



TOGETHER. SELF-RELIANT.

Name: Coen Jager  
Studio: Designing for Care  
Student nr: 4993837  
Date: 30-06-2021





# CONTENTS

<b>INTRODUCTION</b>	<b>5</b>		
<b>METHODOLOGY</b>	<b>6</b>		
Praxeology			
Case studies			
Literature review			
<b>RESEARCH OVERVIEW</b>	<b>7</b>		
<b>GOAL</b>	<b>8</b>		
<b>PROBLEM STATEMENT</b>	<b>9</b>		
<b>LEARNING PROCESS</b>	<b>11</b>		
<b>RESEARCH OVERVIEW</b>	<b>17</b>		
<b>DEFINITIONS</b>	<b>18</b>		
<b>HOW IT FEELS TO BE WEAK</b>	<b>20</b>		
Visual impairment			
Using a wheelchair			
Being blind			
How it felt to be weak			
<b>FIELDWORK</b>	<b>27</b>		
Notable experiences through observation and interviews			
Observation on use of space			
Observation in rooms			
<b>SELF-RELIANCE - OWN DIRECTION</b>	<b>45</b>		
Experienced life domains in 't Kampje			
1. Daytime activities			
2. Living conditions			
3. Physical functioning			
4. Mental functioning			
5. Cognitive functioning			
6. Housekeeping			
7. General daily			
		8. Social network	
		9. Mobility	
		10. Financial situation	
		<b>FIELDWORK CONCLUSIONS</b>	<b>101</b>
		<b>DESIGN TOOLS OVERVIEW</b>	<b>105</b>
		For who is self-reliant living?	
		Where do elderly want to live?	
		Conclusion - where and for who is self-reliant living?	
		<b>CASE STUDIES</b>	<b>109</b>
		Knarrenhof Zwolle	
		ParkEntree Schiedam	
		Eikpunt Lent	
		BloemKoolBurenBond Almere	
		<b>CASE STUDIE OVERVIEW</b>	<b>126</b>
		<b>GENERAL CONCLUSION</b>	<b>127</b>
		<b>VISION</b>	<b>128</b>
		<b>REFLECTION</b>	<b>130</b>
		<b>LITERATURE</b>	<b>132</b>
		Self reliance	
		Life Domains	
		Case Studies	
		<b>APPENDIX</b>	<b>137</b>
		Vilians self reliance valuer	
		GGD indicators for self-reliance	
		Living profiles for elderly - Platform 31	
		<b>FINAL DESIGN IMAGES</b>	<b>155</b>



## INTRODUCTION

At the beginning of my master I would not have thought I would choose a graduation studio that focuses on elderly, I did not hear much about them, before. That was, until I saw many news articles about the increase of elderly and the problems that were predicted. Elderly are not happy to go to a 'retirement center' with only elderly and very few self direction. At the same time, my grandma had to move to an elderly home, my grandfather passed away and she started to show signs of dementia. It was inevitable for her to go there, as she couldn't stay in her own room independently. She could do most things herself, she would just forget a lot of things and there was nobody to look out for her during the day.

It also got me thinking, if I were above the age of 70, where I would want to live. When I see the typical elderly home, I get anxious of aging. I don't want to live in such a place, I want to be self reliant for as long as possible and live close to, or even with friends and family. Before I started this, I didn't know whether such places existed. There are not many examples of such places and the offer to stay is low. I believe there is a change in the way people want to become old, and its corresponding housing should change accordingly.



## **METHODOLOGY**

During the graduation project, multiple research methods will be applied to achieve the end result. They are achieved by;

### **Praxeology**

The first few weeks are mainly focused on observational research, its goal is to understand how things occur in their natural setting. Both neutral and participatory observations are done in an elderly home, t' Kampje in Loenen aan de Vecht. They give an insight in how the people live and what their daily habits are.

Through interviews, in depth knowledge is gained on the research topic. It is qualitative information and during the whole graduation period the method will be used, specifically to gain an insight in the users experiences and feelings, by asking in depth questions. This information is used to formulate the main research question, but also to find out the architectural needs that the user group has.

By shifting the experience to the user we can feel how it is to live with the conditions that elderly do. We did this by using wheelchairs, walkers, and vision changing glasses. But also by living in an elderly home for some days. This gave an insight of what obstacles you encounter when you have certain limiting conditions.

Questionnaires will be used to collect and compare data between various people and to conclude and confirm certain statements, observations and other findings.

### **Case studies**

To get more familiar with case studies and other examples, the research tool of plan analysis will be applied. An analysis of the visited place in Loenen should give an insight how certain spaces are used and what needs there are.

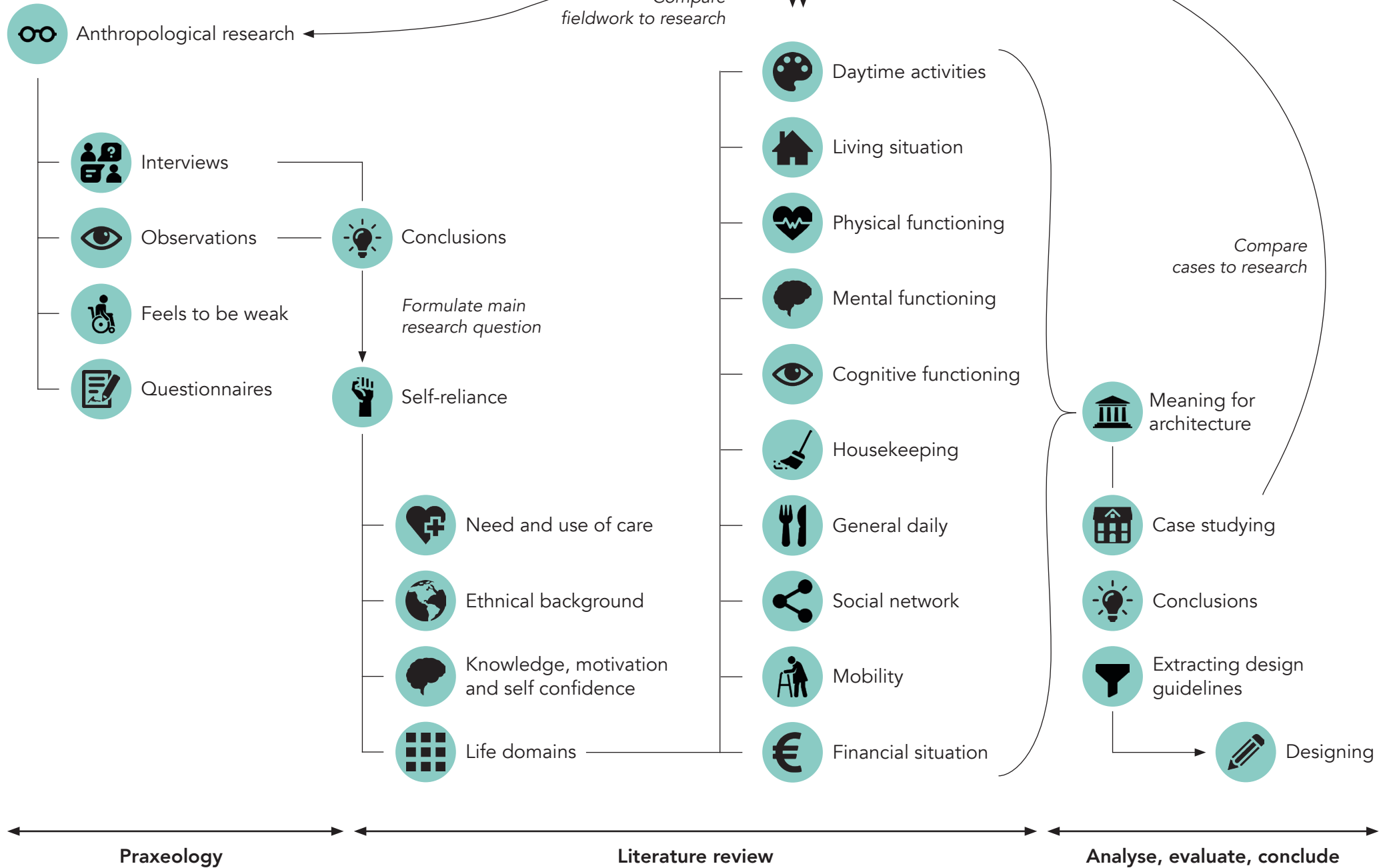
Examples and case studies will be analyzed to see what design solutions there are for various kinds of problems or conditions, in this case, the life domains. At the same time it is used to gain in-depth understanding of a specific context.

### **Literature review**

Literature from both, healthcare, sociology and architecture are used since they are all strongly connected to the target group of elderly. To situate the research in an existing body of work, and to evaluate certain trends within the topic, there will be a literature review. For example by finding the criteria of self-reliance and comparing them with the observations and interviews that have been done in the fieldwork.

By the use of different methods a stronger fundament is established for the posed research questions. The different methods are united by literature through comparison. The next page visualises this methodology.

# RESEARCH OVERVIEW





## GOAL

The anthropological research led to a conclusion that many people living in care facilities show passive behavior and are not as self-reliant as they used to be. Many of them don't interact as much with each other and barely do something for each other. The goal of this research is to find out what it means to be self-reliant and how a person can remain like that with the help of architectural tools.

With this in mind, the goal is to create an inclusive environment where elderly act more pro-active and where they can live as self-reliant for as long as possible. The final design should stimulate the domains of daily life that determine self-reliance. It would be a success if the people living there could mean something for each other and participate together and remain to have direction of their own lives.

## PROBLEM STATEMENT

When I visited 't Kampje in Loenen aan de Vecht in the beginning of October I saw number of elderly, many sitting alone in their room, but also clusters of people sitting together. I often got the feeling that many residents have never introduced themselves to each other. Maybe it was due to Corona, but the many people sitting alone all day long in their room might result in loneliness and affect their mental health in a negative way. The only ones that would visit them often were the caregivers. They really liked the care staff, but often saw many different staff members, not a few to rely on and speak to.

People liked being taken care of, but many could do things on their own. Often they needed small things, little time consuming actions like a more mobile person taking something with them for one that is not so mobile anymore. In 't Kampje there were few examples of people taking care for each other, people are often isolated, not connected to other inhabitants and society, only being taken care of by the personnel and not as actively participating with each other and different age groups.

What shocked me in 't Kampje was that the large beautiful open kitchens were never really used by the residents, when I asked about it why?; they often answered they didn't even know about it, or did not feel like using it. Often it would need someone or something to fire the initiative to use such kind of spaces. Many could do things on their own, but expected others to do it for them or someone else. They are very passive in behaviour.

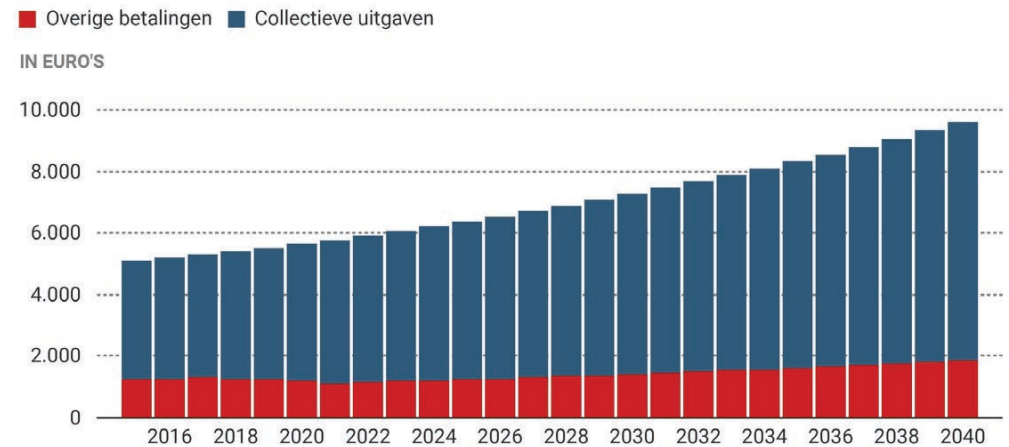
When I interviewed people in 't Kampje if they wanted to stay self-reliant they all answered that they would really want to, because that's how they have always lived before. But because they were taken care of anyway, the elderly didn't seem to bother to participate and take care for each other. The overview studies done by Nivel (2014) show similar results, 97% out of the 600 interviewed people found it important to have an own direction and responsibility over their own health. Yet in reality this is often the case.



In the future, if nothing changes, the cost of care is rapidly increasing, in 2040, the cost of care would be almost 10.000 euros per person per year. (NOS & RIVM, 2017) In total, 28 milliard euros that goes to elderly care, is almost half of the entire Dutch care costs, consisting of the ZWV and WLZ. This is increasing, mainly because of an aging society. (Zorgvisie.nl, 2018) The amount of people 50 years and older has in 2019 surpassed the amount of 18 to 50 year olds, which indicates this rapid increase (see graph 'amount of people per age group') At the same time, there is a decline in the ratio of informal care givers per person with different kinds of care needs. (see graph 'Ratio give/receivers informal care per person')

All of this indicates that there is a need for change in the elderly care system and living environment. Elderly need to become more self-reliant, in a social way, to keep the fair amount of care-givers to the ones who really need it. Needs are shifting, and so should its corresponding housing.

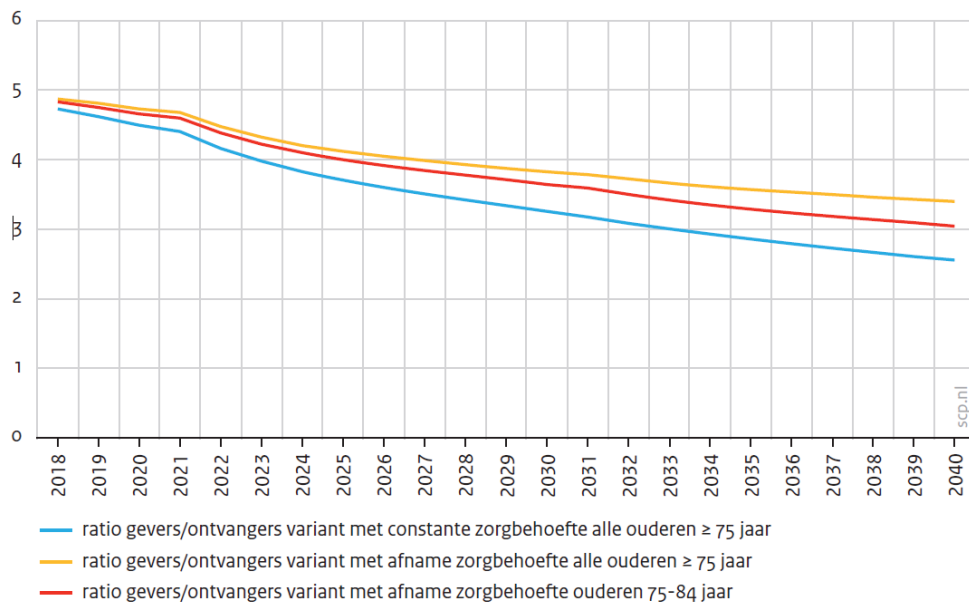
### Zorguitgaven per persoon per jaar in de toekomst



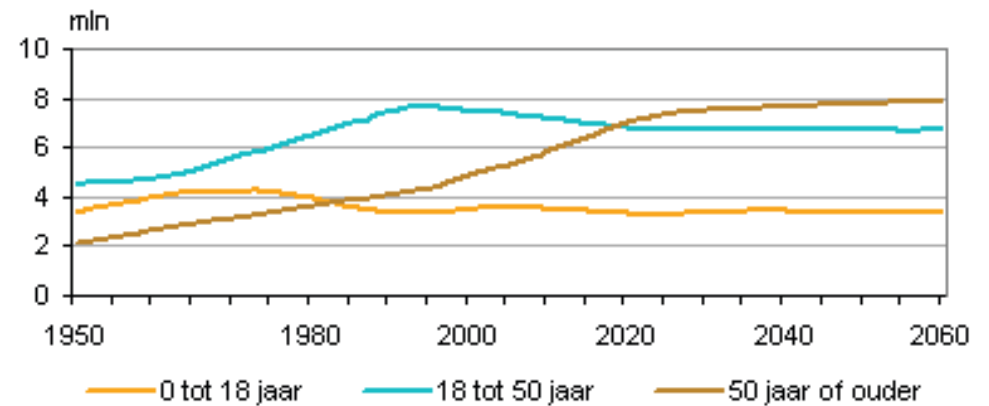
Gemaakt met Localfocus

Bron: RIVM NOS © 2017

Cost of care per person in the future, NOS & RIVM, 2017



Ratio give/receivers informal care per person, SCP, 2018



Bron: CBS

Amount of people per age group, CBS, n.d.

# LEARNING PROCESS

## Lectures

This studio, 'Designing for Care - Towards an inclusive living environment' is about architectural designs for elderly, while at the same time, it is also about taking other disciplines into account, such as sociology, philosophy and economy. The lecture series gave understanding of the position I am in among all the different disciplines that are intertwined in the field of architecture. Klaske Havik (2012) describes this as interdisciplinary. Even though most architects are not sociologists, or economists, we do share many thoughts and knowledge in the fields. The architect could be called a mediator between these fields, using the knowledge, but also by performing and adding research in that specific field, like through anthropological research.

The starting point of all the methods was through this anthropological research, the study of human beings and their ancestors through time and space and in relation to physical character, environmental and social relations, and culture. (M. Webster, 2020) The importance of the anthropological research lies in the perception of elderly that eventually have to go to, or live in care facilities. Where often, the care system is valued higher than the individual needs and wishes of the people who actually have to live there. In many cases, the building and care system is designed to shape the users, who are treated like numbers. By performing the anthropological research, the goal is to change this around, and value the needs and wishes of the users, above the needs of a care system.

There are many research tools, or methods, with their corresponding epistemes within architecture, like praxeology, which the studio utilizes a lot. This episteme includes performing interviews, make questionnaires and shifting our perspective to the user group, to get an insight in the daily life and the needs of the target group. These are useful methods to apply, as the studio is much based on a social approach. Afterwards there is a shift more on material culture and the typology / morphology; through material-and plan analysis, knowledge is increased on existing examples and how these can be translated to a personal design, one of the final steps in the graduation process. By combining these methodologies with the anthropological research there is a strong fundament for the design guidelines and decisions.

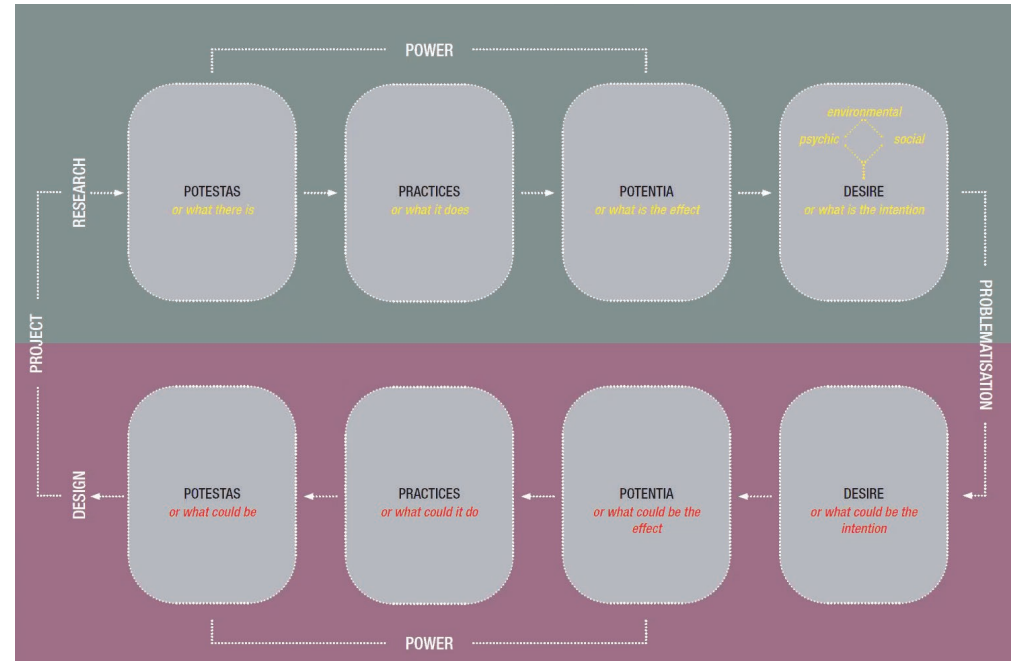


## How to tutorials

The how to sessions provided information what to do with research data and how it can be ordered. Even though the explained steps are not always all implemented, or used in a specific order, they create a clear structure for any scientific research. It was made clear what the differences are between quantitative and qualitative research; Quantitative research tries to uncover facts, often expressing the results in numbers, whereas qualitative research is more descriptive in nature and focuses on interpretations, experiences and meaning, mostly expressed in words. This is highly valuable, especially during the anthropological research, where we received in-depth information from our user group. Through interviews and observation I gained understanding in the experiences of elderly and their use of the architecture that we research, and eventually will design. In this studio, there is a combination of both, performing mainly qualitative research during our fieldwork, and through questionnaires, available data, and literature also extracting quantitative information.

## Masterclass – Disciplinary mergers and encounters

The masterclass gave an insight in which disciplines from other fields are encountered within our subject. We presented as a studio group work that we did and what disciplinary elements intersected within our research. For example; All of us use a lot of the discipline sociology, because our research is mainly socially based and comes directly from our target group. For us it is of high value to learn from the user group, because often there are very specific needs. To give an example, after giving surveys to more than 37 people, with the question in what kind of home they wanted to grow old, nobody said a care home. The followup question was; if you did not check 'care home' why not? Most answers concluded that they had a negative view or experience with such places. I believe this is an important finding and by learning from it in the field and by its people, we can make improvements in the design process, with the possibility to change the idea of people and elderly (care) homes. After all, it gave an insight what other disciplines are used in the main research and how it relates, in our case, to architecture.



Relation between research and design (S. Kousoulas, 2020)

The scheme above, provided by Stravos Kousoulas in the masterclass of disciplinary mergers and encounters, gives an understanding of the transition between research and design. It starts of with; what is there, which in my case is the social view in architecture and the perspective of the target group. The transition is about the translation of the research into architectural tools and solutions. Which is constantly done in this research, comparing the fieldwork to architectural solutions from literature and case studies.



## Theoretical framework

In this research, the domains of life that determine one's self-reliance, are compared with the conducted field research and case studies. These so called life domains are selected from a collection of domains in American versions. Caretakers, researchers, policymakers and other experts in the field of healthcare selected these domains because they are relevant for everybody in the Dutch society. (GGD Amsterdam, 2017) Both the GGD Amsterdam and Vilans, national care and knowledge institutes, use these domains to measure a person's degree of self-reliance. These topics are often found in the discipline of sociology, nonetheless they are of importance for architecture, since they influence how a building can work and look. For instance, the living conditions can influence the degree of self-reliance of someone if the building is not adapted for current conditions of a person; like when the person is using a wheelchair and there are too high thresholds.

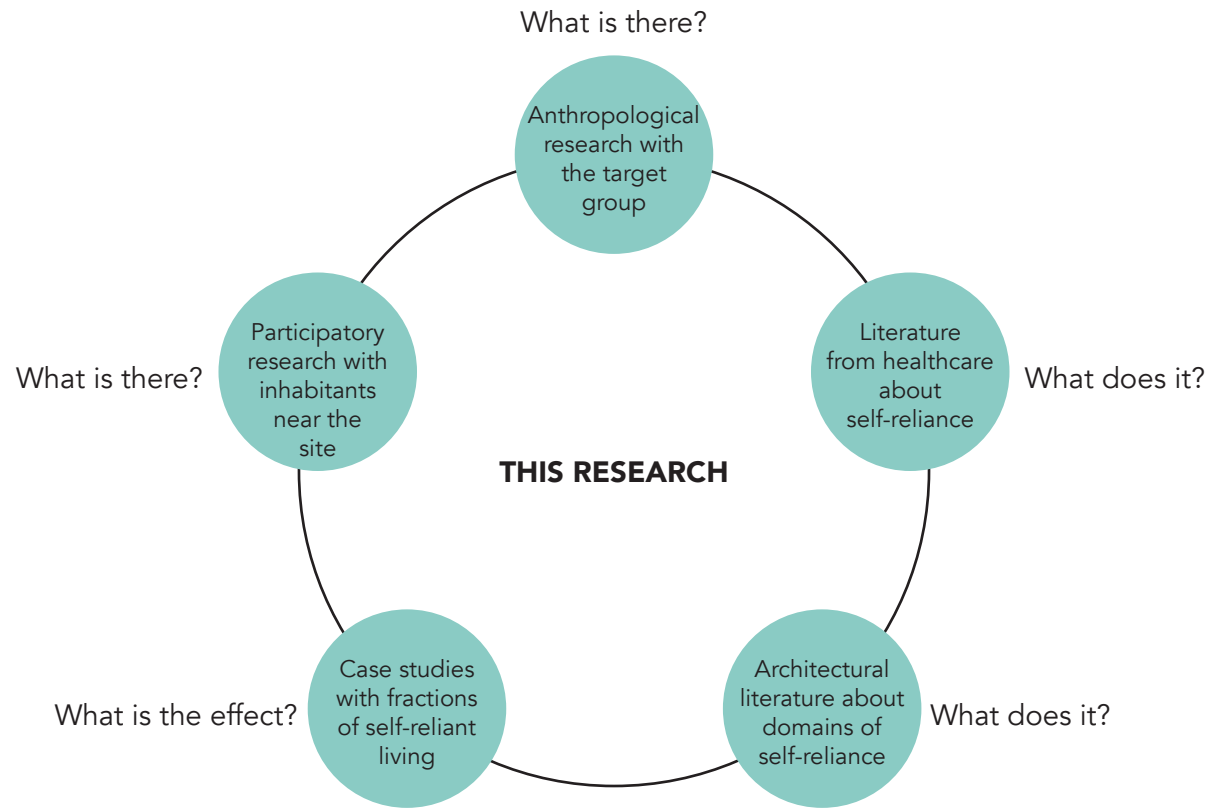
Each domain of life that is of importance for self-reliance is studied to extract architectural tools for the eventual design. At first, this study is conducted by anthropological research, which results in several observations and interviews with the target group. Secondly, there is a theoretical research done by reviewing and summarising sources that are applicable for each domain; for example in the domain of social network, the book of Jan Gehl - *Life between buildings* (2011) will be used. He situates social problems and establishes possible solutions to counter the problem. It can be interpreted by architects and designers how these examples can be created in a physical form.

Another example is in the domain of physical functioning, which is about the health of a person, an important aspect for self-reliance. Being healthy tackles most of the problems for self-reliant living and the stated problems. This is done using literature about healthy lifestyles and lessons from the 'Blue zones', these are places where on average people get really old, even up to a 100 years, and they are not in need for any professional care. A number of factors show similarities between lifestyles in different regions in the world. (D. Buettner, 2013) These factors are translated into design tools by also using case studies where these factors are also taken into account.

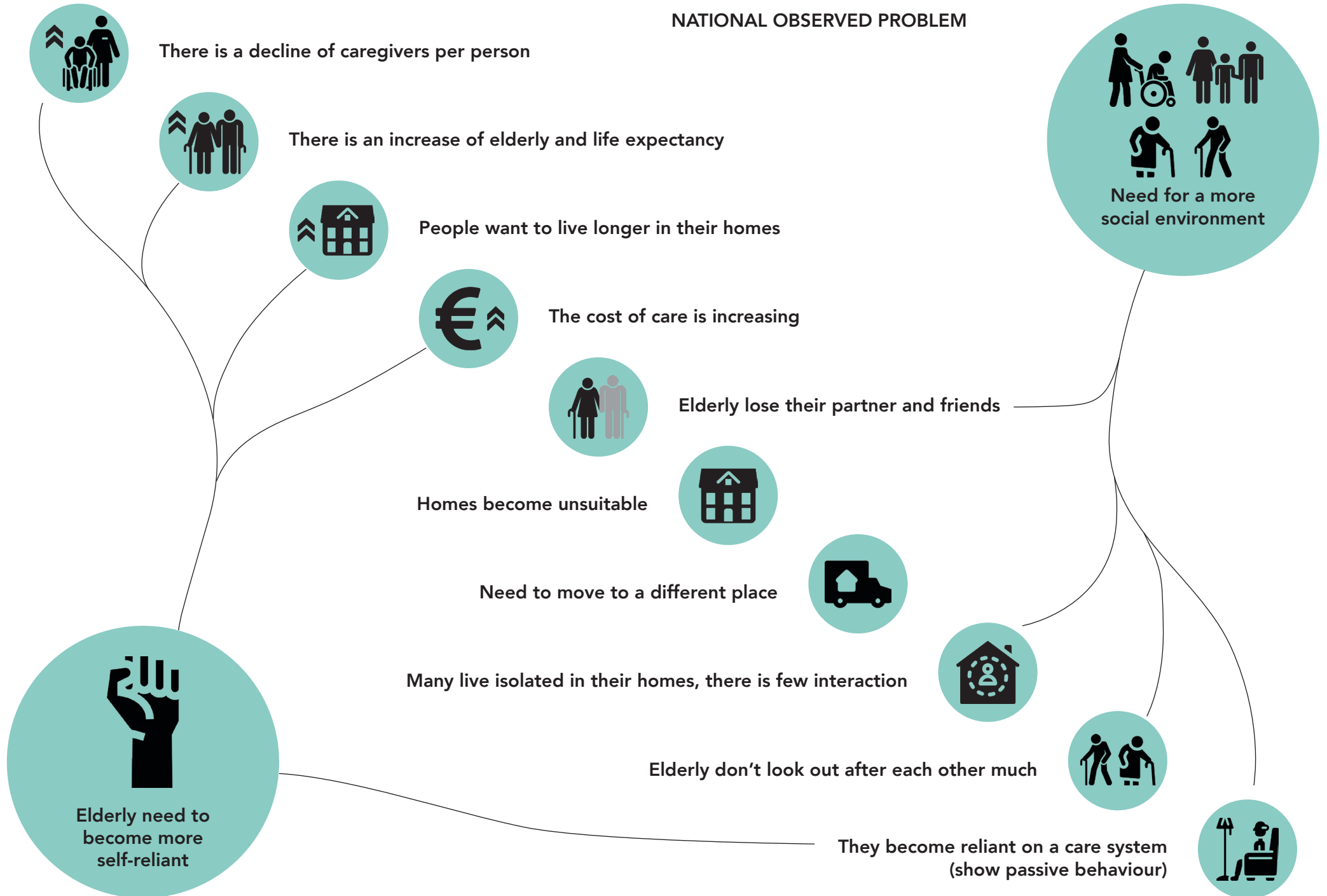
The case studies in general will be used to provide architectural solutions and examples for the domains that make up self-reliance. The focus of these cases is elderly that live independently or collectively, but mainly through informal care. An example is 't Knarrenhof in Zwolle, where the design is based on research by participation. The initiator, Peter Prak, and architect Eerde Schippers initiated sessions where the elderly are directly asked how and in what way they wanted to live. The personal fieldwork research and questionnaires that are done, were also a part of this similar participatory research. With the addition of research done on specifically self-reliance and self-dependence, it could add more value to the design, because it is more tailored for the target group.

As mentioned, the last source of information is from the people themselves that live near the project location in Delft Tanthof Oost. Through questionnaires, information about the wishes and needs of people are collected and compared to the domains. It also provides information that is less susceptible, for example the wishes of amenities nearby, or the value they give to their window view. This way, the design can be made more personal, and more fitting for the target group, and location.

Each architect has its own way of researching for the design, for example, in the case study of 't Knarrenhof, there is also a participatory research with the target group. Or the Cartesiusdriehoek Blue District in Utrecht, which is mostly based on literature review on the factors of the 'blue zones' that make for a healthy neighbourhood. Most of these projects focus on a few domains that make up self-reliance, but not all of the domains at once. This research figures out the criteria for self-reliance from the field of healthcare and sociology, and then connect these criteria to architecture by literature, and case studies that cover a selection of domains. In the end, using questionnaires and interviews there is more participatory research that guides the research and makes the design tools more specific to the site and its users.



NATIONAL OBSERVED PROBLEM



*"In what ways can architecture encourage elderly to become more self-reliant?"*

Source: NOS & RIVM, (2017)  
<https://nos.nl/artikel/2229196-hoe-hard-stijgen-de-zorgkosten-als-we-niet-ingrijpen.html>

**PROBLEM STATEMENT**  
The increase of elderly and the deminishment of caretakers results in an unbalanced situation where there is too few care per person available. Elderly that receive intensive care is very expensive and time consuming, with more needed care and increased life expectancy, the cost of care becomes hardly affordable if nothing changes. People interviewed living in 'T Kampje wanted to stay very self reliant, but because they were taken care of anyway, the elderly didn't seem to bother to participate and take care for each other. The people were very passive in their actions, and waited for things to happen

Source: Planbureau voor de Leefomgeving, (2019)  
<https://www.pbl.nl/publicaties/toekomstverkenning-mantelzorg-aan-ouderen-in-2040>

Observations made in 't Kampje in Loenen aan de Vecht.

**MAIN QUESTION**  
"In what ways can architecture encourage elderly to become more self-reliant?"

**SELF-RELIANCE**

What can elderly do by themselves and needs do elderly have to be self-reliant?

What examples are there for self-reliant living?

What criteria are there to be self reliant? And how does this respond to architecture?

For who is self-reliant living?

What are the wishes and needs of the inhabitants of the project location

Observation

Literature

Case studies

Literature

Observation

Literature

questionnaire

**RESEARCH RESULTS AND INFORMATION**

**DESIGN GUIDELINES**  
What kind of design needs are there to fulfill the main research question?

**DESIGN CONCEPT**

**SITE ANALYSIS**

What are the strenghts weaknesses, opportunities and threats of the chosen location, and how does it influence the main question?



## DEFINITIONS

### **Informal care:**

“Unpaid, non-occupational support and care by a caregiver who is provided for more than eight hours per week or at least three months to people with a physical, mental or psychological disability in their family, household or social network. This concerns care that arises directly from the social relationship and is more than is usual in a personal relationship.” (Nivel, 2014)

### **Informal caregiver:**

A partner, family member, neighbour or friend with whom a person in need already has an emotional connection with.” (Nivel, 2014)

### **Self-reliance:**

“One’s ability to cope with themselves in all areas of life with as little professional support and care as possible.” (zorgvoorbeter.nl, 2020)

### **Self-direction:**

“Self dependence is about being able to decide, and being able to judge what you want” (movisie.nl, 2013)

### **Own strenght:**

“Being able to do certain thing on their own and being able to judge what you can do” (movisie.nl, 2013)

### **Own responsibility:**

“Ones duty to make sure things go well, being able to judge what you must do yourself.” (movisie.nl, 2013)

### **ZVW (Zorgverzekeringswet):**

“The Healthcare Insurance Act (Zvw) is a law that regulates compulsory basic insurance for insured persons. The health insurers are responsible for implementing the Zvw.” (Zorgwijzer.nl, 2020)

### **WLZ (Wet Langdurige Zorg):**

“In the Netherlands, the Long-term Care Act is a compulsory, collective health insurance policy for non-individually insurable health insurance risks. The WLZ is intended for people who constantly need intensive care in the vicinity.” (Zorgwijzer.nl & Wikipedia, 2020)

### **Elderly:**

“A person of advanced age, typically a person above the age of 65, even though it is not a strictly defined age.” (Wikipedia, 2020)

### **Society:**

“The social life of people in general / the biggest social unity to which people belong.” (Ensie, 2020)

### **Cohesive environment**

“A place where people are united and working together effectively.” (Cambridge Dictionary, 2020)

### **Lifecycle proof dwellings**

“Homes that are suitable or can easily be made suitable with adaptations for occupancy into old age, also in the case of physical limitations or chronic diseases.” (www.kcwz.nl/dossiers/levensloopgeschied, 2020)

# **FIELDWORK**

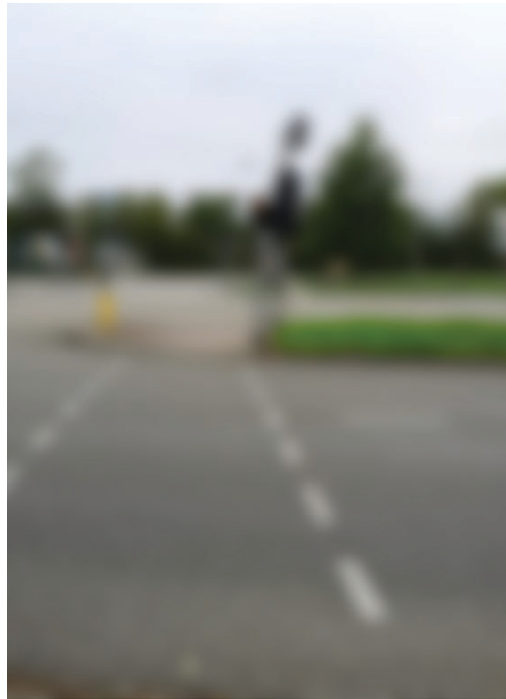
## HOW IT FEELS TO BE WEAK

### Visual impairment

Using special glasses we experienced how it is to have certain visual impairments.



Peripheral vision



Generalized hazed vision

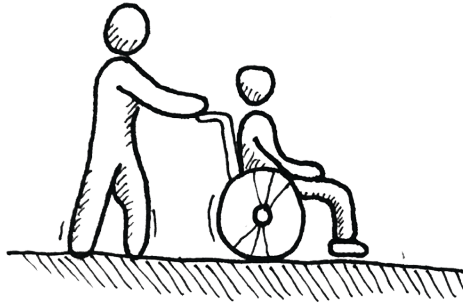


Diabetic retinopathy

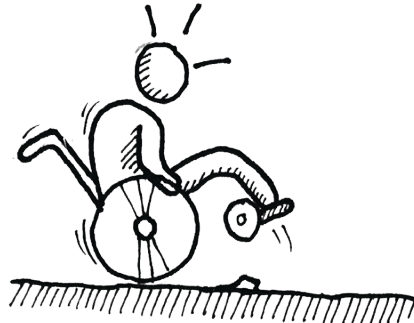


Loss of central vision

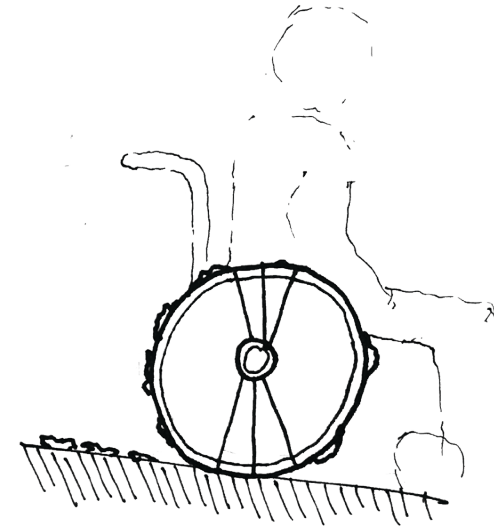
# Using a wheelchair



Easy time to get pushed forward

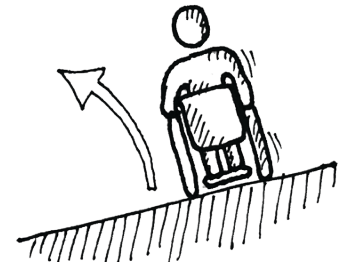
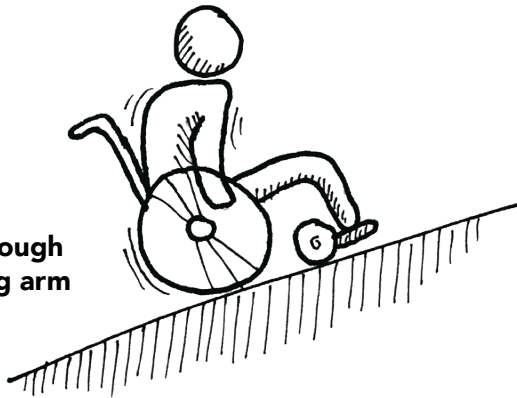


Small obstacles become bigger on the wheelchair



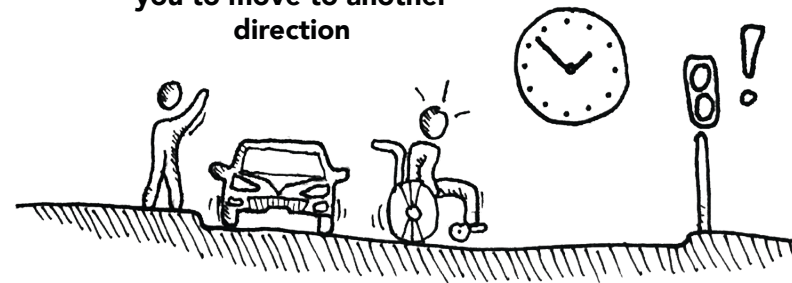
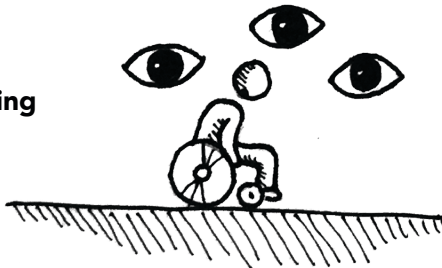
Dirt and other semi fluids stick to the wheels easily

Slopes are very tough and require strong arm strenght



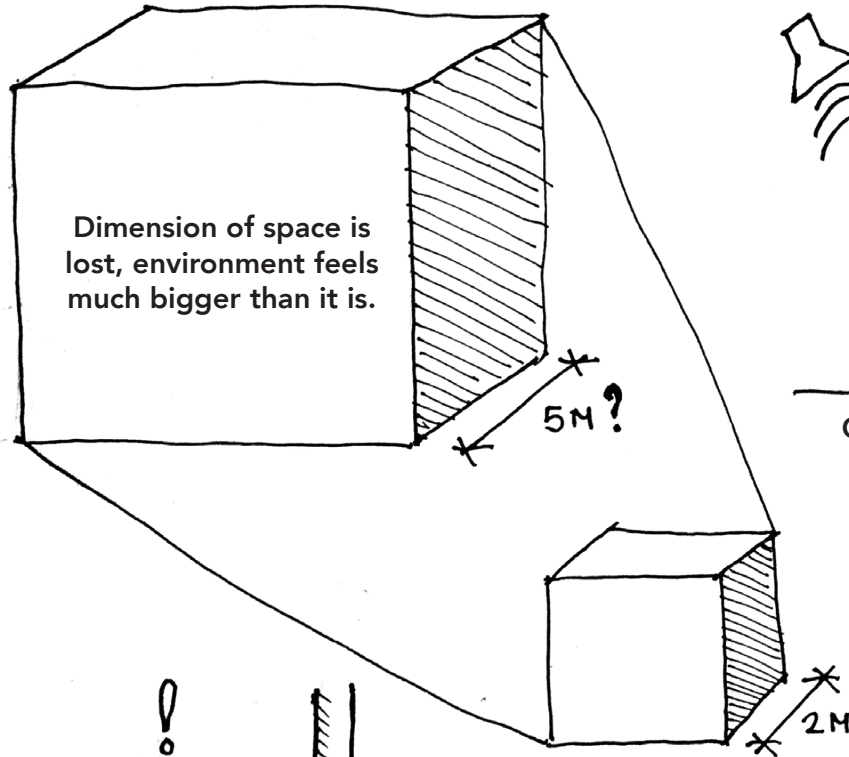
Slight deviations cause you to move to another direction

A feeling of being watched

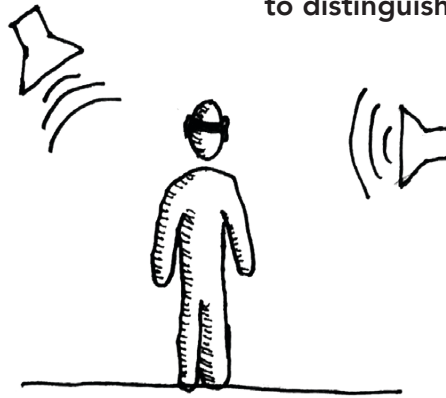


Not much time to cross the street before it turns red again

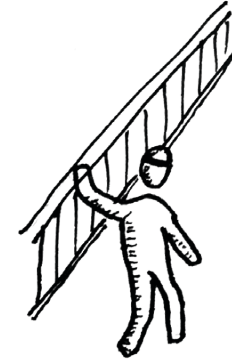
# Being blind



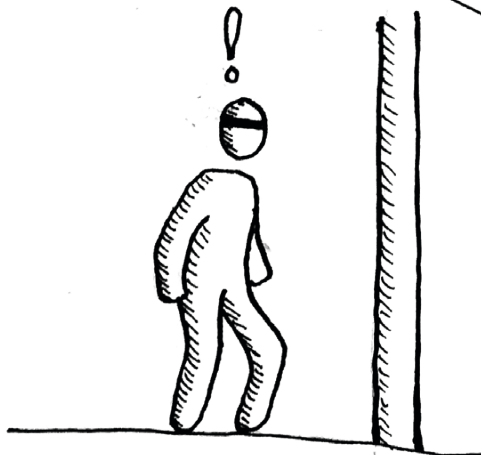
Hear clearer echoing; able to distinguish spaces.



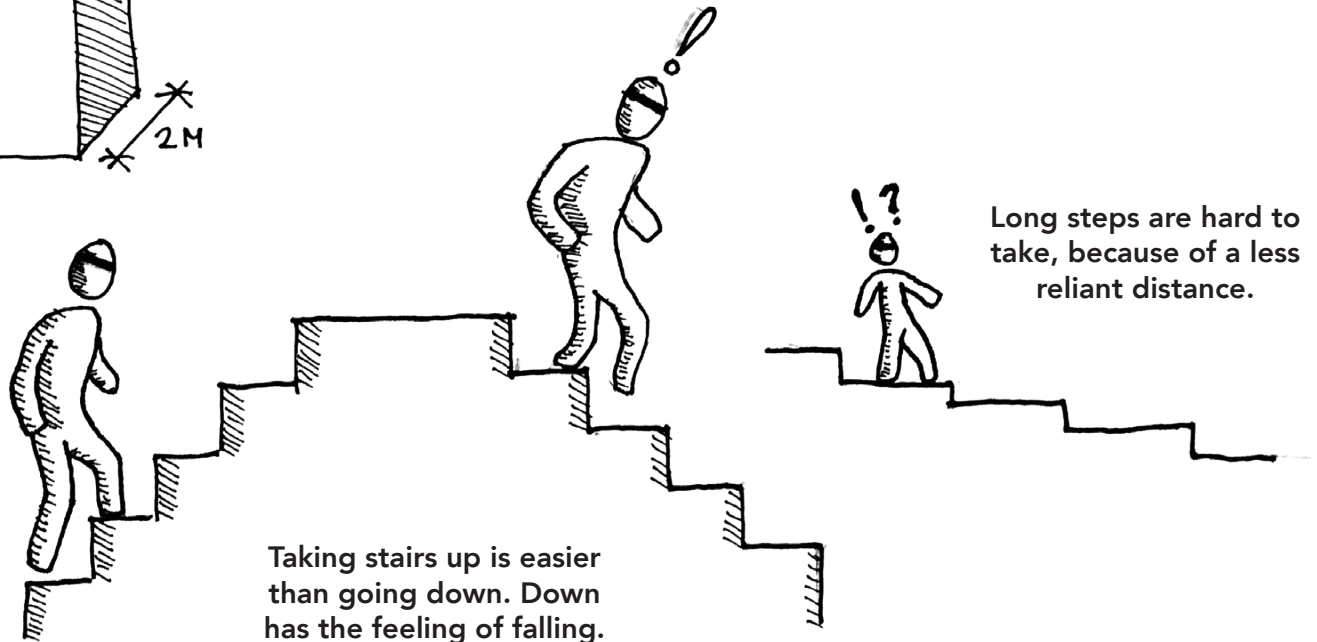
Other senses become more aware



Handrails give a securing feeling, show direction.



Feeling of walking against something all the time.



Long steps are hard to take, because of a less reliant distance.

Taking stairs up is easier than going down. Down has the feeling of falling.



## How it felt to be weak

Experiencing yourself how it feels to have certain disabilities gives an insight what challenges one has to overcome. What might seem 'normal' when you are still healthy and mobile, is usually a big obstacle when you have a certain condition. Like when you cross a busy street with stopping lights, walking gets you to the other side in the right time, but when using a wheelchair, this time might be too short. Cars are already accelerating and it created moments of stress and makes you really feel weak.

Even the slightest slopes can make it very difficult to move yourself forward in a wheelchair, it can make one very dependent on another to push you. Walking around with visual impairments, or even blindfolded made me realise that not only the visual aspect is of importance for way-finding and walking, but also the textures of materials, the sounds in the areas. All the other senses are stimulated.

With this knowledge in mind, the design decisions that will be made can be more grounded based on the experiences of this exercise. In the end it is about making a design that is accessible for anyone, especially for elderly who have more visual and mobility issues than young people.



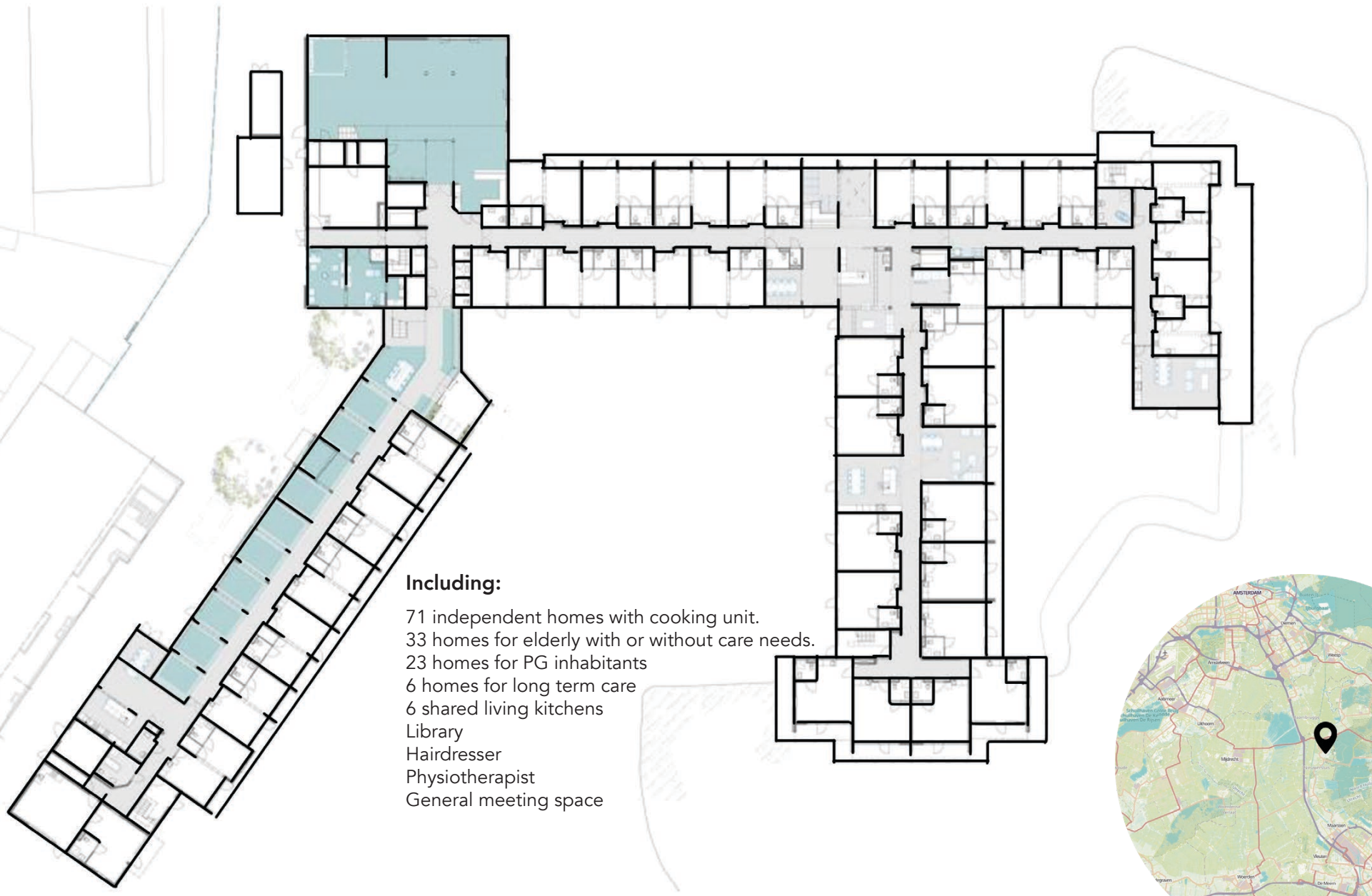
## FIELDWORK - Loenen aan de Vecht



*Loenen aan de Vecht, own image, 2020*

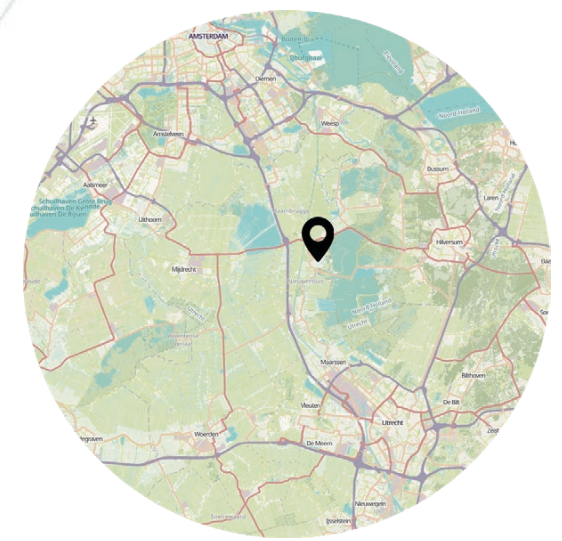


# 't Kampje



**Including:**

- 71 independent homes with cooking unit.
- 33 homes for elderly with or without care needs.
- 23 homes for PG inhabitants
- 6 homes for long term care
- 6 shared living kitchens
- Library
- Hairdresser
- Physiotherapist
- General meeting space



# **OBSERVATIONS**

## FIELDWORK Notable experiences through observation and interviews

### DIFFERENCE

Every elderly is different, like in terms of; character, mobility, communication, looks, age.

- **Character;** Most of the times, the same people come together to drink a coffee, or to participate in scheduled activities. Many others stay in their rooms most of the days. Some say this is because they used to live like this a big part of their life, for example farmers who didn't have very close neighbours.
- **Mobility;** Most people move around with a walker, they often use it also to transport their belongings. Though they would like to walk more without it, but there is not enough supports in the hallways.
- **Communication;** There are certain people that are very direct and loud in their voice, where as others are overthrown by this and are more quiet, yet they still enjoy the company.
- **Age;** There is a variety of age groups living in the building, people we spoke to that were 70 years old, were considering themselves as the youth, where as the really old ones were considered 85 and above.

### REASONS FOR MOVING

There are many reasons why people chose to come to 't Kampje;

- **Family;** There are some residents that decided to move to 't Kampje to live closer to their family. They could have more contact and get extra attention and help.
- **Seperation;** Most people that stayed here got here because they were seperated from their partner, either through death, cheating or through other personal issues.
- **Size;** For some the previous house became too big to handle, so they decided to move to something smaller with less maintenance.



## USE OF SPACE

Some parts of the building are actively used, where as other spaces we saw nobody. (see drawings heatmaps use of space)

- **Open kitchens;** The complex has many open kitchens, though, the residents don't use it. They either don't know about it, or don't have the need to do so, as they have their own kitchen. Many times they are used by the care staff. Someone said she felt guilty for using the open kitchen with some others, because of excluding other people at the same time.
- **Living spaces;** The places where people sat the most are the spaces that had a familiar feeling, like a living room.
- **Hallways;** The hallways are experienced as a purely functional space, they don't enjoy being there, and want to move as quick as possible through the space.
- **Outside;** At the time of stay, the weather was modest, but still there were no elderly going outside. They rather stayed inside and watched outside than actually being outside. They didn't like to stay in the airflow, but many did like to sit in the sun together.
- **Collective spaces;** The collective spaces are not used by the residents, only when there is a planned activity that day.
- **Homes;** Every home was differently used, people put their beds in different places, but mainly in the corners of the rooms, the rooms were often divided by certain objects such as a television, or a bench.

## PERSONNEL

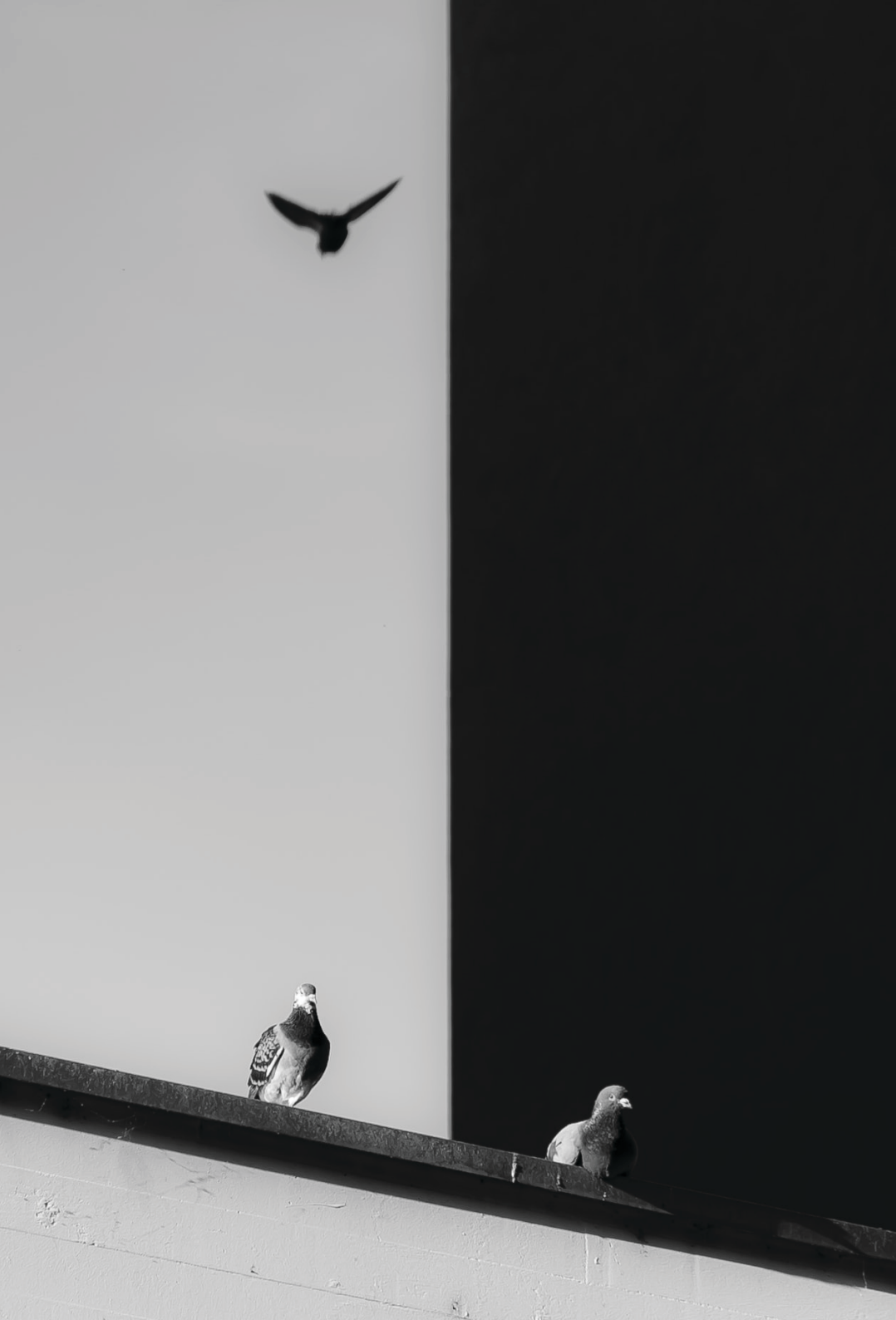
Experiences of the people who work in 't Kampje

- **Communication;** The communication between colleagues is experienced as very good, though the residents themselves don't feel like there is good communication
- **Complaining;** The interviewee experienced a lot of complaining by the residents about various small things, people tend to be rather negative.
- **Loneliness;** The personnel often goes by the residents not only to check on them, but also to make the person feel less lonely.
- **10 million euros;** I asked what the interviewee would do if he got 10 million euros to spend in the facility; He would buy Studio Idee to organise more activities. And create larger communal areas and kitchens. People really liked the situation before the renovation with a large central area.
- **Activities;** Every week activities are organized, but not that many people actually go, many prefer to stay alone, they often read, puzzle, or watch television. In 'normal' circumstances the people are often invited to go out and visit certain places.

## SELF RELIANCE

- **Care;** What I saw in 't Kampje was that there is almost no care for each other among elderly.
- **The past;** In the past, many inhabitants used to be self reliant. A few still do in 't Kampje, but many don't.
- **Participation;** Though there might be people that live self reliant in 't Kampje, the participation with others is rather low, almost nobody uses the communal kitchens.
- **Passive behaviour;** People expect others to do stuff for each other, while many are waiting to be served.
- **Cooking;** Most elderly do not cook anymore.





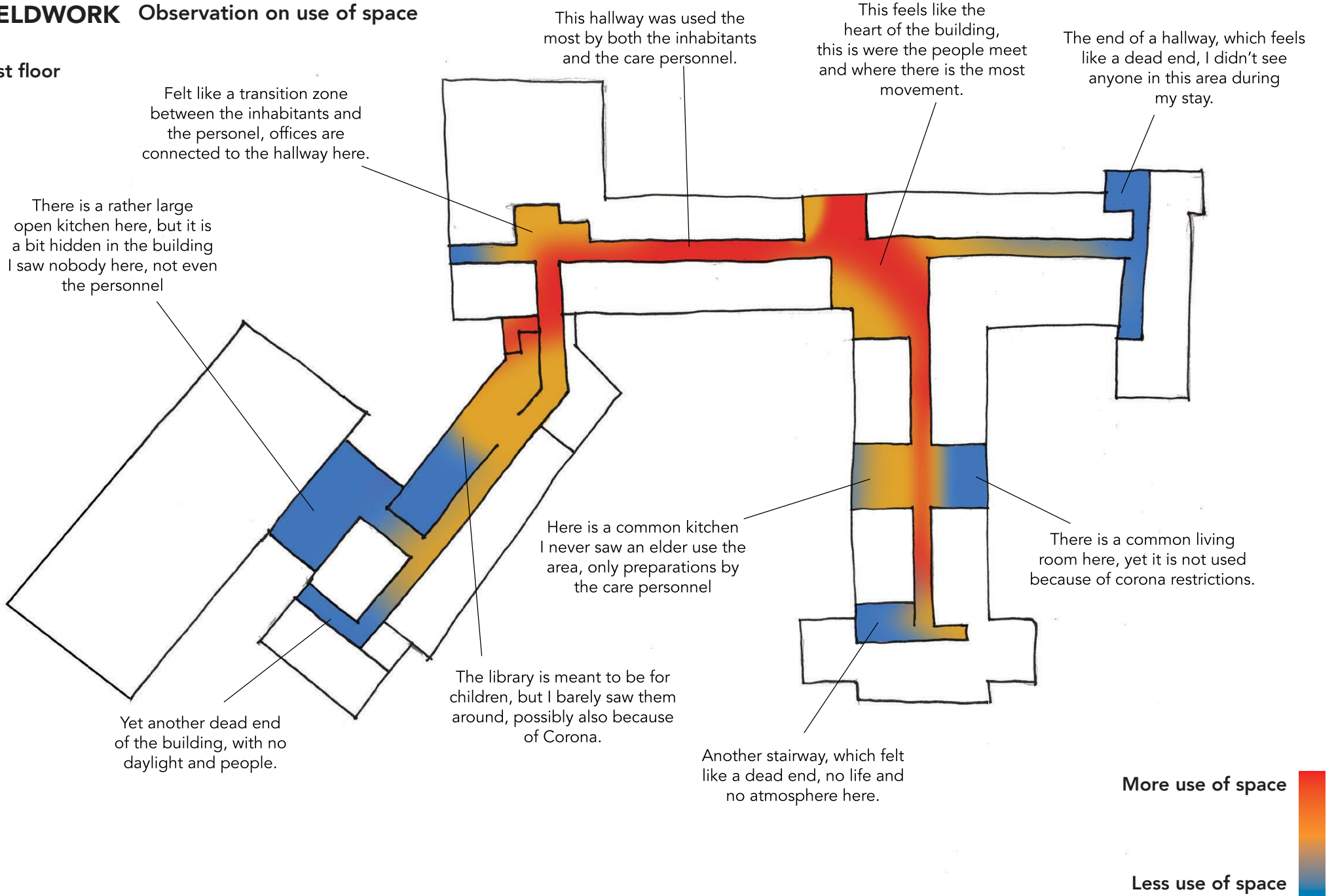
## INTERESTING THINGS

General observations that are not common

- **Group talks;** Most of the times, the conversation in the group is kept alive by the caretakers, they talk about certain topics where the elderly hook up on to. Some people don't get the opportunity to talk, mostly bad hearing people. Elderly seemed to show little interest into each other.
- **Stigmatization;** Many people see 't Kampje as a place where you eventually have to end up. Some even see it as going to 't kamp (a concentration camp from the war) but when they get here, it is not as bad as they thought.
- **PG;** The PG is on the ground floor and the 'normal' elder live above it, they see it as a very negative place where they don't want to end up as 'weirdos'.
- **Phones;** I saw only one person using a smartphone, others used the fixed telephone line in their room. (perhaps few experience with technology)
- **Vision;** Some people said they can't see very well if there is little contrast in their vision.
- **Communication;** For some there is a lack of communication, certain activities were cancelled and they simply didn't know about it, there is no main communication person.
- **Boredom;** A common spoken topic was about being bored.
- **Lonely;** Another common spoken topic was about being lonely, there were not many people visiting anymore and often the others were 'too different'
- **Purpose;** There is nothing left to do for the residents, most of it is done for them, hence they become bored and purposeless.

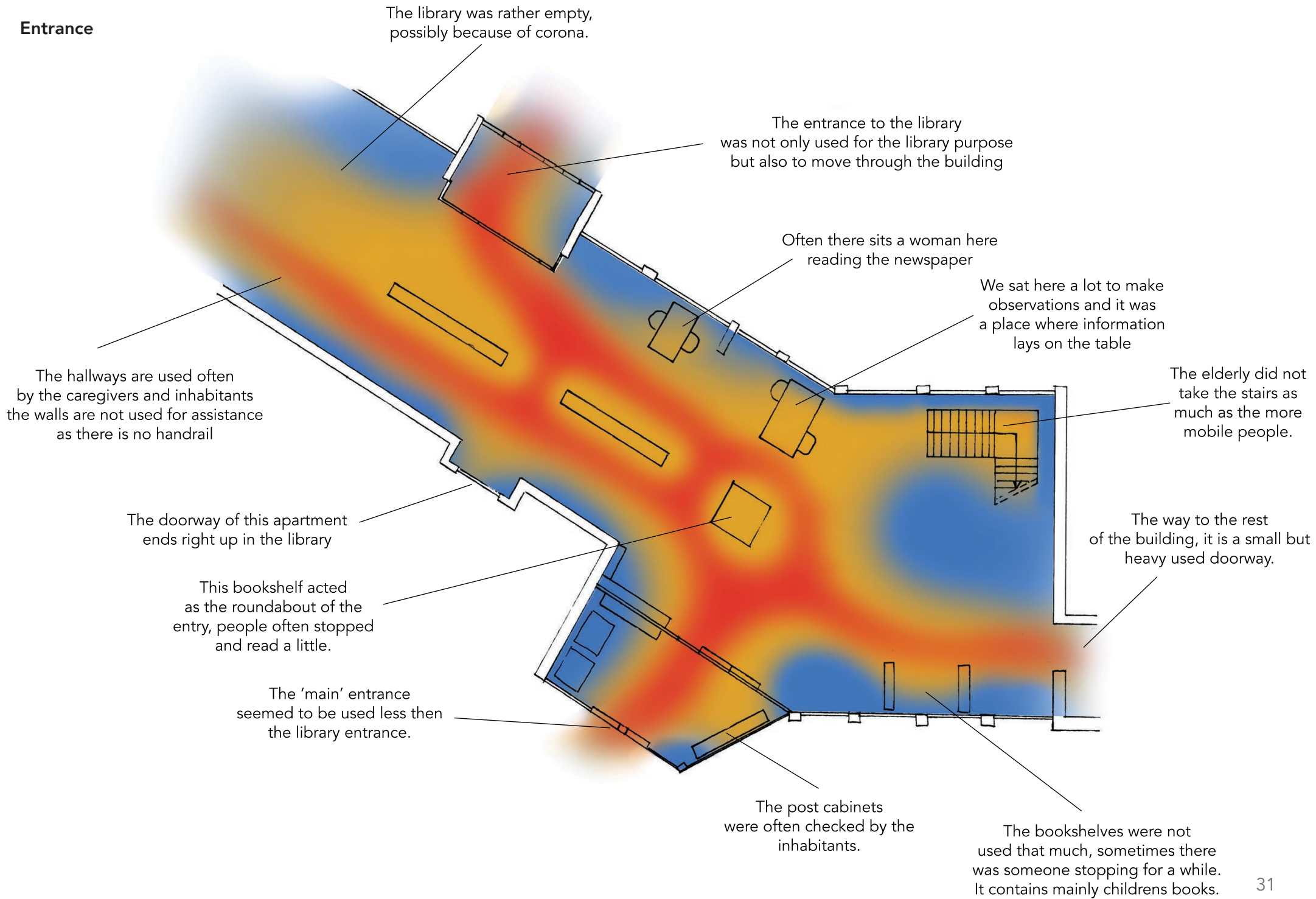
# FIELDWORK Observation on use of space

## First floor

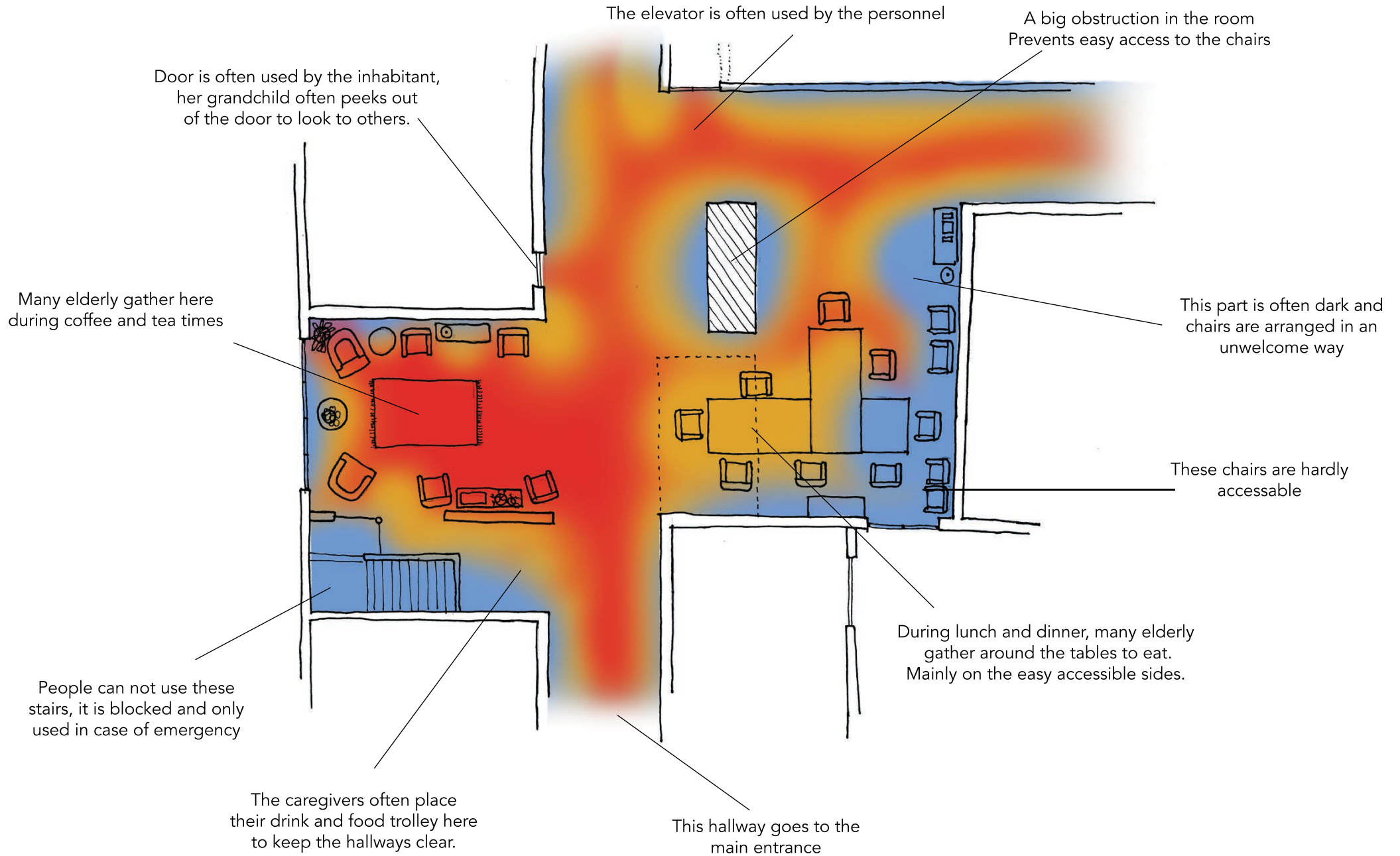




**Entrance**

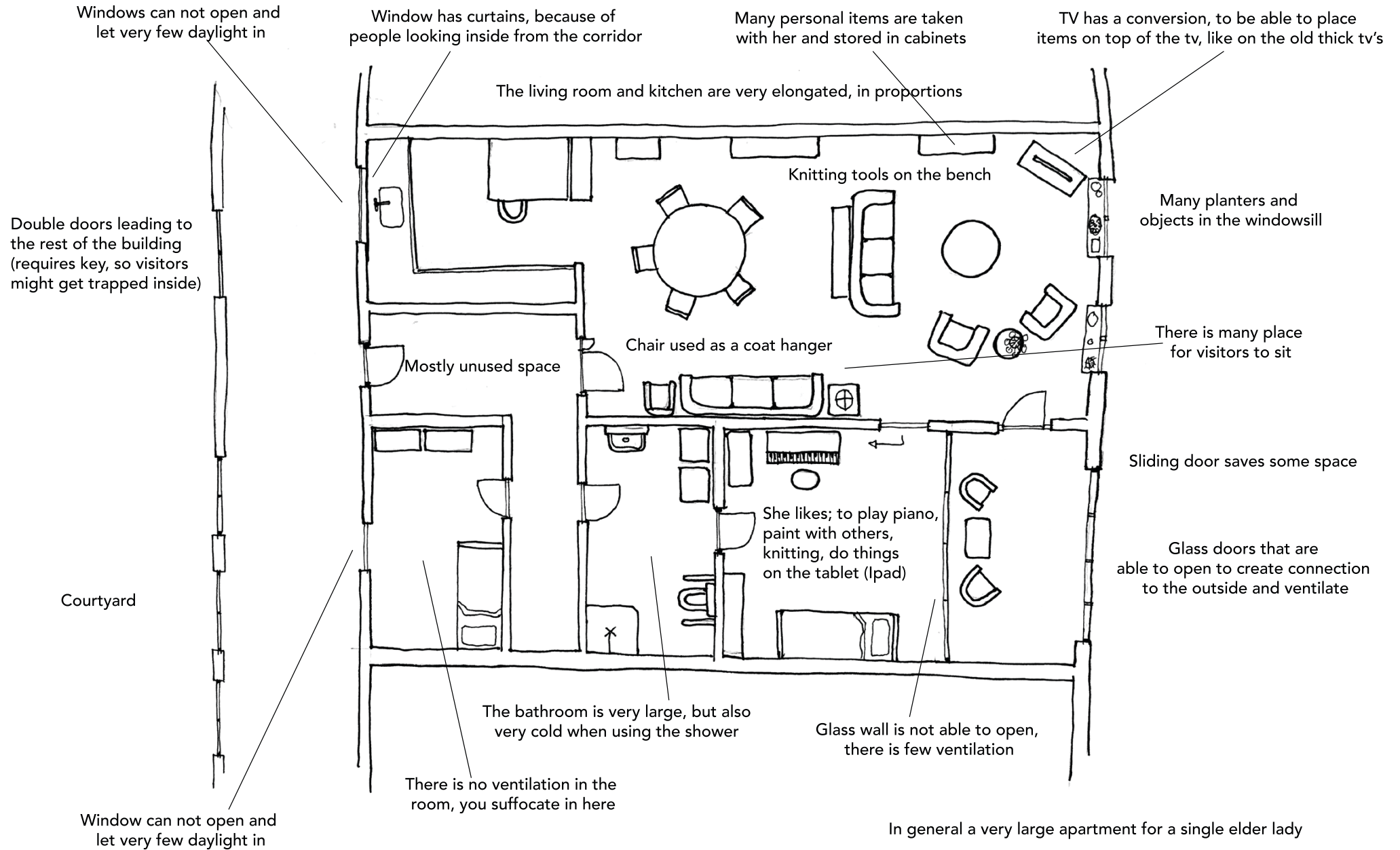


# Common space, 't Trefpunt



# FIELDWORK Observation in rooms

## Sheltered housing



# Elderly home

He would like to see more small shops in the neighbourhood

He is glad the room is this size, it is perfect for him.

Very appreciated large windows

Large television, but it doesn't work yet needs assistance with it

Cushions piled up to sit on the bed aswel

Box with even more cables

Watches soccer on his tablet

Many photoframes on cabinet

Very comfortable chair in the middle of the room

Messy cable wiring

Small scootmobile parking place

Stores his pills on the cabinet so he won't forget it

Bathroom

Storage room

Small, but good enough kitchen

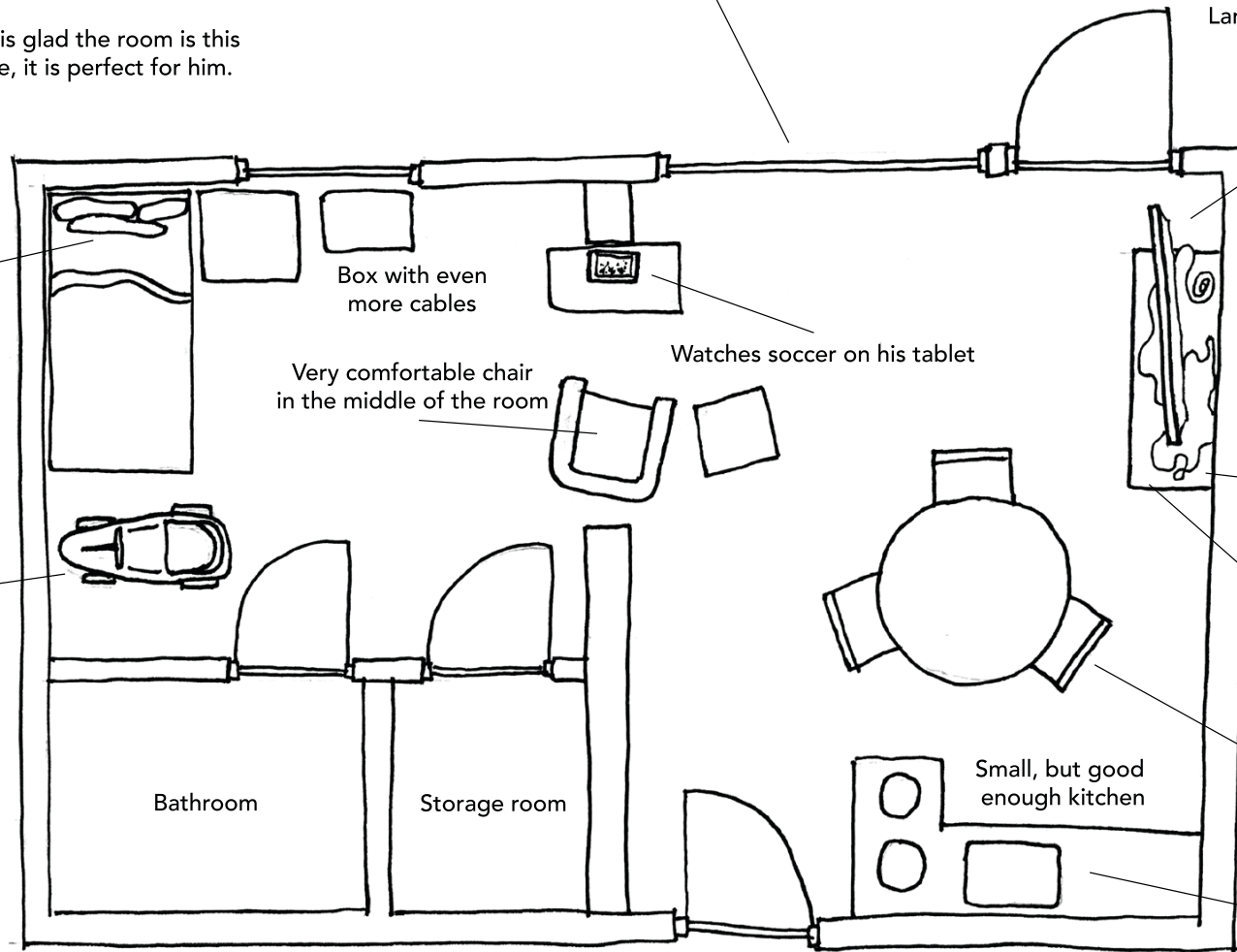
I sit here during the interview and get blinded by the bright sunlight

He likes to cook for himself

This is a transition apartment for him; he waits for a free spot in the care homes with his wife.

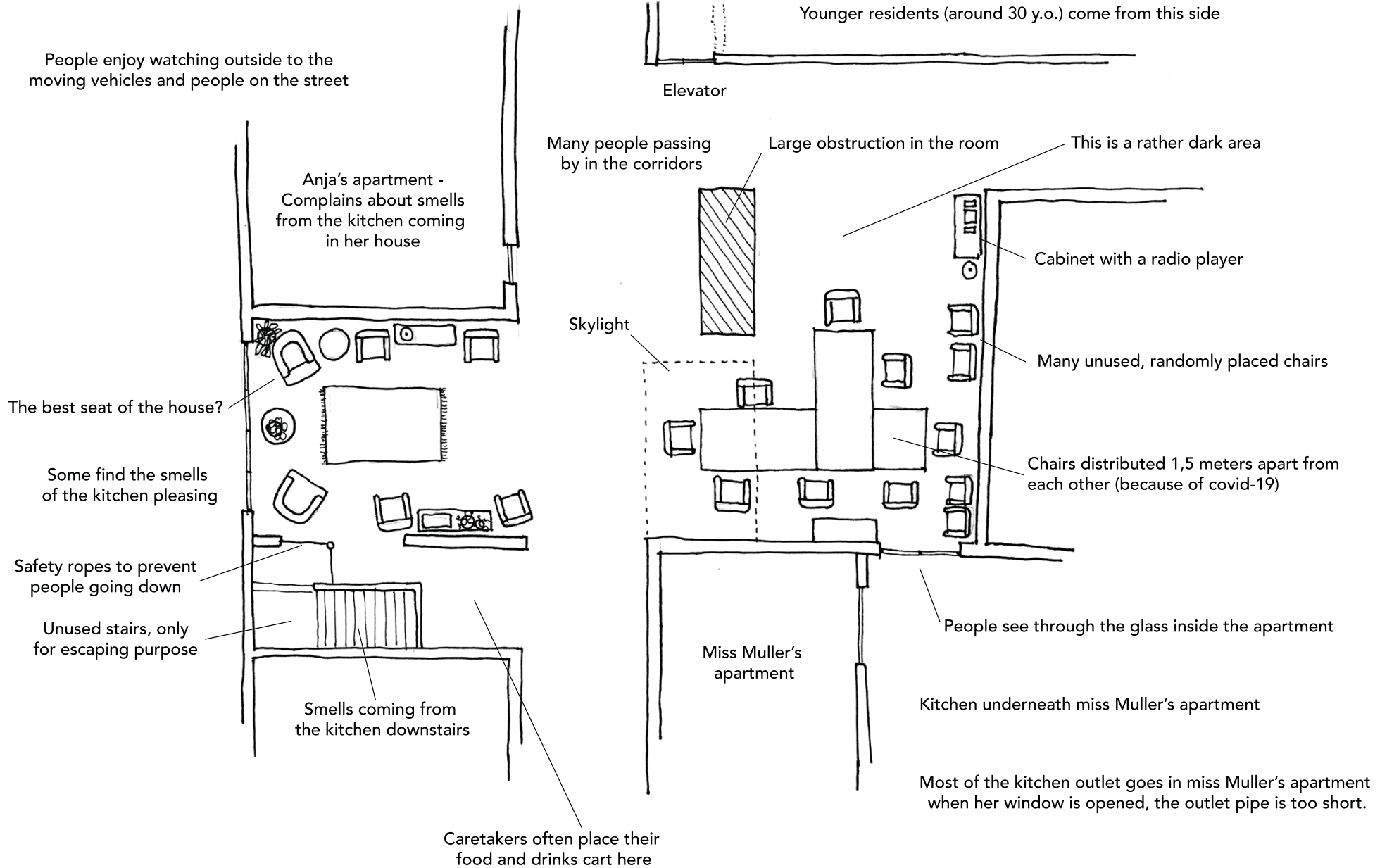
Parks his larger scootmobile outside the door. Some employees complain about it to him.

His larger scootmobile eventually had to move to the garage, but then he first needs his smaller one to get there.

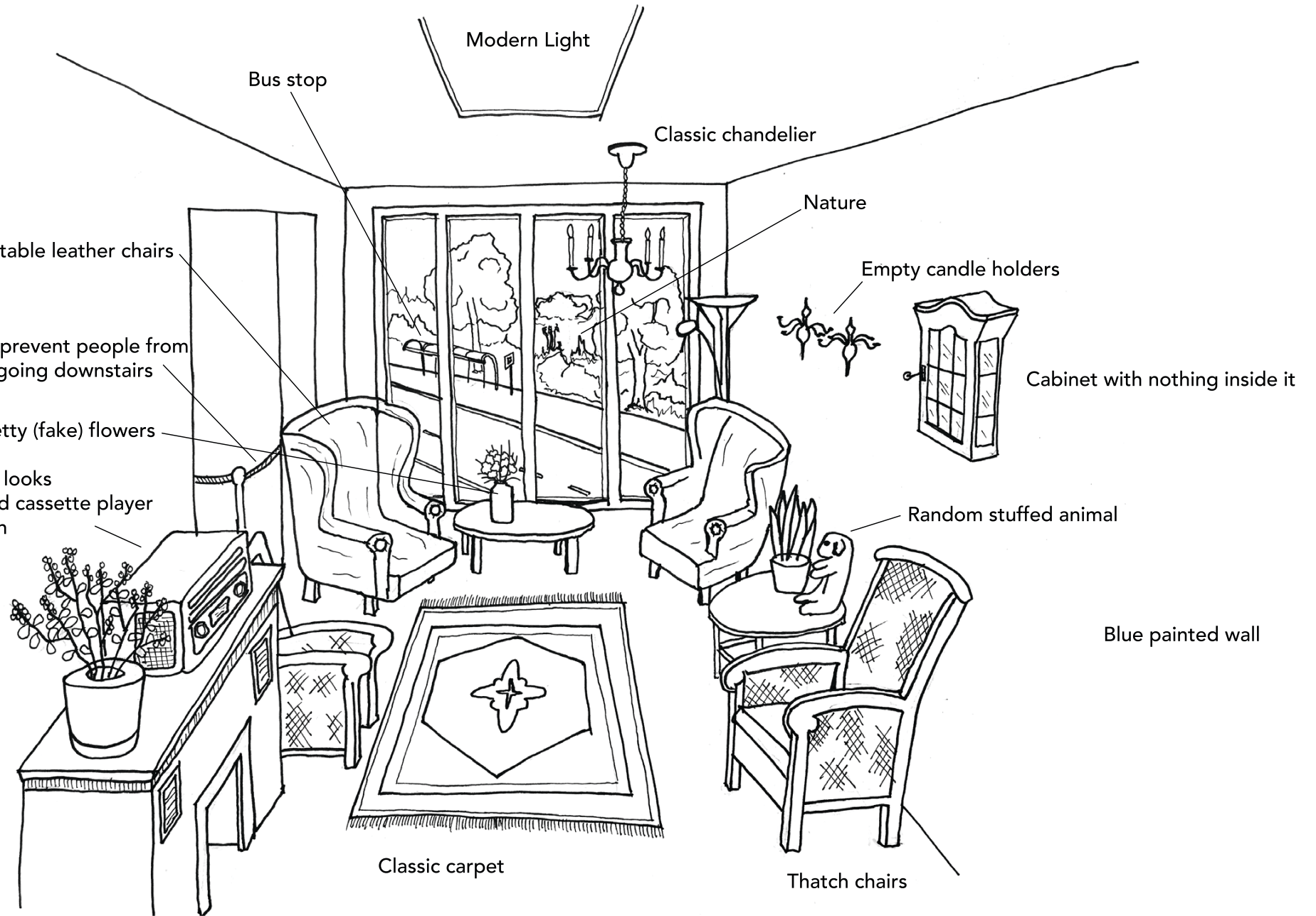




# 't Trefpunt



Common living room



Comfortable leather chairs

Rope to prevent people from falling / going downstairs

Pretty (fake) flowers

Modern radio with classic looks  
Including a record, CD and cassette player  
Connectable via bluetooth

Cabinet with fireplace feel

Modern Light

Bus stop

Classic chandelier

Nature

Empty candle holders

Cabinet with nothing inside it

Classic carpet

Thatch chairs

Random stuffed animal

Blue painted wall



## FIELDWORK

Observation on common talk topics  
People often talked about:



**Groceries**



**Cooking**



**Music**



**TV programs**



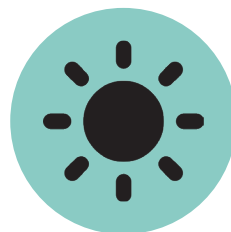
**Boredom**



**Loneliness**



**Study**



**Weather**



**Corona**



**Family**



**Gossips**



**FIELDWORK** Views from 't Kampje



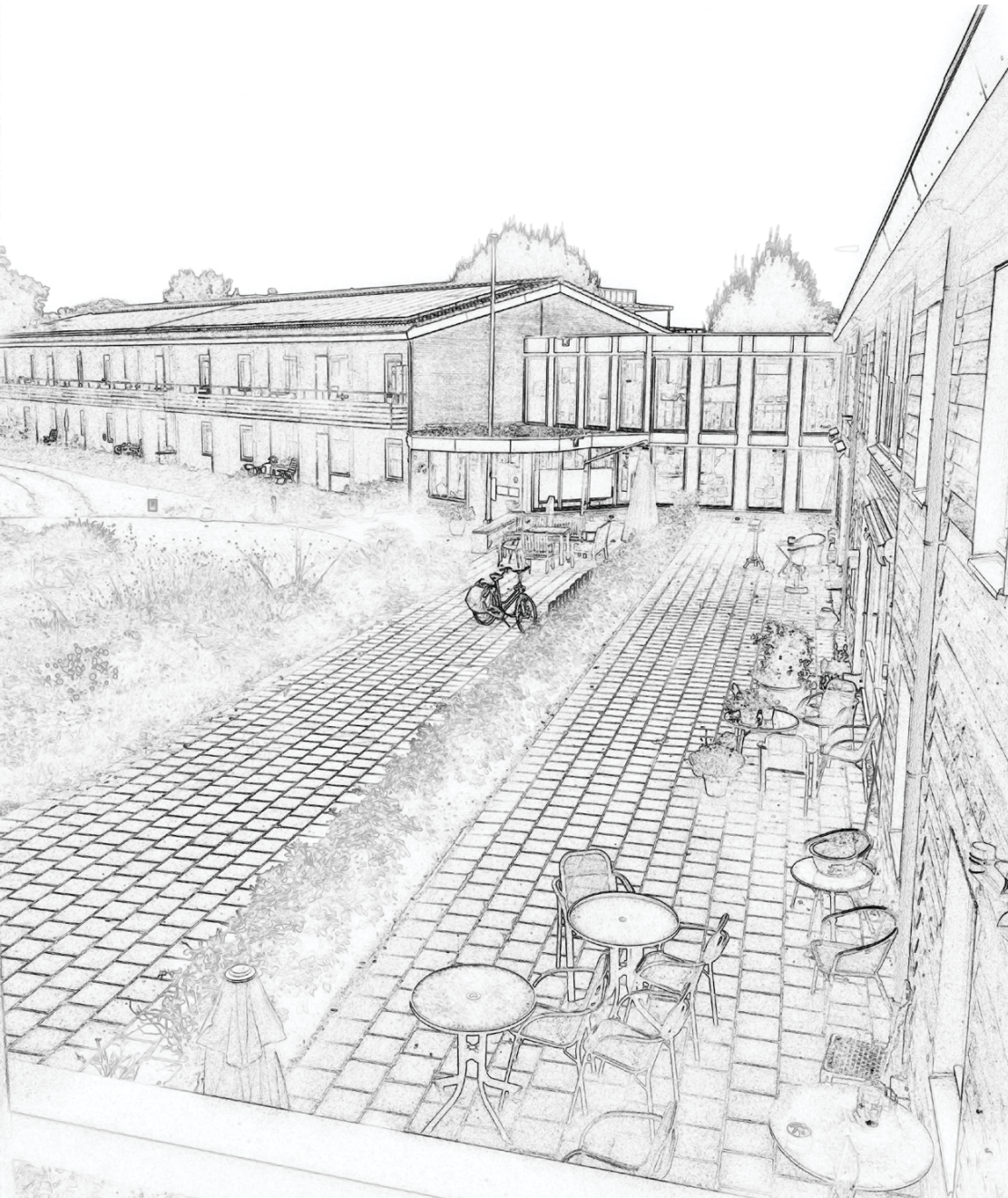


**FIELDWORK** Views from 't Kampje





**FIELDWORK** Views from 't Kampje





### **An experience in the daily life's of elderly**

For three days, me and a companion lived together with many different elderly in care home 't Kampje in the picturesque village of Loenen aan de Vecht. Even though it were not many days, it for sure already gave a great impression on the living conditions of elderly in care homes. Many architects that design for elderly have not experienced this, so for me this was of high value. Understanding what happens in these homes can make for better decisions in the design process. Also, it created the basis for this research, the promotion of self-reliance through architecture. The people we observed were very passive and carried through life by the care staff, for me it was sad to see this. Many lose their direction of life and show very passive behaviour, so in the end I knew I had to do something around these topics. The topic of self-reliance I did not expect to research at the start of the studio.



# **SELF RELIANCE**



### **What is self-reliance?**

The GGD Amsterdam (2017) states that one can be called self-reliant when an acceptable amount of functioning is realised on the domains of which everyone in the Dutch society has to deal with in the daily life. These so called life domains are selected from a collection of domains of American versions. Caretakers, researchers, policymakers and other experts in the field of healthcare selected these domains because they are relevant for everybody in the Dutch society. (GGD Amsterdam, 2017)

Being self-reliant does not mean that you have to do everything on your own. To reach or remain a certain level of self-reliance one can use the skills, expertise, resources and possibilities of others, like families, friends, neighbours or rescuers. Though, it is about asking that help from others in a way that it is understandable for them that you want to become, or remain self-reliant. And also, to do this in time, if one waits for it and others are arranging help for that person, that person can not be called self-reliant. (GGD Amsterdam, 2017)

So the definition of self-reliance is; "Realizing an acceptable level of functioning in the important areas of daily life. If necessary, by organizing the right help at the moment that a decline in your performance level threatens or occurs that you cannot prevent or remedy yourself." (GGD Amsterdam, 2017)



## Factors for experiencing self-reliance and self-direction

According to the research overview panel by Nivel (2014) there are several factors that determine the experience of self-reliance and self-direction. These are; the life domains, the need for care and its use, one's ethnic background, and one's knowledge, motivation and self-confidence.

The life domains of a person indicate personal and situational characteristics that determine the experience of self-reliance and self-direction. (Nivel, 2014) For example; elderly that are limited in their financial situation, a limited social network and limited physical functioning often experience low self-reliance and direction. (Galenkamp et al., 2012)

97% out of 600 55-plussers find it important to have own direction and responsibility over their health. (Lindenberg et al., 2013) However, when a person needs more care, it has an influence on the amount of self-direction and self-reliance. More care means less self-direction and self-reliance. (Galenkamp et al., 2012) Van Campen et al., 2013)

Some people with immigrant background experience a different type of self-reliance and direction. For them it is more about the collective preservation, within the family. They think it is very important to take care of each other as a family, when an elder needs care, the family will provide the needed care. This is especially the case with Moroccan and Turkish people. (de Graaff & Francke, 2003; de Jong, et al., 2004) Elderly from southern Europe, the Antilles and Suriname on the other hand would like to remain more self-reliant and self dependent. (de Jong et al., 2004)

Almost half of the Dutch population has insufficient knowledge, motivation and self-confidence to play an active role in dealing with sickness and care. (Rademakers, 2013) Many elderly need to be informed about certain sicknesses, diets and the importance of health. Elderly need to be actively busy with gaining knowledge in order to increase their self-reliance. (Shearer et al., 2012)



**Life domains**



**Need for care and its use.**



**Ethical background**



**Knowledge, motivation and self-confidence**

# SELF-RELIANCE - OWN DIRECTION

## Life domains

There are a number of domains that indicate the state of dependence and direction of life. If all domains are perceived as non problematic, then you can say one is a very self-reliant person. If all the domains are problematic, then a person is very dependent on someone or something. There is also a difference between self reliance and self direction. Self direction tells you something about the amount of control that a person has over the life domains. Where self-reliance is more about being able to participate on your own and whether there is assistance needed. The domains are;

## Extra domains

The GGD Amsterdam determines 13 domains, three more domains than those of Vilans, they are; Justice, a division of the general daily in; Instrumental general daily and basal general daily, and domestic relationships.

For the relevance of the research, some (sub)domains are seen as part of the bigger domains, like the instrumental and basal general daily are under one part - General daily. The domain 'justice' is not as applicable for the target group and research, where domestic relationship is more about the children and living companions in the homes, these are also taken into account under social network. In terms of justice we assume that the current target group has no active criminal records, because it would become a different type of target group.

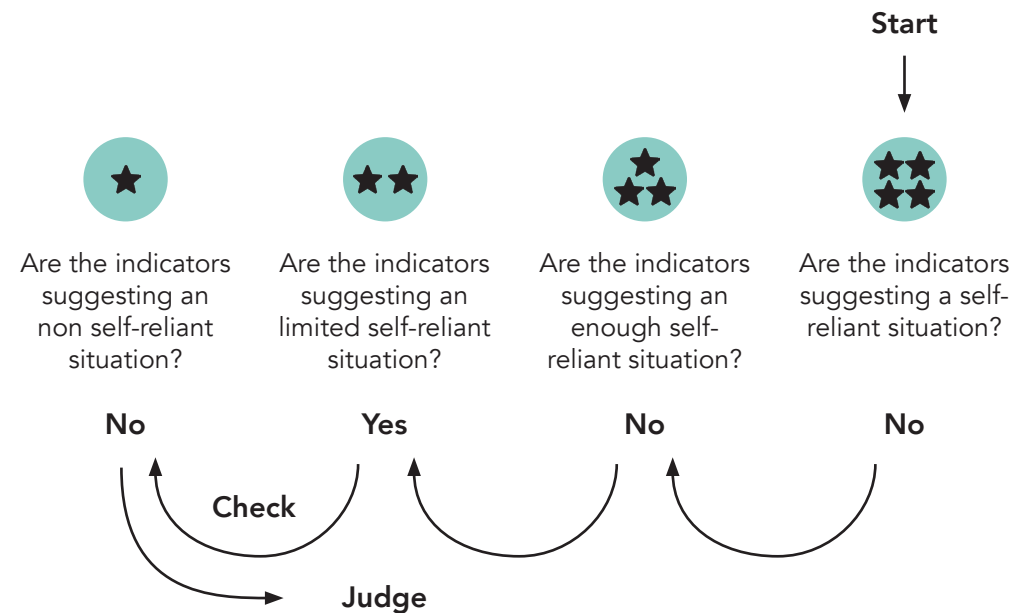
## Valuing

Each domain has indicators to determine the self reliance and self direction of a person. It is used to compare the situation with the indicators and thus creating a more reliable judgment. The valuing is done by observing and interviewing the users and care staff, then using a scheme, the values are determined. The indicators are mentioned on the schemes in the appendix.

## Goal of valuing

Valuing the life domains of someone is done to analyze the functioning of a person in the domains of daily life, this produces a score about the degree of self-reliance and self-direction at a certain moment of time.

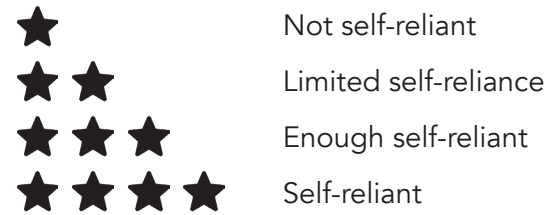
It is mainly used in the working process and culture of care-organisations to have a better understanding of the clients they deal with and to have clear structure and language between different caretakers. The valuing method is a screening instrument, which can also be used to track the degree of self-reliance- and direction of a person. (GGD Amsterdam, 2017) By having a clear overview of the degree of self-reliance on each life domain, certain decisions can be made to adapt to the situation.



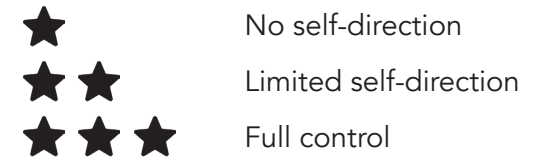
## Experienced life domains in 't Kampje

During the anthropological research in care facility 't Kampje, several observations and interviews are done concerning the topics that determine the life domains. Both indicators from Vilans and the GGD Amsterdam are used to create a reliable value to each domain. The valuing is done to a group of people, and not one single person. Situations can differ per person, therefore an overall repeated situation of a collective is valued.

### Self reliance scheme



### Own direction scheme



## General observations in 't Kampje \*

\* Excluding the PG section

1. Daytime activities (free time, purposeful activities)
2. Living conditions
3. Physical functioning
4. Mental functioning
5. Cognitive functioning
6. Housekeeping
7. General daily (ADL)
8. Social network
9. Mobility
10. Financial situation

### Self reliance



### Self direction



Valued according to the self-reliance measurer by Vilans, 2013



## 1. Daytime activities

Self reliance



Self direction



### Observations

Many people are sitting alone in their rooms, perhaps because of Covid-19, or because they are simply not interested to sit with others. Even though every week there is a schedule for the activities that take place in 't Kampje, only a hand full of people participate in these activities. The people I saw joining the activities were independent enough to join, they sometimes needed some assistance in finding a place to sit while moving with their walker.

All these activities were organized by the care facility, so the people who live there do not have much input and self direction in these daytime activities. Probably a reason why many remain in their rooms and do activities on their own. People that have specific hobbies are not able to perform them in, or around the building, which is why there is no maximum score given.

*"I don't get why all these people  
are in their rooms all day!"*

*- Resident from 't Kampje*





## Meaning for architecture

For people to be completely self-reliant and have self-direction over daytime activities, people need to be able to do certain activities, like hobbies, that they really enjoy. The living environment needs to facilitate places to do this, like through an atelier, a billiards room, or even gardens. To have more self-direction over these activities, the residents themselves should have the option to organize this. This could be done for example by using a system with a timetable of certain flexible areas, where they can plan their own activities and people can join them if they wish. Perhaps, it could even be done in an unplanned manner, where people are encouraged to participate, by showing the activities in open spaces.

### Active gardens

According to Saskia de Wit (2020) who is a landscape architect and wrote the book *Hidden Landscapes*, there are three types of gardens, the active garden, the social garden, and the experiential garden. For daytime activities the first example of the active garden might be of interest. Active gardens are designed in a manner to let people physically engage with its surroundings. (S. de Wit, 2020) An example for this type of garden is a fruit- or vegetable garden, where people can work in to be purposeful. Especially for elderly, it is important to remain active, being active makes one feel rewarded and keep the mind healthy and active. Also, by being active in these types of gardens, it stimulates cognitive and physical processes of the brain and it boosts the self-esteem. (S. De Wit, 2020) Certain types of urban farming would be interesting to be integrated in the design.

In the case studies of 't Knarrenhof, ParkEntree and Eikpunt they all share this principle of working together on farming and working in gardens. In the book of Richard Sennett: *Ethics for the City* (2018), he mentions "for people to act effectively together they need to share a common purpose or goal. Like by doing something productive together, they take pride in the work they do, which eventually breeds respect for each other. If it is done well enough, people start to share their pleasures and comforts with each other." (R. Sennett, 2018) So having people work together is a great way of forming a community, which is important for staying self-reliant for a longer time.



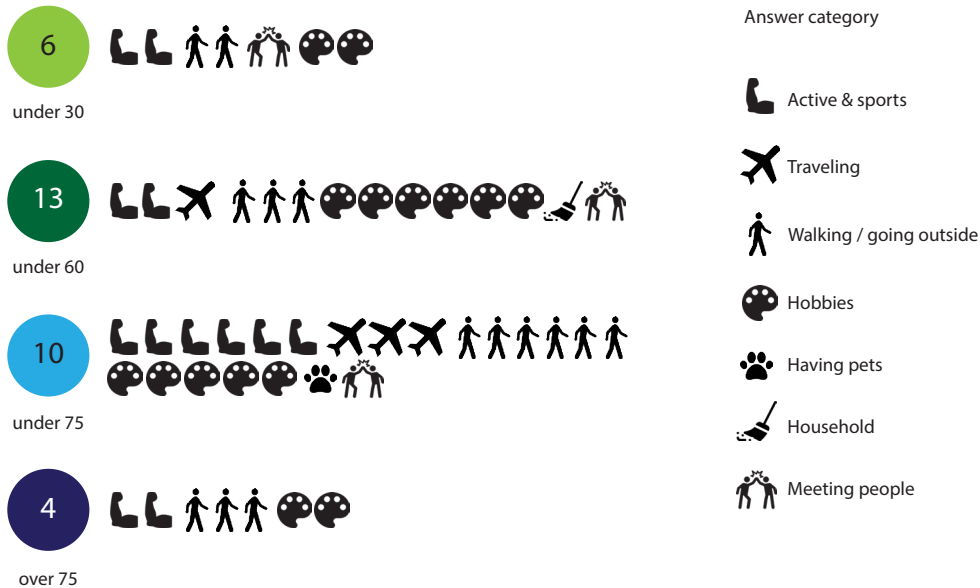
*Hortus Botanicus Leiden 1590, I.C. Woudanus, n.d.*

*"The Hortus Botanicus in Leiden, North Holland, was one of the oldest botanical gardens of western-Europe. They were used to study plants and their effects. this was an early example of people working together and sharing knowledge."* (H. Butter, 2020)



## Survey

In the neighbourhood of Tanthof East in Delft, as a group we distributed surveys to collect information about the wishes and needs of the inhabitants of that area. One of the questions was; Are there things you want to keep on doing when you are older? It was an open question with multiple answers possible. 33 people answered the question and the answers are divided in 7 categories.



Interestingly many people talked about being active, and doing sports, walking or going outside, and performing certain hobbies they liked. Though, in the direct neighbourhood of Tanthof East, there are very few options for performing this. (See image; 'Locations for sports near Tanthof')

An option for the design could be to have a place to be active and perform sports. Also various answers were given in the category of hobbies. For example; making music, drawing, painting, reading, and various handwork activities. Interesting could be to have communal places for people to perform these hobbies, in ateliers or interpretable spaces to play music together.



Locations for sports near Tanthof, Google Maps, 2020

## Extracted design guidelines



Places for gardening



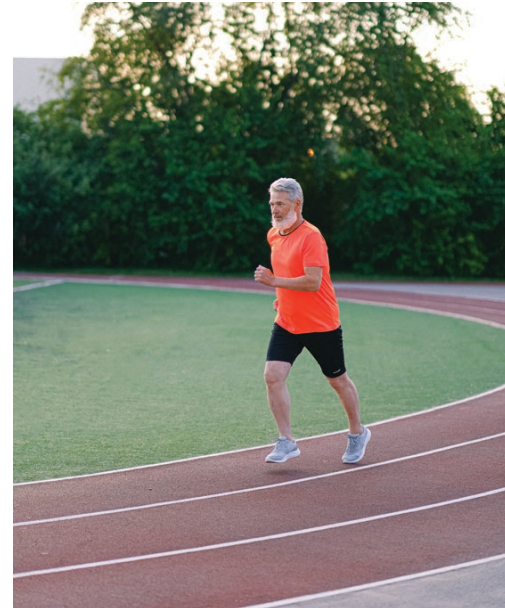
Places for active lifestyles and sports



Places for performing hobbies

## Examples

*Exterior sports, Pexels, 2020*



*Farming for less mobile, Pexels, 2020*



*Urban farming, Pexels, 2020*



*Atelier for hobbies (Pexels, 2020)*



*Billiards for all ages (Pexels, 2020)*



## 2. Living conditions

Self reliance



Self direction



### Observations

The living condition of the people was perceived as great, all interviewed inhabitants mentioned that they really enjoy their place, there are no adjustments needed to fulfill the needs of the resident, and if it was needed, the adjustments can be done easily, because of a flexible floorplan and equipment. The only minor thing was the threshold to the balcony, for people with a walker it was rather high and difficult to enter. So in terms of living conditions it scores very high.

*“The room is perfect for me! I don’t need any more space than this”*

*- Resident from ‘t Kampje*

(Residents home in ‘t Kampje, own image, 2020)





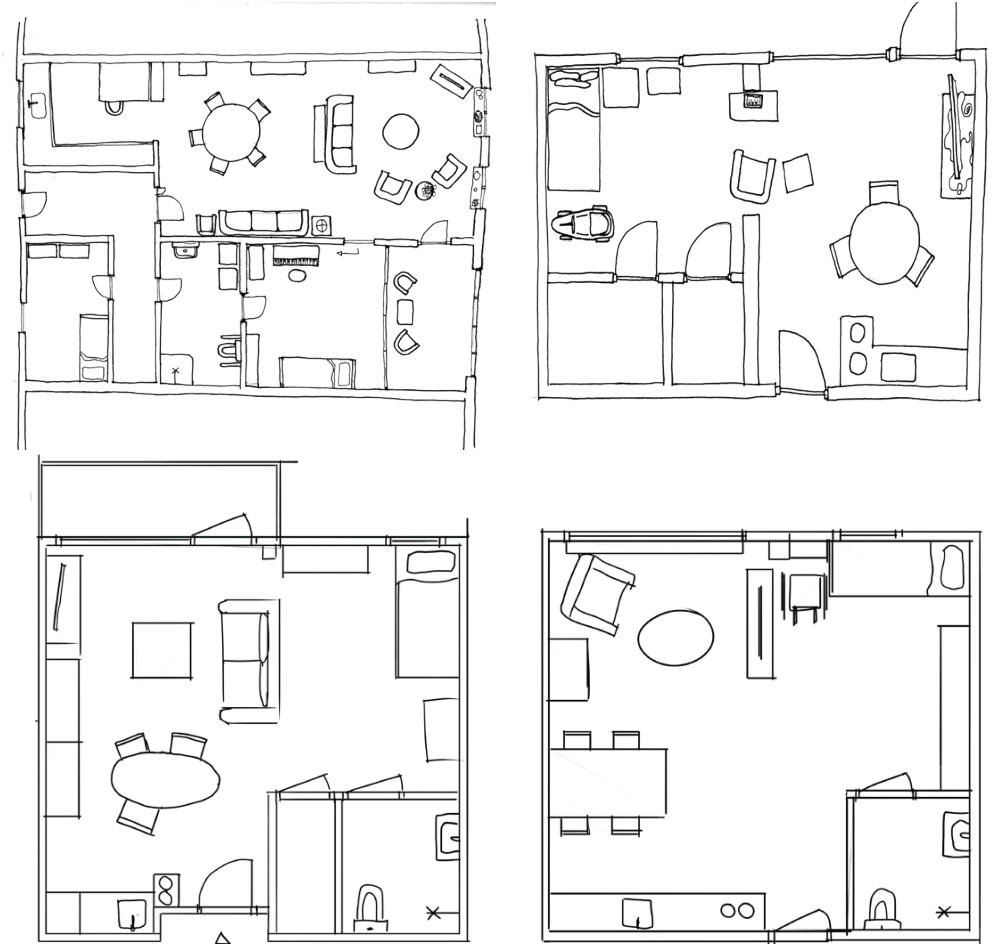
## Meaning for architecture

As a result of all the positive feedback for the living conditions of the elderly living here in 't Kampje, you could say these apartments are a good starting point to design, the size, light and functionality is perceived as very positive. People can stay very independent here, because the equipment can be changed simultaneous to the shifting needs of the inhabitant. Though, most people will need support when they want to change something in their rooms, like moving a bed or closet.

The interior of all the apartments is very similar to each other, the kitchen, closet, and bathroom are on fixed locations, which makes the interior less flexible. Certain furniture is often placed in same locations, for example the beds are mostly placed in the corners of the room, and that in the middle of the room there is often a division, by a bench, chair or a tv stand. (see images on the right side) In the smaller dwellings there is no separate bedroom, which was often perceived as negative, some said they don't want to see the bed they will die in all day. Or when there are visitors, the bed is not very 'houselike'.

Bathrooms are small, but easily maintained, most of the materials are hard and provide a contrast between elements for visual impaired people. Many elements are easily removable, or adjustable to suit it for the users needs. The kitchen also provides contrast of white cupboards and a dark countertop. It is rather small, but efficient, the upper cupboards are not placed too high, so a shorter or less mobile person could still easily reach it, without the fear of falling. The cooking unit is ceramic, which is easy to clean, and safe to use for people, because unlike gas there is no explosion danger. Also it appears red glowing, when it is hot, so you don't place accidentally your hands on it.

For a person to be self-reliant in terms of the living conditions, there should be enough, stability, quality and autonomy for the living conditions of a person. (GGD Amsterdam, 2017) Stability is about the possibility to remain in the house, quality is about the safety in a house (e.g. air quality or gas possible leaks) And autonomy is about being self directed enough to arrange certain things that are needed in the house, like fixing the kitchen sink.



Floorplan layouts of rooms in 't Kampje, own drawings, 2020



According to the overview studies of Nivel (2013) there are a number of wishes of elderly for their future homes, this part describes 4 of these wishes.

### **Wish to remain in own home**

According to research done by Nivel, 79% of independent living future elderly wants to remain in their own homes, also when the need for care is increasing. When people get older, the wish to remain in that home is increasing. 75% of people between 57-61 years wants to stay in the same home, where as people between 72-77 years old, 84% wants to stay in the same home. (Nivel consumentenpanel gezondheidszorg, 2013)

### **Wish to adjust the home**

Some elderly have the wish to adjust their homes in order to live longer in their homes. An example is to adjust the dwelling to a 'zero-step home' to increase the accessibility of the home. (van Iersel & Leidelmeijer, 2010) These kinds of homes are also described as life-cycle proof dwellings. These are dwellings that are suitable or can easily be made suitable with adaptations for occupancy into old age, also in the case of physical limitations or chronic diseases. ([www.kcwz.nl/dossiers/levensloopgeshikt](http://www.kcwz.nl/dossiers/levensloopgeshikt))

These adjustments on short term require a large investment, but in the long run it is more cost-effective because less professional support is needed. (Lansley et al., 2014)

### **Wishes for the living environment**

Elderly attach great importance to the facilities and social contacts in the neighborhood. Elderly people who are satisfied with their current housing situation want to continue living there, because they have lived there for years, have built a life with memories and have a network of friends, acquaintances and neighbors (Lindenberg et al., 2013). More than three quarters of the elderly who want to move would like to continue to live in their own environment. Older people from the countryside are more likely to move to a city or close to a city, so that they have better access to amenities such as shops, public transport or care facilities (Post et al., 2012). In addition to that, they would also like to live in a neighborhood with a diverse age group and close to amenities (Lindenberg et al., 2013; van Iersel and Leidelmeijer, 2010; NIVEL Health Care Consumer Panel, 2013)

Where do (future) elderly people want to move to if they need more care? (N = 198; percentages, multiple choice)

---

43%	To an apartment
38%	To an elderly or senior dwelling
26%	To a sheltered home nearby a care facility (independent living and according to needs make use of the amenities in the care facility)
24%	To a serviceflat or dwelling near or in a care facility (independent living and use the amenities of the care facility for a certain price)
8%	To a single family home
3%	To a specific dwelling type for people who can not live independent anymore.

---

(Source: Nivel Consumentenpanel Gezondheidszorg, 2013)

Housing wishes of (future) elderly people for the neighborhood or municipality in which they want to live if they need (more) care (N = 198; percentages, multiple choice)

---

55%	Nearby shops, a healthcare-centre and other amenities
47%	In a diverse aged neighbourhood
26%	Nearby own children
22%	In a neighbourhood where people live that are willing to help when i need (more) care and help
12%	In a neighbourhood with like-minded people (people with the same preferences, hobbies and other interests)
9%	Nearby friends
7%	Nearby family (other than own children)
4%	In a neighbourhood with many other elderly
10%	No special requests or wishes

---

(Source: Nivel Consumentenpanel Gezondheidszorg, 2013)

## Wish to move to another home

At last there is the wish to move, moving is one of the least favourite wish for most elderly. Only 20% of (future) elderly want to move to another home when they need more care (Nivel consumentenpanel gezondheidszorg, 2013) On the previous page the wishes of elderly are expressed in percentages about where they want to move if they need more care. Most people would prefer to live in an apartment or an elderly-senior dwelling. About a quarter would also move to a sheltered home, a serviceflat or a dwelling near a care facility, as long as it is independent living. Suprisingly, the results of the survey from Tanthof Oost do not match the overall studies, people from Tanthof mostly chose to rather live in a single family home, than in a carehome. The studies from Nivel show that only 8% would like to live in a single family home later on.

In the survey about Tanthof, only one person under 60 years mentioned to also move to a care home. The followup question was about why the people did not cross the care home. Most of the answers show very negative experiences with carehomes, for example somebody said; "No good experiences with with family that lives in a carehome, people lose their direction of their life." which was also one of the observations in 't Kampje in Loenen aan de Vecht. Others spoke a lot about wanting to be as independent and live in their homes for as long as possible. At last, the answers show that there is often an association made that you can not live there if you are healthy, which is not always the case.

In what kind of dwelling would you like to live later?  
(N = 40; absolute numbers, multiple choice)



(Survey Tanthof Oost, own image, 2020)

If you didn't check care home, why not?  
(N = 26; open question)



(Survey Tanthof Oost, own image, 2020)



## Extracted design guidelines



Small house footprints



Lifecycle proof homes



Place near shops & other amenities



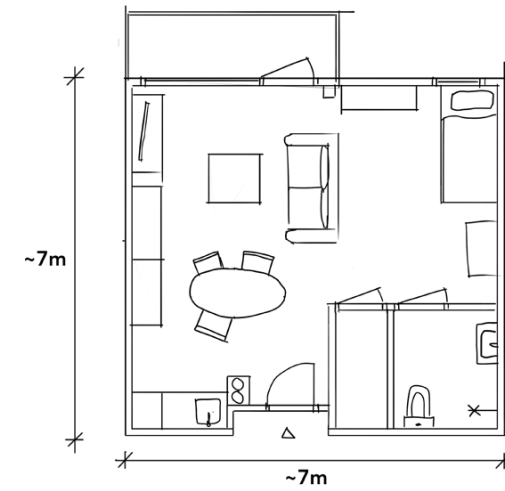
Diverse aged target group



Diverse living options (apartments, single family homes, co-living)

## Examples

Floorplan of home in 't Kampje



Co-living spaces



Cafe amenity



Diverse aged groups interacting



Limited thresholds

### 3. Physical functioning

Self reliance



Self direction



#### Meaning

Physical functioning, or bodily functioning is related to the physical health and wellbeing of a person and the (non) presence of bodily conditions and how the person is dealing with this. (GGD Amsterdam, 2017) These conditions could be; wounds (like from an accident), short term sicknesses (like the flu) and chronic sicknesses, like diabetes.

#### Observations

Of course, from a distance it is not always possible to tell if a person is really dependent on medical supplements. Though through interviews with the staff and some elderly I found out that there are many taking medication. For privacy reasons I did not ask what kind of medication, but it indicates that there is a certain need for the residents. Some told us themselves, they had a TIA (Transient Ischemic Attack) for which they couldn't do certain activities anymore, like playing a guitar, or a piano, which was very disappointing for them. The care staff usually brings the medication on dedicated times in the morning or afternoons, like during breakfast. It is hard to give this a specific rating, because every person had a different condition, many also had no problems at all. In terms of self direction, many could determine if they would need treatment, others had limited insight in their condition and would trust caretakers on their medication.

*“They are too late bringing the medication again!”*

*- Resident from 't Kampje*





For elderly, a certain condition can occur rapidly, if there are professional caretakers around, they can sometimes indicate whether a person needs certain treatment, or assistance. In 't Kampje there was a physiotherapist in the building, which already is a step in the prevention of mobility issues and physical functions. Most elderly would definitely benefit from a general practitioner near them, so a building with an integrated center, could be of much benefit to stay self reliant.

According to research done by TNO, in 2020, 70.000 people with the age of 65 and above experience physical limitations, an increase of 60% in comparison to 2012. With certain disabilities people encounter problems in the activities in daily life, including mobility problems. There is a good chance that older people see worse, have difficulty walking and have a slower reaction speed. (GGD Amsterdam, 2017)

Being self reliant on physical functioning has all to do with remaining healthy, lessons from the blue zones can improve the health of people, thus keeping them self reliant for a longer time.

## Blue zones

Blue zones are places in the world where people get much older than average. People living in these places become on average 90 or even 100 years old, in good health, without medicine and invalidity. (F. Bolding, 2020) The blue zone name derives from the American Dan Buettner, for over 15 years he has done research to longer, happier and healthier living.

Being healthy is closely related to the physical functioning and is an important aspect of self-reliance. People become older and if they become reliant on care on earlier age, they need care for a long period of their lives. As of now, only 1 in 5000 live to become 100 or older, becoming this old has only 10% to do with genetics, and 90% is based on the lifestyle (D. Buettner, 2013)

Together with a team of anthropologists Dan Buettner researched the areas where people got really old on average, they researched their characteristics and lifestyles. They found out nine corresponding characteristics of living in each of these areas. Called the power 9, there are indications that these factors play an important role in a healthy lifestyle. (D. Buettner & Skemp, 2016)



Image: Jouis, 2020



## The 9 factors to become vital and older



1. Move naturally  
Not through a gym, but in the general surroundings, without consciously thinking about it. This can be done by; gardening, cleaning and walking a lot.
2. Knowing your cause  
Have a purpose to wake up in the morning, japanese call it "ikigai". Keeping a purpose in life can make one live 7 years longer.
3. Reduce your stress  
Take time for daily relaxation. Stress is one of the biggest causes for sicknesses with elderly. Having a place to down shift daily can reduce stress.
4. The 80% rule  
Lower your calorie intake by 20%, and do not overeat. The remaining 20% can make a difference in gaining or losing weight.
5. Vegetable diet  
Mostly beans and other carbohydrates foods. Meat is often seen as a luxury food and eaten much less, only about 5 times per month.
6. Drink wine occasionally  
Preferably together with friends or family. It is proven that people who regularly drink wine (1 to 2 glasses per day) live on average longer than people who do not drink wine at all.
7. Right tribe  
Being with the right people has a positive influence on health. Spending time with people who are overweight influences the behaviour of oneself.
8. Put family first.  
This implies having your family close by, or even living together. Having them close by also makes it easier for them to take care for each other.
9. Belong  
Research shows that having a good social life increases a healthy lifestyle, this means to have good friends and enough social contacts. The average amount of friends in 1970 was 3, in 2013 this is 1,5.

(D. Buettner & Skemp, 2016)

## Meaning for architecture

The power 9 factors can also be related to architecture, for example in the Cartesiusdriehoek Blue District in Utrecht, here Mecanoo designed the masterplan for what is to become the most healthy, well-connected to public transport and bicycle-friendly neighbourhood in the Netherlands. (mecanoo.nl, 2020) They translated these 9 factors into four urban design themes, they are based on; mobility, healthy diet, community and meaningfulness & relaxation. The plan is meant for all kinds of target groups, like single households, couples, families and people with a need for care.

The neighbourhood is designed in a way that inhabitants and visitors can quickly use their bikes, the public transport and shared car. Walking is promoted by the public greenery but also by taking into account the maximum capacity of the existing road during rush hour. The average car per person is lower than in other places of Utrecht, the cars are to be parked in garages on the corners of the neighbourhood, which makes the car less dominant and visible. (cartesiusdriehoek.nl, 2020)

The historic CAB building from 1949 will be the epicentre of the Cartesiusdriehoek and will be newly filled with a relation to healthy urban living themes. For example a food hall with healthy catering facilities and restaurants that connect to the green Cartesiuspark. (Mecanoo.nl, 2020) People learn here about healthy food preparation and cooking.

As mentioned before, a healthy lifestyle is of 90% a factor for becoming old vital without consistent care. This is why it has a close relation to being self-reliant. To be self-reliant in the domain of physical functioning it is about being able to judge over- and deal with certain physical conditions. For example the presence of possible wounds or chronic diseases, the person has to have knowledge when to use certain medication or judge when help is needed. (GGD Amsterdam, 2017) If the architecture is adapted to be stimulate healthy lifestyles it simultaneously stimulates one's self-reliance.



(Floorplan of the Cartesiusdriehoek District, bgsv.nl, 2020)



(Walkability with nature, Mecanoo, 2020)



(Impression CAB Building, Mecanoo, 2020)



## Extracted design guidelines



Promote natural movement, a walkable neighbourhood, easy bike access



Places for relaxation and meaningfulness



Places for community forming



Gardens that provide local vegetables



Places to live for friends / family

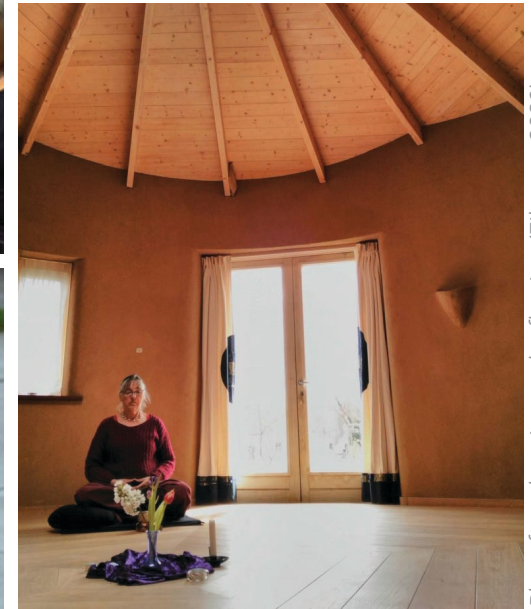
## Examples

Local vegetables farming and community forming (Knarrenhof, n.d.)



Rough ceramic tiles for easy walkability (Bestratingsweb.nl, 2020)

Easy bike access points (Metec.nl, 2020)



Place for relaxation and reflection (Eikpunt, 2020)



Places for community forming (Eikpunt, n.d.)



## 4. Mental functioning

Self reliance



Self direction



### Meaning

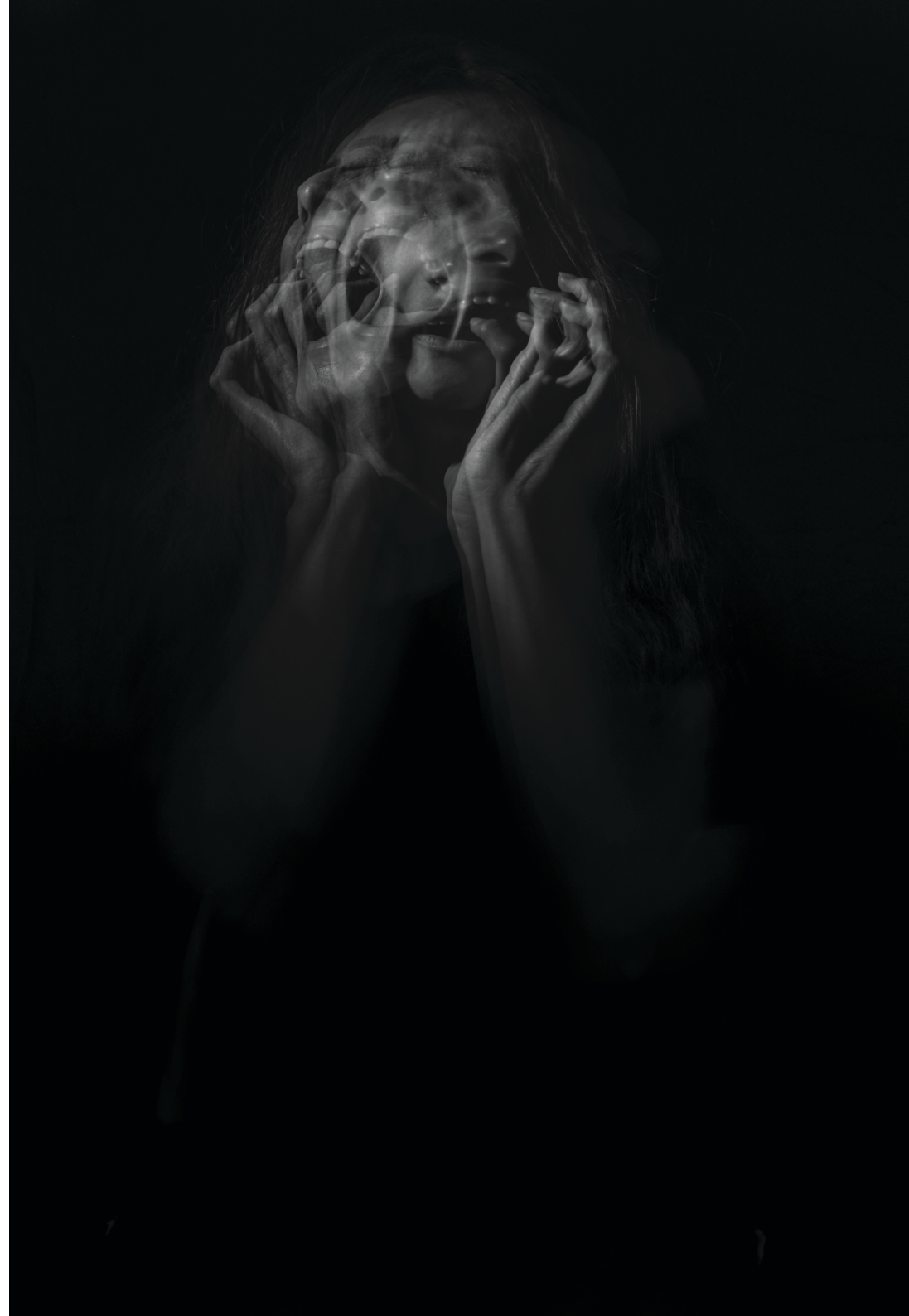
Processing of mental functions such as thinking and reasoning with a problem. (Psychologydictionary.org, 2020)

### Observations

Unfortunately, due to corona, we could not visit the closed section of 't Kampje, so we did not get a glimpse of all the kinds of people that live there. But the ones that we spoke were rather clear in mind. Many interviewed residents moved to this place because they got separated with their partner. In some cases, they got really somber for their loss of partner and / or friends they used to have. Like with the physical functioning, for everyone this was different, and they acted different. But it seemed, that despite the gloom many people were not obstructed in functioning. There was one woman often walking around the building, just walking, never really talking much. When we asked where she was going, she said she was going home, but we see her 20 minutes later wandering around again.

*"She is always silently singing, but she doesn't notice it herself "*

*- Resident from 't Kampje*



## Meaning for architecture

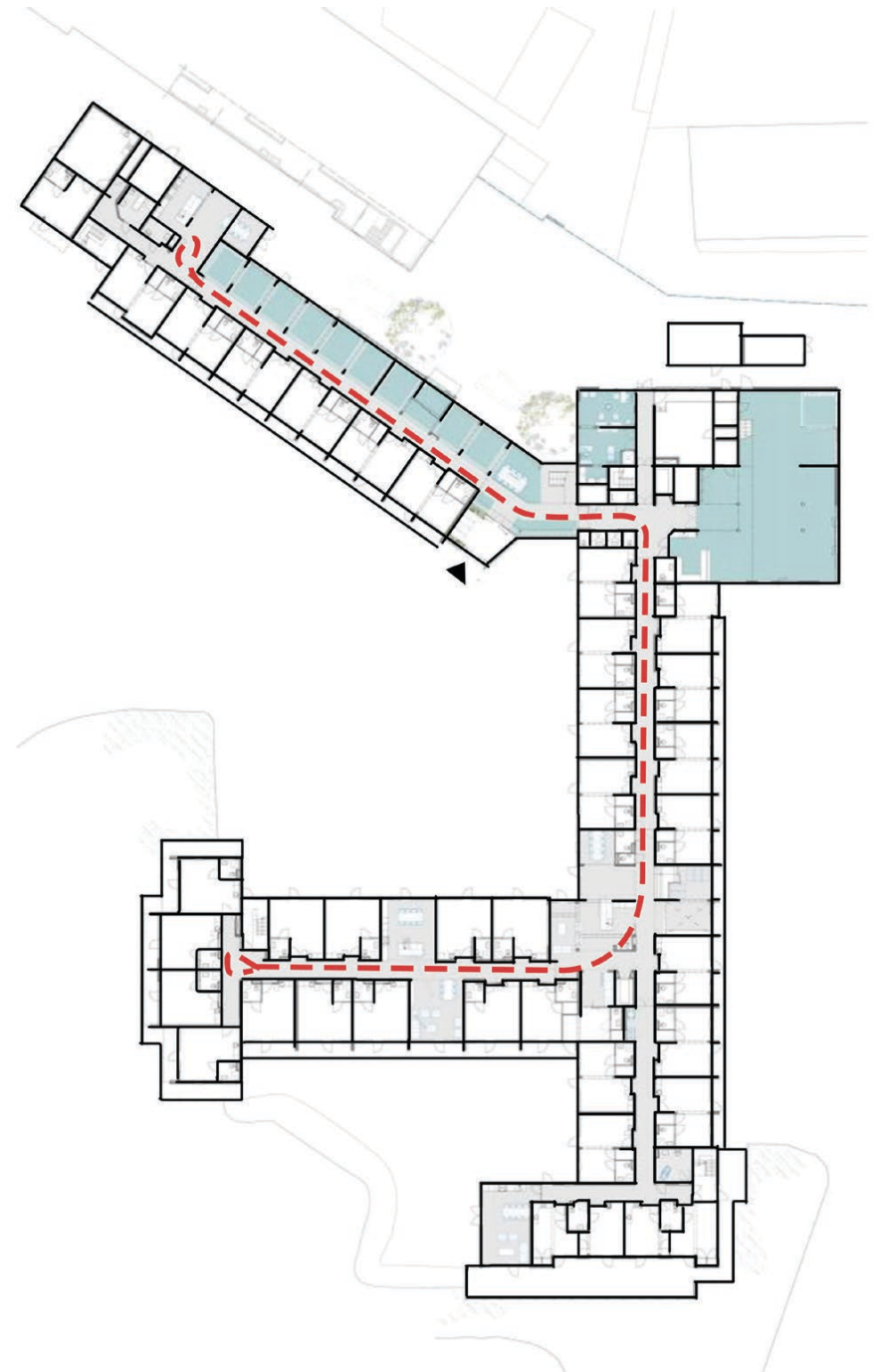
In many cases, issues with mental functioning is often found out late, too late. Presumably because there is nobody constantly around them anymore that can pick up the signs. Of course caregivers can look out for them, but it is not a certainty that they will remain their caregivers all the time, as there could be rearrangements in the care system. By making sure there are people around them that can look after them sometimes, this issue of finding out too late if there are mental problems can be deminished.

## Dementia

The well-being and behaviour of people with dementia living in nursing homes are strongly determined by the design of the environment. People who are restricted by their health or cognitive ability cannot always adapt to the environment to their specific needs. Therefore, they are more dependent on their external environment. Which implies that people with dementia have fewer capacity to regulate the environmental factors, so the environment should fit these people their specific needs. This way, the well-being and functionality among people with dementia can be stimulated in a positive way. (G. Marquardt & P. Schmiege, 2009)

When people get older, there is a chance one starts to suffer from dementia. Dementia has a degradation of a light, severe and serious form (GGD Amsterdam) The goal is to also let people with a lighter form of dementia live longer in their homes and be self reliant. In the neighbourhood there might be the issue that elderly find their way home much harder. According to the GGD Amsterdam (2020) there are two points of attention when designing for people suffering from dementia, they are; moving and recognition.

Research shows, that staying active is essential for a lasting activation of the brain. Also for people suffering light dementia this is of high importance, because the dementiaproces can be slowed down. (dr. Pameijer, n.d.) Not only for people with light dementia, but also for everyone, is good orientation important when moving through space, recognition stimulates the feeling of security and ensures that one knows where to go. (GGD Amsterdam, 2020)



(Repeated walking route of person with mild dementia in 't Kampje, own image, 2020)

The recognition of a place can be enhanced by multiple design strategies, for example by adding landmarks. Adding landmarks increases the recognition of the public space, by adding a variety of equipment and distinctive elements, such as artworks. Keeping in mind to have the right balance, with too much variation the overview gets lost. (GGD Amsterdam, 2020)

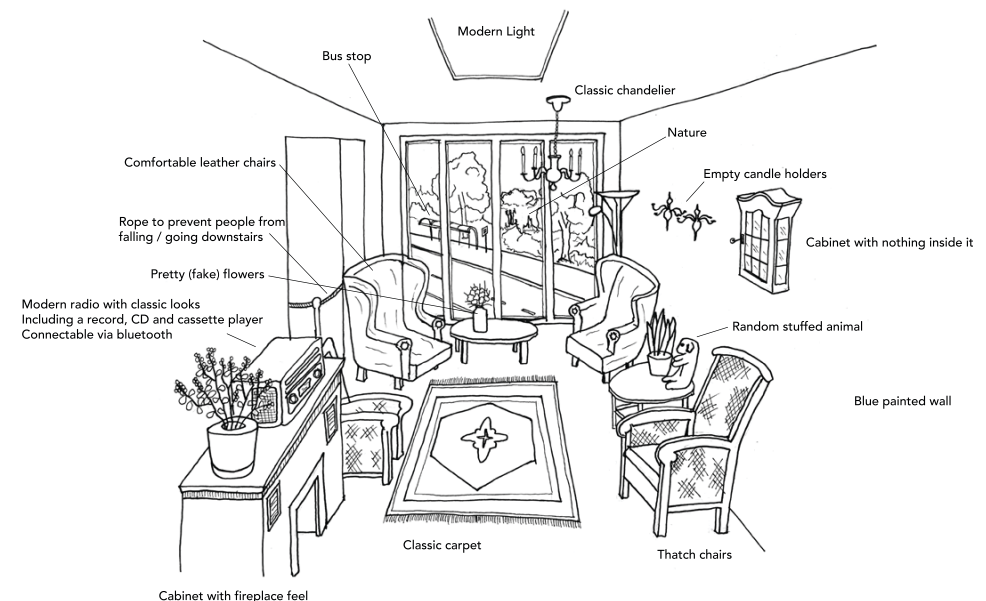
On top of that, research from Gesine Marquardt and Peter Schmiege about dementia-friendly architecture in 2009 also recommend design strategies for way-finding and orientation. They recommend a smaller number of residents per living area, to facilitate this. Also, they mention that a smaller housing unit may contribute positively on top of that. They found out that it is essential for people with moderate- to severe stages of dementia to have a clearly defined, simple, geometrical structures to orient themselves and succeed in way-finding. An example they give is; "Guiding elements, such as a straight wall running through the whole living area, can be supportive features."

Another important finding both the GGD Amsterdam and Marquardt and Schmiege made is that certain spatial situations and places should not be repeated, meaning there should be a variation in the architecture. This can be achieved by materials, form and colours. Also here, with too much variation, the overview might get lost.

At last there is a principle for memorable reference points which can support a resident's allocentric orientation strategy. These can be architectural elements such as a live-in kitchen, or fixtures, fittings, and furniture (object that have a biographic reference). Important is that they should be placed on a location where a direction changes, so that they are interpreted and remembered. (G. Marquardt & P. Schmiege, 2009) In 't Kampje this is also done in 't Trefpunt, a place where most residents meet and pass by each other. There is multiple memorable furniture placed which was recognisable for the residents. Many observed inhabitants were very positive about this place.



(Personal displays to find your own house and give identity in 't Kampje, own images, 2020)



(Recognisable furniture, own drawing, 2020)



## Extracted design guidelines



Promote movement



Places of recognition



Compact housing units



Clear geometric structures



Variation in architecture  
(Colour, material, forms)



Biographic references

## Examples

Clear geometric structures, variation in colour  
*Muralla Roja - Spain, by Ricardo Bofill, 1968*



Biographic and personal references and colour recognition in 't Kampje, 2020



Walkable space, points of recognition, variation in colour, material and forms.  
*(Marktplaats Epe, mobiliteitsplatform, 2020)*



## 5. Cognitive functioning

Self reliance



Self direction



### Meaning

"Cognition is a term referring to the mental processes involved in gaining knowledge and comprehension. These cognitive processes include thinking, knowing, remembering, judging, and problem-solving. These are higher-level functions of the brain and encompass language, imagination, perception, and planning." (K.Cherry, 2020)

### Observations

The day before I arrived, I was told a group of elderly was doing an activity that would improve cognitive functioning, making different kinds of words with the letters of one longer word. They all interacted and made different kinds of words. I stayed there for three days, so it is hard to determine the exact level of self-reliance of cognitive functioning, but from all the people I spoke, most showed no sign of a strong reduction of the cognitive functioning. A woman got a TIA and she sometimes had troubles to bring up certain events. In the departments we visited there was no sign that the cognitive function influenced the self-reliance in such way that the person could no longer take care for his/herself.

*"I need some contrast in the walls  
to see better "*

*- Resident from 't Kampje*



## Meaning for architecture

Cognitive functioning is much about the functioning of the brain. Architecture can trigger this unconsciously, like with certain colours and materials, colours can stimulate certain feelings, but also provide recognition for safety and wayfinding. For example the colour red for passion and expression, blue for trust and reliability, and green for freshness and growth. This section examines the used colours of 't Kampje and compare them to research about the perception of this.

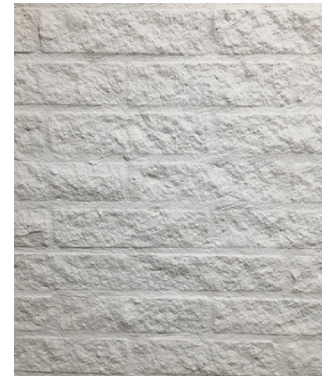
't Kampje is renovated in 2016, but many of the old materials remained, walls are mostly made of bricks and floors are hard concrete floors with a linoleum finish. The interior walls are mainly painted white or contain a textured wallpaper, certain common areas have a coloured painted wall.

## Perception of colour

Even though there is no scientific proof of it, there is anecdotal evidence that people are able to feel colour through the skin. "The absence of light may mean we are not able to see the actual colour, but we may still be able to feel its psychological effect through the skin. In the bedroom, whilst asleep the colour is still present, and therefore we may remain susceptible to its psychological affects." (Gimbel, 1994 & Wright, 1995)

Colour may appear to be perceived differently by anyone, nonetheless there are common patterns that each person reacts to. Either consciously or unconsciously, the vibrational energies of colours have an effect on our moods, behaviour, physical and mental being. In the book 'Colour Design: Theories and Applications' 11 colours are described with their positive and negative effects, their best usage for certain scenarios and rooms, and places to consider avoiding certain uses of colour.

The widely used colour white is apparent in almost any space of 't Kampje, according to the colour scheme, it represents hygiene, sterility, clarity, etc. Things one would expect in a care facility. But there are also common spaces with certain colours applied, such as the entry hall, an entire bright yellow wall, that immediately attracts the attention to the visitor or inhabitants. It occurred to myself too, when I first entered the building.



Walls - White painted bricks



Floors - Linoleum



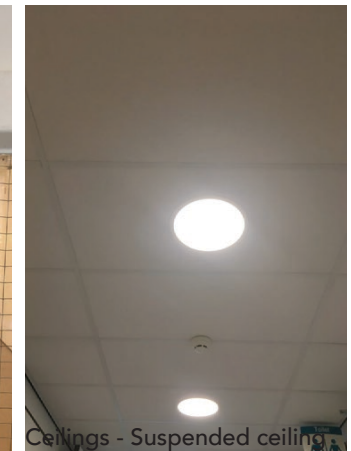
Walls - Textured wallpaper



Floors - Laminate flooring



Doors - White painted wood



Ceilings - Suspended ceiling

(Common appearing materials in 't Kampje, own images, 2020)



(Colours in common spaces of 't Kampje, own images, 2020)



*“Colour is the first thing that you perceive when you walk into a room, and it speaks louder than almost any object in a given space.” (R. Lennon, 1997)*

According to the colour scheme by Haller the colour yellow is best used in hallways, which are usually dark, yellow creates a sense of light and welcoming, something that is often desired in an entry hall. At the same time, it creates a place of recognition, the stairs are connected to this wall and especially for elderly with visual impairment of light dementia, this can be important for way-finding. The same has been done in The Central Manchester Hospitals, which comprise four different hospitals under one roof. Each section uses a different colour, to promote wayfinding. The royal eye hospital uses the colour yellow here to indicate one’s entry of the building. (J. Best, 2017)

There are multiple common living rooms in ‘t Kampje, which all had specific coloured walls, for example in one of the rooms, the colour orange was used. With its positive properties of stimulating warmth, fun, physical comfort, security, and so forth. According to the scheme it is best used in a kitchen-dining room, which encourages socialising and aids digestion. But in this context it can also be perceived well, most of the day, the room is not struck by direct daylight, which for some, makes the room feel less warm. The orange colour counteracts this with its perceivable warm properties. On the other hand there was a living room with a blue wall, which was facing on the south side of the building. Counteracting the warm temperatures with the cooling perception of the colour. So in terms of colour usage, ‘t Kampje used, according to the colour scheme of Haller, most of the positive effects of certain colours in the right kind of spaces. For both recognition, a warmth-cooling effect and the stimuli of specific moods.

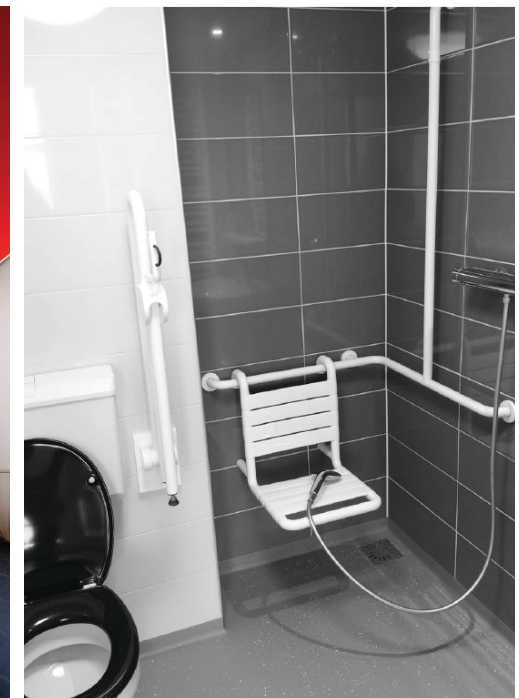
The use of contrasts in colours can provide the necessary support for people with limited vision and colour deficiency to safely navigate a building. (J. Best, 2017) In ‘t Kampje, rooms have a bathroom that provides contrasts between certain amenities, such as the toilet and the shower, showed on the image on the right side. There are certain critical surfaces where contrast is recommended, such as; floors to walls, walls to doors, and floors to doors. But also for things like fittings; door handles, light switches, door leaves, etc. This is to make sure that people with visual impairments are easily able to recognise the fitting and identify where a critical surface starts and ends, this greatly aids them in safe navigation within their surroundings. (J. Best, 2017)



*(Yellow to indicate the entry of the eye hospital, Manchester University NHS Foundation trust, 2020 )*

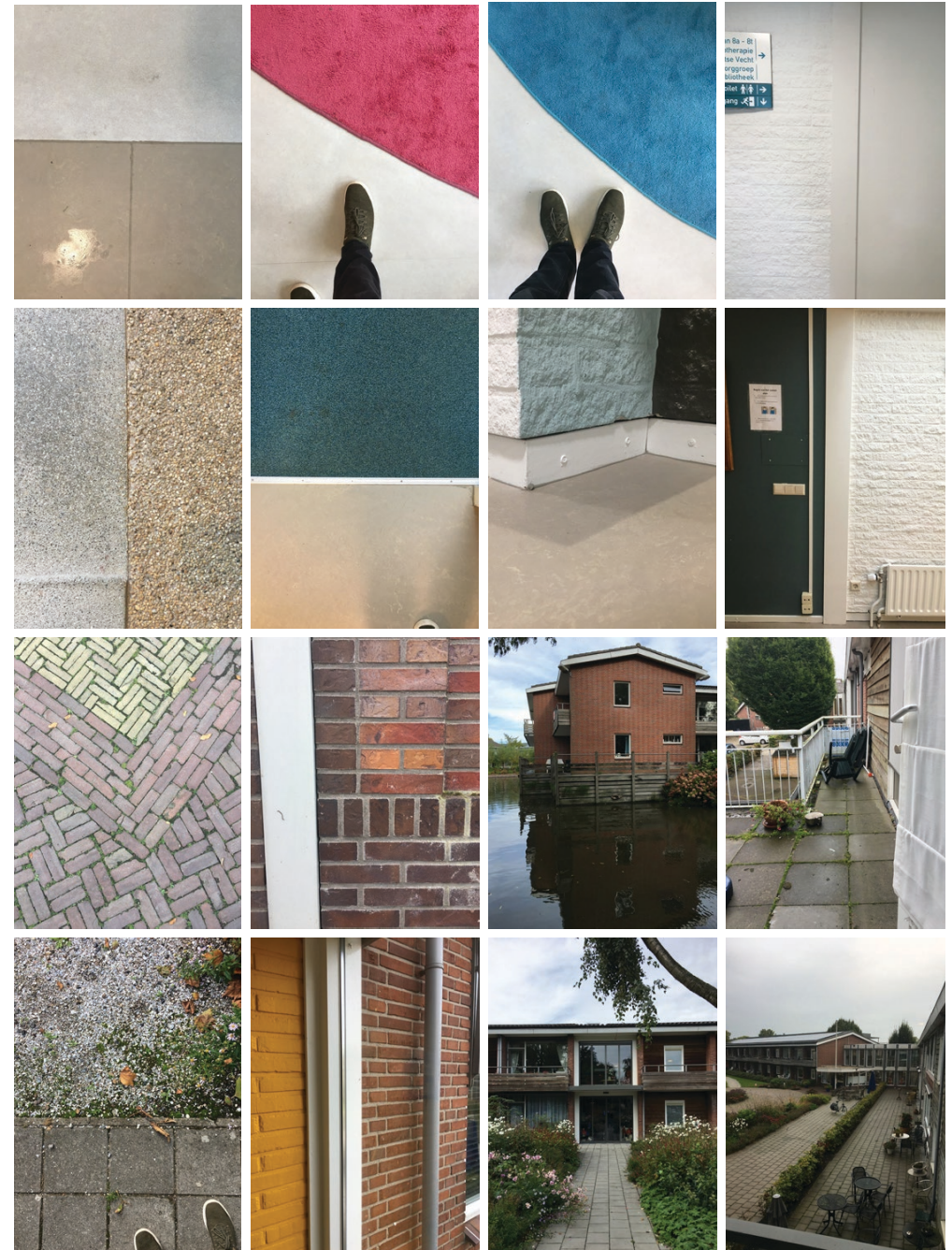


*(Black, white and red contrast to mark critical surfaces, homedit, 2020)*



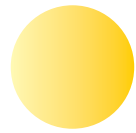
*(Contrast in fittings for the bathroom of ‘t Kampje, 2020)*

The decline of cognitive functioning is not always preventable, but by using specific colours and providing certain amenities like a library, the cognitive functioning can be stimulated. For example when elderly want to be focused and concentrated, a room that contains mainly dark blue colours can help to perceive this extra concentration level. But more importantly, for people to improve the self-reliance on a cognitive level, colours can provide solutions to create more safe environments and recognisable places. For example by using colour contrasts. The more safe and recognisable a place is, the easier it is for people to remain self-reliant in cognitive functioning.



(Colour & material transitions in 't Kampje, own images, 2020)





### Positive effects

- Happiness, optimism, self-confidence, self-esteem

### Negative effects

- Irritability, anxiety, warning
- Too much yellow can over-stimulate the nervous system

### Best usage

- Hallways - which are usually dark, yellow creates a sense of light and welcoming.
- Breakfast rooms - creating a sunny, happy way to start the day
- Brightens a dark space

### Consider avoiding

- Bedroom - over time, wake up irritable and annoyed
- Babies are very sensitive to colour frequencies, so avoid using cream which also contains yellow
- Spaces that already feel overheated or are south facing



- Light blue is serene and mentally calming. Aids in reducing stress and relieving tension, helpful to insomnia sufferers.
- Dark blue aids focus and concentration

- Depressed, withdrawn, cold, aloof

- Bedroom - slows the nervous system, producing a calming effect that prepares the body to relax and sleep
- Study - light blue for creative 'blue sky' thinking
- Dark blue for focus and concentration
- Bathrooms (turquoise) energising, mental awakening

- Kitchen and dining areas as blue can work as an appetite suppressant
- Spaces that already feel cold, or are north facing.



- Warmth, energy, stimulation, excitement, strength, physical courage.
- Red makes objects appear nearer than it is, therefore attracts our attention first

- Aggressive, demanding, dominant, defiant, impatient

- Bedroom - masculine passion (lust)
- Dining room - stimulates lively conversations
- Makes a room feel smaller, warms up a cold room

- Study, healing or meditation room, kitchen as there is already enough heat
- A room that already feels hot, or receives direct full sunlight.



- Warmth, fun, support, physical comfort, aids digestion, security, sensuality, passion, abundance

- Immaturity, deprivation, frustration, frivolity

- Kitchen, dining room - encourages socialising. Aids digestion
- Bedroom - soft peach and apricot tones

- Study, healing or meditation room.





### Positive effects

- Balance, equilibrium, harmony, tranquility, refreshing, rest, universal love, restorative, reassurance, environmental awareness, peace, connection to nature

### Negative effects

- Bland, envy, jealousy, boredom, stagnation, being the colour of mold and decay

### Best usage

- Health practitioners' waiting rooms to calm nervous or worried patients
- Cool down a room that receives a lot of heat from the sun

### Consider avoiding

- A room that requires high physical activity e.g. a gym
- 



- Luxury, quality, spiritual awareness, composure
- Combining the qualities of wisdom and love

- Introversion, decadence, suppression, inferiority
- Excessive use of purple can bring about too much introspection

- Bedroom, meditation or prayer room, encouraging deep contemplation

- Kitchen, dining room, study
- 

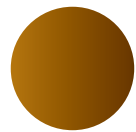


- Physically soothing, it becomes nurturing love, femininity - survival of the species, warmth, supportive, compassionate and caring

- Inhibition, emotional fragility, and neediness, instability, emasculation, physical weakness, physically draining

- Nursery, bedroom, therapy, infant
- Relaxes tension, soothing. Helps the person cope with grief or loneliness

- Study
- 



- Warmth, nature, earthiness, safety, reliability, seriousness, support

- Lack of humour, heaviness, lack of sophistication

- Where stability or grounding is needed

- Nursery, infant rooms (use softer, paler end of the brown spectrum)

*(Colour and its many moods, K.Haller, n.d.)*

### Positive effects

- Hygiene, sterility, clarity, purity, cleanliness, simplicity, sophistication, efficiency

### Negative effects

- Isolation, sterility, coldness, barriers, unfriendliness, elitism

### Best usage

- Kitchen, bathroom - feeling of hygiene, cleanliness

### Consider avoiding

- Avoid cold whites in spaces that already feel cold or are north facing

- Sophistication, glamour, respect, aspirational, security, emotional safety, gravitas, efficiency, substance

- Oppressive, cold, heavy, menacing, sinister, draining, intimidating

- Recommended only to be used by those where black is in their tonal colour family
- More supportive dark colours are dark brown, purple or blue

- A room that already feels cold, small or with little light as it will make the space feel smaller and possibly claustrophobic

- Neither black nor white, it is psychologically neutral

- Non-committal, lack of confidence, dampness, depression, hibernation, energy draining

- Works well as an accent

- Nurseries, infants and children's rooms or bedrooms. Any areas where creativity is needed

*(Colour and its many moods, K. Haller, n.d.)*

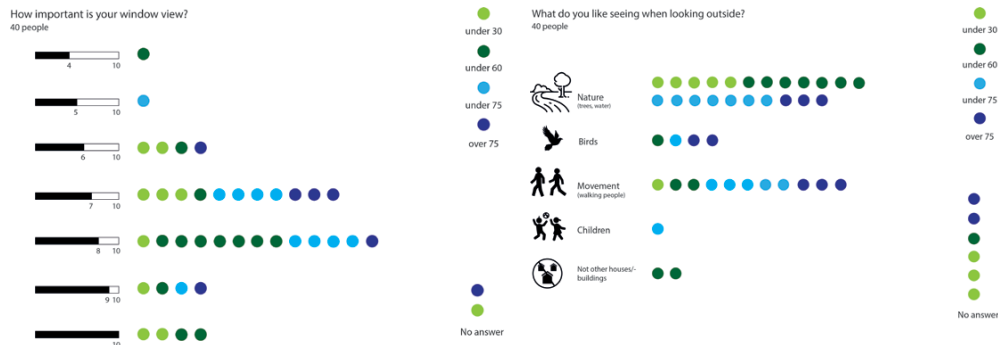
## Views

't Kampje in Loenen aan de Vecht itself is based in an urban environment, though when you look out the window, you don't get that feeling. The surroundings are diverse and filled with nature. The garden is a large area of the plot, but most of the interviewed people were very positive about it. The garden contains seating places, paths for walking around, children's playgrounds and various plants and flowers.

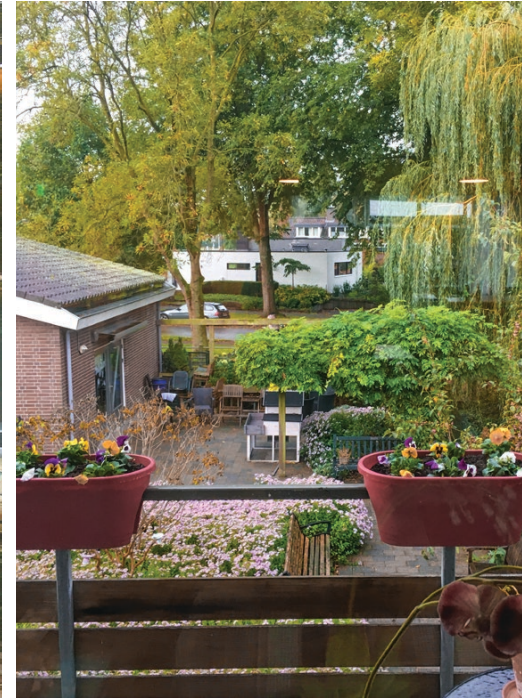
One question was why the people liked the outside view so much, and the inhabitants talked about the amount of greenery, but also more importantly, the movement that takes place. Especially people, the children's playground is experienced as very welcome as the elderly like to see them play. On top of that, there is a bus stop right in front of the building, one of the inhabitants spoke about counting all the people on the bus, and she really liked doing that.

The survey we conducted in Tanthof was also about the importance of the view. 38 of them rated their view on a scale from zero to ten, 84% answered 7 or more, which indicates the importance of the view for the people who live there. The followup question was about what they like seeing when looking outside. A great portion of the answers was in the topic of nature, for example; trees, flowers, water, etc. But also here, movement, in the means of people walking.

Both the observations in 't Kampje and the survey in Tanthof show an importance for the view, especially on nature, and the movement in this area.



(Results from questionnaire in Delft Tanthof, 2020)



(Various views from 't Kampje, own images, 2020)



## Extracted design guidelines



Use specific colours in certain areas



Stimulate cognition  
(like through a library)



Have a view on movement  
(People, traffic, animals)



Have a view on nature  
(Preferable healing gardens)

## Examples

(View on movements, own image, 2020)



(Views on nature, own image, 2020)

(Colours for wayfinding in 't Kampje, own image, 2020)



(Library integrated in building of 't Kampje, 't Kampje plus, 2020)

## 6. Housekeeping

Self reliance



Self direction



### Observations

Every couple days, the rooms of people are cleaned, only the people who rent a home there do it themselves. One woman said; "Because the room is so compact now, I barely have to clean" which was the case for many residents. Many used to live in larger houses before they got here and used to do the housekeeping themselves. The less mobile people had the care staff take over the task of housekeeping, whereas the more mobile people did it themselves. Some residents shared a washing machine to do the laundry themselves, because there was no space in their own apartments. It scores 3 stars because most can perform their laundry and clean their houses, and when it is done by others, it is their choice. The self direction is limited, because they don't organize it themselves and they don't direct how the housekeeping is done.

*"I only do my laundry once a week, why would I need my own washing machine for that?"*

*- Resident from 't Kampje*

*"I'm glad I have such compact apartment I don't have to clean as much!"*

*- Resident from 't Kampje*



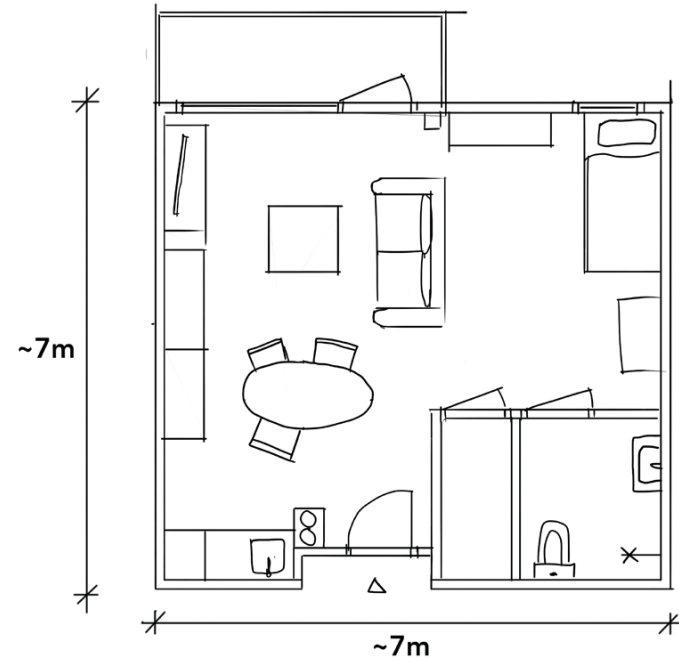


## Meaning for architecture

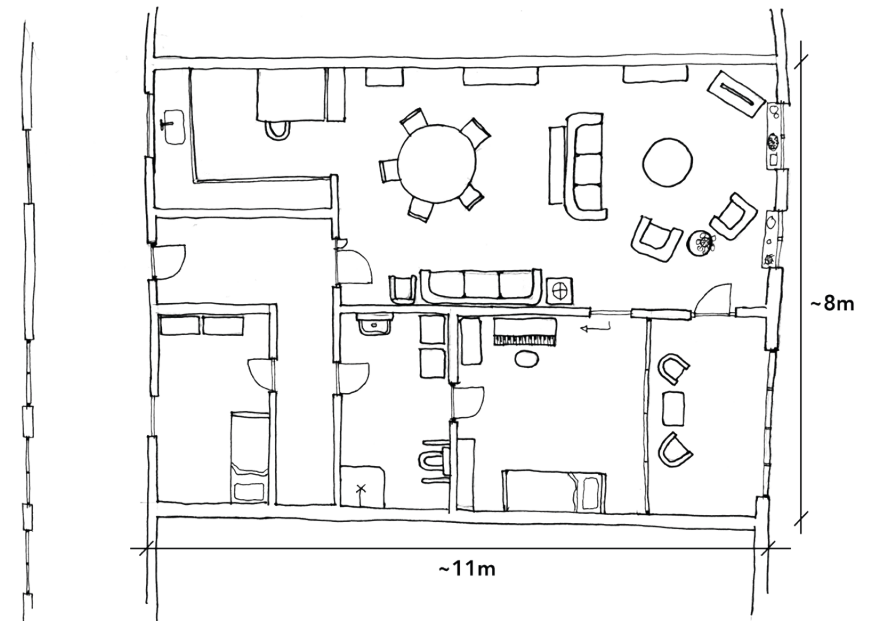
It was noticeable that in 't Kampje many people were self-reliant on their laundry, some others that were less mobile let it be done by the caregivers. The interviewed people were very positive about using a shared washing machine, they had not that much laundry each week and by sharing it they had much lower costs. It could also be a place for interaction, a laundry room, where people have small talk and interact with each other. To keep the housekeeping self-reliant for the elderly, it is important for them that the dwelling is not too large.

According to the description of Vilans (2013), one can be called fully self-reliant in the domain of housekeeping when one can do this completely on one's own and in case there is somebody else that does it, it is their own choice. When someone is not able to do this, and there is a large backlog which makes the dwelling polluted, that person is not self-reliant. This means, that even for elderly who are less mobile, it is still possible for them to stay self-reliant in the domain of housekeeping, it would be a matter of finding the person who can help to keep the house clean.

In 't Kampje, most of the carehomes are about 7 by 7 meters, making the floorplan around 49 m<sup>2</sup>. A compact house has not a given amount of square meters, but my personal definition would be that it has all the provided amenities such as a kitchen, place for a bed, living room and bathroom within around 50 to 70m<sup>2</sup>. So the care homes in 't Kampje could be called compact homes. Most interviewed residents were positive about the amount of space in the room. One lady said; "I'm glad I have such compact apartment, I don't have to clean as much". On the other side, there were sheltered houses of about 8 by 11 meters, making it around 88m<sup>2</sup>, the person living here had many rooms, but she also complained about the amount of walking she had to do in the house, as she was not so mobile anymore. Cleaning was mostly done for her, so she did not have to worry as much about it. But certain rooms were even too big for her to be comfortable. She said the bathroom was so large, that when using the shower, most of the time she was cold.



(Floorplan carehome in 't Kampje, own drawing, 2020)



(Floorplan sheltered housing in 't Kampje, own drawing, 2020)



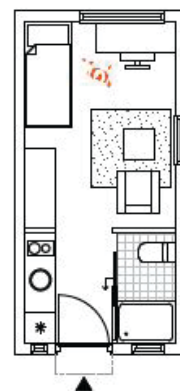
To make it easier and accessible for elderly or the one that helps in the housekeeping, it is essential to have a compact dwelling. Smaller surface area, means less area to clean, making it less time and energy consuming.

An example for this is found in the floorplans of the housing concept of BloemkoolBurenBond in Almere. One variant is a studio, which is the smallest, but is less accessible for disabled people. Of course, not everybody wishes such a small dwelling, so it would only be an option for the people who wish for such dwelling (perhaps because of a cheap price) and who are still mobile enough.

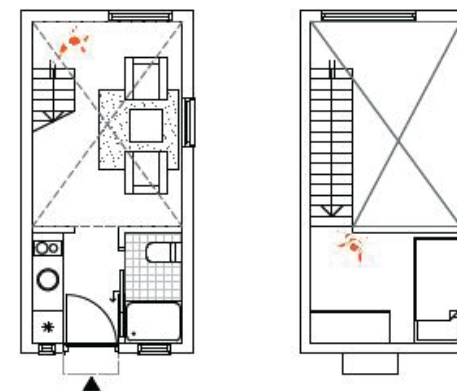
The second variant studio offers an extra floor, for people who would like to have more living space, but also here, one shouldn't have mobility issues, because of the staircase and less accessible hallway.

The last variant would be the most suitable for the target group. The dwellings are about 6 by 6 meters and provide a single floor living situation of around 36 m<sup>2</sup>. The bedroom, bathroom and living room / kitchen are closely connected but still separated, something that was very much wished by residents in 't Kampje. On top of that, it provides enough space for people in a wheelchair, and the doors on the interior are sliding doors, making it easily accessible. An option could even be to have a place for a mobility scooter in the home, instead of a closet.

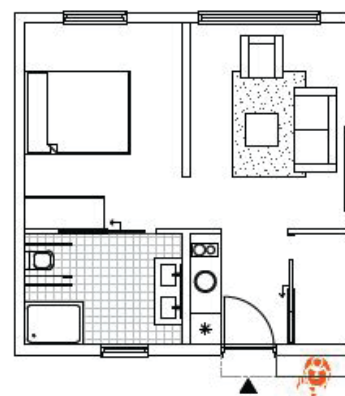
With the use of the right materials, that are easily cleanable, these types of homes provide a good base-layer for compact homes that are suitable for different types of and elderly and promote the self-reliance in the domain of housekeeping.



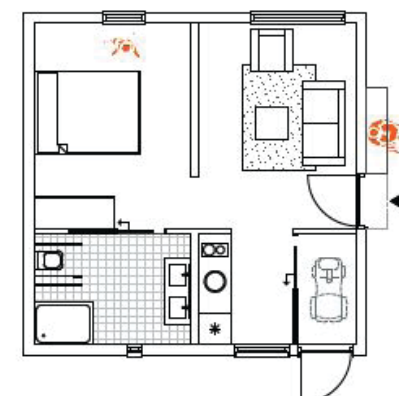
woonstudio



woonstudio - 2laags



senioren- of mindervalide woning



(Compact dwelling types for mobile and less mobile people, Bureau SLA, n.d.)

## Extracted design guidelines



Compact housing  
(up to 50 m<sup>2</sup>)



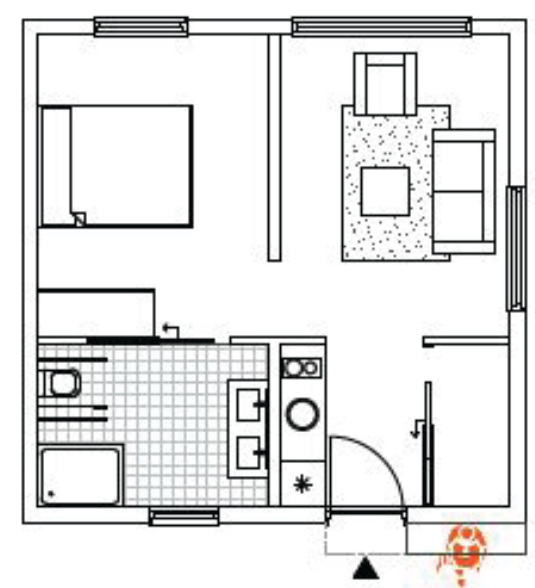
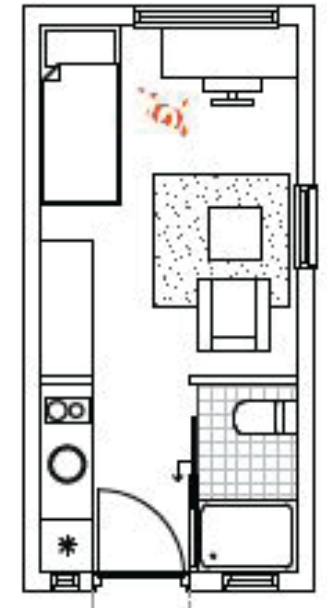
Share appliances  
(like a shared laundry)



Easy cleanable materials in often used spaces

## Examples

(Easy cleanable materials, yonohomedesign.com, 2020)



(Shared laundry room, bruchalaupka, n.d.)

(Compact dwelling types, Bureau SLA, n.d.)

## 7. General daily

Self reliance



Self direction



### Meaning

General daily (in dutch ADL; Algemene dagelijkse levensverrichtingen) is about the maintenance of personal security and well-being. These actions could be for example; dressing up, feeding yourself, using the bathroom, getting groceries, do shopping, using appliances and products, etc.

### Observations

Every day there is roughly the same schedule, they wake up, dress themselves and eat breakfast in their rooms. Around 10 o'clock some of them meet in the common living room to drink a cup of coffee together. After that, they go to their rooms and do something for themselves. Sometimes there is a scheduled activity and a handful joins that. At around 12 o'clock the lunch is being prepared for the ones that applied for that option. Few really have the struggle to eat on their own, but they mainly join because of the interaction that takes place, people get out of their rooms and talk to each other. Even though there are open kitchen, they never use it. If you ask why, there is no feeling for it, and some didn't even know it was there for them. The people are very limiting in arranging these kinds of activities for themselves and others, what was needed is something or someone that would fire the initiative to do something together, like baking together.

*"I don't enjoy the food they make every day, it is often cold!"*

*- Resident from 't Kampje*





## Meaning for architecture

It can be said that there is a search for interaction between the residents, but they don't have the capacity or needs to arrange it themselves. There needs to be a reason for the people to meet each other. For some this is in the morning at the coffee break meet-up, to speak about their favourite topics. For others it is hard to define, their favourite hobbies were often not possible in the building, like painting or playing billiards. Places where these kinds of activities take place already encourages the interaction between the residents and they could even become friends that mean something for each other. Maybe with the help of technology, people can arrange to do things together, maybe in an app where people can join certain activities, like cooking something together in a common kitchen. As of now, there was limited to no help among elderly themselves and the care staff would provide any help that was asked for. In the building itself there was limited use of home automation and technology, when I asked why not, the answers were diverse but mainly because they did not feel like it, or because they did not know how to use it. I saw this more often with today's older people above the age of 70. The architecture should respond to this to make it easy for elderly to get familiar with home automation and technology, but also to relieve the care staff, by for example; informal care, or care among elderly themselves and neighbours. You could say care homes are a form of co-living, but not used effectively, as there is limited to no contact between the residents.

## Home automation and technology for elderly

Technology can be divided into domotica (home automation) and ICT (information and communication technology.) domotica is described as; "electronic home automation systems, often integrated with each other, that can be operated remotely. Domotics can be used in the home and focuses on safety, communication and / or increasing comfort and convenience. Examples of home automation are: a stair lift, personal alarm, night path lighting, automatic curtain control and lighting, sensors (inactivity measurement and fall detection) and camera surveillance." (Nivel, Peeters et.al., 2013)

Whereas the ICT is described as; "E-Health is a collective name for various ICT applications in healthcare, such as the e-consultation, electronic access to your own medical file. Telemedicine / telemonitoring, remote monitoring and guidance of patients with specific conditions (for example heart failure or diabetes) also falls under ICT. Remote care (screen care), for example through video communication (video calling) or camera systems between a client and employee of a home care organization is an ICT application" (Nivel, Peeters et.al., 2013)

Many (future) elderly expect home automation to make sure they can live longer independently at home, live life easier and make them feel safer at home. Also, the use of the systems should be easy to learn and used, luckily most (future) elderly are already trusted with domotica to make it more accessible. (Nivel, 2013)

### When I need more care in the future, I expect home automation to

	(Totally) agree %
make sure I can live longer independently at home	71
make sure I can live life easier	69
make sure I feel safer at home	68
be easily combined with the general daily	63
be easy to be learned	62
be easy to be used	54
be reliable	46
be working properly	43
be something my family and friends will use	42

(Home automation expectations, NIVEL Consumentenpanel Gezondheidszorg, 2013)

One of the main reasons elderly have to move to a care facility is the diminishing of physical, cognitive and mental functioning but also the social network, technology could play a role to prevent the causes and the consequences of these factors. (Peek, 2015) Several people were asked by Sebastiaan Peek and colleagues what they think technology can contribute to make elderly live longer at home. The results on the right image, show many different types of technology that according to the involved could help in self-reliant living. There is still few scientific evidence for the effectiveness of such technology; it is not sure whether technology will actually improve or extend independent living, the same goes for the cost-effectiveness. (Peek, 2015) Though, it does not mean that technology will not deliver what is to be expected.

There are several factors that are of influence for the use of technology for self-reliant living elderly. At first, there is the need to use the technology, this could be because there are certain causes that become more difficult when you become older, such as; doing activities, being and remaining healthy, or to fulfill certain needs. Elderly could use the help of people, existing technology, and new technology. Though the use of technology also has to do with the attitude and thoughts of it, such as the necessity, interest, the willingness to invest, but also the properties, consequences and their own skills. (Peek et al., 2015) The external influences could be the people around the elderly, such as family, friends or other elderly, they could provide advice, support and the usage of technology. Organisations could be a stimuli or a barrier, like shops, 'Thuiszorg' organisations or insurance companies / the government. At last the physical environment could be a factor for the use of technology, like whether the technology suits and fits the house, or if the technology fits the streets, buildings and spaces in the surroundings of the dwelling. (Peek et al., 2015)

All of this indicates that there should be enough external stimuli for elderly to use technology, like through family or informal caregivers. But also to make the environment suitable and fitting for elderly to effectively use technology to improve and extend self-reliant living.

<b>Technologie die een bijdrage zou kunnen leveren aan zelfstandig thuis wonen, volgens diverse betrokkenen:</b>						
<b>Domeinen</b>	<b>Technologie</b>	<b>O</b>	<b>Z</b>	<b>M</b>	<b>T</b>	<b>B</b>
<b>Gezondheid</b>	Monitoring van gezondheid	X	X	X	X	X
	Alarmering	X	X	X	-	X
	Stimulering van fysieke activiteit	X	-	-	X	X
	Valdetectie	-	X	X	-	X
	Slimme medicatie dispensers	-	-	X	X	X
	Dwaaldetectie	-	-	X	X	-
	Online vragenlijsten	X	-	-	-	X
Monitoring van leefstijl	-	-	-	X	-	
<b>Dagelijkse activiteiten</b>	Technologische hulpmiddelen	X	X	X	X	X
	Domotica	X	X	X	X	X
	Huishoudelijke apparatuur	X	X	X	X	X
	Robots die helpen bij dagelijkse taken	X	-	X	X	X
	Elektronische agenda(s)	X	-	-	-	X
	Woningaanpassingen	-	X	-	X	-
	Tilliften	-	-	-	X	-
<b>Communicatie</b>	Computers	X	X	X	X	X
	Beeldbellen	X	X	X	X	X
	Apps/diensten om samen te zorgen	X	-	X	X	X
	Elektronisch gezondheidsdossier	X	-	X	-	-
	Social media	-	-	X	-	X
	Telefoons	X	-	X	-	-
<b>Tijdverdrif</b>	Televisie en radio	X	-	X	-	X
	E-readers	X	-	-	X	-
	Spelletjes	-	-	-	-	X
<b>Mobiliteit</b>	Vervoermiddelen	X	-	X	X	-
	GPS navigatie	-	-	-	X	-

*(Technology that could deliver a contribution to self-reliant living according to different involved people, Peek et al., 2015)*

**O - Ouderen**  
(Elderly)  
**Z - Zorgprofessionals**  
(Careprofessionals)  
**M - Zorg managers**  
(Care direction)  
**T - Technici**  
(Technicians)  
**B - Beleidsmakers**  
(Policymakers)

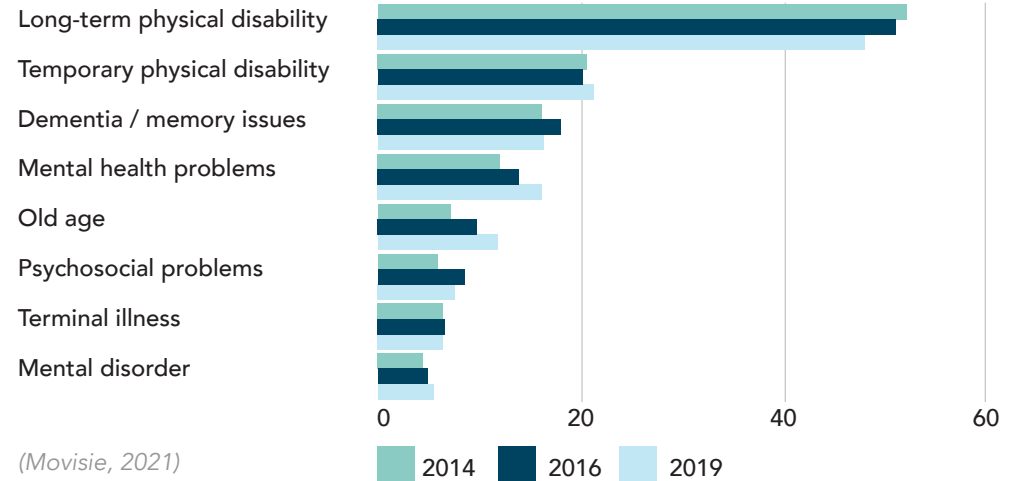
## Informal care

"Informal care is all help to a person in need of help by someone from their immediate social circle. Less intensive assistance, assistance to housemates and assistance to residents of the institution have also been included. Informal care is help that goes beyond the so-called 'usual help'." (SCP, 2021). Given the specific definition, there is a difference in the measurement of informal caregivers. (Nationaal Kompas Volksgezondheid, 2013)

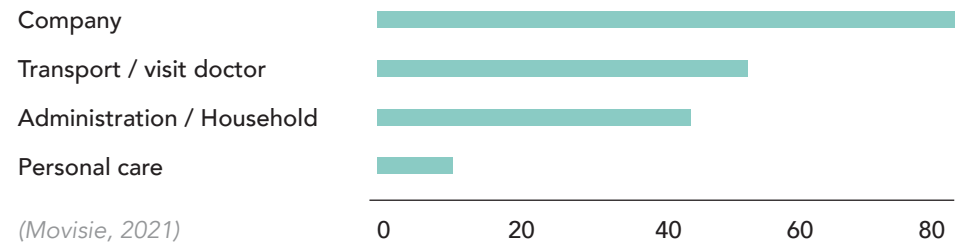
According to knowledge institute Movisie (2021), in the Netherlands, 35% of 16-plussers provide informal care to acquaintances, which comes to around 5 million people. On average, these informal caregivers provide 7,4 hours per week and 5,4 years of care. Of these people, 9 percent indicates to be seriously burdened. (Movisie, 2021)

Caregivers provide the most care for long-term physical disabilities, like when somebody has mobility issues. Preferably any kind of care is avoided, architecture can provide solutions to make it easier for people with long-term physical disabilities. More information on this topic will be provided in chapter 9 - Mobility. Next up we see there is a large number of informal caregivers who come by for company (sometimes in combination with administration / household activities) This comes hand in hand with the issue of increased loneliness among elderly. The architecture should provide places of interaction among neighbours and other residents nearby to create a possible bonding between people and counteract loneliness, more on this topic will be provided in chapter 8 - Social network.

## For what do people provide care?



## What kind of care is provided? (2019)

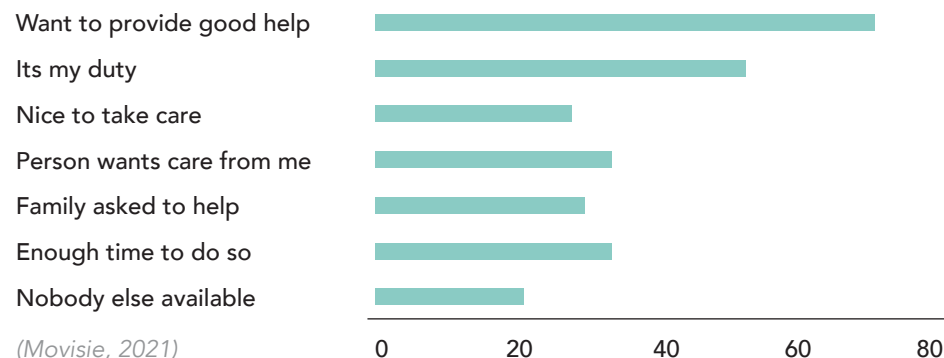




The reason why people, especially family members, provide informal care is because they want to make sure the person who is in need of help receives good care, but also because they feel it is their duty to do so. (Movisie, 2021) Other people, such as friends or neighbours provide informal care because they have a good bond with the care wishing person which is why they more eager to provide help. (Nivel, 2013) To make it possible for neighbours to provide care, it is essential that there is a good bond. Therefore it is necessary to create places where bounding is possible, such as a common room, public spaces etc. (see chapter social network)

When looking at the answers for from whom (future) elderly want care and support, it is clear that most of the answers were from professionals, household support is accepted more form others than personal care and nursing, only 1% would want nursing from other family members and neighbours and 2% of friends. (Nivel Consumentenpanel Gezondheidszorg, 2013) This is in contradiction to the answers given in the survey of Tanthof, where 19 out of 46 would accept care from nearby living such as friends, neighbours or family. Still more than half of all participants answered to preferably receive professional care. For a design this is an important aspect to make people want to live there for a longer time, professional care is highly wished to make people live longer in their homes. This could be arranged by for example creating a physiotherapist, a general practitioner or even a 'thuiszorg' group building nearby.

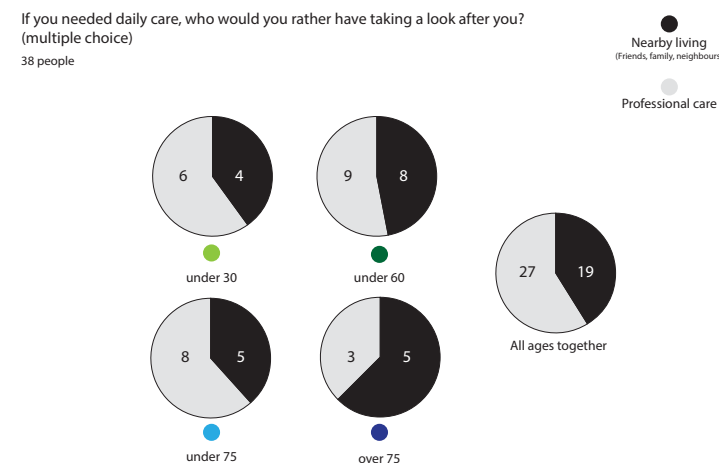
### Why people provide informal care (2019)



### From whom do (future) elderly want care and support? (n=1014)

Caregiver	Household care %	Personal care %	Nursing %
Partner	53	50	34
Child(ren)	33	19	13
Other family members	6	2	1
Neighbours	11	2	1
Friends	16	5	2
Volunteers	29	17	9
Professionals	68	83	92

\*Multiple choice (NIVEL Consumentenpanel Gezondheidszorg, 2013)



## Co living - Centraal Wonen Delft Tanthof

Living close to other people and interacting with them can counteract loneliness, a reoccurring observation among elderly. Having one to take a look after another may improve their general daily without the need of professional care, like to bring groceries, cook together, and so forth.

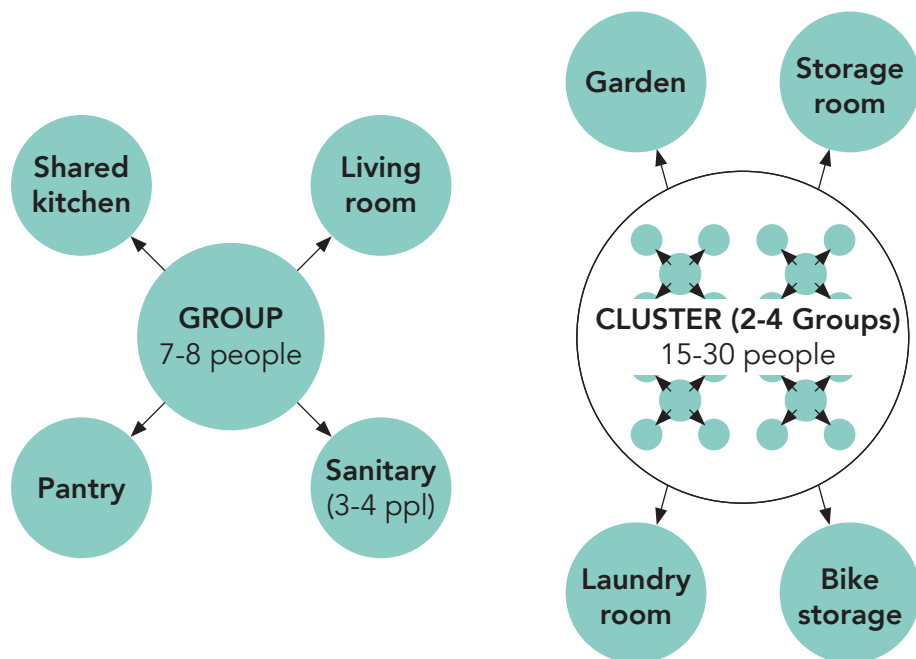
Centraal Wonen is a social co-living concept next to the project location in Delft Tanthof. The delivery was in 1981 and was designed for around 100 people in the social housing. (Krabbendam, 2020)

The project is based on community and interaction on different scales, on a neighbourhood scale, a cluster scales and group scale.

The groups consist of around 7-8 people, which are provided with a kitchen and a living room.

There are 4 clusters in the project, which are meant for 15 to 30 people, consisting of two, three or four groups. These clusters consist over a garden, a communal storage room, a laundry room and a communal bike storage.

For the more general, or project facilities there is a bar space, place for meetings and flex-working but also places for hobbies, such as dancing, yoga, or activities that needs tools. On top of that, there are also vegetable gardens for the people who are interested in using them. (Krabbendam,2020)





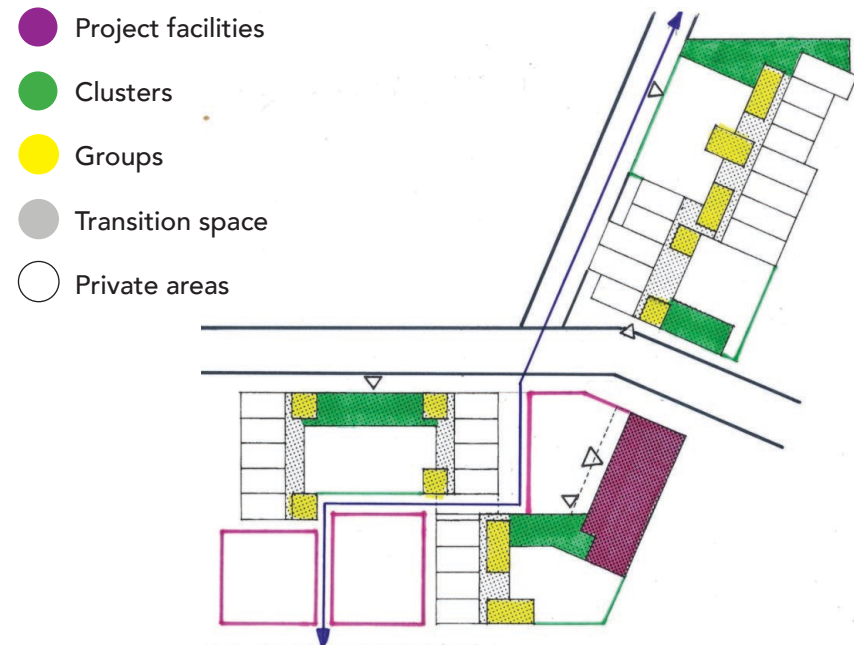
The inhabitants are able to move between groups using so called 'Tussendeuren', door which prevents groups from isolating, at the same time people can become a member of a different group, without necessarily moving. (Krabbendam, 2020)

The spaces are meant to be flexible, households are able to close of or even rent extra spaces when needed. This could make it possible for friends or family members to move in and potentially take care of the one in need for care, yet remain to live more independent (for example on a different floor.)

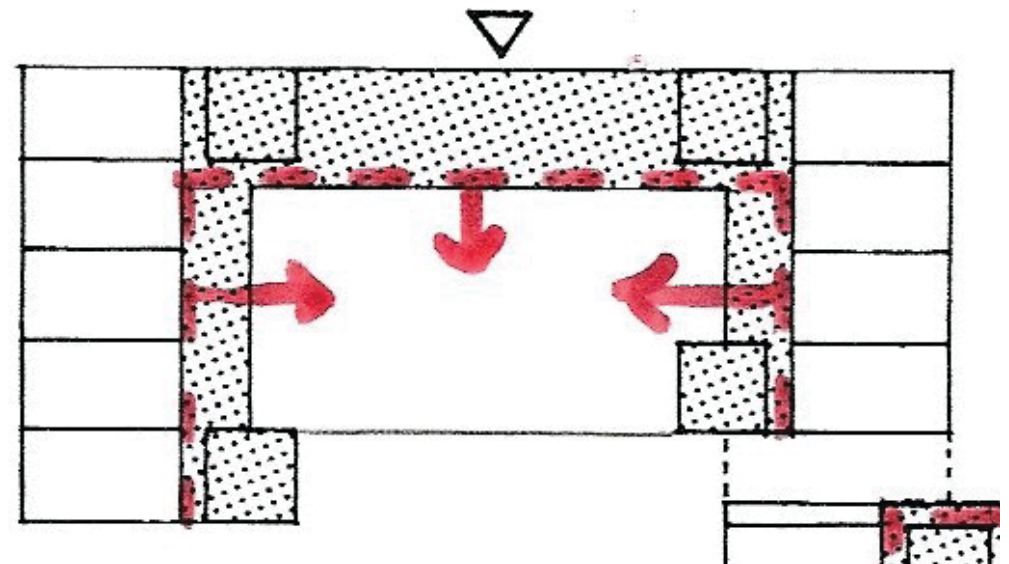
Project, or common facilities are situated in a way that the activities inside are shown to the outside, to make it attractive for others to take part. The same is done from the inside to the outside, the corridors are on the edge of the outside space, to create a visual connection, but also to encourage others to take part. When encountering someone else, the activity could stimulate a conversation and induce to join together.



(Common garden during an activity, dearchitect, 2020)



(Floorplan of Centrale Wonen Delft Tanthof, dearchitect, 2020)



(Circulation around common garden, dearchitect, 2020)



## Extracted design guidelines



**Co-living options**  
(Informal caregivers)



**Place near shops & other amenities**

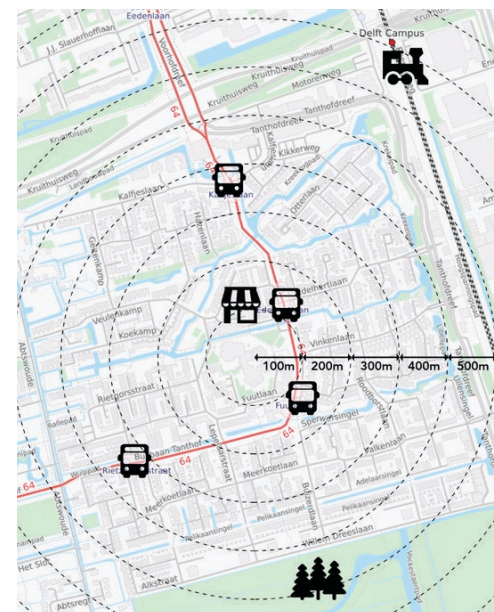


**Lifecycle proof dwellings**  
(Home automation)

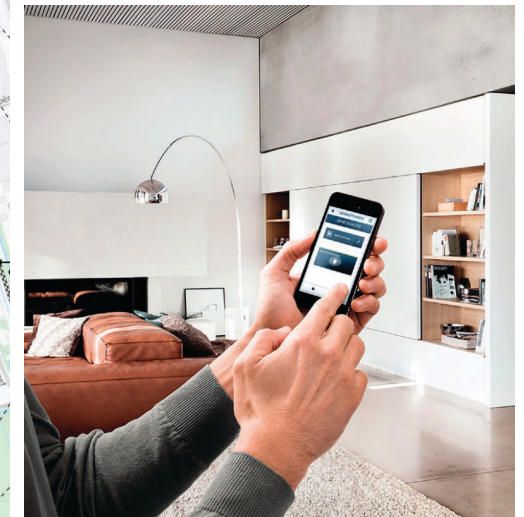
Robot vacuum cleaner for home automation, [sweetesthome.nl](http://sweetesthome.nl), 2020



Co-living option - Centraal Wonen Delft Tanthof, Philip Krabbendam, z.d.



Close proximity of amenities and public transport, own image, 2020



Home automation, ParkEntree, 2020



## 8. Social network

Self reliance



Self direction



### Observations

The social network of many elderly shrunk drastically, many of people's partners deceased and the amount of friends is also declining, either they can not visit them as easy anymore, or because they died. People become very reliant on their relatives and the care staff. What I think they forgot, is that they also have their neighbours, when we visited the place, we brought some elderly together and they even had to introduce themselves to each other, which was shocking, because they lived there for a longer time. During the coffee break around 10 o' clock the same people would meet up, but still, most would remain in their rooms. In the building itself, there were not many places for spontaneous interactions, their homes are private, balcony is private and the hallways are often used only to transit quickly between places, since there are no places to sit, or rest and have a small talk.

*"They used to be farmers, they have always lived on their own, they had no neighbours!"*

*- Resident from 't Kampje*



## Meaning for architecture

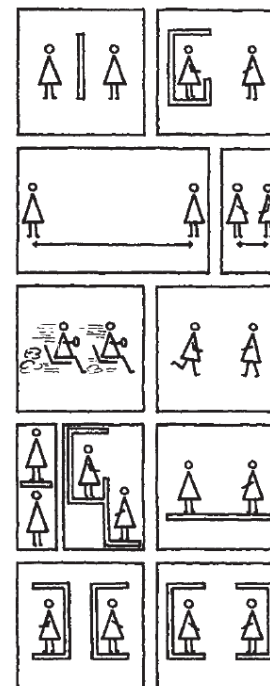
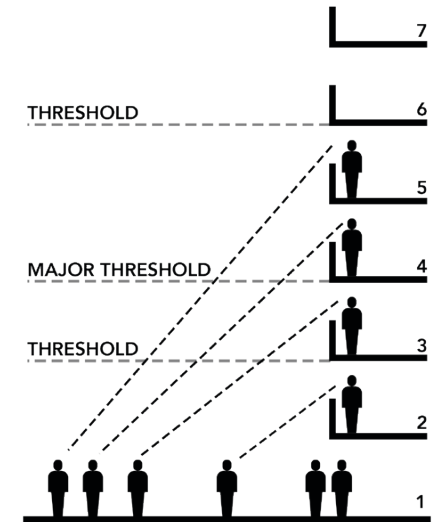
I believe nobody should be isolated and alone all the time, it will definitely influence the other life domains, like mental functioning and the general daily. People should be encouraged to get out of their rooms, the smaller things matter, which could lead to bigger things. Short interactions, like having to go out for your mail, or to do laundry in a shared room. For others that like to actively meet others there could be, similarly to 't Kampje, common living rooms and / or kitchens.

Remaining or becoming self-reliant in terms of the social network is about the amount and the quality of relations with friends, family and others that are not part of the household. An important notion in this domain is whether the person has sufficient people around them that can support or accompany them their growth and development. (GGD Amsterdam, 2017)

Design can stimulate the social network for elderly, Jan Gehl, a Danish architect and urban planner describes in his book *Life Between Buildings* several strategies for interacting between people on a private, semi-private and public scale. To stimulate the growth of a qualitative social network it is important to create opportunities for this network to grow. Small interactions can lead to bigger things, a growing friendship or helpfulness among each other.

## Visibility and contact

One of the ways to create an opportunity of meeting others is through visual connection. High rise buildings offer low sensory connection to people on the ground floor and higher floors. Having meaningful contact with ground level events is possible only from the first couple floors of a high rise structure. The third floor already decreases to have contact with the other, anything above the 5th floor is definitely out of touch with ground level events. (Gehl, 2011) So for the design it would be wise to not go beyond 4 floors in order to create connection between people.



### INHIBITING CONTACT

Visual and auditory

1. Walls
2. Long distances
3. High speeds
4. Multiple levels
5. Back-to-back orientation

### PROMOTING CONTACT

Visual and auditory

1. No walls
2. Short distances
3. Low speeds
4. One level
5. Face-to-face orientation

(Strategies to promote visual and auditory contact between people, J. Gehl, 2011)

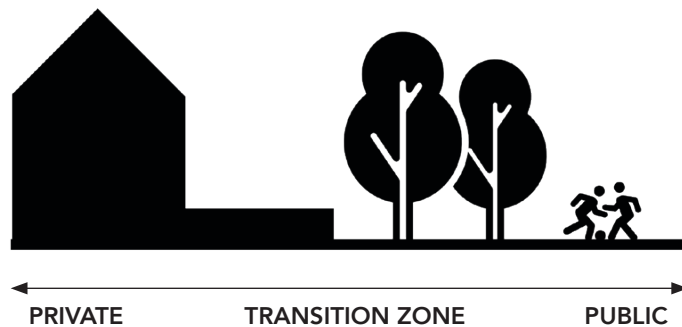


## Invite or repel

Having a visual connection to public space can be an element of invitation, in the same way a storefront is facing the street where people pass by. The connection to this public space can be made in various ways, but by making a smooth transition between the public and private, it makes it easier, physically and psychologically for residents and activities to move back and forth between these spaces. (Gehl, 2011)

An other possibility he speaks of, is for people to meet each other by having a destination, a place to go. Examples for this could be lookout points shops, community centres, a sports facility and so forth. Especially when things are being shared there are more opportunities created for interaction, like a shared laundry room.

A different strategie is to have something to do, Gehl gives the example of gardens and gardening together, which is a common theme now for all life domains. To add on that, there could be places for people to do something with the products of their gardens, such as a shared kitchen to prepare meals together.

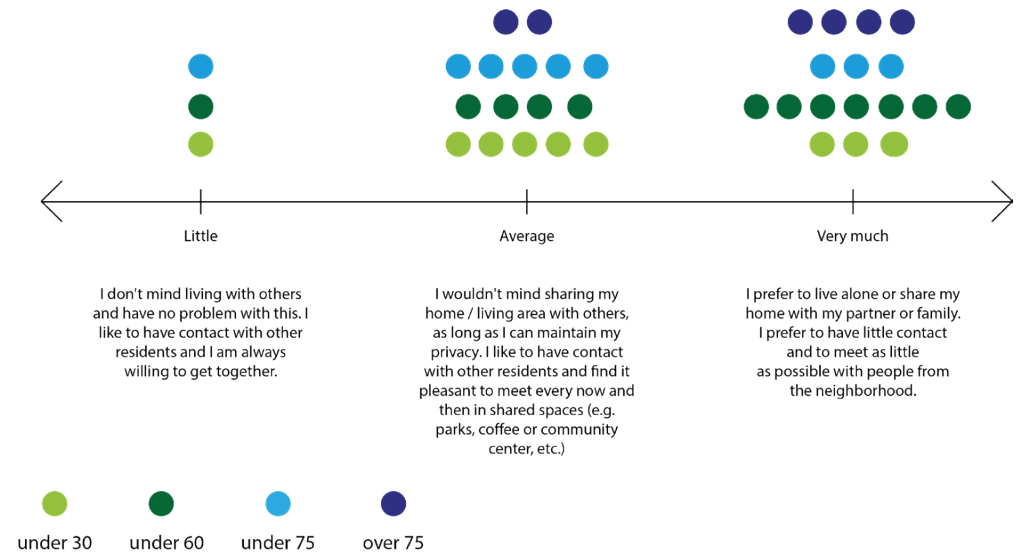


Smooth transition between private and public, own image, 2020

In relation to privacy, the conducted survey about the inhabitants of Tanthof had mixed opinions about how much privacy they valued. Most of the residents answered either average, or very much. Only 3 out of 36 did not mind to live with others.

About half of the people who filled in the questionnaire wouldn't mind to share a home / living space, as long as they can maintain their privacy. They do see a value in sharing spaces like parks a community center or cafe's.

Though, roughly the other half prefers to live alone and only share the home with their partner or family, meeting as little with others from the neighbourhood. To meet the wishes of the people in Tanthof it would be best suited to have both dwellings that are more private, but also ones that share more facilities.



Survey answers about the value of privacy, 2020

## Seating

Most elderly need places to rest every now and then, having no seating area makes it less inviting to go outside and have an opportunity for meeting. According to Gehl, a good rule of thumb is to have an opportunity for seating every 100 meters. The placement and orientation of these seatings is also important, it is about the advantages that the place has to offer such as the weather, view, the particular space or place. It is not ideal to have seating places randomly placed in the middle of a public space, because people tend to seek places where their backs are protected and are oriented to a good view. (Gehl, 2017) Especially when the orientation is towards a certain activity it can create a reason, or a possibility for strangers to talk to each other.



*Optimised seating areas for elderly, own image, 2020*

## Extracted design guidelines



Have visual connections



Places for seating  
(preferably with a view)



Having a place to go



Places for gardening

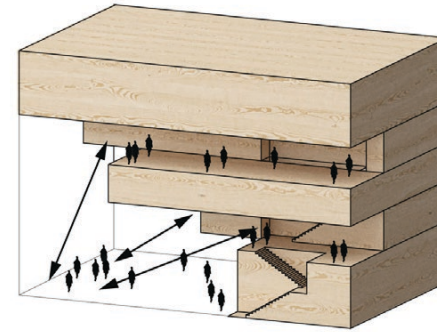


Smooth transition between private and public



Diverse aged target group  
(Co-living concept)

Visual connection, ADEPT, 2018



Having a place to go (like a park), own image



Seating places with a view, own image, 2020



Smooth transition between private and public, ParkEntree, n.d.



Places for gardening, Knarrenhof, n.d.



Co-living concept Centraal Wonen Delft, own image, 2020



## 9. Mobility

Self reliance



Self direction

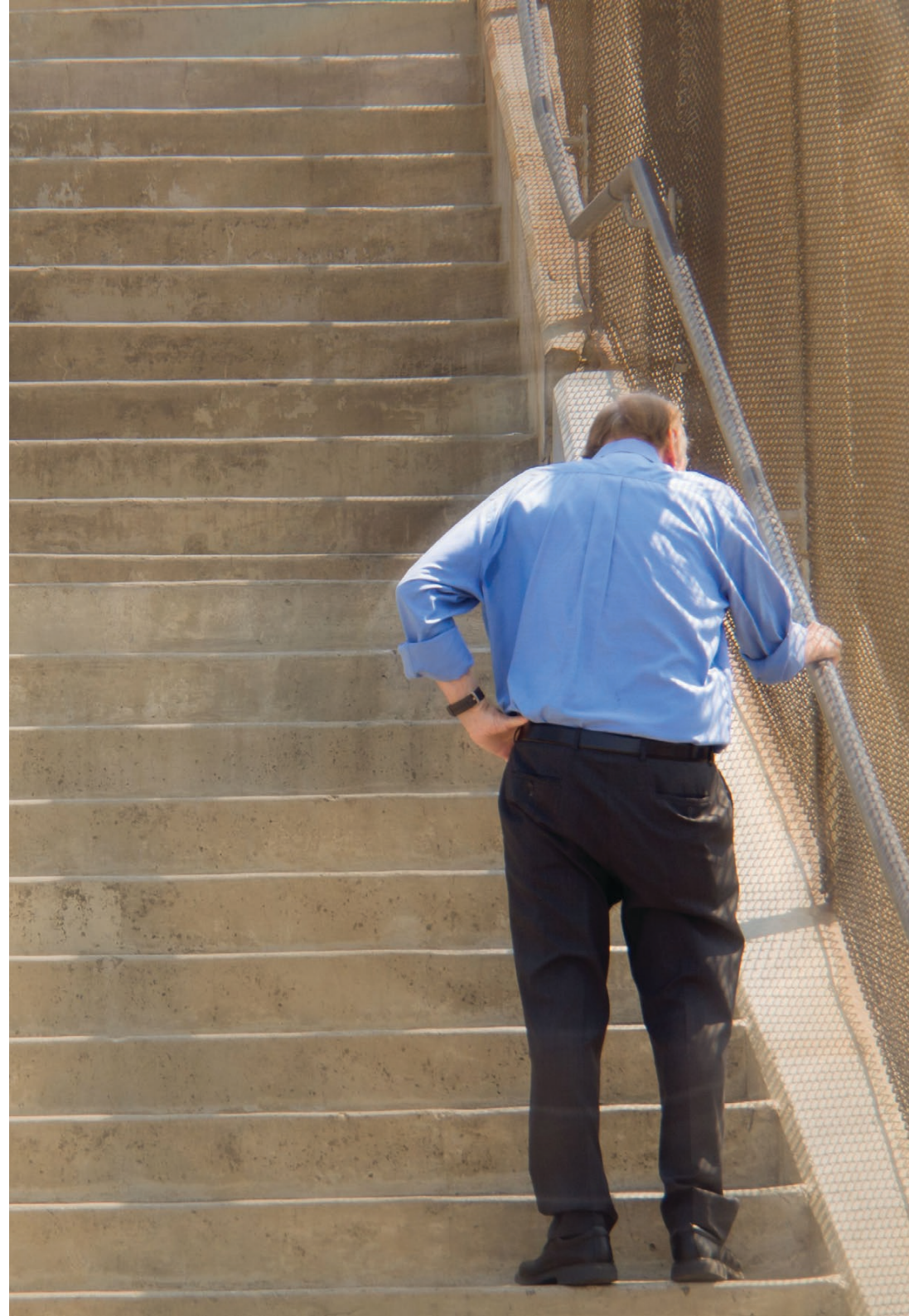


### Observations

The first day I arrived I was sitting in Studio Idee, a larger common room where some elderly met to join the scheduled activity to drink coffee together. What noticed me was that many people used a walker to get around. When everybody went back to their apartment it was a traffic jam of walkers. All going to the elevator to go upstairs. In all the three days I have been there, I saw nobody of the elderly using the stairs. With a walker, of course, it is difficult, but with without it could be possible. When I asked why the people used their walker, they said they need something to rely on, so they won't fall. Before the renovation of the building there used to be hand rails on the sides of the hallways, the residents really appreciated them. Now that they are gone, they need their walker to be reliant on walking safely. The railings were removed for aesthetic reasons, and to not make it feel like an institute. On the neighbourhood scale, people were not mobile at all, a reach of 200 meters, like the supermarket was already the maximum. More than that would require a motorized vehicle, luckily most facilities and shops were within this range, but most people still let their groceries be brought to their places.

*"I need my walker, because there are few places to hold on to!"*

*- Resident from 't Kampje*



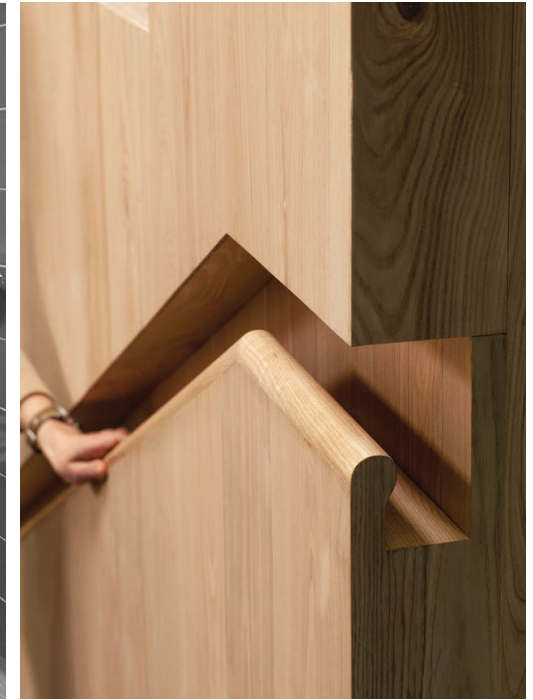


## Meaning for architecture

One can remain self-reliant with the use of certain tools, like a walker or a mobility scooter. Being self-reliant in the domain of mobility is about being able to safely move oneself in- or outdoors, for example to go to other people, activities or to do groceries. (Vilans, 2013)

"Growing old is part of human life. If we are lucky we may experience this period of life. Change is part of ageing. Architecture must reflect these changes." (Torrington, 2006) Less mobile people can still be self-reliant, for example people who live in a wheelchair; over the years many places are built wheelchair friendly and adjustments in the houses are also no problem anymore. Architecture can provide solutions for better mobility, but also to stay mobile for a longer time. The ones using the elevator all the time, and not moving around as much, will certainly not get stronger in their legs. In 't Kampje, apart from the main entrance, all stairs were hidden in the building and barely used. If they can be made more visible, and the elevators less visible, there is already an encouragement to be more active. According to the residents the hand rails are also very important to regain balance from time to time. Due to aesthetic reasons, during the renovation the handrails were removed. But if it can be designed in a subtle way, it will have great value for the users.

Being active can extend the healthy years to live of an elderly, lower the risk of obesity, and lower the cost of care. (Gemeente Amsterdam, 2017) This does not only mean being active through the gym, but also by natural movement like walking, and cycling. Having an environment that promotes this natural movement can make it more attractive for elderly to go out while at the same time increase the amount of movements per day. Having stairs in plain sight, rather than elevators, already create unconscious decisions for natural movement. Like in 'Het Rozet' in Arnhem, upon entry you automatically land on the bottom of the stairs. The elevators are more hidden in the center of the building.



Make stairs visible and easily accessible, Het Rozet Arnhem, n.d.



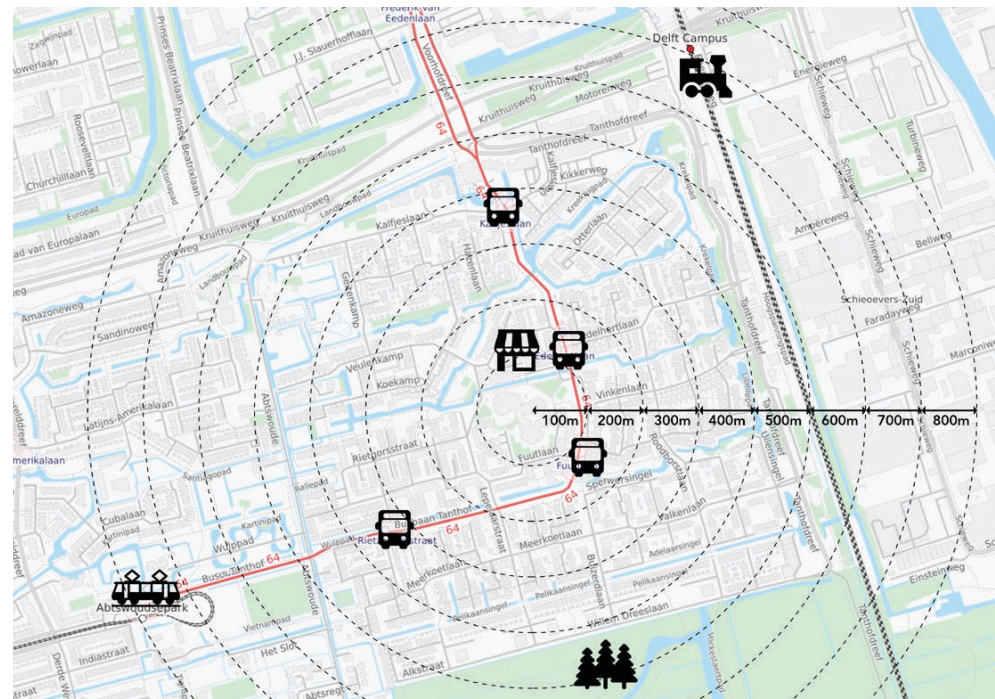
In the coming years, more people will remain to live at home with care and support needs. Part of this care can be given at home. With the use of domotica and other technical advancements will care at home be improved. Nonetheless will human contact be important for elderly, and care amenities will remain important for them. Especially the accessibility and close proximity play an important role. (Gemeente Amsterdam, 2017)

Most people living in 't Kampje were dependent on their walker, or mobility scooter to move around. For most, with a walker, the supermarket would be the furthest they would go, otherwise it would become too tiring and not appealing to go out. A round trip to the supermarket is about 400 meters, most of the amenities in Loenen aan de Vecht were in this range, making it more accessible for elderly to go out. For people that were using a mobility scooter, the only limit was the range of the mobility scooter itself. The more mobile people could walk further, but also used their car (if they had one) for further distances.

Most people were very positive about the close proximity of the public transport, at around 75 meters there is a bus stop that creates connection to further parts of the town and other cities. The municipality of Amsterdam has design strategies for public transport, one of them being the close proximity. Other strategies are that there is enough shelter, seating opportunities, lighting and comfort. Seating and leaning opportunities provide to the accessibility and social safety. (Gemeente Amsterdam, 2017)

In Delft Tanthof there are multiple options for public transport within 700 meter radius. The closest to the site is a bus stop at around 100 meters, providing access also to the tram and train line. The shopping area is in the same radius making it easier and more attractive to walk here.

Distance map Loenen aan de Vecht - 't Kampje, own image, 2020



Distance map Delft Tanthof Oost, own image, 2020



There exists a risk that people with a disability develop a negative self-image as a result of their disability. A manageable environment could contribute to the mediation of a negative self-image. (C. Nord, 2008) This indicates the need for an inclusive environment, to design not only for the mobile, but also people that are disabled or have mobility issues.

The existing situation around the site in Delft Tanthof is both accessible as not accessible, as also shown in the site analysis. There are many obstacles and obstructions that limit easy accessibility for the less mobile and disabled people.

For example, the pavement is untended by the roots of the large trees that grow in the area. To create a safe environment for elderly, it is important that the paving is smooth to walk on without tripping or slipping hazards. Pedestrian traffic is quite sensitive to pavement and surface conditions. Cobblestones, sand, gravel and uneven ground surfaces are mostly unsuitable. (J. Gehl, 2011) On the other hand, the neighbourhood is very walkable, the streets are meant for low speed traffic so that natural movement is encouraged.

A large number of surveys show that an acceptable walking distance for people in ordinary daily situation is around 400 to 500 meters. For children, old people, and disabled people, this number is often considerably less. (J. Gehl, 2011) Most of the shops and amenities are within this range, at 100 meters, making it easier both physically and physiologically for elderly to go out and do own shopping.

Though, when there is no shopping facilities nearby, it is essential to have a good connection through public transport, with bus, tram or train stops nearby.



*Untended pavements in Delft Tanthof Oost, own images, 2020*



*Obstructions in Delft Tanthof Oost, own images, 2020*



*Obstructions in Delft Tanthof Oost, own image, 2020*



## Extracted design guidelines



Promote natural movement



Places for gardening



Easy access to public transport & other amenities



No, or few cars in the neighbourhood



Life-cycle proof homes



*Close proximity of shops for elderly, own image, 2020*



*Walkable - slow traffic streets, own image, 2020*



## 10. Financial situation

Self reliance



Self direction



### Observations

The financial situation of the people we saw was hard to observe, in the context of privacy, we did not specifically ask if there are financial issues and if they were very prosperous. It was also unknown if they did their own financial duties or if somebody else did it for them. In general, Loenen aan de Vecht has a lot of rich inhabitants, but at the same time also many poorer, the difference is big.

*"I used to live in a big house with a lot of stuff, now I only have the essential things and I'm very happy with it!"*

*- Resident from 't Kampje*





## Meaning for architecture

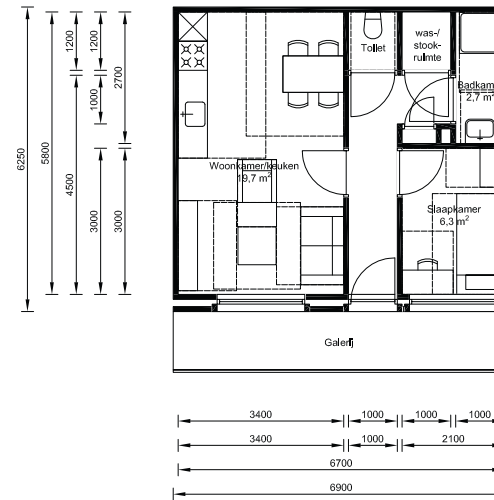
One can be called fully self-reliant in the domain of financial situation when there is enough income to provide a person with their basic needs, such as buying food, clothes, paying rent or mortgage, paying for water and electricity, pay for care and insurance and to pay of eventual debts. The income should be acquired as independently as possible, and the incomes and expenses should be in balance. (GGD Amsterdam, 2017)

The best thing to do to make people more self reliant in terms of the financial situation, is to make a dwelling affordable, but it is usually at the cost of other commodities, which could influence the other life domains. The biggest challenge for architecture is to make an affordable design with the qualities that encourage self-reliance.

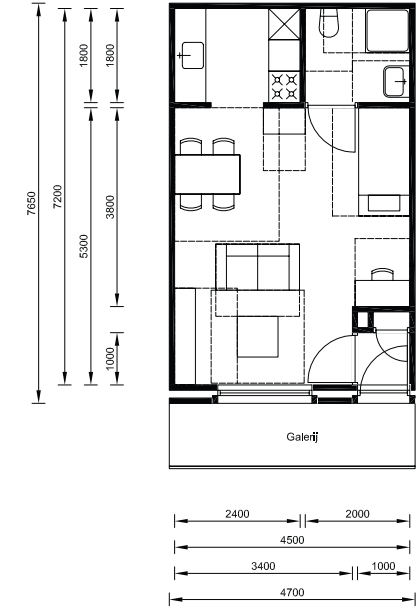
“Affordability (of housing) is concerned with securing some given standards of housing (or different standards) at a price or rent which does not impose, in the eyes of some third party (usually the government) an unreasonable burden on households.” (Maclennan & Williams, 1990)

The average income from AOW (general old age law ) in the Netherlands for 65+ households is gross €3170,-. For a single retired man this is on average gross €2370,- (CBS, 2019). Rental homes can easily reach prices of €1000 per month, making it almost 32% of the income for households, or even up to 42% for singles. With lower incomes, this percentage increases, leading to potential lower purchasing power. Architects can fulfill a role in making homes more affordable, for instance by micro housing, shared-facility housing and, zero-energy or zero-gas housing. On top of that, architects and designers should stimulate and take the positives of the dwelling’s surroundings rather than only the dwelling itself. (Haffner, 2020)

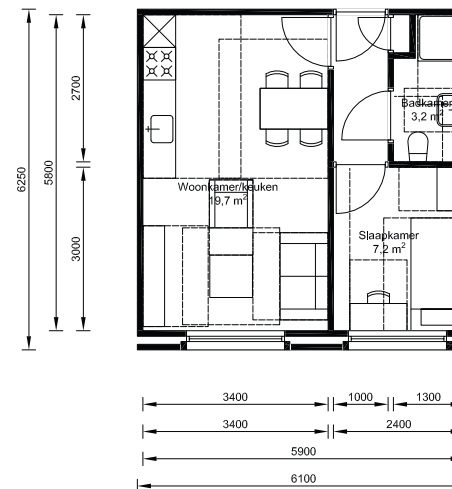
Especially when combining the domain of the social network, shared-facility housing is



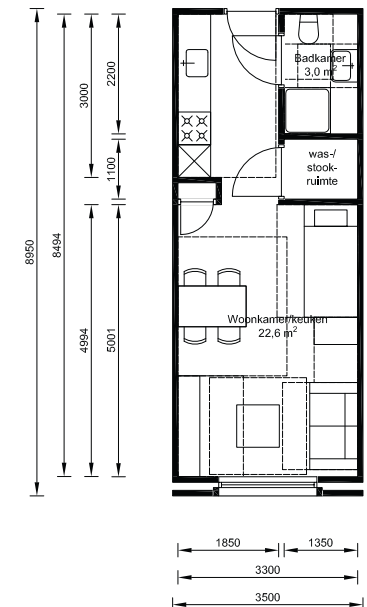
Square meters: 38,9 m<sup>2</sup>  
Building costs: €45.000



Square meters: 32,4 m<sup>2</sup>  
Building costs: €37.500



Square meters: 34,2 m<sup>2</sup>  
Building costs: €39.500



Square meters: 28 m<sup>2</sup>  
Building costs: €32.500

## Extracted design guidelines



Compact housing



Share facilities and appliances  
(like a shared laundry, kitchen, garden)

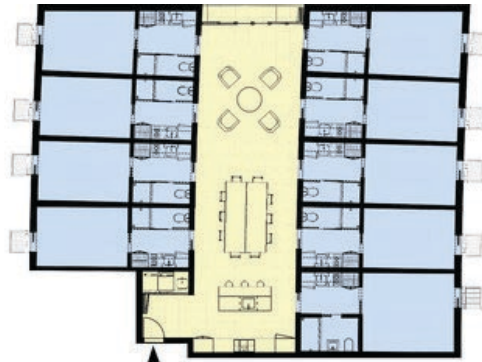
## Examples



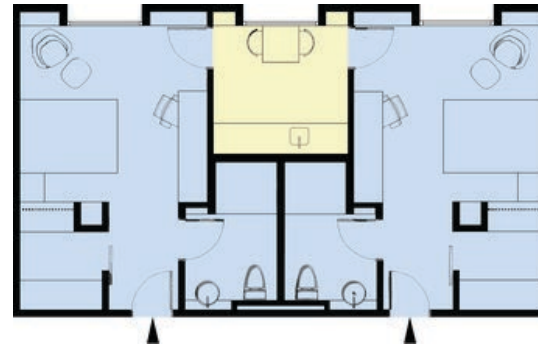
Communal kitchen at Staten Island Urby, Courtesy Ironstate, Frenish, 2021



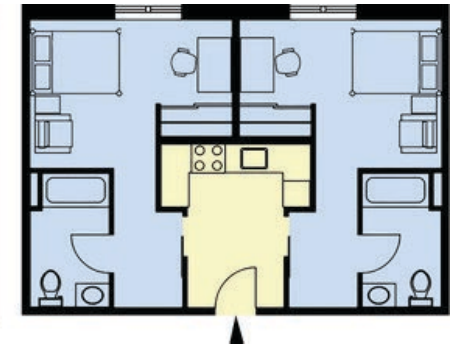
(Example of compact co-living, KTG Architecture & Planning, 2019)



(Example of compact co-living - Harrison Co-living, Macy Architecture, 2013)



(Example of compact co-living - Student housing in Stanford, Legorreta, 2016)

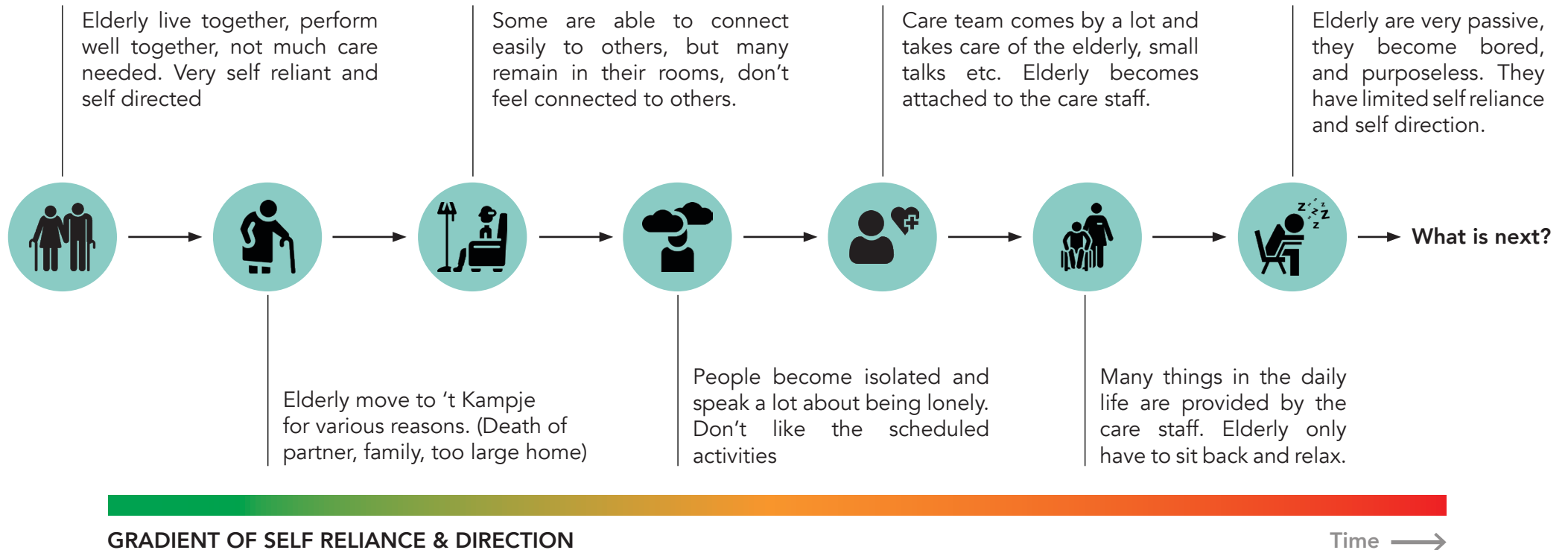


(Example of compact co-living - Donald Kennedy Graduate Residences in Stanford, Kenneth Rodrigues & Partners, 2013)

## FIELDWORK CONCLUSIONS

### A repeatedly observed situation

*How people can lose their self-reliance- and direction in life in care-facilities*



### Striking observation:

*'Many have to do nothing, hence they have nothing left to do.'*



## CONCLUSION SELF-RELIANCE FIELDWORK

One can be called self-reliant when an acceptable amount of functioning is realised on the domains of which everyone in the dutch society has to deal with in the daily life. These life domains comprise the; daily activities, living conditions, physical- mental- and cognitive functioning, housekeeping, general daily, social network, mobility and the financial situation. (Vilans, 2017) Certain additional domains that the GGD Amsterdam states are kept out of contention, for the relevance of the research, like the domain justice.

Each domain of life can be valued, with conditions that the valuer describes. Valuing can be done to anybody above the age of 18. In this research, an amount of individuals that belong to one group (inhabitants of 't Kampje) on a certain moment are valued. In terms of self-reliance, the observed conditions in general were that the people are enough self-reliant, but have limited self-direction. Especially in the domain of daytime activities people were very dependent on others to arrange things. Also, there is an outlier of the self-reliance in the domain of the social network, which scored the least.

Remaining or becoming self-reliant in terms of the social network is about the amount and the quality of relations with friends, family and others that are not part of the household, like neighbours and acquaintances . An the important notion in this domain is whether the person has sufficient people around them that can support or accompany them their growth and development. In 't Kampje and most likely also in other care facilities there is a lack of the amount and quality of the relations a person has. They are mostly dependent on the care staff and among elderly take very few care for each other.



The observed conditions in terms of self-direction also scored limited. Because most things are done, the inhabitants of 't Kampje had to organise barely anything, especially in the field of daytime activities. Each week there is a schedule for the people to participate in certain events. Even though there are options for the elderly to organise activities themselves, for example in the shared kitchens or living rooms.

	Observed living conditions	
	Self reliance	Self direction
1. Daytime activities	★ ★	★
2. Living conditions	★ ★ ★ ↱	★ ★
3. Physical functioning	★ ★ ★	★ ★
4. Mental functioning	★ ★ ★	★ ★
5. Cognitive functioning	★ ★ ★	★ ★ ★
6. Housekeeping	★ ★ ★	★ ★
7. General daily (ADL)	★ ★	★ ↱
8. Social network	★	Unknown
9. Mobility	★ ★	★ ↱
10. Financial situation	Unknown	Unknown

Self reliance scheme		Self direction scheme	
★	Not self-reliant	★	No self-direction
★ ★	Limited self-reliance	★ ★	Limited self-direction
★ ★ ★	Enough self-reliant	★ ★ ★	Full control
★ ★ ★ ★	Self-reliant		

## FIELDWORK CONCLUSIONS

	Observed living conditions			Desired living conditions	
	Self reliance	Self direction		Self reliance	Self direction
1. Daytime activities	★ ★	★	<p><i>Can this...</i></p>  <p><i>...become this?</i></p> 	★ ★ ★ ★	★ ★ ★
2. Living conditions	★ ★ ★ ↯	★ ★		★ ★ ★ ★	★ ★ ★
3. Physical functioning	★ ★ ★	★ ★		★ ★ ★ ★	★ ★ ★
4. Mental functioning	★ ★ ★	★ ★		★ ★ ★ ★	★ ★ ★
5. Cognitive functioning	★ ★ ★	★ ★ ★		★ ★ ★ ★	★ ★ ★
6. Housekeeping	★ ★ ★	★ ★		★ ★ ★ ★	★ ★ ★
7. General daily (ADL)	★ ★	★ ↯		★ ★ ★ ★	★ ★ ★
8. Social network	★	Unknown		★ ★ ★ ★	★ ★ ★
9. Mobility	★ ★	★ ↯		★ ★ ★ ★	★ ★ ★
10. Financial situation	Unknown	Unknown		★ ★ ★ ★	★ ★ ★

### Self-reliance:


“One’s ability to cope with themselves in all areas of life with as little professional support and care as possible.” (zorgvoorbeter.nl, 2020)


### Self-direction:


“Self dependence is about being able to decide, and being able to judge what you want” (movisie.nl, 2013)


## CONCLUSION SELF-RELIANT ARCHITECTURE


Self-reliance is built upon a construct of 10 or 13 life domains, the 10 domains by Vilans are more applicable for the target group of elderly, whereas the 13 domains by the GGD Amsterdam are applicable for everyone in the Netherlands. These 10 life domains are observed during the anthropological research and examined using indicators by both Vilans and the GGD which led to various results. Using literature, surveys near the site, case studies and other examples, are these domains and fieldwork compared and translated to architectural design guidelines.

 For people to be completely self-reliant and have self-direction over daytime activities, people need to be able to do certain activities, like hobbies, that they really enjoy. The survey in Delft Tanthof showed that many have a wish to remain active and perform sports and their favourite hobbies. But also having a walk and going outside. The living environment needs to facilitate places to do this, like through an atelier, a billiards room. Especially active gardens are preferred for elderly, it stimulates cognitive and physical processes and at the same time people can create a bond with each other. To have more self-direction over these activities, the residents themselves should have the option to organize this.

 For a person to be self-reliant in terms of the living conditions, there should be enough, stability, quality and autonomy for the living conditions of a person. Stability is about the possibility to remain in the house, quality is about the safety in a house (e.g. air quality or gas possible leaks) And autonomy is about being self directed enough to arrange certain things that are needed in the house, like fixing the kitchen sink. The layout of the care homes in 't Kampje are already an example for this, apart from the high threshold to the balcony and the direct view to the sleeping section. Research shows that 79% of future elderly want to remain in their own homes, of whom some have a wish to adjust their home, some have wishes for the living environment and only 20% have a wish to move to another home. These people in the Netherlands seem to move most rather to an apartment or elderly dwelling, nearby shops, a healthcare-centre- and other amenities, and in a neighbourhood with diverse ages. People from Tanthof wish the most to live in a single-family home. An important notion is that the homes should provide conditions to grow old there, thus being life-cycle proof.

 Being self reliant on physical functioning has all to do with remaining healthy, lessons from the blue zones can improve the health of people, thus keeping them self-reliant for a longer time. There are 9 factors to become vital and older; Move naturally, have a purpose, down shift daily, eat to 80% full, eat mostly plants, drink wine in moderation, find your tribe, put family first, and belong. Cases like the Cartesiusdriehoek in Utrecht and Eikpunt in Lent show strategies that come forth in the 9 factors of the blue zones. Like having an easy walkable and bikable neighbourhood, gardens that provide local vegetables and create a connection between inhabitants. But also places for relaxation and meaningfulness like the 'silence room' from Eikpunt. At last there should be homes that are suitable for friends or family, to prevent loneliness and have people look out after each other, like through co-living.

 Being self-reliant in terms of mental functioning is about remaining mentally healthy in a way that one does not become a treat to oneself or another. Especially for elderly there is a chance to develop dementia related issues. Architecture and the urban environment can provide solutions that can stimulate the well-being and functionality positively for these people. This can be done through; staying active and creating recognition. Remaining active is essential for a lasting activation of the brain, and the dementia-process can even be slowed down, again this results in a walkable neighbourhood that promotes natural movement. Not only for people with light dementia, but anyone, good orientation important when moving through space, recognition stimulates the feeling of security and ensures that one knows where to go. This can be done by landmarks, distinctive elements, such as artworks, but also through materials, forms, colours and biographic references. Though with too much variation the overview might get lost.

 Cognitive functioning is much about the functioning of the brain. Architecture can trigger this unconsciously, like with the use of certain colours and materials, colours can incite certain feelings, but also provide recognition for safety and way-finding. For example, creating colour contrast in the bathroom, makes it easier to identify and use the appliances and create safer living conditions. Bright colours can lead people to specific places and better be recognised, and the use of 'warm' colours can counteract a cold feeling on north facing facades. Both people in 't Kampje and in Tanthof valued their views highly, there is a high preference to have a view on nature and various movements in the area.



👤 One can be called fully self-reliant in the domain of housekeeping when one can do this completely on its own, and in case there is somebody else that does it, it is their own choice. When someone is not able to do this, and there is a large backlog which makes the dwelling polluted, that person is not self-reliant. This means, that even for elderly who are less mobile, it is still possible for them to stay self-reliant in the domain of housekeeping, it would be a matter of finding the person who can help to keep the house clean. Having a compact home drastically decreased the amount of housekeeping that has to be done. 't Kampje has a floorplan of around 50m<sup>2</sup> which was doable for most mobile residents. By sharing appliances and rooms, there is also fewer need for housekeeping, as it can be done collectively. Examples could be a; shared kitchen or a laundry room.

🍴 General daily (in dutch ADL; Algemene dagelijkse levensverrichtingen) is about the maintenance of personal security and well-being. These actions could be for example; dressing up, feeding yourself, using the bathroom, getting groceries, do shopping, using appliances and products, etc. Someone is not self-reliant anymore in this domain when there are multiple critical problems in the domain, and the person is (almost) completely dependent on others. With the use of home automation and informal care, most of these critical problems can be diminished or removed. Smart heating and lighting systems can provide aid in daily actions. Robot vacuum cleaners can take care of keeping the home tidy. Important is to create a life-cycle proof home which makes most actions easier. But as most of the actions in the general daily are personal physical activities, there could a demand for care which architecture can not solve directly. In this case there is a demand for (informal) care, which should be available on demand. Having a place nearby shops and other amenities makes it easier for either the person, or the (informal) care giver to provide the person in need of care with their needs. But also to provide a place for the informal caregiver to stay for a while, like a flexible use dwelling.

👥 Remaining or becoming self-reliant in terms of the social network is about the amount and the quality of relations with friends, family and others that are not part of the household. An important notion in this domain is whether the person has sufficient people around them that can support or accompany them their growth and development. To stimulate the growth of a qualitative

social network it is important to create opportunities for this network to grow. Small interactions can lead to bigger things, a growing friendship or helpfulness among each other, thus improving the self-reliance of a person. This can be done for instance by; Visibility, having a view on each other creates opportunities for contact, above 4 floors there is a major threshold, so low rise is preferred in this case. Seating places in the environment make it more attractive for elderly to go outside and offer encounters between people, especially when the view is on an activity. Having a smooth transition between private and public makes it physically and psychologically easier to move between these spaces, this could be done through a garden or front door semi-private area. Especially gardening creates a bound between people, there could also be places to process the products of the gardens such as common kitchens to prepare meals together.

👤 One can remain self-reliant with the use of certain tools, like a walker or a mobility scooter. Being self-reliant in the domain of mobility is about being able to safely move oneself in- or outdoors, for example to go to other people, activities or to do groceries. In terms of architecture and urban design, it requires an environment that allows for safe movement and unobstructed routes. Again, this also means to promote natural movement and activities, since being active can extend the healthy years to live of elderly, and lower the risk of obesity. This could be done for example by making stairs visible, and elevators hidden, or making the outdoor environment more accessible, by removing unnecessary obstructions, and creating smooth but non-slippery pavements. Also, having easy access, and close proximity to the public transport makes it easier for elderly to move through the city independently. The dwellings themselves could also be designed in a life-cycle proof way, with few or no stairs, wide (sliding) doors, lowered cupboards, lowered thresholds and support elements.

€ One can be called fully self-reliant in the domain of financial situation when there is enough income to provide a person with their basic needs, such as buying food, clothes, paying rent or mortgage, paying for water and electricity, pay for care and insurance and to pay of eventual debts. The income should be acquired as independently as possible, and the incomes and expenses should be in balance. For many people, their homes are the biggest expenses, making affordable homes for people with a lower (retirement) income

can make them more-self reliant in the domain of the financial situation. Strategies like compact housing (up to 50m<sup>2</sup>) can make homes much more affordable, especially for single households. Which is one of the main reasons for elderly to move after losing a partner, making their homes too large, with too much costs. Also, by sharing certain spaces such as a laundry room, a common kitchen, or living room, can make it more affordable as there is less investment costs. At the same time it can create social connections, improving the domain of social network.

All in all, the architectural translation of the domains show strategies to help people do the things they would normally do when they were younger. By trying to uncover the possible hinders in daily life and to see if they can be diminished or even removed through architectural solutions. Many domains show common principles that can improve one's self-reliance, such as staying active through natural movement or gardening. But also by having compact, life-cycle proof housing. The environment should provide safety and easy accessibility. Having a group of people around that can support each other makes life easier in both physical as well as in a mental way. In the end you can say that self-reliance is about being, and remaining healthy in a physical way, a mental way, and a social way. The architectural solutions can stimulate this, consciously but also unconsciously.

Note;

*The next page summarises all the specific design tools for each life domain. These principles are extracted through personal anthropological research, literature, case studies in the Netherlands. Design principles may differ in different regions of the world, but also differ for each individual person. Design principles for the domains can be added on through extra literature or other findings. The showed design tools are extracted in the graduation period from September 2020 to January 2021.*

# DESIGN TOOLS OVERVIEW

Daytime activities	Living situation	Physical functioning	Mental functioning	Cognitive functioning	Housekeeping	General daily	Social network	Mobility	Financial situation
Places for gardening	Compact housing	Promote natural movement	Promote natural movement	Use of specific colours in certain places	Compact housing	Places to live for friends / family	Have visual connections	Promote natural movement	Compact housing
Places for active lifestyles and sports	Lifecycle proof homes	Places for relaxation and meaningfulness	Compact housing	Use of specific materials in certain places	Share facilities & appliances	Place near shops & other amenities	Places for seating (with a view)	Places for gardening	Share facilities & appliances
Places for performing hobbies	Place near shops & other amenities	Places for community forming	Places of recognition	Places to stimulate cognition (library)		Lifecycle proof homes	Having places to go to	Create easy access to public transport	
Diverse aged target group	Gardens that provide local vegetables	Clear geometric structures	View on natural areas			Places for gardening	Car free neighbourhood		
Diverse living options	Places to live for friends / family	Variation in architecture				Smooth transition between private and public	Lifecycle proof homes		
		Biographic references				Diverse aged target group			



## For who is self-reliant living?

79% of (future) independent living elderly want to remain living in their current home when their need for care is increasing. And when people get older, this wish increases. (Nivel, 2013) Self-reliant living has to do with the previously mentioned factors; the life domains, the need- and use of care, the ethnic background, and the knowledge, motivation and self-confidence. In principle, everybody could live self-reliant, though there are people who want to be self-reliant, but they are unable, this is a group of powerless elderly (16%). They are limited by their age, financial situation, education and social status. And there is a group of awaiting elderly (10%) that don't want to be self-reliant, and are not able to. (Nivel, 2013)

Self-reliant living is more fitting for people that value to make decisions on their own and arrange most things themselves. But also for people that want to live a more healthy lifestyle, though there is often too few knowledge motivation and self-confidence when dealing with diseases and care. (Rademakers, 2013) An important aspect for elderly to live self-reliant, is education; elderly need to get more information about their diseases and about diet prescriptions. At the same time do these elderly need to act actively to increase their own self-reliance. (Shearer. et al., 2012)

The care wishing elderly have the feeling they can decide over their daily lives. They are able to tell when certain care is needed, but often it is expected that others are taking care for them. (Nivel, 2013) With extra knowledge and motivation, this group might be stimulated to become more pro-active. The pro-active elderly want to arrange most things themselves and independence and self-reliance is an important aspect. Especially for this group, self-reliant living is attractive.

### 1. The care wishing elderly

Care wishing elderly have the experience of high self-direction, they can determine whether they need care. Often they are together with their partner. When they need care, they expect others that they will take care for them.

### 2. The pro active elderly

Just like the care wishing elderly the pro active elderly can and want to have a lot of self direction, but this group would like to arrange these things mostly themselves, self reliance is an important aspect for them.

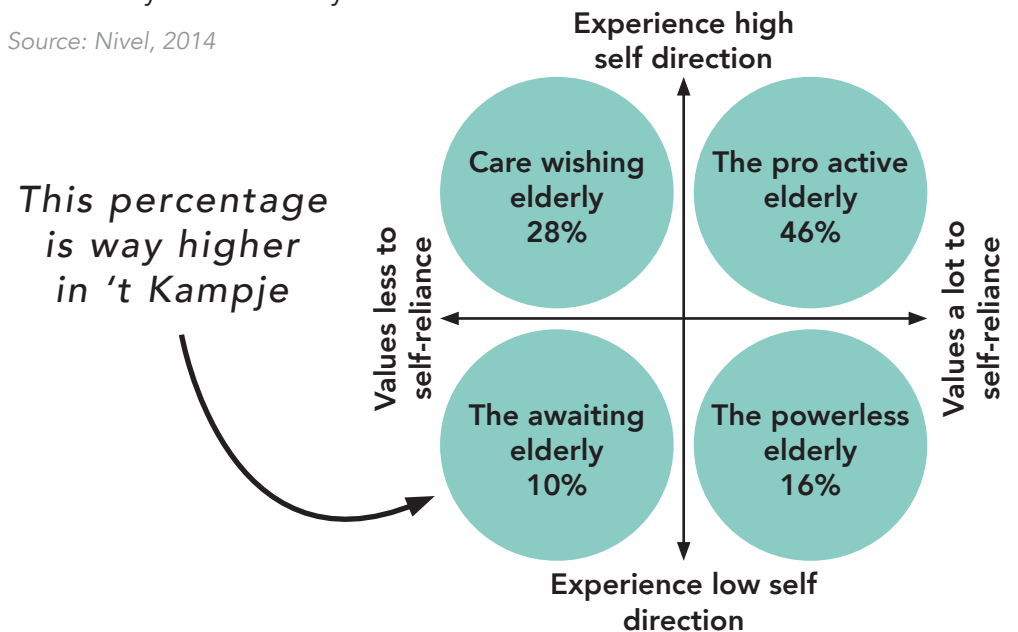
### 3. The awaiting elderly

The awaiting elderly have the feeling they can not determine how their life will look like. They have the feeling that they overcome life and it is as it is. For them it is not so important to do things themselves. They make themselves look dependent for others and accept care very easily.

### 4. The powerless elderly

Powerless elderly experience very less self direction in life, but the difference between them and the awaiting elderly is that they strive to be self-reliant, even if they can not always achieve that.

Source: Nivel, 2014



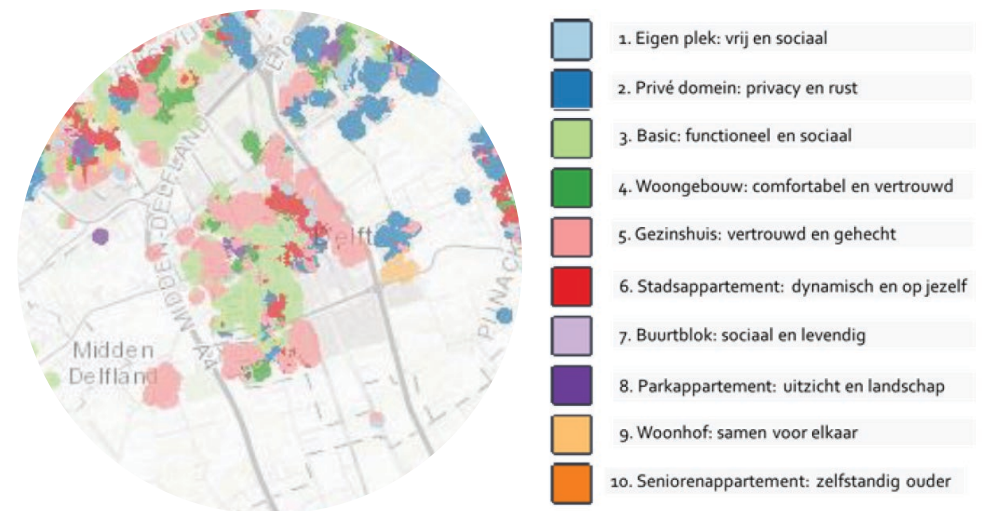
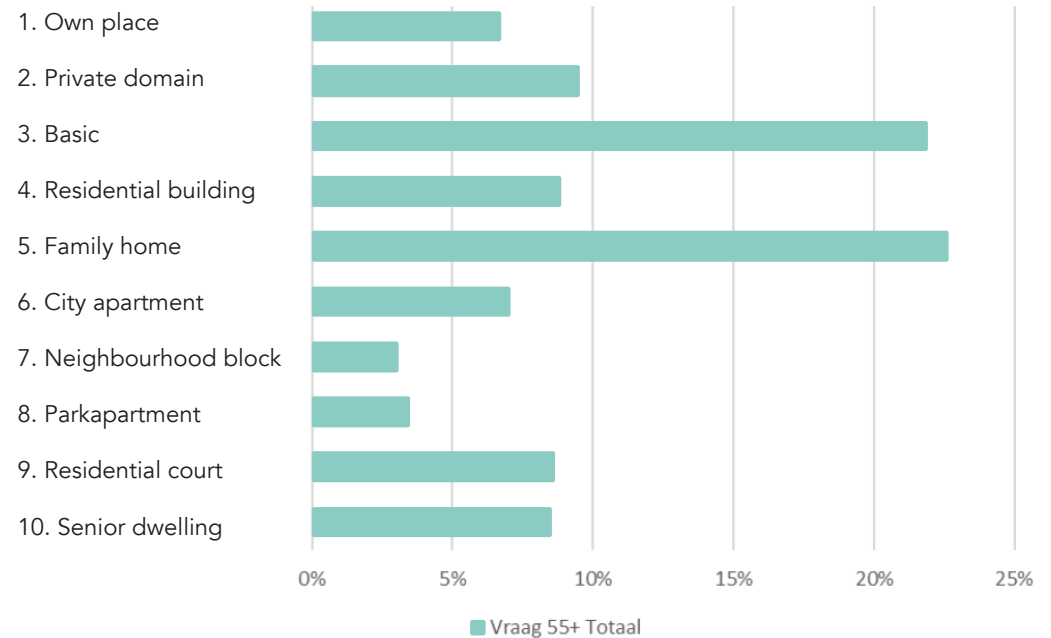
## Where do elderly want to live?

Platform31 researched the living wishes of 22.500 elderly in the province South Holland and their corresponding real estate concepts. On the site location in Delft Tanthof family homes are most wished. Perhaps because most people lived like this for a long time. According to the descriptions by Platform31 (see appendix) the most fitting and corresponding type of housing for self-reliant living in Delft Tanthof are; The neighbourhood block, and the residential court.

The neighbourhood block is described as; "In the neighborhood block, the houses (and the residents) are much more part of the (residential) neighborhood with residents in all stages of life. There is a great diversity in residents and buildings. Privacy is less important. The houses are durable and comfortable. There are communal facilities and with this concept too, part of the target group is interested in communal living and / or the joint realization of a project. The target group for this form of housing also finds the court attractive as a form of housing. This form of communality could well be reflected in this housing concept. Care and convenience services are provided as needed. One can (continue to) live here until old age. Shops, a doctor and public transport are available at a short distance." (Platform31, 2020)

The residential court is described as; "The court is the archetype of this residential concept. A court is a more or less protected whole. This is attractive for households who - because they are in the same phase of life - understand and can help each other well. There is a strong community. The courtyard can be in the form of small low-rise houses, but also of stacked (small) houses. Meeting is an explicit part of this concept. Facilities (GP, supermarket and facilities specifically aimed at seniors) are available in the area. The proximity of public transport is less important for this housing concept in connection with the lower mobility needs of this group. Although it is precisely this form of housing that makes it possible for care to remain outside the door for as long as possible, we see an average higher demand for care among those interested in this profile. Care could be provided from a nearby healthcare facility." (Platform31, 2020)

(Division of living profiles for elderly, Platform31, 2020)



(Living wishes in Delft, Platform31, 2020)

## Conclusion - where and for who is self-reliant living?

Even though the wishes for family homes are the highest for elderly in Delft Tanthof, the need to live for as long as possible in the own homes are high, which is not always possible in family homes. The most important aspects about family homes are the trust and the strong social connections. Though there are many similarities between the family homes and the neighbourhood block and residential court homes, such as; the close proximity of shops and amenities, the diversity of dwellings and people, and the type of care that is given on demand. With extra provided knowledge, people can be motivated to see the benefits of these living types for self-reliant living, as most people have the wish to remain in their homes, even when their need for care is increasing.

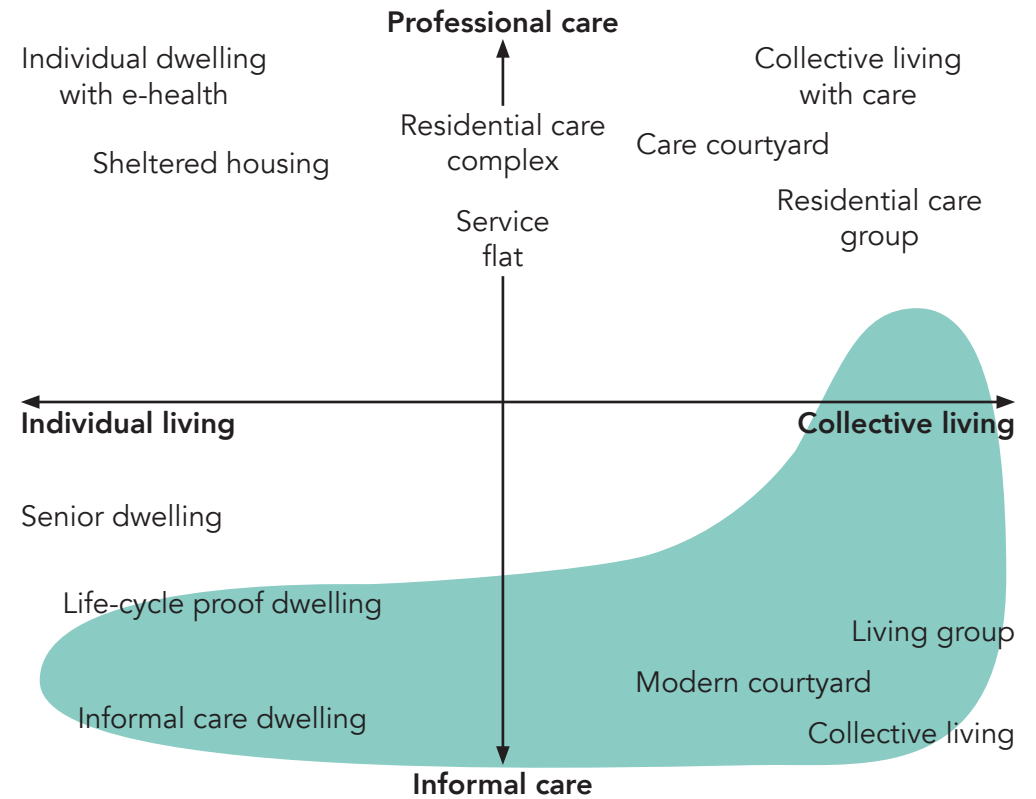
Especially for elderly who find it important to have and keep a lot of self-direction over life these types of living options are suited. Also for people who want to arrange things themselves and have a healthy lifestyle in both physical, mental and social way. People living in care-facilities are often awaiting elderly, they have the feeling they can not determine how their life will look like. They have the feeling that they overcome life and it is as it is. For them it is not so important to do things themselves. They make themselves look dependent for others and accept care very easily. For this type of group, self-reliant living is less suited, they would need more knowledge, motivation or self-confidence to be encouraged to live in these types of dwellings.

When people lose their ability to be self-reliant in a certain domain, of course there can be assistance, preferably through informal care, but in certain conditions this is not preferred. For this scenario, there must be an option for care nearby, this could be facilitated in a public building, a 'thuiszorg' group that can provide specific care many in the neighbourhood. These people should know in what domains there is help needed, to limit the spent time, money and unnecessary care.



## CASE STUDIES

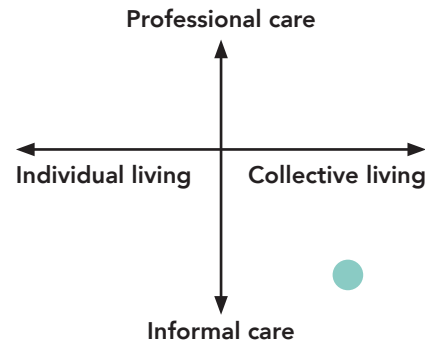
This chapter will examine a couple of cases that are relevant for the design process. The outcomes will provide design guidelines for certain ways of living. The focus of these case studies will be on the side of informal care, but also both individual living, as collective living, to see the differences between them. Because self-reliance is much about being able to take care for yourself without professional care, these kinds of cases won't specifically be addressed. Each floorplan of the case will be projected on the site location to see its scale, and fitting to the urban layout. On the right side you can see what kinds of living forms are common in the Netherlands for elderly. The marked area is the focus for the case studies. The studies are then analysed to find examples for the domains that make up self-reliance.



*Types of living forms for elderly, Platform31, 2018*

## Knarrenhof Zwolle

Knarrenhof is a place where there is a balanced living environment of privacy and the benefits of social living. It is mainly suited for people that like to participate and do something for each other. Though there are no obligations. The children do not necessarily need to take care of their parents, as the people living here look out for each other. There are individual houses, but there is also a common room for the people to meet each other and perhaps cook something together or play some games. (Knarrenhof, n.d.)



*Knarrenhof Zwolle birdseye view, Knarrenhof, 2017*

't Knarrenhof shows a number of elements that promote self-reliant living. People who live here are not reliant on a care system, but rather on occasional assistance, like with regular friends and neighbours. They take care of themselves as much as possible, which is promoted by their homes. Eventually if they will need more care, it is also possible to change the house. Not everybody is suited for living in a place like this, there is a long list of people who want to live here, but through selection people are chosen if they are suited enough. (Brandpunt+, 2018)

The people here have no obligations, but rather options. For example they can help each other to take care of the gardens and other greenery in the area. This way they get a sense of purpose and feel less bored. At the same time they create a bond with each other. (P. Prak, 2017)



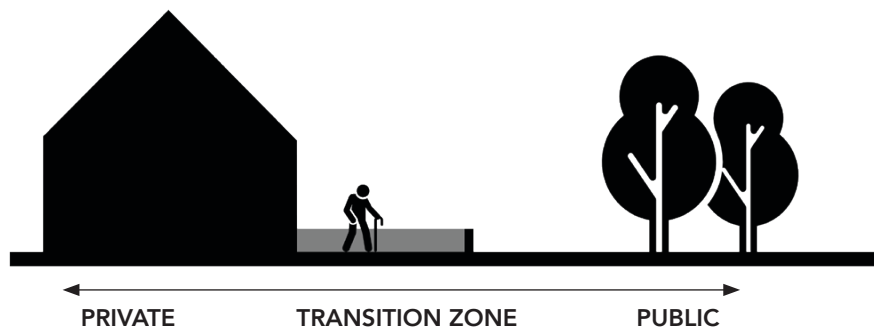
*Knarrenhof courtyard, Knarrenhof, 2017*

## Domains - Daytime activities & Social network

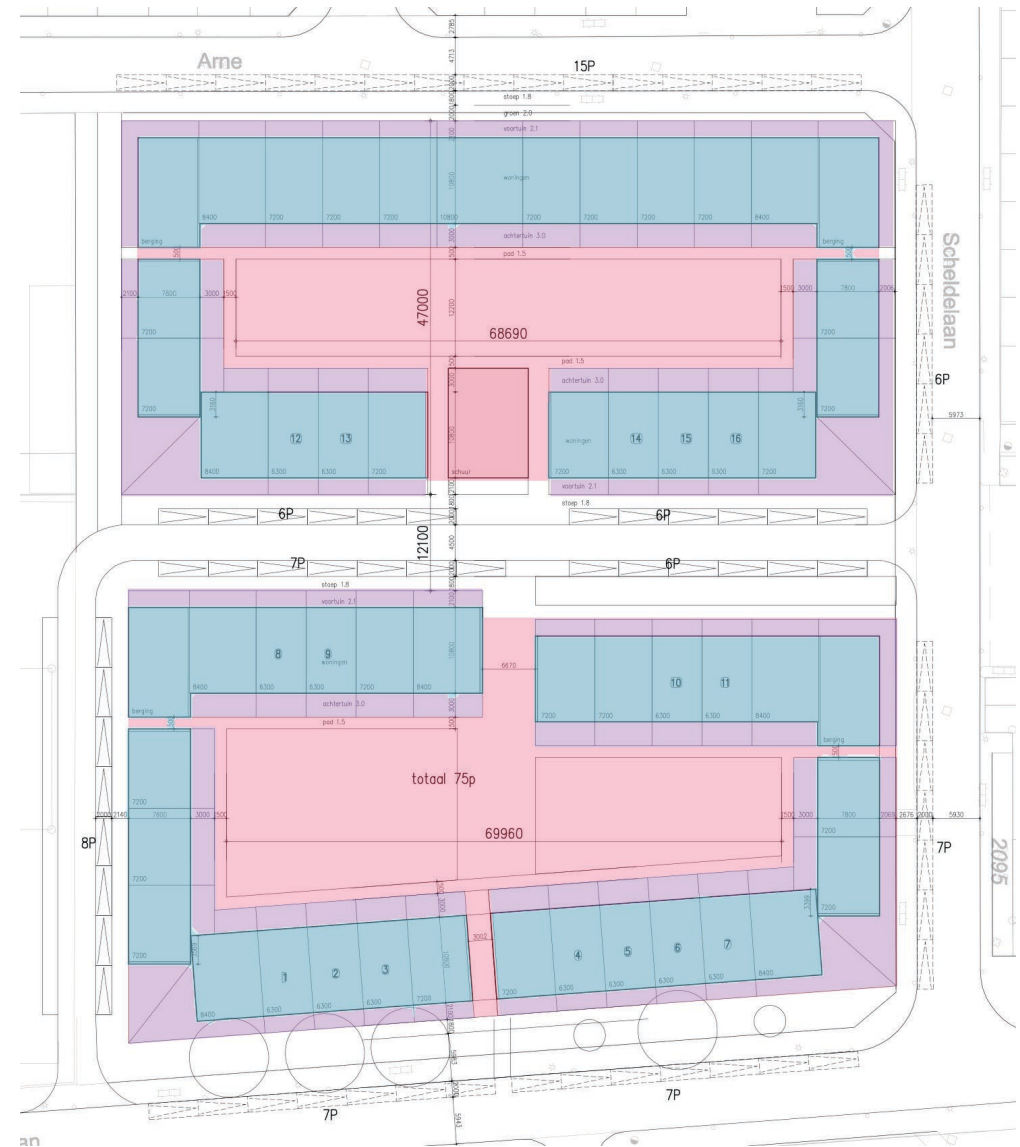
Knarrenhof is based on many sociable concepts, activities are organized by the residents themselves via a group-chat. There is a film-club, walkers-club and an eating-club. When somebody proposes to do something together, others can accept if they wish for it. (van Lier, n.d.) Initiator Peter Prak says there is a strong social cohesion, which results in more informal care, for example; A neighbour watches the sickbed of a resident who got into an accident, so that the partner can do their groceries.

Every resident has its skills and people provide for each other with these skills; which makes every human of value. (L. Reitsma, n.d.)

The layout is based on the classic courtyards, In Zwolle, there are 2 courtyards with a total of 48 houses, 34 for sale, and 12 social housing. (Eigenhuis, 2020) The houses are privately owned and are connected to a private garden. Next to the private garden, there is a collective garden, which is larger in size and creates connectivity between all the houses. Just as Jan Gehl gives as an example in his book 'life between buildings', the dwellings create a smooth transition between the private and collective, through this semi-private garden.



Transition between private and public in 't Knarrenhof, own image, 2020



- Private
- Semi private
- Collective

Floorplan with sizes, INBO, 2015, own colour edit, 2020)



## Domain - Living conditions

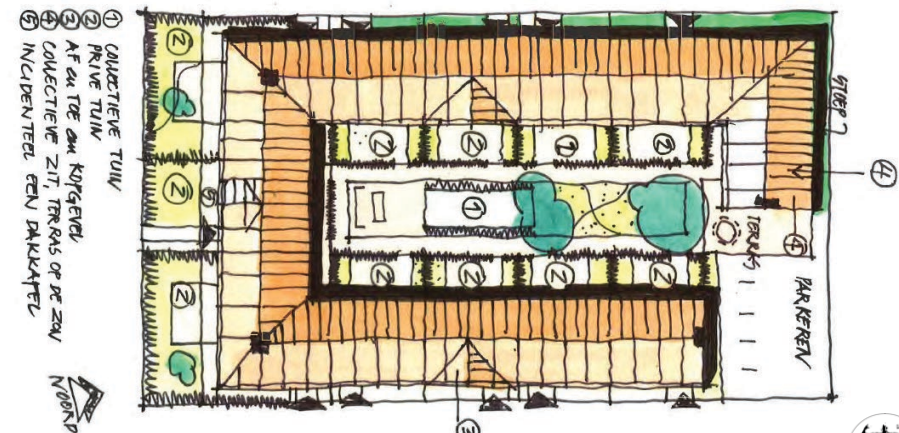
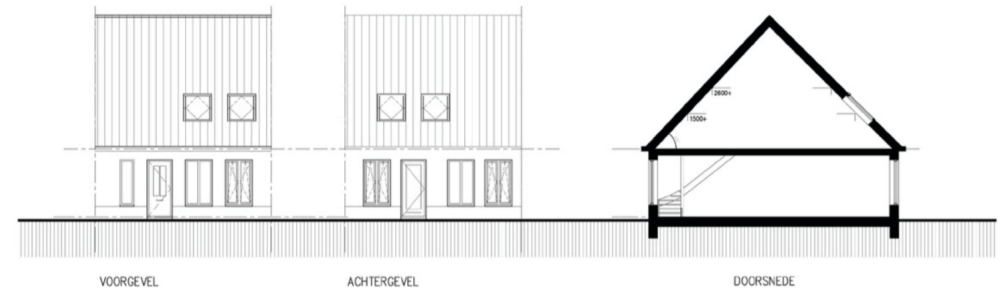
The homes are designed to be life-cycle proof, there is a bedroom and bathroom on the ground floor, most frequently used doors are sliding doors and there are limited thresholds. There is an access to the bathroom via the bedroom, and there is room for a hospital bed. All the doors have a certain width to allow for easy wheelchair access. (P. Prak, n.d.) The houses themselves are made to be as maintenance-friendly as possible. Window frames are made of plastic and require no repainting. The roof is made from ceramic roof tiles, which is very hard for mosses to grow on. (P. Prak, n.d.)

One downside is the staircase, which is hard to use for elderly with mobility issues, on top of that, it is a hazard for falling. Even though there are stair lifts, they require a large unwanted investment.

Houses are available from 69-200m<sup>2</sup> making them rather large for a single person, for couples it is more suited, to limit the amount of housekeeping.

## Domain - Financial situation

The homes are both for rent as for sale. There are 48 homes of which 30% is social housing, making it affordable for a larger group of people. Though, the houses could have been made more compact and share more facilities such as the laundry room. The project is based on 'CSR'; Corporate Social Responsibility, 'MVO' in Dutch 'Maatschappelijk Verantwoord Ondernemen'. Making the economical goals respect the people.



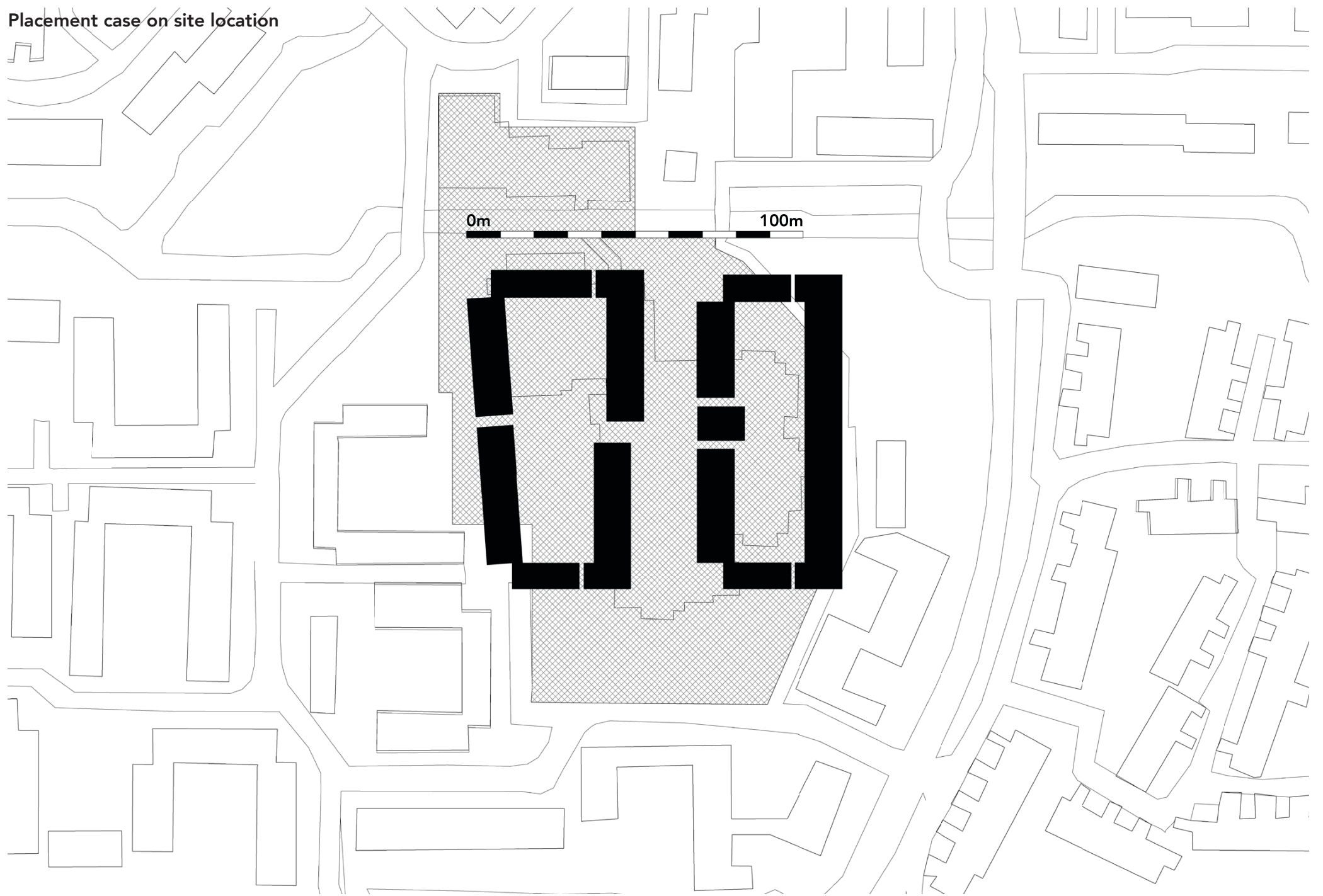
Situation concept Knarrenhof, INBO, 2015)

Facades, section and floorplan of dwellings in 't Knarrenhof, INBO, 2015)

SITUATIE CONCEPT



Placement case on site location





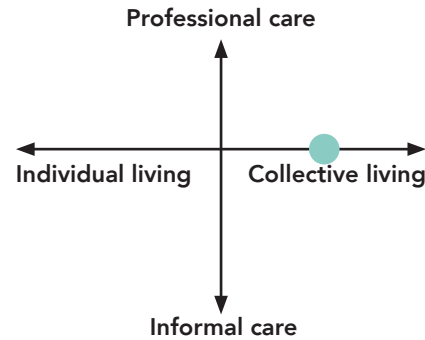
## ParkEntree Schiedam

ParkEntree is a new built project residing 89 dwellings for sale including bungalows and apartments and 10 free sector rent dwellings.

The place is designed in co-creation with future inhabitants. Inhabitants automatically become a member of the 'ParkEntree Association' which has a servicecontract with hospitalitymanager Vitaal&Zo. Each household contributes monthly to them, for which they get; an exploitation of the common facilities, the effort of a hospitality manager and the concept monitoring of ParkEntree. (ParkEntree.nl, 2020)

Vitaal&Zo provide hospitality to the inhabitants of ParkEntree, they connect people from the building and even the neighbourhood. They believe every one has unique talents, qualities and interest, and that people become happy when they can express these talents, qualities and interests. They facilitate, with professional organizational strenght and physical space. (ParkEntree, 2020)

ParkEntree provides a living environment which can mean a lot for active elderly throughout their daily life, not only through the houses, but also by connecting inhabitants. They do this by people that are likeminded, their development and the environment. (ParkEntree, 2020)



Birdseye view ParkEntree, Pararius, 2020

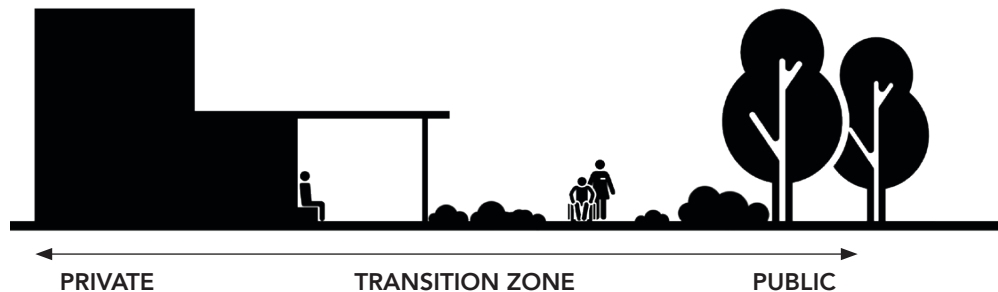


## Domain - social network

The complex is divided into 2 sections, one larger building with an adjacent courtyard living section. Similarly to 't Knarrenhof in Zwolle, this courtyard is built up in the same way, a private dwelling, with a semi-private garden, connected to a larger communal garden. The transition between the private space and the public is smooth out with this transit zone. According to Gehl, it makes it easier for the people to move between the private and public areas. The semi-private garden is designed to be maintenance friendly, by using easy to clean materials and a compact area, so elderly don't need to spend much energy on it, if they are incapable of doing so. Paths lead through the garden, and create opportunities for interaction between the residents sitting on their porch and the person passing by. The residents have the option to maintain the garden together, to create a connection between the inhabitants.

## Domain - Living conditions

The living conditions seem not to be optimised for self-reliant living, especially for less mobile people, there are no sliding doors, the bathroom is too small for a wheelchair and while using a walker, and there are many doors and hallways to pass. The homes seem to be optimised for elderly that are still mobile. On the other hand, there are many diverse options for the type of living, such as apartments, bungalows and family homes, making it possible for a diversified aged target group.



Transition between private and public in ParkEntree, own image, 2020

(Smaller section, ParkEntree, 2020)



(Floorplans of Singel apartment and bungalow, ParkEntree, 2020)

## Domain - Daytime activities

The larger section contains all the apartments, storage spaces and communal areas. For example 'The Lounge' where people can cook together, play a game of billiards or paint together. When one has something to celebrate with friends and family, it can also be done in this area. (Pararius, 2020)

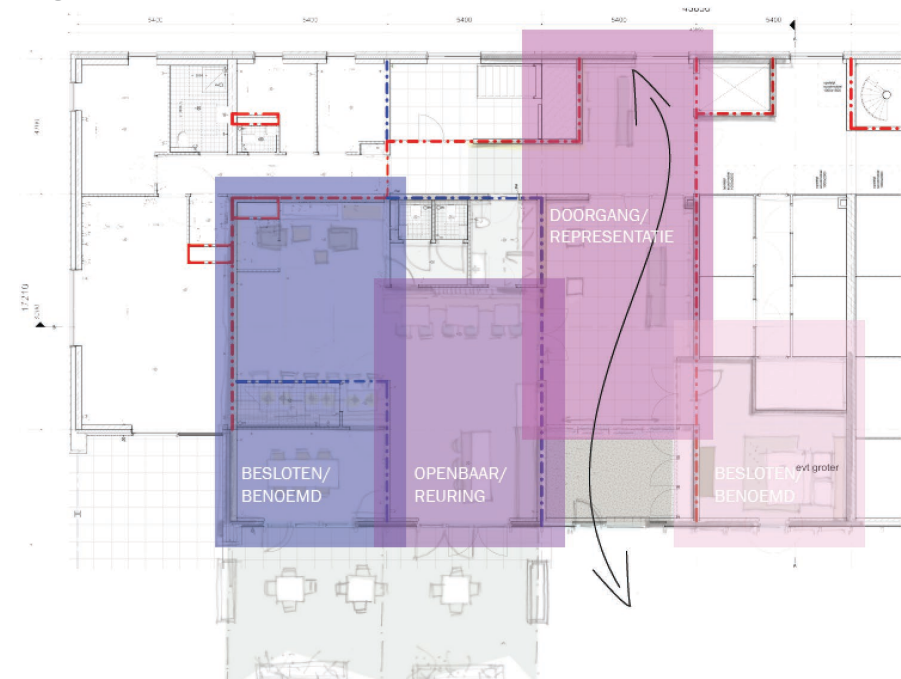
The area are divided in sections of openness as shown in the image 'Open-closed areas'. The ground floor has multiple access points to enter the building, the main entrances are connected to a passage/representational space which is accessible for everyone, people from the neighbourhood can also enter the open kitchen area to meet with the inhabitants. Most of the activities and planning is done by the hospitality-manager. This means the inhabitants don't have full self direction, but it is made more easy for them to connect to each other, for the ones that don't have much self-confidence.

## Domain - General daily

Homes are provided with a basic home automation system 'Bush-free@home' which is expandable according to the wishes of the inhabitants. The system can turn off all lights with one switch, but also create scenes for certain times of the day. The smart thermostat can be set up for each room of the home, and also be adjusted from a distance using an app. The doors are opened using a keyless entry button, making it easier for less mobile people to enter their homes. (A. Bodewes, 2016)



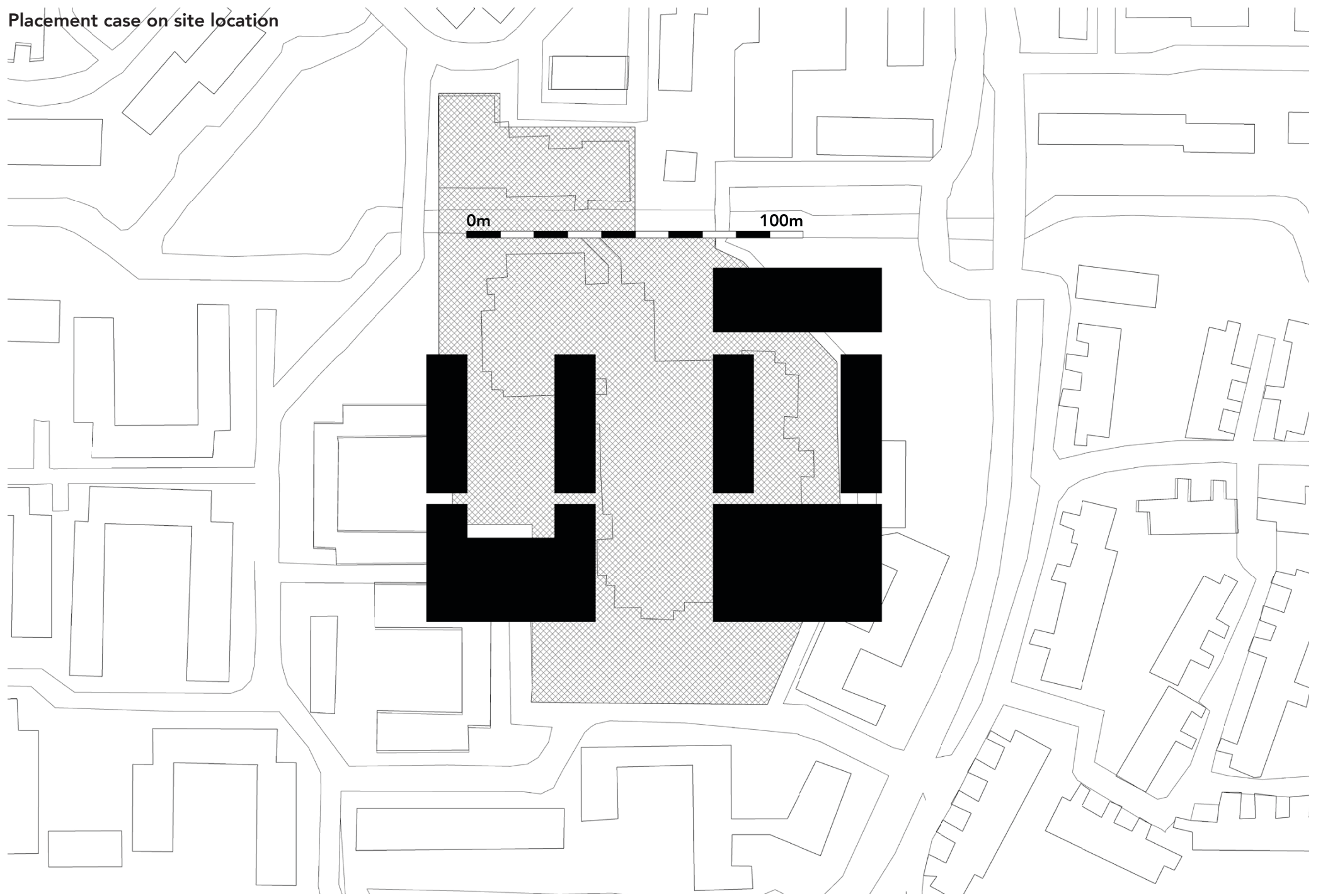
(Larger section, ParkEntree, 2020)



(Open-Closed areas of ParkEntree, Maas Architecten, 2018)



Placement case on site location

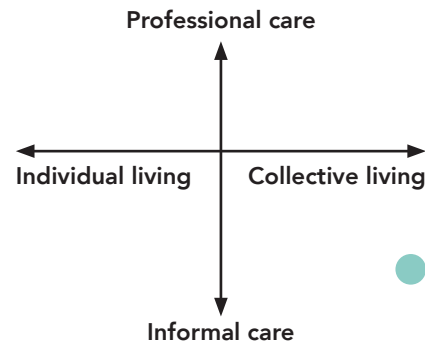






Housing association Eikpunt, wbvng.nl, 2020

## Eikpunt Lent



(Situation of Eikpunt, dearchitect, 2020)

Eikpunt is a residential community in Lent, near the large city of Nijmegen in Gelderland. It is a multi-generational living environment where there is a priority to spirituality and sustainability. The place consists of 40 rental houses and 9 homes that are for sale.

The place consists of 4 sections, 2 section of mainly living, one with a combination of living and collective spaces, and one shared 'silence-room'. On the ground floor of the smaller section with the collective spaces there are multiple services, like a general meeting space with a terrace, a 'Do it yourself space', a music room, guest rooms, a child daycare, and a wash- and dry room. (P. Krabbendam, 2020)

As the name suggests, there is a large oak tree in the middle of the place which acts as a meeting point for the people. For children there is a playground and for the parents and elderly there are large picnic tables to have a chat with each other. A bit further in the collective garden, there is a so called 'silence room'.



The project is based on four pillars to make the people feel connected to each other, they are based on; silence and reflection, sustainability, multi-generational living, and community building. (Woongemeenschap Eikpunt, 2020)

### **Domain - Mental functioning**

In 't Eikpunt they strive for both physical health, as well as mental health. In the busy life of everyone, often it is forgot to take a moment for oneself and reflect. Eikpunt has a dedicated space to do this, it contains a silenced room where people can perform meditation and loosen themselves from daily fixations. (Eikpunt, 2020) They claim they don't represent certain religious or spiritual directions, but rather a 'trans-conventional field'.

### **Domain - Living conditions**

The project straves to be sustainable in many ways. The houses are built to be passive houses, which consume almost no energy. It is also built in a way that there is more space for communal functions in account for a portion of the private space. These spaces are; storage, workareas, guest rooms, 'wet' rooms and a bike stalling area. The project uses mainly natural and organic materials, such as wood, loam and straw. Many of them have low embodied energy, which are also locally produced. (Eikpunt, 2020)

During visits on the site location of Tanthof there was an observation that there are many trash bins on the road and they determine the streetscape. In 't Eikpunt the trash is collected on the border of the place, green trash is collected and produced to compost which is maintained by the neighbourhood. Everything is seperated, like plastic, glass, paper, batteries, aluminium, cartridges, etc. Larger goods are collected monthly. Also there is a giveaway shop for second hand goods that other people can use. (Eikpunt, 2020)



*(Silence room Eikpunt, dearchitect, 2020)*



## Domain - Social network

According to the website of Eikpunt (2020) the place is designed for people from 0 to 100+, which would lead to a forward-looking way of living. There is a child daycare where elderly have the opportunity to help, which is also one of the ways of community building.

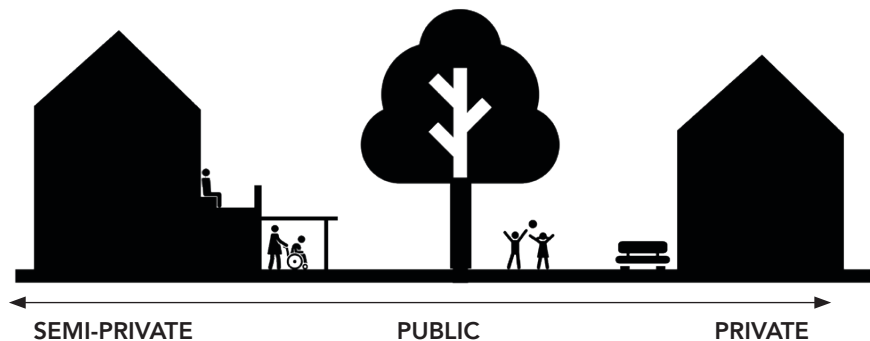
There are multiple forms of living, designed for each individual needs. For example for singles, young and old (single) families, couples, and small living groups (up to 5 people), but also homes that are life-cycle proof. (Eikpunt, 2020)

Most of the homes for elderly and handicapped people are on the ground floor, close to the communal spaces and the public realm. Children have a natural outdoor living space, where they can meet other children and play together. The workshop place is made for people to express and learn more skills, but also for the purpose of the community, to create a sense of usefulness, elderly could should younger ones particular practices. As of now, there live 95 people, of which 22 children and 17 elderly. (dearchitect, 2020)

People who live in the community of Eikpunt strive for connectivity to each other by spiritual deepening, where there is an importance for one's independence, personal limits and individual life vision. (Eikpunt, 2020)

The project reaches this by making people meet each other and help each other, with small things, but also larger things. The place offers an example for self-direction because the inhabitants themselves organise everything, in diverse work / theme groups, for example; The garden board, intern communication, common activities and maintainance. (Eikpunt, 2020)

The plan is oriented in a way that all the individual homes are situated to have a view on the central 'plaza' and to the other homes of the concept. Which can create a form of social safety by having a view on your neighbours.



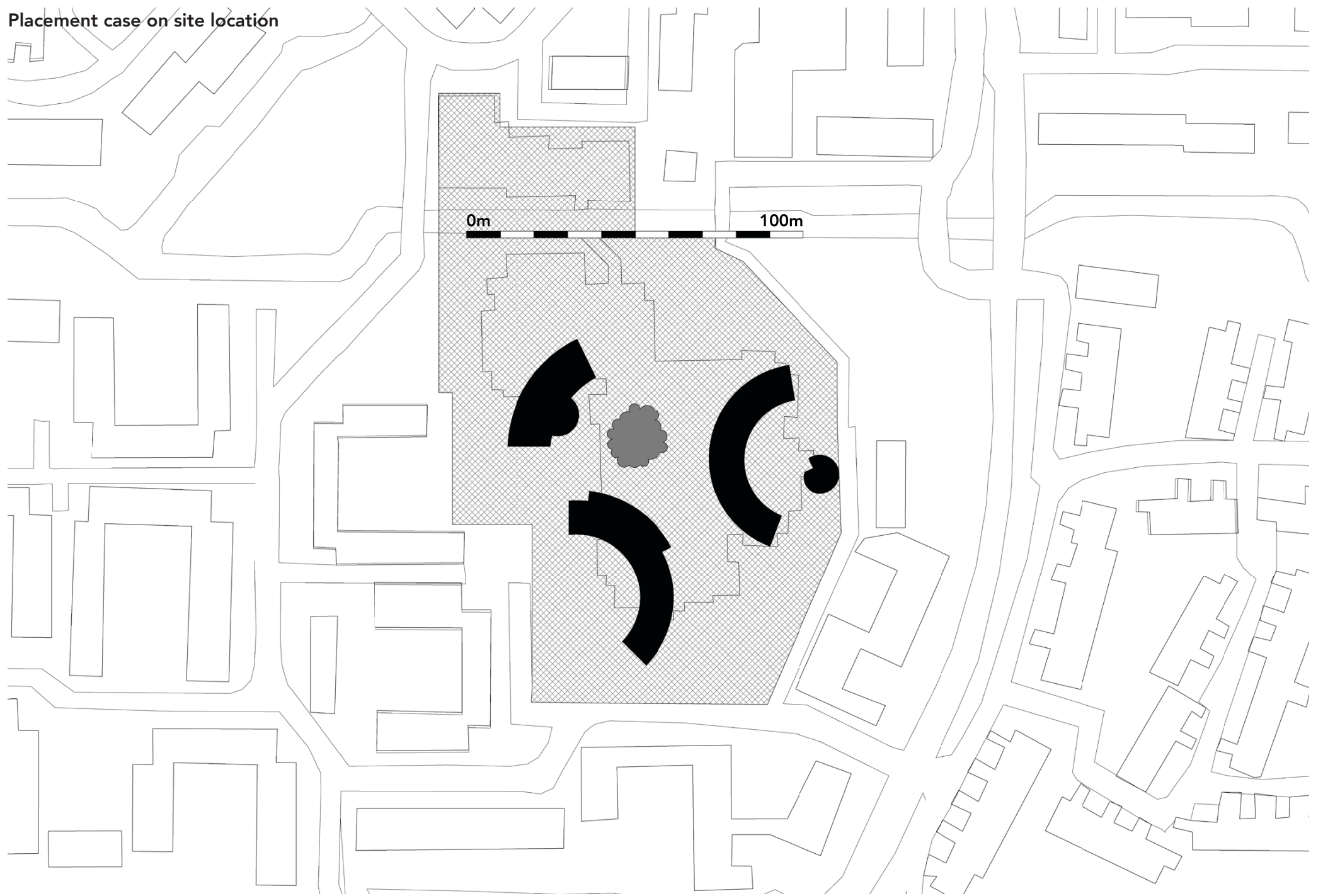
Transition between private and public in ParkEntree, own image, 2020



(The large oak of Eikpunt, dearchitect, 2020)



Placement case on site location



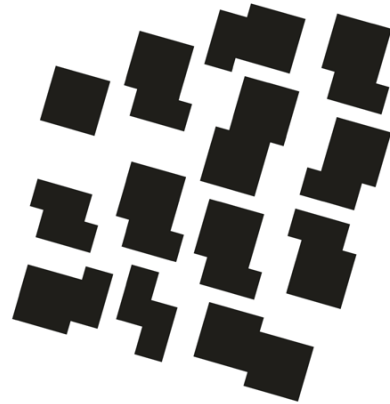
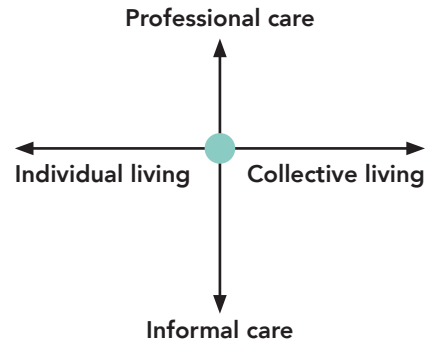


## BloemKoolBurenBond Almere

Translated to English, the Cauliflower Neighbour Union is a competition winner of; whocares - community of practice, for a neighbourhood in the city of Almere. It consists of many small scaled dwellings for a diverse target group.

The plan contains living studios, with a single floor, mainly for singles or students, but also studios with 2 floors, which are more spacious by its vide.

There are two types of lofts, which are twice the size in footprint than the living studios. They are more designed for couples who are still mobile enough to climb stairs. The last version are senior- or disabled people, they don't have a staircase and are located on ground floor level. These houses have an option to store a scootmobile while also having a front door.



*(Nolli map, Own image, 2020)*

The plan is based on the modern courtyard, and like Tanthof, based in a cauliflower neighbourhood. They face the same situation as in Tanthof, where elderly remain in their larger single family homes, and there is no room for youngsters to move in. They try to tackle this, by filling empty urban spaces in the neighbourhood while remaining the connectivity, by logical ongoing routes. They want people to remain close to their own trusted and familiar environment.





## Life domain - General daily

The layout is based on the historic courtyard, they claim to have 4 successfactors; The pump, the gate, the inner mother and the regent, each is translated in a modern version.

The pump translates to common functions, like a laundry room with repair café. The gate translates to a recognisable and safe living environment, with an unforced social control. The duty of the inner mother is taken over by volunteers, they also live here, and next to them is a CareB&B, a guesthouse where temporary shelter is also possible. The regent is a housing coach, who are on distance. (Bureau SLA, 2020)

A housing coach give help and advice to elderly who have certain needs, for example; one can address him/her when one has a wish to move, they give advice and search together for a new dwelling. (wooncoachsenioren.nl, 2020)

The project lies in between both professional-informal care, and individual-collective living. Mostly because there are many options for living, there are mainly smaller apartments for individual living, but also collective rooms for residents to join each other. In terms of care, there are volunteers and some professionals who take a look after the ones in need for care, but it is favoured when the residents take a look out after each other.

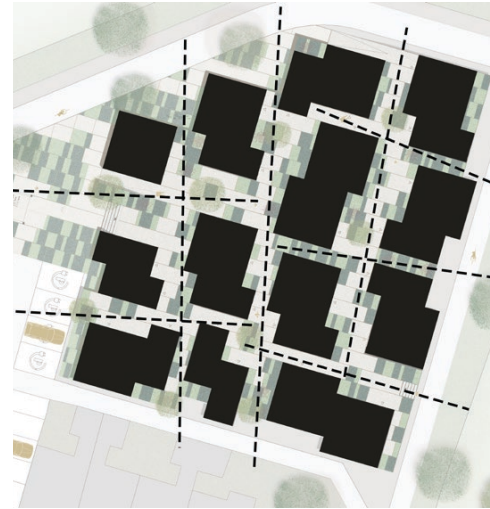
## Life domain - Mental functioning / Social network

The dwellings are situated in such way that the streets provide clear views and are mostly unobstructed. For elderly this is important for both the sense of safety, as well as a form of wayfinding, as described by the municipality of Amsterdam (2017).

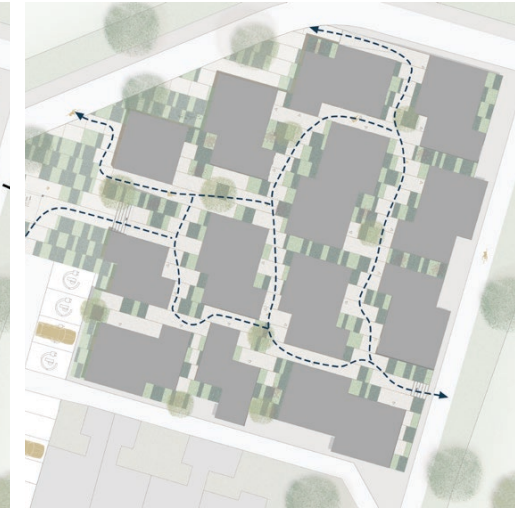
All streets a contain a vast amount of seating areas, as Jan Gehl (2011) describes, it is an important notion for encounters and meeting.

Both municipality Amsterdam and the research about dementia-friendly architecture by G. Marquardt and P. Schmiege (2009) show that it is important to have variation in architecture and clear points of recognition for elderly with mild dementia in order to find one's way. As the homes are very homogeneous and the plan is set up like a small maze, it might provide issues for them.

(Sightlines, Bureau SLA, own edit, 2020)



(Routes, Bureau SLA, own edit, 2020)



(Sightlines & Seating areas, Bureau SLA, 2020)



### Life domain - Living conditions

The plan contains many variations in the layout of the homes, as it is designed not only for one target group, but rather a diversified age group. (Bureau SLA, n.d.) As the homes are rather compact, the homes have a first floor to provide extra living space, this also means a staircase, which is not ideal for life-cycle proof dwellings for elderly to remain living in their homes. For this reason they also provide a senior- disability dwelling which has all its amenities on the ground floor. Apart from the front door, it uses sliding doors, which is easier accessible for people in a wheelchair. Bedrooms are also separated from the livingroom / kitchen, which is also much preferred in 't Kampje. In terms of living conditions it provides a good example for self-reliant living.

### Life domain - Housekeeping

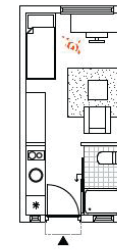
As mentioned before, the dwellings are compact, which means that the housekeeping is limited in comparison to a larger home. The homes are about 6 by 6 meters, providing a floorarea of around 36 square meters.

### Life domain - Mobility

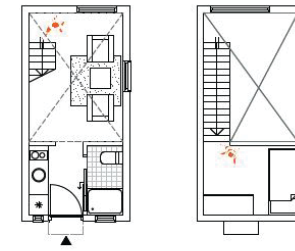
For people, or elderly with no limited mobility issues the homes with a staircase could be an option, as it also promotes natural movement by climbing the stairs. Though, self-reliance in the domain off mobility is about a safe in- and outdoor environment to move around in. A staircase could be a potential threat for a fall, a paradoxical situation.

### Life domain - Affordability

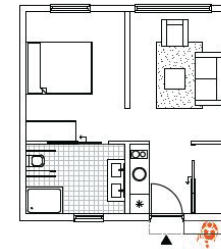
Since the homes are designed to be very compact, this lowers the investment cost and thus makes it possible to offer an affordable price for a majority of people. Even though there are no given prices, the leaflet of the plan mentions; "low founding costs: relatively small homes in relatively high densivication." (Bureau SLA, n.d.)



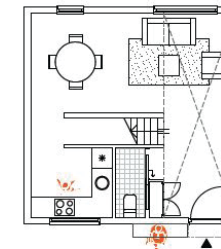
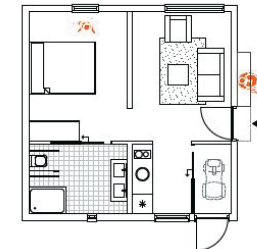
woonstudio



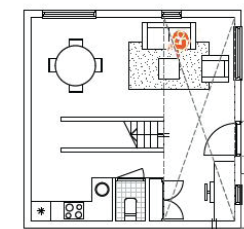
woonstudio - 2laags



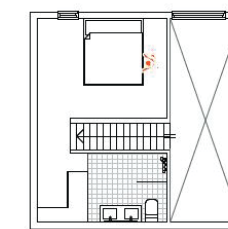
senioren- of mindervalide woning



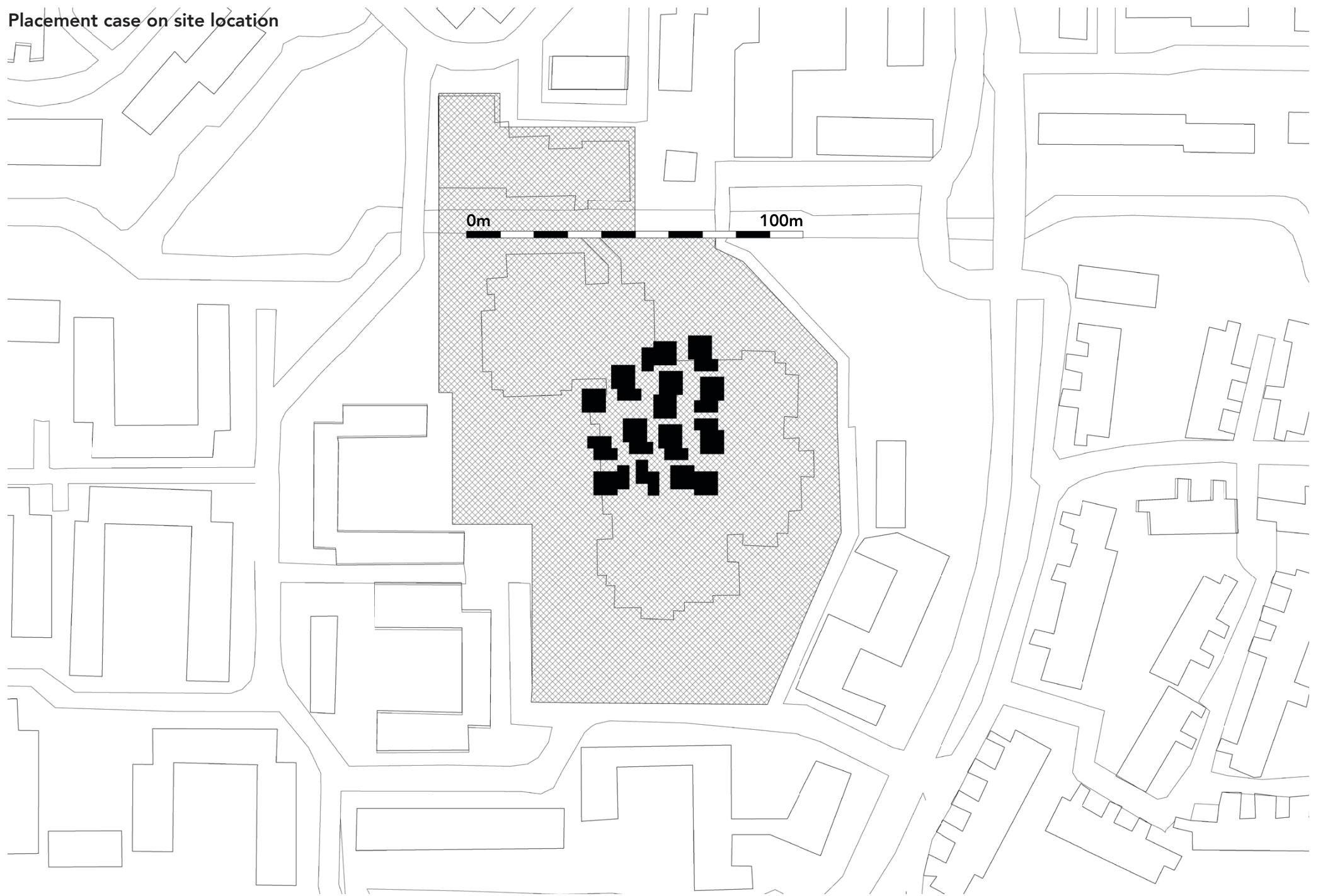
loft type A - 2laags



loft type B - 2laags



Placement case on site location



## CASE STUDIE OVERVIEW



Name Knarrenhof  
 Location Zwolle, NL  
 Architect(s) Eerde Schippers  
 Status Realised (2018)  
 No. of homes 48  
 Type of living Communal  
 Type of care Informal



Name ParkEntree  
 Location Schiedam, NL  
 Architect(s) Inbo  
 Status Realised (2020)  
 No. of homes 89  
 Type of living Communal & individual  
 Type of care Informal & professional



Name Eikpunt  
 Location Lent, NL  
 Architect(s) Van Laarhoven  
 Status Realised (2013)  
 No. of homes 52  
 Type of living Communal  
 Type of care Informal



Name BloemkoolBurenBond  
 Location Almere, NL  
 Architect(s) Bureau SLA  
 Status Competition winner  
 No. of homes 26+  
 Type of living Communal & individual  
 Type of care Informal & professional





## GENERAL CONCLUSION

97% of 55-plussers find it important to have own direction and responsibility over their health. Though, in reality this is hardly the case, especially in the visited care facilities the direction over life is observed noticeably low. People tend to lose the degree of self-reliance- and direction over life when they get old in care homes.

Self-reliance is about realising an acceptable level of functioning in the important areas of daily life. If necessary, by organising the right help at the moment that a decline in the performance level threatens or occurs that cannot be prevented or remedied by oneself. These important areas of life are called; 'life domains'. Both healthcare institutes GGD and Vilans use these domains to value their clients degree of self-reliance- and direction. The domains differ in some areas, as the domains of the GGD are used for anyone in the Netherlands, and the domains from Vilans are more tailored for elderly. The 10 domains that Vilans describe are; daytime activities, living conditions, physical functioning, mental functioning, cognitive functioning, housekeeping, general daily, social network, mobility, and the financial situation.

The main question seeks answer to the architectural needs of these domains that make up self-reliance. Each domain has certain conditions for a person to be called fully self-reliant. Most of these conditions indicate a need for independence and a safe- and healthy living environment. Architecture alone can not provide all the answers for self-reliant living, the living environment around the building plays an equal role in the degree of self-reliance for a person. The extracted design tools for each domain show correlations between each other. Such as having places for gardening, the promotion of natural movement, the need for a diverse aged target group, homes that are compact and life-cycle proof, close proximity of shops, public transport- and other amenities, and the need for a social environment. These are the main architectural / urban strategies that can encourage elderly to become more self-reliant. These have to do mainly with being- and remaining healthy in a physical way, a mental way, and a social way.

Research from Platform31 show that there is a high wish for family home dwellings in the Netherlands, also in Delft Tanthof. People wish to remain self-reliant and live for as long as possible in their homes, but in many cases these types of family homes don't provide all conditions for self-reliant living, making them unsuitable and eventually making people have to move when they need more care. Types of homes that are more suited for self-reliant living are; the neighbourhood block and the residential court, as the description of these types match the extracted design tools the most.

Architecture alone cannot provide all answers for self-reliant living, people actually have to respond to the architectural solutions and need to act on them. For the pro-active people who experience high self-direction and value a lot to self-reliance, self-reliant living is a good option. Though self-reliant living is not suited for everybody, there is a group who want to stay self-reliant, but for them it is impossible due to their physical or mental conditions. Another group is people who do not find it important to do things themselves and make themselves look dependent for others and accept care very easily. These people are often found in care-facilities, as seen during the anthropological research.

Half of the Dutch population has insufficient knowledge, motivation or self-confidence to play an active role in dealing with sickness and care. Many elderly need to be informed about certain sicknesses, diets and the importance of health. But also be actively engaged with gaining knowledge in order to increase their self-reliance.

## VISION

The goal is to create an inclusive environment where elderly act more pro-active and where they can live as self-reliant for as long as possible. The final design should stimulate the domains of daily life that determine self-reliance. It would be a success if the people living there could mean something for each other, participate together and remain to have direction of their own lives.

The living environment should be a lively, natural place where people of different ages can mean something for each other. It should be an accessible, open design with places of recognition, views, differences, and options. Because after all, every person is unique and has different needs.







## REFLECTION

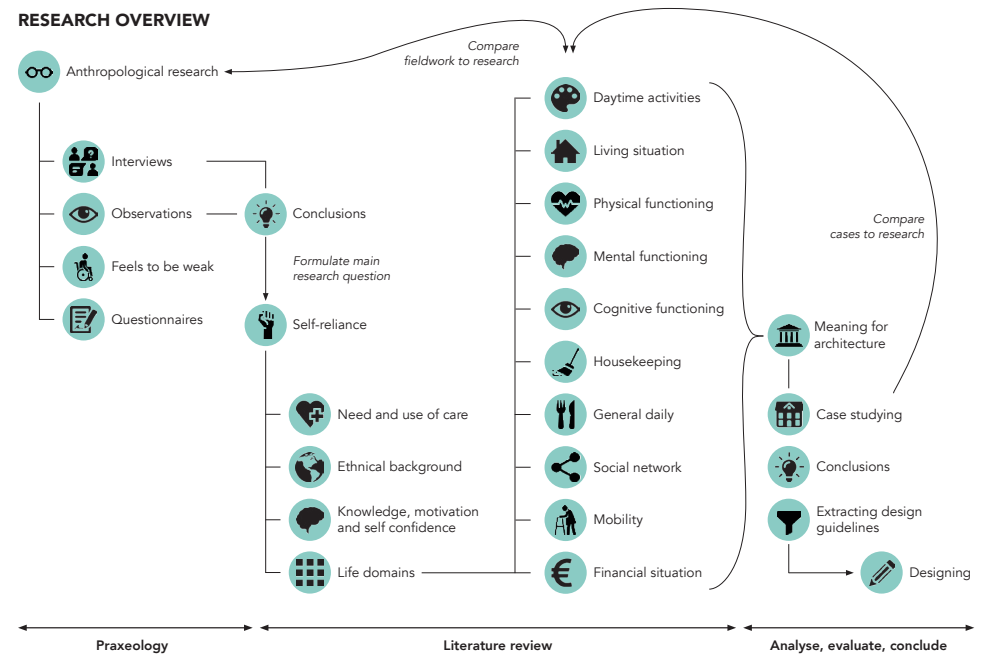
Looking back at the MSc3 and MSc 4 track I could state that it was an intensive, new, but fun experience. Differently from other tracks and courses I followed, I could now fully dive in to the topic of elderly, healthcare and the architecture that relates to it for an extended period of time. This gave many opportunities to explore things more in depth, such as the days of stay in an elderly home, and to experience what it is to have certain disabilities, using walkers, wheelchairs and visual impairing glasses.

The research is done in several steps and methods, as seen in the research overview. The first few weeks started with anthropological research, staying in an elderly home for a couple of days and walking around neighbourhoods with elderly, where I held interviews and observed elderly, to see their needs and wishes. And at the same time through questionnaires and own experiments, as stated before. This gave me an understanding of what elderly have to face, what problems they might have, and how they deal with it. Other than normally, now there was a large focus on the social aspect and our target group, and I literally got to understand them better.

At the start of the graduation I had no clear question in mind what to research, the days in the care home should form a basis for the research. We had to do this with the described methods, before that, I never really interviewed and observed people for a research. This method of research was an interesting thing to do, as I really found out how people behave and to see what their wishes and needs were. What was most striking for me, which I found out using interviews and observations, is how people tend to lose their direction over life when they get older, especially in care homes where most things in daily life are taken care for.

All the anthropological research led to the main question of; "in what ways architecture could encourage elderly to remain more self-reliant". I found out that many people have the wish to remain in their homes for as long as possible, making the research to be applicable in the whole Netherlands and possibly even abroad.

After the anthropological research I also performed more literature research. I found information about self-reliance and what domains exist that make up self-reliance. All of these domains I tried to translate to architectural solutions



(Research overview, own image, 2021)

comparing it to case studies and the anthropological research. This worked really well for me because the domains were observed in many ways, without consciously knowing that I was going to research these specific domains. If I knew the domains before, perhaps an even better research could have been done in the care home, asking and observing the specific domains, such as how people perform their housekeeping and what needs they have for it, or in what ways elderly maintain their social network.

The eventual research was rather large, creating many different guidelines, which were the base for the mass studies I did. I tried to narrow it down to more main guidelines that formed the design. These are about staying active, a natural environment, healthy lifestyles, making contacts with people from different ages, and to get help mainly from the people you know nearby, instead of professional care every day. What could be improved is to verify all obtained guidelines by more interviews and translate them in an even better practical sense.

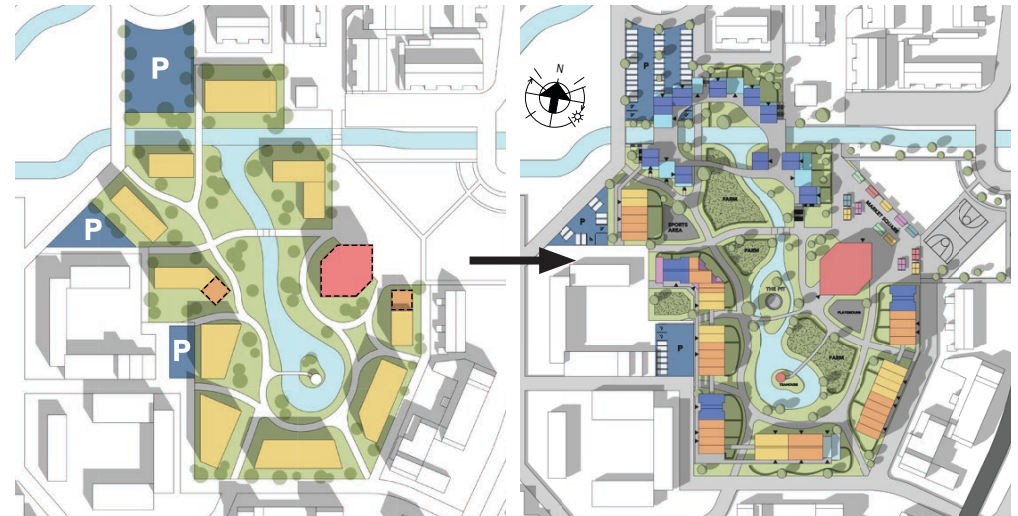
The design started off with sketches on masterplan level, the main ideas of connection to the existing neighbourhood, and having views on nature provided the first mass models. The design gradually decreased scale up the detail level, which for me went rather natural.

Creating clear guidelines was one of the key factors that made it pleasant and an understandable design. Often in previous designs I had a concept, but not clear guidelines for the design. This is something I will do more often for myself.

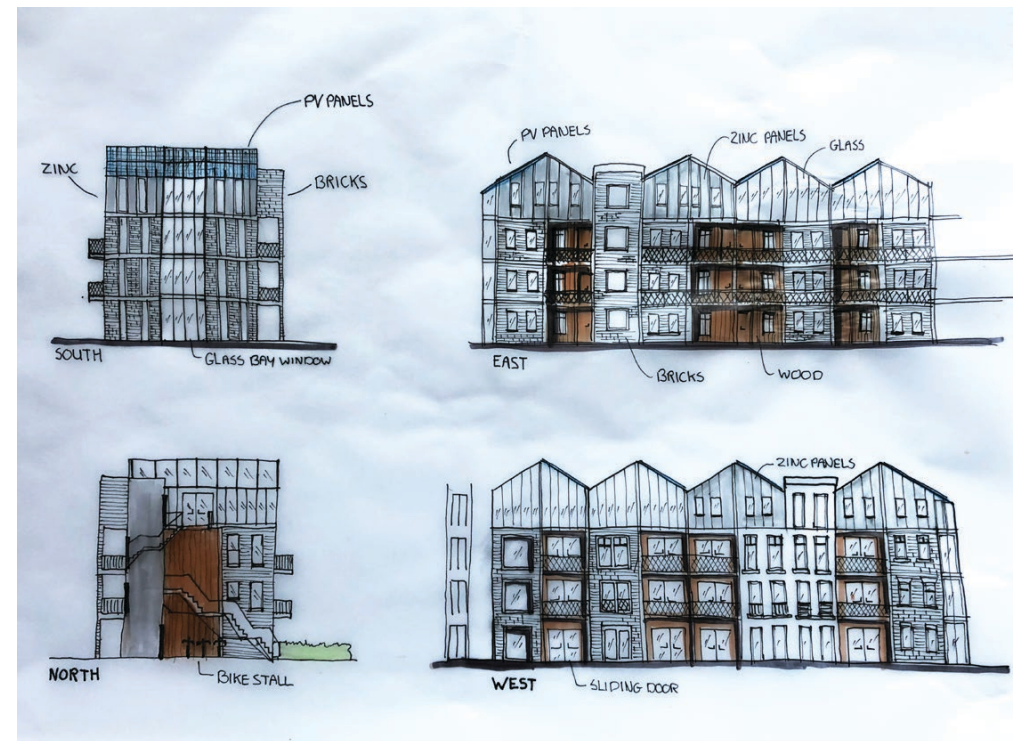
Essentially I had the idea to work out all of the buildings on the plot, but later I found out that that would be too much work, and then it would be at cost of the quality and detailing of the design. So I worked out one building block, which made it much more feasible and fun to do.

The meetings with both tutors, Birgit Jurgenhake and Lex van Deudekom, but also the people who seen our presentations, made me understand my design even better, asking myself why I made certain choices. At the same time to see things from another perspective, as sometimes I lost vision on the project as I worked on it for many weeks. For instance; they give examples of situations that I did not encounter during my research, like to have specific places for a bed when you are sick, or to have the option to sleep in separate rooms when this is wished for. Also, by joining the other student's weekly progress presentations I learned about what they researched and got inspired by this aswel.

I believe the projects in its essence is relevant for general practice, having diversity, yet connection between people is for me, essential for a healthy population. Especially when we look at the amount of caregivers that will be available in the future, there is a large need for informal care and help among neighbours, friends and family. Having designs that stimulate this, can relieve healthcare in the future, while at the same time to create a place that is really for people themselves. Where they have their own direction over life and in the end be together, self-reliant.



(Masterplan development, own images, 2021)



(Sketches of the design, own images, 2021)

## LITERATURE

### Self reliance

- Campen C van, Draak M den: Verpleging en Verzorging. In: Van Campen C (red). Kwetsbare ouderen. Den Haag: Sociaal en Cultureel Planbureau, 2011.
- Campen C van, Klerk M de: Actieve ouderen in vrijwilligerswerk en mantelzorg. In: Nimwegen N van, Praag C van (red). Bevolkingsvraagstukken in Nederland anno 2012. Actief ouder worden in Nederland. Den Haag: Nederlands Interdisciplinair Demografisch Instituut, 2012.
- Doekhie, K. D., de Veer, A. J. E., Rademakers, J. J. D. J. M., Schellevis, F. G., & Francke, A. L. (2014). Nivel overzichtstudies - Ouderen van de toekomst (Eerste druk). Retrieved from <https://www.aco-utrecht.nl/wp-content/uploads/A.3-NIVEL-Ouderen-van-de-toekomst.-Verschillen-in-de-wensen-en-mogelijkheden-voor-wonen-welzijn-en-zorg.pdf>
- Galenkamp H, Plaisier I, Huisman M, Braam AW, Deeg DJH: Trends in gezondheid en het belang van zelfredzaamheid bij zelfstandig wonende ouderen. Advies Raad voor de Volksgezondheid & Zorg. Amsterdam: Vrije Universiteit Amsterdam/ VU Medisch Centrum, februari 2012.
- GGD Amsterdam. (2017a). Handleiding Zelfredzaamheid. Retrieved from <https://www.zelfredzaamheidmatrix.nl/wp-content/uploads/200303-Handleiding-Zelfredzaamheid-Matrix-2017-v2.0.pdf>
- Graaf FM de, Francke AL: Home care for terminally ill Turks and Moroccans and their families in the Netherlands: carers' experiences and factors influencing ease of access and use of services. International Journal of Nursing Studies, 2003, 40:797-805.
- Jong Y de, Lier W van, Morée M: Zorg inkleuren. Ondersteuning van zorg in allochtone families. Utrecht: Expertisecentrum Informele Zorg/NIZW Zorg, 2007.
- NOS. (2018, April 26). Hoe hard stijgen de zorgkosten als we niet ingrijpen? Retrieved 19 October 2020, from <https://nos.nl/artikel/2229196-hoe-hard-stijgen-de-zorgkosten-als-we-niet-ingrijpen.html>
- Movisie. (2020, March 24). Eigen regie: Wat weten we en waar staan we? Retrieved 27 October 2020, from <https://www.movisie.nl/artikel/eigen-regie-wat-weten-we-waar-staan-we#:~:text=Eigen%20regie%20gaat%20om%20kiezen,van%20de%20zelfredzaamheid%20van%20cli%C3%ABnten>.
- Rademakers JJDJM: De Nederlandse patiënt en zorggebruiker in beeld. Kennissynthese. Utrecht: NIVEL, 2013.
- Shearer NBC, Fleury J, Ward KA, O'Brien AM: Empowerment Interventions for Older Adults. Western Journal of Nursing Research, 2012, 34(1):24-51.



## Life Domains

### 1. Daytime activities

- Sennett, R. (2019). *Building and Dwelling: Ethics for the City*. London, United Kingdom: penguin books ltd.
- De Wit, S (2020). *Hidden Landscapes*, online lecture

### 2. Living conditions

- Doekhie, K. D., de Veer, A. J. E., Rademakers, J. J. D. J. M., Schellevis, F. G., & Francke, A. L. (2014). *Nivel overzichtstudies - Ouderen van de toekomst (Eerste druk)*. Retrieved from <https://www.aco-utrecht.nl/wp-content/uploads/A.3-NIVEL-Ouderen-van-de-toekomst.-Verschillen-in-de-wensen-en-mogelijkheden-voor-wonen-welzijn-en-zorg.pdf>

### 3. Physical functioning

- Boekholt, D. (2019, April 12). 9 kenmerken van Blue Zones. Retrieved 1 December 2020, from <https://cmostamm.nl/9-kenmerken-blue-zones/#:%7E:text=Op%20vijf%20plekken%20leven%20mensen,gezondheid%2C%20zonder%20medicijnen%20of%20invaliditeit.>
- How to live to be 100+ (Blue Zones) - Dan Buettner. (2013, April 17). [Video file]. Retrieved from <https://www.youtube.com/watch?v=ff40YiM-mVkU&t=1s>
- Kotifani, A. (2020, July 8). Blue Zones - The Power 9. Retrieved 6 December 2020, from <https://www.bluezones.com/2016/11/power-9/>
- Mecanoo. (n.d.). Cartesiusdriehoek District. Retrieved 7 December 2020, from <https://www.mecanoo.nl/Default.aspx?tabid=424&error=An%20unexpected%20error%20has%20occurred&content=0>
- Nord, C. (2008). The aging body and architecture. *Researchgate*, 1–10. Retrieved from <https://www.researchgate.net/publication/251581711>

- Mecanoo. (n.d.). Cartesiusdriehoek District. Retrieved 7 December 2020, from <https://www.mecanoo.nl/Default.aspx?tabid=424&error=An%20unexpected%20error%20has%20occurred&content=0>
- Cartesiusdriehoek. (n.d.). Cartesiusdriehoek. Retrieved 7 December 2020, from <https://www.cartesiusdriehoek.nl/>

### 4. Mental functioning

- Gemeente Amsterdam. (2017, June). *Zorg en Ruimte - voor ouderen, Ruimtelijke strategieën voor levensloopbestendige buurten*. Retrieved from [https://www.amsterdam.nl/publish/pages/829551/zorg\\_en\\_ruimte\\_voor\\_ouderen\\_juni\\_2017.pdf](https://www.amsterdam.nl/publish/pages/829551/zorg_en_ruimte_voor_ouderen_juni_2017.pdf)
- Marquardt, G., & Schmiege, P. (2009). *Dementia Friendly Architecture: Environments That Facilitate Wayfinding in Nursing Homes*. *Sagepub*, 24(4), 1–8. Retrieved from <https://journals.sagepub.com/doi/pdf/10.1177/1533317509334959>

### 5. Cognitive functioning

- Best, J. (2017). *Colour Design (Second Edition)*. Retrieved from [https://books.google.nl/books?hl=nl&lr=&id=GfqpDQAAQBAJ&oi=fnd&pg=P-P1&dq=colour+design+theories+application&ots=sJDxMSzxT7&sig=yf-DI5FF3lHeZWioFaTyyXqGQth4&redir\\_esc=y#v=onepage&q=colour%20design%20theories%20application&f=false](https://books.google.nl/books?hl=nl&lr=&id=GfqpDQAAQBAJ&oi=fnd&pg=P-P1&dq=colour+design+theories+application&ots=sJDxMSzxT7&sig=yf-DI5FF3lHeZWioFaTyyXqGQth4&redir_esc=y#v=onepage&q=colour%20design%20theories%20application&f=false)
- Cherry, K. (2020). *The Importance of Cognition in Determining Who We Are*. Retrieved 2 December 2020, from <https://www.verywellmind.com/what-is-cognition-2794982#:~:text=Cognition%20is%20a%20term%20referring,imagination%2C%20perception%2C%20and%20planning.>
- Lennon, R., 1997. *Home Design from the Inside Out*. Penguin Arkana, New York.

- Pouya, S., & Demirel, Ö. (2014). What is a healing garden? Researchgate, 1–9. Retrieved from [https://www.researchgate.net/profile/Sima\\_Pouya2/publication/303923867\\_What\\_is\\_a\\_healing\\_garden/links/575e8ca808aec91374b3cd92/What-is-a-healing-garden.pdf](https://www.researchgate.net/profile/Sima_Pouya2/publication/303923867_What_is_a_healing_garden/links/575e8ca808aec91374b3cd92/What-is-a-healing-garden.pdf)

## 6. Housekeeping

- Bureau SLA. (n.d.). BloemkoolBurenBond. Retrieved 27 November 2020, from <https://www.prijsvraagwhocares.nl/inzendingen/bloemkoolburenbond+en+hedendaagse+hofjes/>

## 7. General daily

- Denissen, E.G.J.M. (2006) Ouderen en nieuwe technologie in huis : bondgenoten of vijanden?
- Sociaal en Cultureel Planbureau. (2019). Toekomstverkenning mantelzorg aan ouderen in 2040. Retrieved from <https://www.pbl.nl/sites/default/files/downloads/pbl-2019-toekomstverkenning-mantelzorg-aan-ouderen-in-2040-3925.pdf>
- Kloosterman, R. H. S. (2020, September 22). 55-plussers over mantelzorg krijgen. Retrieved 19 October 2020, from <https://www.cbs.nl/nl-nl/longread/statistische-trends/2020/55-plussers-over-mantelzorg-krijgen>
- Movisie. (2021, March). 5 miljoen Nederlandse mantelzorgers: de feiten en cijfers. Retrieved 18 March 2021, from <https://www.movisie.nl/artikel/5-miljoen-nederlandse-mantelzorgers-feiten-cijfers>
- Nivel. (2014). Ouderen van de toekomst - Verschillen in de wensen en mogelijkheden voor wonen, welzijn en zorg. Retrieved from <https://www.nivel.nl/sites/default/files/bestanden/Overzichtstudie-ouderen-van-de-toekomst.pdf?>
- Zorgvoorbeter. (2015). Technologie acceptatie ouderen. Retrieved from <https://www.zorgvoorbeter.nl/docs/PVZ/Onderwijs/technologie-acceptatie-ouderen-samenvatting.pdf>

## 8. Social network

- Gehl, J. (2011). Life Between Buildings. Amsterdam, Netherlands: Amsterdam University Press.
- Altman, I. (1975). The Environment and Social Behavior. Zaltbommel, Netherlands: Van Haren Publishing.

## 9. Mobility

- Gemeente Amsterdam. (2017, June). Zorg en Ruimte - voor ouderen, Ruimtelijke strategieën voor levensloopbestendige buurten. Retrieved from [https://www.amsterdam.nl/publish/pages/829551/zorg\\_en\\_ruimte\\_voor\\_ouderen\\_juni\\_2017.pdf](https://www.amsterdam.nl/publish/pages/829551/zorg_en_ruimte_voor_ouderen_juni_2017.pdf)
- Torrington, Judith (2004). Upgrading buildings for older people. London: RIBA Enterprises.

## 10. Financial situation

- Haffner, M. E. A. (2020, September). Housing affordability [Slides]. Retrieved via TU Delft webmail services.
- Bulstra, Henk, & Bert Karel Deuten (2016) Goed Wonen in een betaalbare woning. n.l. (Sputnik).

## Case Studies

### General:

- Beter Oud. (2019, November 11). 10 woonvormen voor ouderen: omzien naar elkaar. Retrieved 27 November 2020, from <https://www.beteroud.nl/nieuws/10-woonvormen-voor-ouderen-omzien-naar-elkaar>

### Knarrenhof:

- Knarrenhof. (2019, November 14). Het Knarrenhof Concept. Retrieved 16 October 2020, from <https://knarrenhof.nl/wat-is-knarrenhof/>
- Brandpunt+. (2018, February 6). Heft in eigen hand - Knarrenhof [Video file]. Retrieved from [https://www.npostart.nl/brandpunt/06-02-2018/KN\\_1696758?utm\\_medium=refferal&utm\\_source=tvblik](https://www.npostart.nl/brandpunt/06-02-2018/KN_1696758?utm_medium=refferal&utm_source=tvblik)

### ParkEntree:

- Bodewes, A. & ParkEntree. (2018). Wonen met een plus, meer dan alleen thuiskomen. Retrieved from <https://www.beyondnow.nl/wp-content/uploads/2017/09/Flyer-ParkEntreeFase2.pdf>
- ParkEntree. (2020). ParkEntree - Senior Smart Living. Retrieved 27 November 2020, from <https://www.parkentree.nl/>
- Pararius. (2020). Senior smart living in het centrum van Schiedam. Retrieved 26 November 2020, from <https://www.pararius.nl/projecten/park-entree>

### Eikpunt:

- Eikpunt. (n.d.). Woongemeenschap Eikpunt. Retrieved 28 November 2020, from <https://www.woongemeenschapeikpunt.nl/>
- kcwz. (2016, September). Generaties Huizen Samen. Retrieved 28 November 2020, from <https://www.kcwz.nl/doc/woonvariaties/Generaties-huizen-samen-web.pdf>
- Krabbendam, P. (2020, April 14). Blog – Gemeenschappelijk wonen: Woongemeenschap Eikpunt in Lent (Nijmegen). Retrieved 28 November 2020, from <https://www.dearchitect.nl/architectuur/>

[blog/2020/04/blog-gemeenschappelijk-wonen-woongemeenschap-eikpunt-in-lent-nijmegen-101240101](https://www.dearchitect.nl/architectuur/blog/2020/04/blog-gemeenschappelijk-wonen-woongemeenschap-eikpunt-in-lent-nijmegen-101240101)

### BloemkoolBurenBond

- Bureau SLA. (n.d.). BloemkoolBurenBond. Retrieved 27 November 2020, from <https://www.prijsvraagwhocares.nl/inzendingen/bloemkoolburenbond+en+hedendaagse+hofjes/>
- Wooncoachsenioren. (n.d.). Wat doet de wooncoach - Wooncoach Senioren. Retrieved 28 November 2020, from <https://www.wooncoachsenioren.nl/#:~:text=De%20Wooncoach%20geeft%20hulp%20en,en%20willen%20of%20moeten%20verhuizen.&text=Je%20bespreekt%20de%20woonwensen%20en,naar%20een%20woning%20op%20Woningnet.>

### Cartesiusdriehoek District

- Mecanoo. (n.d.). Cartesiusdriehoek District. Retrieved 7 December 2020, from <https://www.mecanoo.nl/Default.aspx?tabid=424&error=An%20unexpected%20error%20has%20occurred&content=0>
- Cartesiusdriehoek. (n.d.). Cartesiusdriehoek. Retrieved 7 December 2020, from <https://www.cartesiusdriehoek.nl/>



# **APPENDIX**

# APPENDIX

## Fieldwork prepared questions

### OBSERVATIE

#### BEWEGING

- .1 Hoe bewegen mensen zich door het gebouw?
- .2 Welk type verticaal transport wordt vaak gebruikt?
- .3 Welke problemen komen mensen tegen onderweg?

#### SOCIAAL / INTERACTIE

- .4 Wat doen mensen samen?
- .5 Wanneer doen ze deze activiteiten?
- .6 Wat doen mensen alleen?
- .7 Wanneer doen ze dit?

#### PLATTEGROND

- .8 Hoe ziet de ruimte van een bewoner er uit?
- .9 Wat nemen mensen mee in dit soort huizen?
- .10 Waar laten mensen hun persoonlijke items?

#### EMOTIE

- .11 Hoe reageren ouderen op bepaalde gebeurtenissen?

#### ARCHITECTUUR

- .12 Hoe is het gebouw geïntegreerd in de omgeving?
- .13 Hoe zijn ruimtes aan elkaar geschakeld?
- .14 Welke ruimtes worden vaak gebruikt? en waarom?
- .15 Waar vinden veel interacties plaats?
- .16 Wat voor materialen en kleuren worden gebruikt?

## **INTERVIEWS BEWONERS**

### **ONTMOETING**

- 1.1 Wanneer bent u hier naar toe verhuisd?
- 1.2 Was het toen anders als nu?
- 1.3 Vond u de transitie tussen uw oude huis en hier groot? Wat en waarom?
- 1.4 Waarom heeft u voor dit verzorgingstehuis gekozen en niet een andere?

### **SOCIAAL / INTERACTIE**

- 2.1 Wat vindt u hier leuk om zelf te doen?
- 2.2 Wanneer doet u dit vaak?
- 2.3 Wat doet u graag met anderen die hier wonen?

### **TEVREDENHEID**

- 3.1 Wat vindt u over het algemeen van dit verzorgingstehuis?
- 3.2 Als u een plek moest opnoemen in dit gebouw, waar bent u dan het liefst?
- 3.3 Waarom deze plek?
- 3.4 Wat vindt u een onprettige plek in het gebouw en weet u waardoor dat zou kunnen komen?
- 3.5 Heeft u het gevoel dat u betrokken bent in de buurt of het dorp? Waardoor komt dat denkt u?

### **VISITE**

- 4.1 Krijgt u regelmatig bezoek?
- 4.2 Op welke plek ontvangt u ze dan? Waarom op deze plek?
- 4.3 Wat zou u vinden van een speciale plek waar u mensen kunt ontvangen, zoals bij speciale gelegenheden of verjaardagen?

## **INTERVIEWS PERSONEEL**

### **INTRESSE**

- 5.1 Wat voor werk doet u precies?
- 5.2 Hoe lang doet u dit al?
- 5.3 Waarom doet u het werk wat u nu doet?
- 5.4 Heeft u ook in andere verzorgingstehuizen gewerkt?
- 5.5 Zo ja - Wat waren de grootste verschillen hier tussen?
- 5.6 Wat vindt u het leukst om te doen?
- 5.7 En waar ergert u zich aan?
- 5.8 Waar verblijft u tijdens een pauze? en wat doet u dan meestal?

### **SOCIAAL / INTERACTIE**

- 6.1 Wat vindt u het leukst aan de bewoners hier?
- 6.2 Heeft u het idee dat de mensen die hier wonen nog veel worden betrokken in de buurt of het dorp?

### **TEVREDENHEID**

- 7.1 Wat vindt u over het algemeen van dit verzorgingstehuis?
- 7.2 Hoe beleeft u de werksfeer in dit gebouw?
- 7.3 Wat vindt u een onprettige plek in het gebouw en weet u waardoor dat zou kunnen komen?



## Interview inhabitant 1

Wanneer bent u hier naar toe verhuisd?	Een week geleden ondertussen, ik zit er net!
Waarom heeft u voor dit verzorgingstehuis gekozen en niet een andere?	Er was geen plek in Breukelen waar mijn vrouw zit, ik wacht tot er iemand weg gaat, of er eigenlijk dood gaat.
Bezoekt u uw vrouw nog regelmatig?	Ja zeker, ik ga iedere week met mn scooter er naar toe, ik ben zo'n 10 minuten onderweg, dus dat is mooi te doen.
Ik zie hier een scooter staan, gebruikt u deze daar voor?	Nee nee, ik heb buiten een veel grotere staan, die hebben ze liever niet binnen, omdat ie in de weg zou staan. Ik vind ze maar zeuren, niemand heeft er last van! Ze willen dat ik hem buiten in de stalling zet, maar dan is het weer zo'n gedoe om er mee weg te gaan, eerst met de kleine daar naar toe, en dan weer wisselen, en dat nog een keer op de terugweg!
Vind u de kamer waar u nu zit prettig?	Het is een fantastische kamer, er is mooi veel licht en de kamer is groot zat.
Hoe is het anders dan hoe u vroeger leefde?	Vroeger deelde we een toilet, die je van beide kamers kon betreden, maar de buurman vergat vaak de deur weer open te doen.
Heeft u liever een eigen toilet? of vind u het delen ook prima?	Na deze ervaring heb ik liever een eigen toilet, dat houd je ook netter.
Heeft u ook kinderen die regelmatig langs komen?	Ja, ik heb 3 zonen en 1 dochter, 2 zitten in het buitenland, dus die spreek ik niet heel vaak, alleen via de telefoon. Mijn dochter komt wel vaak bij mij langs, dan eten we gezellig samen wat.
Wat vind u het meest prettige aan uw woning?	Ik vind het fijn dat het een grote ruimte is, en dat ik een eigen keuken heb om te kunnen koken.
Kookt u vaak voor uzelf?	Niet heel vaak, ze maken hier lekkere gerechten, dus die kan ik niet laten staan he!
Wat vind u jammer aan deze plek?	Dat er niet veel buurt winkels zijn, je moet ver reizen voor iets leuks.

## Interview inhabitant 2

Wanneer bent u hier naar toe verhuisd?	Na het overleiden van mijn man ben ik hier naar toe verhuisd. Hiervoor woonden wij in een grote flat.
Kon u niet meer zelfstandig wonen op uw vorige plek?	Nee, het huis werd veel te groot voor mij alleen, ik wilde graag iets kleiner wonen.
Waarom heeft u voor deze plek gekozen?	De omgeving is prachtig, en de sfeer in het gebouw is ook erg goed, toen wij hier kwamen kijken waren we gelijk om.
Wat vind u hier leuk om zelf te doen?	Vroeger speelde ik heel graag instrumenten, ik heb ze hier nu ook nog liggen, maar het spelen gaat niet meer zo goed omdat ik een tia heb gehad. Ik heb soms moeite met dingen onthouden, maar ik heb nog geluk gehad want t kon veel erger.
Wat heeft u voornamelijk hier naar toe meegenomen?	Ik heb veel spullen thuis moeten laten, of ik bracht het naar de kringloopwinkel. Ik heb nu voornamelijk de essentieële dingen meegenomen. En natuurlijk veel foto's en herrineringen.
Ik zie veel exotische objecten staan, reist u veel?	Vroeger gingen we de hele wereld rond, nu doe ik dat niet meer.
Waarom niet?	Ik ben al vrij oud en nadat mijn man is overleden had ik er ook geen zin meer in.
Is er nog veel familie die langs komt?	Ik heb gelukkig een grote familie, maar veel wonen ook in het buitenland. Ze bellen vaak, dus daar ben ik erg blij mee.
Waar ontmoet u uw vrienden en familie als ze langs komen?	Als het mooi weer is, dan zitten we graag buiten, anders gewoon in mijn kamer.
Vind u dat er genoeg te doen is in het gebouw?	Ze organiseren veel dingen in t pand, iedere dag wel, maar ik doe niet aan alles mee. Alleen de dingen die ik echt leuk vind. Het mooiste vind ik de groepen die komen muziek maken.

### Interview inhabitant 3 & 4 simultaneously

Wat vinden jullie het grootste verschil tussen jullie vorige huis en hier?

Grootste verschil is zeker de vrijheid, we zijn toch wel veel afhankelijk van anderen hier.

Wat vinden jullie over het algemeen van het verzorgingstehuis?

3 - Weinig te klagen, t is wel prima.

4 - Ik vind t nou echt jammer dat ik geen koffie kreeg toen ik hier kwam wonen, omdat ik hier gewoon een kamer huur. Ik mocht er bij zitten, maar kon geen koffie krijgen, want dat zou niet in het pakket zitten.

Vinden jullie dat er genoeg te doen valt in of rondom het gebouw?

Er word veel georganiseerd, maar vaak weten we niet wanneer ze zijn, of wanneer ze worden afgelast, zoals deze week. Ze hebben het ons niet laten weten, we zijn erg onwetend wanneer er iets gebeurt.

Hoe komt dat dan?

Er is geen leiding, geen vast aanspreek persoon, er moet betere communicatie zijn naar ons toe.

Doen jullie vaak mee met activiteiten?

Als ze er zijn, doen wij altijd mee, ik snap niet wat al die mensen de hele dag op hun kamer doen.

Waar gebeuren deze activiteiten voornamelijk?

Eerder voornamelijk in de keuken, maar door corona mogen we daar niet meer zitten.

Hebben jullie ook wel eens contact met jongeren?

Voorheen zaten hier ook een aantal studenten, en er komen ook wel eens stagelopers langs, en mensen zoals jullie. Nu is dat een stuk minder, de studenten zijn ook al weer weg.

Hoe was het om met de studenten samen te leven?

Ze deden niet heel veel met ons, ze zijn overdag weg, en als ze thuis zijn dan zijn ze moe en blijven ze in de kamer, dan hebben ze geen zin meer om met ons oudjes te kletsen.

Wat vind u van de verzorging hier?

Het zijn hele lieve mensen, helemaal goed. Alleen laatst komt er zo iemand binnen waarvan ik denk, wie is dat nou weer? Blijkt het een klusjesman te zijn, maar daar laten ze dan niets van horen.

Wordt er veel voor jullie gedaan?

Als we willen, kunnen we de hele dag lekker in onze stoel zitten. We proberen wel zelf veel te doen, maar de zorg neemt het vaak van ons over.



Wat vind u van uw woning?	De ruimte is super, alleen zit hier buiten een afvoerpijp van de keuken, waardoor ik het raam niet open kan zetten. Alle rook komt naar binnen.
Wordt dit gerepareerd?	Als het goed is wel, ze zijn al eens langs gekomen, maar het paste allemaal niet. Ik heb er verder niets meer over gehoord.
Is er iets wat u mist in het gebouw?	In Breukelen was alles wat groter en meer centraal geregeld, er was een dokter, en dat is erg fijn om te hebben in de buurt. Voor de verbouwen zaten er handvaten langs de wanden, dat was wel fijn want dan hoef je niet altijd met de rollator weg.
Wat vind u erg leuk om te doen hier?	Ik vond het heel erg leuk toen er een groot scherm was in studio idee, die lieten allemaal mooie beelden van de omgeving zien. Gezellig om met z'n allen naar te kijken, voor herinneringen.
Zitten jullie vaak op het balkon?	Wanneer de zon lekker schijnt, zit ik heel graag buiten, maar vaak wel met een zonnescherm erbij. Het is fijn om een snelle verbinding naar buiten te hebben.
En buiten? zitten jullie er vaak of maken jullie een rondje?	Met mooi weer zitten we graag samen onder de grote boom op het terras, daar zitten we ook nog wel goed uit de wind.
Doen jullie vaak iets voor elkaar als ouderen onderling?	Wij kijken vaak wel uit naar elkaar, ik haal nog wel eens een boodschapje voor haar. Ik kan dat nog goed, de winkel is net niet te ver. De anderen roddelen graag over ons, ze zeggen dat we een stelletje zijn, maar dat is natuurlijk niet zo! Ze zijn vaak jaloers en willen graag elkaar overtreffen, bijvoorbeeld wie het meest heeft megemaakt in de oorlog, of wie de meeste ziektes heeft gehad. Daar heb ik het liever niet over, dus ik ga ook minder met hen om.
Heeft u een idee waarom niet iedereen er bij komt zitten?	Veel zitten in hun kamer, dat waren vroeger boeren, die hadden geen burens dus zijn ze ook gewend om alleen te zijn. Ik denk dat het daar aan ligt.

### Interview inhabitant 5 (70 years old, woman)

Hoe lang woont u hier nu?	Ik woon hier nu ondertussen 2,5 jaar.
Wat was de reden voor uw verhuizing?	Ik woonde hier in Loenen samen met mijn man, in een groot huis, maar op een dag kwam mijn man met het verhaal dat hij uit de kast is gekomen. Hij had een ander gevonden en we zijn uit elkaar gegaan. Ik wou toen graag wat kleiner gaan wonen en toen ben ik hier gaan kijken, en ik vond het er erg leuk uit zien allemaal.
Wat vindt u er allemaal zo leuk aan verder?	Ik heb een fantastisch uitzicht vanuit mijn kamer, en het is er mooi licht. Ik heb een eigen keukentje, dus ik kan ook zelf nog lekker koken.
Kookt u vaak zelf?	Ja. Altijd. Af en toe eet de buurvrouw mee, of ik bij haar. Dat is wel zo gezellig.
Gebruikt u wel eens de open keukens?	Eigenlijk niet, ik heb niet echt zin om met andere mensen te koken. Net zoals die spelletjes, daar voel ik mij nog echt te jong voor.
U doet dus niet heel veel met de andere bewoners hier?	Nou, met een aantal wel, die ook nog wel jong van geest zijn, maar met de anderen en die gekkies die hier beneden zitten, echt niet hoor. We delen samen, met zn vijven ook een wasmachine, aangezien we die hier niet echt kwijt kunnen.
Hoe organiseerd u dat dan?	Nou, iedereen heeft zijn eigen wasdag, en dan kun je alles gaan wassen en drogen, zo komt iedereen aan de beurt, en is het ook niet zo duur om aan te schaffen.
Wat is het grootste verschil tussen uw oude woning en hier?	De grootte, ik heb nu veel minder spullen, we hebben alles weggedaan, verkocht of weggebracht naar de kringloop. Ik heb nu alleen de essentiële dingen, en daar ben ik heel tevreden mee. Bijna alles wat je hier nu ziet komt bij de Ikea vandaan.
Zit u vaak op uw balkon hier?	Ja t liefst wel, als ik die niet had, dan zou het heel opgesloten voelen. Nou heb ik geen rollator nodig, maar t opstapje is wel erg hoog.
U heeft mooi uitzicht op de tuin, zit u hier ook wel eens?	Nee, eigenlijk nooit. Je moet toch helemaal naar beneden en omlopen om er snel te komen, dat lukt niet vanaf hier.

Gaat u niet vaak meer uit de deur?	Ja dat wel hoor, ik kan nog zelf auto rijden, dus ik kan ook wel eens naar vrienden of familie toe rijden.
En als u thuis alleen bent, wat doet u dan graag?	Ik lees heel veel, of ik luister naar de radio. Ik kijk anders ook veel televisie.
Wat vind u minder aan uw woning?	Het is vrij gehorig, onder mij hoor ik ze vaak met stoelen en tafels schuiven, daar word ik soms wel eens wakker van. Hier onder zit ook ergens een keuken, en die geuren gaan via de trap naar boven, waarschijnlijk heb je het zelf ook al geroken, maar dat trekt dus ook mijn kamer binnen, daar walg ik van.
En in het gebouw zelf?	Veel mensen hebben de deuren open staan, en als ze niet best meer kunnen horen dan zetten ze de televisie khard aan, dat hoor je dus best goed. Ik moet dus altijd de deuren dicht houden. Ik snap trouwens ook niet het nut van de trap hier naar de PG, je kan daar niet eens goed vluchten, en alles is afgezet.
Uw kleinkind was hier net, komt ze vaak op bezoek?	Ja, ik ben haar oppas in de pauzes voor school, ik vind het heel leuk dat ze langs komt, voor haar is het altijd een feestje.



## Interview staff member

Hoe lang doet u al het werk wat u nu doet?	Ik werk hier nu 9 maanden.
En wat voor werk doet u precies?	Ik ben in zekere zin een gastheer, ik voorzie de bewoners van een ontbijt, breng ze de medicatie enzovoorts.
Waarom heeft u er voor gekozen dit werk te doen?	Vroeger zat ik in de techniek, daar ben ik nu helemaal klaar mee, er waren veels te veel problemen. Ik wou meer onder de mensen komen en contact maken.
Wat maakt het zo leuk?	Het contact met mensen, het is veel meer op maat gemaakt naar de client. Ik bied ook een goed luisterend oor. En ben dus echt ook een communicator. Er is dus veel 1 op 1 contact, dat vinden de mensen hier fijn.
Is dat nodig hier?	Veel mensen zijn vaak op zich zelf, en doen weinig activiteiten met anderen. Ik ga naar de meer eenzamere mensen toe ter vermaak voor hun.
Waar hebben jullie het dan zowel over?	Het gaat veelal over de zelfde onderwerpen, omdat de mensen verder ook niet heel veel meer meemaken. Ik merk dat ze veel klagen.
Wat ziet u de mensen over t algemeen veel doen, die alleen op hun kamer zitten?	Ze zijn aan het lezen, of ze kijken televisie. Maar ook een hoop die aan het puzzelen zijn.
Heeft u het idee dat de mensen die hier wonen nog veel worden betrokken in de buurt of in het dorp?	We hebben hier het initiatief van Stichting vrienden van 't Kampje, die nemen de mensen hier mee om boodschappen te doen, of activiteiten te doen. In 'normale' omstandigheden natuurlijk veel meer dan nu. Dan gaan ze meer dagjes uit. Ook de mensen in de aanleunwoningen worden hierbij betrokken.
Hoe beleefd u de werksfeer in het gebouw?	Ik vind dat er goeie communicatie is onder de collegas, iedereen weet waar die aan toe is.
Tijdens pauzes, wat doet u dan voornamelijk en waar?	Ik neem vrij weinig pauzes, vaak ga ik even naar buiten om een sigaret te roken, ondertussen neem ik informatie door. Binnen zit ik vaak in de open keukens, dan ben ik ook een aanspreekpunt voor mensen hier.

Wat vind u leuk om te doen met de ouderen?

Live kook sessies worden heel vaak als positief ontvangen, iedereen is lekker bezig, en zo leren we elkaar beter kennen.

Als u nu een zak met 10 miljoen euro zou krijgen, wat zou u daarmee veranderen aan het gebouw?

Pfoe, dat is een goeie vraag. Ik zou denk ik studio Idee opkopen, om daar onze eigen activiteiten goed te kunnen plannen. Mensen vinden het leuk om met zn allen in een grotere ruimte te zitten. En ik zou grotere gemeenschappelijke ruimtes en keukens maken.

Het viel ons op dat de open keukens vrijwel niet worden gebruikt, waardoor komt dat denkt u?

Ja, nu je het zegt, het wordt wel weinig gebruikt, ik denk dat mensen niet helemaal begrijpen dat ze t samen kunnen gebruiken op ieder moment van de dag. Misschien moeten we het beter inlichten.

# Vilians self reliance valuer



Zelfredzaamheid | Zelfredzaamheidsmeter | © Vilians, juni 2013

Levensdomein 1		Dagbesteding (vrije tijd, zinvolle activiteiten)			
	Heeft weinig tot niets te doen op een dag en ervaart dit als negatief.	Heeft een aantal activiteiten, maar vindt dit zelf onvoldoende.	Heeft voldoende dagbesteding.	Kan de activiteiten doen die hij leuk of belangrijk vindt (bv hobby's).	
Zelfredzaamheid	1 - niet	2 - beperkt	3 - voldoende	4 - volledig	
	1	1,5	2	2,5	3
				3,5	4
	Is afhankelijk van anderen om de dagbesteding te organiseren.	Is gedeeltelijk afhankelijk van anderen om de dagbesteding te organiseren.	Regelt de eigen dagbesteding helemaal zelf.		
Eigen regie	1 - geen	2 - beperkt	3 - volledig		
	1	1,5	2	2,5	3

4

Zelfredzaamheid | Zelfredzaamheidsmeter | © Vilians, juni 2013

Levensdomein 2		Woonsituatie			
	De woonsituatie is ongeschikt voor deze cliënt. Er moeten grote aanpassingen plaatsvinden of de persoon moet verhuizen. En/of er is sprake van een onveilige situatie.	De cliënt kan zich met de nodige moeite redden in en om het huis. Er zijn aanpassingen nodig en/of het is soms niet veilig.	De cliënt kan zich redelijk redden in huis. Evt. zijn er kleine aanpassingen gewenst.	De cliënt kan zich volledig redden in en om de eigen woning. De woning is geschikt.	
Zelfredzaamheid	1 - niet	2 - beperkt	3 - voldoende	4 - volledig	
	1	1,5	2	2,5	3
				3,5	4
	Is afhankelijk van anderen om aanpassingen of verhuizing te regelen.	Heeft enige hulp nodig bij het regelen van aanpassingen of verhuizing.	Regelt evt. aanpassingen of verhuizing zelf.		Niet van toepassing, de cliënt is volledig zelfredzaam op dit levensdomein.
Eigen regie	1 - geen	2 - beperkt	3 - volledig	4 - niet van toepassing	
	1	1,5	2	2,5	3

5



Zelfredzaamheid | Zelfredzaamheidsmeter | © Vilians, juni 2013

Levensdomein 3		Lichamelijk functioneren			
	Er is sprake van lichamelijke problemen/(chronische) ziekte(n) die regelmatig behandeling of verpleging vereisen. De persoon ervaart ernstige gezondheidsbeperkingen.	Er is sprake van lichamelijke problemen/chronische ziekte(n) en enige gezondheidsbeperkingen. Er is soms behandeling of verpleging nodig.	Er is sprake van lichamelijke problemen of chronische ziekte. De persoon heeft hier weinig last van en ervaart geen of weinig gezondheidsbeperkingen.	Er zijn geen directe of voortdurende medische problemen. De persoon functioneert fysiek gezien goed.	
Zelfredzaamheid	1 - niet	2 - beperkt	3 - voldoende	4 - volledig	
	1	1,5	2	2,5	3
				3,5	4
	Heeft geen of weinig inzicht in de eigen ziekte.	Heeft beperkt inzicht in de eigen ziekte.	Heeft inzicht in de eigen ziekte en kan zelf goed bepalen wanneer en of behandeling nodig is.		Heeft geen problemen bij het lichamelijk functioneren.
Eigen regie	1 - geen	2 - beperkt	3 - volledig	4 - niet van toepassing	
	1	1,5	2	2,5	3

6

Zelfredzaamheid | Zelfredzaamheidsmeter | © Vilians, juni 2013

Levensdomein 4		Psychisch functioneren			
	Terugkerende psychische problemen in de vorm van somberheid en/of angsten of vermoeden hiervan. De cliënt heeft hier veel last van in het functioneren.	Milde symptomen van somberheid en/of angst of vermoeden hiervan. De stemming van de cliënt is wisselend. Heeft hier enige last van bij het functioneren.	Heeft soms last van somberheid en/of angsten, maar de cliënt wordt hierdoor niet of nauwelijks belemmerd in het functioneren.	De cliënt functioneert goed. De stemming is doorgaans positief. Niet meer dan de dagelijkse beslommeringen of zorgen.	
Zelfredzaamheid	1 - niet	2 - beperkt	3 - voldoende	4 - volledig	
	1	1,5	2	2,5	3
				3,5	4
	Heeft geen of weinig inzicht in het functioneren en/of kan niet goed bepalen of hulp nodig is.	Heeft beperkt inzicht in het eigen functioneren en kan in beperkte mate inschatten of hulp nodig is.	Heeft inzicht in het eigen functioneren en/of kan zelf goed bepalen of hulp nodig is.		Heeft geen problemen bij psychisch functioneren.
Eigen regie	1 - geen	2 - beperkt	3 - volledig	4 - niet van toepassing	
	1	1,5	2	2,5	3

7







Levensdomein 5 Cognitief functioneren				
	Er is sprake van of vermoeden van een sterk verminderd cognitief functioneren.	Er spelen enige problemen in het cognitief functioneren of vermoeden hiervan.	Er is sprake van een voldoende functionerend cognitief vermogen.	Er zijn geen problemen op cognitief gebied.
Zelfredzaamheid	1 - niet	2 - beperkt	3 - voldoende	4 - volledig
	1	1,5	2	2,5
	1	1,5	2	2,5
	3	3,5	4	
	1 - niet in staat om cognitieve problemen te signaleren en kan niet goed bepalen of er behandeling nodig is.	Heeft in beperkte mate inzicht in de cognitieve problemen en schakelt beperkt hulp in.	Heeft volledig inzicht in cognitieve problemen en kan goed bepalen of behandeling nodig is. Houdt zich aan evt. behandeling.	Heeft geen problemen bij het cognitief functioneren.
Eigen regie	1 - geen	2 - beperkt	3 - volledig	4 - niet van toepassing
	1	1,5	2	2,5
	1	1,5	2	2,5
	3			



Levensdomein 6 Huishouden				
	Is niet in staat het huishouden zelf te doen en/of er is sprake van een grote achterstand waardoor sprake is vervuiling van de woning.	Heeft de nodige beperkingen bij het uitvoeren van het huishouden en/of vervuiling dreigt.	De meeste huishoudelijke werkzaamheden kan de persoon zelfstandig doen. Indien het huishouden of een deel daarvan door anderen wordt gedaan is dit een eigen keuze.	Kan het huishouden volledig zelfstandig doen. Indien het huishouden of een deel ervan door anderen wordt gedaan is dit een eigen keuze.
Zelfredzaamheid	1 - niet	2 - beperkt	3 - voldoende	4 - volledig
	1	1,5	2	2,5
	1	1,5	2	2,5
	3	3,5	4	
	1 - niet in staat zelf hulp te organiseren bij het huishouden.	Is deels in staat hulp te organiseren bij het huishouden en te bepalen hoe het huishouden gedaan moet worden.	Kan zelf hulp organiseren bij het huishouden en bepalen hoe het huishouden gedaan moet worden.	
Eigen regie	1 - geen	2 - beperkt	3 - volledig	
	1	1,5	2	2,5
	1	1,5	2	2,5
	3			



Levensdomein 7 ADL- vaardigheden				
	Er is sprake van een belangrijk probleem op één of meer gebieden van zelfzorg/ADL vaardigheden (eten, wassen, aankleden, naar toilet gaan). Is (bijna) volledig afhankelijk van anderen.	Heeft problemen bij de sommige gebieden van zelfzorg/ADL- vaardigheden. Kan deels voor zichzelf zorgen en heeft deels hulp nodig.	Kan (met moeite) zelfstandig functioneren als het gaat om ADL-vaardigheden.	Is volledig in staat op alle gebieden van ADL zelfstandig te functioneren.
Zelfredzaamheid	1 - niet	2 - beperkt	3 - voldoende	4 - volledig
	1	1,5	2	2,5
	1	1,5	2	2,5
	3	3,5	4	
	1 - niet in staat zelf de hulpvraag te formuleren en/of te regelen.	Kan deels de hulpvraag bepalen en/of regelen.	Kan zelf bepalen hoe en wanneer hij/zij de hulp wilt ontvangen.	Heeft geen problemen op gebied van ADL.
Eigen regie	1 - geen	2 - beperkt	3 - volledig	4 - niet van toepassing
	1	1,5	2	2,5
	1	1,5	2	2,5
	3			



Levensdomein 8 Sociaal netwerk				
	Heeft weinig sociale contacten en er is sprake van ernstige eenzaamheidsproblematiek	Er zijn enige contacten. De cliënt zou graag meer contacten hebben. Er is sprake van lichte eenzaamheidsproblematiek.	De cliënt heeft, voor zijn eigen gevoel, voldoende sociale contacten met familie en vrienden. Er is niet echt sprake van eenzaamheidsproblematiek.	Er is sprake van een gezond sociaal netwerk. De cliënt voelt zich niet eenzaam.
Zelfredzaamheid	1 - niet	2 - beperkt	3 - voldoende	4 - volledig
	1	1,5	2	2,5
	1	1,5	2	2,5
	3	3,5	4	
	1 - niet in staat zelf het sociale netwerk te te organiseren of sociale contacten aan te gaan.	Is deels in staat zelf het sociale netwerk te organiseren of sociale contacten aan te gaan.	Is in staat het eigen sociale netwerk te regelen of contacten aan te gaan.	
Eigen regie	1 - geen	2 - beperkt	3 - volledig	
	1	1,5	2	2,5
	1	1,5	2	2,5
	3			



Levensdomein 9 Mobiliteit				
	Is niet in staat zich (veilig) buitenshuis te verplaatsen. Bijvoorbeeld om boodschappen te doen of naar mensen of activiteiten te gaan. NB: het gaat er niet om of iemand wel of niet hulpmiddelen heeft of gebruikt.	Is beperkt in staat zich (veilig) buitenshuis te verplaatsen. Bijvoorbeeld om boodschappen te doen of naar mensen of activiteiten te gaan. NB: het gaat er niet om of iemand wel of niet hulpmiddelen heeft of gebruikt.	Kan zich voldoende redden als het erom gaat zich buitenshuis (veilig) te verplaatsen. Bijvoorbeeld om boodschappen te doen of naar mensen of activiteiten te gaan. NB: het gaat er niet om of iemand wel of niet hulpmiddelen heeft of gebruikt.	Heeft geen mobiliteitsproblemen. Is volledig zelfredzaam op dit terrein.
<b>Zelfredzaamheid</b>	1 - niet 1	2 - beperkt 2	3 - voldoende 3	4 - volledig 4
<b>Eigen regie</b>	1 - geen 1	2 - beperkt 2	3 - volledig 3	4 - niet van toepassing



Levensdomein 10 Financiële situatie				
	Onvoldoende inkomsten voor het aanschaffen van basisbehoeften en/of er is sprake van schuldenproblematiek.	Net voldoende inkomsten voor de basisbehoeften.	Voldoende inkomsten voor basisbehoeften en een aantal extra's.	Kan zich financieel goed redden.
<b>Zelfredzaamheid</b>	1 - niet 1	2 - beperkt 2	3 - voldoende 3	4 - volledig 4
<b>Eigen regie</b>	1 - geen 1	2 - beperkt 2	3 - volledig 3	

# Zelfredzaamheid-Matrix<sup>®</sup> 2017

GGD Amsterdam



**Instructie:** beoordeel het huidig functioneren (**hoe gaat het NU**) op basis van wat u weet (**informatie uit observatie, niet uit interpretatie**) en ga uit van volledige zelfredzaamheid (**scoor van rechts naar links**). Zie de Handleiding ZRM voor verdere toelichting: [www.zrm.nl](http://www.zrm.nl).

DOMEIN	1 Acute problematiek	2 Niet zelfredzaam	3 Beperkt zelfredzaam	4 Voldoende zelfredzaam	5 Volledig zelfredzaam
<b>Financiën</b>	<ul style="list-style-type: none"> <li>• geen inkomsten</li> <li>• groeiende complexe schulden</li> </ul>	<ul style="list-style-type: none"> <li>• te weinig inkomsten om te voorzien in basisbehoeften <i>of</i> spontaan/ ongepast uitgeven</li> <li>• groeiende schulden</li> </ul>	<ul style="list-style-type: none"> <li>• inkomsten uit uitkering om te voorzien in basisbehoeften</li> <li>• gepast uitgeven</li> <li>• eventuele schulden zijn tenminste stabiel <i>of</i> inkomen/ schuld wordt beheerd door derden</li> </ul>	<ul style="list-style-type: none"> <li>• inkomsten uit werk/ (basis) pensioen/ vrijwillige inkomensvoorziening om te voorzien in basisbehoeften</li> <li>• eventuele schulden zijn in eigen beheer</li> <li>• eventuele schulden verminderen</li> </ul>	<ul style="list-style-type: none"> <li>• uitsluitend inkomsten uit werk/ (basis) pensioen/ vrijwillige inkomensvoorziening</li> <li>• aan het eind van de maand is geld over</li> <li>• geen schulden</li> </ul>
<b>Werk &amp; Opleiding</b>	<ul style="list-style-type: none"> <li>• geen werk(-traject)/ opleiding <i>of</i> werk zonder adequate toerusting/ verzekering</li> <li>• geen werk-zoekactiviteiten</li> </ul>	<ul style="list-style-type: none"> <li>• geen werk(-traject) <i>maar</i> wel werk-zoekactiviteiten <i>of</i> 'papieren' opleiding (ingeschreven maar niet volgend) <i>of</i> dreigend ontslag/ drop-out</li> </ul>	<ul style="list-style-type: none"> <li>• werktraject gericht op participatie <i>of</i> werkt niet naar vermogen <i>of</i> volgt opleiding maar loopt achter <i>of</i> vrijwillig baanloos zonder sollicitatieplicht</li> </ul>	<ul style="list-style-type: none"> <li>• werktraject gericht op re-integratie <i>of</i> tijdelijk werk <i>of</i> volgt opleiding voor startkwalificatie <i>of</i> vrijgesteld van werk en opleiding</li> </ul>	<ul style="list-style-type: none"> <li>• vast werk <i>of</i> volgt opleiding hoger dan startkwalificatie</li> </ul>
<b>Tijdsbesteding</b>	<ul style="list-style-type: none"> <li>• afwezigheid van activiteiten die plezierig/ nuttig zijn <i>of</i> geen structuur in de dag</li> <li>• onregelmatig dag-nacht ritme</li> </ul>	<ul style="list-style-type: none"> <li>• nauwelijks activiteiten die plezierig/ nuttig zijn</li> <li>• nauwelijks structuur in de dag</li> <li>• afwijkend dag-nacht ritme</li> </ul>	<ul style="list-style-type: none"> <li>• onvoldoende activiteiten die plezierig/ nuttig zijn <i>maar</i> voldoende structuur in de dag <i>of</i> enige afwijkingen in het dag-nacht ritme</li> </ul>	<ul style="list-style-type: none"> <li>• voldoende activiteiten die plezierig/ nuttig zijn</li> <li>• dag-nacht ritme heeft geen negatieve invloed op het dagelijks functioneren.</li> </ul>	<ul style="list-style-type: none"> <li>• alle tijd is plezierig/ nuttig besteed</li> <li>• gezond dag-nacht ritme</li> </ul>
<b>Huisvesting</b>	<ul style="list-style-type: none"> <li>• dakloos <i>of</i> in nachtopvang</li> </ul>	<ul style="list-style-type: none"> <li>• voor wonen ongeschikte huisvesting <i>of</i> huur <i>of</i> hypotheek is niet betaalbaar <i>of</i> dreigende huissuitzetting</li> </ul>	<ul style="list-style-type: none"> <li>• veilige, stabiele huisvesting <i>maar</i> slechts marginaal toereikend <i>of</i> in onderhuur <i>of</i> niet-autonome huisvesting</li> </ul>	<ul style="list-style-type: none"> <li>• veilige, stabiele en toereikende huisvesting</li> <li>• (huur)contract met bepalingen <i>of</i> gedeeltelijk autonome huisvesting <i>of</i> ingeschreven als inwonend</li> </ul>	<ul style="list-style-type: none"> <li>• veilige, stabiele en toereikende huisvesting</li> <li>• regulier (huur)contract</li> <li>• autonome huisvesting</li> </ul>
<b>Huiselijke relaties</b>	<ul style="list-style-type: none"> <li>• sprake van geweld in huiselijke kring/ kindermishandeling/ verwaarlozing</li> </ul>	<ul style="list-style-type: none"> <li>• aanhoudende relationele problemen met leden van het huishouden <i>of</i> dreigend geweld in huiselijke kring/ kindermishandeling/ verwaarlozing</li> </ul>	<ul style="list-style-type: none"> <li>• erkent relationele problemen met leden van het huishouden</li> <li>• probeert negatief relationeel gedrag te veranderen</li> </ul>	<ul style="list-style-type: none"> <li>• relationele problemen met leden van het huishouden zijn niet (meer) aanwezig <i>of</i> woont alleen</li> </ul>	<ul style="list-style-type: none"> <li>• steunt en wordt gesteund binnen het huishouden</li> <li>• communicatie met leden van het huishouden is consistent open</li> </ul>
<b>Geestelijke gezondheid</b>	<ul style="list-style-type: none"> <li>• geestelijke noodsituatie</li> <li>• een gevaar voor zichzelf/ anderen</li> </ul>	<ul style="list-style-type: none"> <li>• aanhoudende geestelijke aandoening <i>maar</i> geen gevaar voor zichzelf/ anderen</li> <li>• functioneren is ernstig beperkt door geestelijk gezondheidsprobleem</li> <li>• geen behandeling</li> </ul>	<ul style="list-style-type: none"> <li>• geestelijke aandoening</li> <li>• functioneren is beperkt door geestelijk gezondheidsprobleem</li> <li>• behandeltrouw is minimaal <i>of</i> beperking bestaat ondanks goede behandeltrouw</li> </ul>	<ul style="list-style-type: none"> <li>• minimale tekenen van geestelijke onrust die voorspelbare reactie zijn op stressoren in het leven</li> <li>• functioneren is marginaal beperkt door geestelijke onrust</li> <li>• goede behandeltrouw <i>of</i> geen behandeling nodig</li> </ul>	<ul style="list-style-type: none"> <li>• geestelijk gezond</li> <li>• niet meer dan de dagelijkse besommeringen/ zorgen</li> </ul>



DOMEIN	1 Acute problematiek	2 Niet zelfredzaam	3 Beperkt zelfredzaam	4 Voldoende zelfredzaam	5 Volledig zelfredzaam
<b>Lichamelijke gezondheid</b>	<ul style="list-style-type: none"> <li>• een noodgeval/ kritieke situatie</li> <li>• direct medische aandacht nodig</li> </ul>	<ul style="list-style-type: none"> <li>• (chronische) lichamelijke aandoening die medische behandeling vereist</li> <li>• functioneren is ernstig beperkt door lichamenlijk gezondheidsprobleem</li> <li>• geen behandeling</li> </ul>	<ul style="list-style-type: none"> <li>• lichamelijke aandoening</li> <li>• functioneren is beperkt door lichamenlijk gezondheidsprobleem</li> <li>• behandeltrouw is minimaal <i>of</i> beperking bestaat ondanks goede behandeltrouw</li> </ul>	<ul style="list-style-type: none"> <li>• minimaal lichamenlijk ongemak dat samenhangt met dagelijkse activiteiten</li> <li>• functioneren is marginaal beperkt door lichamenlijk ongemak</li> <li>• goede behandeltrouw <i>of</i> geen behandeling nodig</li> </ul>	<ul style="list-style-type: none"> <li>• lichamenlijk gezond</li> <li>• gezonde leefstijl (gezonde voeding en voldoende bewegen)</li> </ul>
<b>Middelengebruik</b>	<ul style="list-style-type: none"> <li>• ernstige stoornis in het gebruik van middelen</li> <li>• gebruik veroorzaakt lichamenlijke/ geestelijke problemen die directe behandeling vereisen zoals overdosis/ drugspsychose/ hartproblemen/ ademhalingsproblemen</li> </ul>	<ul style="list-style-type: none"> <li>• stoornis in het gebruik van middelen (verslaving)</li> <li>• gebruik veroorzaakt/ verergert lichamenlijke/ geestelijke problemen</li> <li>• geen behandeling</li> </ul>	<ul style="list-style-type: none"> <li>• gebruik van middelen</li> <li>• aan middelengebruik gerelateerde problemen thuis/ op school/ op het werk <i>maar</i> geen lichamenlijke/ geestelijke problemen</li> <li>• behandeltrouw is minimaal <i>of</i> beperking bestaat ondanks goede behandeltrouw</li> </ul>	<ul style="list-style-type: none"> <li>• gebruik van middelen <i>of</i> geen middelengebruik ondanks hunkering <i>of</i> behandeling met potentieel verslavende middelen zonder bijgebruik</li> <li>• geen aan middelengebruik gerelateerde problemen</li> </ul>	<ul style="list-style-type: none"> <li>• geen middelengebruik anders dan alcohol</li> <li>• eventueel alcoholgebruik binnen de normen voor verantwoord gebruik</li> <li>• geen hunkering naar gebruik van middelen</li> </ul>
<b>Basale ADL</b>	<ul style="list-style-type: none"> <li>• een gebied van de basale ADL wordt niet uitgevoerd</li> <li>• verhogering <i>of</i> uitdroging <i>of</i> bevulling/ vervuiling</li> </ul>	<ul style="list-style-type: none"> <li>• meerdere gebieden van de basale ADL worden beperkt uitgevoerd</li> </ul>	<ul style="list-style-type: none"> <li>• alle gebieden van de basale ADL worden uitgevoerd <i>maar</i> een enkel gebied van de basale ADL wordt beperkt uitgevoerd</li> </ul>	<ul style="list-style-type: none"> <li>• geen beperkingen in de uitvoering van de basale ADL</li> <li>• gebruikt hulp(middel) zoals wandelstok/ rollator/ incontinentiemateriaal/ hulp bij voeden</li> </ul>	<ul style="list-style-type: none"> <li>• geen beperkingen in de uitvoering van de basale ADL</li> <li>• geen gebruik van hulp(middelen)</li> </ul>
<b>Instrumentele ADL</b>	<ul style="list-style-type: none"> <li>• meerdere gebieden van de instrumentele ADL wordt niet uitgevoerd</li> <li>• woningvervuiling <i>of</i> onder-/ over-medicatie <i>of</i> geen administratie <i>of</i> voedselvergiftiging</li> </ul>	<ul style="list-style-type: none"> <li>• een enkel gebied van de instrumentele ADL wordt niet uitgevoerd <i>of</i> uitvoering op meerdere gebieden is beperkt</li> </ul>	<ul style="list-style-type: none"> <li>• alle gebieden van de instrumentele ADL worden uitgevoerd</li> <li>• uitvoering van een enkel gebied van de instrumentele ADL is beperkt</li> </ul>	<ul style="list-style-type: none"> <li>• geen beperkingen in de uitvoering van de instrumentele ADL</li> <li>• gebruikt hulp(middel) zoals begeleiding bij reizen met openbaar vervoer/ regelen bankzaken/ klein onderhoud huis/ grote schoonmaak</li> </ul>	<ul style="list-style-type: none"> <li>• geen beperkingen in de uitvoering van de instrumentele ADL</li> <li>• geen gebruik van hulp(middelen)</li> </ul>
<b>Sociaal netwerk</b>	<ul style="list-style-type: none"> <li>• ernstig sociaal isolement</li> <li>• geen contact met familie</li> <li>• geen steunende contacten <i>of</i> alleen belemmerende contacten</li> </ul>	<ul style="list-style-type: none"> <li>• weinig contact met familie</li> <li>• nauwelijks steunende contacten</li> <li>• veel belemmerende contacten</li> </ul>	<ul style="list-style-type: none"> <li>• enig contact met familie</li> <li>• enkele steunende contacten</li> <li>• weinig belemmerende contacten</li> </ul>	<ul style="list-style-type: none"> <li>• voldoende contact met familie</li> <li>• voldoende steunende contacten</li> <li>• nauwelijks belemmerende contacten</li> </ul>	<ul style="list-style-type: none"> <li>• gezond sociaal netwerk</li> <li>• veel steunende contacten</li> <li>• geen belemmerende contacten</li> </ul>
<b>Maatschappelijke participatie</b>	<ul style="list-style-type: none"> <li>• niet van toepassing door crisissituatie <i>of</i> in 'overlevingsmodus' <i>of</i> veroorzaakt ernstige overlast</li> </ul>	<ul style="list-style-type: none"> <li>• maatschappelijk geïsoleerd <i>of</i> veroorzaakt overlast</li> </ul>	<ul style="list-style-type: none"> <li>• nauwelijks participierend in maatschappij (bijwonen) <i>of</i> uitsluitend zorgtaken</li> </ul>	<ul style="list-style-type: none"> <li>• enige maatschappelijke participatie (meedoen) <i>maar</i> er zijn hindernissen zoals vervoer/ zorgtaken/ kinderopvang</li> </ul>	<ul style="list-style-type: none"> <li>• actief participierend in de maatschappij (bijdragen)</li> </ul>
<b>Justitie</b>	<ul style="list-style-type: none"> <li>• zeer regelmatig (maandelijks) contact met politie <i>of</i> openstaande zaken bij justitie</li> </ul>	<ul style="list-style-type: none"> <li>• regelmatig (meerdere keren per jaar) contact met politie <i>of</i> lopende zaken bij justitie</li> </ul>	<ul style="list-style-type: none"> <li>• incidenteel (eens per jaar) contact met politie <i>of</i> voorwaardelijke straf/ voorwaardelijke invrijheidstelling</li> </ul>	<ul style="list-style-type: none"> <li>• zelden (minder dan eens per jaar) contact met politie <i>of</i> strafblad</li> </ul>	<ul style="list-style-type: none"> <li>• geen contact met politie</li> <li>• geen strafblad</li> </ul>

### 3.5 Profiel 5 - Gezinshuis: vertrouwd en gehecht

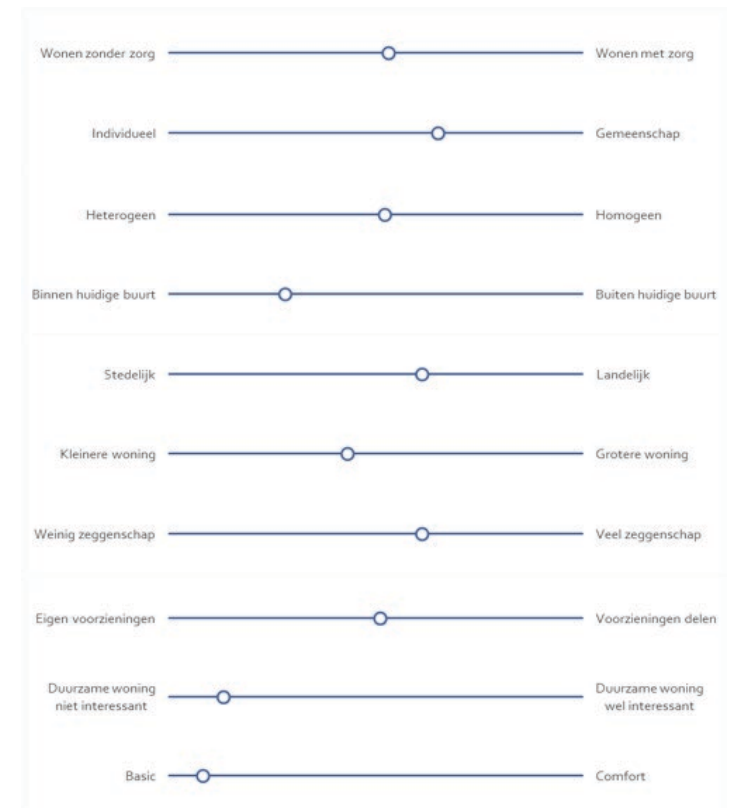
**Het gezinshuis kenmerkt zich door een eigen huis in een hechte buurt met veel ruimte voor ontmoeting.**

Er is sprake van een sterke sociale binding en men zorgt voor elkaar wanneer dat nodig is. Het concept biedt ruimte voor variatie. Men hecht eraan onderdeel uit te maken van een gemeenschap waar alle levensfasen vertegenwoordigd zijn. Senioren willen ook kinderen op straat zien spelen. Aparte voorzieningen voor senioren zijn in dit concept minder belangrijk; winkels en OV wel. De doelgroep voor dit concept woont vaak al (lang) in deze woonvorm en verhuist niet graag naar een appartement. De woningen in dit concept zijn betaalbaar en hebben een beperkt comfort. Het zouden zelfs rug-aan-rugwoningen kunnen zijn. De kracht zit in het woningtype (grondgebonden) en de sociale structuur. Omdat men niet graag verhuist naar een andere woonvorm, is het van belang dat de woningen zijn/ worden toegerust op bewoning door senioren met een zorgbehoefte. Wanneer de huidige woning te groot is, moet worden overwogen kleinere laagbouwoningen voor deze groep te realiseren. Deze woningen zijn wellicht ook interessant voor de toenemende groep jongere alleenstaanden.

18



kleinschalig  
 voordeurbehouden  
 benedenwoning  
 rustiger geboren  
 contactkenners  
 dorps tuintje  
 gezelliger  
 gezondheid



### 3.7 Profiel 7 - Buurtblok: sociaal en levendig

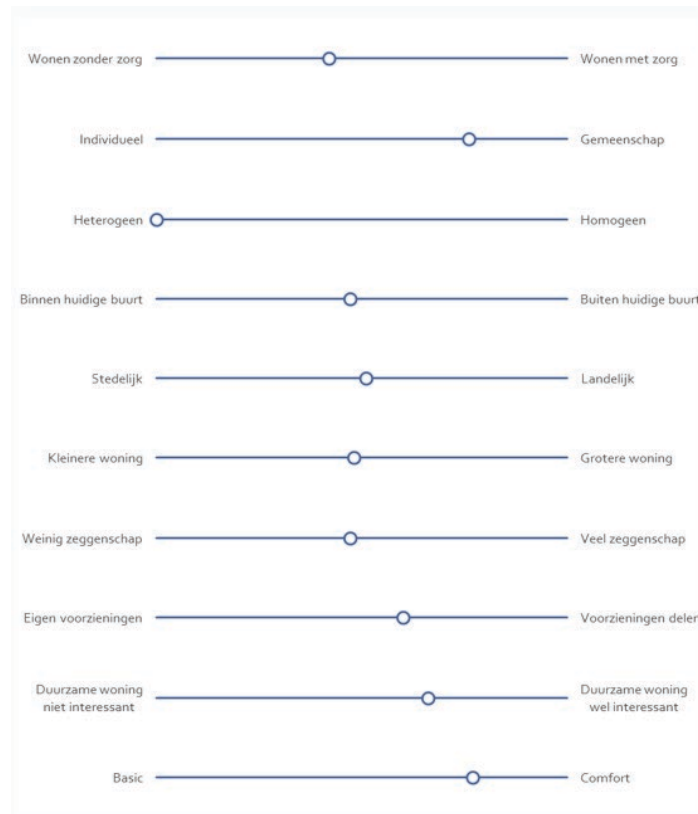
Het buurtblok kenmerkt zich door onderdeel te zijn van de levendige, diverse buurt.

In het buurtblok zijn de woningen (en de bewoners) veel meer onderdeel van de (woon)buurt met bewoners in alle levensfasen. Er is een grote diversiteit in bewoners en gebouwen. Privacy is minder van belang. De woningen zijn duurzaam en comfortabel. Er zijn gemeenschappelijke voorzieningen en ook bij dit concept is er bij een deel van de doelgroep belangstelling voor gemeenschappelijk wonen en/ of het gezamenlijk realiseren van een project. Door de doelgroep voor deze woonvorm wordt ook het hof als woonvorm aantrekkelijk gevonden. Deze vorm van gemeenschappelijkheid zou goed tot uiting kunnen komen in dit woonconcept. Zorg en gemaksdiensten worden naar behoefte aangeboden. Men kan hier tot op hoge leeftijd (blijven) wonen. Winkels, een huisarts en OV zijn op korte afstand aanwezig.

20



winkelcentrum  
bos natuur  
dorp openbaar vervoer  
centraal OV station  
diversiteit uitzicht  
gelegen loopafstand  
gezellige





### 3.9 Profiel 9 - Woonhof: samen voor elkaar

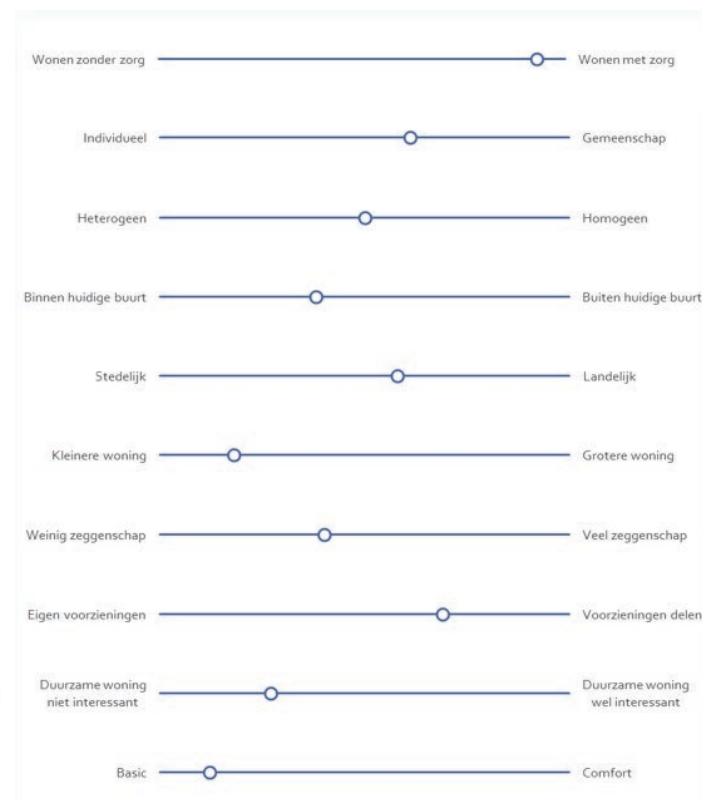
Het woonhof kenmerkt zich door **community, zorg (voor elkaar) en minder nadruk op comfort**

Het hof is het archetype van dit woonconcept. Een hof is een min of meer afgeschermd geheel. Dit is aantrekkelijk voor huishoudens die – omdat ze in een zelfde levensfase zitten – elkaar goed begrijpen en kunnen helpen. Er is sprake van een sterke gemeenschap. Het hof kan de vorm hebben van kleine laagbouwwoningen, maar ook van gestapelde (kleine) woningen. Ontmoeting is een expliciet onderdeel van dit concept. Voorzieningen (huisarts, supermarkt en voorzieningen specifiek gericht op senioren) zijn in de omgeving aanwezig. De nabijheid van OV is voor dit woonconcept minder belangrijk in verband met de lagere mobiliteitsbehoefte van deze groep. Hoewel juist deze woonvorm het mogelijk maakt dat zorg zo lang mogelijk buiten de deur blijft, zien we onder de belangstellenden voor dit profiel een gemiddeld grotere zorgvraag. Zorg zou vanuit een nabijgelegen zorginstelling kunnen worden geleverd.

22



contact  
levensloopbestendige  
zorgwoning  
seniorenwoning  
gelijkvloerse  
zorgen hofjes  
gezamenlijke  
groepswonen



## **FINAL DESIGN IMAGES**

















































