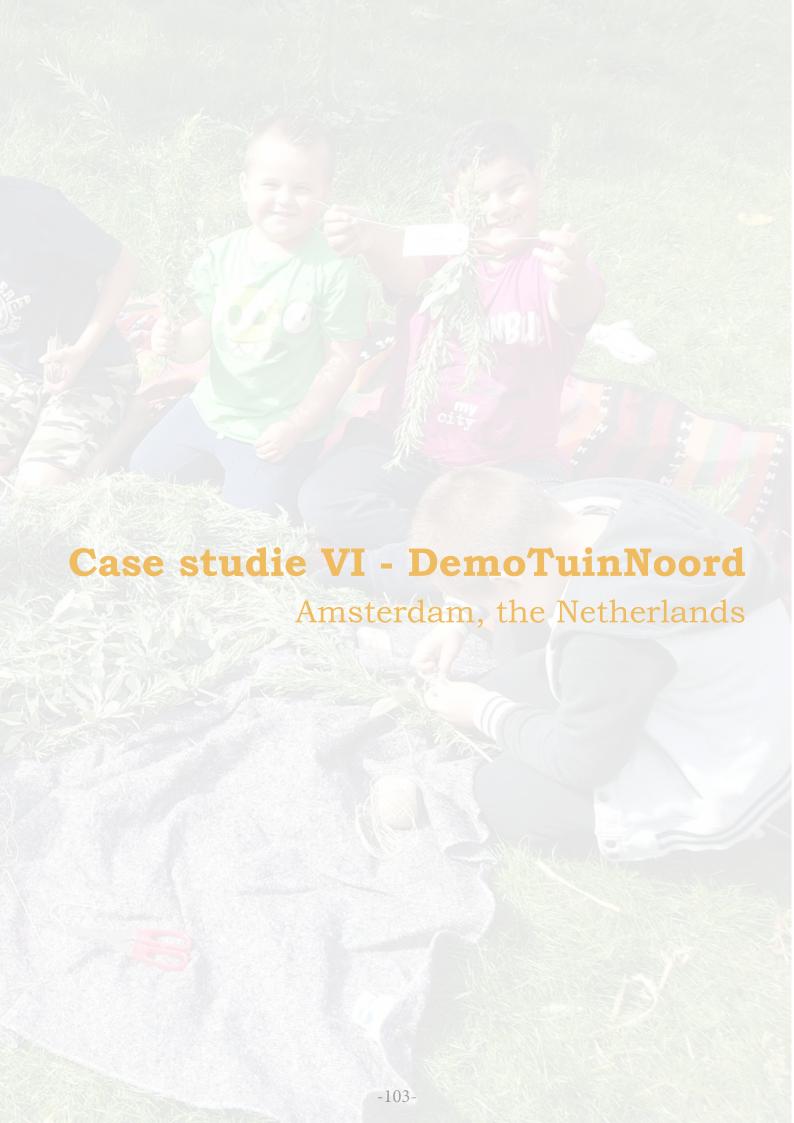










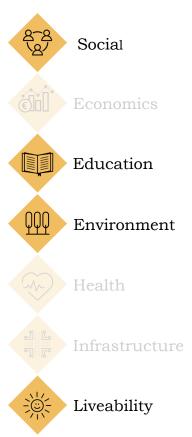


### 3.2.6 DemoTuinNoord

Location: Notweg 32, Amsterdam, the

Netherlands Date: 2011

### **Key Dynamics**



Source: www.urbaniahoeve.nl

DemonstrationGarden is of the part Urbaniahoeve project in Amsterdam. Urbaniahoeve's demonstration garden is a showcase of Urbaniahoeve's research areas, including growing foodscapes into the national ecological framework, phytoremediation (cleaning soils of contaminants with plants, soils biota and mycelia), urban topsoil soil (re)generation, closed-cycle use of organic materials, green surfacing, water sequestration, espalier hedging, facade and barriers and terraforming with mound gardening. While the core team participates in information-rich work, the neighbours are attracted to the DemoTuin by its collective, organic kitchen garden and private park space (with pit oven). The 1.500m2 garden is adjacent to a large urban park, making the ambition of a contiguous ecological framework a realistic endeavour.

Working with local people existing materials and institutions, DemostrationGarden has quickly built a 15-person core team with a strong sense of project ownership, that is knowledgeable about green typologies and whose members bring their own expertise to the project. Urbaniahoeve believes that we as citizens need to be highly skilled at creating strong communities with sufficient knowledge to phytoremediate contaminated urban soils and to transform unproductive spaces into contiguous, edible landscapes.













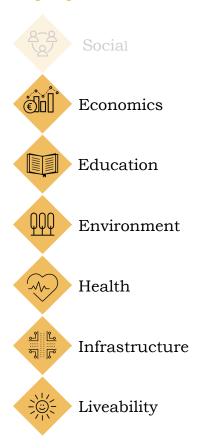


3.2.7 Forage Kitchen

Location: 1473 Oak St #7, San Francisco,

CA 94117, USA Date: 2013

### **Key Dynamics**



Source: www.foragesf.com/foragekitchen

Forage Kitchen is a co-working space for food. More than a shared kitchen, it will be a home for food makers and a hub for the Bay Area food community, in San Francisco. It's a philosophy-focused space, where local food producers can start their projects with support of the others who are going through the same experiences. They work together to source local produce and meats from local producers, while at the same time supporting the urban food-making/growing community.

If someone is starting a business, Forage Kitchen can offer a space. Office, kitchen, support, equipment business rental, preparation help and dish washing, all in one place. Except than a kitchen, this space will be a community of makers working side by side to create something really special. There will be retail space for products, as well as relationships with local stores in order to help with the confusing process of retail distribution. Furthermore, there will be classes and opportunities to complete big projects on professional equipment.

This space will provide a much-needed resource for the food community of San Francisco. A space to help small businesses thrive, but also one where people can get their feet wet, when deciding if making food full-time is for them

















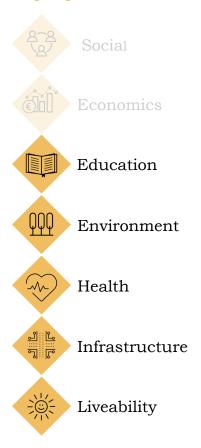
#### 3.2.8 HK Farm

Location: 404 Shanghai Street Kowloon,

Hong Kong, China

Date: 2012

#### **Key Dynamics**



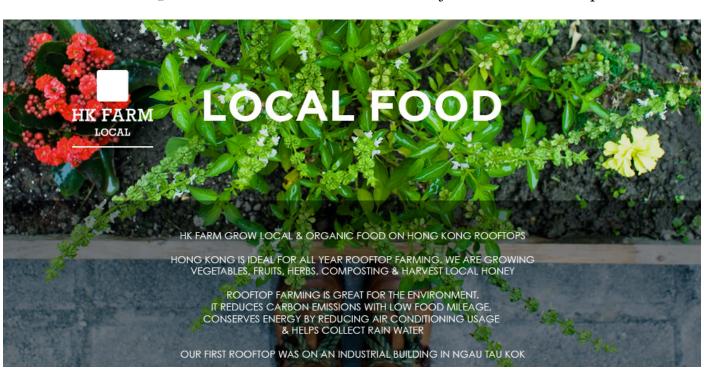
Source: www.hkfarm.org

HK Farm is an organisation of Hong Kong urban farmers, artists and designers. It aims to communicate the value of rooftop farming and benefits of local produced food. HK Farm grows local food and designs products and services related to urban agriculture.

The Farm grows seasonally and practices organic farming methods. As part of creative, community and educational work it offers school tours, collaborates with other rooftop farms, and runs plant-making workshops and exhibitions.

From a farming perspective, Hong Kong is producing less and less food every year. For example in 1980 20% of the vegetables that were consumed in Hong Kong, were also grown in Hong Kong. In 2012 this figure has significantly reduced to only 2,3%. It has been argued by some rural farmers that the government is not supportive of local agriculture in its policy.

As urban farmers, HK Farm is aware of such a socio-cultural and environmental issues affecting Hong Kong and its population and aims to address them in its organic urban farming practices. HK Farm promotes such organic practices in its creative workshops, school tours, exhibitions annd with the community around the rooftop.



















3.2.9 Zuidpark Urban Farming Rooftop

Location: Spaklerweg 50 - 52 1114 AE

Amsterdam, the Netherlands

Date: 2012

#### **Key Dynamics**



Zuidpark Urban Farming Rooftop sits on the roof of a modernist office building that has recently been renovated to offer flexible, mobile working facilities.

The rooftop has various functions: its serves as the office park, where people can meet, walk and eat lunch. It is also a cultivating space were almost 70 different fruits, vegetables and herbs are grown.

The food is harvested by cooks who prepare food at one of the building's lunch spaces and also by office workers who are willing to take fresh produce at home for dinner.

Zuidpark shows that urban farming is as much for adding amenity, as well as social and economic value, to an office building as it is about cultivation. A non-traditional office environment has been created, not only because the building fosters sustainable entrepreneurship and provides flexible workspace, but also because it incorporates the rooftop farm into its operational concept, providing welcome additional space in an increasingly dense urban environment.

Source: www.zuidpark.nl















Utrecht, the Netherlands

3.2.10 Rijp en Groen Tolsteeg

Location: Engelen van Pijlsweertstraat 9,

3513 GC Utrecht, the Netherlands

Date: 2012

#### **Key Dynamics**



Zuidpark Urban Farming Rooftop sits on the roof of a modernist office building that has recently been renovated to offer flexible, mobile working facilities.

The rooftop has various functions: its serves as the office park, where people can meet, walk and eat lunch. It is also a cultivating space were almost 70 different fruits, vegetables and herbs are grown.

The food is harvested by cooks who prepare food at one of the building's lunch spaces and also by office workers who are willing to take fresh produce at home for dinner.

Zuidpark shows that urban farming is as much for adding amenity, as well as social and economic value, to an office building as it is about cultivation. A non-traditional office environment has been created, not only because the building fosters sustainable entrepreneurship and provides flexible workspace, but also because it incorporates the rooftop farm into its operational concept, providing welcome additional space in an increasingly dense urban environment.

Source: www.urbanpilots.wordpress.com











#### 3.2.4 Conclusions

As already mentioned on the introduction of this sub-chapter, the above case studies where analysed based on seven key dynamics: social, economics, education, environment, infrastructure, health and liveability. The case studies were analysed in this way in order to be able to compare the case studies and draw conclusions for the sub-question What kind of activities can raise food awareness between a group of people?

The analysis has shown (see fig. 12 & 13) that the majority of the case studies to have an impact on the liveability between the people of a community. Furthermore, a big amount of the case studies care a lot for improving the way people are feeding to a more healthy way. The acts of improving the environment, changing the way cities are supplied, educating people about food and creating social bonds between people are also essential for the analysed case studies. The impact on the economic field is the least important key dynamic, based on the analysis.

Furthermore, another conclusion that came out from the analysis is that the majority of the projects are located in very central city areas. This is a very important conclusion for this thesis, because the thesis location is also in a very central part of Amsterdam. Here we can say that by creating such a residential complex, which integrates activities that raise food awareness between people, is something that is already successful in other parts of the world.

Finally, and in order to answer the research sub-question, looking at the case studies, we can say that the key dynamics of education, environment, health and social are the ones that are the most likely to raise food awareness between a group of people. To be more specific, activities such as producing local food through urban agriculture, community or commercial kitchens, food production workshops for students and people in general, lessons of cooking healthy with local produce and learning how to

respect the environment, are some of the activities which can succeed in engaging people more with the food that they consume and can create food awareness in an urban environment.



Figure 12. Percentages of the urban impact of the case studies. Source: own illustration

Urban location

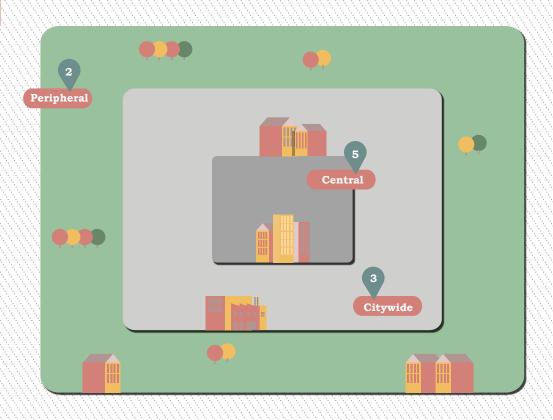


Figure 13. Location of the case studies. Source: own illustration

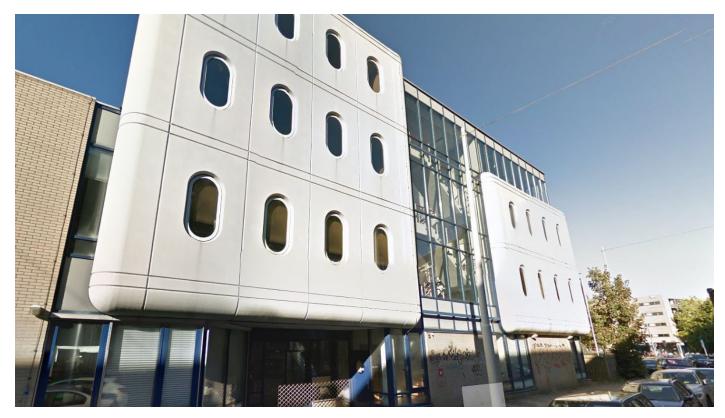
### 3.2 Site Analysis

The studio's location for this academic year is the centre of Amsterdam and specifically the are around the Singel belt. During the first 9 weeks of the semester, I had to choose a plot around the belt for my research phase and for the later design phase in the second semester.

After visiting the location site twice, I've decided that the best option for me is a plot all the way on the eastern side of the belt. The plot is situated on a corner between the Hoogte Kadijk street and the Sarphatistraat. This area is part of the Kadijken & Oostelijke Eilanden neighbourhood.

My decision for this plot was based on a very symbolic reason. Currently on the plot Hoogte Kadijk 401, lies the former Office of the Food and Consumer Product Safety Authority. This building has been vacant for the last five years. On December 2016, the building has been occupied from the squatting community Wij Zijn Hier for almost 1 year, when they were later removed by the local police force. The municipality declared that the building is going to be demolished in the following year. A new residential

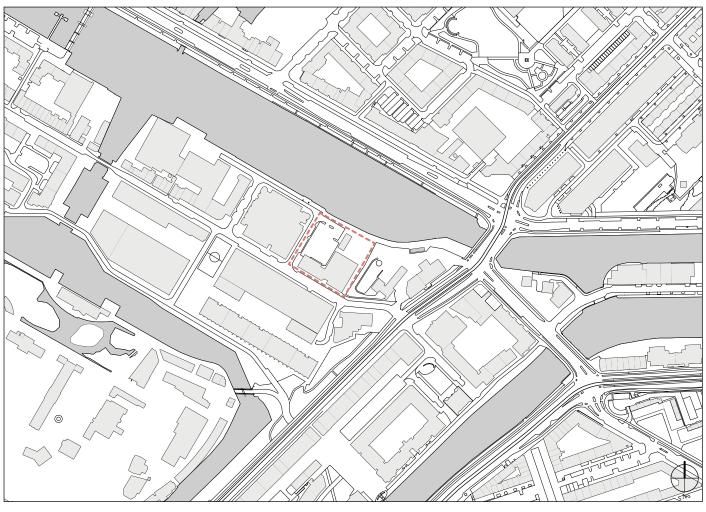
complex for immigrants and young people is planned to be built in the place of the former Office of the Food and Consumer Product Safety Authority.



Office of the Food and Consumer Product Safety Authority.

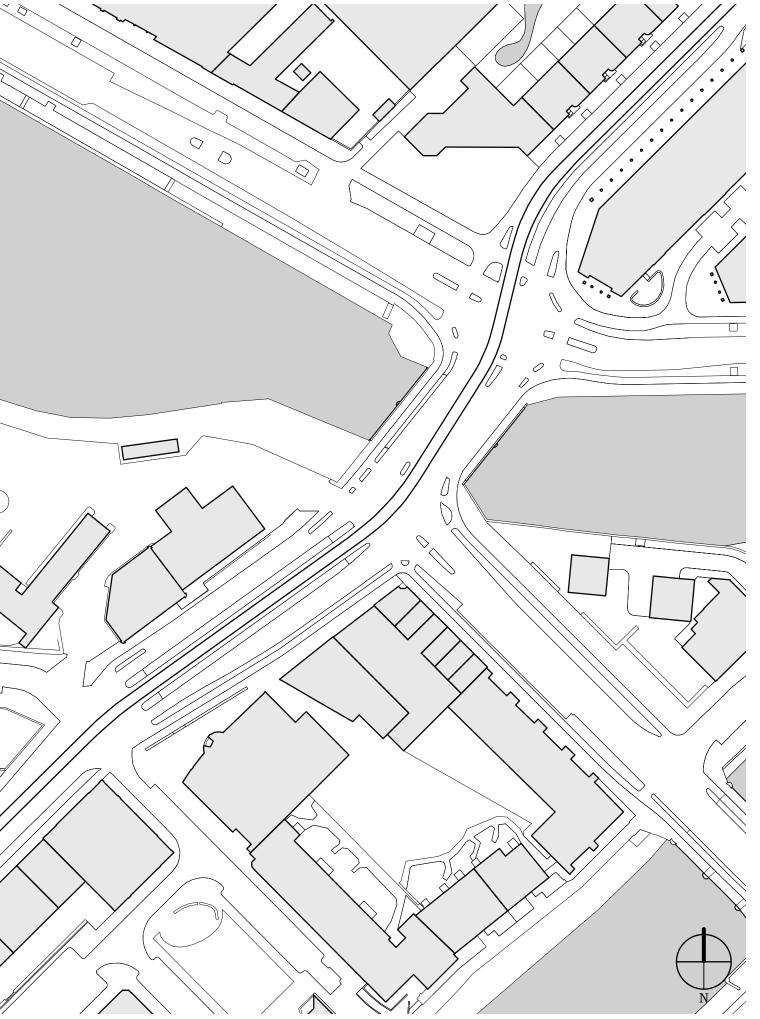


Amsterdam map



Location map Scale 1:4000



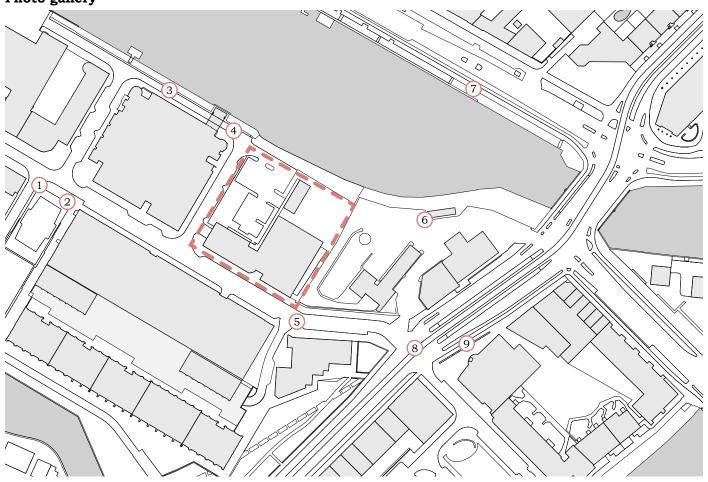


Scale 1:1000





### Photo gallery





















#### 3.2.1 History

In 1662 the city of Amsterdam started with the fourth city expansion of the city, in which the neighbourhood of the Plantage was a part of. They executed this giant part at once because the city of Amsterdam was growing rapidly, and municipality expected to be able to easily sell all the properties build. Also finishing the second part of the a half round shape of the city could have helped in their urge to already make the Plantage area ready for habitation. But after the wars with England (1672) the economic growth stagnated, making further development of the area impossible (Rosenhart, 2010, p.4). To make any use of this bare land Jacob Bosch designed a plan in 1683 to rent the area as places for leisure and parks for periods of 20 years, with temporal buildings to be sure that the land could be sold later, when the economical situated bettered (Roegholt, 1982, p.13).

To make the allotment of the Plantage more easy, the Sint Anthoniesdyke (important embankment between the city and the Zuiderzee) going diagonally trough the area was rebuild up north, the Hoogte Kadijk. At first there was still not so much interest in these new plots, therefore some charity groups as the Amstel, Occo's, Corvers and Brandts courts (mostly build for elderly unmarried women), the protestant church, the Hortus Medicus (now Botanicus) and the Amsterdam workhouse (where inmates could be set to work) where able to buy large plots for a small price (Roegholt, 1982, p. 10). Although elderly house the Amstelhof has been rebuild as museum the Heritage and some of the courts are now normal dwellings, some of this characteristic is still there, as for instance the Dr. Sarphatihuis is already since 1782 and still an elderly housing complex.

The rest of the plot where in later years rented to be used for a leisure function, first only parks for walking, but later also theatres, teahouse and gardens, bars and a bathhouse. Soon it was the most important leisure area of Amsterdam. To take control over the amount of bars starting in the area,

the city of Amsterdam build in 1688 a grand public house and removed all the skanky pubs from the area (Roegholt, 1982, p.14-16).

While the Plantage was now a formative looking area, the banks of the Hoogte kadijk had a more rough storehouse function for the overseas trade. This was not the ordered and structured affair that would have fitted the area, but a rather messy one. King William I therefore gave order to build a new storage building in 1823, in which the storaged goods where well organized and was which was closed off from sight by walls (Roegholt, 1982, p.31).

In the beginning of the 19th century, in the last years of the military occupation by the French, a barrack building was constructed in the area as commissioned by Napoleon, to strengthen the stronghold of Amsterdam (Roegholt, 1982, p.27). This building was the beginning of a later build barrack building and a military hospital constructed close by, that later formed an important part in the defence works around Amsterdam as part of the "Nieuwe Hollandse Waterlinie".

From 1860 onward the temporal park buildings where lotted and sold for dwelling construction, where the economic situation was bettering (Roegholt, 1982, p.42-43). By 1900 the Plantage had established itself as a Jewish neighbourhood, with a great deal of shops as for instance jewelleries (Roegholt, 1982, p.49). In 1941 about 65% of the area was inhabited by Jewish people (Roegholt, 1982, p.52-54). The Portugese synagogue, the Dutch theatre (now a Jewish cultural institute and war memorial) and the Jewish museum (which used to be a synagogue) still remind of that history. Also the lively public character of the Plantage with it's theatres and bars that had dominated this area in the 18th century was in the 19th century still alive, by the end of the century the Plantage possessed no less than four theatres (Roegholt, 1982, p.65). This all until the second world war. In 1943 the Dutch theatre, which had traditionally been

a populair place for Jews to visit had been used by the Nazi's to deport Amsterdam Jews to working camps (Roegholt, 1982, p.69-72). Later this became a memorial area, because of its laden history. Off the once lively neighbourhood was not much left.

By the end of the 20th century the area lost its trade function and military function, where the entrotdock was dismanteled in 1983, to be some years later to be reused as a dwelling complex and the military complexes where reused as offices. Nor was it, because of the war a Jewish neighbourhood anymore. Today it is mainly a dwelling neighbourhood with some touristic attractions as Artis, the IJ brewery and the botanic garden. Also it is since 1880 one of the locations of the University of Amsterdam, that is growing in size since then. Today the area houses three of the universities faculties.

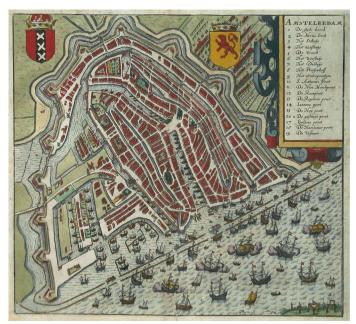


Figure 15. Amsterdam 1593. Source: Wikipedia



Figure 16. Amsterdam 1649. Source: Wikipedia

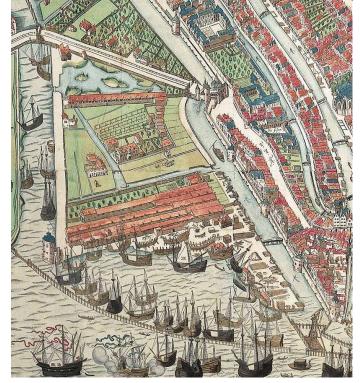
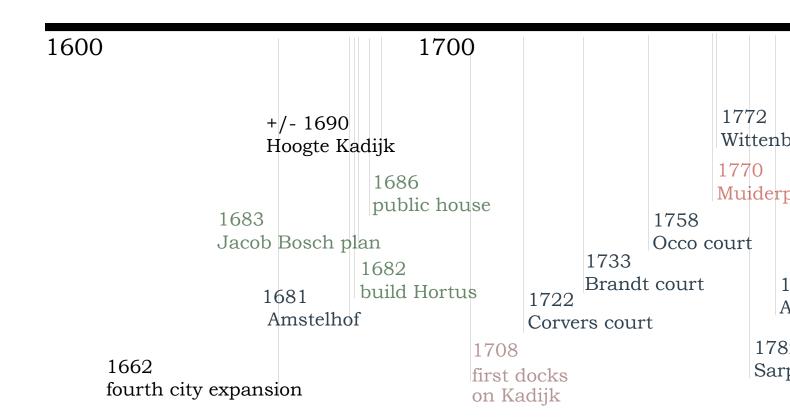
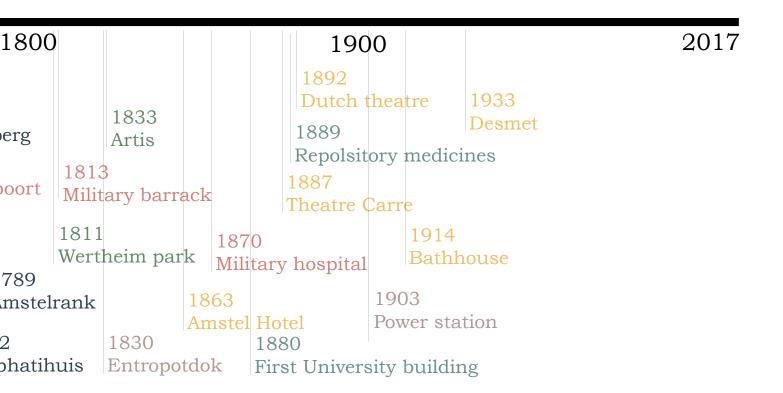


Figure 14. Lastage area. Source: Wikipedia



Figure 17. Amsterdam 1700. Source: Wikipedia





	military function
rly care function	
industry	function (Kadijk)
	knowledge function (university/offices)
par	klike character
	dwelling character

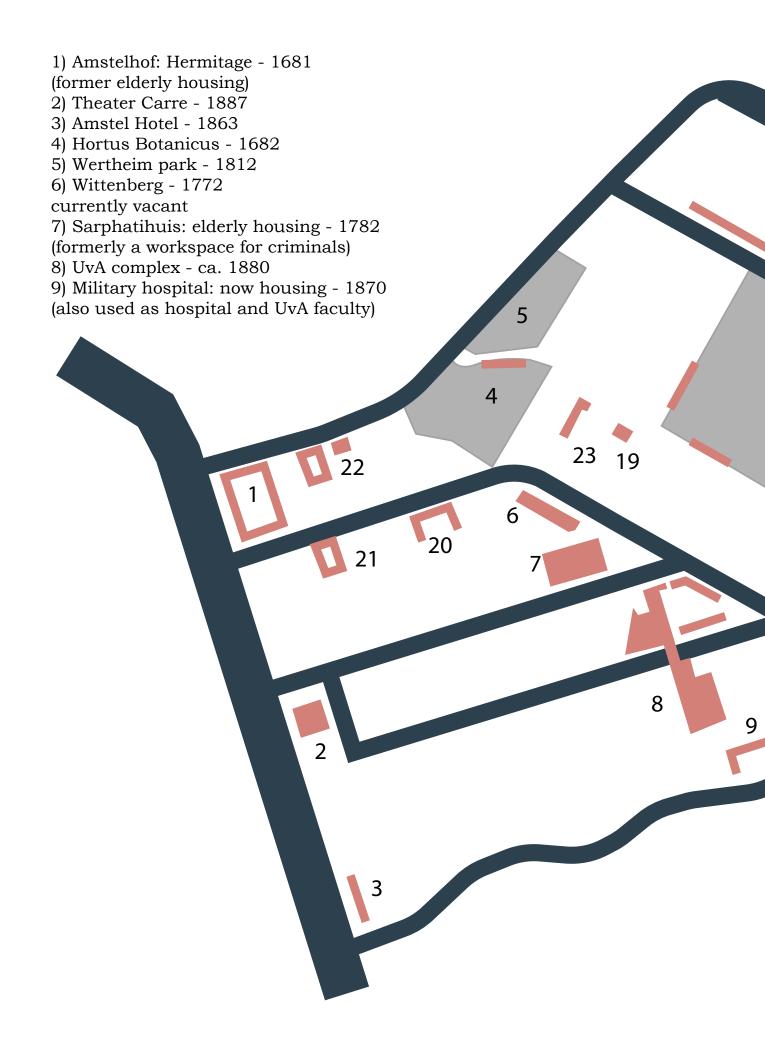
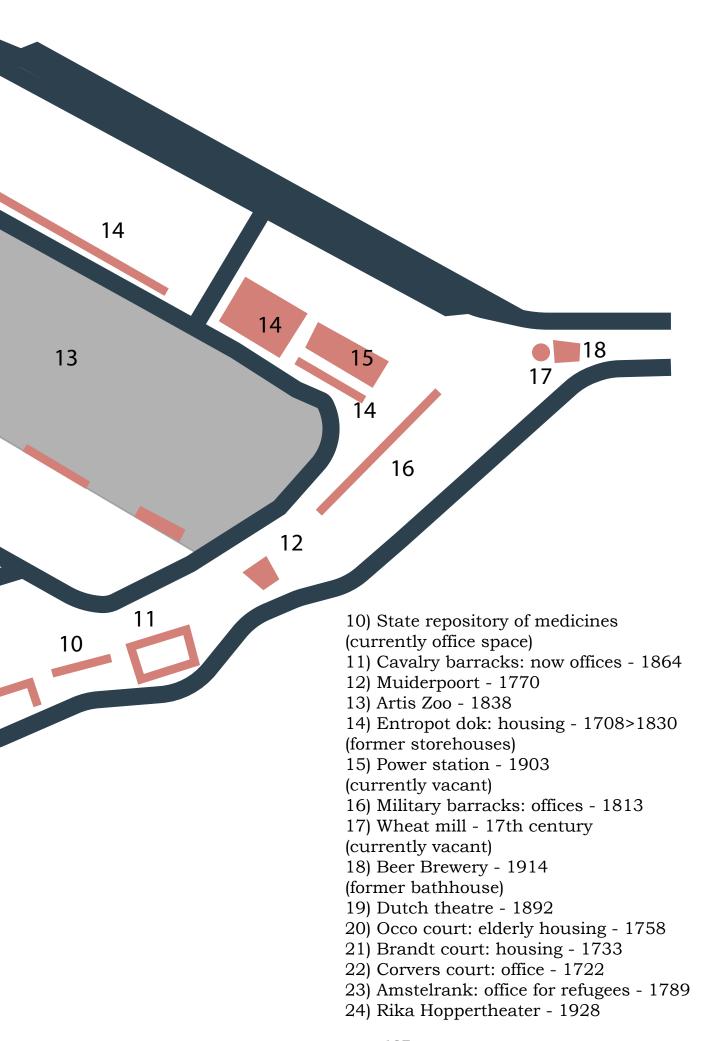
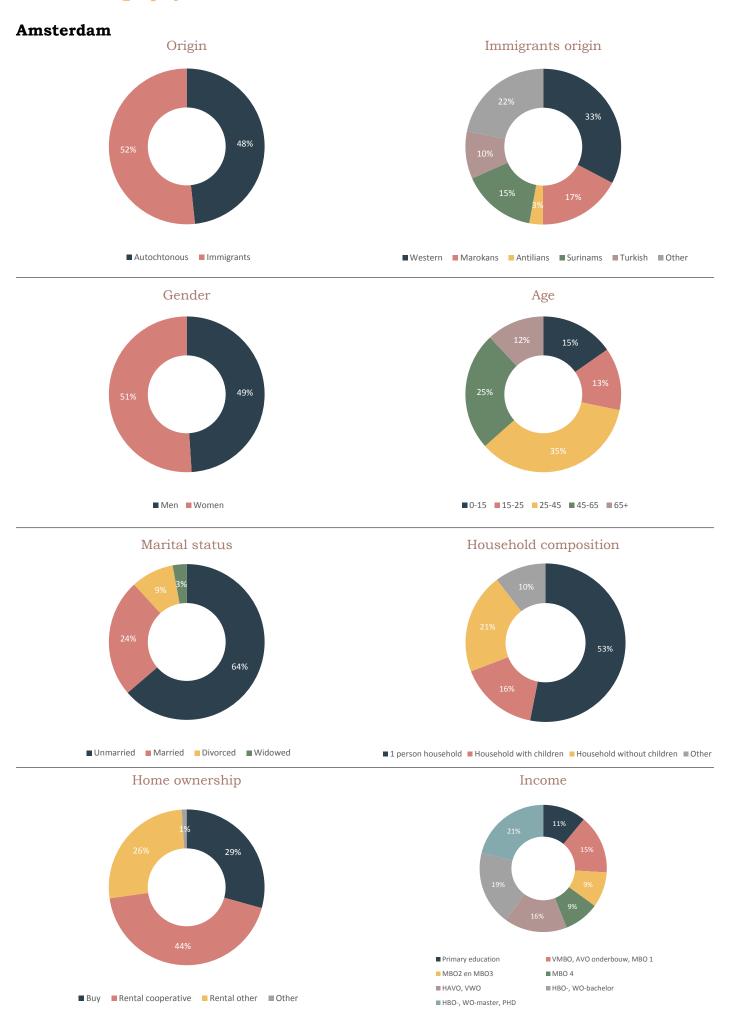


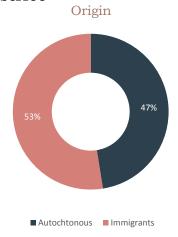
Figure 19. Important buildings of the Kadijken / Plantage neighbourhood. Source: Group's location analysis



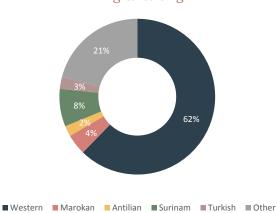
# 3.2.2 Demography

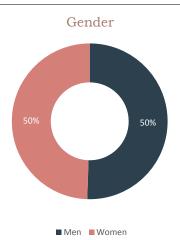


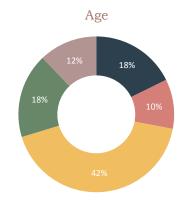
#### **Center District**



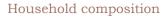
# Immigrants origin

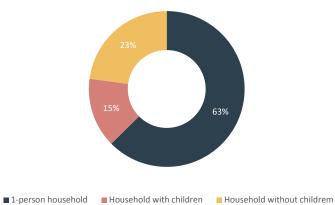


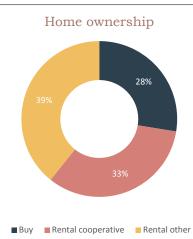




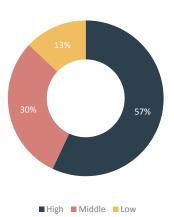
■ 0-15 ■ 15-25 ■ 25-45 ■ 45-65 ■ 65+







#### Income



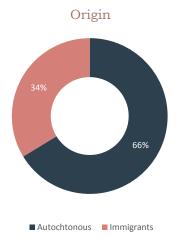
#### Kadijken/Oostelijke Eilanden neighbourhood

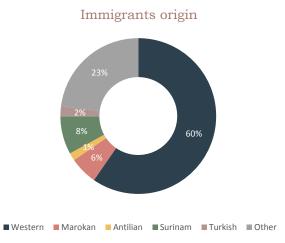


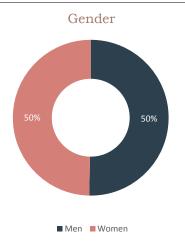
■ High income ■ Low income ■ Other

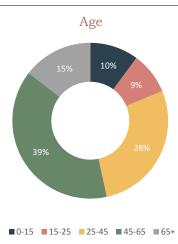
■ Buy ■ Rental cooperative ■ Other

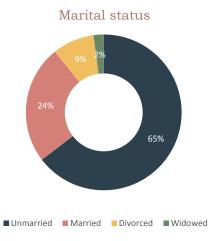
### Kadijken











# 3.2.3 Morphology

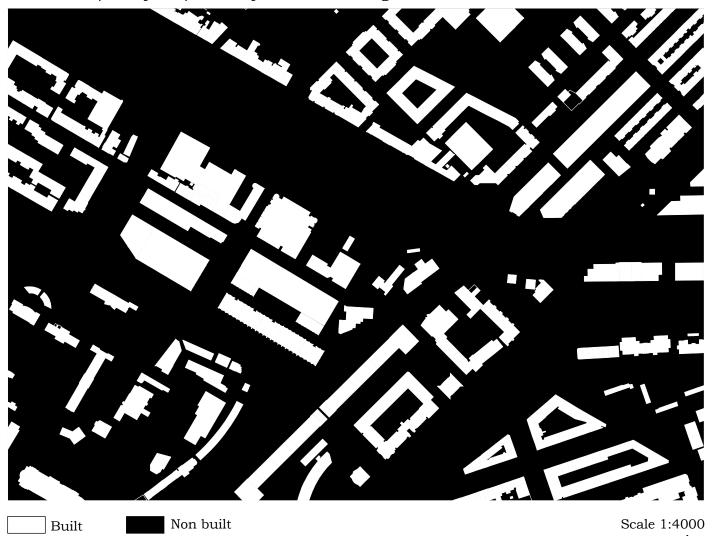
# Figure & Ground

Noli map | Kadijken / Oostelijke Eilanden Neighbourhood



### Figure & Ground

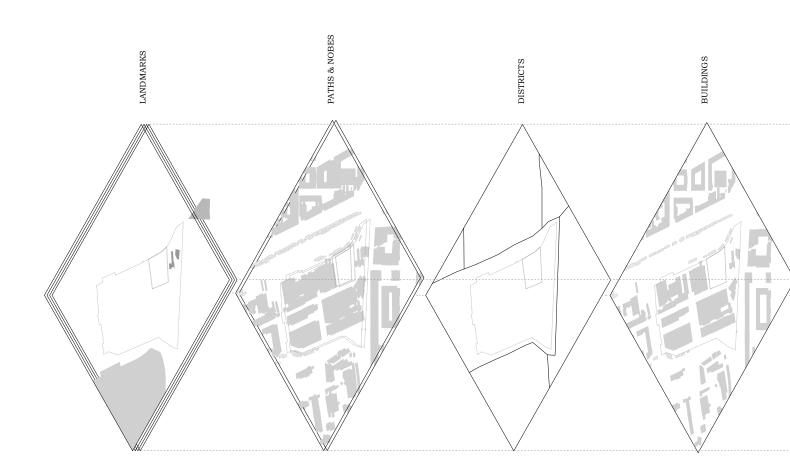
Built fabric| Kadijken / Oostelijke Eilanden Neighbourhood



-143-

# Figure & Ground

Site Context | Kadijken / Oostelijke Eilanden Neighbourhood



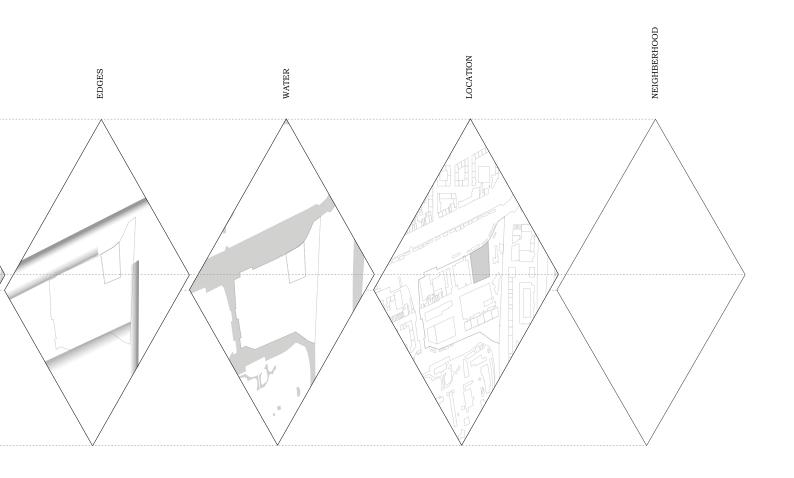
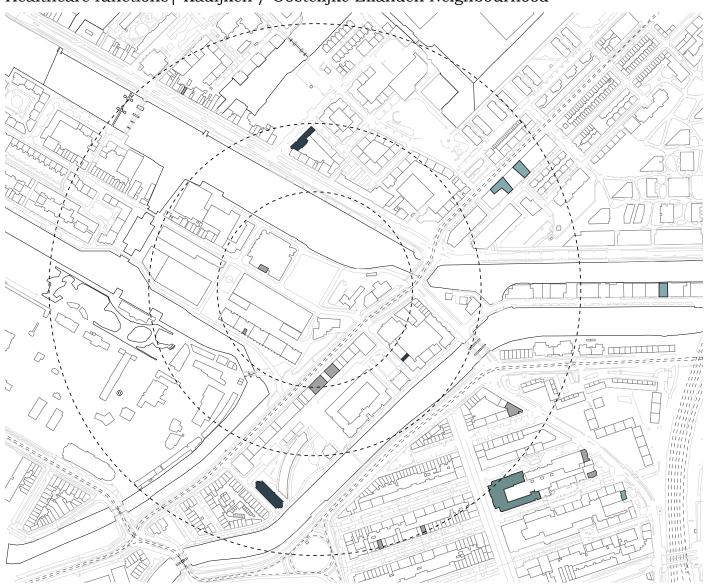


Figure & Ground

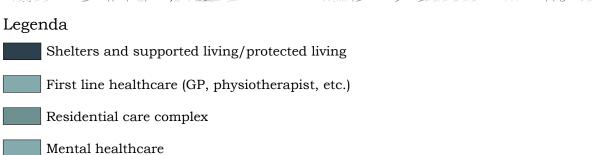


Figure & Ground

Healthcare functions | Kadijken / Oostelijke Eilanden Neighbourhood



Scale 1:4000



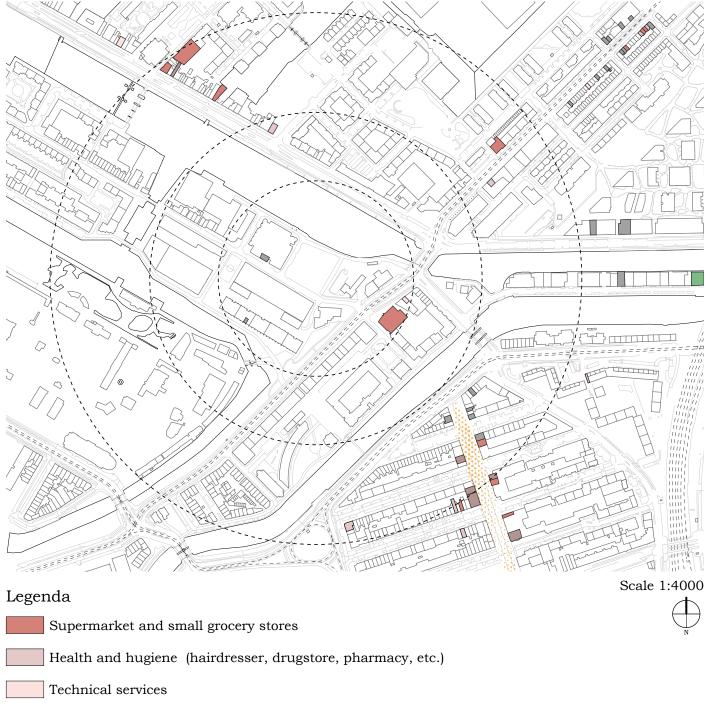
Other care functions

# Figure & Ground

Clothing stores

Other retail stores

Retail functions | Kadijken / Oostelijke Eilanden Neighbourhood



# Figure & Ground

Horeca functions | Kadijken / Oostelijke Eilanden Neighbourhood



# Figure & Ground

# Building age | Kadijken / Oosteijke Eilanden Neighbourhood



Figure & Ground

# Building heights | Kadijken / Oosteijke Eilanden Neighbourhood

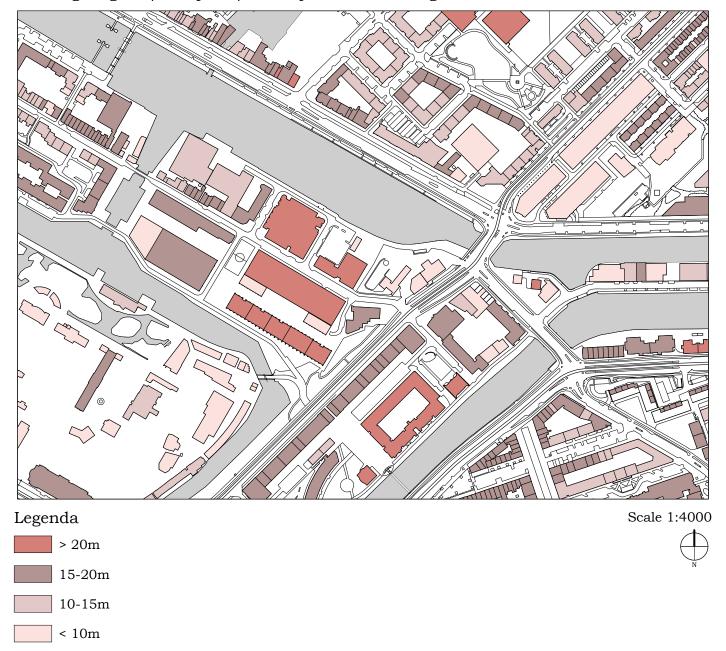
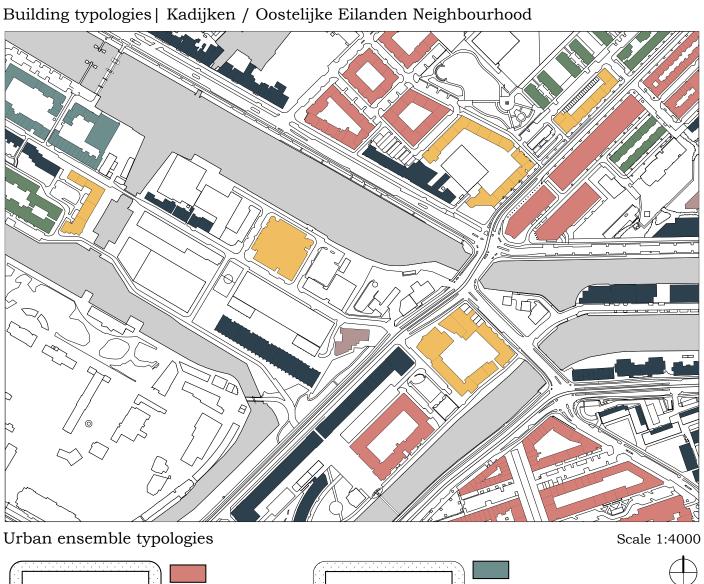


Figure & Ground



U-shape courtyard typology

Open courtyard typology

Facing slab typology

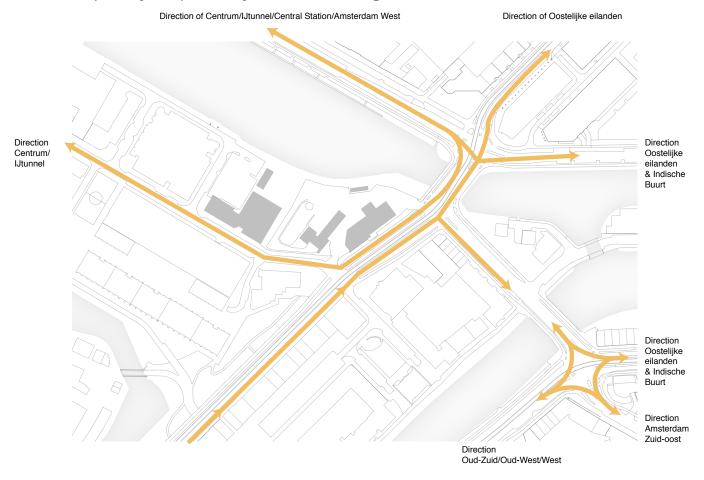
Facing slab typology

Slab typology

# 3.2.4 Mobility

### **Transport**

# Car routes | Kadijken / Oosteijke Eilanden Neighbourhood

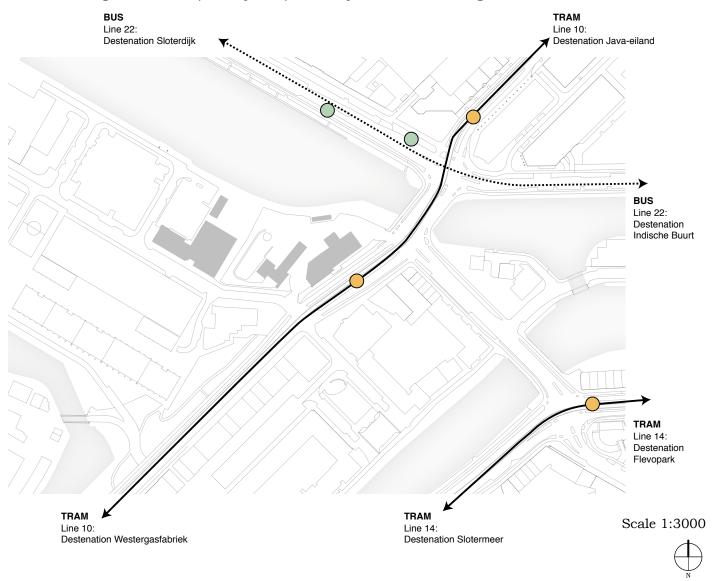


Scale 1:3000



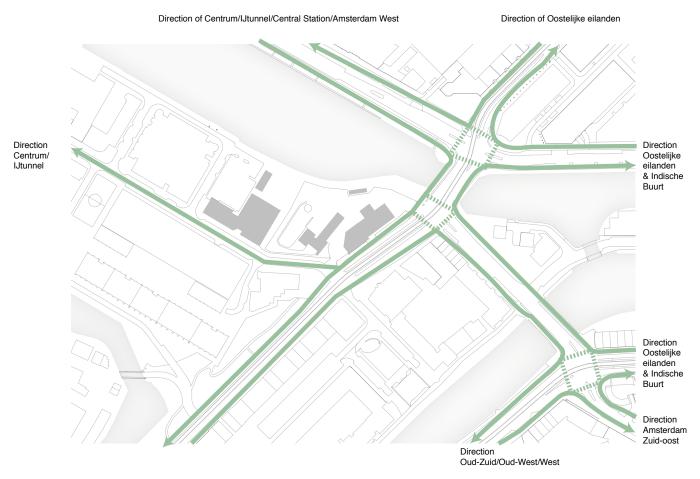
#### **Transport**

Public transport routes | Kadijken / Oosteijke Eilanden Neighbourhood



#### **Transport**

# Bicycle routes | Kadijken / Oosteijke Eilanden Neighbourhood



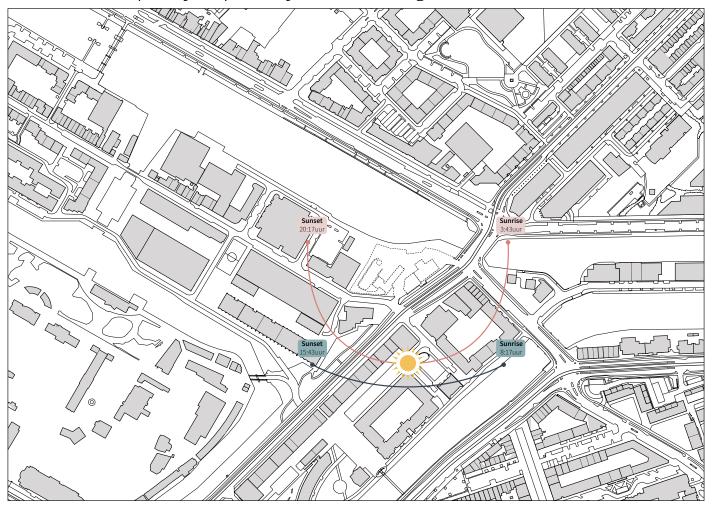
Scale 1:3000



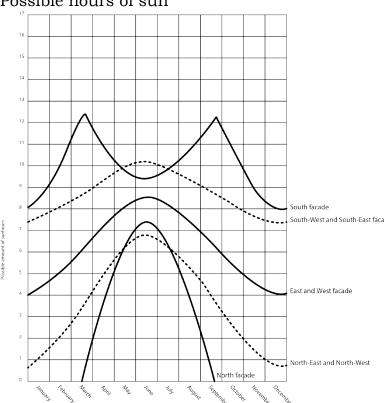
# 3.2.5 Climate

#### Sun & wind

# Sun orientation | Kadijken / Oosteijke Eilanden Neighbourhood



Possible hours of sun



Scale 1:4000



Sun & wind

Solar energy generation | Kadijken / Oosteijke Eilanden Neighbourhood

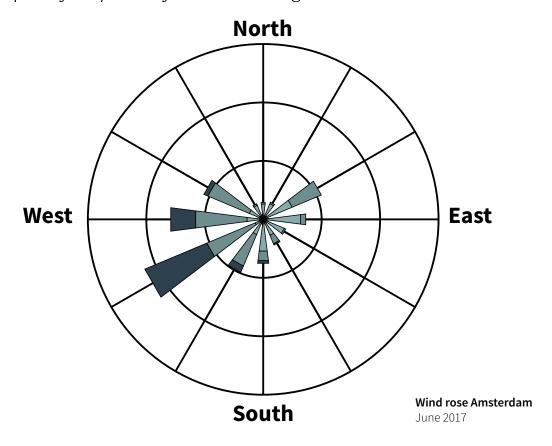


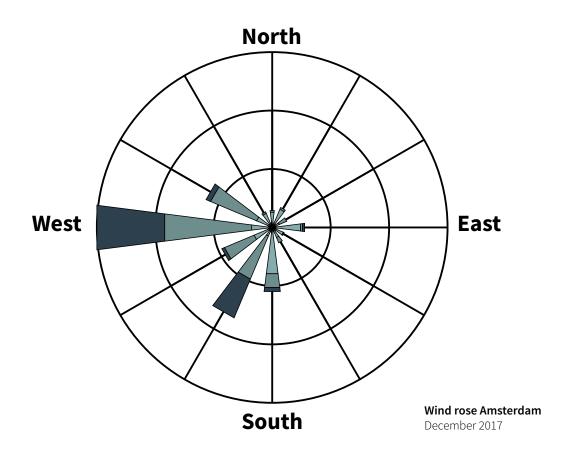
Scale 1:4000



Sun & wind

Wind rose | Kadijken / Oosteijke Eilanden Neighbourhood





Sound

# Sound pollution zones | Kadijken / Oosteijke Eilanden Neighbourhood

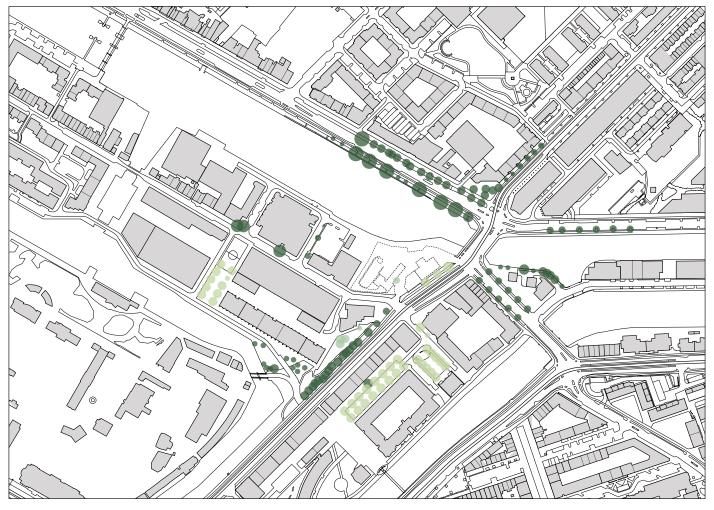


Scale 1:4000



### Flora & fauna

Trees | Kadijken / Oosteijke Eilanden Neighbourhood

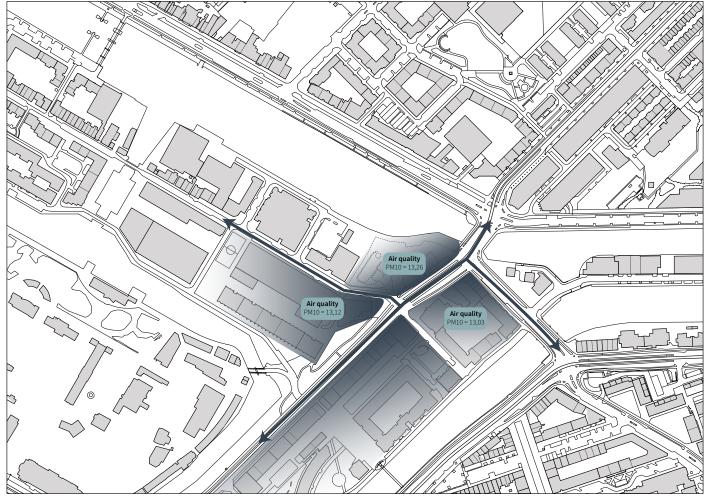


Scale 1:4000



# Air quality

# Dust pollution zones | Kadijken / Oosteijke Eilanden Neighbourhood



Scale 1:4000







- 4.1 Target groups
- 4.2 Dwelling typologies
- 4.3 Additional functions
- 4.4 NeighbourFOOD system paths

# 4.1 Target groups

In this sub-chapter, the target groups are going to be introduced, together with some information about their marital status, household composition, income and daily life. The target groups were divided in two main age groups: elderly and starters. This comes mainly from the fact that although the residential complex will be in the majority inhabited by elderly, the research of their living preferences has shown that they prefer to live in a neighbourhood where different age groups exists. And because the elderly they least prefer living with families

only, the target group of starters was chosen. The elderly will occupy 70% of the dwellings and the starters will occupy 30% of the dwellings.

The decision of adding a small percentage of starters has also to do with the very active participation in the food-based activities, and the creation of relationships that provide help by the starters to the elderly.

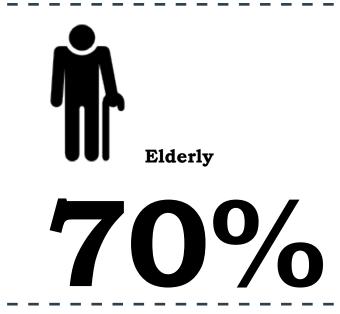
# Elderly

- Age: 55+
- Marital status: Couples without children in the house (empty nesters).
- Working or retired
- Very active in their daily life.
- Income: Middle or high
- With no physical limitations.



- Age: 55+
- Marital status: Single (unmarried or widowed), without children in the house
- Working or retired
- Very active in their daily life
- Income: Middle
- With no physical limitations.







#### **Starters**

- Age: 25-30

- Marital status: Couples without children

- Working

- Very active in their daily life and social relationships

- Income: Middle



- Age: 25-30

- Marital status: Single

- Working

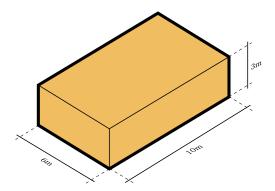
- Very active in their daily life and social relationships

- Income: Middle

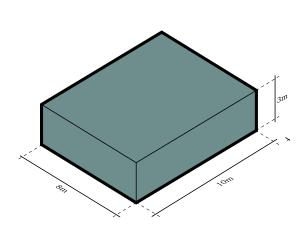


# 4.2 Dwelling typologies

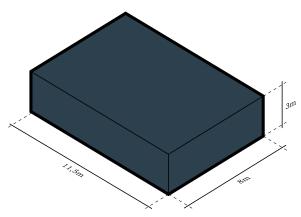
## Elderly



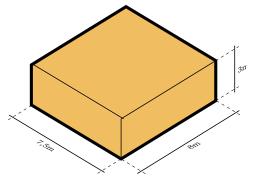
- **60 m² | Elderly|\$\$**  For a single person
- One level apartment
- Double orientation
- Private outdoor space



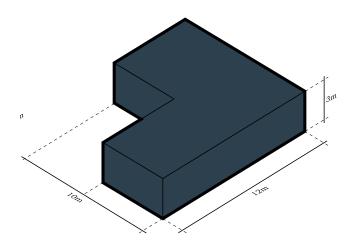
- 80 m<sup>2</sup> | Elderly & starters |\$\$\$
- For couples
- One level apartment
- Double or triple orientation
- Private outdoor space



- 90 m<sup>2</sup> | Elderly | \$\$\$
- For couples
- One level apartment
- Double or triple orientation
- Private outdoor space

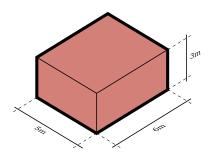


- 60 m<sup>2</sup> | Elderly | \$\$
- For a single person
- One level apartment
- Double or triple orientation
- Private outdoor space

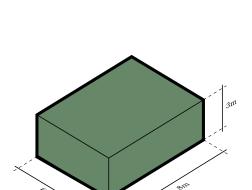


- 90 m<sup>2</sup> | Elderly | \$\$\$
- For couples
- One level apartment
- Double orientation
- Private outdoor space

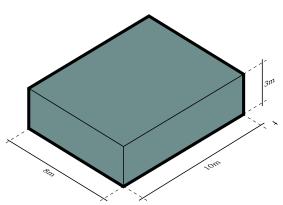
#### **Starters**



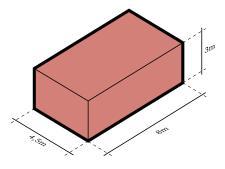
- 30 m<sup>2</sup> | Starter |\$
- For a single person
- One level apartment
- One orientation



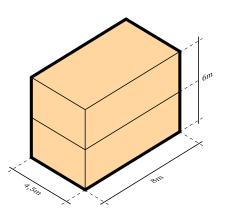
- 48  $m^2$  | Starter or elderly | \$
- For a single person
- One level apartment
- Double or triple orientation
- Private outdoor space



- 80 m<sup>2</sup> | Elderly & starters | \$\$\$
- For couples
- One level apartment
- Double or triple orientation
- Private outdoor space



- 36 m<sup>2</sup> | Starter |\$
- For a single person
- One level apartment
- Double or triple orientation
- Private outdoor space



- 70 m<sup>2</sup> | Starters | \$\$
- For a couple
- One level apartment
- Double or triple orientation
- Private outdoor space

### 4.3 Additional functions

The outcome of the literature research and case studies based on food and housing for elderly has given us a number of desirable functions, which can be added in the design of the building. These additional functions could be divided in those which are related to the living part of the complex and those which are related to the food part of the buildings program.

#### Living

From the case studies, we concluded that nowadays elderly prefer to live independently than earlier. This means that they desire a certain amount of privacy. Thus, the shared amenities are less evident in residential buildings nowadays that they used to be before. Although the analysis has also given us a variety of spaces, which elderly are willing to share with the rest of the residents. These amenities are:

- parking space
- bicycle storage
- storage
- laundry room
- courtyard

For the case of the small percentage of starters who are also going to live in the complex the following shared amenities are desired:

- parking space
- bicycle storage
- storage
- laundry room
- courtyard
- kitchen













#### Food

The food-specific case studies analysis has also presented us a number of activities which can raise food awareness between people and also create social relationships between them. The following amenities are some of these activities which can be included in the building program

- Community kitchen
- Vertical food production (green house)
- Soil-based production (roof gardens and/ or private gardens)
- Weekly food market
- Student trips
- Workshops based in local food production and food knowledge
- Waste management















#### **Privacy levels**

The following pyramid tries to distinguish and illustrate the different privacy levels of the different functions and activities taking place in the building premises. **Private** shared living shared kitcen **Shared ®** greenhouse bicycle parking production Collective gardening workshops greenhouse production community trips workshops Public / Collective

Figure 20. Distinguish pyramid private shared, collective and public. Source: own illustration

# 4.4 NeighbourFOOD system paths

This sub-chapter will present how the cultivation system of the NeighbourFOOD complex will function, based on site, production, process and consumption.

Starting from the site field, the complex will provide different areas, where food could be produced. Where food will be produced, will be a result of soil, location and people's relationships. Specifically, sites such as your own garden, a communal roof garden, a greenhouse and a rented plot, are the areas where food is going to be produced in the complex. A relatives or a neighbour's garden in the premises, are also ways where someone can grow local food.

In means of production, NeighbourFOOD will only produce fruits and vegetables. Meat is not part of the complexes identity and character. The production will include fruits like strawberries and apples, vine plants like tomatoes, eggplants and courgette, leafy greens like cabbage, lettuce, asparagus, spinach, celery and herbs like basil and ginger.

The variety in production, gives also the opportunity to consume these product in different ways. Consume the flesh, the skin, the juice or even the whole product are some of these ways. Furthermore, the produce could also be processed, so that consumers can eat the produce in different ways. Roasted, jam, salad, boiled, dried or steamed are some of the different processes that the fruits and vegetables can accept.

But how will these produce arrive on the tables of the consumers? And who are these consumers? First of all, consumers can be the residents of NeighbourFood, theirs neighbours and the community involved in the project, visitors, students, relatives and out of towners as well. These people can engage with the production of the community by visiting the weekly Bio Market taking place in the premises, by participating in the workshops of the community kitchen,

where people can learn how to cook healthier with local food, by visiting the project and engaging with the local residents/farmers or by participating to the cultivation itself.

Food as a connector is the main aim of NeighbourFOOD as a community. In order to be able in the future, to create self sustained food/living factories, people need first to learn to consume better food and to connect with it. And that's why NeighbourFOOD is focusing on sharing knowledge about food. Because awareness is the first steps for the later biggest step of being self sustained in means of food.

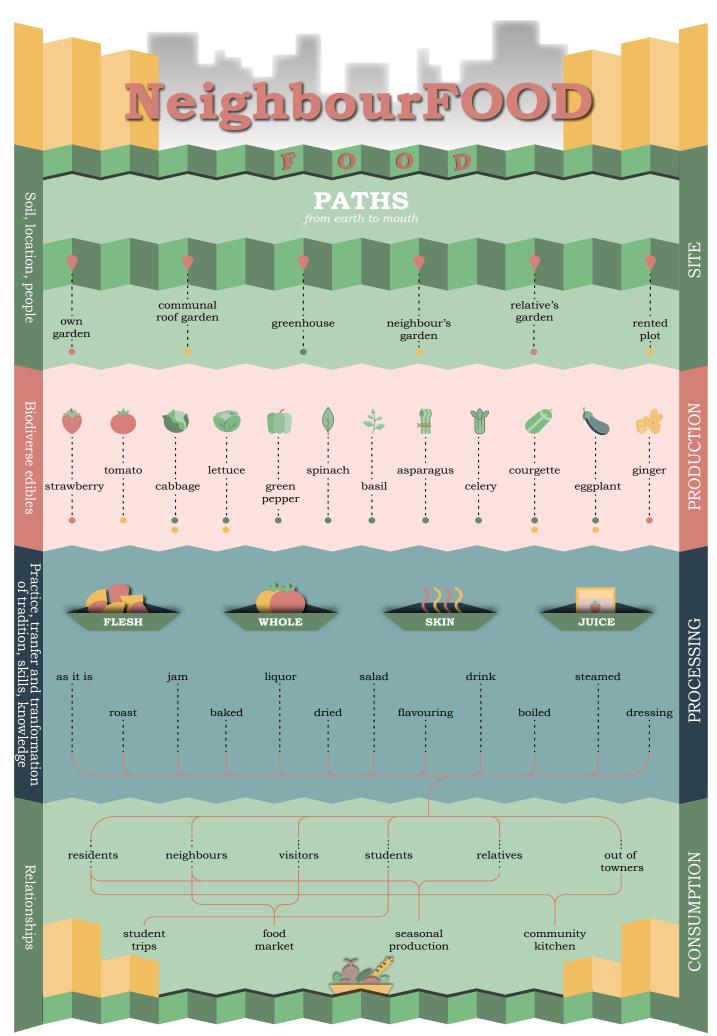


Figure 21. Organisation of food-based activities in the building. Source: own illustration





# Appendix 1

# Bibliography

van Dam, F., Daalhuizen, F., de Groot, C., van Middelkoop, M., Peeters, P. (2013). Vergrijzing en ruimte gevolgen voor de woningmarkt, vrijetijdsbesteding, mobiliteit en regionale economie. Den Haag: Planbureau voor de Leefomgeving.

**Despommier, D. D. (2010).** The vertical farm: Feeding ourselves and the world in the 21st century. New York: Thomas Dunne Books.

**Dykstra, P. A. (2009).** Older adult loneliness: myths and realities. European Journal of Ageing, 6(2), 91-100.

**Hazer, O., & Boylu, A. A. (2010).** The examination of the factors affecting the feeling of loneliness of the elderly. Procedia - Social and Behavioral Sciences, 9, 2083-2089.

**de Jong, P., Rouwendal, J., Hattum, P. V., & Brouwer, A. (2012).** Housing preferences of an ageing population: Investigation in the diversity among Dutch older adults.

**de Klerk, M. M. Y. (2004).** Zorg en wonen voor kwetsbare ouderen. Den Haag: Sociaal en Cultureel Planbureau.

**Kullberg, J. (2005).** Ouderen van nu en van de toekomst: hun financiële spankracht, zorgbehoefte en woonwensen. Den Haag: Sociaal en Cultureel Planbureau.

Kullberg, J., & Ras, M. (2004). Met zorg gekozen? Woonvoorkeuren en woningmarktgedrag van ouderen en mensen met lichamelijke beperkingen. Den Haag: Sociaal en Cultureel Planbureau.

Miazzo, F., & Minkjan, M. (2013). Farming the City: Food as a Tool for Today's Urbansation. Amsterdam: Valiz/Trancity.

Medical Delta. (2013). Grijs is niet zwart wit: ambities van 55+. Leyden Academy. Leiden

Mens, N., & Wagenaar, C. (2009). Architectuur van de ouderen-huisvesting: Bouwen voor wonen en zorg. Rotterdam: NAi Uitgevers.

**Rijksoverheid.** (2015). Zorg en ondersteuning thuis: Wet maatschappelijke ondersteuning (Wmo) 2015. Retrieved from https://www.rijksoverheid.nl/onderwerpen/zorg-en-ondersteuning-thuis/inhoud/wmo-2015?utm\_campaign=seat-gezondheid\_en\_zorg-a-zorg\_en\_ondersteuning\_thuis\_wmo\_2015&utm\_term=wmo&gclid=CLCIzr6BhMoCFebUcgodV8wG3Q.

**Roegholt, R. et al. (1982).** Wonen en wetenschap in de Plantage: De geschiedenis van een Amsterdamse buurt in driehondred jaar. Amsterdam: Universiteit van Amsterdam

**Rosenhart, A.M. (2010).** De vierde uitleg van Amsterdam van 1662: Stedenbouwkundige ontwikkeling en verkaveling. Utrecht: Universiteit Utrecht.

Steel, C. (2008). Hungry city: How food shapes our lives. London: Chatto & Windus.

# Appendix 2

# **Graduation Plan**

# Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences

# **Graduation Plan: All tracks**

Submit your Graduation Plan to the Board of Examiners (<u>Examencommissie-BK@tudelft.nl</u>), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information		
Name	Ioanna Tzavella	
Student number	4284119	
Telephone number	0643690445	
Private e-mail address	iwannatzavella@hotmail.com	

Studio	
Name / Theme	Dutch Housing / Stronghold Amsterdam
Teachers / tutors	Theo Kuypers, Pierijn van der Putt
Argumentation of choice of the studio	My studio decision for Msc1 & Msc2 was Dwelling as well. After these two experiences with designing residences in the Netherlands but also in foreign countries, I knew that dwelling design is the right field for my thesis. The design of dwellings is my fascination for many reasons, but the most important one is that, the home is a dwelling and, as such, a sanctuary for life. Ideally, a home is a calm refuge in a chaotic world and the place where people feel the most intimate in.

Graduation project				
Title of the graduation	NeighbourFOOD: designing for raising food awareness in the			
project	city.			
Goal				
Location:		Hoogte Kadijk 401, the plot on the corner of		
		Hoogte Kadijk and Sarphatistraat.		
The posed problem,		Amsterdam is already facing and going to face a		
		number of problem in the near future.		
		This graduation thesis is depicting two of these		
		problems. Firstly, the population of Amsterdam is		
		aging and the amount of elderly people who are		
		living in Amsterdam is going to be increased up to		

143,000 from 95,000 which is now. Together with the fact that Amsterdam has a big housing market problem, we can say that the introducing of new housing schemes, which are suitable for elderly is essential.

Secondly, the general overpopulation of the globe is resulting to a bigger demand of food production, almost 70% more than now. Until 2060 an additional of 3 billion people will need to be fed and thus new ways and locations for sustainable food production need to be found. But in order to engage people with new ways of food production and especially in a local level, we need first to reconnect people with the food that they consume. Because this relationship has been lost throughout the years.

#### research questions and

The main research question that was raised throughout the research process, during the first semester, is:

How can the architecture of an elderly residential complex, contribute to raising of food awareness for people?

In order to be able to answer the main research question a number of sub-questions need to be answered as well. These sub-questions are:

- 1) What kind of amenities the specific target groups would be willing to share in their immediate living environment, long-term?
- 2) What are the living preferences of the specific target group in dwelling and neighbourhood scale?
- 3) Which dwelling typologies fit to the specific target group?
- 4) Which types of urban agriculture could be added to the urban fabric of Amsterdam?
- 5) What kind of activities can raise food awareness between people?

Design assignment in which these result.  The design assignment will result to a new housing scheme for elderly and a small percentage of starters.  - The target group of elderly will be between 55-85 years old, living alone or in a couple. Although we are talking about elderly housing, these people are very active in their everyday life and they want to keep living independently. Their common characteristic is that of wanting to share food knowledge with the neighbourhood and the rest of the city The target group of starters will occupy 30% of the dwellings. They are going to be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important There will be approximately 70 dwellings realized The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2 The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex Social activities that engage people with		T .
Design assignment in which these result.  The design assignment will result to a new housing scheme for elderly and a small percentage of starters.  - The target group of elderly will be between 55-85 years old, living alone or in a couple. Although we are talking about elderly housing, these people are very active in their everyday life and they want to keep living independently. Their common characteristic is that of wanting to share food knowledge with the neighbourhood and the rest of the city.  - The target group of starters will occupy 30% of the dwellings. They are going to be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important.  - There will be approximately 70 dwellings realized.  - The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2.  - The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.  - Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.  - Social activities that engage people with		6) How can the design of a building host these
housing scheme for elderly and a small percentage of starters.  - The target group of elderly will be between 55-85 years old, living alone or in a couple. Although we are talking about elderly housing, these people are very active in their everyday life and they want to keep living independently. Their common characteristic is that of wanting to share food knowledge with the neighbourhood and the rest of the city The target group of starters will occupy 30% of the dwellings. They are going to be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important There will be approximately 70 dwellings realized The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2 The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex Social activities that engage people with		food-based activities?
housing scheme for elderly and a small percentage of starters.  - The target group of elderly will be between 55-85 years old, living alone or in a couple. Although we are talking about elderly housing, these people are very active in their everyday life and they want to keep living independently. Their common characteristic is that of wanting to share food knowledge with the neighbourhood and the rest of the city The target group of starters will occupy 30% of the dwellings. They are going to be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important There will be approximately 70 dwellings realized The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2 The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex Social activities that engage people with		
housing scheme for elderly and a small percentage of starters.  - The target group of elderly will be between 55-85 years old, living alone or in a couple. Although we are talking about elderly housing, these people are very active in their everyday life and they want to keep living independently. Their common characteristic is that of wanting to share food knowledge with the neighbourhood and the rest of the city The target group of starters will occupy 30% of the dwellings. They are going to be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important There will be approximately 70 dwellings realized The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2 The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex Social activities that engage people with		
housing scheme for elderly and a small percentage of starters.  - The target group of elderly will be between 55-85 years old, living alone or in a couple. Although we are talking about elderly housing, these people are very active in their everyday life and they want to keep living independently. Their common characteristic is that of wanting to share food knowledge with the neighbourhood and the rest of the city The target group of starters will occupy 30% of the dwellings. They are going to be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important There will be approximately 70 dwellings realized The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2 The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex Social activities that engage people with		
housing scheme for elderly and a small percentage of starters.  - The target group of elderly will be between 55-85 years old, living alone or in a couple. Although we are talking about elderly housing, these people are very active in their everyday life and they want to keep living independently. Their common characteristic is that of wanting to share food knowledge with the neighbourhood and the rest of the city The target group of starters will occupy 30% of the dwellings. They are going to be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important There will be approximately 70 dwellings realized The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2 The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex Social activities that engage people with		
housing scheme for elderly and a small percentage of starters.  - The target group of elderly will be between 55-85 years old, living alone or in a couple. Although we are talking about elderly housing, these people are very active in their everyday life and they want to keep living independently. Their common characteristic is that of wanting to share food knowledge with the neighbourhood and the rest of the city The target group of starters will occupy 30% of the dwellings. They are going to be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important There will be approximately 70 dwellings realized The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2 The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex Social activities that engage people with		
housing scheme for elderly and a small percentage of starters.  - The target group of elderly will be between 55-85 years old, living alone or in a couple. Although we are talking about elderly housing, these people are very active in their everyday life and they want to keep living independently. Their common characteristic is that of wanting to share food knowledge with the neighbourhood and the rest of the city The target group of starters will occupy 30% of the dwellings. They are going to be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important There will be approximately 70 dwellings realized The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2 The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important Design al living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex Social activities that engage people with	Design assignment in which these result.	The design assignment will result to a new
percentage of starters.  - The target group of elderly will be between 55-85 years old, living alone or in a couple. Although we are talking about elderly housing, these people are very active in their everyday life and they want to keep living independently. Their common characteristic is that of wanting to share food knowledge with the neighbourhood and the rest of the city The target group of starters will occupy 30% of the dwellings. They are going to be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important There will be approximately 70 dwellings realized The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2 The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex Social activities that engage people with	3	housing scheme for elderly and a small
- The target group of elderly will be between 55-85 years old, living alone or in a couple. Although we are talking about elderly housing, these people are very active in their everyday life and they want to keep living independently. Their common characteristic is that of wanting to share food knowledge with the neighbourhood and the rest of the city.  - The target group of starters will occupy 30% of the dwellings. They are going to be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important.  - There will be approximately 70 dwellings realized.  - The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2.  - The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.  - Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.  - Social activities that engage people with		
between 55-85 years old, living alone or in a couple. Although we are talking about elderly housing, these people are very active in their everyday life and they want to keep living independently. Their common characteristic is that of wanting to share food knowledge with the neighbourhood and the rest of the city.  The target group of starters will occupy 30% of the dwellings. They are going to be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important.  There will be approximately 70 dwellings realized.  The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2.  The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.  Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.		per centuage of counterer
in a couple. Although we are talking about elderly housing, these people are very active in their everyday life and they want to keep living independently. Their common characteristic is that of wanting to share food knowledge with the neighbourhood and the rest of the city.  The target group of starters will occupy 30% of the dwellings. They are going to be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important.  There will be approximately 70 dwellings realized.  The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2.  The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.  Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.  Social activities that engage people with		- The target group of elderly will be
about elderly housing, these people are very active in their everyday life and they want to keep living independently. Their common characteristic is that of wanting to share food knowledge with the neighbourhood and the rest of the city.  The target group of starters will occupy 30% of the dwellings. They are going to be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important.  There will be approximately 70 dwellings realized.  The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2.  The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.  Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.  Social activities that engage people with		between 55-85 years old, living alone or
about elderly housing, these people are very active in their everyday life and they want to keep living independently. Their common characteristic is that of wanting to share food knowledge with the neighbourhood and the rest of the city.  The target group of starters will occupy 30% of the dwellings. They are going to be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important.  There will be approximately 70 dwellings realized.  The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2.  The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.  Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.  Social activities that engage people with		in a couple. Although we are talking
very active in their everyday life and they want to keep living independently. Their common characteristic is that of wanting to share food knowledge with the neighbourhood and the rest of the city.  The target group of starters will occupy 30% of the dwellings. They are going to be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important.  There will be approximately 70 dwellings realized.  The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2.  The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.  Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.  Social activities that engage people with		about elderly housing, these people are
want to keep living independently. Their common characteristic is that of wanting to share food knowledge with the neighbourhood and the rest of the city.  The target group of starters will occupy 30% of the dwellings. They are going to be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important.  There will be approximately 70 dwellings realized.  The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2.  The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.  Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.  Social activities that engage people with		,
common characteristic is that of wanting to share food knowledge with the neighbourhood and the rest of the city.  The target group of starters will occupy 30% of the dwellings. They are going to be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important.  There will be approximately 70 dwellings realized.  The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2.  The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.  Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.  Social activities that engage people with		
to share food knowledge with the neighbourhood and the rest of the city.  The target group of starters will occupy 30% of the dwellings. They are going to be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important.  There will be approximately 70 dwellings realized.  The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2.  The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.  Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.  Social activities that engage people with		
neighbourhood and the rest of the city.  The target group of starters will occupy 30% of the dwellings. They are going to be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important.  There will be approximately 70 dwellings realized.  The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2.  The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.  Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.  Social activities that engage people with		_
<ul> <li>The target group of starters will occupy 30% of the dwellings. They are going to be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important.</li> <li>There will be approximately 70 dwellings realized.</li> <li>The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2.</li> <li>The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.</li> <li>Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.</li> <li>Social activities that engage people with</li> </ul>		
30% of the dwellings. They are going to be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important.  There will be approximately 70 dwellings realized.  The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2.  The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.  Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.  Social activities that engage people with		
be people between 25-30 years old, living alone or in a couple. For these people social engagement is very important.  There will be approximately 70 dwellings realized.  The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2.  The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.  Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.  Social activities that engage people with		
alone or in a couple. For these people social engagement is very important.  There will be approximately 70 dwellings realized.  The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2.  The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.  Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.  Social activities that engage people with		
social engagement is very important.  There will be approximately 70 dwellings realized.  The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2.  The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.  Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.  Social activities that engage people with		
<ul> <li>There will be approximately 70 dwellings realized.</li> <li>The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2.</li> <li>The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.</li> <li>Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.</li> <li>Social activities that engage people with</li> </ul>		
realized.  The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2.  The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.  Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.  Social activities that engage people with		social engagement is very important.
<ul> <li>The dwelling typologies will be one-level apartments, studios and maisonettes and their size will vary between 30-80m2.</li> <li>The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.</li> <li>Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.</li> <li>Social activities that engage people with</li> </ul>		- There will be approximately 70 dwellings
apartments, studios and maisonettes and their size will vary between 30-80m2.  The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.  Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.  Social activities that engage people with		realized.
their size will vary between 30-80m2.  The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.  Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.  Social activities that engage people with		<ul> <li>The dwelling typologies will be one-level</li> </ul>
<ul> <li>The dwellings specified for elderly have to be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.</li> <li>Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.</li> <li>Social activities that engage people with</li> </ul>		apartments, studios and maisonettes and
be designed based on flexibility. No internal stairs, wide bathrooms, hallways and doors are also important.  - Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.  - Social activities that engage people with		their size will vary between 30-80m2.
internal stairs, wide bathrooms, hallways and doors are also important.  Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.  Social activities that engage people with		- The dwellings specified for elderly have to
and doors are also important.  Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.  Social activities that engage people with		be designed based on flexibility. No
and doors are also important.  Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.  Social activities that engage people with		internal stairs, wide bathrooms, hallways
<ul> <li>Design a living environment against loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.</li> <li>Social activities that engage people with</li> </ul>		
loneliness is crucial for the living preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex.  - Social activities that engage people with		•
preferences of elderly. Therefore activities which involve people of the neighborhood and create social relationships will be present on the complex Social activities that engage people with		
activities which involve people of the neighborhood and create social relationships will be present on the complex.  - Social activities that engage people with		
neighborhood and create social relationships will be present on the complex.  - Social activities that engage people with		i i
relationships will be present on the complex.  - Social activities that engage people with		
complex.  - Social activities that engage people with		
- Social activities that engage people with		· · · · · · · · · · · · · · · · · · ·
		·
their food such as: a community kitchen		
		their food such as: a community kitchen,
local food production workshops, student		
trips, a weekly bio food market and local		trips, a weekly bio food market and local

soil-based cultivation are some of the activities which will help people to be aware of the food that they're eating. In this way residents will also feel the sense of participation in a local community.

#### **Process**

#### **Method description**

Research through literature studies: Books, articles, websites.

**Research through case studies**: analysis of food- and elderly-specific precedents based on morphological and typological attributes of their design.

**Research through analysis**: analysis of specific target group, themes and location.

Research through design: mass studies and drawings.

#### Literature and general practical preference

van Dam, F., Daalhuizen, F., de Groot, C., van Middelkoop, M., Peeters, P. (2013). Vergrijzing en ruimte gevolgen voor de woningmarkt, vrijetijdsbesteding, mobiliteit en regionale economie. Den Haag: Planbureau voor de Leefomgeving.

**de Jong, P., Rouwendal, J., Hattum, P. V., & Brouwer, A. (2012).** Housing preferences of an ageing population: Investigation in the diversity among Dutch older adults.

**de Klerk, M. M. Y. (2004).** *Zorg en wonen voor kwetsbare ouderen*. Den Haag: Sociaal en Cultureel Planbureau.

**Kullberg, J. (2005).** Ouderen van nu en van de toekomst: hun financiële spankracht, zorgbehoefte en woonwensen. Den Haag: Sociaal en Cultureel Planbureau.

**Kullberg, J., & Ras, M. (2004).** *Met zorg gekozen? Woonvoorkeuren en woningmarktgedrag van ouderen en mensen met lichamelijke beperkingen.* Den Haag: Sociaal en Cultureel Planbureau.

**Miazzo, F., & Minkjan, M. (2013).** Farming the City: Food as a Tool for Today's Urbansation. Amsterdam: Valiz/Trancity.

Medical Delta. (2013). Grijs is niet zwart wit: ambities van 55+. Leyden Academy. Leiden

Mens, N., & Wagenaar, C. (2009). Architectuur van de ouderen-huisvesting: Bouwen voor wonen en zorg. Rotterdam: NAi Uitgevers.

**Rijksoverheid. (2015).** Zorg en ondersteuning thuis: Wet maatschappelijke ondersteuning (Wmo) 2015. Retrieved from https://www.rijksoverheid.nl/onderwerpen/zorg-en-ondersteuning-thuis/inhoud/wmo-2015?utm\_campaign=sea-t-gezondheid\_en\_zorg-a-zorg\_en\_ondersteuning\_thuis\_wmo\_2015&utm\_term=wmo&gclid=CLClzr6BhMoCFebUcgodV8wG3Q.

Steel, C. (2008). Hungry city: How food shapes our lives. London: Chatto & Windus.

#### **Precedents:**

- 'De Drie Hoven' by Herman Hertzberger
- 'WoZoCo' by MVRDV
- 'Johannes Enschede Hof' by Doll Atelier vour bouwkunst

#### Reflection

#### Relevance

The new governmental policies regarding elderly result to seniors living as longer as possible in their home independently with the help of their family and friends. Therefore the increased number of elderly people living in the city of Amsterdam results to a growing demand of housing, design for elderly.

Moreover, since more and more people are migrating to cities we have to question ourselves what the role of cities and architecture can be in improving the current food system. Last couple of years a lot of start-ups come up with ideas to improve the food system in urban areas. Although improving our food system would be a step towards a more sustainable way of living, it is remarkable that the government of Amsterdam does not pay a lot of attention to this subject.

#### Time planning 2.10 Week Development of concept and masterplan (diagrams, sketches, models & final drawings) Food & elderly theme research Spatial, morfological and typological configuration of the building Research booklet preparation Activity **P2** Graduation plan tescarch of case studies and terature Review of literature studies and analysis of the case studies Product Presentation Week 3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8 3.9 Adjustment of urban plan, plan iews, facades, sections and mod-based on the given P2 feedback Development of structural design Activity РЗ Development of material selection Material and facade research Design in detail scal Product Presentation Week 4.7 4.8 4.9 Definitive design process Design process Definitive floor plans, facades and sections Presentation preparation and materials Activity Definitive design of outdoor space Product :5 & Models & posters Week Finalize all the P5 products Activity **P**5 prepare oral presentation Product Models, drawings, beamer presentation & posters



