# FORGET ABOUT *DEMENTIA*

A research into the prevention of ***dementia***
through architectural interventions
in our built environment

**Research report**

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**Master research report**
Forget about dementia

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*'There comes a point in time where we need to stop just pulling people out of the river, we need to go upstream and find out why they're falling in'.*

- Bishop Desmond Tutu

# ABSTRACT

The modern healthcare system's focus on treatment, rather than prevention, has failed to make progress against age-related chronic diseases like dementia. Our global world population is increasing as well as our lifespan, however, our healthspan (time free of diseases) has not followed these increases. Dementia, now a leading cause of death as it is affecting 15% of our world population, is considered a significant challenge as it increases healthcare costs and putting pressure on our systems. With the anticipated rise in dementia cases, it is crucial to explore non-pharmaceutical strategies. This research aims to address this gap by exploring how architecture and the built environment can contribute to dementia prevention through the development of design guidelines.

This led to the following main question for this research: *'How can architecture and the built environment be an instrument in developing design guidelines that contribute to the prevention of dementia?'* To address this question, literature research delved into healthy living environments, drawing inspiration from implemented design principles in sustainable urban concepts. Additionally, case studies of dementia care facilities, fieldwork investigations and conversation with dementia-care experts were conducted.

The research has highlighted the importance of community awareness for healthier lifestyles and advocates for a shift towards health-oriented societies, particularly in architecture. With our aging population facing increasing illnesses like dementia, solely pharmaceutical treatments have become insufficient and proactive measures are essential. By identifying modifiable dementia risk factors and drawing inspiration from urban models like Blue Zones and the 15-minute city, architectural interventions can promote social inclusion, education, and well-being. Recognizing the interconnectedness of physical environments and human health, architecture can play an essential role in promoting healthy living and well-being, shifting towards more health-oriented societies.

KEY WORDS:

Dementia | Prevention | Blue Zones | 15-minute city concept | Health-promoting architecture | Healthy living environment

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# FASCINATION

When my grandfather turned 87 years old, we gave him a new watch. He lost his old watch which made him very sad as he had owned that watch for a long time. He unwrapped the new watch and started to get tears in his eyes out of happiness of receiving a new one from us.

A week later I visited my grandfather again together with my father. Soon we noticed he was not wearing his new watch so we asked him where it was. My grandfather cluelessly shook his head and told us that he had lost his watch and could not find it anymore and that he was very sad about it. We reminded him about the new watch we gave him last week but he had no idea which watch we were talking about. He forgot we had given him a new watch for his birthday last week. We found it hidden in one of his bed side drawers where he had probably put it right after we left last week because he didn't recognize it. We gave it to him again and he responded with the same amount of happiness as the first time he had received his gift a week ago on his birthday. A week later this story repeated itself again.

Something that I have always admired about my grandfather is his positivity and gratefulness about the littlest things in life. Even now, when I think of him, years after he passed away, I remind myself to take example of him and his positive view on life. As I pass by the nursing home he resided in during his time battling dementia in the last years of his life, I can't help but wonder about how the last years of his life would have looked without dementia. Is there a way to prevent people from developing dementia so that elderly, like my grandfather, can enjoy the last years of their lives to the fullest and stay 'their own person and identity'?

# INTRODUCTION

Growing older is something that is inevitable for all of us. However sadly, many of us assume growing older is associated with becoming less vital and getting sick. Developing a disease such as dementia has become almost indispensable in our society; as if it is our unavoidable fate that we all expect will happen once we become older. This is because, like I have experienced with my own grandfather, we have all seen our (grand)parents, partners and friends undergo that fate of suffering from illnesses that hinders them from enjoying the last years of their lives. Instead of awaiting this future ourselves, relatively few of us are taking measures that could potentially help us prevent that outcome. Dr Attia, who is a prominent longevity expert, addresses this topic in his book 'outlive; the science and art of longevity' by stating that there is a lack of societal resilience against getting sick when we are older even though our own future is more malleable than we think (Attia & Gifford, 2023, p. 37).

## BACKGROUND

Our world population has grown enormously from 2.9 billion in 1950 to 7.8 billion in 2020. The same applies to our global life expectancy, which has increased thirty years since the mid-twentieth century: It has risen from 47 to 73 years in those seven decades. Our life expectancy is considered to be the benchmark of the population's health, however, our healthspan (time free of diseases) has not followed these increases. This is largely due to the pandemic of chronic diseases that are afflicting the growing older population and is causing a deterioration in the quality of life of their lives (Garmany et al., 2021).

Among these chronic diseases, dementia is the fastest growing cause of death in the Netherlands according to the Centraal Bureau of Statistiek (Factsheet Cijfers En Feiten Over Dementie | Alzheimer Nederland, n.d.). Dementia is used as an umbrella term to describe a range of neurological diseases that are affecting our brain and cognitive thinking. The most common cause of dementia is Alzheimer's disease (What Is Dementia? | Alzheimers.gov, n.d.). Estimating that 1 in 5 people in the Netherlands develops dementia, currently more than 280.000 people live with this disease. They expect that these numbers will increase to over half a million people by 2040 (1 Op De 5 Mensen Krijgt Dementie | Alzheimer Nederland, n.d.). Moreover, they estimate these number to rise to about 620.000 in 2050, which is partly due to our older growing population (Factsheet Dementie | Vektis, 2022.). Globally this disease is affecting around 15% of our worldwide population (Feigin et al., 2020.).

Besides these increases in the amount of people with dementia, it is the age-related disease with the highest healthcare costs. Due to the rapid increase of the amount of people diagnosed with dementia, these costs will even rise more and be a burden on the population and the societies' taxes. In 2020 the costs for dementia care were 10.3 billion (10,6% of the total healthcare costs) which was a rise of almost 2 billion compared to the 8.6 billion in 2017 (Ranglijsten | Aandoeningen Op Basis Van Zorguitgaven | Volksgezondheid En Zorg, n.d.). These rises are not only caused by the increased number of people with dementia but also because the care in nursing homes is becoming more expensive (Factsheet Dementie | Vektis, 2022).

This is resulting in a huge challenge how to keep neurological care accessible for everyone both in medical care as well as in meeting the demand for special care homes in our living environment. This puts an enormous pressure on our healthcare system ("Werkdruk En Arbeidstevredenheid in De Zorg | CBS," 2022.). The World Health Organization and the United Kingdom's National Health Service are therefore alarmingly stating that *'the availability of resources for neurological services are insufficient in most countries of the world compared with the global need for neurological care'* and that *'neurological services are not sustainable in their current form and redesign is needed'* (Dorsey et al., 2018).

## PROBLEM STATEMENT

The approach of our modern healthcare system has failed to make much progress against age-related chronic diseases as the sole focus is on treatment rather than prevention (Attia & Gifford, 2023, pp.26-27). Especially for dementia, mainstream medicine has not worked properly as it is the only folk disease for which no solution has been found yet (1 Op De 5 Mensen Krijgt Dementie | Alzheimer Nederland, n.d.). The Dutch government's healthcare advisor Zorginstituut Nederland is therefore also advocating for a 'rigorous change' of approach from solely treatment to also preventive measures in order to find ways to prevent these diseases as they warn that the current healthcare system is risking of becoming too overburdened and unaffordable unless it will undergo some changes (Pascoe, 2022).

In recent years, more studies have been conducted into the search for preventive measures by creating a healthy environment for people that could contribute to the prevention of diseases and change our common believe that we are unable to prevent ourselves from getting sick (Attia & Gifford, 2023, pp.28-29). These are focused more on the larger scale in our urban context and living environment as The National Institute for Public Health and the Environment for example published a report in August 2023 that examined the correlation between a healthy living environment and chronic diseases (cancer, obesity and dementia). They consider this a first step into creating a more intensive approach to preventing these diseases on a national level. They state that the influence of the living environment on health, both directly as well as indirectly through other determinants of health is offering opportunities for the prevention of cancer, dementia and obesity: '

*'A safe, healthy and green living environment not only protects against health-threatening factors in the environment (such as radiation, air, pollution, tobacco smoke, chemicals and viruses and bacteria), but also promotes healthy behavior and thus reduces the risk of cancer, dementia and obesity'* (Relatie Tussen Gezonde Leefomgeving en Kanker, Overgewicht En Dementie | RIVM, n.d.).

However, these are generally focusing on the living environment on the larger scale but leave out the effects of the smaller scale (neighborhood and building scale) of our built environment as a prevention tool.

## RESEARCH QUESTION

By changing our approach from treatment to prevention in both the medical and built environment, opportunities arise to create fitting design guidelines that can be applied in the built environment that can contribute to the changing health approach. Therefore, the main question of this research is:

**How can architecture and the built environment be an instrument in developing design guidelines that contribute to the prevention of dementia?**

## SUB-QUESTIONS

To allow this main question to be fully investigated, a set of sub-questions have been defined to structuralize the research in order to answer the main question:

1. What is dementia, and how do architectural interventions within the existing built environment currently respond/adapt in order to support the daily lives of dementia sufferers?

2. What are different principles of a healthy living environment and how can these contribute to the goal of preventing dementia (while prolonging healthy living)?

3. What characteristics of dementia are preventable through architectural interventions within the built environment?

## RESEARCH AIM

By researching how architecture and the built environment can be utilized to develop healthy building guidelines that contribute to the prevention of dementia, this research aims to use architectural and design interventions as a supporting instrument to prevent dementia in order to extend people's healthspan as well as prolonging the quality of their lives. This could be achieved by closing the existing gap between our lifespan (total years lived) and our healthspan, which is the period in our lives we live free of diseases (Garmany et al., 2021, p. 1).

Our global life expectancy, that is considered to be the benchmark of our population's health, has reached 72.8 years in 2019 which is an increase of nine years since 1990. Moreover, this is estimated to increase to an average longevity of 77.2 years globally in 2050 (World Population Prospects 2022, 2022). Our Healthspan however has not reached that age yet as recent studies, conducted by the World Health Organization in 2020, estimated a nine-year gap between our healthspan and lifespan by using health-adjusted life expectancy that considers life expectancy (year lived with disability) and premature death from diseases (Garmany et al., 2021). Thus, in order to close this gap, we need to prevent diseases like dementia.

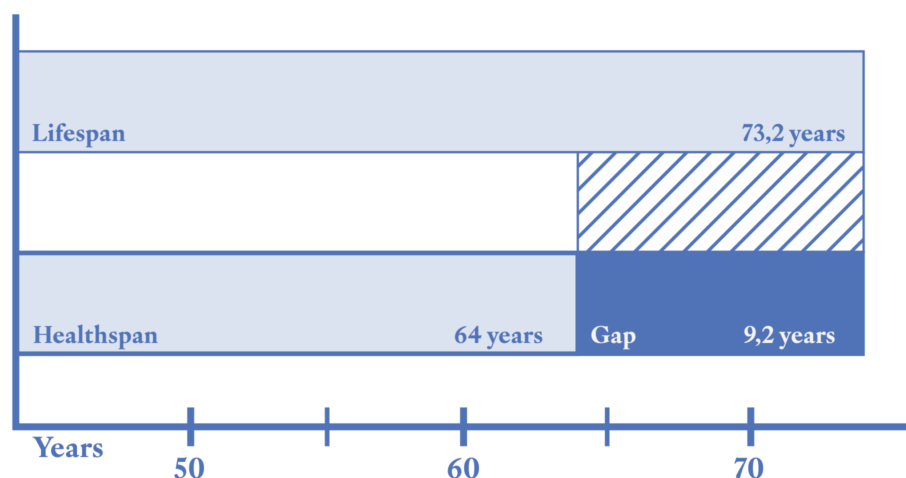



**Figure 1:** Healthspan vs. lifespan gap, own illustration (2023) (Source: Garmany et al., 2021, fig. 2).

## RESEARCH SCOPE

This research will solely focus on the prevention of dementia, as this is the fastest growing cause of death in The Netherlands. The World Health Organization currently estimates the number of people living with dementia is over 50 million and believe this number will almost triple by 2050 (World Health Organization, 2021). It is therefore important to research preventive measures for this disease in order to reduce the pressure on our healthcare system. Dementia is known to be caused and influenced by different aspects both genetical as well as environmental factors (Can Dementia Be Prevented? | NHS, 2023). This research will be conducted from an architectural perspective instead of a medical perspective by solely aiming to develop building guidelines that can contribute to the prevention of dementia.

## RESEARCH RELEVANCE

There are four factors that are clarifying the relevance of this research:

### Social aspect

By making people aware that their healthspan is more malleable than they think and educating them on strategies to implement in their daily lives, they can contribute themselves to prolonging their healthspan.

### Health aspect

By implementing more preventive measures, less people are dependent on special treatment which reduces the pressure on our healthcare systems.

### Care aspect

By preventing or delaying elderly from needing special care, they are able to live longer independently. This would reduce the demand for special care and nursing homes so people can grow older at home and age in place.

### Economical aspect

Currently, insurances now only pay for care after diagnosis and not for preventive care methods (Attia & Gifford, 2023, p. 34). By investing more money into preventive measures rather than solely on the insurance of treatments and prescription medicine of diagnosed patients, healthcare costs in general could potentially be reduced and become more attractive economically.

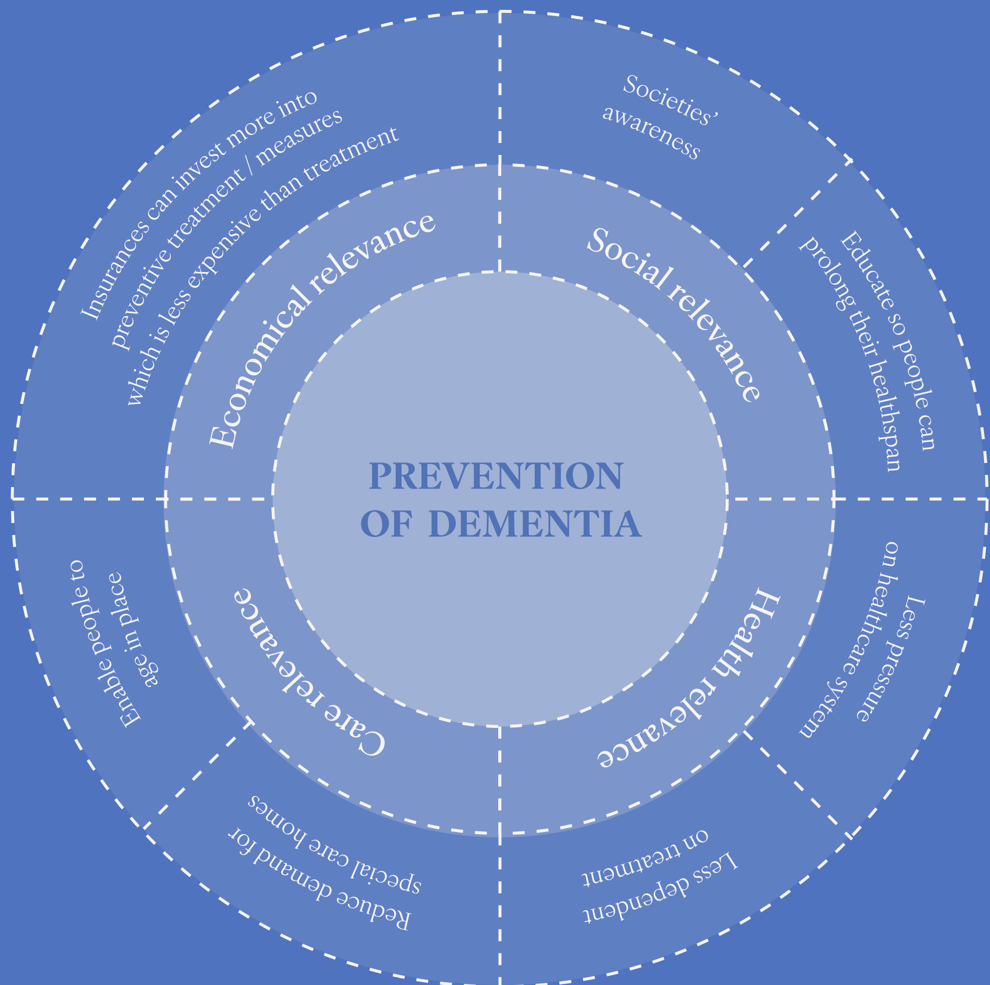



**Figure 2:** Four aspects why prevention of dementia is relevant for society, own diagram (2023).

# THEORETICAL FRAMEWORK

## LITERATURE STUDY

Extensive research is available about the influence of architecture on people suffering from dementia (e.g., Bowes & Dawson, 2019; Feddersen & Lüdtke, 2014; Fleming & Bennett, 2017; Nillesen & Opitz, 2014). Most of these studies focus on what kind of architectural and design interventions could be implemented in current dementia care facilities in order to support the daily lives of people, extend the quality of their lives when people are already suffering from dementia and making them 'feel at home' and at ease while residing in those care facilities.

More recently, an increasing number of studies have been conducted into researching the potential for dementia prevention if modifiable risk factors were addressed and potentially be translated into interventions that aim at improving cognitive functions (Ngandu et al., 2015; Kivipelto et al., 2020). In addition, some studies investigate the environmental impacts on dementia development and connecting it to the green and built environment as potential factors (Liu et al., 2020; Röhr et al., 2021; Wu et al., 2020).

## RESEARCH GAP

Even though a lot of research has been done on the topic of dementia and more research starts to investigate potential dementia prevention through modifiable risk factors, not much research has been conducted yet on what architectural interventions could contribute to the prevention of dementia. Focusing more research on prevention opportunities rather than solely treatment and care for dementia sufferers can enhance and develop the body of knowledge about dementia prevention in connection to the built environment. Therefore, this research will focus on that gap of investigating what architectural interventions can contribute to the prevention of dementia.

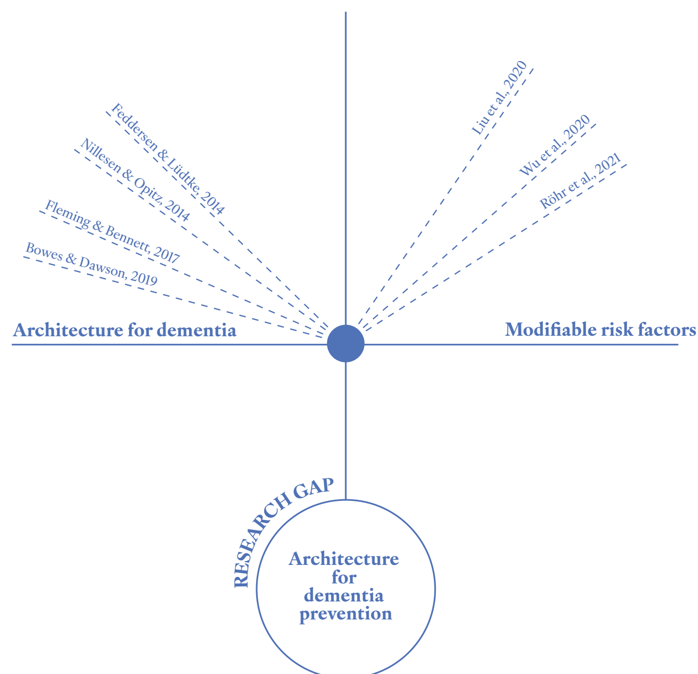



**Figure 3:** Summary literature study and research gap, own diagram (2023).

## THEORETICAL FRAMEWORK

The theoretical framework of this research is aiming to describe previous studies that have already been conducted and researched the topic of this research; how can architecture contribute to the prevention of dementia. Two different research topics will be investigated that together form the foundation of this research in order to answer the main question: healthy living environment (designing for prolonging people's vitality) in connection to dementia prevention through architectural interventions within the built environment.

*Healthy living environment*

One of the important aspects of this research is to understand how our physical living environment and lifestyle have great influence on our health and well-being. One of the first urban planning concepts that promoted a healthier environment and played an important role in the urban planning of the 20th century was the garden city concept. It was founded by Ebenezer Howard. He proposed the idea of decentralization of cities and instead constructing garden cities that, with its spatial urban planning, create an environmentally friendly environment (Gatarić et al., 2019, p.34).

A more recent concept in this field has been developed by Carlos Mereno in 2016 which is called the '15-minute city'. Being inspired by Jane Jacob's (1961) book 'The death and life of great American cities', this concept advocates for human centered urbanism, where aspects such as socialization, self-actualization, cultural demand and health are accessible in short commutes. This means that the time required for people to access different nodes within urban spaces should be a priority (Allem et al., 2022, p.2). In the last recent years, especially after the COVID-19 pandemic, the 15-minute city concept has been widely adapted and integrated in multiple cities around the world with different names and shapes in order to encourage their residents to live healthier lives (C40 Knowledge Community, 2020).

Another proposed variation on the 15-minute concept is developed by Capasso Da Silva (Capasso Da Silva et al., 2019). He claims that it is possible to plan cities that are accessible with a 20-minute threshold with all forms of transportation rather than solely using walking as a way of transportation (Stanley, 2015, p.3). These two concepts align since they both promote personal and societal wellbeing, improve liveability and emphasize accessibility as being a crucial element while wanting to reduce the need for mobility (Moreno et al., 2021, p.97).

Walkable neighborhoods like the 15-minute city concept have also been researched in relation to the development of noncommunicable diseases (NCDs). This term refers to a group of conditions that are not primarily caused by an acute infection but rather are the result of long-term health consequences that are in need of treatment and care (Noncommunicable diseases | Pan American Health Organizaion, n.d.). Dementia is also named by the World Health Organization as one of the five NCDs that are ranked in the top 10 causes of deaths globally (World Health Organization, 2020). Several studies have highlighted the reduce of NCDs in walkable neighborhoods (Weng et al., 2019) as more research has been conducted into the relationship of our living environment and our health because the world is facing unprecedented number of older adults and people with NCDs (Peters et al., 2019). Weng et al (2019) advocated the walkable city as a way of promoting the health of its residents in order to void NCDs (Weng et al., 2019). Therefore, recent urban concepts like the walkable 15-minute city entail crucial principles in the search towards creating a healthier living environment that contributes to disease prevention, especially for noncommunicable diseases like dementia.

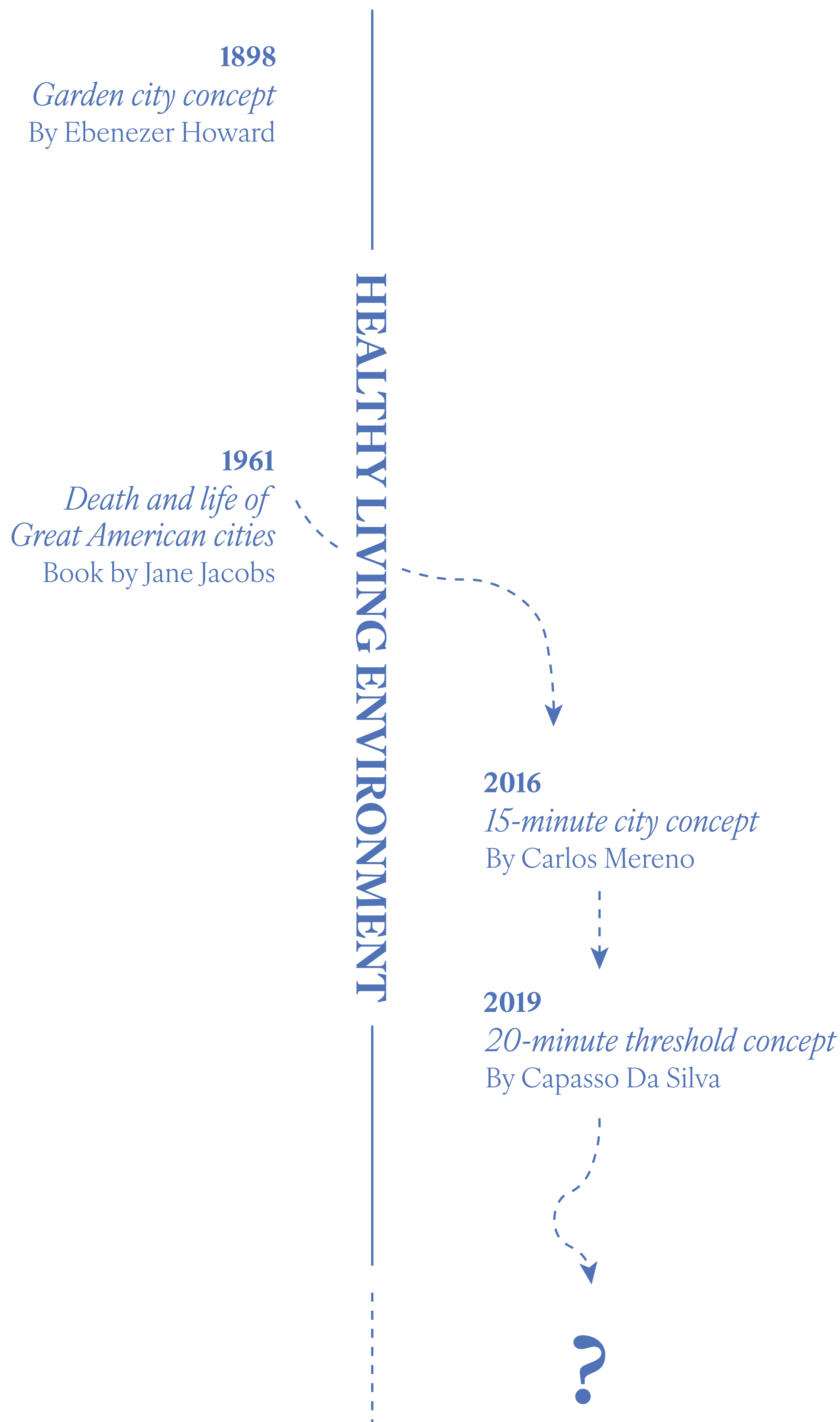



**Figure 4:** History of healthy living environment concept development, own diagram (2023).

## DESIGN HYPOTHESIS

The intention of this research is to utilize the topic of preventing dementia through architectural interventions within our built environment as a starting point for a wider, more inclusive renewal of the built environment that could prevent us from getting sick as well as prolong our healthspan. By combining architectural interventions used in architecture for dementia and design principles for healthy living environments (such as the 15-minute city concept) to prolong people's vitality, a design toolkit can be developed that can create a healthy living environment that contributes to dementia prevention.

These design principles will be implemented in existing neighborhoods by using small scale interventions as an instrument to achieve this through multiple scales (building, street, area, neighborhood) in private dwellings, public buildings and shared outside spaces. Implementing the design principles into existing neighborhoods will ensure the prevention of dementia whilst prolonging people's healthspan and changes our current societies' perspective against elderly getting sick in order to shift it towards a more preventive orientated society that will be reflected into the healthy living environment.

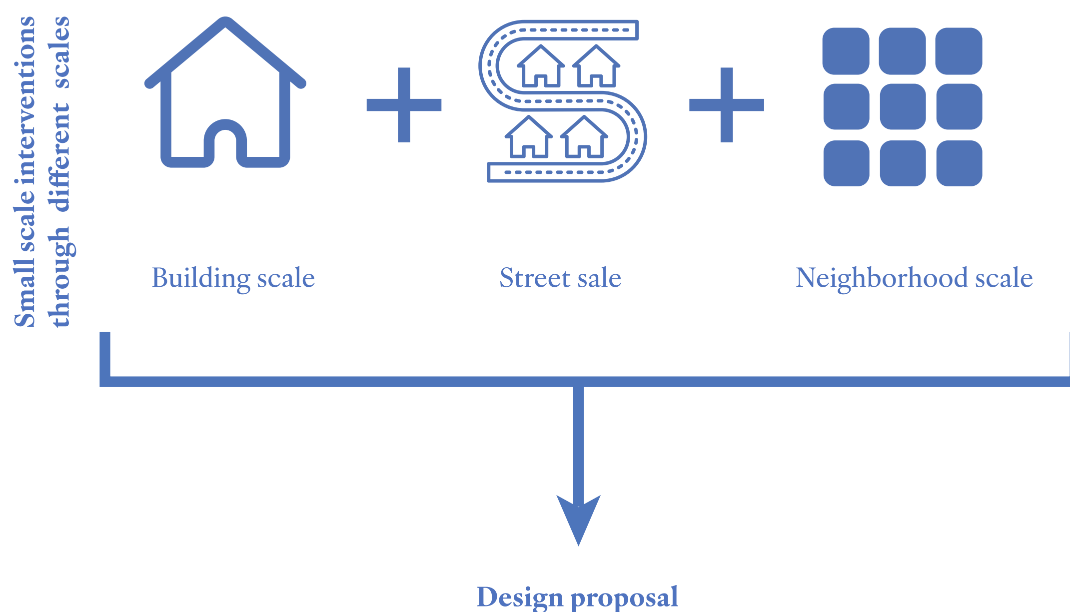



**Figure 5:** Visualisation of design hypothesis, own diagram (2023).

# RESEARCH METHODOLOGY

This research will be conducted through multiple different methods. The three sub-questions will be divided into three representing chapters. Before starting answering the sub-questions in the representing chapters, an introduction chapter and a chapter about understanding the disease dementia will be described. After those two chapters, the three chapters that will answer the sub-questions will follow.

In ***Chapter 1***, the literature research will be used to gain an understanding on how dementia works by describing the definition, symptoms, stages of the disease as well as the needs of people that are suffering from dementia.

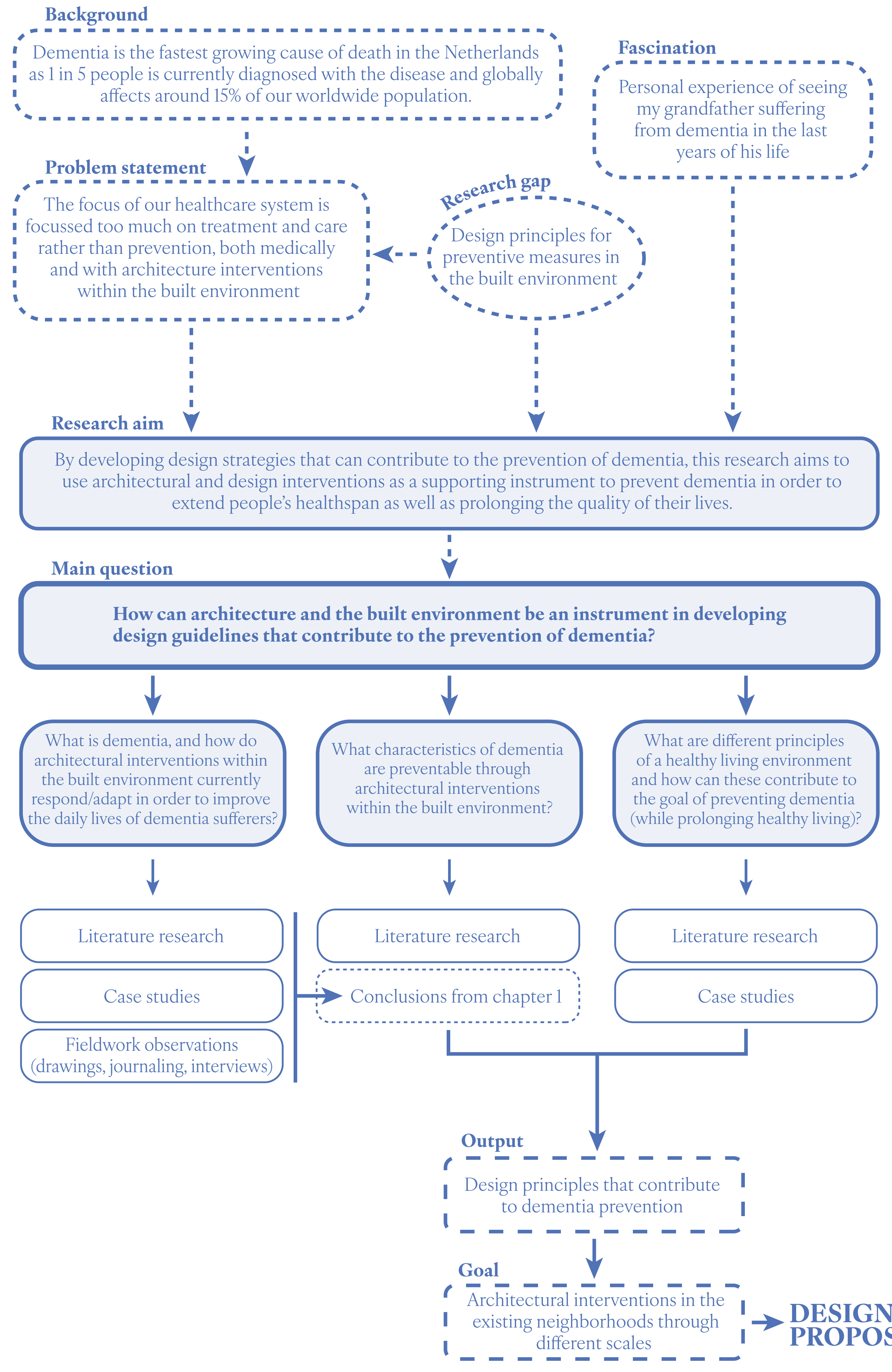
***Chapter 2*** continues by exploring design guidelines for dementia (prevention). This is done by conducting research into the current living environment of people suffering from dementia. To research this, literature research will be used to explore multiple design principles. Also, one case study (Alzheimer's village by Nord Architects) will be researched and two different dementia care facilities were visited to observe and experience the daily lives of dementia sufferers in their living environment. The methodological approach that will be utilized is ethnography. This method is applied in anthropological research when studying communities or groups of people by spending a longer period of time living the daily lives with the group and observing their ordinary routines and drawing conclusion from the collected observations (Lucas, 2016). This method could also be implemented in this research by observing a group of people that all have in order to gain insights into their living environment (observations, sketches), daily routines (observations, interviews with caregivers and family members), and gather information on what could be improved in the current living environment. The collection of materials and experiences during the fieldwork week will be combined into a journal:

- Daily journal: a day in the life of a person suffering from dementia timeline.
- Drawings and sketches of living environment.
- Informal interviews with their caregivers (and family members) to understand more about the patient's need.
- Formal interview with the founder of one of the facilities on their design vision.

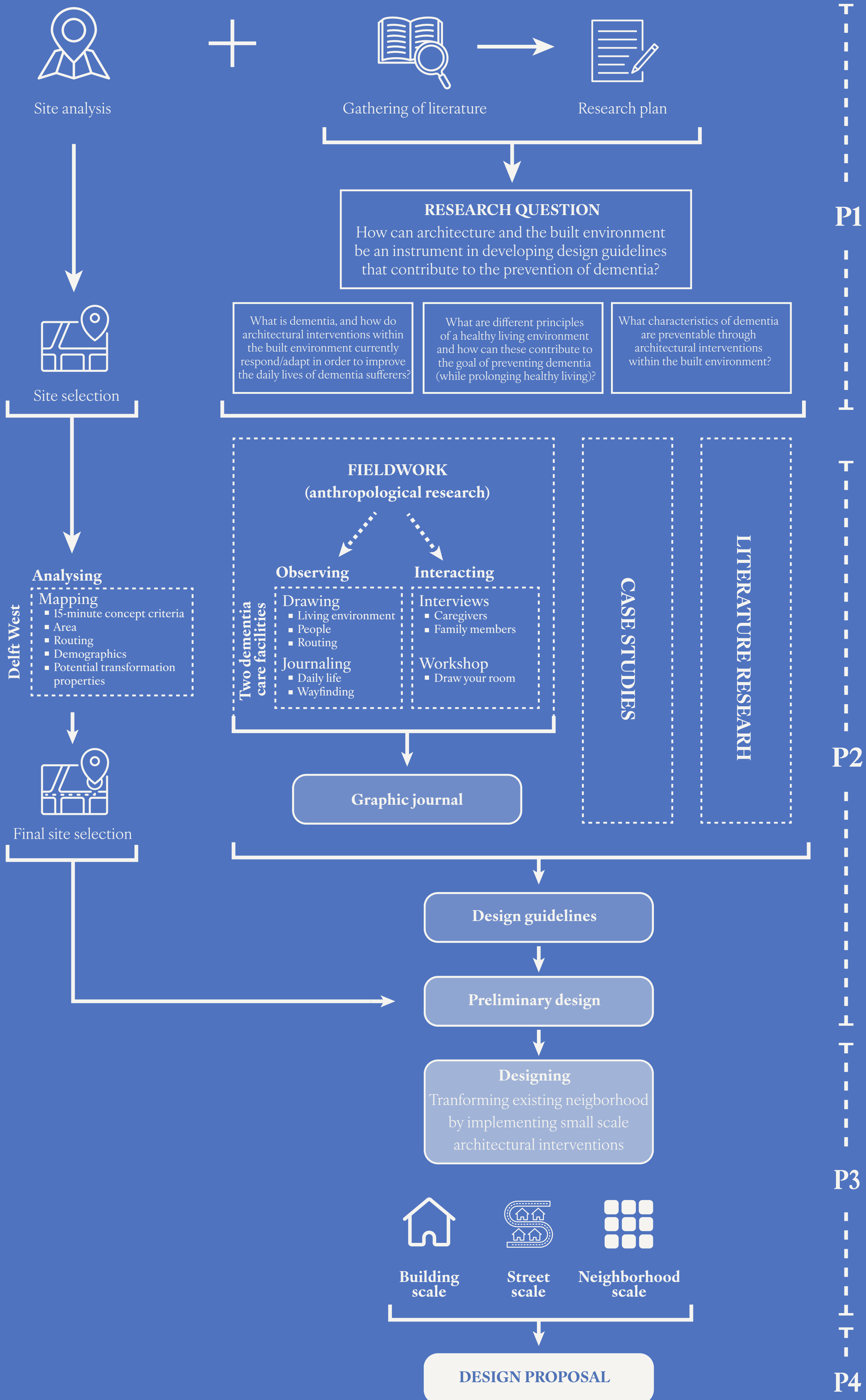
In ***Chapter 3***, the principle of a healthy environment will be explored by investigating two different concepts to gain an understanding whether these can be applied to contribute to the prevention of dementia. The two concepts that will be discussed are the 'Blue Zones' by Dan Buettner and 'The 15-minute city' by Carlos Moreno. One case study that implemented the 15-minute concept (20-minute neighborhood in Melbourne, Australia) will be examined in order to understand how the concept can be integrated into existing neighborhoods and how it could contribute to the prolonging of people's healthspan while they are still vital and disease free.

Finally, ***Chapter 4***, identifies the risk factors that are causing dementia in to order to indentify which risk factors are modifiable and can be translated to architectural interventions that can be integrated in the living environment of people in order to contribute to the prevention of the dementia. This is done by utilizing literature research and studies from recent years that have conducting research into this topic.

## RESEARCH SCHEME



## RESEARCH PLANNING



# KEY TERMS

## Chronic diseases

The World Health Organization describes chronic diseases as: ‘Diseases that are not passed from person to person. They are of long duration and generally slow progression. The four main types ... are cardiovascular diseases (like heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructed pulmonary disease and asthma) and diabetes (World Health Organization, 2023b). However, The Centers for Medicare and Medicaid Services also include more chronic conditions such as Alzheimer’s disease, depression and HIV to a more extensive list (Bernell & Howard, 2016).

## Dementia

Dementia is a syndrome that can be caused by numerous diseases which over time destroy nerve cells and damage the brain which typically leads to cognitive decline that go beyond the usual consequences of biological aging. The cognitive impairment is regularly accompanied by changes in mood, emotional control, behavior or motivation (World Health Organization, 2023a). This results into the lack of ability to achieve daily tasks and routines such as dressing up, doing household chores, paying your bills and taking medication (Factsheet Wat Is Dementie? | Alzheimer Nederland, n.d.).

## Healthspan

Healthspan is defined as ‘the period of life spent in good health, free from the chronic diseases and disabilities of aging’ (Kaeberlein, 2018, p. 361).

## Healthy living environment

The Dutch National Institute for Public Health and the Environment has defined ‘a healthy living environment’ as ‘A healthy living environment is one that is clean and safe, protects against health risks and encourages exercise and socializing’ (Healthy Living Environment Programme Launched | RIVM, n.d.). It also should invite everyone to engage with each other while promoting healthy behaviors and is a pleasant place to live in (Healthy Living Environment | RIVM, n.d).

## Life expectancy

The World health organization defines this term as ‘the number of years of life that can be expected on average in a given population’ (World Health Organization, 2004, p. 48).

## Lifespan

Lifespan is defined as 'the total amount of years you have lived' (Garmany et al., 2021, p. 56).

## Longevity

Longevity is defined as living a longer and healthier life. It means both how long a person is living and how healthy their life will be. It includes three concepts, which is extending people's lifespan (life expectancy) as well as expanding their healthspan (living longer free of diseases) and aiming to control and reverse the hallmarks of aging (What Is Longevity and How Can You Live Beyond Your Life Expectancy by 10+ Years?, n.d.).

## Neurodegerenative diseases

Neurodegenerative diseases are defined as 'conditions that gradually damage and destroy parts of your nervous system, especially areas of your brain'. These conditions are known to slowly develop as the effects and symptoms tend to appear later in life. This term is not referring to a single type of condition but is an umbrella term that applies to several types of conditions among them being dementia-type diseases (Alzheimer's disease, frontotemporal dementia, chronic traumatic encephalopathy, Lewy body dementia and limbic predominant age-related TDP-43 encephalopathy) (Cleveland Clinic Medical, n.d.).

## Prevention

The World Health Organization defines prevention as approaches and activities that aim to reduce the likelihood that a disease or disorder will affect an individual, interrupting or slowing the progress of the disorder or reducing disability. They distinguish primary prevention as reducing the likelihood of the development of a disease or disorder. Secondary prevention aims at interrupting, preventing or minimizing the progress of the disease or disorder at an early stage and tertiary prevention focuses on the halting of the progression once damage is already done (World Health Organization, 2004, p. 50.).

## Quality of life

The World Health Organization defines the term quality of life as 'the individuals' perception of their position in life in the context of culture and value systems in which they live and in relation to their goals, expectations, standards and concerns'. They also state that it is a broad ranging concept that incorporates in a complex way the persons' physical health, psychological state, level of independence, social relationships, personal beliefs and their relationship to salient features of the environment ("World health Organization Quality of Life", 2023, p. 11.).

# CHAPTER 1
## *Understanding* dementia

In order to set out ways and design guidelines to design for people suffering from dementia, first a better understanding need to be gained on what this disease entails, how it develops and how to approach people with dementia. First, in this chapter, a definition will be given on dementia and then this chapter will continue to highlight design guidelines that are important to take into account when designing living environments for people with dementia.

## 1.1 What is dementia?

Dementia can be defined as an irreversible brain disorder that affects different parts of the brain and impacts a range of functions (Jones et al., 2019, p. 6). It is used as an umbrella term that describes several diseases that affect your memory, thinking and the ability to perform daily activities. Although age is one of the strongest known risk factors for dementia, it is not a consequence of natural aging (Dementia | World Health Organization: WHO, 2023). It usually arises from a complex correlation of aging, genetic susceptibility, lifestyle and the living environment (RIVM, 2023, p. 9). It is caused when a disease is damaging nerve cells in the brain. These nerve cells carry the messages between different parts of the brain and to other parts of the body. When more nerve cells are getting damaged, the brain will not be able to continue to work properly. This brain damage can be caused by different diseases which results into a variety of types of dementia. There are four main types that most people are diagnosed with as they affect around 19 out of 20 people diagnosed with dementia. The four most common types of dementia are Alzheimer's disease, vascular dementia, dementia with Lewy bodies (DLB) and Frontotemporal dementia (FTD). A common trait of all these types of dementia is that they show the same early symptoms. Some people may also have mixed dementia as they have symptoms of more than one type (What Is Dementia? | Alzheimer's Society, 2022).

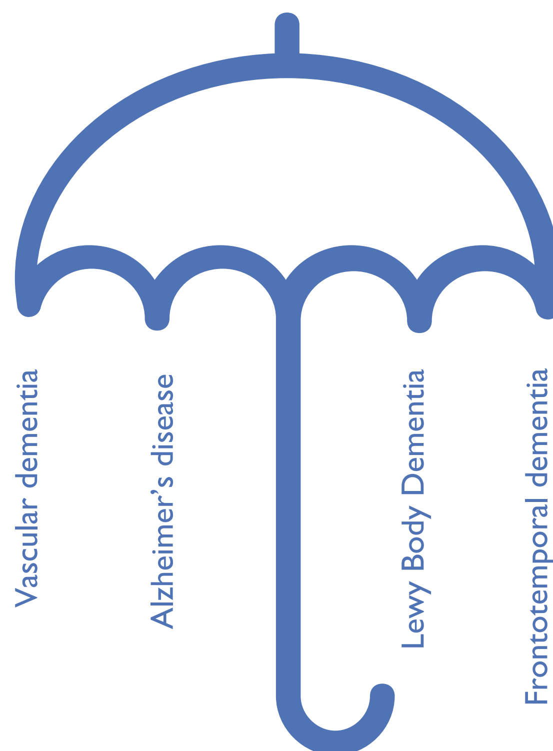



**Figure 6:** Dementia is used as an umbrella term, own diagram (2023).

## 1.2 Symptoms of dementia

The first symptoms of dementia vary per person and also is dependent on the type of dementia the person is suffering from. However, there are ten common symptoms from which you can recognize dementia. The ten symptoms are (Herkennen En Symptomen Van Dementie | Alzheimer Nederland, n.d.):

**1. Forgetfullness**

Forgetting important dates or events or new information and repeating the same question multiple times.

**2. Problems performing daily tasks**

Normal things of daily lives are getting more difficult to manage. It becomes harder to plan things or execute them in the right order.

**3. Mistakes with place and time**

Getting less sense of time and getting lost more often. Sometimes the person forgets how or when they got at a certain location.

**4. Problems with language**

Having difficulties following a conversation. Talking less smoothly or pausing, repeating or stumbling on their words while speaking.

**5. Losing things**

Losing their stuff and not remembering or knowing where they had put it.

**6. Poor judgement**

Difficulties to interpret situations in the right way and not knowing which choice to make in that moment.

**7. Withdrawal from social activities**

Social interactions and activities are becoming harder to attend. Therefore, withdrawing more often and undertaking less activities.

**8. Changes in behaviour and character**

Could be perceived as confused, depressed, anxious or suspicious. Suddenly their mood can change and they can act out of character.

**9. Restlessness**

A continuous feeling of restlessness and the desire to wander and walk around which can result in having trouble sleeping and getting rest.

**10. Problems with vision**

It becomes more difficult to process what they are seeing. For example more difficult to estimate distances.

## 1.3 Stages of dementia

As dementia is a progressive disease, the symptoms and consequences of the illness get worse over time. Even though the disease progresses differently for everyone, dementia is often divided into three phases to describe the syndrome. This can help doctors to make decisions about what treatment or medication to prescribe and give healthcare professionals some insight into how to take care of people suffering from dementia (Dementie Fasen | Alzheimer Nederland, n.d.).

***Early Stage:*** In the early stage, minor changes in behavior, functioning, and personality become visible. These changes may include memory loss, small strokes, difficulty speaking, depression, or selfish behavior. Diagnosing dementia at this stage is challenging due to the similar symptoms of other diseases such as aging, burnout, or major life events.

***Middle Stage:*** As the disease progresses to the middle stage, symptoms become worse which makes daily tasks more challenging. Individuals become more dependent, leading to more pressure on caregivers. At this point, the symptoms become more recognizable as dementia which make the diagnosis easier. Even though the diagnosis could provide a sense of relief, it also raises many questions.

***Late Stage:*** It takes years before the disease enters this late stage. The damage to the brain then becomes severe and it is impossible to function independently anymore. The person will become completely dependent on the environment and professional or volunteer care is often required. In some cases, home care becomes even impossible and admission to a care facility is needed.

This division of the symptoms in these stages is an average illustration and the progression cannot sharply be defined as it varies per individual and the type of dementia. That is the reason that this classification is sometimes considered to be unpersonal and too general (Dementie Fasen | Alzheimer Nederland, n.d.). therefore, also other classifications, like the four stages of self-experience, have emerged which focuses more on person-oriented dementia care. This classification is based on the specific experiences of the person with dementia and connects it to the symptoms of the disease (De Vier Fases Van Dementie | Amaliazorg, n.d.):

***Stage 1 - The Threatened Self:***

Symptoms: Memory loss and general clumsiness.
Experience: Denial, distrust, need for structure, irritation, sadness, withdrawal.
Approach: Support self-esteem, guide through feelings of loss.

***Stage 2 - The Lost Self:***

Symptoms: Disorientation and loss of recognizability.
Experience: Feeling of anger (with aggression) and unwillingness behavior.
Approach: Name emotions, touch, and hold to provoke positive associations.

***Stage 3 - The Hidden Self:***

Symptoms: Memory moves to the past, difficulty in language.
Experience: Desire to go home, mismatch between environment and memory.
Approach: Furnish with timeless, recognizable items from an earlier phase of life.

***Stage 4 - The Sunken Self:***

Symptoms: Deterioration of hearing and vision, processing loss in the brain.
Experience: Brain no longer feels it exists, creating dynamic stimuli.
Approach: Provide dynamic stimuli like touches, smells, warmth, and soft sounds.

This person-oriented classification offers a better understanding of the individual's experience which allows the caregivers to adapt their approach based on the unique challenges presented at each stage. This classification emphasizes therefore on positive healthcare, focusing on the person's abilities and adaptation to life's challenges rather than solely on the disease itself (Dementie Fasen | Alzheimer Nederland, n.d.).

## 1.4 Needs of dementia sufferers

Tom Kitwood has come up with the basic needs that every human being desires and it is therefore especially important for people with dementia to ensure to give them these basic needs and desires which are love, comfort, identity, occupation, attachment and inclusion. He suggests that meeting the needs and wishes of your loved ones in a positive way is a responsibility that we have to bear together as a family, informal caregivers, employees and volunteers of dementia sufferers.

Although your loved one is turning more towards themselves as a result of the disease, we still need to make effort to have direct contact with them even when that feels impossible. Ensuring to remain a positive approach towards them until they are suffering from the severe stages of dementia is very important and can only be done by continuing to fulfill the basis needs and desires (that every person has) for your loved ones (Amaliazorg, 2018, pp. 11-12).

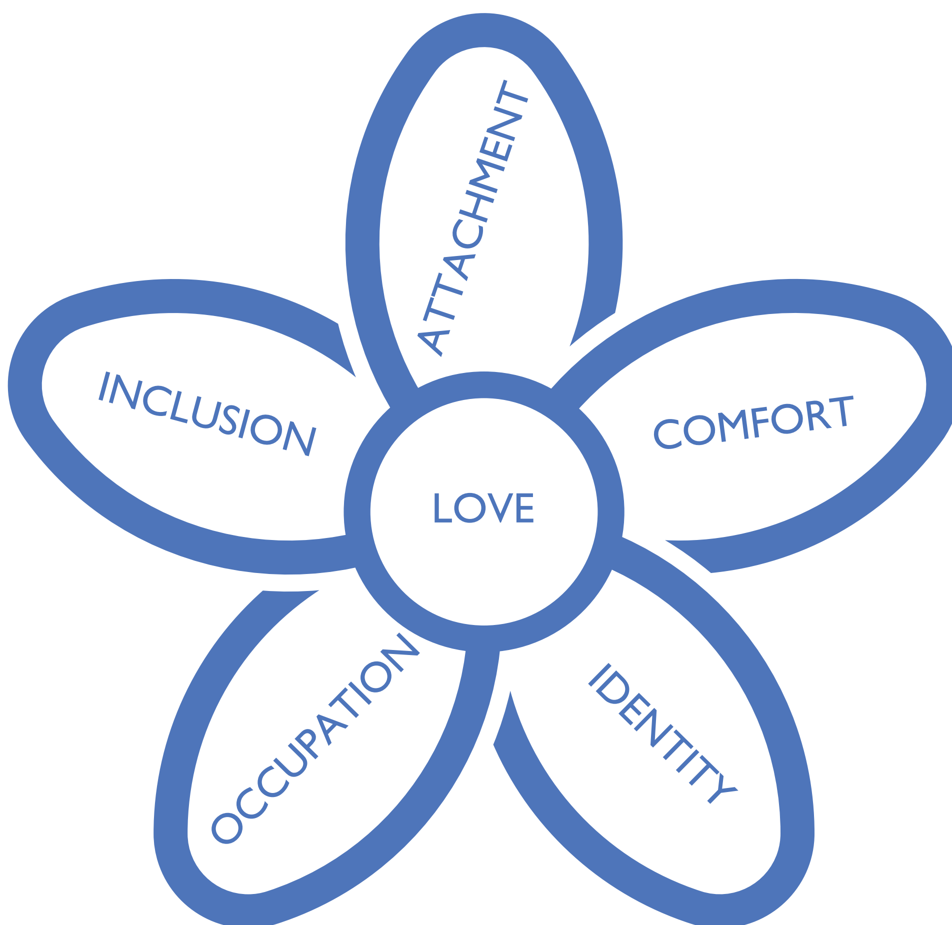



**Figure 7:** Kitwood's flower diagram that describes individual's needs, own diagram (2023).

## Conclusion chapter 1

Understanding dementia is crucial in the process of designing living environments that cater to the unique needs of individuals that are affected by dementia. Since this irreversible brain disease impacts memory, thinking and the capability to orient themselves. This result into people becoming completely dependent on their living environment once the disease progresses to a point in which they are not able to perform simple daily tasks anymore. Therefore, creating dynamic stimuli in their living environment is crucial for them to still be able to process and perceive their direct surrounding through their four senses in order to support them in their daily routines and maintain the quality of their lives.

# CHAPTER 2

## *Exploring* dementia design guidelines

The behavior of people suffering from brain diseases like dementia is very closely related to the stimuli and impulses from their environment (Nillesen & Opitz, 2014, p. 7). As described before, people with dementia are completely dependent on their environment once their brain functionality is declining (Dementie Fasen | Alzheimer Nederland, n.d.). It appears that a stimulating and recognizable environment have an influence on the cognitive abilities of people with dementia (Van Liempd et al., 2009, p. 116). It is therefore important to pay extra attention to the exterior and interior of the built environment for people with dementia (Nillesen & Opitz, 2014, p. 7).

## 2.1 Dementia & living environment

### 2.1.1 The influence of the living environment on people with dementia

Our health and the development of illnesses are the result of a dynamic correlation between our genetic predisposition, personal factors, behavior (lifestyle) and environmental factors (RIVM, 2023, p. 3). The aspects that are influencing our health are also called determinants. These determinants can both have a direct influence on our health but also indirectly through their influence on other determinants (RIVM, 2021, p. 2). Thus, our living environment influences our behavior and can therefore indirectly influences our health when our behavior changes (RIVM, 2022, p. 15). For example, our living environment is influencing the development of dementia indirectly through its effect on our lifestyle and risk factors that exists within that environment on developing cardiovascular diseases. These damages to our heart and vessels are increasing the risk of dementia. Therefore, risk factors for cardiovascular diseases, that are created by our behavior in the living environment, are also risk factors for dementia (Baumgart et al., 2015, p. 718).

All in all, the living environment in which we live and work is influencing our health both directly as well as indirectly. This includes the physical living environment such as spatial layout, location of industry or busy roads and exposure to containments in the environment. The presence of greenery in the living environment, for example, ensures a better cognitive health that is related to dementia. The positive effect of greenery is, among other things, partly through the stress reducing effect of greenery on people that is associated with a better cognitive health (RIVM, 2023, p. 2). Greenery also offers opportunities and encourages to exercise and is inviting people to have social activities and encounters (Besser, 2021, p. 1).

Besides the physical environment also the social environment is (in)directly influencing our health which includes aspects such as the social cohesion in the neighborhood. An attractive and well-designed living environments is encouraging to make social contacts and ensures that moving and relaxing is easy and safe (RIVM, 2023, p. 2). Moreover, having a rich and complex social network in which you are invested also is associated with a better cognitive health and therefore lowers the risks of developing dementia (Ellwardt et al., 2015, p. 107).

### 2.1.2 Designing for people with dementia in all environments

Instead of solely focusing on implementing dementia design guidelines in formal care settings, recently also the importance of designing for people with dementia in all environments has been increasingly recognized. This is because most people with dementia still live at home in their local communities. They visit shops, go to theatres and parks and make use of public transport. By establishing the appropriate social and environmental support, people living with dementia can still be active participants in society (Quirke et al., 2023, p. 1044).

Day care centers is an aspect of social care that is necessary in order to support people with dementia that still live at home in their local communities (Bennett et al., 2020, p.15). As government policies increasingly support people with dementia to remain at home for as long as possible, it increases the focus on community care services and demand for center type services (Bennett et al., 2020, p. 69). Feeling part of their community while maintaining connections can play a significant role in changing the lived experience of people with dementia (Ward et al., 2017). They can be the link between the people with dementia and the community:

*'Day care centers can provide a hub of community activity by providing opportunities for intergenerational programs and purposeful activities that support community connection'* (Bennett et al., 2020, p. 72).

Intergenerational dementia programs within these day care centers are considered to be promising interventions. Including socially engaging activities in these programs have shown to have beneficial outcomes for some people living with dementia (Ward et al., 1996). Also, hosting children's playgroups or linking the center with the local school to have schoolchildren spend regular time at the center can add to the day center environment (Bennett et al., 2020, p. 72). Since research has revealed that children and younger adults have poor perceptions of people with dementia and a lack of understanding of the condition, bringing these generations together through by organized combined activities could improve their perspective. The aim of these activities is thus to mutually benefit the younger and older generations (Gerritzen et al., 2019, p. 215).

**2.1.3 The aim when designing a dementia-friendly living environment**

When designing a living environment for people with dementia, the goal is to promote goal-oriented behavior and create stimuli. As discussed in chapter 1, people with dementia rely on their intuition which emphasizes the importance of a well-structured environment that enables them to navigate with their intuition. Stimuli play a crucial role as they can be processed by the lower part of the brain which is controlled by emotions. The emotional response to stimuli influences their behavior (Nillesen & Opitz, 2014, p. 7). A bad designed environment may evoke feelings of fear and insecurity, leading to problem behavior. Experience has shown that adjustments to the built environment makes at least half of the so-called problem behavior of people with dementia disappear without any medication or special treatment (Nillesen & Opitz, 2014, p. 9).

*'Functioning of a person with dementia be positively or unfavorably influenced by the environment. A favorable environment produces less problem behavior while an unfavorable environment produces more'* (Verbraeck & Van Der Plaats, 2008, p. 37).

There are three important aspects to consider when implementing dynamic stimuli in the living environment of people with dementia. First, to experience their own existence, dynamic stimuli are needed such as movement and sound. Other aspects are the encouragement of movement (walking) and the use of colors and materials within the interior of the building. Creating a building based on the knowledge of creating the right physical environment that promotes calmness, the purposefulness and the well-being of these people and their caregivers is essential (Nillesen & Opitz, 2014, p. 9).

## 2.2 Designing for dementia

### 2.2.1 Design guidelines for dementia beneficial for everyone

Architects Nillesen & Opitz (2014) go further by advocating that living environments designed for individuals with dementia benefit everyone. They highlight four universal design principles that are essential for everyone: clarity, recognizability, enclosure, and demarcation. The aim is to create intuitive spaces where people, with or without dementia, can navigate effortlessly (Nillesen & Opitz, 2014, p. 7).

Similarly, architects Feddersen & Lüdtke (2014) also suggest that design guidelines for health- and dementia care can positively impact general architecture. In their book "Lost in Space," they propose using dementia-focused design as a broader renewal of the built environment. They emphasize the use of architectural elements, such as proportions, materials, lights, colors, and acoustics, to engage the sensory experiences of both individuals with and without dementia. Creating spaces that offer clear orientation, security, and identity is seen as beneficial for society at large (Feddersen & Lüdtke, 2014, p. 11).

### 2.2.2 Design principles

Many studies have been published about developing evidence-based dementia design principles. However, one of the most sustained developments and tests of such principles over the past 35 years have been conducted by Fleming, Bennett, and colleagues (Quirke et al., 2023, p. 1041). Their latest publication is their comprehensive handbook 'Dementia Training Australia: Environmental Design Resources' from 2017 (Fleming & Bennett, 2017). They believe that the aim when designing for dementia is to focus on the person rather than the disease itself Bennett et al. (2020):

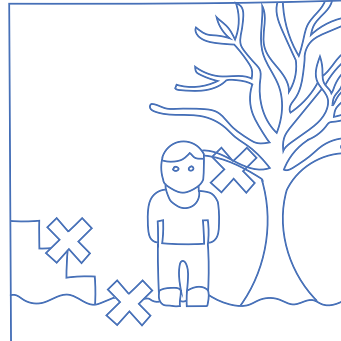
*'The purpose of designing well for people living with dementia is to support them to reach their full potential as human beings'* (Bennett et al., 2020, p. 12).

In order to provide a way to untangle and categorize their design terminology, Bennett has come up with a four-part schema. The four domains of designing for people living with dementia are goals, principles, approaches and responses. All domains correspond to each other at increasing levels of detail and specificity. Goals are a higher-order and more societal level as it should respond to an organization aiming to, for example, provide dignity and autonomy for people with dementia as their key design question. The principles are then guiding the design. The approaches are there to indicate the areas that need to be considered when applying the design principles. At last, the design response is the detailed design solution that is responding to a specific client, project, context or other individual need (Quirke et al., 2023, p. 1042).

According to Fleming and Bennet's ten principles, environmental design for people with dementia should be (Fleming & Bennett, 2017, pp. 50-52):

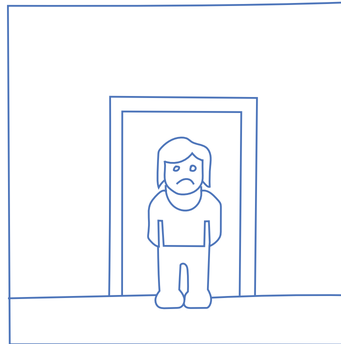
***1. Unobtrusively reduce risks***

People with dementia require a safe environment that is easy to navigate in order to maintain their independence. Safety features should be discreet to avoid causing frustration or agitation.



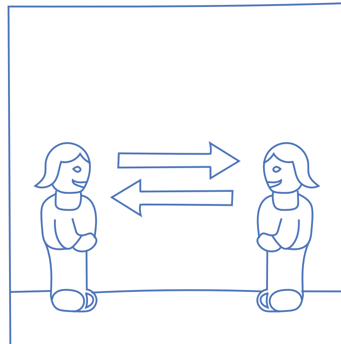
***2. Provide a human scale***

A person with dementia is influenced by the scale of the building, the number of people they encounter, the building size. The surrounding should not be intimidating but rather promote well-being and enhance the person's independency.



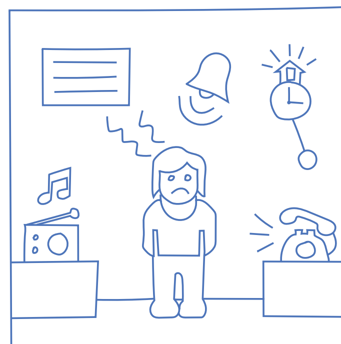
***3. Allow people to see and be seen***

To reduce confusion for people with dementia, their environment should be easily understandable. Recognizing the location enables them to make better choices. Clear visual access stimulates engagement and confidence for exploring the environment.



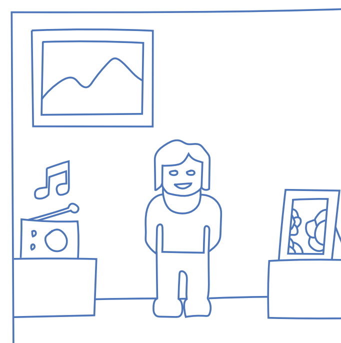
***4. Reduce unhelpful stimulation***

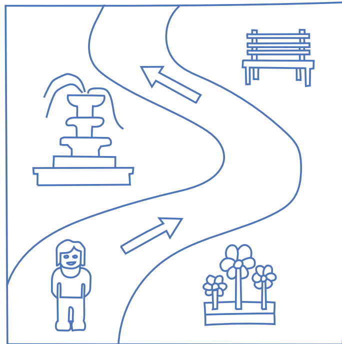
The environment should be designed to minimize exposure to stimuli since people with dementia become stressed when exposed to a large amount of stimulation. The full range of senses must be therefore considered.



***5. Optimize helpful stimulation***

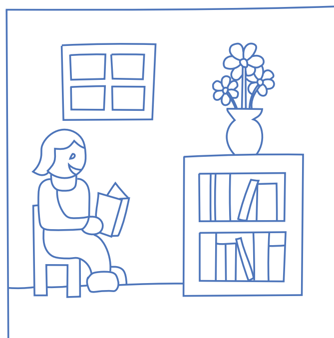
To reduce confusion for those with dementia, provide sensory cues but carefully design them to avoid overstimulation.





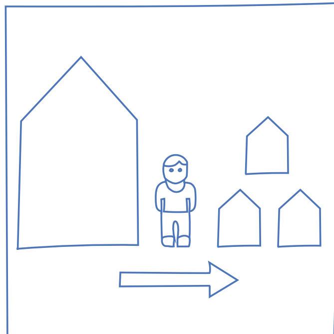
***6. Support movement and engagement***

To motivate engagement and well-being, establish purposeful movement pathways that are clear without any obstacles. Pathways should also be accessible indoors and outdoors, allowing opportunities in various weather conditions.



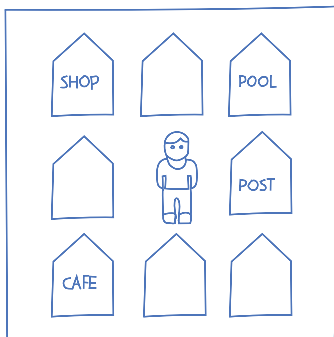
***7. Create a familiar place***

The environment should enable them to maintain their independency with the help of familiar building design (internal and external), furniture, fittings and colors as well as encourage them to be involved.



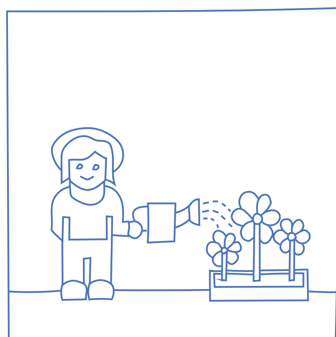
***8. Provide a variety of places to be alone or with others***

A variety of places in the units should be available, some for quite conversation and some for larger groups or places to be by themselves. The different rooms should also all be usable for different activities.




***9. Link to the community***

To maintain a person with dementia's identity, regular interaction with friends and relatives is crucial. Accessible spaces for visitors and community integration help combat stigmatization. Shared spaces can connect both residents and the community.



***10. Design in response to vision for way of life***

Clearly state and design the building to support the lifestyle choses by the specific care facility. The facility should embody its care philosophy, reminding staff of values and practices, and providing necessary tools.

Several researchers have explored evidence-based guidelines for dementia design, such as Nillesen and Opitz (2014). They focused on small-scale living environments by emphasizing the benefits of creating intimate, clearer, and home-like interiors to enhance the caregiving. Nillesen and Opitz identified principles that overlap with those of Fleming and Bennett (2017). However, they also highlighted the importance of supporting residents' orientation through clear layouts, colors, and detailing connecting indoor and outdoor spaces. Incorporating these principles could improve the quality of life for individuals with dementia (Nillesen & Opitz, 2014, pp. 115-116).

### 2.2.3 Design approaches

Even though design principles guide designers towards ways in which they can contribute to the well-being and dignity of people that are suffering from dementia, design approaches are necessary in order to indicate the ways in which design principles can be applied. A design approach identifies a design direction without giving the design detail (Quirke et al., 2023, p. 1042). For instance, the creation of walking paths and outdoor access are two examples of design approaches. They are relating to the principle of 'Support movement and engagement' and 'Create a familiar place' from chapter 2.2.1. Therefore, the correlation between the design principles and approaches is crucial when designing for people living with dementia (Bennett et al., 2020, p. 34).

Several authors and researchers have identified approaches that ensure the people with dementia are supported by the built environment. One of them is John Zeisel, who proposes eight approaches that are key to the provision of an environment that supports well-being and dignity (Zeisel, 2013):

1. Exit controls
2. Walking paths
3. Common spaces
4. Unit privacy
5. Outdoor access
6. Homelikeness
7. Sensory comprehension
8. Independence support

The relationship between the design principles and approaches is crucial when aiming for creating high-quality designs that support individuals living with dementia best. These two domains together, after conceptualizing the goal in the first domain, create conversations in which ideas and concepts move towards a specific design as a response to every unique context.

## 2.3 Fieldwork week: key findings

To explore the impact of the living environment on individuals with dementia and the integration of specific design principles in formal care settings, fieldwork was conducted at a care farm facility in the Netherlands. The facility, designed for people with dementia, includes 27 permanent residents across four small-scale homes, a guest house for short-term stays, and a day care facility for 12 visitors. The purpose of the visit was to understand the facility's vision and the implementation of the vision through the design principles and approaches by gathering insights through interviews, drawings, and observations (specific names and locations are excluded in this report for privacy reasons). Appendix B contains the complete fieldwork report as this solely summarizes the key findings of the visit that were discussed during an interview with the founder of the location.

The founder's motivation to establish the dementia care facility is due to her personal experience with a family member that suffered from dementia. After doing extensive research focused on effective communication with people with dementia, she founded this care farm location with Tom Kitwood's theory on person-centered care (1997) as the basis of the vision of her facility. The facility's vision is based on seven basic principles that are integrated into every aspect of the built environment:

***1. Not the disease, but the person is the starting point***

At the core of her vision is a simple and powerful principle: people with dementia are human beings in the first place and not their disease. This was based on Kitwood's principle (chapter 1.4) and also resonates with Bennett et al. (2020) as he aimed to support individuals with dementia to reach their full potential as human beings (chapter 2.2.1). In this facility, therefore, employees are encouraged to understand residents' habits, interests, life history, and culture in order to provide personalized and effective care.

***2. Expert care that is focused on the resident's need***

Providing person-centered care means also addressing resident's psychological needs such as love, warmth, comfort, activity, attachment, and a sense of belonging. Tom Kitwood's flower diagram (chapter 1.4) described these needs that all humans desire. The environment, including caregivers, family members, and the living space, play a crucial role in this. The founder believes that creating a well-designed environment can slow the deterioration of people with dementia:

'If you design the environment well, which means that you design an environment based on their (psychological) needs, then someone with dementia will deteriorate less rapidly than if those needs are not met' (founder dementia care facility fieldwork).

***3. Feeling at home***

In order to make the residents feel secure and at peace, a recognizable living environment is crucial. To achieve this, four 'normal homes' were designed, based on the layout of typical Dutch houses. Caregivers (see full interviews appendix C) adapt to residents' habits, emphasizing that it is the house of the residents and not theirs. The founder gained inspiration from other Dutch care facilities and identified two key design principles: the environment as a prosthesis for daily support and a layout that mirrors ordinary houses. A prosthetic environment has proved to promote well-being, reduce caregiver's stress, possibly decrease the frequency and intensity of behavior problems and support maintaining the functional level of individuals with dementia (Guaita, 2023). Mirroring the structure of ordinary houses is an example of creating a supportive environment:

*'In every Dutch house there is a small hallway after entering through the front door. You hang your coat on a rack and then you have the toilet. Then you enter the living room, where you clearly can see the rest of the space with the kitchen and the living space from one perspective. And then, when they want to enter their own private room, they only have to go one way that is clearly visible because there is one hallway that connects all private rooms with the public rooms'* (founder dementia care facility fieldwork).

This concept is also incorporated into the placement of the four homes on the facility terrain as the buildings embrace the central garden. This allows residents to have an overview of the entire facility from their private homes which relates to ordinary houses with a connected garden. Researchers also emphasize the importance of a well-designed and varied garden as they identified a positive correlation between being outside and cognitive functioning (Van Liempd et al., 2009, p. 8).

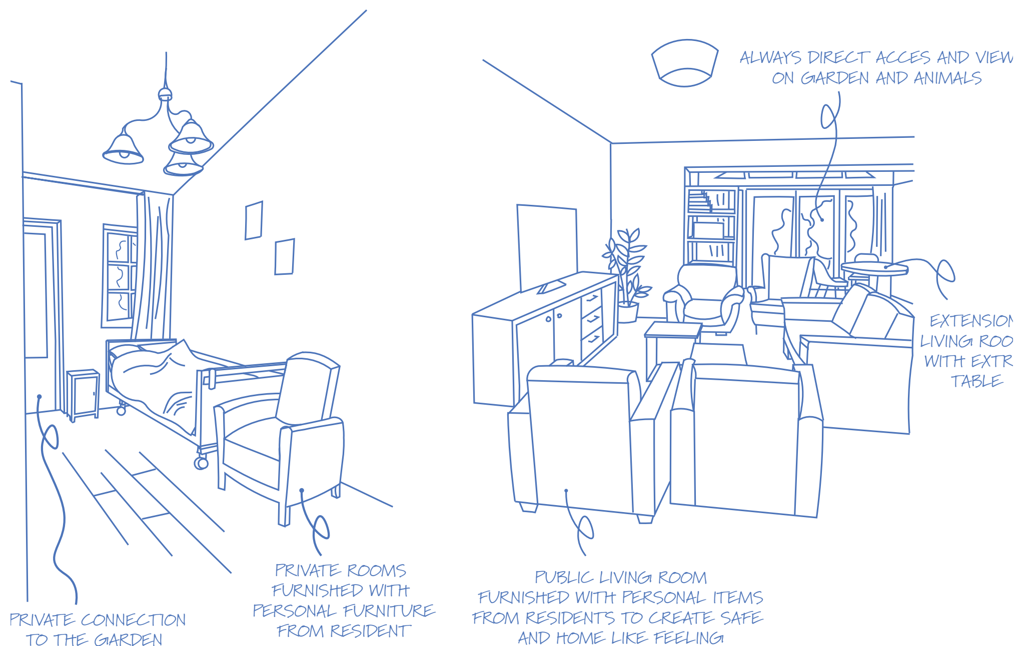



**Figure 8 and 9:** Field work dementia care farm, own diagram (2023).

***4. Always say yes, unless...***

This principle is based on the concept that everything is possible unless proven otherwise in practice. Residents at this facility are for example able to bring their own furniture, have their pets move in, or invite family members to share meals. Inspired by Naomi Feil's validation theory (1993), the approach acknowledges and validates the feelings, memories, losses, and human needs of people with dementia (Feil, 1993, p. 200).

***5. Without freedom there is no life***

The facility places a high value on residents' freedom, allowing them to move freely both indoors and outdoors. Employees prioritize the comfort of the residents respect the individual's daily routine by always considering their needs and wishes while maintaining their health and well-being.

Choosing to establish the care facility as a care farm was a conscious choice for a few positive reaons. Firstly, it enables residents to live in the present and engage in conversations about current events. Secondly, the farm environment serves as a visual and stimulating tool, drawing attention to elements like the movement of animals in the garden. This connection with the outdoors contributes to a sense of calm and security, particularly when the living room is well-connected to an outdoor space with a view (Van Liempd et al., 2009, p. 76). Additionally, the private gardens contribute to the feeling of safety and calmness among residents (Nillesen & Opitz, 2014, p. 80).

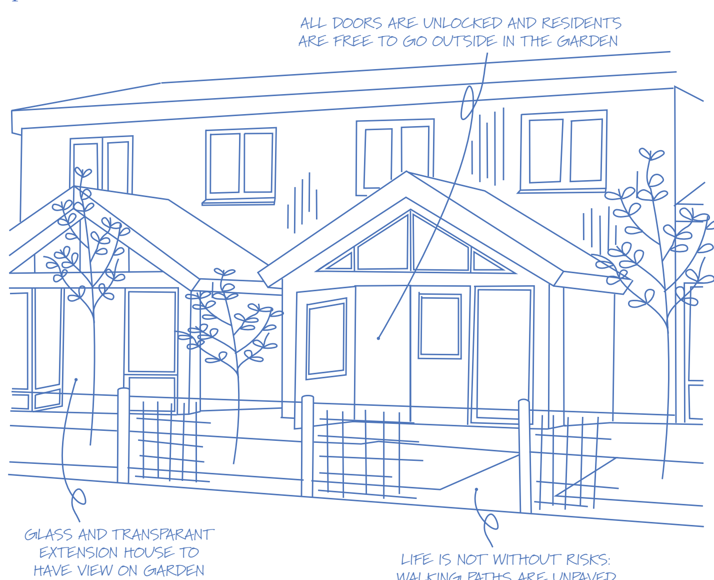



**Figure 10:** Field work dementia care farm, own diagram (2023).

***6. A meaningful daily routine makes life worth living***

The house-like farm environment allows residents to feel meaningful in many ways. Doing chores in the house like cooking, cleaning or doing the dishes makes them feel like they matter. It gives them a daily purpose and meaningful routine. The farm environment also contributes to this feeling. They can feel, smell, hear the sounds of the garden. Also making contact with the animals and being responsible for their care are all initiators to enrich the experience of people with dementia (Nillesen & Opitz, 2014, p. 79).

***7. Being a part of the society and community***

The founder emphasizes the goal of keeping residents engaged in the community by making the location accessible to family, volunteers, and the neighborhood. Residents have the freedom to leave (after consulting with the employees and family) and the day care center and guest house serve as place to connect permanent residents with the community in order to fulfill an important societal function according to the founder:

'A lot of people have the wish to live at home longer, but then they must also be able to live well enough at home to do so. The biggest predictor of whether someone ends up in a residential care facility is the burden on the informal caregiver, whether they are still able to cope. So, it is not even about the cognitive functioning or problematic behavior of the person with dementia. They of course are also influential factors but the most important one is the informal caregiver' (founder dementia care facility fieldwork).

She believes these functions to support the community as well by providing the informal caregivers the necessary relief when they need it in order to enable people with dementia to live at home longer. Research also confirms that small-scale facilities are able to cater to maintaining the connection with the familiar social environment as well as the close contact with the informal caregiver after admittance (Van Liempd et al., 2009, p. 2). Also, within the facility, the founder believes a community feeling is established as residents from different homes have become friends or share hobbies. Also the employees are included in the community as they know all residents and their personal history and preferences.

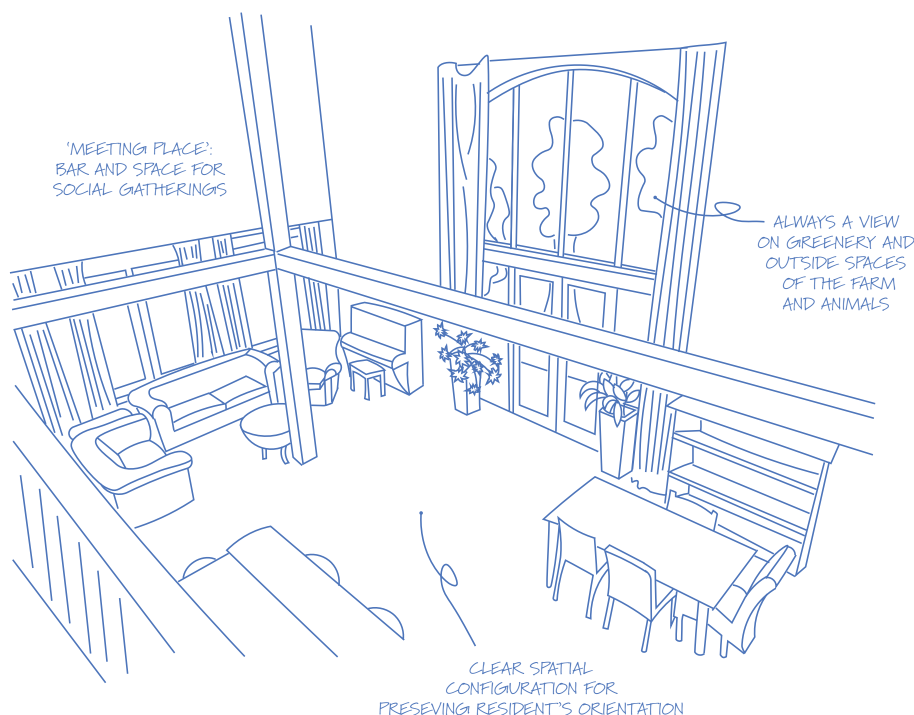



**Figure 11:** Field work dementia care farm, own diagram (2023).

## 2.4 Case study: Alzheimer's village – Nord Architects

A case study, the Alzheimer's Village by Nord Architect, was analyzed to investigate how design principles were implemented in this design. Completed in 2020 in Dax, France, the Alzheimer's village by Nord Architects aims to establish a secure and welcoming environment for residents, their families, and healthcare professionals. The architect believed that by prioritizing well-being, better qualitative care could be provided and healthy aging could be achieved (Pintos, 2022). This case study was chosen because this is one of the few references that both focused on providing dementia care while promoting healthy aging.

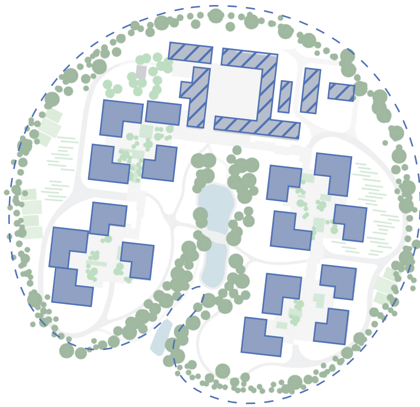
The analysis was done by utilizing Zeisel's eight design approaches (2013) and focused on how this case study, a small-care facility for dementia care and healthy aging, responded to these approaches in its specific location and context.

**Figure 11:** Case study Alzheimer's village by Nord Architects (Nord Architects, 2023).

***1. Exit controls***

The facility is surrounded by natural fencing and one entrance gate that is controlled with a reception. This reception can control who enters and leaves the complex as visitors are allowed to make use of the public function in the central village building. The permanents residents have the freedom to leave their private cluster but are not allowed outside the property.

**Figure 12: Entrance gate** (Nord Architects, 2023).



## *2. Walking paths*

The complex is integrated in the surrounding nature. They transformed the existing landscape, with its characteristic ancient pine trees, into a recreational space where residents can go outside and go for a walk. There is a path that runs through the landscape in a loop so no residents will experience dead ends or getting lost (Pintos, 2022).

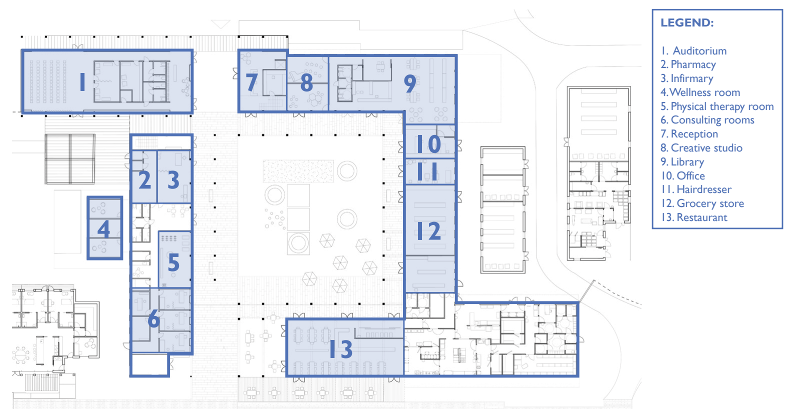



**Figure 12,13 and 14:** Spatial layouts (Nord Architects, 2023).

## *3. Common spaces*

The architects have implemented several familiar functions within the complex such as a grocery store, hairdresser, a restaurant and a market square. In this way they are aiming to make residents reminiscence on their lives within a neighborhood to create a feeling of living at home (Pintos, 2022). As visitors are also allowed to use these public buildings besides the permanent residents, everyday connections are made between residents and locals. Social interactions are stimulating for residents with dementia but being able to choose the time and content of the social activities is essential for them. Therefore, dividing the common spaces from the private units was a choice the architects implemented into the design of this village (Architizer, 2023).

## *4. Unit privacy*

They have designed the complex divided into four clusters that each house around 30 residents. In this way, the residents are living in smaller 'families' with all the necessary facilities and outdoor spaces (Pintos, 2022). Each of them has their own identity and courtyard. This results into four different neighborhoods that are connected by an urban street that is leading up to the village center with the market square (NORD Architects, 2023).

**Figure 15:** Spatial layout private unit (Nord Architects, 2023).

***5. Outdoor access***

Every cluster of four homes is connected to its private courtyard. Therefore, accessing the outdoor spaces can be done from the private units. The inner courtyards are connected with the urban street that leads up to the center of the village (NORD Architects, 2023).

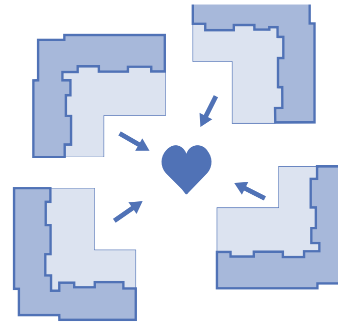


**Figure 16:** Connection indoor and outdoor spaces (Nord Architects, 2023).

***6. Homelikeness***

The architects aimed to create a recognizable living environment because that is crucial for people living with dementia. Their architecture showcases a local feel that features elements from local building styles. The structure of the complex refers to the urban layout of Dax's old town, with the building wrapping around a communal market square and by using natural and local materials such as timber cladding, plaster and pitched, clay-tiled roofs (Pintos, 2022).

**Figure 17 and 18:** Using local materials and forms to create familiarity (Nord Architects, 2023).

***7. Sensory comprehension***

Connecting to nature was also an important aspect they wanted to implement in their design. By establishing a closeness to nature, they were aiming to create a 'stimulating effect' with the small lake and trees in the middle of the site with surrounding gardens with fragrant flowers (Astbury, 2023). The walking paths that are connecting the different buildings from the complex therefore are full of experiences and sensory inputs with different characteristics that lie as loops in the landscape (NORD Architects, 2023).W

***8. Independence support***

By creating looped walking paths in the outdoor spaces that are connecting all four clusters with the village center, a sense of independency is provided for the residents. Due to the looping paths, they are able to always find their way and not get lost when having a relaxing walk outside (Pintos, 2022).

**Figure 19 - 21:** Sensory experiences in garden with walking loop (Nord Architects, 2023).

## Conclusion chapter 2

In conclusion, chapter 2 discusses the dynamic correlation between dementia and the living environment, emphasizing the (in)direct influence of both the physical and social environment on individuals with dementia. Since people with dementia have the same needs as people without dementia (conclusion chapter 1), more architects belief that living environments designed specifically for dementia will benefit everyone as they highlight four universal principles: clarity, recognizability, enclosure and demarcation. In this way, the ordinary living environment can be utilized as a prosthetic that supports everyone in their daily lives to fulfill their needs.

The presence and connection to greenery, clear spatial layout and creating community cohesion are important key principles in order to achieve a prosthetic and dementia-friendly environment. Also, prioritizing safety, human scale and visibility as well as supporting movement and engagement and creating dynamic stimuli and a familiar setting are important key design principles to take into account. Implementing these key design principles into the ordinary living environment requires a holistic approach to dementia care in order to create a surrounding that enhances the well-being and improve the quality of life of individuals living with dementia.

# CHAPTER 3

## *Exploring* the concept of a healthy living environment

With the estimation that 70% of our global population will be living in urban areas in the future (United Nations, n.d.), the way the living environment of cities are design and developed is crucial to our health and well-being. This is due to the effect of the living environment on the psychical and mental health of everyone (Sweco Group, 2023, p. 5). Since our living environment is (in)directly influencing our health through other determinants of health, opportunities arise to prevent diseases like dementia through this living environment. Creating a safe, healthy and green living environment not only protects against health-threatening factors in the environment (such as radiation, air pollution, tobacco smoke, chemicals and viruses and bacteria) but also simultaneously promotes healthier behavior and can therefore reduce the risk of diseases such as dementia (RIVM, 2023, p. 10).

## 3.1 What is a healthy living environment?

The Dutch National Institute for Public Health and the Environment defines a 'healthy living environment' as one that is clean, safe, guards against health risks, encourages exercise and socializing, and is a pleasant place to live (RIVM, n.d.). To create healthier urban living environments, three crucial aspects in designing buildings and cities are important:

***1. An inviting green city:***
Nature and greenery positively impact human health and well-being. Future cities should integrate more green areas per inhabitant and higher-quality green spaces in urban areas, streets, and buildings. Greenery not only benefits physical and mental health but also improves air quality, reduces noise pollution, absorbs CO2 emissions, and enhances biodiversity (Sweco Group, 2023). Studies also indicate a connection between the presence of nature and reduced depression, anxiety, cardiovascular risk factors, improved mood, attentiveness, and increased physical activity (Frumkin et al., 2017, p .10). Other studies moreover suggest an association between brain health across people's lifespan as greater neighborhood greenness lowers the chances of developing Alzheimer's disease at an older age (Brown et al., 2018, p. 5).

***2. Healthy buildings connected with the outdoor environment:***
As people spend approximately 90% of their time indoors, designing indoor environments is crucial for health and well-being (Roberts, 2016). Also, the location of the building impact indoor air quality and should therefore be considered carefully. Design solutions include integrating plants, creating open vistas to green outdoor areas and optimizing natural light through smart façade designs. Prioritizing natural light over artificial lighting enhances the indoor environment (Sweco Group, 2023).

***3. Healthy Lifestyle Promoting Movement:***
Urban planning should focus on pedestrians and cyclists by implementing living, working, and public facilities within mixed-use neighborhoods that are accessible by bike or foot. Building circulation elements, such as staircases and walking paths, should be appealing and encourage movement. Also, designing buildings with spaces for play and sports, or connecting them to outdoor spaces, promotes a healthier lifestyle. Future city and building designs should inspire healthier choices, with architects and engineers prioritizing inviting and innovative designs for stairs, corridors, urban spaces, and infrastructure (Sweco Group, 2023).

Thus, by creating healthier indoor climates that are connected with a more balanced natural outdoor urban environment that promote physical activity, cities can be developed that both promote the mental and physical health of its residents (Sweco Group, 2023).

## 3.2 Learning from the Blue Zones

An example of an interesting living environment that promotes health and well-being and has proofed to be beneficial towards people's healthspan and lifespan is the principle of the Blue Zones.

A study from 1969, conducted on Danish twins, revealed that only 20% of how long the average person lives is dictated by our genes while the other 80% is determined by our lifestyles (Herskind et al., 1996). Therefore, in 2004, Dan Buettner, was motivated to uncover what specific aspects of people's lifestyles and environment are leading to longevity (Buettner & Skemp, 2016, p. 318). His intend was to identify lessons and principles that could be applied to build healthier communities and helping people to live longer and better lives (Institute of Medicine of the National Academies, 2015, p. 5). In collaboration with National Geographic and the National Institute on Aging, he and his team found five places around the world where people consistently live beyond 100 years. These five geographically defined areas had the highest percentages of centenarians as in these places the chances of reaching the age of a 100 years old is 10 times greater than in the United States. The locations are Loma Linda, California in the United States, Nicoya in Costa Rica, Sardinia in Italy, Ikaria in Greece and Okinawa in Japan. Together they are called the Blue Zones (Buettner & Skemp, 2016, p. 318).

After studying these locations extensively, nine shared characteristics ('The Power Nine') have been identified that are believed to be common denominators among the world's centenarians that are assumingly slowing their aging process (Buettner & Skemp, 2016, p. 318). Activity, way of living and diet are key factors and the foundation that is underlying these factors is the population's behavior and how they connect with others (Institute of Medicine of the National Academies, 2015, p. 7):

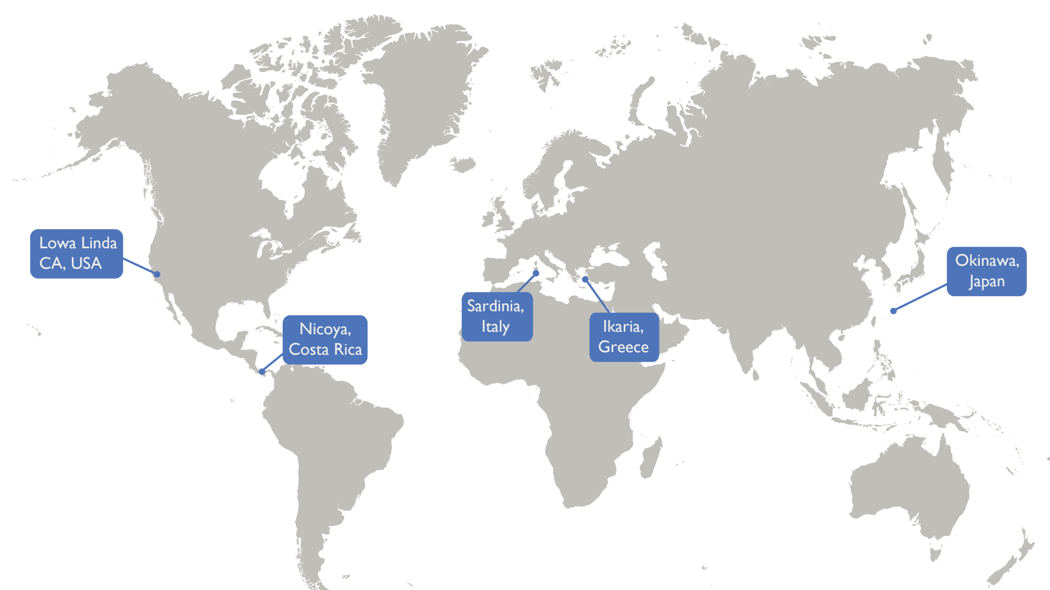



**Figure 22:** Location five Blue Zones around the world (Buettner & Skemp, 2016).

***1. Move naturally***
Longevity in Blue Zones is not about exercising extensively but rather due to living in an environment that enable unconscious and everyday movement. Residents engage in activities like gardening without relying on mechanical conveniences (Buettner & Skemp, 2016, p. 319).

***2. Purpose***
Having a sense of purpose is linked to extended life expectancy of 7 years. In Blue Zones, this is reflected in concepts like "ikigai" in Okinawa, Japan, and "plan de vida" in Nicoya, Costa Rica (Buettner & Skemp, 2016, p. 319).

***3. Downshift***
Stress is something that every person experiences, even in the Blue Zones. However, in these areas, they have found routines that shed stress. Activities like remembering ancestors (Okinawa), afternoon naps (Ikaria, Greece), and happy hour (Sardinia, Italy) help reduce stress (Buettner & Skemp, 2016, p. 319).

***4. 80% rule***
People in the Blue Zones eat their smallest meal in the late afternoon or early evening and do not eat any more the rest of the day. A 2500-year old Confucian mantra (Hara Hachi Bu) from the people in Okinawa is used to remind them before each meal to stop eating when their stomach are 80% full. The 20% gap could be beneficial for their health (Buettner & Skemp, 2016, p. 319).

***5. Plant slant***
There are a few ingredients that are the cornerstone of almost every centenarian's diet which are beans, including fava, black, soy, and lentils. Meat (mostly pork) is only eaten 5 times per month on average (Buettner & Skemp, 2016, p. 319).

***6. Wine at 5pm***
Almost all people in the Blue Zones drink alcohol regularly and moderate. It is believed that moderate drinkers are outliving nondrinkers. Solely drinking 1 or 2 glasses per day with family and/or friends is the key (Buettner & Skemp, 2016, p. 319).

***7. Belong***
Almost all people living in the Blue Zones belonged to some faith-based community and which denomination does not seem to matter. Research has shown that attending faith-based services around 4 times per month will add 4 to 14 years to your life expectancy (Buettner & Skemp, 2016, p. 319).

***8. Loved ones first***
All centenarians put their family first. This means that they keep their aging parents and grandparents nearby or in their home, which also lowers disease and mortality rates of children in the home too. Committing to one life partner adds 3 years to their life expectancy. Also, taking good care of their children increases the chances of them receiving care from their children in the future (Buettner & Skemp, 2016, p. 319).

***9. Right tribe***
The centenarians of the world chose or were born into social circles that support healthy behavior. For example, in Okinawa they have groups of five friends that commit to each other for life that they call Moais. Research has shown that smoking, obesity and happiness or loneliness are contagiou (Christakis & Fowler, 2007, p. 370). This means that social networks of those long-lived people have positively shaped their health behaviors (Buettner & Skemp, 2016, p. 319).

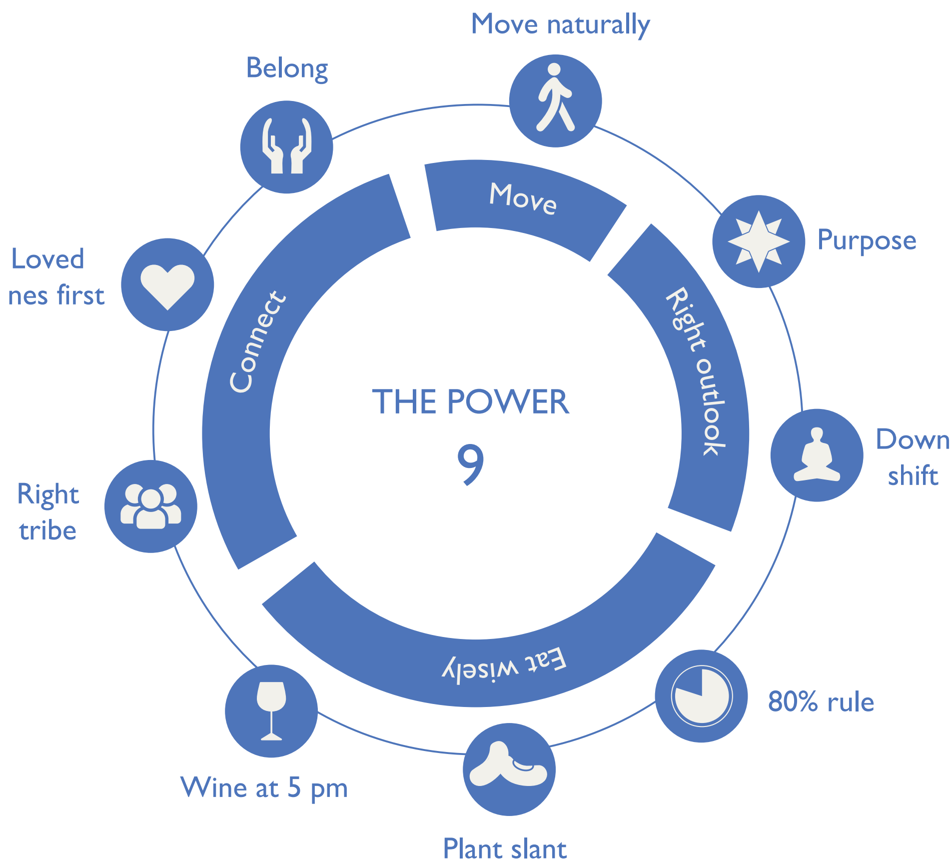



**Figure 22:** The Power nine characteristics that all Blue Zones have in common (Buettner & Skemp, 2016).

## 3.3 Learning from the 15-minute city

Recently, the concept of the 15-minute city has become a very popular concept to implement in cities around the world (Irish Institutional Property, 2021, p. 6). The concept was first introduced by professor Carlos Moreno in 2016 as a framework for combating greenhouse gas emissions after the 2015 Paris Climate Change Conference (Moreno et al., 2021). However, after 2020 it raised a lot of popularity and publicity post the COVID-19 pandemic when the mayor of Paris selected this concept as her central pillar during her 2020 re-election campaign (Allam et al., 2022, p .181). The Cities Climate Leadership Group (C40) moreover recommended it as a crucial strategy for post-COVID recovery (Gould, 2020).

The 15-minute city is a compelling urban vision that is promising to improve the quality of people's life by increasing the access to amenities and by encouraging and enabling them to choose a more local and sustainable lifestyle. It describes a place where citizens are able to access almost everything that they need in order to live a happy and healthy life within a 15-minute walk or bike ride from their homes (Irish Institutional Property, 2021, p. 15). The concept is therefore fundamentally about creating opportunities for people to live their lives locally with all necessities in close proximity (Ferrer-Ortiz et al., 2022, p. 147).

This idea of having crucial amenities accessible to citizens at close proximity is an idea that has existed for decades in the history of urban planning (Irish Institutional Property, 2021, p. 15).

The proposed concept from Moreno is based on the combination of more historical and classic concepts such as the neighborhood unit by Clarence Perry or the urban vitality approaches of Jane Jacobs (Ferrer-Ortiz et al., 2022, p. 147). Moreno continues these historical concepts by adapting and modernizing them as he envisions to create neighborhoods that are self-sufficient, dense and are socially and functionally connected. The neighborhood should also be designed based on the human scale in order to encourage walking and cycling (Balletto et al., 2021, p.3).

Moreno is explaining his framework by stating that there are six things that make urbanites happy: dwelling in dignity, working in proper conditions, being able to gain provisions, well-being, education and leisure. He suggests, in order to improve the quality of life, that the access radius for these functions needs to be reduced (Gould, 2020). Therefore, the concept sets out to bring out these six core aspects that we need in our daily lives closer to our homes: Education, work, transport, nutrition, health & care, and recreation & culture (Irish Institutional Property, 2021, p. 7).

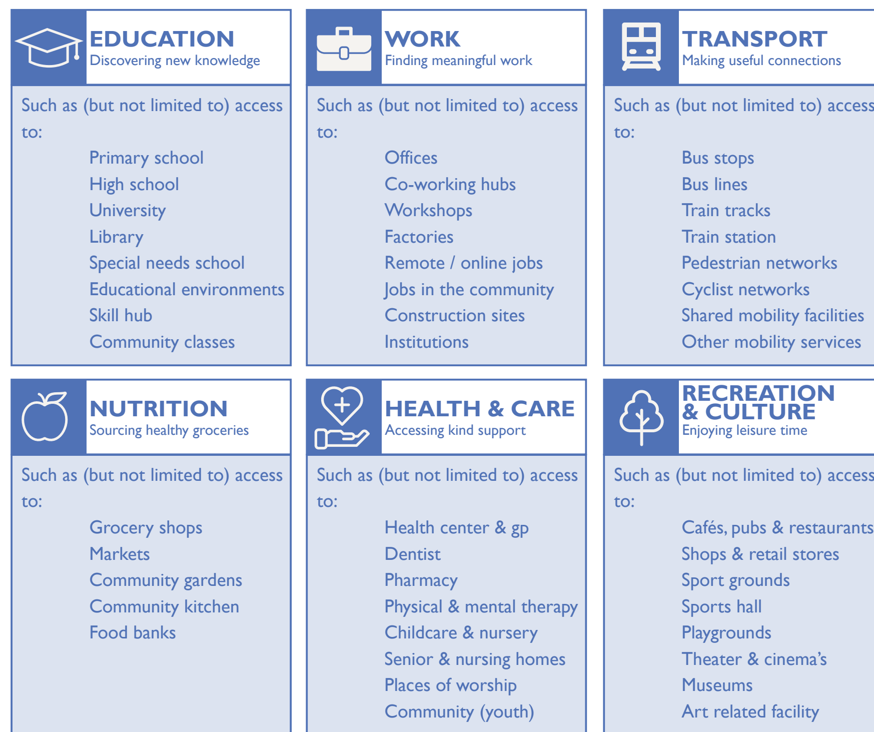



**Figure 23:** Six core amenities that should be within a 15-minute walking distance (Irish Institutional Property, 2021, p. 7).

As the idea of the framework is more on unlocking the local experience, there is no single global definition of the concept's criteria (Irish Institutional Property, 2021, p. 18). It is a flexible concept and can be adapted by municipalities to their city's culture and circumstances and by implementing varying amenities responding to the specific local needs. Since the introduction of the 15-minute concept in 2016, it has been widely adapted and tailored and implemented in many different cities with different names and shapes. After Moreno's own interpretation of his concept tested in Paris' 15-minute city, some other leading examples are Bogota's 'Barrios Vitales', Portlands' 'Complete neighborhoods' and Melbourne's '20-minute neighborhood' (C40 Knowledge Community, 2020).

## 3.4 Case study: The 20-minute neighborhood in Melbourne, Australia

The city of Melbourne, Australia has implemented the 15-minute concept by adapting it to the cities needs and context into the '20-Minute Neighborhood'. It has been part of Melbourne's urban development strategy since 2018 and it is one of the core pillars in the city's 2017-2050 plan (State Government of Victoria, 2023b). Melbourne's goal as a city is to create more inclusive, vibrant and healthy neighborhoods. They believe a 20-minute neighborhood could create a more cohesive and inclusive community with a vibrant local economy while reducing social exclusion, improving health and well-being, promoting a sense of place, reducing travel costs and reducing carbon emissions across the city as a whole (State Government of Victoria, 2017, p. 104). The government defined their concept to be simple and clear:

*'It's all about giving Melburnians the ability to live locally: meeting most of their everyday needs within a 20-minute walk, cycle or local public transport trip of home'* (State Government of Victoria, 2023a, p. 12).

They identify six hallmarks that together form a 20-minute neighborhood (State Government of Victoria, 2017, p. 104): (1) Be safe, accessible, and well connected for pedestrians and cyclists to optimize active transport, (2) offer high-quality public realm and open space, (3) provide services and destinations that support local living, (4) facilitate access to quality public transport that connects people to jobs and higher-order services, (5) deliver housing and population at densities that make local services and transport viable and (6) facilitate thriving local economies.

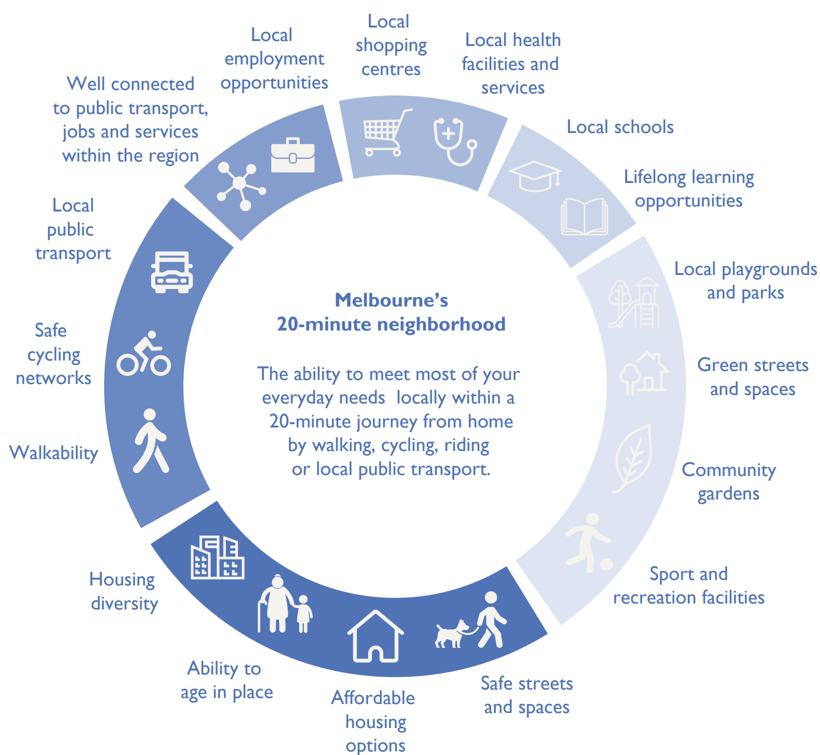



**Figure 24:** Melbourne's 20-minute neighborhood (State Government of Victoria, 2017).

## Conclusion chapter 3

In conclusion, Chapter 3 explores principles for creating healthier urban living environments which emphasizes three key aspects: designing green spaces, creating healthy buildings, and promoting active lifestyles.

Moreover, since our living environment is one of the key determinants that is (in)directly influencing our physical and mental health, opportunities arise to prevent diseases like dementia within these surroundings. Recognizing this of our living environment on physical and mental health, the Blue Zones concept offers insights from areas with low dementia rates and long-life expectancy. These areas share nine common aspects, including natural movement, daily purpose, stress management and a plant-based diet as well as social connections and (faith-based) community involvement. In addition, the concept of the 15-minute city further highlights the importance of healthy neighborhoods and suggests all essential amenities to be within a 15-minute walk.

Thus, by incorporating lessons from global urban models like the Blue Zones and integrating them into the 15-minute city concept, urban planning can guide the creation of living environments that not only prevent diseases like dementia but also promote longevity, overall well-being, and an improved quality of life for residents.

# CHAPTER 4

# *Translating* dementia risk factors into architectural interventions

Since our health is influenced by various factors, a growing body of research is emphasizing the link between the design of our built environment and well-being (Public Health England, 2017, p. 6). Recent studies focus on reducing dementia risk through modifiable lifestyle factors like physical activity, social engagement, and chronic condition management (World Health Organization, 2019, p. 32). Also, environmental aspects have also proven to influence dementia such as air pollution, noise, and built environment features (Kivipelto et al., 2020). Therefore, gaining insights on risk factors that are causing dementia and identifying which risk factors are modifiable is essential when aiming to design architectural interventions that can be integrated in the living environment and contribute to dementia prevention.

## 4.1 Identifying modifiable risk factors for dementia

In recent years, research has highlighted improvements surrounding dementia risk reduction as an increasing amount of literature suggests dementia prevention has potential if certain modifiable risk factors were addressed. Researchers have been investigating the preferred age to start dementia prevention in order to identify which risk factors could be modified. Since dementia onset mostly occurs after the age of 65 years, preventive non-pharmacological efforts should begin as early as the age of 55 years old since no interventions have been found to be effective on people that have already been diagnosed with the middle stage of dementia (Gan & Trivic, 2021).

In order to prevent dementia, scholars are suggesting to modify and tackle modifiable risk factors for whole populations or high-risk populations (Gan & Trivic, 2021). The Lancet Commission on Dementia Prevention, Intervention and Care has estimated that 40% of the known risk factors for developing dementia are modifiable in high-income countries and 50% in low- and middle-income countries could be prevented or delayed. They have summarized 12 risk factors that should be eliminated: low education in early life, hearing loss, traumatic brain injury, hypertension, obesity, alcohol consumption above 21 units a week in midlife, diabetes mellitus, depression, psychical inactivity, smoking, social isolation and exposure to air pollution later in life (Livingston et al., 2020).

## 4.2 Translating modifiable risk factors into architectural interventions

An increasing number of studies have explored translating knowledge about modifiable risk factors into interventions aimed at preserving or improving cognitive function in order to delay or prevent dementia (Kivipelto et al., 2020). At first, the focus was on individual risk factors, but lately there has been a shift towards investigating the effectiveness of complex lifestyle interventions addressing multiple risk factors at the same time. A pioneering study in this research field is the Finnish Geriatric Intervention Study to Prevent Cognitive Impairment and Disability (FINGER). Their results showed a significant benefit of a multi-domain lifestyle intervention on cognitive function over 2 years.

While these lifestyle trials mostly concentrate on micro (individual) or meso (social network of the individual) levels, they often neglect the macro level which is the environment in which individuals live. However, this macro level is overlooked in these studies while it plays a crucial role in health promotion strategies (Röhr et al. (p. 2).

Therefore, in recent years, researchers have expanded their focus to investigate environmental impacts on dementia development including the effects of air, noise, greenery, and the built environment. A study conducted in Taiwan (Liu et al., 2020) concluded that environments featuring more playgrounds, sport venues, and community centers were associated with lower odds of dementia. Additionally, another study (Wu et al., 2020) found that living far from daily amenities to be associated with higher odds for dementia as well as living far from lifestyle and healthcare amenities.

Despite these insights, a research gap remains to translate these findings into risk reduction interventions (Röhr, 2021, p. 2). Therefore, Röhr (2021) herself desired to address this gap by exploring how urban environments can enhance lifestyles promoting brain health and reducing the risk of cognitive decline and dementia (Röhr, 2021, p. 3). Their study connected to the 12 modifiable health and lifestyle factors outlined in the Lancet Commission on Dementia Prevention, Intervention, and Care (see chapter 4.1).

Röhr's study found three main themes that emerged from their research on promoting dementia risk reduction in the urban environment. Firstly, social participation and inclusion were highlighted and emphasized the importance of social connectedness, social housing, neighborhood assistance, information and orientation, digital and technological literacy, lifelong learning and co-creation and design. Also, intergenerationally was named to be important to stimulate engagement across generations and especially to create connections between elderly and children. Secondly, the significance of proximity and accessibility within the urban environment was emphasized. In order to continue to participate and remain socially included while mastering daily life tasks, access and proximity to means of transport as well as health care services, necessities of daily life and community events are crucial. The possibility to easily reach relevant facilities was considered to be a key need to preserve autonomy and functionality. This idea of accessibility within easily reachable distances connects to the principles of the 15-minute city concept that was earlier discusses (chapter 3.3). Lastly, the third theme evolved around creating opportunities for recreation and well-being in the city which included safety in traffic, security both during the day and at night, public gardening, urban greenery, cleanliness and environmental protection, climate change and heatwaves and highlighting the importance of physical outdoor activity. Especially urban greenery was highlighted as an important sub-theme as it is utilized for multiple purposes such as physical activity, socialization, stress reduction, recreation, well-being and for clean air. They concluded that the themes imply the importance of the design and function of the urban environment to be a prerequisite to enable engagement in and practice lifestyle behaviors that enhance brain health:

*'To remain cognitively healthy through recreation and fostering well-being, older individuals need to be able to socially participate, which can only work if they feel safe, secure, have the access and the means to do so.'*

Thus, they concluded, that urban concept should have a systematic approach which considers an individual's health and lifestyle profile rather than focusing solely on single environmental factors (Röhr, 2021). The design and functionality of the urban environment are crucial aspects for enabling engagement in lifestyle behaviors that enhance brain health, ultimately ensuring cognitive well-being for older individuals.

## Conclusion chapter 4

In conclusion, chapter 4 discusses the importance of identifying modifiable dementia risk factors and translating the gained knowledge into architectural interventions that can be implemented in the living environment to contribute to dementia prevention. Studies have identified 12 risk factors that influence dementia from which 40% are modifiable and thereby could contribute to the prevention of dementia. In addition, implementing these preventive measures in order to eliminate these risk factors in an individual's life should start at the age of 55 years to be effective.

When translating the risk factors into architectural intervention within the living environment, three themes were highlighted: social participation and inclusion, proximity and accessibility within the urban environment, and creating opportunities for recreation and well-being. The emphasis therefore is on creating a systematic approach in the urban design that considers the individual's health and lifestyle rather than focusing solely on single environmental factors.

# CONCLUSION

The main research of this report is the following question:

**How can architecture and the built environment be an instrument in developing design guidelines that contribute to the prevention of dementia?**

In order to answer this question accordingly, sub-questions were formulated that were discussed in the chapters 2-4.

In chapter 1 and 2 the question *What is dementia, and how do architectural interventions within the existing built environment currently respond/adapt in order to support the daily lives of dementia sufferers?* was answered based on conducted literature research into the characteristics of dementia in order to understand the needs of people that are suffering from dementia in the first chapter. Understanding dementia is an essential element when designing living environments that can cater to the unique needs of individuals that are affected by the disease. Since their memory, thinking and capability to orient themselves will deteriorate, these individuals become dependent on their surroundings, caregivers and family members. Being able to still experience their surroundings and the people around them, dynamic stimuli are crucial aspects to implement in the living environment as those can still be perceived by the four senses that they utzilize as their new compass once their cognitive functioning becomes too unreliable. Implementing these dynamic stimuli in their living environment supports them in their daily lives to maintain their quality of life.

Chapter 2 delves into the relationship between dementia and the living environment as it emphasizes the (in)direct influence of both the physical as well as the social environment on individuals with dementia. Since people with dementia have similar needs as people without dementia, more architects are stating that living environment that were specifically designed for people with dementia are beneficial for everyone, suggesting that dementia design principles could be integrated into ordinary housing as these are based on four universal principles: clarity, recognizability, enclosure and demarcation. In this way, the living environment can be utilized as a prosthetic that supports everyone, people with and without dementia, in their daily lives.

The key principles that were mentioned to be of importance are including the presence and connection to greenery, clear spatial layouts and creating a feeling of community connection as well as prioritizing safety, maintain a human scale, visibility and familiarity and supporting movement and engagement. In all these principles, the overarching element is to create a balanced consideration of dynamic stimuli in the living environments. When implementing these principles, having a holistic approach is crucial in order to create a surrounding that enhances well-being while improving the quality of life of individuals living with dementia.

The second sub-question *What are different principles of a healthy living environment and how can these contribute to the goal of preventing dementia (while prolonging healthy living)?* was answered through literature research in chapter three which first explored the principle for creating a healthier living environment that emphasizes three themes: designing green spaces, creating healthy buildings, and promoting active lifestyles. In addition, since our living environment is one of the key determinants that are influencing our physical and mental health, opportunities arise to prevent diseases like dementia within these surroundings. Learning from urban models like the Blue Zones offers insights from areas with low dementia rates and long-life expectancy. Together these areas share nine common aspects that have believed to influence their longevity including natural movement, daily purpose, stress management and a plant-based diet as well as social connections and (faith-based) community involvement.

In addition, the concept of the 15-minute city further highlights the importance of healthy neighborhoods and suggests all essential amenities to be within a 15-minute walk of people's homes to be beneficial for their health.

Lastly, the third sub-question *What characteristics of dementia are preventable through architectural interventions within the built environment?* was answered in chapter 4 by exploring which risk factors and characteristics that are causing dementia are modifiable through the living environment by translating these risk factors into architectural interventions. Studies have identified 12 risk factors that influence dementia from which 40% are modifiable and thereby could contribute to the prevention of dementia. In addition, implementing these preventive measures in order to eliminate these risk factors in an individual's life should start at the age of 55 years to be effective.

When translating the modifiable risk factors into architectural interventions that can be implemented in the living environment, three themes were highlighted which emphasized on social participation and inclusion, proximity and accessibility within the urban environment and creating opportunities for recreation and well-being. By integrating these themes through a systematic approach is proven to be more effective than focusing on solely single risk factors and results into more promising outcomes.

Thus, architecture and the built environment can be used as an instrument to contribute to the prevention of dementia by utilizing dementia design principles that are both beneficial for people with and without dementia and by incorporating lessons learned from the global urban models like the Blue Zones and integrate them into the concept of a 15-minute city concept. In this way, the urban and built environment can guide the creation of healthier urban living environments that not only prevent diseases like dementia but also promotes longevity, overall well-being and enhances the quality of lives of its residents.

## DISCUSSION

This study conducted an extensive literature review on the implementation of design guidelines, specifically for dementia, into regular buildings with the aim of contributing to dementia prevention in existing neighborhoods. However, the field of study in which preventing dementia through architectural interventions is discussed has only recently gained more attention. The existing body of literature primarily discusses ongoing lifestyle trials, which are yet to receive fully conclusive results.

Besides this, translating lifestyle risk factors into architectural interventions for dementia prevention in living environments has remains largely untested. This highlights the necessity for initiating studies and contuining to conduct research projects that focus on implementing architectural interventions and testing their effectiveness to reduce the risk of developing dementia. There is a clear need to close the existing gap in knowledge and gain more insights into how architectural interventions in the living environment can contribute to preventing dementia.

Consequently, the next crucial step is to continue conducting research on dementia prevention through architectural interventions by for example setting up population-based control studies. These studies could test the architectural (and lifestyle) interventions proposed in recent studies and improve them by refining and developing theories. By continuing to research this significant gap, further developments can be made toward a better understanding about the potential influence of architectural interventions on reducing the risk of dementia and creating more opportunities towards more effective preventive interventions in the future.

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# REFLECTION

**1. What is the relation between your graduation project topic, your master track (A, U, BT, LA, MBE), and your master programme (MSc AUBS)?**

The approach of our modern healthcare system has failed to make much progress against age-related chronic diseases as it solely focuses on treatment rather than prevention. The graduation studio from Dwelling 'Designing for care in an inclusive environment' offers students the opportunity to conduct research into finding innovative ways to support our healthcare system through architectural design.

Selecting this studio for my graduation as a way to finish the Master program Architecture, Urbanism and Building Sciences was an easy decision for me as it was driven by my interest in the relationship between architecture and health. Specifically focusing on dementia in my personal graduation project was intentional due to personal experiences with loved ones being affected by the disease. Since there is no effective pharmaceutical treatment available (yet), I was interested to investigate which non-pharmaceutical approaches could delay or prevent the progression of dementia by researching the influence of architecture and the built environment. The main question of this research therefore became: 'How can architecture and the built environment be an instrument in developing design guidelines that contribute to the prevention of dementia?'. This is a more undiscovered field in the scientific framework as many studies have been conducted into designing for dementia. However, not much research has been done that investigates how architectural design interventions could contribute to the prevention of dementia.

**2. What is the relevance of your graduation work in the larger social, professional and scientific framework?**

Researching dementia prevention in relation to architecture is relevant due to the rising number of people worldwide being affected by the disease. Our world population has grown enormously from 2.9 billion in 1950 to 7.8 billion in 2020, with global life expectancy also rising from 47 to 73 years. However, despite our expanding lifespans, our healthspan (time free of diseases) has not followed these increases. This is partly due to the pandemic of chronic diseases, like dementia, that is afflicting our older growing population. One of the fastest growing causes of death is dementia, as it globally affects approximately 15% of the population. This will also increase healthcare costs due to this increasing number of dementia diagnoses as well as rising nursing home expenses. This results into a significant pressure on our healthcare system in order to ensure accessible neurological care for everyone.

With the anticipated rise in dementia cases, it is crucial to explore non-pharmaceutical strategies to address this growing challenge. Therefore, researching dementia from an architectural perspective and conducting research into how architecture and the built environment can contribute to the prevention of dementia can play an important role in supporting our worldwide healthcare system to take care of our aging population. This research seeks to utilize architectural interventions as a supportive tool in combating chronic diseases like dementia in order to extend people's healthspan and improve their quality of life.

**3. How did your research influence your design/recommendations and how did the design/recommendations influence your research?**

Deciding to research approaches to prevent dementia was exciting but also complex. Addressing one of the most common and currently irreversible diseases through architectural interventions gave me a significant challenge. One of the biggest challenges was due to the limited availability of research on this topic of prevention. However, this also motivated me more to create a methodology in which I could still research this topic and answer my main question despite the lack of sufficient literature.

One method that was applied was conducting research in order to gain a better understanding of the disease itself, the needs of people suffering from it as well as delving into the relationship between dementia and the influence of the living environment. Investigating health-promoting urban design concepts, such as the principle of a healthy living environment and the 15-minute city concept, provided valuable insights. Furthermore, studying urban models like the Blue Zones from areas with low dementia rates and long-life expectancies gave useful insights to utilize when creating preventive tools by focusing on aspects like natural movement, daily purpose, social connections and community involvement. Lastly, understanding dementia characteristics ended up being a crucial element during the creation of the design concept. Researching the relation between these characteristics and identifying risk factors through the living environment revealed that 40% of the 12 risk factors, identified by studies, are modifiable. Integrating these factors into architectural interventions focusing on social participation and inclusion, education on healthy living and creating opportunities for recreation and well-being proved to be effective when implemented simultaneously rather than addressing individual risk factors.

Choosing to repurpose an existing primary school in a neighborhood in Delft called 'Tanthof Oost', characterized by the typical Dutch post-war urban structure known as 'Bloemkoolwijken', transformed the current building into a new typology. The new design concept, that resulted from the research, prioritizes health promotion rather than just prevention. Serving as a public hub in this typical Dutch neighborhood, a new building typology is created that aims to raise awareness and encourages healthier lifestyles while contributing to the creation of more health-oriented communities.

**4. How do you assess the value of your way of working (your approach, your used methods, used methodology)?**

Researching preventive measures to address one of the most impactful chronic diseases affecting the global population and translating those into an architectural design was more complex than originally expected. That made the transition from the research phase at the end of MSc2 to starting the design phase in MSc3 particularly challenging. Formulating a clear design concept that included all my extensive research findings and design guidelines was difficult in the beginning. Multiple design concepts were explored that implemented the design guidelines that were created during the research phase. In the end, shifting the focus from solely prevention to health-promoting architecture as part of the design concept was crucial into developing a design concept that could be translated into a building design.

During the first phases of this design process in MSc3, the choice to transform an existing building and integrate the new design concept was proved to be challenging as well. Initial attempts to create a new building mass from the original shape were unsuccessful because it became too different from the existing building and did not fit within a transformation project. Refocusing on the existing shape and creating a building volume that could fit the new design concept by making smaller adjustments to the original building, such as reusing the existing construction and adding a new atrium and roof, proved to be more suitable within both the neighborhood's context and conceptually.

**5. How do you assess the academic and societal value, scope and implication of your graduation project, including ethical aspects?**

During these current times of expanding global populations and rising chronic diseases that are affecting the quality of our population's life and healthspan, it is vital to explore and conduct research beyond traditional (pharmaceutical) and institutional approaches.

Thus, investigating preventive methods to keep people from getting sick rather than solely focusing on treatment becomes crucial in order to relieve pressure on our healthcare systems. This research not only emphasizes the importance of raising awareness within communities to encourage healthier lifestyles but also highlights the need for a shift towards more health-oriented societies in order to contribute from the architectural perspective. With our aging population which continues to experience more illnesses, pharmaceutical treatments can no longer be the sole solutions and proactive and preventive measures are essential for maintaining our societies' health and well-being.

**6. How do you assess the value of the transferability of your project results?**
By exploring this new building typology as a public hub and integrating it in the center of a typical Dutch "bloemkoolwijk," there's potential to apply this design concept to similar neighborhoods across the Netherlands, such as Tanthof. Also, integrating various functions and creating a multifunctional building with flexible spaces for multiple users can serve as a model for combining community-based functions effectively within a neighborhood. This approach promotes smarter use of space, rather than constructing multiple buildings that may not be utilized effectively in the growing urban density in the Netherlands in which space is scarce. It provides an opportunity for various members of the community to gather and collaborate as well as creating healthier societies and more inclusive environments in which people from different layers of society within a neighborhood and community can come together. This aligns with the overarching theme of the graduation studio, which focuses on creating inclusive environments for health and care.

Moreover, this project demonstrates how to rethink architectural expansion by repurposing the existing building stock and making them future proof. This not only highlights the importance of creating more circular designs and healthier living environments but also promotes active lifestyles within sustainable buildings.

**7. What challenges did you encounter during your research and design process, and what strategies did you employ to address them?**
During the research phase, the most challenging aspect was developing a methodology for studying preventive measures against chronic diseases like dementia, given the lack of available literature on the topic of prevention. This forced me to think differently and utilize alternative research methods to address the topic effectively. Shifting my focus towards health-promoting architecture and studying literature on that subject, as well as learning from urban models like the Blue Zones (which has low dementia rates and high life expectancy) proved to be valuable information that I was able to retrieve and use during the search for answers to my research topic and translation of my findings into design guidelines.

Furthermore, during the design phase one of the most challenging aspects for me was the fact that it was a completely individual project. This is because I had gotten used to working together in teams during other courses in the master as well as during my time working in an architectural office. This has made me realize I like working together in teams and joining skills and ideas to strive to create the best possible design outcome. Despite this realization, doing this graduation project by myself made me learn a lot about my own approach as an aspiring architect and made me realize I could still turn to others for help. Therefore, in times in which I was brainstorming about design concepts, I turned to close friends and family to talk about my ideas and share my process in order for me to be able to order my thoughts and formulate them better and clearer.

# APPENDIX A:
# Intergenerational day care centers

# APPENDIX A

## Successful program aspects for intergenerational day care center

Intergenerational programs can include different types of activities such as narrative, art and music programs (Galbraith et al., 2015, p.357). A literature review study from 2019 has identified six program-specific aspects that were successful elements to include into intergenerational dementia programs: buddy system, dementia education, Montessori-based activities, considerate activity set-up, student-reflective journals and reminiscence programs (Gerritzen et al., 2019):

**1. Buddy systems**
A successful element for both generations was the use of a buddy system. In these programs, younger participants were linked to each other one-on-one or were put in consistent small groups together with people that have dementia. One of the main positive outcomes was the creation of strong relationships within each group (Gerritzen et al., 2019, p. 233).

**2. Dementia education**
This program is specifically beneficial for the younger generation around 10 years old in which they received regular lessons on dementia during their school term. The aim was to teach them about dementia and prepare them for their interaction with people with dementia (Gerritzen et al., 2019, p. 233). The lessons focused on explaining what dementia is and how it affects the daily lived of people with dementia and their families. They were executing these lessons by using different materials such as case studies and special games. Teachers afterwards reported that the children enjoyed the lessons about dementia and they noticed changed attitudes of the children towards people with dementia (Di Bona et al., 2017).

**3. Montessori-based activities**
Montessori activities such as sorting images according to categories or chronological order, looking for hidden objects or practicing fine motor coordination, have been found to be specifically suitable for people with dementia as well as for the younger participants (Gerritzen et al., 2019, p. 234). It stimulates their cognitive functions and social skills (Camp et al., 2005).

**4. Being considerate about the activity set up**
This was identified as a successful element for both generations by setting up an intergenerational choir for example. In this choir it resulted into reduction of stigmatization as well as introducing buddy systems and using an informal approach (Gerritzen et al., 2019, p. 234).

**5. The use of student-reflective journals**
A study from 2012 used student reflective journals to assess the impact of their intergenerational dementia program. They paired university students with older adults for one semester and they worked together in weekly art sessions which followed with the students writing about their learnings from that week into a journal. These journals revealed that there was a wide range of outcomes for the students, such as becoming more comfortable around people with dementia and feeling rewarded for working with them (Lokon et al., 2012).

**6. Reminiscence programs**
In 2009, a study was conducted into the use of a reminiscence approach as the foundation of an intergenerational dementia program. In this program, the older adults were grouped with two or three younger participants. These younger participants would facilitate the reminiscence activities weekly that were focused on positive life experiences during adolescence and adulthood by focusing on the past. In this way, it emphasizes the cognitive strengths that people with dementia still possess. Also, the younger participants helped the people with dementia to create a life-story book based on the topics they discussed during the previous activities. This resulted into the younger participants gaining more knowledge and developing more positive attitudes towards people with dementia (Chung, 2009).

**Outcomes**
One mutual beneficial outcome that was identified through all studies was the relationship between the two generations. This included relationship building outside the participant's regular social circles. There were five beneficial outcomes only for the older generation which included an (1) increased activity engagement, (2) improved mood, (3) increased quality of life, (4) positive stimulation of memory and mind and (5) a reduced social isolation (Gerritzen et al., 2019, p. 235). In addition, there were four beneficial outcomes identified solely for the younger generation which are: (1) more positive attitudes and empathy towards older adults and people with dementia, (2) personal growth, (3) increased knowledge about dementia and (4) an increased sense of community responsibility. The participation of younger people into this program also enables them to improve their broader communication skills that could lead to an improved interaction across society (Gerritzen et al., 2019, p. 240).

The buddy system program has proofed to be the most commonly reported successful element as this system allow for a set ratio of older and younger participants to interact, increasing the likelihood as well that older participant all receive the same amount of attention and have the same opportunity to participate (Gerritzen et al., 2019, p. 240). Other successful activities were the Montessori-based and reminiscence activities as they both emphasize the strengths that people with dementia still have rather than their limitations. In these activities the people that have dementia can tutor the younger participants while giving these younger people the opportunity to learn from them through new activities and shared life experiences. In this way, the people with dementia can feel proud and appreciated (Camp et al., 2005).

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# APPENDIX B:
## Fieldwork report

# Visiting *Dementia* care facilities

An observation of experiencing daily life in two different ***dementia care facilities***

**Fieldwork Report**

Amber Gorter

**Fieldwork report**
Visiting dementia care facilities

**Amber Gorter**
4673212

**May 2024**

**Course:**
Graduation studio
AR3AD110: Designing for health and care
Designing for Care in an Inclusive environment

**Tutors:**

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| Birgit Jürgenhake | Architecture tutor |
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**Faculty of Architecture and the Built Environment**
Department of Architecture
Chair of Architecture and Dwelling

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Architectural analysis
Interviews
    Employee
    Family member (partner)

# INTRODUCTION

The graduation studio 'Designing for Health and Care' of the faculty Architecture and the Built Environment of the University of Delft that started in September of 2023 focuses on designing for health and care to contribute to a healthy and inclusive environment for all people.

The research question of this research is:

**How can architecture and the built environment be an instrument in developing design guidelines that contribute to the prevention of dementia?**

For this research, it is therefore important to question what are the spatial needs are for people that are suffering from dementia? How can the space be utilized to enable caregivers to give them the best care and how are people with dementia influenced by their living environment?

In order to gain a better understanding on how people suffering from dementia live, it is important for this research to study their living environments. Therefore, during a field work week, two different dementia care facilities were visited. Location A is a small-scale facility that is housing a total amount of 27 permanent residents while location B has 8 department floors for people suffering from dementia with 20-25 permanent residents per floor.

**FIELDWORK AIM**

The goal during these two visits is to experience personally the daily life of dementia sufferers within their living environment. By spending a longer period of time with them and observing their ordinary routines and habits, a better understanding can be gained of their needs and wishes for their living environment. By visiting two different types of dementia care facilities, more information can be gathered about what people prefer their living environment to look and be like by comparing the different facilities.

This booklet contains a collection of materials gathered during this field work week of observations, sketches, interviews and stories from visiting two different dementia care facilities. For privacy reasons, both locations and all names and faces will be kept anonymous.

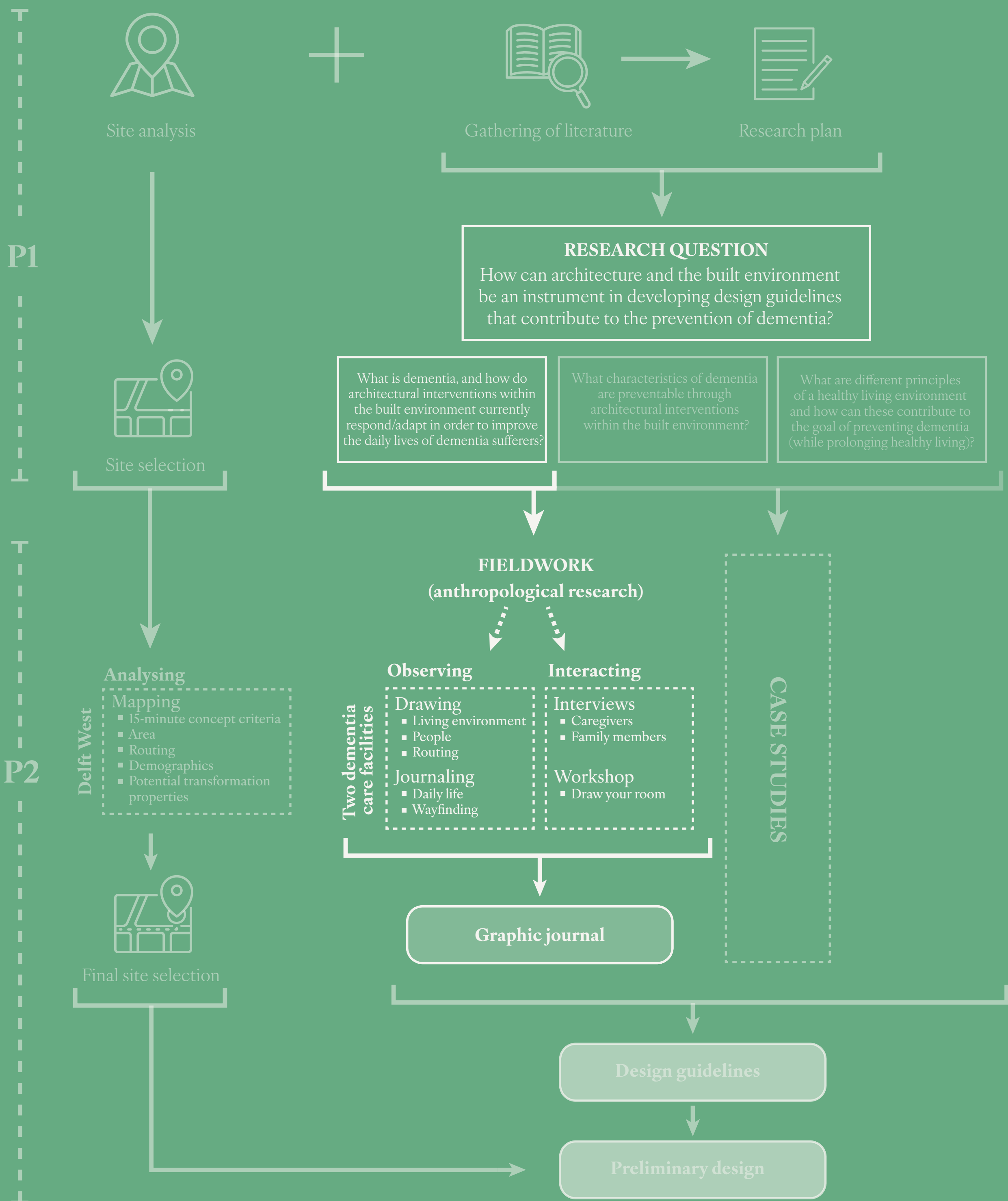
## FIELDWORK METHODS

This research will be conducted through multiple different methods. The three sub-questions will be divided into three representing chapters. However, all chapters start with a structured foundation of information gathered through literature research into the field of the specific research question. The knowledge that is retrieved through the fieldwork week will be discussed in chapter 1.

In this chapter 1, the literature research will be used to gain an understanding on how dementia works (symptoms, characteristics, impairments) and continues by conducting research into the current living environment of people suffering from dementia. To research this, both case studies (current care facilities solely designed for dementia sufferers) will be researched as well as visiting two different dementia care facilities to observe and experience the daily lives of dementia sufferers and their living environment. This booklet will contain all the information gathered during the fieldwork week while the research report will only contain the summarized key findings from this fieldwork week.

The methodological approach that will be utilized is ethnography. Researchers normally implement this method in the anthropological research when studying communities or groups of people by spending a longer period of time living the daily lives with the group and observing their ordinary routines. They collect this through daily rituals, objects and processes by using photo's, journalling and drawings as recording their research in order to draw conclusions about the cultural and philosophical views and practices of the observed group. This method could also be implemented for this research by observing a group of people that all have dementia to gather crucial information and insights; How does their current living environment looks like (drawing workshops, photographs), what is their daily routine (observations, interviews with caregivers and family members) and what is missing in their current living environment and could it be improved (observations, workshops and interviews with caregivers and family members). The collection of materials and experiences during the fieldwork week will be combined into a journal:

- Daily journal: a day in the life of a person suffering from dementia
- Daily journal: a day in the life of a visitor of the day care facility
- Drawings and sketches of their living environment
- Informal interviews with their caregivers and family members to understand more about the patient's needs


P1
Site analysis
Gathering of literature
Research plan
RESEARCH QUESTION
How can architecture and the built environment be an instrument in developing design guidelines that contribute to the prevention of dementia?
What is dementia, and how do architectural interventions within the built environment currently respond/adapt in order to improve the daily lives of dementia sufferers?
What characteristics of dementia are preventable through architectural interventions within the built environment?
What are different principles of a healthy living environment and how can these contribute to the goal of preventing dementia (while prolonging healthy living)?
Site selection
P2
FIELDWORK
(anthropological research)
Analysing
Delft West
Mapping
15-minute concept criteria
Area
Routing
Demographics
Potential transformation properties
Two dementia care facilities
Observing
Drawing
Living environment
People
Routing
Journaling
Daily life
Wayfinding
Interacting
Interviews
Caregivers
Family members
Workshop
Draw your room
CASE STUDIES
Graphic journal
Final site selection
Design guidelines
Preliminary design

# LOCATION A

This location was visited for three days to experience the daily life of their permanent residents. This facility is a farm care facility and is solely for people that suffer from dementia. It is therefore specifically designed for people with this disease. They have 27 permanent residents in total divided between four homes that each have six or seven residents. One of the houses is specifically for people that were diagnosed with dementia at a younger age (under 65 years). Additionally, they have created a guest home in which people with dementia who still live at home can come and stay over at for 3 days to 3 weeks to give their informal caregivers some time to relax and take care of themselves. Besides the residents and the guest home, the location also offers 12 visitors each to come and join their day care facility in the building called 'the meeting place'.

During the three-day visit, we talked to the founder of this location about her reasoning behind starting this dementia care facility and her vision and concept of this location. We also had a conversation with a caregiver of one of the residences and we talked to three family members from different residents about their experiences with their loved ones living at this location.

## CONCEPT

They want to give people with dementia and their loved ones really good care in an environment where people can continue their lives, be respected for who they are and where they feel comfortable and of value. They believe this care should be accessible for everyone, also for people with a smaller budget.

To achieve this mission, they work from a clear healthcare vision. In their vision, their starting point is the needs of the residents. That means that they respect the residents' habits whether they want to sleep in, eat a soft-boiled egg or have a wine after dinner. They strive to continue to lifestyle of each resident which means for example letting them decide when they wake up or have their breakfast so that they still have the control over their own lives.

Besides giving them the suitable care that their residents need, they also try to give residents a meaningful way of spending their days as their employees are trained to offer activities to people with dementia. The facility offers many different opportunities to do and experience things and undertake activities as the well-being of the residents always come first.

Since the employees are responsible for all care and activities for the residents of one specific residence, they get to know the residents very well. They are aware of their habits and needs to be able to help them the best they can. Also, immediate family or partners are closely involved in tailoring care to the residents and the employees also have a lot of experience in helping the families deal with this disease.

They have summarized their vision into seven principles:

1. Not the disease, but the person is the starting point
2. Expert care that is focused on the resident's needs, together with their family
3. Feeling at home
4. Always say yes... unless
5. Without freedom there is no life
6. A meaningful daily routine makes life worth living
7. Being part of the society and comunnity

# ARCHITECTURAL ANALYSIS

**LOCATION SITE**

The grounds of the care farm are safely surrounded by a fence, so that residents can move freely across the grounds without the risk of losing their way. The site is freely accessible to people who want to visit the farm. They can ring the intercom. If residents want to leave the site themselves, this is usually possible in consultation.

The farm environment offers a rich range of activities with which a day can be spent meaningfully. The residents enjoy the animal pasture, fresh vegetables from the vegetable garden and the smells and sounds. There are several small farm animals in the yard. There are four cows, two Shetland ponies, five sheep, three pigs and seven goats. They graze in a large meadow with a pond, where several special ducks and goslings swim. The chickens have a separate coop, but usually roam around the yard. There are also quite a few rabbits living at the location. They live on the rabbit hill. Finally, there is an aviary on the site with diamond doves and canaries. There is currently a cat in every group home, and in one of the homes there is a beautiful aquarium with fish.

A large part of the site consists of a vegetable garden. Depending on the seasons, all kinds of fruits and vegetables are grown. In addition to low areas of ground, raised planters have also been created in which people can work at sitting height. This means that residents do not have to bend down too much. Even in the cold winter months, activities in the garden will not stop because there is a large greenhouse in the yard where everyone can always get started. Part of the greenhouse is also furnished as a courtyard with a heater for the cold seasons.

The goal of creating this farm care facility is to let the residents help and take care of the garden and animals in order to create a sense of responsibility and purpose within their daily lives to keep them vital and active.

As is visible on figure 1 the site is enclosed by a fence that is accessible through two different entrances that have a code. The design concept was to place the buildings on the site in a way in which they are 'embracing' the garden and the garden feels like a safe, secluded and enclosed space for its residents. Therefore the buildings are solely focussed on the inner garden and their connection and it can feel closed when you enter the location from the main gate. However, once you enter one of the residences, you immediately have direct visual connection and sight lines towards the inner garden.

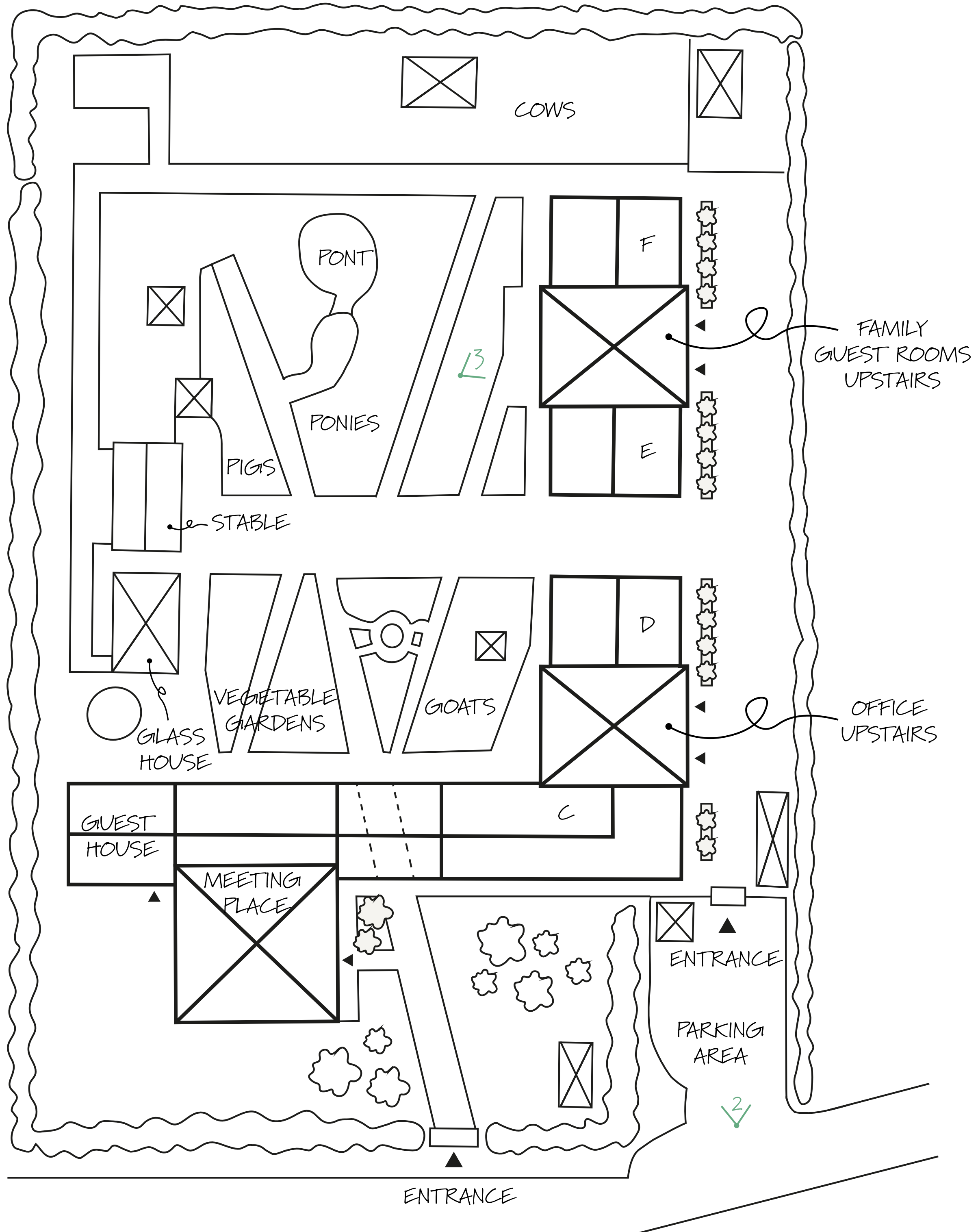



Figure 1: Visualisation of location site, own sketch (2023).

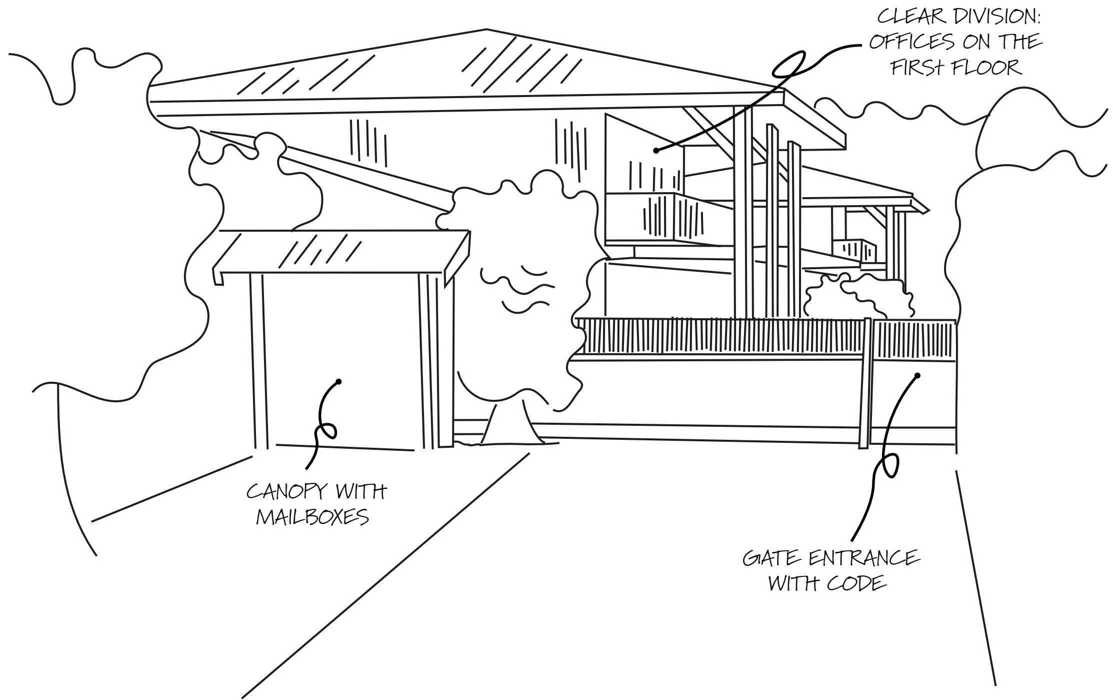



**Figure 2:** Visualisation of entrance location, own sketch (2023).

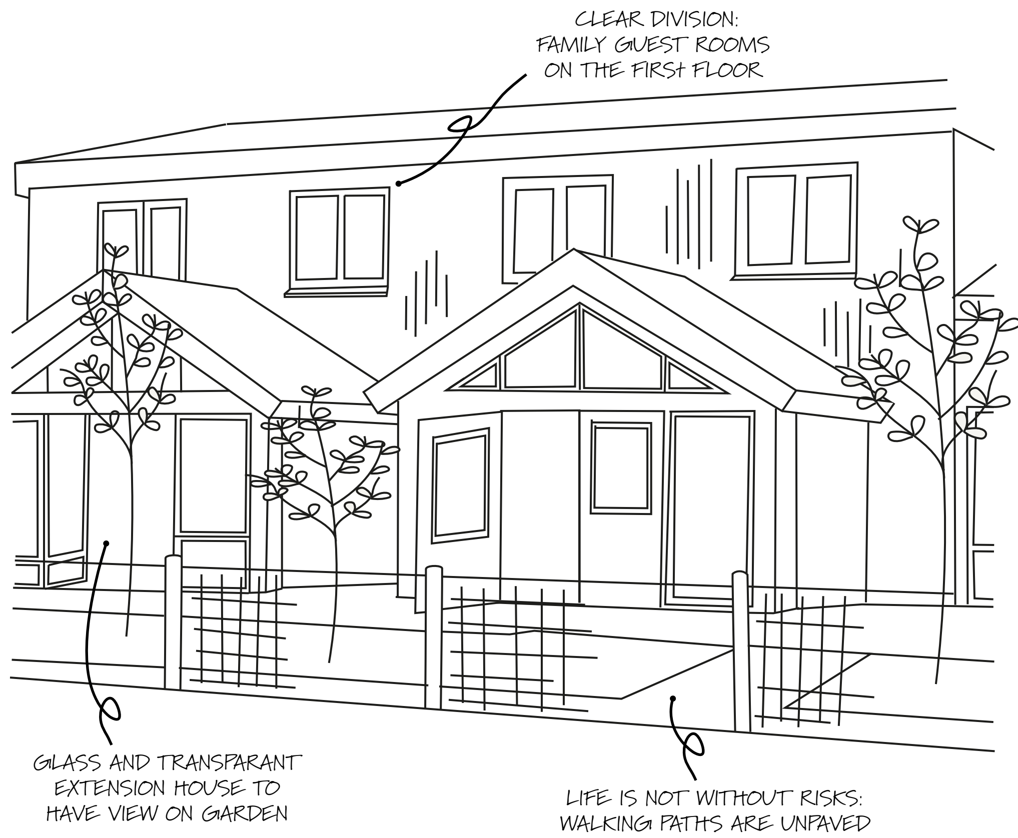



**Figure 3:** Visualisation of residences from garden, own sketch (2023).

## DAY CARE FACILITY 'THE MEETING PLACE'

Besides the residents and guest home, the location also offers 12 visitors each day to come and join their day care facility in their 'meeting place'. The 'meeting place' building within the location is a space where they offer daytime activities for people that are suffering from dementia but still live at home. It is a place where they can come together and talk about their experiences while undertaking different meaningful activities.

The goal is to organize activities that people with dementia stull can do well to boost their self-esteem and make them feel confident. The large spaces at the large farmyard provide an enormous diversity of possible activities. Visitors can help take care of the small farm animals, hoeing and weeding in the garden, picking and processing the vegetables that grow in their own garden and doing other creative activities such as ceramics or painting in the studio, dancing, playing games or having a drink at the café or cooking together in the big kitchen. It is a closed activity which means the neighborhood or community are not part of this day care facility.

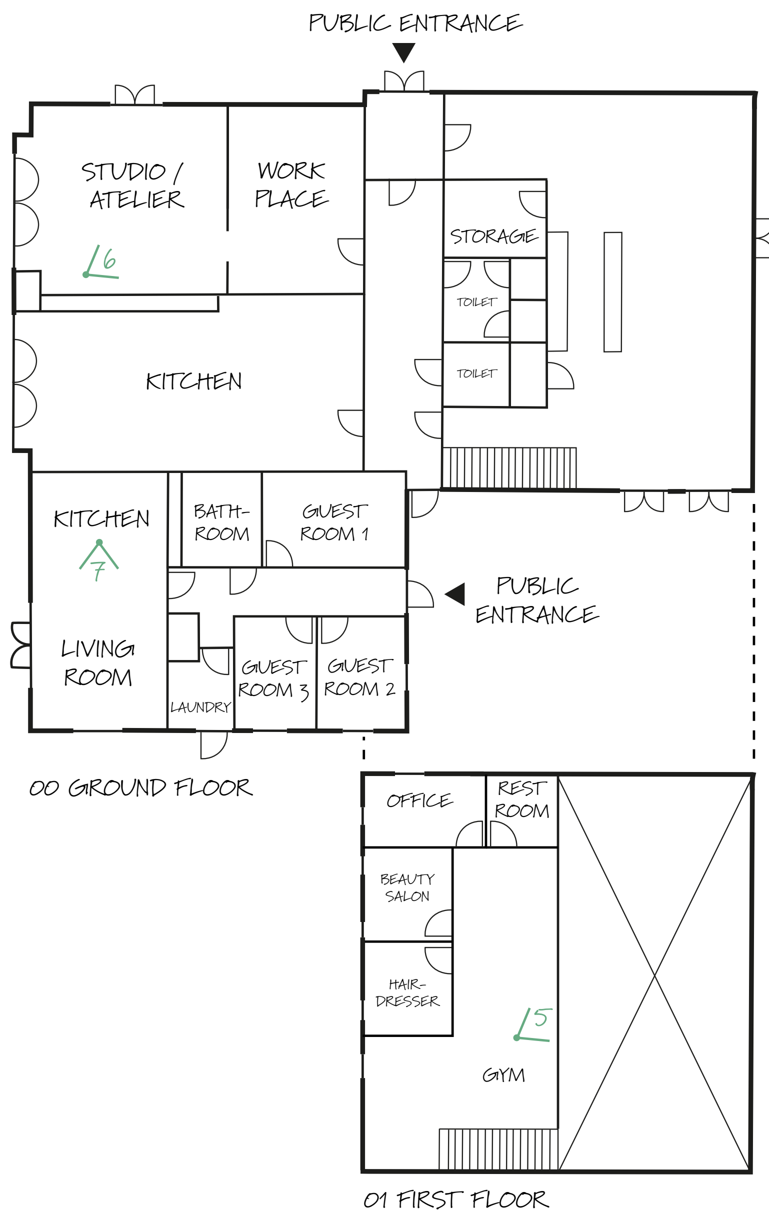



**Figure 4:** Visualisation of floor plan meeting place building, own sketch (2023).

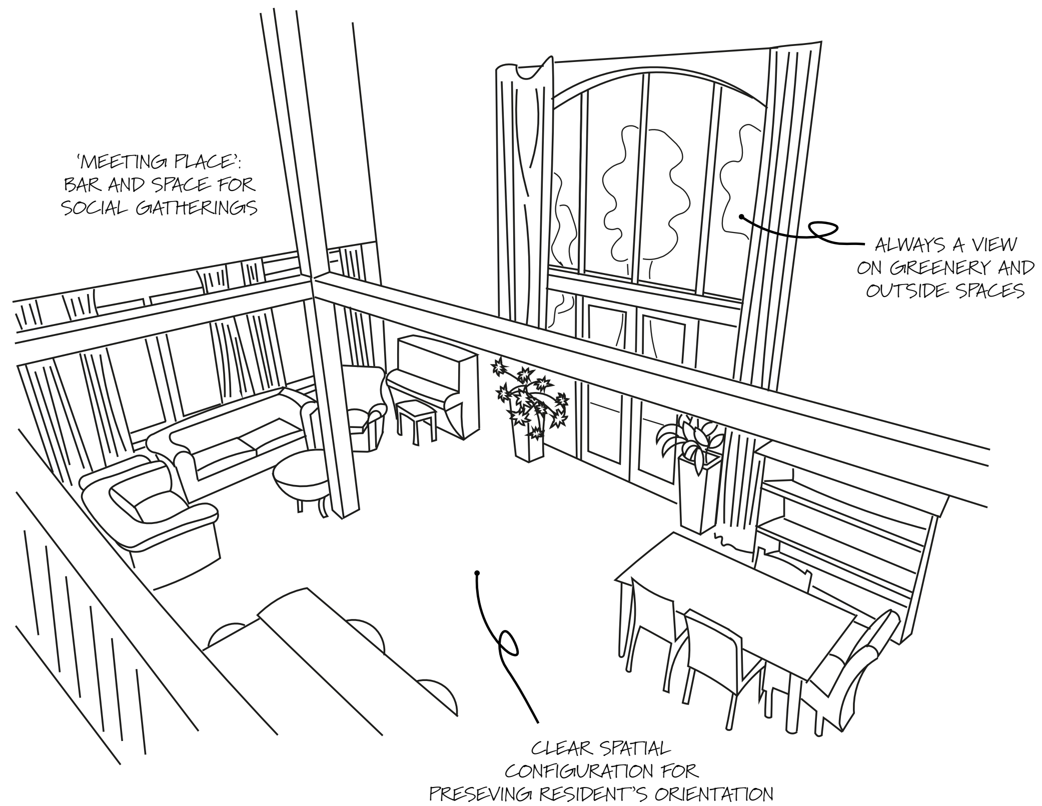



**Figure 5:** Visualisation of meeting place bar, own sketch (2023).

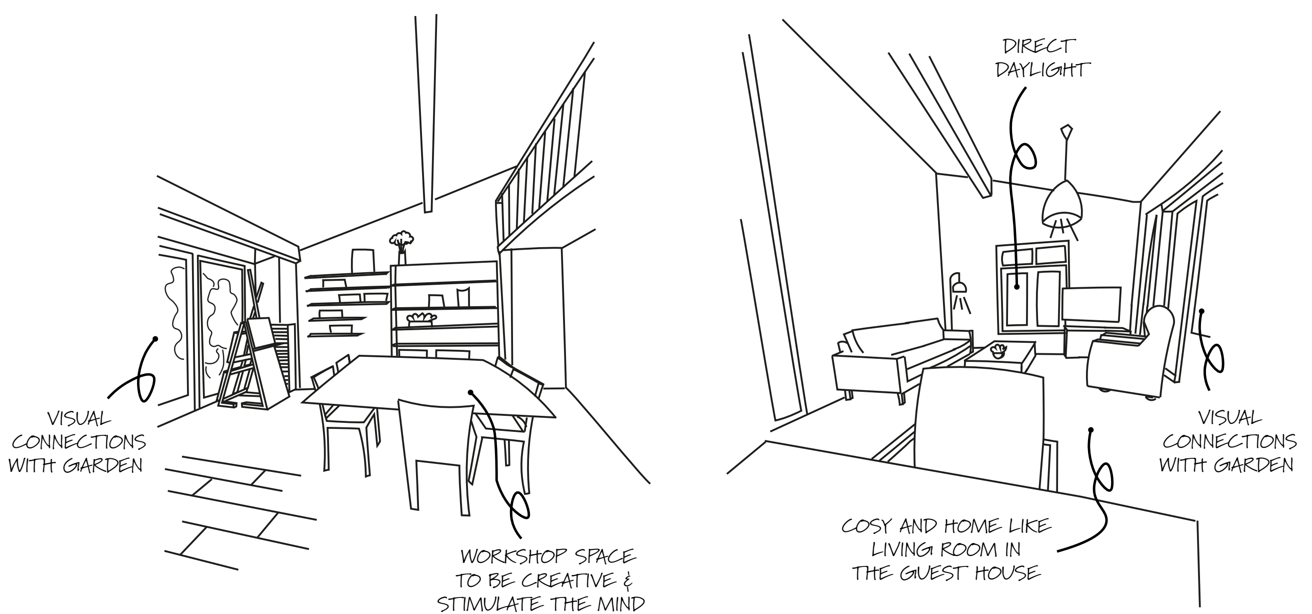



**Figure 6 and 7:** Visualisation of guest house and atelier, own sketch (2023).

## RESIDENT HOME

There are four different resident homes on the location and every house has six or seven permanent residents. Their stages of dementia differ and their ages can differ too. One of the four residents is specifically for people that were diagnosed with dementia younger (under 65 years).

The group homes have their own front door that opens into a hallway. The hall gives access to the living room where an open kitchen has been installed. A conservatory is adjacent to the living room, where residents can enjoy the view of the gardens of the site. The hallway is adjacent to the living room, from which six or seven apartments are accessible. Each apartment has one open space that can be used as living space and bedroom with a kitchenette and private bathroom in a connected space. The rooms on the north have a window with an outside view while rooms on the south have a direct access to the inner garden with a door. The design concept was that the buildings are embracing the garden, therefore the north rooms don't have a door.

The homes do their own washing and cooking. The homely layout ensures that the resident can easily feel at home. The layout and the maximum number of residents of seven ensure that as normal a life as possible can be led, with the residential care supervisors always having a good overview of the group. Each resident can furnish their own private room, and the shared living room and dining room are also furnished with personal furniture from the current residents.

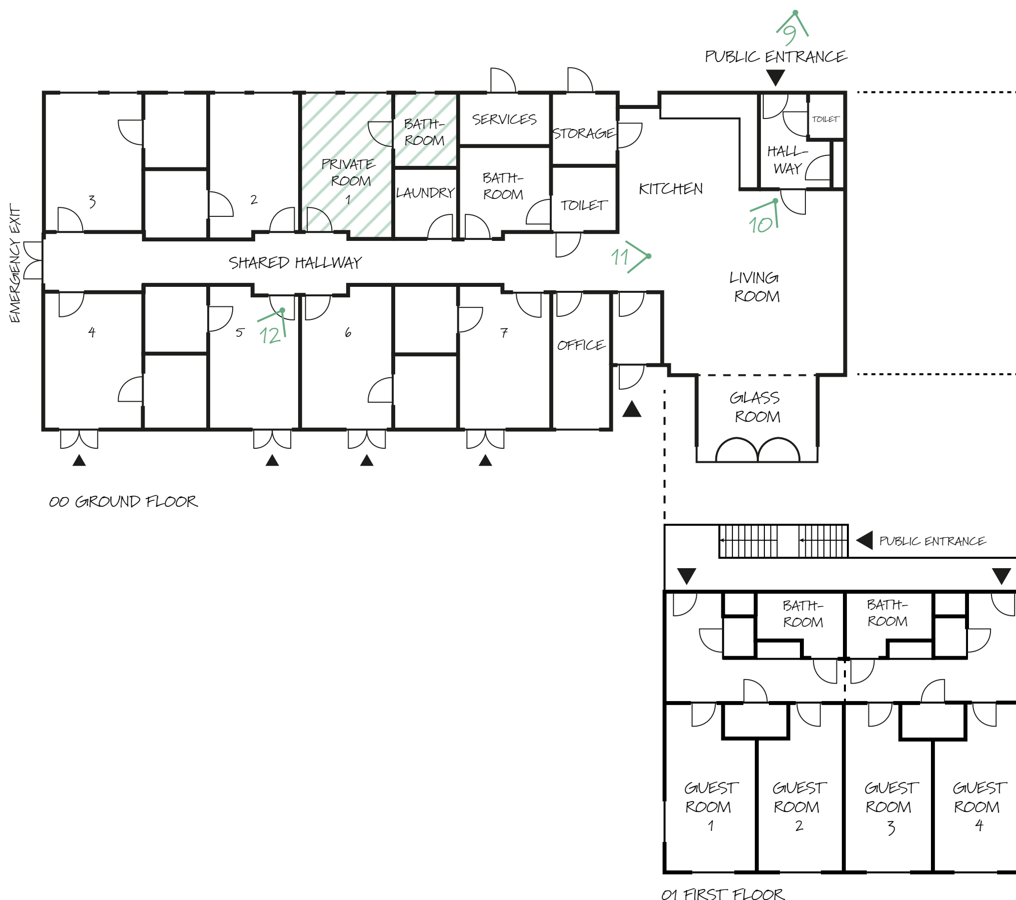



**Figure 8:** Visualisation of floor plan residence building, own sketch (2023).

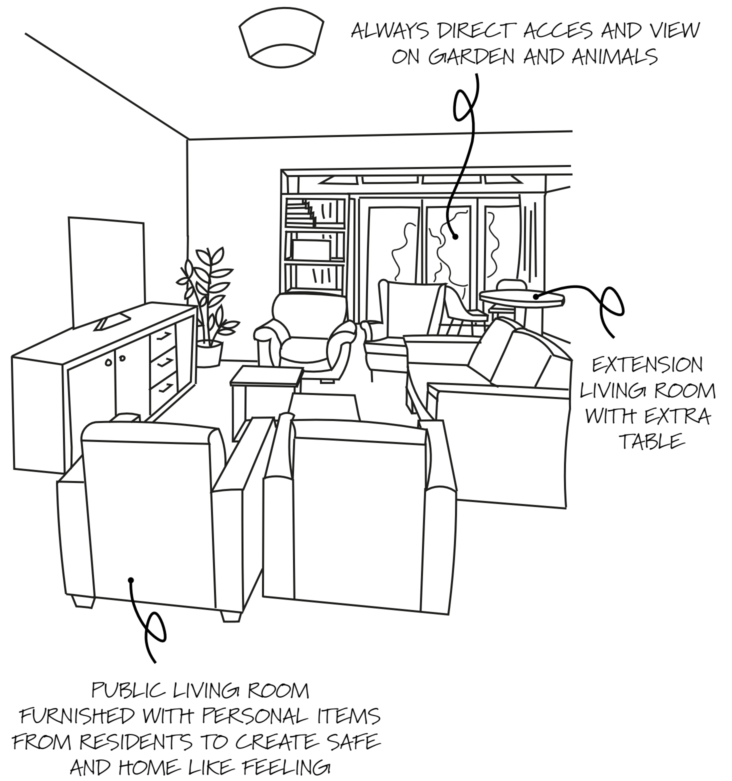



**Figure 9 and 10:** Visualisation of residence building, own sketch (2023).

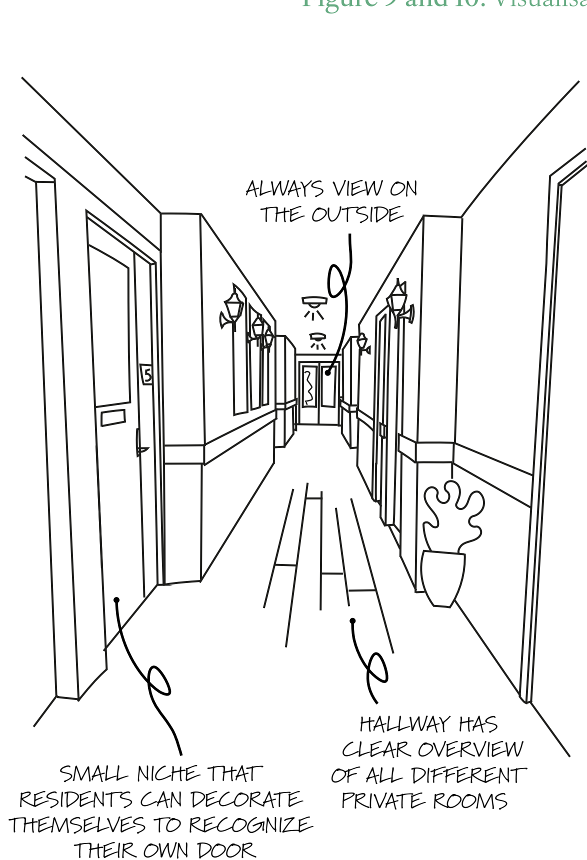


**Figure 11 and 12:** Visualisation of residence building, own sketch (2023).

## TIMELINE

Every day they have 12 visitors to join their day care activities. They have the same schedule every day but the activities differ per day depending on the visitors that are there that day.

**10 am**

At this time, all day care visitors are arriving either independently by bike or car or they have been picked up by a pick up service from this location. Together they have a coffee or tea in the common kitchen and discuss which activities they will be doing today.

**10.30 am**

After coffee, they all start with the activities which mostly consists of doing work and chores on the farm and taking care of the animals in the morning. One visitor is likes to paint so he renovates a lot of furniture of the reseidences He told me he enjoys this the most and likes that he is doing something useful by helping out the staff in this way. He was in the painting studio by himself all morning.

**11.30 am**

It is time for a coffee break. All day care visitors gather again the common kitchen (or in the glass house outside in summer) and give the employees of the day care an update on their chores and what they have still left to do. After this break they all continue their tasks and try to finish it before lunch starts in an hour. They are all excited to finish the tasks.

**12.30 pm**

It is time for a joint lunch. Every time they try to have a nice lunch with a homemade soup or a baked cake as dessert after and they all organise it themselves. They talk with each other about their daily lives outside the location and how they have been doing this week. Since they come here every week, they know each other pretty well and like to talk about their families and jobs with each other. One resident told me he is finding it hard to deal with his diagnosis because he is realising he can do less stuff himself as time goes by but he likes to come here to talk about it with people that have to deal with these issues too.

**1.30 pm**
After lunch they discuss what they will be doing the rest of the afternoon and this planning they can decide more per person. Some decide to stay inside and have a small nap or read a magazine while others finish up the lasts tasks in the garden. I go on a longer walk with a few visitors in the nearby forest.

**2.30 pm**
When I arrived back again after the walk, we have a tea again and some decide to start playing a few card games while I just sit at the table and talk with a few visitors.

**3.30 pm**
It is time to close of the day with the whole group again in the common kitchen with a small snack and a drink (beer, wine, soda). We start playing a game together where there is a question on a gamecard and we all have to answer them. Questions like with which famous person do you want to switch with for a day or what is your biggest achievement in life. It is very inspiring to see how positive and vulnerable these answers from these visitors are and how they are approaching their lives while dealing with their diagnosis. It also seems like they all have become friends as they are also having a lot of fun with each other beside the serious conversations.

**4.00 pm**
It is time to say goodbye and go all home again. The pick up bus arrived to bring some of the visitors home again while the others grab their bike and cycle home. They are all a bit sad that this day is over again because they are looking forward to this day every week.

## TIMELINE

Every resident can stick to their old routines and habits. They can decide themselves when to wake up, to eat breakfast or when they want to have a walk outside or sit inside and read a magazine. Dinner is a collective moment but again, they can decide whether to help with the cooking or not. In this way, every resident still has control over their own life. This overview is from my observations from one day visiting one of the residents at this location.

**9 am**
I went to the residence to have breakfast. I only notice one female resident that is having breakfast in her pajamas. One of the caregivers is helping her with preparing her food. After finishing her food, she decides to go back to bed for a small nap.

**10 am**
After finishing my own breakfast, a few other residents come and have breakfast. Two male residents are preparing their own food. One of them wants yoghurt instead of bread but he can't find the right package in the fridge. He gets the cholocate milk instead of the yoghurt so the caregiver helps him. One other female resident decides to have her breakfast in her private room.

**11 am**
It is time for a joint coffee moment. The caregivers prepare the coffee and other residents are helping with setting up the table with enough cups. One female residents enters the room and notices me. She walks up to me and asks for my name and I introduce myself and then she gives me a big hug, sits down next to me and talks with me for a long time about her life and that she is happy here.

**12.30 pm**
After everyone just does their own thing after coffee, it is time for lunch now and everyone decided to have lunch together at the kitchen table. They again help with preparing the table and getting all the food out on the table. Some of them can prepare their own food all by themselves while others need help.

**3 pm**
During the afternoon, everyone is just free to do what they want to do. One female resident is sitting in her own room a lot during the day to avoid the noise and distractions from the others. Another female residents sits in the extension of the house and is reading a magazine with a cup of tea.

**4 pm**
The washing was done today so it needs to be folded so I help two female residents clean it all up. They are the most active ones of the household and therefore help a lot with the chores in the residence. They were very precise doing this task and were thanking me a lot that I was helping because they were the only ones doing it and that annoyed them sometimes they said.

**6 pm**
It is time for dinner. Normally some residents help prepare the food but today the caregivers were doing it together. We are having pasta pesto with spinach and bacon. A few residents were enjoying it a lot and gave compliments to the caregivers while one female resident was not happy about the spinach. She is unable to speak out clearly anymore but she was able to explain herself with gestures.

**7 pm**
After dinner it was time for coffee and tea for those who like. One of the caregivers was doing a test with two different coffees; one with cafeïne and one without. She noticed a lot of residents drink a lot of cafeïne because sometimes they forget they already had had multiple coffees. She asks the two most active female residents to drink the two coffees and decide which one they like best. It turned out they liked the one without cafeïne best in terms of taste so a great succes! Some other residents started watching some television while others went to their own room again.

# INTERVIEW
## *Founder*

FOUNDER OF THIS LOCATION

This interview has been executed in Dutch, therefore, the transcription is also in Dutch. The complete interview is shown in this booklet. The summary and outcomes of this interview are found in the research report.

For a better reading experience, the interview question are in green and the founders questions in grey.

**Interviewer:** Waaruit ontstond het idee en wat vond jij dat er moest veranderen aan dit soort zorginstellingen waardoor je besloot er zelf een op te richten?

**Founder:** Het begon met mijn eigen ervaring met mijn opa, die woonde op een kleinschalige afdeling binnen een grootschalige zorginstelling, dus een verpleeghuis met kleinere afdelingen. En daar ervaarde ik dus dat er heel weinig kennis was over dementie. Heel simpel voorbeeld, dan vroeg iemand, mag ik een kopje koffie? En dan zei iemand, ja dat heb ik al eerder gezegd, denk ik, ja dan heb je de basisprincipes van dementie niet zo heel goed begrepen. Daar kan die persoon niks aan doen maar he dus de opleiding is heel belangrijk en de kennis over dementie. En de fysieke omgeving, mijn opa wilde altijd de afdeling af. En het gebrek aan activiteiten en prikkels om ja om bezig te zijn gedurende de dag, waardoor in mijn ogen mijn opa, ja, daardoor verveeld werd en tussen haakjes 'lastig' werd, hè zo in ieder geval werd gezegd, was lastig. En dat de benadering van iemand met dementie dat dat dus heel erg belangrijk is, dus dat waren aanvankelijk mijn ideeën van nou de benadering en kennis. Dat is belangrijk en die fysieke omgeving. Er moet een omgeving komen waar van alles te beleven en te doen is.

Toen ben ik mij gaan verdiepen in dementiezorg en dan kom je, als je het hebt over benadering van mensen met dementie, Ja, een heleboel literatuur tegen over bijvoorbeeld validation theorieën waarbij je dus altijd ja zegt, valideert als bewoners bijvoorbeeld zeggen; 'ik moet naar Huis van mijn moeder is jarig'. Dat je dan niet zegt; 'nee, je moeder is allang overleden', maar dat je meegaat In de beleving. Dat je dus ja zegt en dat je contact kan maken door te spiegelen. Ik verdiepte me vooral in informatie over hoe communiceer je met mensen met dementie en toen kwam ik eerst validation theorie van naomi feil tegen. Toen kwamen we bij de belevingsgerichte zorg. Toen kwamen we bij de warme zorg en het kleinschalig wonen. En uiteindelijk kwam ik bij een boekje aan over persoonsgerichte zorg van KIDWOOD en dat werd echt mijn bijbel, want ik is een heel klein boekje uit 1997 maar ik las dat en ik werd daar zo enorm door gegrepen en dat is eigenlijk de basis van onze visie van de locatie.
En de belangrijkste pijler of wat het wat persoonsgerichte zorg eigenlijk Inhoud is dat je ja super simpel: mensen met dementie zijn in eerste plaats mensen en ze hebben dementie oké, zoals Iedereen wel wat heeft en mensen met dementie hebben dezelfde basisbehoefte als ieder mens alleen door die dementie zijn, zijn minder goed in staat om die behoefte zelf te vervullen. Denk aan behoeftes zoals erbij horen en betekenisvolle dag invulling, het gevoel van de identiteit, gevoel van veiligheid of gehechtheid, gevoel van troost, van liefde en van, nou ja, dus nogmaals erbij horen die behoeftes. Die zijn er nog wel alleen, ja, als je ook misschien hebt gezien is dat twee bewoners die naast elkaar aan tafel zitten, dan is de kans klein dat er een gesprek plaatsvindt tussen die twee mensen. Dus dat de omgeving is nodig, hè? En dan bedoel ik daar medewerkers of familie of jullie. Die is nodig om dat gesprek aan te wakkeren en Als je dat eenmaal doet, dan zie je dat er heel veel plezier is. Maar uit zichzelf, is dat niet meer. Dus en wanneer je dus je richt op die behoefte en op het vervullen van die behoefte, dan zie je dat mensen weer zich mens worden.

**INTERVIEWER:** Soms dus net even iets aanreiken en dan kunnen ze het grijpen en meedoen?

**FOUNDER:** Ja, eigenlijk kun je zeggen dat dus bij mensen met dementie door hun dementie een soort mist ontstaan, dus zijn wij als als de andere kant van de communicatie, zeg maar, moet je een stapje extra zetten om door die mist heen te komen en dan kan er nog heel veel met mensen met dementie en wat mij ook aangreep in het boekje in de theorie van KIDWOOD. Hij was een psycholoog, dus het was niet per se wetenschappelijk bewezen, maar hij zei, als je de omgeving goed inricht en dat gaat dus dat je de omgeving inricht gericht op die behoeftes, dan gaat iemand met dementie minder hard achteruit dan als die behoeftes niet vervuld worden, en dat noemt hij Access disability dus je hebt eigenlijk een grotere beperking dan nodig zou hoeven te zijn als die omgeving goed zou zijn en hij heeft het ook over positieve interacties en negatieve interacties dus in jouw interacties met bewoners, of met mensen met dementie in het algemeen, kan je iemand eigenlijk maken of breken. En dat zit hem in hele kleine dingen en heel vaak in dingen die wij onbewust doen. Iedereen die in de zorg werkt en daar ga ik in ieder geval vanuit een zeker bij de mensen die hier werken, iedereen heeft het hart de goede plek en iedereen wil liefde geven en willen het beste voor de bewoners.

Alleen, soms doe je dingen onbewust die eigenlijk maken dat je iemand juist ondermijnt; Persoons ondermijnende interacties in die behoeftes. Bijvoorbeeld als je met elkaar gaat praten en we zitten aan tafel. Er zitten ook bewoners bij en ik praat alleen maar hè, PERSOON A, hoe is het met jou, hoe heb je het gehad hier? (alleen kijkende naar die persoon) en die bewoners zitten daar bij. Die voelen zich genegeerd en die horen er dus niet bij. Dus door je interactie, ook al doe je eigenlijk niks fout, Ja, laat je eigenlijk, sluit je mensen buiten. Of ik zeg joh, nou ja, ze voelde zich vandaag niet zo lekker dus we moeten even extra opletten, want weet je wel, dan praat je over iemand in plaats van met hen. Dat is heel belangrijk, vind ik, om medewerkers daarin te te trainen dat je heel erg bewust bent van jezelf als instrument dat je daar dus mee iemand kan maken of breken.

En het kleinschalig wonen. Dat heeft dus heel erg de functie om een soort van de voorwaarden te scheppen om het makkelijker te maken om die positieve interacties aan te gaan. Bijvoorbeeld het zelf koken. Als je kookt met bewoners daarna gaat eten en je zegt; Nou, kijk PERSOON B, die heeft geholpen met met de sperziebonen. En wat hebben we dat toch heerlijk Samen gedaan hè, PERSOON B, weet je wel dan? Dan waardeer je iemand en iemand in het weet misschien helemaal niet meer, maar die denkt dat heb ik toch wel gedaan en andere denken van oh, huh, heeft hij dat gedaan? Wat fijn dus je, je werkt heel erg door die omgeving met en aan de hand van die basis psychologische behoeftes.
En, wij wisten en wij wilden dus die zorgboerderij maken omdat deze omgeving ook weer gewoon heel simpel de gelegenheid geeft om, ja, en te leven in het hier en nu. Dus je ziet nu die bokjes achter elkaar aanrennen, of je ziet nu en je hebt die beesten waarvoor gezorgd moet worden om je nuttig te voelen.

**INTERVIEWER:** Ja, het geeft je wel een doel eigenlijk dus?

**FOUNDER:** Ja zeker en ook in het heir en nu over te praten. Het geeft vrijheid om te lopen, dus daarom is het idee van die zorgboerderij ontstaan.

En wat ook een hele belangrijke visie een uitgangspunt is, dus inderdaad ja, tenzij. Zeg nooit op voorhand nee en bekijk elke situatie weer opnieuw. In principe is alles mogelijk, tenzij in de praktijk blijkt dat het niet kan en ook al kan iets niet voor dat moment, dan moet je daarna gaan kijken of het dan toch weer kan.

**INTERVIEWER:** Dat zie je ook wel heel erg terug vind ik In de behandeling van de verzorging en ook de persoonlijke aanpak. Dat vond ik het heel opvallend gister vooral. Ik ben nu even de naam kwijt, maar ze woont ook in woning XX was het ook en BEWONER A is natuurlijk heel creatief geweest ooit en die heeft geboetseerd een beeldjes en die hadden we erbij gehaald aan tafel, maar dat herkende ze niet meer. Toen vertelde dus ook de verzorgster van; Ik heb ook een keer klein meegenomen, want dan dacht ik, dan kan ik Samen met BEWONER A kleien en dan komt er misschien iets los en gewoon die persoonlijke aanpak dat ze dat dan zelf bedenken en dan denken, neem ik dat gewoon mee en dan gaan we proberen en dat dan zelf regelen, dat vind ik echt zo bijzonder en leuk.

**FOUNDER:** Ja en dat vraagt ook heel veel, een soort gevoel van veiligheid bij het team, hè? Dat je mag uitproberen dat dat juist wordt omarmd die creativiteit.

En dat is ook de reden waarom kleinschalig wonen denk ik ook zo belangrijk is dat mensen dus in kleine teams werken voor 6 of 7 mensen vast. Dat je echt die mensen heel erg goed leert kennen. Misschien herkennen zij jou niet direct of op een gegeven moment raken ze vaak wel aan medewerkers gewend of dan merk je dat ze toch wel Mensen missen als die dan even op vakantie moet zijn of zo. Dus heel. Maar Je leert de bewoners door en door kennen. En oh ja, besteden we heel veel aandacht aan het verzamelen van de levensgeschiedenis. Wie was dat dan voordat iemand dementie kreeg?

**INTERVIEWER:** Wij zaten eergisteren ook aan tafel in het Logeerhuis en BEWONER B en BEWONER C zaten aan tafel en we waren een beetje aan het praten en BEWONER C had een tweelingbroer ook verteld die de volgende dag en BEWONER B kwam uit Den Haag en ben je bent ben haar naam. VERZORGER A had even de geschiedenis erbij gehaald van BEWONER B en vertelde van ja je hebt in Delft gestudeerd, civiele techniek, en toen knikte hij ook van ja dat klopt. Dat was zo leuk om te zien.

En toch ook ja, ondanks dat ze dan wel allemaal specifiek dan hun eigen woning hebben of vaak in een woning zitten, je merkt wel dat iedereen kent eigenlijk bijna alle bewoners die hier wonen. Wij hadden het dan ook over andere bewoners van we waren even daar, we waren bij de dagbesteding met die en die en dan, Eigenlijk, het viel me op dat alle medewerkers kennen bijna eigenlijk alle bewoners wel. En Ik denk dat dat Natuurlijk ook heel mooi is dat Als je even moet bijspringen bij de een of je ziet iemand hier wandelen op het terrein en Dat is een ander dat je ook bij die nog steeds weet. Kijk, Misschien ken ze dan wel iets minder goed, maar je weet nog steeds wie Het is, hoe ze heten en hoe je ze kan benaderen Als je ze buiten tegenkomt. Ik denk dat dat ook wel echt de kracht is van de grootte van zeg maar, de schaal van dit project. Dat doordat het maar 27 bewoners zijn kan je ze wel dus echt allemaal kennen en dus die persoonlijke, eigenlijk allemaal allemaal die persoonlijke ja aandacht geven, zeg maar.

**FOUNDER:** Wat ook heel belangrijk is, is dat we daar, we hebben dus allerlei keuzes gemaakt hè, die je niet zo snel ziet, maar die maken dat dus het werk volgens deze filosofie makkelijker uit te voeren is. Bijvoorbeeld wij hebben geen flexwerkers nooit dus bij ziekte. Dat is een ene kant, een nadeel, want Mensen moeten elkaar dus vervangen. En het samen oplossen en het soms met minder Mensen doen, maar op het moment dat je gaat werken met Flex en medewerkers of uitzendkrachten, dan werk je met Mensen die de bewoners helemaal niet kennen. Dus dat je eigenlijk ja, je hebt wel iemand, maar die weet helemaal niks van Mensen af, dus is het ook heel en ook niet van Onze visie af, dus is het heel moeilijk om Volgens onze visie te blijven zorgen.

We hebben geen vaste nachtdienst in veel organisaties heb je dat. Wat er dan echt de nachtzuster zijn, maar daardoor heb je geen dus doordat wij niet met hè? De de Mensen die overdag werken werken ook de nachtdiensten en Dat is geen favoriete dienst. Iedereen snapt wel dat het belangrijk is omdat je ook In de nacht tenminste moet kennen en ook begrip moet hebben, Stel nou dat je aankomt In de nachtdienst en Het is nog Ontploffing en zootje in In de woning, dan kan je denken, oh ja, Er is Natuurlijk vast iets geweest of er zojuist een activiteit geweest of is dit gebeurt. Dat is oké, dus je krijgt geen twee eilanden en we besteden ook heel veel aandacht aan, Nou ja, de visie dus. We hebben visie dagen met de medewerkers twee keer per jaar om echt met elkaar over die visie te praten. Visie dag voor vrijwilligers en voor familieleden besteden we veel aandacht aan het met elkaar praten.

**INTERVIEWER:** Gisteren was er ook een bijeenkomst dag zag ik, was een flinke opkomst.

**FOUNDER:** Helaas moeten we volgend jaar met minder geld doen. We hebben dus inderdaad een bijeenkomst georganiseerd om samen met medewerkers en familieleden te praten over hoe gaan we dat dan doen? Welke ideeën zijn er om minder uren personeel in te zetten? Want in 9 uur per dag korter op de nou ja, we zetten op een dag iets van 136 uur in, dus Dat is 9 uur van 136 uur valt nog wel mee, maar je ziet het dus wel heel gaaf want ik dat er en inderdaad zo'n grote opkomst was, Maar dat het een hele, Het is helemaal geen leuk onderwerp Natuurlijk, Maar het is een hele positieve bijeenkomst Omdat Mensen zich gehoord voelen van We hebben inspraak. We doen het Samen.

**INTERVIEWER:** We hoorden inderdaad de afgelopen dagen ook wel een of zeker inderdaad. Medewerkers zeggen dat inderdaad die meeting was of ook bij een of twee familieleden en dat ze allemaal wel inderdaad hun zorgen daarover uitten. Van ja, hè, we vinden het super fijn hoe het nu is ingericht met twee medewerkers op 6, 7 bewoners en soms nog een vrijwilliger erbij en dat ze daarom ook die zorg zou kunnen geven en dat het helemaal niet gaat vanuit hun eigen belang, Maar dat het heel erg belang van die bewoners is van, We willen ze niet minder zorg geven of minder aandacht dan dat we ze Nu geven en. Kan dat nog steeds op diezelfde manier zo blijven, en dat vond ik dan wel heel mooi hoe ze dat dan uitlegde. Dat het ging echt om het belang van de bewoners, Omdat dat zoveel mogelijk hetzelfde blijft en zo min mogelijk voor hun verandert eigenlijk.

Want zie je dan bijvoorbeeld die ja jullie zijn 9 jaar geleden jaar geleden begonnen? Oh 10 jaar, Hoe is die visie veranderd In de afgelopen 10 jaar? Want Ik kan me ook voorstellen dat er bijvoorbeeld nieuwe ja inzichten zijn doordat je hè ervaringen opdoet Omdat je het hebt gestart en hoe? Ja ideeën van buitenaf of is dat veranderd de afgelopen 10 jaar?

**FOUNDER:** Nou altijd als Mensen hier nieuw komen werken, dan geef ik een training over de visie. Ja en dan begin ik altijd met de vraag, is de visie heilig? en ja, eigenlijk is ie best wel. Ja want, Maar het is ook geen dogma, dus Als we met elkaar vinden bijvoorbeeld stel nou werk komen ontzettende nieuwe inzichten over dementie, dan moeten we daar in mee gaan. We moeten niet starren worden en wat er op ze hebben. Nou, dat zou ik alweer een aantal jaar geleden. We waren in 2013 overgegaan opengegaan. In 2018 hebben we een keer die visie met elkaar besproken op zo'n visie dag en gelezen van: klopt hij nog, is die nog actueel? En toen is er eigenlijk nog een visie pijler bij gekomen en 'Dat was dus Zonder vrijheid geen leven'.

En Dat was dus eigenlijk al een kernactiviteit, Maar dat stond niet los beschreven dus die is toegevoegd, Maar ik denk dat we nog steeds wel heel erg volgens die visie leven of werken en Dat is dus hè. 'Mensen zijn' wat ik al net noemde. 'Thuis'. Mensen moeten zich thuis kunnen voelen, dat gevoel hebben en 'betekenisvolle dag invulling maakt het leven de moeite waard'. 'Ja, tenzij' en de 'een met de maatschappij' en op sommige wonen punten moeten we wel nog dat je denkt van oh, dit behoeft wel meer aandacht weer.

**INTERVIEWER:** Ja, soms voelt het echt als een soort minidorpje ofzo en je mist Alleen nog maar een supermarkt en dan ben je helemaal voorzien. Zijn er nog plannen om ooit toch uit te breiden of gaat dat in tegen het kleinschalige?

**FOUNDER:** Wij hebben geen ambitie om nog een *locatie* op te zetten. Er is wel heel veel vraag naar. Ja de wachtlijst is heel erg lang, Maar we hebben willen andere inspireren en niet zelf nog een keer doen. Want ja, dan wordt je het feit dat wij nu nog net alle medewerkers echt kennen, maar familieleden wordt al wat moeilijker aan het begin van open gingen. Toen hadden we 36 medewerkers en nu 65. en hadden we Alleen nog maar bewoners en nog geen dagbesteding en geen logeerhuis en dat maakt het wel ja. We worden dus eigenlijk al groter binnen onze eigen capaciteit.

Ik denk wel dat het kan nu nog kan om net Iedereen min of meer te kennen en een groter moeten we echt niet doen.

**INTERVIEWER:** Want hoe heb je eigenlijk dat hele vrijheid versus veiligheid, dat dat ze dus hun eigen deur uit mogen lopen en dat dit geen enkele deur op slot zit en dat Mensen gewoon ook als ze zelf zouden willen, het echte grote terrein af zouden kunnen, dan wel het liefst ook een soort van gecontroleerd. Maar dat dat zie heb ik eigenlijk nog nooit ergens anders gezien. Hoe heb je besloten? Of ja, hoe hebben jullie bedacht om het op die manier te gaan doen en was daar dan ook bijvoorbeeld van? want Ja dat zat best wel wat risico aan. En ik Denk dat familieleden dat ook best angstig vonden?

**FOUNDER:** Voordat ik deze locatie opende, ben ik onderzoeker geweest en toen ben ik bij heel veel zorgorganisaties op bezoek geweest, dus Ik heb heel veel kunnen afkijken. Dat is fijn en ik ben ook een soort van In de leer geweest bij de grondleggers van kleinschalig wonen. Waarbij die die deuren van de woningen al open waren, dus Het was heel mooi dat Ik had ervaren dat dat kon en dan is het lef hebben en je poot stijf houden, zeg maar, want Toen wij allemaal medewerkers kregen, dat waren de meesten die werkten hier inderdaad in andere zorgorganisaties In de buurt waar zij helemaal niet zo gewend waren om op die manier te werken, dan is het heel spannend. Het is heel spannend, ook om te zeggen, nou, Ik ga even een wandelingetje maken, oké, tot ziens, Als je bijvoorbeeld hebt over BEWONER XX die super gevaarlijk is, hè? Net zo rollator die zomaar over het terrein kan rennen waarvan we weten dat hij nou ja een aantal keer per dag valt.

Ja, Dat is best wel eng als je die verantwoordelijkheid hebt over iemand. Dus daar hebben we Medewerkers ook heel erg in moeten coachen. En dan, op een gegeven moment heb je een groepje medewerkers die vervolgens die manier durft te werken en dan is het makkelijker Als je als nieuwe erbij komt. Want dan is het makkelijker.

Toen we open gingen hebben de medewerkers een twee scholings weken gehad, waarbij de medewerkers in twee weken werden getraind en toen hebben we dit ook besproken over die open deuren en dus vooral niet toegeven, ook Als het spannend wordt. Soms is het spannend en dan toch die deur openhouden en met elkaar nadenken van hoe gaan we dit dan oplossen? Eerst konden 's nachts de deuren nog op slot en dan kon je dus niet open maken van binnen.

We hebben eigenlijk recent ja, afgelopen jaar pas, die deuren ook veranderd met een draai cilinder van binnenuit. Dat was eigenlijk al langer onze wens Omdat Ik vind als bewoners eruit willen, dan is het niks vreselijks dan dat je dat niet kan Natuurlijk. Ook al werkten met melders dat je weet meteen wanneer er iemand, maar ja, Maar dat betekent ook soms, ja, We hadden een man aan het begin met fronto temporale dementie. Toen waren de deuren Ook waren we aan het eind van de gang open. De nooddeur was open, maar die man stond steeds midden In de winter in zijn onderbroek, buiten op het terrein met toen nog maar één nachtdienst en voordat je iemand gevonden hebt...

**INTERVIEWER:** en één ongeluk met de vijver in de afgelopen 10 jaar?

**FOUNDER:** Ja er is een keer iemand in gelopen maar die vijver is heel ondiep. En het werd ook heel snel gezien want de woningen zijn zo ingericht dat iedereen uitkijkt op het middenterrein.

**INTERVIEWER:** Inderdaad, maar dan zie je ook dat zoiets ook maar een keer moet gebeuren en dan zie je dat dat eigenlijk. Het is ook niet zo erg is.

Maar een soort van het feit dat de deuren open zijn en dat je een vijver ziet en dat betekent ook dat Mensen er echt niet zo heel snel in zullen lopen en echt wel weer terugkomen, want ze vinden het een fijne plek en ze kunnen eruit, dus ze kunnen er ook weer in, dus ze zullen nooit volledig weggaan en Ik weet niet wanneer ik dat heb gehoord Maar dat vind ik ook wel iets moois dat Als je zegt nee, je mag niet naar buiten, dan willen Mensen juist naar buiten. terwijl Als je zegt ja hoor is goed, ga maar en dan staan ze bij de deur en dan zijn ze alweer vergeten wat ze gingen doen en dan gaan ze weer rustig in de woonkamer zitten. Dus het zeggen ja en kijk maar werkt goed. Dat je het zeggenschap over je eigen leven hebt.

**FOUNDER:** Ja, We hadden iemand een en die heeft heel lang bij ons gewoond. Een vrouw en die was altijd al, ook in haar gezonde leven, een hele strenge en niet zo vrolijke vrouw. Het was een beetje een apart mens, dus dan merk je vaak dat mensen zijn daar dol op, hè?! Dat medewerkers dat nog meer hebben dan de familieleden.Maar dat was een hele aparte dame en die wilde graag ‘s nachts een rondje lopen, dus wat deed ze? Zij ging midden in de nacht om 4 uur via haar tuindeur naar buiten en dikwijls schrok de nachtdienst want die had dan ineens die vrouw achter zich. Maar ja, het ging altijd goed. Zij maakte dat rondje en daarna kon ze weer slapen. Dus ja, wie zijn wij nou om te zeggen? Ja, dat mag niet. Of Dat is gevaarlijk?

**INTERVIEWER:** Want als we het meer hebben over de fysieke gebouwen. We merkten ook dat bijvoorbeeld die twee eetplekken in een woning ook echt heel fijn waren dat daar heel veel gebruik van werd gemaakt en ik sprak ook gister iemand in een woning die zei van ja, we zitten wel te kijken of we Misschien bijvoorbeeld gordijn of nog een bepaalde afscheiding kunnen maken zodat er echt ook het visuele contact soms gescheiden kan worden Omdat dat dan best wel wat onrust voorkomt. Maar tegelijkertijd is bijvoorbeeld die hele lange gang die rechten gang ook met dat uitzicht ook weer heel fijn voor medewerkers om gelijk het overzicht te hebben. Dus, hoe is dit bedacht en ontworpen? met een architect samen?

**FOUNDER:** Ik heb mezelf heel erg verdiepd in de inrichting van woonvoorzieningen, waarbij ik eigenlijk twee uitgangspunten had. Als eerste, je moet dus weer een soort van prothese vormen, hè, dus waarbij je zo goed mogelijk aansluit bij wat Mensen gewend zijn en overzicht creëert. Dus je hebt In elk Nederlands huis, bijna elke Nederlands heb je. Als je binnenkomt De voordeur en dan is een gangetje, en dan Hang je jas op en de kapstok en je hebt een wc. Dan ga je de woonkamer binnen.

De Nederlandse al ik zeg toch ja. Hier zie je De keuken en de rest, Het is heel makkelijk te zien. En dan heb je, Als je dan naar je eigen appartement wil. Ja, je hoeft maar één kant op, want het zit ergens in die gang en en en helaas in één woning gaat die de bocht om maar dat kwam omdat we heel graag het terrein wilde omarmen met alle vier de woningen samen.

**INTERVIEWER:** Precies ja, terwijl ze daar dan van zeiden, dat het voor hun af en toe ook fijn is, Omdat dan In de woonkamer die onrust niet wordt gevoeld als Mensen met maar heen en weer lopen in die gang.

**FOUNDER:** Dit is gebouwd door de woningbouwcorporatie, dus er waren weinig middelen en We hadden geen eigen middelen en wat heel fijn is dat er een architect is gekozen en wij hadden daar inspraak In welke architect werd gekozen. En We hebben in elk bouwteam overleg zijn wij aanwezig geweest om mee te praten over. Nou ja, hoe de indeling? Dus het ontwerp, de materialen, de kleuren. Dus daar heb ik me ook heel erg in verdiept, dus niet de grote contrasten waar je dat niet wil. Nou ja, soms zie je dat dat toch nog fout is gegaan, dus bijvoorbeeld dat er een zwarte drempel tussen de badkamer zat en de slaapkamer en dat sommige Mensen met dementie die ervaren dat dus als een gat In de grond. Dus je ziet ook heel moeilijk Mensen daarover heen stappen, terwijl we daar voor. Dus nu verwijderen we die drempels dan ook, als daar sprake van is. de kleuren die gebruikt zijn voor de tegels In de badkamer, Omdat Dat is bewezen dat het meest rustgevend is voor mensen en het feit dat je Als je de deur opendoet van de badkamer, zie je meteen de WC, dus je weet, hé daar moet ik plassen dat je de goeie kant op gaat en helemaal als je 's nachts moet plassen snel.

**INTERVIEWER:** Dus je had wel een lijst met een aantal criteria, waarvan je sowieso wist dat die in plattegronden moest?

**FOUNDER:** Ja maar Je hebt een beperkt aantal vierkante meters, want alles kost geld en Wij hebben gekozen toen om veel vierkante meters In de gemeenschappelijke woonkamer te doen Omdat Mensen met dementie, De meeste niet Iedereen trouwens, maar die zoeken toch vaak de veiligheid van de Medewerkers op en dat weten Mensen vaak haarfijn uit te zoeken dat ze bij Medewerker moeten zijn. En ja zoeken die veiligheid op van hun aanwezigheid en Ik heb ook zelf in een kleinschalige woonvoorziening stage gelopen en daar was de woonkamer heel klein en dan zat je dus de hele dag met elkaar aan de tafel, elkaar In de ogen te staren. Nou, dat is niks en ook als bepaalde mensen het minder met elkaar kunnen vinden. Dus we vonden het heel belangrijk om die verschillende zitjes te creëren. En inderdaad ook bijvoorbeeld dan twee tafels te hebben om aan te kunnen eten.

**INTERVIEWER:** En wat een medewerker ons vertelde en wat later ons ook opviel is dat aan de ene kant van de eigen kamers heb je een deur, een openslaande deur in de kamer en aan de andere kant heb je dan een raam. Hoe is daar bewust voor gekozen?

**FOUNDER:** Ik ben in Engeland geweest bij een centrum wat heel erg gericht was op de inrichting voor Mensen met dementie. Ook bijvoorbeeld dat je met het idee van stickers op De muur, zodat je. Bijvoorbeeld in plaats van een deur boekenkast ziet en Nou ja, bijvoorbeeld geen gebruik van grind op plekken waar je waar je Mensen eigenlijk niet wil hebben Omdat het minder prettig is om op te lopen voor sommige mensen. Dat was wel inspirerend Om te zien dat je gebruikt maakt van verschillende kleuren voor herkenbaarheid in woningen. Maar mijn idee erachter was dat ik inderdaad hè, je wil eigenlijk Mensen niet zo aan de wegkant hebben, Omdat in die richting de uitgang is, dus Ik wilde die plek zo onaantrekkelijk mogelijk maken. Natuurlijk wel Mooi, maar niet zoveel aan zodat je meer getrokken zou zijn om lekker te gaan beleven In de boerderijtuin en dat je dus daar heen wordt getrokken en dat je dus die behoefte niet hebt om daar aan die kant eruit te gaan.

Daarom dus ook aan die kant dat je gewoon de deur uit kon Omdat je ja, daar mag je doen wat je wil eigenlijk, overal wel, maar en aan de andere kant dat je niet dan eruit zou gaan en dan richting het hek van het terrein zou gaan. In de praktijk denk ik misschien dat het beter was geweest dan ook daar gewoon deuren te maken, want je merkt nu dat sommige Mensen Uit het raam klimmen. En het gevoel van je eigen tuintje hebben nog is ook nog heel veel waard.

**INTERVIEWER:** Maar ik snap inderdaad wel wat je zegt over die deuren en het idee erachter want Je ziet ook heel duidelijk inderdaad dat door die omarming ook alles gericht is op die mooie tuin aan de ene kant en dus ik snap inderdaad heel erg dat dat concept en dat idee daarvan

**FOUNDER:** Je merkt wel dat sommige mensen aan de beurt waren om hier te komen wonen en dat ze dan de tuinkant wilde maar dat doen wij niet. Kamer vrij is kamer vrij.

**INTERVIEWER:** Dat dat Ellen ook, zei ze, vertelde dat er ook wel verschil is tussen ja groen zien of lucht, want bij haar vorige werk woonde mensen op een verdieping en dan zagen ze alleen maar lucht en een paar boomtoppen terwijl hier is de kwaliteit dat je op de begane grond bent en ook geaard op een manier. Ik weet niet of dat in jouw ervaring ook is, maar ik denk dat het kwaliteit brengt aan de bewoners ten opzichte van wonen op een verdieping.

**FOUNDER:** Oh zoveel zeker want Als je niet meer in staat bent om zelf naar beneden te gaan Als je obstakels hebt zoals dat Je met een lift of de trap moet of wat dan ook hè? Ja, Ik vind dat je mensen met dementie kan je niet hoger zetten als je de kans hebt. Vaak wordt gedacht van nou we laten de mensen met dementie juist boven zitten weggestopt echt vreselijk terwijl deze mensen juist het meeste behoefte hebben aan een soort van visuele richting want ze weten het niet totdat ze het weer zien.

Ik kan daar helemaal een beetje Kwaad om worden maar Je hebt bijvoorbeeld een hele mooie woonvoorziening met 13 kleinschalige woonvoorzieningen In Haarlem en hele ja een leuke tuin en zo maar wat je ziet, de duren naar die tuinen zijn altijd dicht. En dus de Mensen komen er niet, want ze worden zelf helemaal niet gestimuleerd Of ze kunnen niet daaruit om daar dan van te gaan genieten. Ze hebben iemand nodig om dat dan te doen. Bij ons hebben soms mensen ook de vraag nodig van he ga je mee naar buiten maar als het mooi weer is, dan staan de deuren open. In de zomer is het hier één groot vakantiepark, dan staan de deuren open, Mensen eten buiten en gaan bij elkaar langs. Het is een grote buitenzijn.

**INTERVIEWER:** Ja en ik hoorde ook dat jullie veel doen aan beweging enzo en toen het een paar keer werd benoemd en los van elkaar hebben heel veel medewerkers het benoemd dat hier bijna niemand een rolstoel heeft. Iedereen is nog best wel fit hier. De Wachtrijen worden Misschien zo lang Omdat Mensen hier heel lang wonen en ouder worden ook. Dat vind ik wel een heel mooi iets om te zien omdat dat eigenlijk dus bewijst dat de fysieke omgeving zoveel invloed heeft.

Dat Mensen met dementie en doordat ze hier Lekker wandelen en Ik vind dat schelpenpaadje hier ook heel grappig dat dat hoor je een beetje kraken en Dat is Misschien moeilijker Of er staat een bloempot, maar dan leren ze ook ooh, Maar Als ik er omheen loop gaat het ook goed, en dan zijn ze ook weer bezig met hun he cognitieve hersenen en met je brein van oh, Maar ik kan daar ook omheen en ook al duurt het dan wat langer het wandelen maar doordat ze dat dus nu nog steeds wel doen denk ik ook echt wel dat ze langer wat vitaler voor hun doen zijn.

**FOUNDER:** Dat denk ik zeker en juist ook omdat het niet allemaal effen is inderdaad. Wij huren ook wel eens de fysiotherapeut in om met iemand te trainen speciaal. Nou laatst had iemand zijn heup gebroken, dan zet je dus zeker de fysiotherapeut een aantal keer per week in of voor bijvoorbeeld BEWONER XX, daar komt parkison verpleegkunde met hem oefenen met lopen of bij BEWONER XX ook oefenen met lopen, dus het wil niet zeggen dat we die behandelaars niet inzetten, maar we hebben geen gymzaal of zo weet je wel, want dit is een grote oefenruimte.

**INTERVIEWER:** Er was wel een soort van activiteiten dienst of zo toch die dan soms wel wat meer beweeglijke activiteiten kan doen

**FOUNDER:** Ja maar dat is gewoon een dienst die wordt ingevuld door de medewerkers. Een van de twee avonddiensten doet die activiteiten. En, maar ik denk ook echt doordat Mensen zoveel hier lopen nog, Komen Mensen veel minder snel in een rolstoel. En ja, Ik heb geen onderzoek gedaan en ik kan het niet bewijzen, want het is natuurlijk een klein aantal wat hier woont maar ja. En wij hebben ook bijna geen, ik weet eigenlijk ook niet of dat nog in andere woonvoorzieningen bestaat, maar ik liep vroeger nog stage in een woning, in een kleinschalige woonvorm, waarbij iemand gewoon al twee jaar op bed lag. En het was ook nog eens op een verschrikkelijke manier, want die vrouw, die was de hele dag aan het gillen dat ze niet meer wilde maarr dat komt hier nooit hoor. Sowieso niet hoor want stel dat iemand zodanig beperkt dat iemand niet meer goed kan zitten, dan ga je iemand in een kuiprolstoel zetten of een kantoor rolstoel en dan haal je er iemand alsnog bij. En dan breng je iemand natuurlijk op gepaste tijden naar bed om te zorgen dat iemand ook geen constante druk heeft op de billen enzovoort maar de hele dag op bed hoeft echt niet.

**INTERVIEWER:** Mensen moeten nu tegenwoordig ook veel meer langer thuis blijven wonen, hè? En met lange wachttijden hier. Ik vraag me al af van als mensen de mogelijkheid hebben om in een wat eerder stadium hierheen te verhuizen of dat bevorderlijk zou zijn voor een welzijn? En als de leefomgeving beter zou zijn voor nensen met dementie of dat het beginstadium wat meer uitgesmeerd kan worden? Ik weet niet of jij een soort van verschil ziet bij het bewoners die in een later stadium hier aankomen en mensen die al wat eerder hierheen verhuizen?

**FOUNDER:** Ik denk wel dat het is natuurlijk het allermooiste als iemand hier naartoe kan verhuizen, terwijl die het nog een beetje begrijpt dat hij nog kan helpen met het inrichten van zijn appartement bijvoorbeeld. Dat iemand er ook nog soms voor kan kiezen om hier te wonen, dat hebben we ook best wel wat aan de hand gehad dat mensen het echt beseffen en weten, Ik wil hier wonen. Dat is natuurlijk prachtig als dat gebeurt en dat iemand ook ja beetje went en zelfstandig zich kan voortbewegen, dat het langer behouden blijft en dat beter kan aangeven wat iemand wil dus dat is natuurlijk heel mooi Als het kan. Tegelijkertijd zie ik ook, hebben we ook. Nou ja, vorig jaar hadden nog iemand of dat jij daarvoor die zat was echt heel ver in haar dementie. Die woonde eerst in een ander verpleeghuis en die is toen alsnog hier naartoe verhuisd waarvan je bijna zou zeggen, nou, is dat nou nog de moeite waard? Heel oneerbiedig gezegd, wat weet hij er? Wat krijgt ie daarna nog van mee? Dat is het dan. Hè, wat dan in je opkomt?

En om die vrouw, die was al in het vorige huis altijd angstig tijdens het wassen aankleden, echt aan het gillen. Heel veel medicatie en die is hier naartoe verhuisd en we hebben het niet een keer gegeven. Ik vond het zo mooi dat zij was ook echt geliefd en een andere vrouw die in het vorige huis zelfs werd vastgebonden nog dus gefixeerd. En toen schrokken wij als een hoedje, want mijn collega en ik hadden dat nog helemaal niet door en toen zagen we ineens in het zorgdossier van oh die mevrouw die komt, komt met een autogordel. Maar wij doen dat per definitie niet in een rolstoel. De familie en zorgmedewerkers zijn dan bang dat ze eruit glijdt. Maar die vrouw had dat echt niet nodig en dat ook zo iemand die zeer vergevorderde dementie heeft en die en dan zag je dus dat de medewerkers haar zagen als persoon en ging uitproberen.

Waar wordt zij blij van en bloemen voor haar gingen plukken en die dan voor haar hielden en dat je dan zag dat ze daarvan genoot, hele kleine dingen dus en uiteindelijk heeft ze hier maar een halfjaar gewoond maar dat de familie zo blij was dat ze hier nog de laatse maanden heeft kunnen wonen omdat ze het idee hadden dat zij hier pas echt werd gezien. Bij de uitvaart moesten de medewerkers gewoon huilen uit betrokkenheid terwijl je denkt joh wat bijzonder dat zon diep demente vrouw eigenlijk zon medewerker zoveel heeft gegeven ook nog.

**INTERVIEWER:** Ja precies en dat zo iemand toch weer zo kan opbloeien of zo. En, maar ook die wisselwerking ook tussen haar en de medewerkers.

Ja en je ziet ook gewoon dat in ieder geval aan het begin ben je toch een beetje aan het aftasten, zeg maar hoe mensen op voor mezelf ook, hoe dan mensen reageren of dat inderdaad de ene zie je al wat verder in hun dementie dan de ander, maar dat dan bijvoorbeeld, nou ik zat dan bij een woning gister bij bewoner xx en die is natuurlijk best wel in zijn eigen wereld, maar ik had niet door hoeveel hij nog begreep totdat ik gisteren bijvoorbeeld de tafel even ging afnemen en dat ik zei dat ik even zo op mijn hand om zijn schouder deed en zei van ik ga even de tafel bij u afnemen en dat hij dan op een gegeven moment begon hij te wijzen want ik had een vlekje op de tafel gemist en toen ik het had schoongemaakt en ik vroeg nou zo goed en dat hij begon te lachen uit bevestiging dat het goed is. Of ik ging vandaag mijn broodje hagelslag maken en toen zat hij naar mij te kijken want hij had hetzelfde broodje en ik zei tegen hem van oh jouw broodje ziet er ook lekker uit en toen begon hij weer te lachen. De eerste dag had ik niet door dat hij dat allemaal wel begreep maar door het gewoon te proberen en tegen hem te praten tijdens het tafel schoonmaken gaat hij reageren en ik vond dat wel mooi om te zien.

**FOUNDER:** Ja, ik vond het wel grappig, want ik ben dus onderzoeker geweest, hè? En op een gegeven moment deden wij ook mee aan een onderzoek en dan moesten medewerkers vragenlijst invullen over het functioneren van mensen. Dus dan heb je zon naar de geriatric type. Nou ja, Dat was de Cognitive deterioration scale, dus die moest worden afgenomen, en nou medewerkers hadden dat gedaan en ik keek eens voordat we het naar die onderzoekers sturen, van wat hebben ze ingevuld? En er was een mevrouw die helemaal niet kon praten behalve ja en nee en vaak was het nog zo als ze ja bedoelde zei ze nee en andersom die ook op een gegeven moment echt, nou heel passief was en echt vergevorderd stadium had en heel oneerbiedig gezegd, maar gewoon heel leeg eigenlijk en toen zat ik zo te kijken, Ik denk hè, wat is er nou ingevuld? Bijvoorbeeld, mevrouw kan zich goed verstaanbaar maken. Ja, en toen vroeg ik mij af van huh, hebben we het over dezelfde persoon. En, maar ik vond het zo mooi om te zien dat doordat die medewerkers haar zo goed kenden, begrepen zij wat zij bedoelde dus in hun optiek kon zij zich goed verstaanbaar maken, want zij kon heel goed nonverbaal duidelijk maken wat ze wilden aan die medewerkers. De medewerkers kunnen deze mensen die op een andere manier hun functioneren inschatten

**INTERVIEW:** Ja en dat logeerhuis. Dat is relatief nieuw. Hoe zijn jullie daarop gekomen? Hoezo heb je er niet gekozen om daar nog 4, 3 kamers van te maken? Maar echt het logeert principe toe te voegen.

**FOUNDER:** Ja, wij vonden het logeerhuis een heel belangrijke maatschappelijke functie vervullen. Dat doet het ook. De wens is natuurlijk dat mensen langer thuis wonen, maar dan moeten ze het ook wel langer thuis kunnen volhouden. En, de grootste voorspeller van of iemand in een woonvoorziening terechtkomt, is de belasting van de mantelzorger of de mantelzorger het nog trekt, dus het gaat helemaal niet eens om cognitief functioneren of om probleemgedrag of wat dan ook. Ja, dat zijn ook wel voorspellers, maar de belangrijkste voorspeller is dus die mantelzorger of die het nog trekt.

Daarom is het zo belangrijk om respijtzorg te bieden en dat kan je doen in de vorm van dagbesteding, maar dat logeerhuis biedt dus ook heel veel. Ja echt een verademing voor mensen. Er kwam hier een tijdlang elke maand iemand logeren en die sliep dan hier ook voor geen meter. Maar dat was dus de enige twee dagen in de maand dat zijn vrouw door kon slapen 's nachts. Dat was voor de rest was hij de hele nacht in de weer en zij dus ook. En zo hebben wij kunnen voorkomen dat er een crisisopname nodig is want ja, zij kon het nu uitzitten totdat er een plek was. Ik vind het zelf wel heel mooi om te zien dat je mensen waarbij de nood heel hoog is, want dat is bij veel mensen op de wachtlijst is zo, dat je een soort van oplossing kan bieden.

**INTERVIEW:** Staan dan ook veel logees bij het logeerhuis op jullie wachtlijst?

**FOUNDER:** Ja dat zie je veel maar ook wel mensen die niet op de wachtlijst staan.

**INTERVIEW:** Ik heb dan gisteren bijna de hele dag meegelopen met de dagbesteding en dat was ook volgens mij, op dinsdag is het wel een redelijk jonge groep. Ik schrok best wel van hoe jong ze ook allemaal waren, maar ik vond het wel heel mooi om te zien dat die mensen zo blij waren dat ze daarheen konden en ook echt hun doel zagen van die dag en dat ze daardoor ook kunnen zeggen dat ja, we kwamen hier meerdere keren per week. Of Ik ben zijn naam even vergeten, maar hij schildert hier heel veel. Bewoner xx vertelde ook dat hij heel veel in het logeerhuis heeft geschilderd en dat hij weer een ander kastje had geschilderd en dat hij binnenkort weer een ander meubelstuk gaat schilderen binnenkort.

Je ziet gewoon dat hij daar helemaal van opleeft en ook op gegeven moment sprak hij wel een keer uit van ja, Ik ben mijn Alzheimer wel eens een keertje zat, maar dan zegt hij, maar ik heb schilderen gevonden en dat vind ik nu zo mooi om te doen en dat hij dan elke keer kan zien als hij hier komt dat hij dan ook daadwerkelijk iets bijdraagt en eigenlijk een verantwoordelijkheid heeft.

**FOUNDER:** Ja en wij zijn ook heel blij met hem want hij helpt ons.

**INTERVIEW:** Ja, en een ander zei ook dat hij gewoon zo blij was dat hij eindelijk mensen om zich heen heeft, die hem ook begrijpen want dat heel veel vrienden van hem hem niet altijd meer begrijpen en dat hij nu een plek heeft gevonden waar mensen tijd voor hem hebben, geduld hebben en dat hij precies kan doen wat hij wil.

**FOUNDER:** Ik vond het zo indrukwekkend. Misschien heb je hem ook gister ook nog gesproken maar die vertelde dat hij heel achtief was als vrijwilliger en timmerman was. En op een gegeven moment kon hij niet meer timmeren. En dat hij dus merkte ja, eigenlijk hangt zijn identiteit daaraan vast dat timmeren en daarmee het vrijwilligerswerk. En daarmee het verenigingsleven, maar dat werd gewoon teveel en te druk en ook in sociale contacten, dus hij was echt somber voordat hier kwam, dit heeft hem echt weer zin in het leven gegeven.

**INTERVIEW:** Ja dit vertelde hij ook heel duidelijk van ik weet dat ik deze ziekte heb. De ene helft van mijn hersenen werken niet meer, de andere wel. Ik kan met één persoon praten, maar niet met meerdere. Ik mag thuis niet meer het gasfornuis gebruiken, maar hier mag ik dan nog wel een appeltaart bakken en dan reageert iedereen van ja die appeltaart is zo lekker en dan zie je hem weer helemaal blij worden en sommige waren de hele tijd grapjes met elkaar aan het maken dat als ze dan de vaatwasser hadden ingeruimd, dan kregen ze een box van elkaar, want dat hadden ze zo goed gedaan samen. Dat ze dus op die plek daardoor ook weer vrienden aan het maken zijn en dat ze daardoor ook zin hebben en de hele week daarna uit kunnen kijken, want dat weten zij nog wel dan op die dag ga ik lekker met mijn vriendje wandelen en appeltaart bakken.

**INTERVIEWER:** Denk je dat er misschien nog meer van dat soort voorzieningen zouden moeten zijn qua dagbestedingen bijvoorbeeld vooral voor de mensen die nog wat meer in de maatschappij staan en die nog wel ja, op veel jongere leeftijd dementie hebben dat je merkt dat daar eigenlijk een gat is?

**FOUNDER:** Ja, wij richten ons natuurlijk ook speciaal op jongere mensen met dementie en onze faciliteiten trekken dat ook aan, hè? Het feit dat we in het echt aan het werk kunnen, wat bij jongdementie is de moeilijkheid is dat het een kleine doelgroep is relatief gezien en die ook wel bepaalde expertise vraagt maar ik denk wel dat er behoefte is aan meer van dit soort dagbestedingen en dat dat gelukkig ook wel langzaamaan komt.

Je hebt bijvoorbeeld dementalent, waarbij ze echt ook nou ja klussen op zich nemen. Ja waar wij ons heel erg in onderscheiden was ook het afstappen van de traditionele dagbesteding van je komt met elkaar en je hebt de hele tijd groepsactiviteiten en je zit de hele tijd aan die tafel en wij gaan de hele tijd hup. Die werkt daar In de tuin en die is daar bezig met koken. Die is in het creatief atelier aan de gang en die andere is ergens naar de winkel om verfspullen te kopen samen met dan bijvoorbeeld een medewerker. Wij volgen daarin ook veel meer het individu net als dat we dat ook In de woningen doen en ik denk wel dat dat langzaam een beetje meer in beweging komt in de meer traditionelere dagbestedingen. Maar je hebt toch ook nog wel veel van? Nou, we zitten in een kringetje en we gaan gymmen en op de stoel allemaal.

**INTERVIEWER:** Ja en ook op de middelbare school een week meegelopen bij zon dagbesteding. Dat was dan bij mijn ouders in het dorp zo'n boerderij en dan hadden ze dan een ruimte over maar alles was wat je nu zegt van steeds met hele groep. Dan gingen we 's ochtends kopje koffie met zijn allen In de kring en dan gingen we met zijn alle schilderen en dan gingen we met zijn allen de kas in en liedjes zingen en iedereen leek het ook wel prima te vinden.

**FOUNDER:** Ik denk dat je door deze manier van dagbesteding bij ons, ze meer het gevoel van betekenisvolheid aanspreekt bij deze mensen en de verantwoordelijkheid. En het gaat ook wel eens mis he, bijvoorbeeld, ik hoorde net dat bewoner XX, er is nu te weinig onkruid, dat hij aan de vaste planten begonnen met schoffelen.

Maar oké, ik moet zo weer een beetje verder. Hebben jullie nog andere prangende vragen?

**INTERVIEWER:** Nou er werd gesproken, er was een keer een partner die was meeverhuisd hierheen Hoe was dat en denk je dat dat nog op grotere schaal zou kunnen werken? Of zoals nou ja, dat dat gemixt kan worden eigenlijk?

**FOUNDER:** We zeiden ja tenzij hè, dus die echtgenoot is meeverhuisd. Hij kon zijn vrouw echt helemaal niet loslaten en hij wilde alleen maar dat zij naar een woonvoorziening zou verhuizen als hij ook mee kon en hij heeft dat 1,5 jaar gedaan waarna hij, dat was heel bijzonder trouwens, want er was een medebewoonster en met met mensen met dementie, als de dementie vordert, hebben mensen vaker ja, behoefte aan ja, bijvoorbeeld nabijheid, hè, dus intimiteit en die vrouw van die persoon en zij konden heel innig tegen elkaar aan liggen en elkaar kusjes geven en heel onschuldig naar mijn idee. Maar die echtgenoot kon daar helemaal niet tegen en dat was heel moeilijk. Die dacht echt dat er lesbische relatie ontstond dus dat was heel boeiend om dat goed te begeleiden en dat is denk ik uiteindelijk ook goed gelukt is en de weg die bewandeld heeft. Tegenwoordig heb je ook bijvoorbeeld de Molenwijd bij zorgbalans heb ik zelf training gegeven. En die hebben ook echt appartementen voor echtparen, waarbij je mensen zonder en met indicatie hebt en er zitten nogal haken en ogen aan organisatorisch als je echt een groot appartement hebt, dan wil je natuurlijk leefruimte hebben eigenlijk met zijn tweeen in plaats van op zon klein kamertje want daar moet je toch niet aan denken.

En als er eentje overlijdt, wat doe je dan? Want ja, wij krijgen geen inkomsten meer als je daar een gezond iemand hebt wonen. We zijn echt gericht op dementie. We krijgen zorgzwaartepakket 5 of 7. Dat betekent dat wij nou bij rond de €300 per bewoner per dag krijgen. Daar kunnen we ons personeel en de huur van betalen en de zorg. Op het moment dat er dan een appartement leeg zou staan of zeg maar een gezond iemand betreft. Ja dan, dan is ons model niet meer financieel rendabel. Ik heb vroeger bij het AntonPiekhofje meegelopen, waarbij ze aanvankelijk, het is een soort flat of nou ja, twee verdiepingen waarbij ze de begane grond dan een soort hofje voor mensen met dementie hadden en daarboven konden de partners wonen, zodat die dan heel nabij waren. Maar dat was ook net niks. Dat liep helemaal niet omdat ja ze hadden wel hun eigen stek en het was nabij, maar toch te nabij zo dan weer. Het stond leeg eigenlijk voor mantelzorgers. Veel Mensen kozen daar niet voor om daar hun eigen vertrouwde huis voor te verlaten. Maar dat is twee jaar terug gelsoten maar wel jammer maar gebrek aan visie want ze begonnen heel goed maar toen de inititief nemers en visiedragers weggingen liep het mis.

**INTERVIEWER:** Ja en ik denk dat dat misschien ook wel het succes zeg maar is van deze locatie doordat die visie zo duidelijk is en zo wordt nageleefd, werkt het ook. Terwijl als je de open deuren zou hebben maar de medewerkers gaan daar toch in twijfelen, dan werkt het niet.

**FOUNDER:** Ja, want je bent, ook in de eerste jaren en nog steeds soms nu, je moet elkaar steeds de vraag stellen is dit wel volgens de visie. Dan kwam er ineens iemand die had bedacht zonkarretje, zo een waar je dan heel handig de kopjes, zo'n ijzeren karretje, mee kan ophalen. Weg ermee, dit is niet zoals thuis ook al is zo handig maar loop maar 3 keer heen en weer met die kopjes, dat ding komt hier er echt niet in. Net zoals, er heel veel kleinschalige woonvoorzieningen die dan opeens toch bedenken. Ja, Het is toch veel efficiënter om de was niet zelf te doen, maar gewoon er was uit te besteden en dan krijg je dus die waskarren en toch allemaal standaard dekbedden en niet neem je eigen dekbedhoes maar mee. Maar netjes wit, dat kan goed schoongemaakt worden. Dat helpt niet mee aan het thuisgevoel.

**INTERVIEWER:** Terwijl ik was gister met twee bewoners wel de was aan het opvouwenen dat zijn ze echt aan het nadenken hoe het nou precies moet en dat is toch weer een bepaalde motoriek en ik kreeg commentaar want ik het volgens hun niet goed opgevouwen dat het niet netjes genoeg was.

**FOUNDER:** Ja maar dit zijn hele herkenbare activiteiten die mensen met dementie heel lang kunnen blijven doen. Zij kan jou zeggen dat jij het niet goed doet terwijl zij is de zieke en jij bent gezond.

**INTERVIEWER:** En Misschien nog een vraag, want hebben jullie bijvoorbeeld plattegronden die wij kunnen zien?

**FOUNDER:** Ja, ik zal ook nog even de documenten sturen die ik heb gebruikt toen we gingen bedenken in samenwerking met architect hoe het ging worden. Het Rapport heet huiselijk en vertrouwd, daar heb ik heel veel van die kennis over zichtlijnen, contrasten enzovoort uit gehaald. Het is wel heel he, komt uit 2006. En ja nog heel even terugkomend op jouw vraag. Ik denk dus wel dat daar, dat het voor sommige mensen het heel mooi is om om wel die optie te hebben. Het is dus alleen financieel ingewikkeld. Ja dus daarvoor nou ja, zou je eens op moeten vragen, bijvoorbeeld bij die molenwijd, hoe zij dat dan doen financieel maar dat kunnen ze ook makkelijker doen omdat zijn een grotere organisaties zijn. Kijk Als je een organisatie bent met weet ik veel, 6000 bewoners in totaal met al je huizen en thuiszorg en weet ik veel wat die je biedt dan kan je zoiets wellicht beter aanbieden. Bij ons is het heel puur, wij kunnen niet schuiven of toch nog thuiszorg laten komen voor die andere gevallen.

# INTERVIEW
## *Caregiver*

**CAREGIVER OF ONE RESIDENCE**

This employee has worked at this location for six years and has worked at a large-scale healthcare institution in the area for almost 30 years before. That's why we mainly talked about the difference between a small-scale healthcare institution like this and large-scale healthcare institutions.

She states herself that she is very happy that she now works at this location and that if she had known that these types of care locations existed, she would have changed her job sooner to this location. She noticed that a lot of former colleagues now also work at this location.

The big difference, according to her, is that the care at this location is mainly tailored to the individual as they look specifically at each resident to see what the resident likes in terms of their daily routines concerning things like getting up, eating times, being outside and going to bed. They can also decide how much time they spend in their own room or in the shared living room. She also says that she visits the home of these residents and therefore adapts to their habits: *'we are here at the residents' homes and help them, they are not at our home'.*

She also says that this place feels like a big family. As a result, they also try to connect residents of different houses with each other for friendships or to do common hobbies. For example, two male residents always watch Formula 1 together and have become good friends. She also indicates that things don't always go well, but that they always try. They follow one of the seven principles of the vision of this location; always say yes, unless in reality it turns out not to work.

When it comes to the layout of the physical environment, she suggests a few improvements. On the northside the private rooms only have a window to look outside, while other residents have their own door to the garden. She would like it better if everyone had their own connection to the outside, which gives a feeling of freedom. She also indicates that the individual rooms could have been a bit larger, because she notices that some of the residents' furniture does not fit in or that people with a wheelchair or walker have difficulty moving in their own room. The corridors could also be a little wider because when two residents pass each other with both walkers, arguments sometimes arise due to the limited space. She does understand that it was probably more of a financial matter that some space are smaller. She is very happy with the large living room, although her only wish would be that the living room and kitchen could be (partly) closed off from each other, for example with sliding doors between the glass extension and the rest of the room. Some residents sometimes trigger each other, so more separation is nice at times for peace in the house. A separation that the employees can adjust themselves would be the ideal solution for her.

She also notices that people here are a lot fitter and more vital than at the other location where she worked. There, many people needed a walker for support or were in a wheelchair, while here almost no one needs an aid. She thinks that this is certainly due to the place where these residents live in this farm-like location, where they still enthusiastically help with the tasks and activities required on the farm. She also indicates that this location also organizes several exercise activities where there is a service with volunteers who come by to do the activities with the residents. This was almost never done at her previous job, but she suspects that this is due to understaffing of the staff. Here at this location there are two employees for seven people and sometimes there is an extra volunteer as a third employee, while at her other job there were two employees for almost double the number of people.

# INTERVIEW

## *Family members*

### PARTNER A AND PARTNER B

We talked to two partners of two residents. That is why the conversation was mainly about sharing experiences about what it is like to have a partner with dementia and what it is like for them to see their partner in this living environment. They both indicate that it is heartbreaking and degrading because in their eyes they no longer recognize their own partners. The person they married through is no longer the same person who now lives here at this location.

They both also indicate that they believe the disease had been developing for years before their partner received the final diagnosis. In retrospect, there were many indications that could have indicated to them that this was a diagnosis of Alzheimer's. One of the partners eventually recognized the symptoms because they were similar symptoms to a friend of theirs who had been diagnosed four years earlier. With the other partner the children were reporting it at first as their parent was asking them the same questions a lot.

When the partners were asked about what they thought of this care facility they both stated: You don't want your partner to get dementia, but if that is the case then this place is really the best place to sit. Of all the terrible places, this is the best'.

It feels to them as if they, as partners, often get the most blame for the fact that the partners have to stay here when they go home and that they are not allowed to come along, but at the same time they never stand at the gate to leave because they like it here anyway. very nice to have. What they really like about this place and appreciate is that they are not locked up but that they can stand and go wherever they want within the fences of the large site. Not a single door is locked and they can walk freely between the different homes.

When we ask how often they speak to or see other partners from other residents, they indicate that in their opinion this is quite little. They have noticed that many people who live here are divorced and they really think that the disease is the cause of this, in some cases because the diagnosis is made so late and certain behavior and actions can only be explained by the diagnosis afterwards. They think that if some residents had known earlier that they had this disease, some would probably not have been separated.

Another positive point about this location is that they believe that a lot is done to maintain the bond between residents and partners and/or family members. For example, a dinner was organized during Valentine's Day and all partners were invited.

When we ask them what they think are specific design elements that can help their partners with dementia in daily life, they indicate that they notice that they sometimes confuse emotions or feelings or experience them in extremes. For example, a stroke on their head is experienced as pain and walking in the wind is immediately associated with extreme cold. They think this sensitivity can be influenced by materials and textures. They are also happy that people's rooms could be furnished with their own things.

## DAUGTHER

We talked to the daughter of a resident of one of the houses. This resident has now been living at this location for two years and she is very happy that her mother now lives here.

We talked a lot about what her mother can and cannot do and how her behavior has changed compared to when she still lived independently and how she lives here now. Her daughter indicates that her body was a ball of stress (hunched shoulders, tightness around the mouth) before she came here. She noticed that this disappeared immediately as soon as she moved here.

Her daughter prefers to visit her mother in the morning because that is when she is at her clearest because she has not yet experienced so many stimuli. What she finds remarkable is that her mother no longer recognizes her voice, but she does recognize her footsteps when she stands behind her and her face, while she can sometimes still make the comment that her children need to be picked up from school while she is with her daughter at that moment. is chatting.

She does not go outside on her own, but can often be found in the living room. She needs a lot of confirmation, so she looks for a lot of 1-on-1 contact. She first lived at another institution, but there was no room for this personal attention. This caused her to contact other residents with dementia, which was of course not always pleasant for them and caused overstimulation and irritation among other residents of that location.

Where she used to live, there were 2 care workers for every 26 people, here 2 for every 7. This of course makes a world of difference in terms of the attention people receive, her daughter says. Her mother was urgently admitted to this previous location when there was no room available at this current location. At that location, the curtain in the room was not even allowed to be replaced with her own curtains and her mother was taken out of bed together with the other residents and put at the table. Here she is allowed to go her own way and determine her own rhythm, which gives her a lot of peace, her daughter notices.

When we ask her about the layout and design of this living environment compared to the previous location, she indicates that she is happy that many natural materials and colors have been used, such as wood and fabric. It feels more homely and dampens the sound. Where her mother used to sit was much more sterile and cold, easy-to-clean materials were used such as linoleum, which reflected the sound. This made her mother restless and caused more stimuli in people with dementia.

She also thinks it is very nice that it is a location on the ground floor. Firstly, because all residents can walk outside independently and into the garden if they wish. Secondly, they see movement and activity in the garden because of the animals, which makes them more likely to go outside. At the previous location she was on the seventh floor and could only see the sky and was hardly allowed to go outside. The difference could not be greater, she says. She ends the conversation by indicating that the differences in location in particular also have a great influence on her mother's state of mind and that she feels a lot better about herself at this location.

# LOCATION B

This location was visited for one day to observe and experience how residents live at this location. It is a nursing home for elderly people with dementia or physical disabilities and it considered to be a real community under one roof. It is located in a city district and is very spacious despite its central location in relation to the city. It offers many amenities for both residents and residents in the surrounding flats. It is a place where the entire community can come together.

During the one-day visit, we talked to multiple caregivers of this location about what their vision is while working at this location and how they experience working in this facility. We also talked to several familymembers of people of residents and how they experience their loved ones living at this location.

**CONCEPT**

At this healthcare facility they have the vision that everyone can be who they are and that everyone is accepted as they are. The caregivers are there for the resident and it was founded with the idea of offering help to people regardless of their background or way of life. Everyone is welcome. It is a place where everyone can be themselves and continue to live their lives they wish. The employees, volunteers, practitioners and family members and friends are solely there to help and support.

A lot of attention is paid to the well-being of the residents in addition to the care and guidance provided by the committed and expert employees. These are different employees than the caregivers because these activities are organized by the welfare employees. In this way it can be guaranteed that both the care and well-being of the residents are provided as best as possible. With specific attention to the individual wishes of the residents, the daytime activities are organized as well as possible.

# ARCHITECTURAL ANALYSIS

## LOCATION SITE

This location is housing different housing opportunities depending on the wished amount of care of the residents. One high rise building is used as a closed facility for people diagnosed with either somatic or psychogeriatric impairments. The two mid rise buildings are used for assisted living housing units for people who can still live independently but are in need of some small daily care that can be provided by one of the caregivers of the closed facility.

The entrances of all the different facilities are combined into one collective big entrance. From there, with the elevators the higher levels can be reached. The ground floor is completely furnished for the public and there are rooms for organizing joint activities. There are a lot of facilities on this floor such as a creative studio, gym, hairdresser, memory museum, pedicure, beautician, dentist at home and a restaurant and brown cafe. The restaurant is really seen as the central meeting place where residents from the closed section as well as the adjacent houses and the surrounding flats come together. In that sense, they state, the whole community is living under one roof.

The high rise building exists of 12 department floors. There are four floors specifically for people with physical impairments (somatic indication) and eight floors for people with dementia (psychogeriatric indication). Each floor is accessible with the elevators and is secured with a closed door with a code only known by the caregivers. Every floor houses around 20 residents that all have a private room and share two kitchens and a common living room.

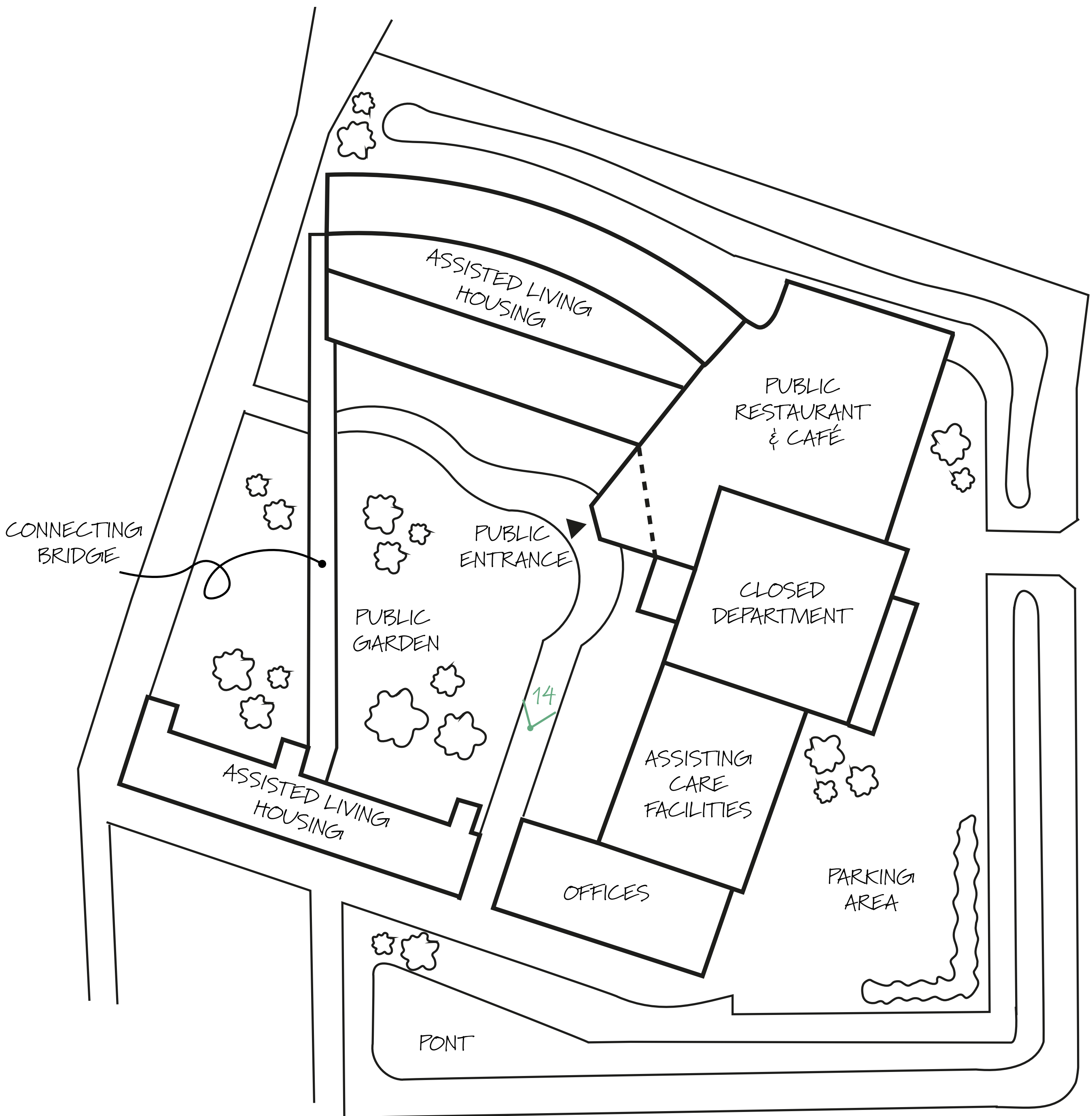



Figure 13: Visualisation of location B site, own sketch (2023).

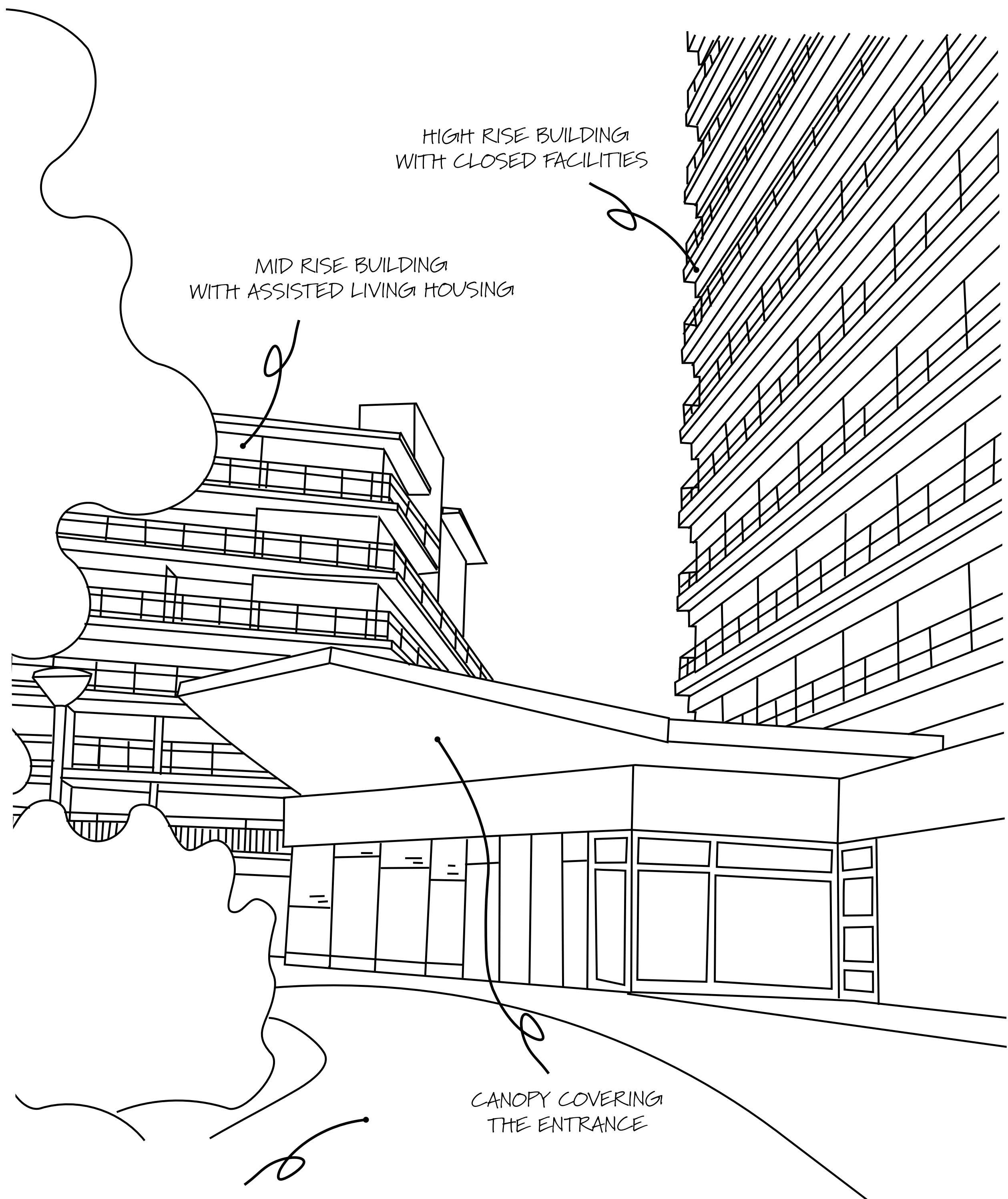



**Figure 14:** Visualisation of entrance location, own sketch (2023).

## PUBLIC FACILITY AT THE GROUND FLOOR

The public facilities on the ground floor are both usable for residents from the closed facility department floors as well as for the residents that live in the connected assisted living housing units. There is a restaurant and café, a hairdresser, a second hand shop and a space for creative activities. They also have a space that is used for sport activities and by the physical therapists and they have a lot of offices for employees and meeting with family members of residents.

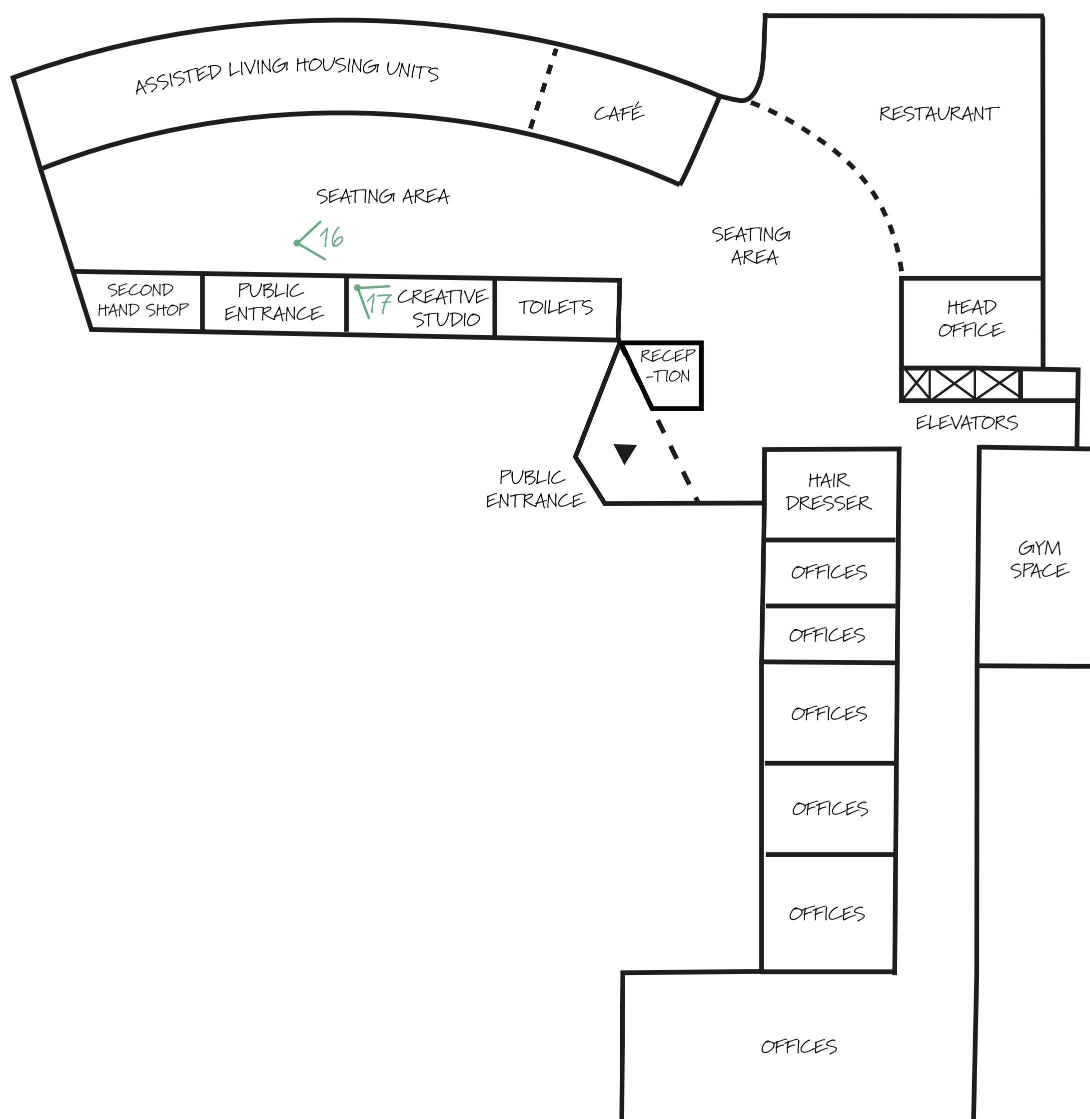



Figure 15: Visualisation of ground floor plan public space, own sketch (2023).

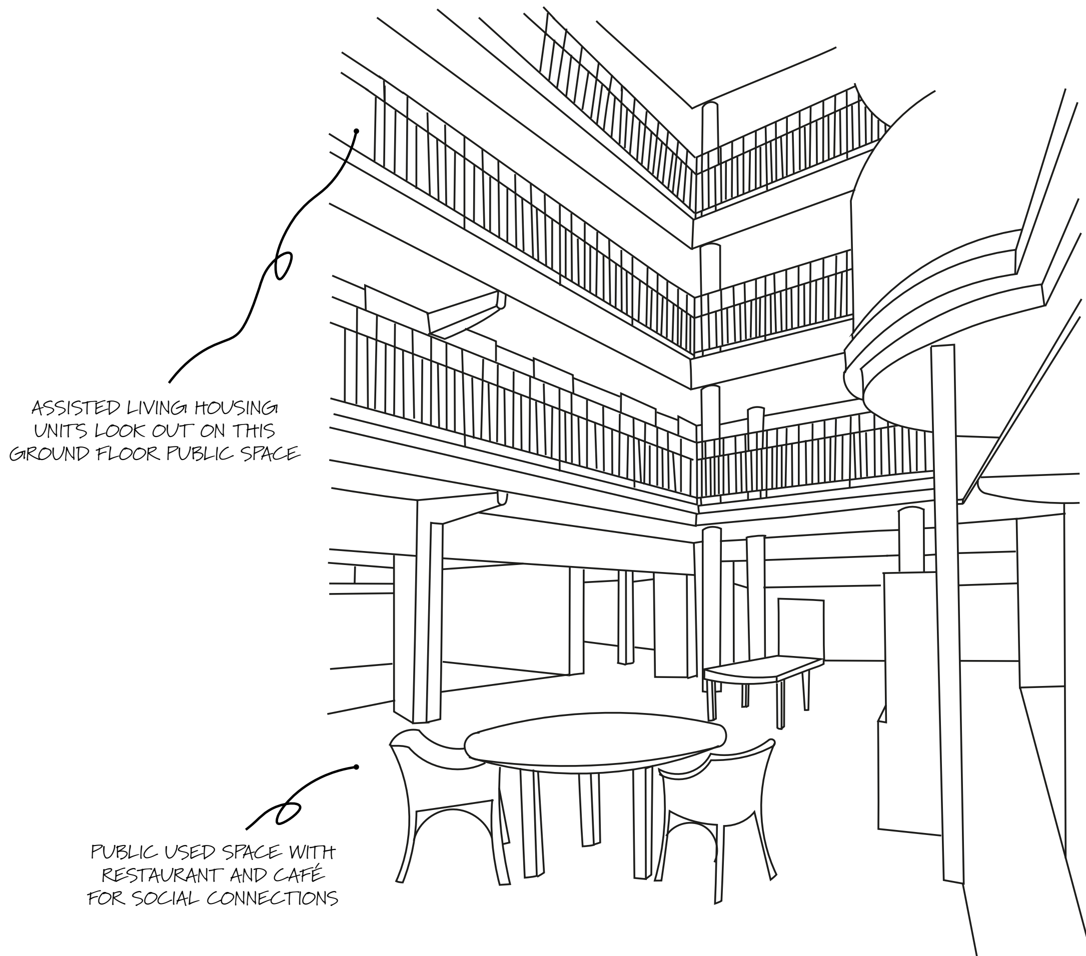



**Figure 16:** Visualisation of public place bar, own sketch (2023).

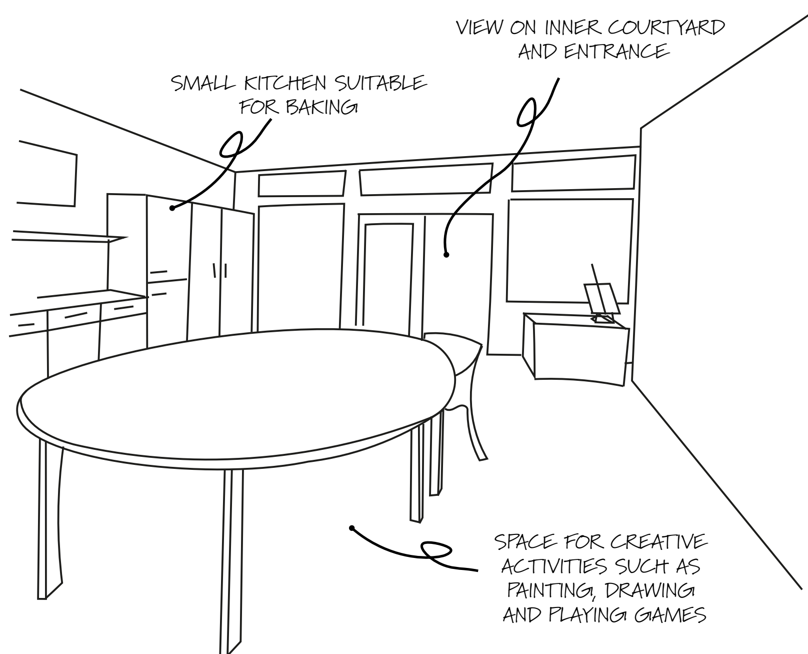



**Figure 17:** Visualisation of creative space, own sketch (2023).

## RESIDENT DEPARTMENT FLOOR

Each department floor can have around 20 residents. Some rooms can connect so a private room suitable for two persons can be created. This has been done for an older couple for example so they can continue to live together. Some rooms have a private bathroom while others have a shared bathroom accessible through the connecting hallway. The hallway is a continuous space that is enclosing the vertical circulation spaces. The door to the elevator is closed with a code, so it is only accessible by the caregivers because each floor is a closed facility. There are two emergency staircases but normally only the elevators are used for moving between floors. There are two common kitchen areas and one common living space. However the living space is very dark and doesn't have any direct sunlight so it is rarely used.

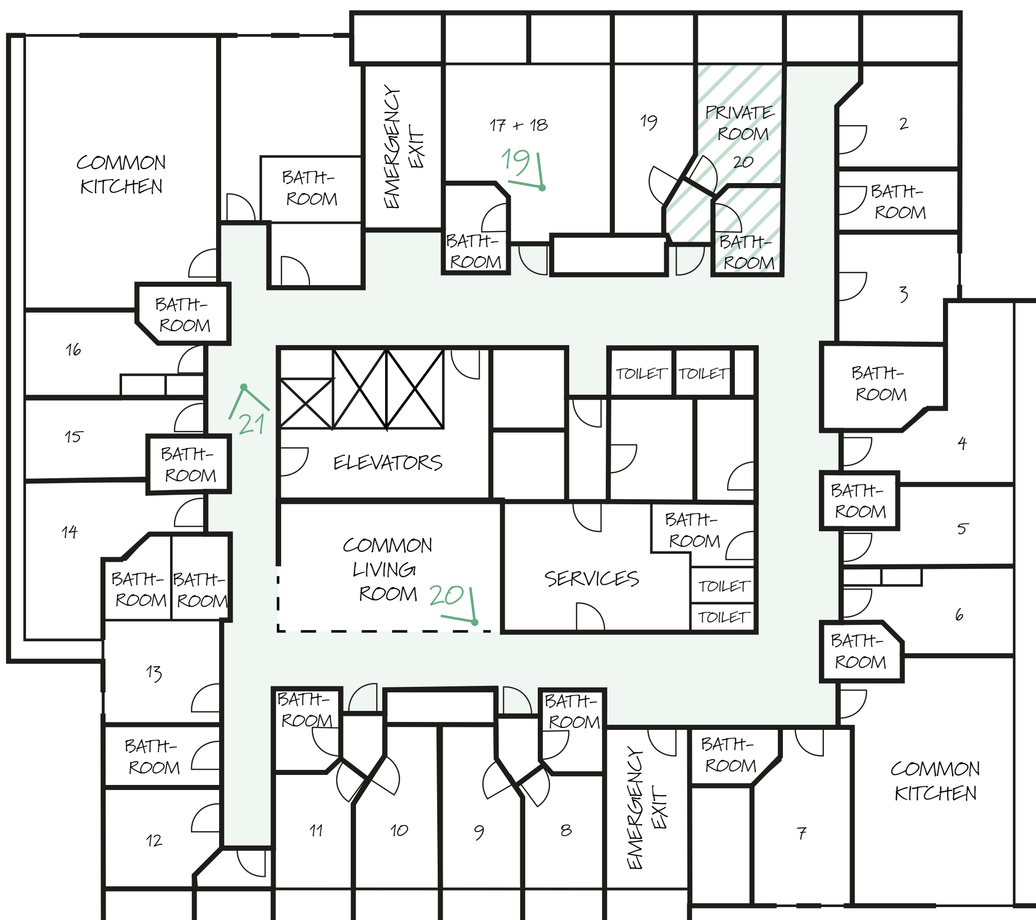



Figure 18: Visualisation of department floor plan closed facility, own sketch (2023).

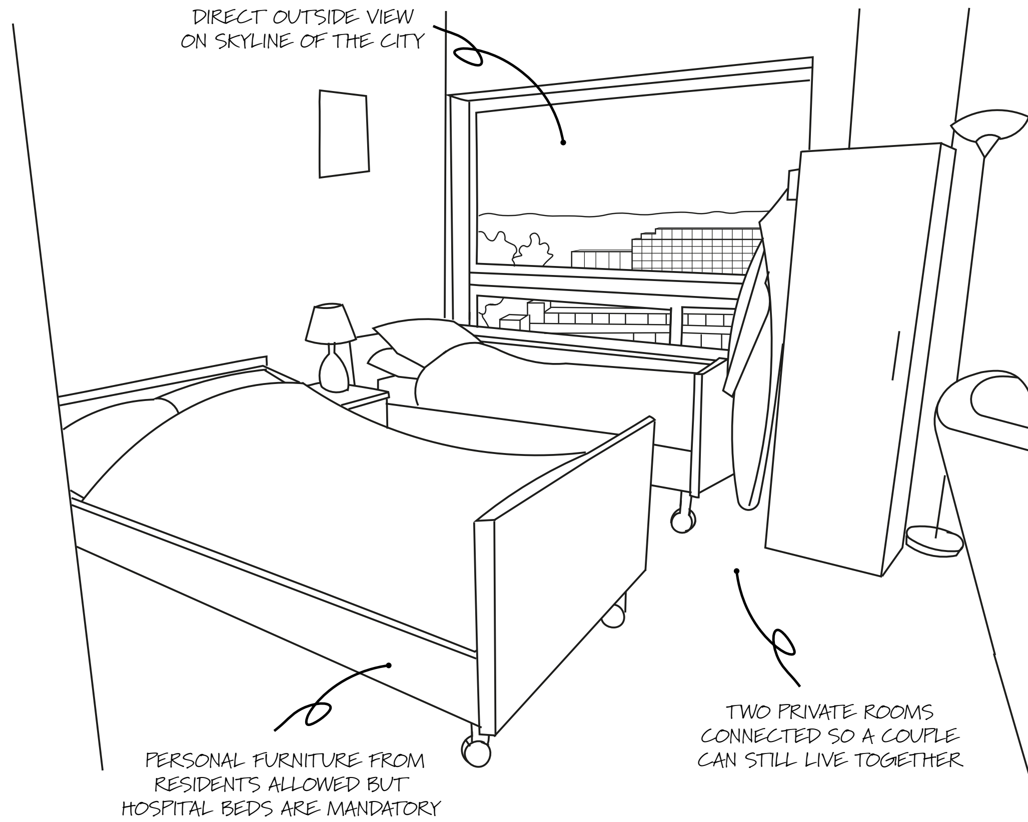



Figure 19: Visualisation of private room for two persons, own sketch (2023).

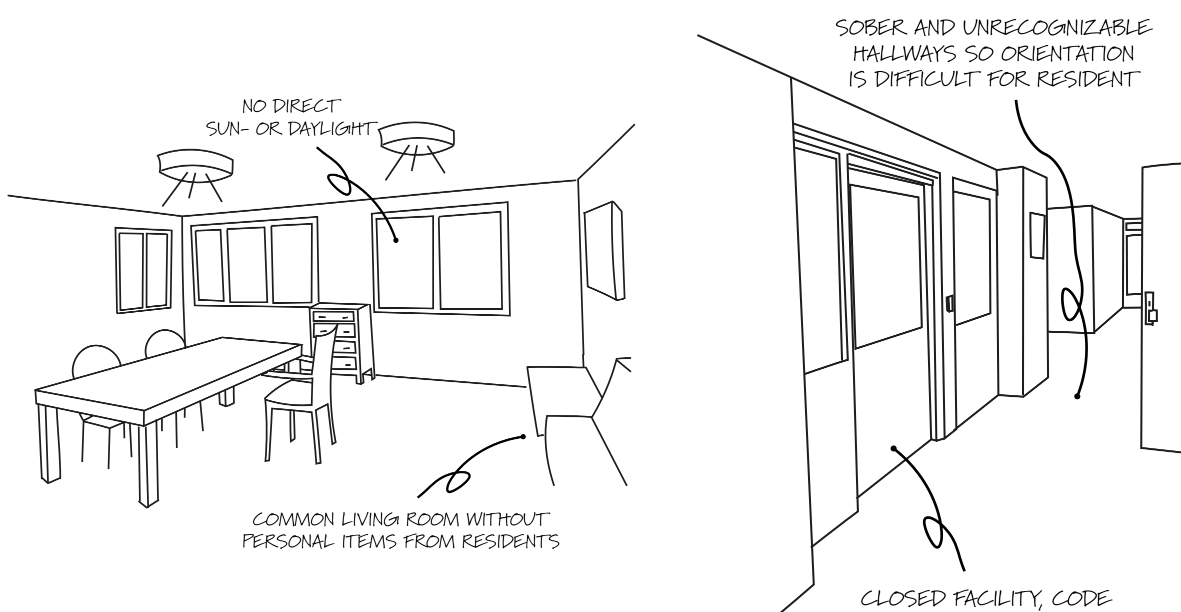



Figure 20 and 21: Visualisation of spaces of private closed facility, own sketch (2023).

## TIMELINE

Every resident has to follow the planning that the caregivers have each day. They all wake up at the same time, eat breakfast together and the caregivers decide how is vital enough to be able to join the day activities down at the ground floor organized by other special employees. Therefore, these residents are unable to stick to their old routines and habits.

**9 am**

The caregivers wake everyone up around 9 am and take everyone to one of the common kitchens to have their breakfast. The residents cannot decide to sleep in longer or have their breakfast later, the caregiver decide that for them as they state it is important for the residents to have a structured daily routine that is happening the same every day.

**10.30 am**

After breakfast everyone stays in the common kitchen or goes back to their own room. At 10.30 am everyone gathers again the common kitchens to have a cup of coffee or tea together. The caregivers don't sit with them at the table and drink from different cups.

**11 am**

It is time for the joint activity of the day to begin in the main ground floor. Today it is painting. Every day of the week has its own organised activity and the schedule is the same every week, only the afternoon activities sometimes change throughout the weeks. The welfare employees decide which residents from which floor are fit enough to go downstairs and join the painting activity. The residents are not allowed to go downstairs themselves, they are all guided by the welfare employees and today I am assisting. Also residents from the assisted living housing units joined this activity.

**12.30 pm**

Everyone has lunch at this time. The residents from the closed facilities have lunch at their own floor unless one of their family members or friends visits, then they can have lunch downstairs in the restaurant. I had lunch downstairs and you see many people drink coffee there or eat something with their family. There is a menu and you can order anything.

**1.30 pm**
After lunch it is time for some residents to have a nap. The caregivers decide who need to have a nap and bring them back to their room. Others can stay in the kitchen or sit in the common living room if they want.

**2 pm**
It is time for the second activity of the day. In the afternoon at this day, there is always a special perfomance booked that will come and entertain everyone. Today it were two sisters who are a singing duo and play an accordion. They played multiple old songs that the residents that are wathcing remember from when they were younger so a lot of them were singing and even dancing along. Everyone looked very happy and were enjoying the performance.

**4 pm**
After an 2 hours of music it was time for the residents to go back to their own department. Due to the lack of elevators, it took a lot of time to get all the residents up to their own floors again. After coming back to their own department floor, they can decide what they would like to do. Some have another coffee in the common kitchen while others go back to their own room and have some quiet time.

**6 pm**
Around 6 pm they all have their dinners in one of the two common kitchens. The caregivers decide who sits in which room to avoid any conflicts between certain residents. Residents all eat at their own floor unless a family member or friend joins them and guides them to go have dinner downstairs in the restaurant.

# INTERVIEW

## *Caregiver*
## *Family member*

## CAREGIVER AT ONE OF THE DEPARTMENT FLOORS

We mainly talked to her about the working method of this location and how they provide care to their residents. She tells us that one of the greatest qualities of this location, she believes, is the diversity of different typologies of accommodation they can offer to new residents. They have both assisted living units as well as a closed facility for people with worse impairments. This ensures that many people can move within their location as they need more care.

The closed departments are subdivided by indication. They have made a distinction between somatic and psychiatric indications. She tells us that there are four departments for physical complaints and eight for people with dementia or other neurodegenerative diseases. They make no distinction between the stage of the disease a person is in so when one of the rooms become available, someone is placed there without looking at the diagnoses of the other residents on that floor. That is why it is possible that relatively well residents are placed with residents who already have a more severe stage of the disease. They also always have a few rooms available that are available for emergency admissions if someone needs to be removed from their home immediately.

She indicates that everyone who comes here spends a lot of time in the shared ground floor and that this is really the heart of the location where everything comes together. The advantage of the assisted living homes that are directly connected to the rest of the location is that they can receive care indoors and also make use of the organized activities that are offered. We then ask her whether all residents of the closed departments can always participate in the activities. She tells us that the activities are organized by special welfare staff who are responsible for the well-being of the residents. There is one welfare employee per department and who decides in that department who is 'fit' enough to go downstairs and participate in the activities. This means that residents that live in the closed facilities are only allowed to go downstairs if they have discussed that with a welfare employee or caregiver.

She also tells us that there are physiotherapists present to help people who have difficulty moving and their mobility in the sports facility that is located on the ground floor. However, this is only on indication and is therefore only for people who qualify for this. The other residents cannot go downstairs to exercise. Residents who do not have appointments and an indication but want to exercise must do so in their own department and she explains that the welfare staff are responsible for this. They usually organize some activities per department to get the other residents moving and stimulate their motor skills.

## PARTNER

We talked to a partner of a resident who lives in one of the closed department floors. He told us that they used to live together in their apartment across the street. When she was diagnosed with dementia, he was able to care for his partner as an informal caregiver for a long time. At some point he realized that it was too much work for him to take care of his partner alone. He tells us that his partner was particularly haunted at night and slept very irregularly. As a result, he had to get out of bed several times at night to get his partner back to sleep. That was the turning point for him when he realized that he could no longer do it alone. They decided that his partner would live at the care location across the street.

She currently lives in one of the closed department floors. He tells us that she is still fairly sharp compared to other residents, which means he sees that his partner sometimes finds it difficult to live there. However, his partner is very happy that he lives so close and for him this is also the ideal situation for this circumstance. He still lives in the same apartment across the street and visits his partner every afternoon. This means he has a good night's sleep and can do his own thing in the morning. In the afternoon he picks her up from the department and always goes to the ground floor to participate in the organized activities together or they sit together at the restaurant and chat over a cup of coffee.

He is very happy that together they have found a way to deal with this situation in which she has been diagnosed with dementia and he is still completely healthy. This way, even though they no longer live together, they can still spend and experience their lives together.