Elderly Living in the City

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Elderly
Living in the City
This document is the final report of the graduation project “Graduation LAB: Urban Transformations & Sustainability” of the mastertrack Urbanism. In this graduation project I researched how the living environment of elderly aging in place in the Regentessekwartier in The Hague can be improved. In order to keep elderly active and healthy which enables them to live longer independently at their homes.

Almost every day, I travel to Delft by bus. After a while you begin to recognize some people who also use that bus at a certain time of the day.

Since a couple of years the bus stop Bankastraat catch my attention. At this bus stop, the ones that go in or off the bus are often elderly people; some are a couple and some are alone. Sometimes they know the bus driver or they meet other people from their neighbourhood and start a chat. This is the place where their journey starts.

In the beginning I wondered where they were going to. To the Bieslandhof? To the supermarket? To a friend? Are they going together or alone? I could not know because I get off the bus earlier than they do.

Suddenly when I was at Zuidpoort, I recognized a few of those elderly people from the Bankastraat at Zuidpoort. They were sitting in a lunchroom which is located at the corner of the entrance of Zuidpoort. They were gathering and met other elderly people. So this is the place where they sometimes go to!

Another day, I stood at the bus stop at Zuidpoort and my elderly friends of the Bankastraat were there too, this time packed with groceries. We got into the bus at the same time. They were chatting along the route and had a nice time. When we approached their bus stop, they helped each other with the groceries and hold each other’s hand to get off the bus safely. I observed them when they were out of the bus; they said each other goodbye and each went to their own home. On this point, our and their paths were separated.

These social interactions with the neighbours, the bus driver and others are a very important part of the everyday life of these elderly people. It stimulates that they still go out, that they are still part of public life and that they enjoy the moments with each other. The amount of older people and the amount of older people who still live at their home is growing the upcoming years. How can neighbourhoods and the built environment still facilitate the needs of these people? And how can elderly people live longer independently in a nice, healthy and comfortable way without feeling lonely? This story and questions were a starting point for my topic of this graduation project.

The graduation project was a nice journey. I would like to thank my mentors Maurice and Lei for their time, feedback and help.

Besides, I want to thank my friends for the brainstorm sessions, the talks and the positive words during the project. I also want to thank my boyfriend for his support and patience, especially during the last month of the project.

And of course I want to thank my parents and sister who always helped and supported me during the whole study.

I hope you enjoy reading this report and that the project gives food for thought.

Pien Kuijpers
July, 2017
Everyone wants to grow old, but nobody wants to be old
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DEFINING THE PROJECT
PROBLEM FIELD

Trends

Aging population
Worldwide the population of elderly people is growing. Due to the increasing life expectancy and the decrease of the number of births, the amount of older people is growing faster than other age groups (United Nations, 2015). In the Netherlands this trend is also visible (Fig. 1).

Since 2010 the amount of people over the age of 65 has grown rapidly. This is because of the babyboom generation (between 1945-1970) who started to reach the age of 65. The number of people over the age of 65 was 18% in 2015 and this will increase to 27% in 2040 (Kooiman et al., 2016).

Aging in place
Besides the growing population of elderly people, there is an increase of elderly people who remain living at their homes. This trend is mainly because of the wish of older people to continue living in their home, to stay independent and to continue living in the neighbourhood where they are familiar with.

The tendency to move decrease as people age (De Groot et al., 2013). In addition the government has introduced policies which should foster elderly to live longer independently in their own house (Van Duin et al., 2013). The Wmo 2015 (Social support act 2015) supports this. It includes that municipalities are responsible for housing, support services and welfare.

They should foster elderly people to live at their home as long as possible and they should provide support if that is needed (Rijksoverheid, n.d.; Van Staaldruin, 2014).

The term ‘aging in place’ is often used to describe this aspect. The term is often defined as the ability to continue living independent or with some level of independence in the community or in the environment of someone’s choice, even when the health and physical conditions decline, instead of living in residential care centre (Emlet & Moceri, 2012; Wiles et al., 2012).

The term ‘aging in place’ is often used in combination with ‘active aging’. ‘Active aging’ is described by Michael et al. (2006, p. 734) as: “the desire and ability of older adults to integrate physical activity and daily routines, such as walking for transportation, exercise, or pleasure. Active ageing may also include engagement in economic or socially productive activities, such as playing in the park with grandchildren and working in the home or yard.” More seniors take action to remain healthy and vital for as long as possible (Sievers et al., 2007).

Increase of elderly people living alone
Due to the trend of older people who live longer independently, the amount of elderly people living alone is increasing (Fig. 2). More elderly people means more people who already have lost a partner or whose partner went to an institution and therefore live alone. Besides, divorces are more usual than in the past which result in more single person households, also among older people (Van Duin, 2011; Van Duin et al., 2013).

In 2050 the half of the number of single person households will consist of people who are 65 years and older (Van Duin, 2011) (Fig. 3).
Figure 2: Amount of one person households according to age (Van Duin et al., 2013)

Figure 3: One person households by age (Van Duin, 2011)
Problem analysis

Due to the trend aging in place, neighbourhoods are facing an increase of older residents. Elderly people spend more time at their homes and in the nearby environment. Due to personal, physical and social changes, such as a decrease in mobility and the loss of social contacts, elderly are more dependent on amenities, activities and social contacts in the nearby surroundings (De Groot et al., 2013; Cannuscio et al., 2003; Mahmood et al., 2012). Therefore, the neighbourhood becomes more important for older people aging in place and it should meet their everyday needs (Gilroy, 2008).

The last few years, several municipalities focussed on the development of ‘woonzorgzones’ or ‘woonservicezones’ and the adaption of housing to make them suitable for elderly (De Jong, 2006; Penninx & Royers, 2007). In these developments the emphasis was mainly on housing and facilities. The quality of the living environment is often neglected (De Jong, 2006). Besides, studies have hardly been focussed on the elements of neighbourhood context and urban form that allow successful ‘aging in place’ (Michael et al., 2006). However, the living environment is as important as the house or facility, especially when older people are more dependent on what their neighbourhood has to offer. The neighbourhood environment can contribute to the health of older people through the stimulation of outdoor activity, such as walking, and the provision of opportunities to meet and interact with others which could lead to an increased social network and the development of strong and supportive social relationships (Sugiyama & Thompson, 2007; Gardner, 2011). At this moment, the living environment often create problems for older people and therefore limit elderly to age successfully in a place they desire (Gilroy, 2008).

The difficulties experienced by elderly people in their living environment can be divided in social and physical components.

Social component

Places and neighbourhoods are more than just backgrounds where our life takes place (Gilroy, 2008, p. 146). “Places are a setting for social interaction, that among other things, structures the daily routines of economic and social life, (…) it provides a site for processes of socialization and social reproduction” (Knox, 2005, p. 2). Places in the neighbourhood could provide social interaction and they consist of informal relationships and interactions that shape the everyday social life of older people (Gardner, 2011).

Since the last few years, there is a change in the public domain. A lot of small and local shops closed their doors. Besides, many community centers and small libraries disappeared by government cuts. These places are important meeting places and fulfil an important social function in the neighbourhood as a node of social interaction, especially for elderly (Ter Avest, 2016; De Jong et al., 2015; Gilroy, 2008). These shops and places foster encounters between local residents. Through repeated encounters, local residents become familiar strangers which decrease anonymity in the neighbourhood (De Jong et al.,
These everyday experiences, short talks with shop keepers and encounters with neighbours, increase people’s attachment to their neighbourhood (Gilroy, 2008). This could lead to a stronger sense of community and social support from neighbours. Something that becomes more desirable when more people age in place. Therefore it is important that in neighbourhoods there are enough suitable places where people or residents can meet each other spontaneously.

According to Gardner (2011, p. 269), in neighbourhood networks there are, yet often unconsidered, places and people in the everyday life of older people that facilitate social relationships, give a feeling of being noticed and belonging and provide places and opportunities to develop strong and supportive social relationships. Especially when support from and contact with family is not on a daily basis, contact with strangers, neighbours and friends will play a more important role (Gardner, 2011). These social neighbourhood networks in the lives of elderly could have a positive influence on the well-being of older people aging in place.

However, at this moment a lot of neighbourhoods consist of large, meaningless in-between spaces that cause alienation and distance between people (Alkemade, 2016). Moreover, the transition between home and the sidewalk is often an abrupt transition. Instead of an area to stay it is often a traffic space that does not invite people to personalize the space or to meet other neighbours (Van Ulden et al., 2015). A lot of Dutch elderly complain that neighbourhood residents barely know each other (Penninx & Royers, 2007). In-between spaces, sidewalks and residential buildings do not always encourage encounters between residents. A lack of contact with neighbours could strengthen the feeling of loneliness among some people (Thomese, 2007).

Statics show (figure 4) that loneliness increases as people age (Volksgezondheidenzorg, n.d.). This is often caused by the loss of social contacts and a decline in physical functioning. Besides, the current trends as stated earlier, aging in place and the growing amount of elderly people living alone, are often seen as factors that makes older people more vulnerable to loneliness and social isolation (Van Dam et al., 2013) (fig. 4). Loneliness is considered as bad for health (Van Staalden, 2014).

Loneliness is generally described as the subjective and negative feeling people have that they lack social relationships or that they have a poor quality of social relationships (Dykstra & Fokkema, 2007, p. 1; Heylen, 2010, p. 1178). There are two forms of loneliness: emotional loneliness and social loneliness. Emotional loneliness is caused by experiencing a strong absence of an intimate relationship, a confidant or partner. Social loneliness is caused by a lack of meaningful relations in or absence of a broader social network (Heylen, 2010, p. 1178; De Jong Gierveld & Van Tilburg, 2010). This thesis will only focus on social loneliness.

As opposed to the subjective feeling of loneliness, social isolation is the objective characteristic of the absence of relationships with other people (De Jong Gierveld & Van Tilburg, 2010).

![Figure 4: Loneliness by age](Volksgezondheidenzorg, n.d.)
In contrast to loneliness, maintaining social involvement with others and having a larger number of social contacts can have positive effects on health (Sugiyama & Thompson, 2007). Therefore, the meaning of these often unconsidered places and people in the everyday life of older people as mentioned by Gardner (2011), local facilities, such as shops and community centers, which are nowadays under pressure by government cuts and change in buying behaviour, and those in-between spaces should become more of importance when we intervene in the urban environment. In order to enhance encounters between neighbours and residents and to increase a vital social neighbourhood network, which support older people to age in place.

**Physical component**

The existence of meaningful places and supportive social networks in a neighbourhood are not the only concern of older people. People also have to move between and within those places or even beyond. However, a lot of elderly experience physical barriers in their living environment. If those barriers in the outdoor environment discourage older people to go out or to move, then they also limit older people to participate in public life which could lead to loneliness among older people. Besides, the barriers can also reduce the physical activity of elderly people. Both loneliness and a decrease of physical activity are bad for the health and well-being of older people.

In several studies, poor pavement maintenance, such as loose tiles, uneven pavements and obstacles on it, is mentioned most often as main barrier in the outdoor environment and cause difficulties in walking and fear of falling or stumbling (Gilroy, 2008; Burton & Mitchell, 2006; Penninx & Royers, 2007; Mahmood et al., 2012).

Besides, part of Dutch elderly suffer from traffic (Penninx & Royers, 2007). This is consistent with findings by Michael et al. (2006) that heavily trafficked roads sometimes limit the activity of older people for safety reasons. They avoid walking on busy streets and at heavy traffic times. This often leads to a conflict because most services are located on busy roads. Busy roads are often linked with difficulties to cross roads in a safely way. Some experience unsafe crossings or crossing roads not being in the right place (Burton & Mitchell, 2006; Mahmood et al., 2012).

Moreover, older people experience poor and unclear signage in the outdoor environment which makes access to information and choosing direction in public spaces difficult (Gilroy, 2008; Burton & Mitchell, 2006).

Besides, elderly often experience not enough well located places with seats to rest on route (Burton & Mitchell, 2006; Handler, 2014).
Problem statement

Nowadays and the upcoming years, more elderly people remain in their home independently for as long as possible, due to their wish and government policies which stimulate this. As people age, their mobility declines and they experience a loss of social contacts. This makes elderly more dependent on their neighbourhood and the amenities, activities and social contacts it has to offer. However, a lot of elderly experience problems in their living environment. The urban environment is not always designed or functions in such a way that it stimulates meetings between people and the development of strong social connections. Besides, a lot of older people experience physical barriers in their living environment. These difficulties experienced in the living environment could cause loneliness and a decrease in physical activity which is both bad for the well-being and health of older people. These factors can hinder elderly to age in place in an active and healthy way.

Aim

For older people who age in place, the direct neighbourhood environment becomes more of importance. The aim of this research is to gain more insight in how to intervene and design in the urban environment in order to create neighbourhoods that keep elderly active (physical & social) and that facilitate the preference of the majority of older people to remain in their homes and community for as long as possible.
INTRODUCTION

The city is often associated with young people and families. Although in rural areas the growth of an aging population is higher in relative terms than in urban areas, the increasing amount of elderly people in urban areas is in absolute terms bigger. Elderly and the city will become inseparable (Volksgezondheidenzorg, n.d.; Latten & Manting, 2014; Van Hoogstraten, 2014). Urban areas are seen as attractive residential environments for older people because of its easy access to public transport, facilities and because of the higher density it provides more opportunities for social interaction (Burton et al., 2011). Recently, there was attention for the elderly in cities in the newspaper article “straks bepalen ouderen trend in de stad” (Latten & Manting, 2014). It stated that people who are now living in the city, want to continue living in the city when they are older. This is supported by the fact that older people are less willing to move. And if they do, it will be within a short distance (De Groot, 2013).

However, not everyone agrees that the city is suitable for elderly. Marlet (2013) stated that “elderly people contribute relatively little to the vitality of the city”. He argued that this vitality is caused by younger people living in the city. Indeed, a lot of cities try to attract younger people and families but that does not mean that we should exclude older people. Older people benefit from the city and the city benefits from older people. After all, a good and vital city is a city for everyone.

THE HAGUE

AGING POPULATION IN THE HAGUE

The city The Hague is chosen as study location for this research. The Hague is the second city who has and will have the highest percentage of people who are 65 years and older (Kooiman et al., 2016) (fig.5).
Figure 6: Growth of young-seniors (Gemeente Den Haag, 2016a)
The Hague, an age-friendly city?

The municipality of The Hague is actively committed to become a senior-friendly city due to the policy of decentralization which makes municipalities responsible for housing, support services and welfare and the policy which foster elderly people to live at their homes as long as possible. In their approach they focus on the vitality of elderly, preventing and reducing of loneliness among elderly people and an Age-friendly city. Vitality is seen as a precondition to support elderly to live independently in their home as long as possible and to reduce loneliness (Gemeente Den Haag, 2015a).

Vitality and Age-friendly city project

In 2015, The Hague became the first Dutch city who joined the network of the WHO Age-friendly cities (Gemeente Den Haag, 2015a). This network is part of the World Health Organization (WHO) “Global Age-friendly Cities” project. This project was launched in 2006 (Buffel et al., 2012). In 33 cities around the world, focus groups with elderly, care givers and service providers determined the characteristics of an age-friendly city, which resulted in an age-friendly checklist. This “Checklist of Essential Features of Age-friendly Cities” consists of eight domains: outdoor space & public buildings, transportation, housing, social participation, respect & social inclusion, civic participation & employment, communication & information and community support & health services. (WHO, 2007a, WHO, 2007b).

According to the age-friendly city project: “it should be normal in an age-friendly city for the natural and built environment to anticipate users with different capacities instead of designing for the mythical “average” (i.e. young) person. An age-friendly city emphasizes enablement rather than disablement; it is friendly for all ages and not just elder-friendly” (WHO, 2007a, p. 72).

The municipality of The Hague uses their modified version of the eight domains of the WHO Age-friendly city checklist to gain insight in which aspects are important for elderly.

In 2015, TNO published a research in which they identified, based on the eight domains of the WHO Age-friendly city checklist, what elderly in The Hague need to remain vital. Their conclusion was that: “to keep elderly vital in the city The Hague, it is important that they are able to participate with the things they want (social participation), subsequently they need to know what and where they can do this (communication) and that they should be able to get there (transport) (Van Hespen et al., 2015).

Loneliness

The municipality of The Hague also tries to reduce and prevent loneliness. In The Hague 49% of the people aged 65 and over feels lonely. About half of this group experience social loneliness and 35% emotional loneliness (Gemeente Den Haag, 2015a). The “Hague Community against Loneliness” was established in December 2015. This community of entrepreneurs, companies, organizations and citizens calls attention to loneliness. Besides they search for new ways and solutions to combat loneliness (Den Haag Seniorvriendelijke stad, n.d.). This is one way of how they try to cope with loneliness in the city.

Dissatisfaction among elderly of The Hague

Even though these initiatives, policies and approaches sound promising, we should not forget that they are a reaction on issues that require careful attention and/or that do not work at the moment.

An overview on how older people rated their neighbourhood on different topics (fig. 7), shows that a lot of elements of neighbourhoods are negatively assessed by the elderly. This means that still a lot of neighbourhoods lack qualities or elements which are important to elderly people. In the overview, the Regentessekwartier is poorly assessed on
There is still a lot to do to improve the living environment of elderly and their position in society.

**Figure 7: Assessment of the neighbourhood on different domains by elderly living in The Hague (Gemeente Den Haag, 2015b)**
Social relevance

The upcoming years, the amount of elderly people is growing rapidly. Besides, elderly people are expected to continue living independently at their home. These new trends give rise to a lot of questions among people. Almost every week, a topic related to aging is discussed in the news and in newspapers. This discussion is often about health care: the rising cost of health care due to aging, the dissatisfaction with the quality in nursing homes and the affordability of both.

However the effects of these trends on the built environment are rarely discussed. Besides a lot of people wonder where they could live in a pleasant way for as long as possible, if they are expected to remain living in their home when they are old (Pol, 2014). Nowadays it is not only the wish of people to age in place but also policies are forcing it. Moving to a nursing home is made more difficult by stricter criteria. Besides, the number of places in nursing homes are limited because a lot of nursing homes closed their doors. Now, older people are dependent on themselves and their neighbourhood, surroundings and connections. It becomes a challenge to keep older people active, to keep them involved in society, to maintain their health and well-being and to stimulate social activities to prevent them from social isolation, in order to maintain their independence and to let them age in place in a healthy way. This confirms that there is definitely a need to modify, improve or reconsider the built environment in the context of an aging population.

The newspaper article “Do we want more or less elderly people?” (Van Veelen, 2014) caught my attention. We often generalize elderly people and sometimes forget that this group is so diverse. “The elderly” does not exist actually. When designing for this group we often tend to put them together and to segregate them from other places and people.

However, no matter how old people are, every person has different needs and wishes, is part of society and benefits from being with other people and in different places.

Academic relevance

Since the WHO launched the “Global Age-friendly Cities” project in 2006, a lot of research has been done on elderly from the perspective of gerontology, sociology and health. However these studies are often not translated into the current research and applications related to community design (Michael et al., 2006 p.734). They mainly discuss which features influence the health and well-being of elderly.

But they do not often explicit address how these outcomes are related to elements of neighbourhood design and urban form that could provide pleasant living environments for elderly people and allow successful “aging in place” (Michael et al., 2006). Besides, when studies look to elements in the built environment that promote the needs of elderly people, they often focus on presence or absence measures and are limited to identify specific needs or how to apply it in neighbourhood design (Alley et al., 2008).

A lot of age-friendly guidance and checklists exist already. However, these checklists can be limiting and leave out what is less obvious or more complex by focusing only on the basics (Handler, 2014).

This graduation research will look both to different studies on elderly and literature on public space and neighbourhood design in general. As a result, knowledge from both fields will be combined in order to improve the built environment and create living environments that stimulate elderly to age in place.
RESEARCH QUESTIONS

Main research question

In order to address the issues which are stated in the problem statement and the sections above, the following main question is formulated:

> Which spatial interventions and interventions in the public space are needed to create a more suitable and pleasant urban living environment for elderly aging in place in The Hague?

Sub questions

> Who are the elderly?

> What is aging in place?

> Which general characteristics of the urban living environment and public space facilitate elderly to age in place in a pleasant way?

> What are the current public space networks in the neighbourhood Regentessekwartier and how are elderly positioned in it?

> Which (semi-) public spaces and elements of it are important for elderly living in the Regentessekwartier that stimulate them to go out and to participate in public life?

> Which spatial barriers do elderly, who live in the neighbourhood Regentessekwartier experience that makes it more difficult to age in place?

> Design
How can the researched characteristics and elements of public spaces and the living environment, that stimulate aging in place, be applied in the existing neighbourhood of the Regentessekwartier in The Hague?
**METHODOLOGY**

**Methods & products**

In order to answer the research questions, which are formulated in the previous chapter, different methods will be used. The research questions “who are the elderly?”, “what is aging in place?” and “which general characteristics of the urban living environment and public space facilitate elderly to age in place in a pleasant way?” will be answered by a review of the existing literature. These questions are part of the theoretical framework. In this review, both literature on aging and literature on urban design are used. This theoretical framework will result in general criteria of the urban environment that facilitate elderly to age in place.

The second sub question, “what are the current public space networks in the neighborhood Regentessekwartier and how are elderly positioned in it?”, will be answered by a location and spatial analysis of the neighbourhood. Besides, observations will be used to get an understanding of the behaviour of elderly in the public space. In order to formulate opportunities and weaknesses of the areas in the neighbourhood, the general criteria from the literature review will be used as a guideline.

If you design for a certain group, you need to know what their needs and demands are; assumptions are not enough. Therefore the following two questions are formulated: “which (semi-) public spaces and elements of it are important for elderly living in the Regentessekwartier that stimulate them to go out and to participate in public life?” and “which spatial barriers do elderly, who live in the neighbourhood Regentessekwartier experience that makes it more difficult to age in place?”. These questions will be answered by interviews and surveys.

It would be also nice to know what the future elderly demand.

The interviews and surveys will lead to a new set of requirements.

The products gained by the above mentioned questions will help to apply these knowledge in a urban design. In order to do this, some design principles should be formulated first. Besides, an additional analysis of the location is needed to integrate it well with the conditions on the location.
Main research question

Sub questions

- Who are the elderly?
- What is aging in place?
- Which general characteristics of the urban living environment and public space facilitate elderly to age in place in a pleasant way?
- What are the current public space networks in the neighbourhood Regentessekwartier and how are elderly positioned in it?
- Which (semi-) public spaces and elements of it are important for elderly living in the Regentessekwartier that stimulate them to go out and to participate in public life?
- Which spatial barriers do elderly, who live in the neighbourhood Regentessekwartier experience that makes it more difficult to age in place?

How

- Literature review
- Location & spatial analysis
  - Observations
  - Review of the area based on the general criteria
- Interviews
- Survey

Products

- General criteria and domains
- Overview of weaknesses and opportunities for elderly in the area
- Requirements

How can the researched characteristics and elements of public spaces and the living environment, that stimulate aging in place, be applied in the existing neighbourhood of the Regentessekwartier in The Hague?

Design

Final design
ELDERLY AND THE LIVING ENVIRONMENT
THEORETICAL FRAMEWORK

Introduction

The theoretical framework will review which general characteristics of the urban living environment and public space facilitate elderly to age in place in a pleasant way according to the existing literature. Before this is discussed, a description of the target group elderly will be given. Who are the elderly? Besides, the trend aging in place is discussed which will be an introduction to the requirements of the urban living environment which could stimulate aging in place.

The elderly

In our society it is normal that when people start to reach the age of 60-65 we label them as elderly. Even if they do not consider themselves as old. Although our image of elderly as a homogeneous group with the same characteristics did not change the past few years, the elderly of today are not the elderly of the past.

In the 19th and in the early 20th century, old age and poverty were inextricably linked together in the Netherlands. In 1830 approximately 80% of the Dutch elderly lived in poverty (De Wildt et al., 1993). After World War II, due to the AOW (General Retirement Act / basic state pension), elderly were dissociated from the poor and became a separate group in society with specific needs (De Wildt et al., 1993; Deen, 2004). Elderly were seen as needy and dependent people. Their degree of reliance on care distinguished elderly from each other (Mens & Wagenaar, 2009). Besides, the care and housing of elderly consisted of standard features and a general sequence of it (Schuijt-Lucassen, 1997).

Nowadays, our view of elderly as needy and dependent people, even though a lot are independent and healthy, still exist. Aging is seen as something negative and a lot of people have negative associations with it: becoming slow, weak, decline in health, loss of independence, transience of life and so on (Kits & Schut, 2011; Doorten, 2012) When we think of elderly, we often have a stereotype of the elderly in mind and link this to one of these negative associations. However, “the” elderly does not exist, the diversity within this age group is as large as, or maybe even larger than in other age groups (Doorten, 2012).

Even though the general image of elderly as vulnerable people exist, most elderly people consider themselves as vital and not as vulnerable (Doorten, 2012; Kits & Schut, 2011). Besides, the elderly of the future are not the elderly of the past. The elderly of today and in the future are on average more prosperous, better educated, more mobile, and more vital than the elderly of the past (Van Dam et al., 2013). If you turn 65 nowadays, you are definitely not “old”.

Currently, we often distinguish older people in two groups: elderly in the third phase of life and elderly in the fourth phase of life (Van Tilburg, 2005). People in the third phase of life are between 60 and 75 years old. They do not participate in the labour market anymore, are quite healthy with little defects. They are also characterized as young elderly or active elderly (Van Tilburg, 2005; Van Dam et al., 2013). The transition from the third to the fourth phase of life is at the age of 75 years. This fourth phase of life is characterized by increasing disabilities due to health problems (Van Tilburg, 2005). They become frail elderly. However, 86% of the elderly aged 85, consider their health still in good or very good condition, despite of illnesses and disabilities (Van Tilburg, 2005).
Aging in place

Aging in place is often defined as the ability to remain living independent in the community or environment of one’s choice, even when disabilities arise which threaten the level of independence, rather than living in a residential care institution (Emlet & Moceri, 2012; Wiles et al, 2012).

In recent years, it became clear that most elderly prefer to remain in their home independently as long as possible instead of entering a retirement home or nursing home (De Wildt et al., 1993; Horner & Boldy, 2008; Sixsmith & Sixsmith, 2008). Nowadays aging in place is not only a wish of older people to stay in their home, it is also part of policies in the Netherlands on care, care institutions and older people. Moving to a nursing home is made more difficult by stricter criteria and the number of places in nursing homes has decreased (Van Dam et al., 2013).

In the period between 1970-1980, due to a huge expansion of retirement home, one was afraid about the escalating costs of the institutional elderly care. Remaining longer at home was also desirable in that time. Since the increasing of an older population, which has not taken place before, and the rising costs of care, aging is in place is seen as a solution to lower these costs of “aging” to an acceptable level (Van Staaldruinen, 2014; Sixsmith & Sixsmith, 2008). Customized care at home is seen as less expensive than moving to institutional care (Sixsmith & Sixsmith, 2008).

Aging in place is considered to have several advantages; for the elderly itself and for the community.

In general, aging in place is seen as a benefit for the quality of life of elderly people (Sixsmith & Sixsmith, 2008). Aging in place enables elderly to stay independent and to maintain social connections and friendship with neighbours, friends and family, where they could benefit from (Wiles et al, 2012; Buffel et al., 2012). Besides, a long-term emotional attachment to a place or environmental surrounding gives meaning and security to older people and contribute to their well-being (Wiles et al, 2012).

Moreover, elderly can offer a lot of advantages to a community or neighbourhood because of their experience, time, knowledge, and the commitment and attachment to their communities and the immediate surrounding (Buffel et al., 2012). Besides, they could play an active role in and contribute to society by caregiving and voluntary work in the local area (Van Dam et al., 2013).

The advantages of aging in place are related to the quality of the living environment (Van Dam et al., 2013). Aging in place asks some assistance and requirements of the living environment. If the living environment does not meet the needs of elderly people, it can have negative effects on health, it could reduce physical activity and cause an increased risk of loneliness and social isolation (Sugiyama & Thompson, 2007; Sixsmith & Sixsmith, 2008).

Aging in place is often associated with the home, the personal environment, which is often seen as an essential component. However the neighbourhood and community are as important and should also facilitate the wish and ability of the majority of elderly to remain in their homes as long as possible (Vasunilashorn et al., 2012). This is supported by Wiles et al. (2012) who found that the advantages of aging in place operate at community and neighbourhood level – people and places –, and that they are not just linked to a particular house. Components, beside the home, that assist aging in place are good access to services and amenities, community care, social connections, recreational opportunities, facilities that stimulate physical activity and transportation (Wiles et al, 2012, Horner & Boldy, 2008).
To age successful in place, it is important that elderly stay active and maintain their health and well-being and that factors in their environment enhance and support this (Cramm et al., 2012; WHO, 2007a). The neighbourhood environment can contribute to the health of older people through the stimulation of outdoor activity, such as walking, and the provision of opportunities and places to meet and interact with others which could lead to an increased social network and the development of strong and supportive social relationships (Sugiyama & Thompson, 2007; Gardner, 2011; Toepoel, 2013)

The urban living environment

Elderly people spend more time at their homes and in the nearby environment. Due to personal, physical and social changes, such as a decrease in mobility and the loss of social contacts, elderly are more dependent on amenities, activities and social contacts in the nearby surroundings (De Groot et al., 2013; Cannuscio et al., 2003; Mahmood et al., 2012). Therefore, the neighbourhood and the quality of it become more important for older people who age in place.

This review of the characteristics of the urban living environment and public spaces that facilitate and support elderly to age in place according to the existing literature, will be divided in the following themes: services & facilities, mobility & street characteristics and social interaction & contacts.

Services & facilities

Older people, even if they have an active life, spend most of their time in and around their immediate environment. The presence of services and facilities in the local neighbourhood area are important for elderly who age in place. It influence their independence. When their mobility declines, they will be still able to go by foot to important facilities, as a supermarket and pharmacy. Besides, it provides older people with places to walk or bike to and therefore to stay active (Michael et al., 2006). According to Gehl (2011), to invite people to move from the private to the public environment, destinations to go are needed. Besides, going out to daily services and destinations is often used as motive to satisfy other needs, such as the need for contact and stimulation. This is supported by Mahmood et al. (2012, p. 1187) who found that the necessity of going out and walking to a service or amenity, often included a social component, such as meeting friends for coffee or talking to people along the way.

Necessary and daily services were seen as destinations for both functional and recreational activities. Gehl (2011) divides outdoor activities in public spaces in necessary (functional) activities, optional (recreational) activities and social activities and argue that these activities intertwine in all conceivable combinations. Recreational activities only take place under favourable exterior conditions. By connecting functional facilities with recreational facilities and public spaces, daily activities can be combined with other activities or needs. This stimulates older people to go out.

The presence of services and amenities is not only of importance for elderly, the distance to these services is also important. Besides, the distance to a destination is one of the most important factors that influence the choice for walking as a mode for transport (Borst et al., 2009). The distance to essential services and facilities should be no further than 500 meters (Burton & Mitchell, 2006; De Groot et al., 2013). These facilities are a supermarket, health center, doctor, small green spaces, and a public transport stop. Secondary services and facilities should be no further than 800 meters and include open recreation space, parks or squares, a library, dentist and community and leisure facilities (Burton & Mitchell, 2006). According to Gehl (2011), the acceptable walking distance for most people is around 400-500 meter. This emphasise the
importance that facilities should be available in a radius of 500 m. Besides it is desirable that services are situated together (WHO, 2007b). Also houses for seniors and residential homes should be located nearby each other and be part of the network of existing public spaces and facilities. In order that they can work together and create support for facilities and activities (Graaff, 2016). The trend aging in place asks for more health care services in the local area (Van Dam et al., 2013). However, elderly people also want to experience things and to give their free time a worthwhile manner (Sievers et al., 2007). Therefore, recreational facilities, in the neighbourhood, such as a park and community center, are also needed.

Mobility & street characteristics

When people get older, their mobility declines. However, mobility is important for elderly who age in place because it affects their independence. Besides, walking and biking makes elderly physical active which is important for maintaining their well-being, health and vitality (Sugiyama & Thompson, 2007; Borst et al., 2009).

When people get older, they move less frequent and less far (Van Dam et al., 2013). From 65 years, the amount of movements with a recreational, social or functional goal as part of the total amount of movements per day, increase. From 80 years, the daily movements are mainly for necessary, functional purposes (Van Dam & Hilbers, 2013) (fig. 8). Because elderly move more often in their local neighbourhood, they are more dependent on parking facilities, the accessibility of public transport and the street characteristics in their neighbourhood.

Although in the future, a lot of elderly will have a driving license, aging in place is only possible if the neighbourhood has good access to public transport and provides possibilities to walk and bike because if older people are no longer allowed to drive, they become dependent on these types of transportation and movement (Van Dam et al., 2013; Michael et al., 2006). Access to public transport and urban design features that stimulate walking integrate elderly people in the social fabric of the community and contribute to their health and physical functioning (Mahmood et al., 2012). According to Gehl (2011), life takes place on foot. Only on foot, meaningful opportunities for contact occur. The next paragraph will elaborate on that further. Besides, as stated earlier walking is an important factor to maintain the physical functioning, the health and independency of older people, because elderly who regularly walk are less likely to lose their physical function (Borst et al., 2008).

The presence and distance to facilities within the neighbourhood strongly influence the walking behaviour of older people, as stated in the previous paragraph. However, there are more aspects of the built environment, which makes walking more comfortable and could stimulate walking among elderly. In general, elderly want safe, accessible and attractive streets and public spaces in their neighbourhood (Penninx & Royers, 2007;
Accessibility
Accessible sidewalks, with flat and smooth paving, no physical obstacles, stairs or slopes and a width of 2 m, are desired (Burton & Mitchell, 2006; Borst et al., 2008, Borst et al., 2009; Mahmood et al., 2012).

Safety
According to Michael et al. (2006), a sidewalk separated from traffic by a planting strip or buffer zone increase walking among elderly because it gives a secure feeling. Burton & Mitchell (2006) complements this by suggesting clearly marked bicycle paths separated from sidewalks and pedestrians separated from traffic by bicycle paths, trees or on-road parking. Besides, pedestrian crossings should be safe and sufficient in number (WHO, 2007b). A car-free street or pedestrian friendly street are both safe and attractive for older people.

Attractiveness
Inviting pedestrian-friendly routes with differentiation in streets not only encourage walking, it also increase the legibility of an area (MENSenSTRAAT, 2014; Gilroy, 2008). Besides, streets with interesting things to look at, such as art, historical markers and greenery, stimulate elderly to walk, increases enjoyment while walking and distinct streets or areas from each other (Michael et al., 2006; Penninx & Royers, 2007, Mahmood et al., 2012; Gilroy, 2008). The identity, history or story of an area are important for elderly. They provide elements or memories one can attach to, it creates involvement and it defines a certain neighbourhood (Sievers, 2007; Penninx & Royers, 2007). In addition, streets with human activity are preferred. Elderly people are more likely to walk along streets with dwellings and buildings with doors and windows facing the street, front gardens, shops, bus and tram stops. Blind walls and high-rise buildings are less attractive features of streets (Borst et al., 2008, Borst et al., 2009).
Moreover, enough benches are needed to rest on and should be placed at regular intervals because people aged 70 cannot walk further than 10 minutes without a rest (Burton & Mitchell, 2006; Mahmood et al., 2012; Gehl, 2011). The ideal situation is every 100-125 m a bench (Burton & Mitchell, 2006). Benches are preferred on locations were one’s back is protected, for example facades and spatial boundaries, and on locations where people can view the activities in the area (Gehl, 2011). Elderly people like to look at activity or to watch other people (Sievers, 2007; Mahmood, 2012). Therefore it is important that streets and public spaces have different kind of activities and facilities for different type of users and enough places to sit to watch these activities.

Social interaction & contacts
Social contacts and connections are seen as important for elderly who age in place (Horner & Boldy, 2008; Wiles et al, 2012; Cannuscio et al., 2003; Toepoel, 2013). Aging in place ask more involvement of friends, neighbours, informal caregivers, volunteers or relatives, by increasing disabilities that comes with aging (Vasunilashorn et al., 2012). Besides, due to the loss of a part of the social ties, network or partner and the growth of older people living alone, elderly are more dependent on the social connections and relations within their community (Cannuscio et al., 2003). Moreover, Mahmood (2012) found that that the potential of interacting with others is a very strong factor for older people to get out of their house and to participate in a physical activity. Therefore a good social network in the neighbourhood is necessary. Cramm et al. (2012) found that besides social capital of individuals, neighbourhood social capital (obtaining support through indirect ties such as from neighbours) and neighborhood social cohesion (interdependencies among neighbours) positively affect the well-being of older people. A lack of
social relationships can cause an increased risk of loneliness and social isolation, and negatively affect the well-being of people. Maintaining contacts in the neighbourhood contributes to the prevention of loneliness (Thomese, 2007).

Even though we, as designers, are not able to design encounters or social cohesion between people and neighbours, we can affect the possibilities for interactions and meetings between people (Gehl, 2011).

In general, the social contacts on the street are often casual and passive. However, these passive contacts makes the boundary between isolation and contact less sharp and they provide a possible starting point for contact at other levels and a possibility for maintaining already established contacts (Gehl, 2011). These casual and brief contacts also contribute to a better sense of well-being (Raad voor de Volksgezondheid en Zorg, 2015).

Social contacts and connections in the neighbourhood can be promoted by opportunities for passive social contact, proximity to others and the existence of suitable outdoor places to greet, meet and chat with others (Sugiyama & Thompson, 2007; Skjaeveland & Garling, 1997). Besides, a mix of functions provide opportunities to meet others (Blokland, 2009). In a neighbourhood with multiple functions it is likely that residents encounter each other in the daily use of these facilities and that they start to recognize each other (Raad voor de Volksgezondheid en Zorg, 2015). These interactions can be intentional, accidental and regularly. A spontaneous meeting with neighbours, which leads to a brief conversation, or just waving hello to each other can help to encourage a sense of connection between people, residents and the places where they live (Leyden, 2003). Besides, according to Greenbaum (1982, cited in Kuo et al, 1998) relations among neighbours grow through repeated visual contact and short-duration talks and greetings.

According to Gehl (2011), meaningful social activities take place when people are standing, sitting or walking. This is supported by a study of Metha & Bosson (2010) who found that seating and shelter provisions are the most crucial urban design characteristics that contribute to sociability on the main street. Street furniture like benches can enhance this and invite people to stay for a longer time in a certain place. Longer stays enlarge the change to meet friends and neighbours who pass by (Gehl, 2011). Therefore meeting places often have the combination of transit routes and places to stay (Van der Zwaard, 2010). Moreover, pedestrian streets show a great number of people standing and sitting in comparison with streets with a lot of traffic (Gehl, 2011). These, in turn, provide also more opportunities for social activities.

According to Gardner (2011), third places and transition zones are important places in the neighbourhood for older residents aging in place. Within these places an informal social neighbourhood network could exist which facilitate social relationships, social support and enhance the well-being of older people.

Third places are described as informal public gather places, other than the home (first place) or workplace (the second place). They are inclusive and local (Oldenburg, 1999; Gardner, 2011). According to Oldenburg (1999, p. xx-xxi) “Third places serve the elderly as well. (..) Third places provide a means for retired people to remain in contact with those still working and, in the best instances, for the oldest generation to associate with the youngest.”

Transition zones provide a gradual transition between the private- and the public domain; the house and the street. These transition zones are part of the sidewalk or are spaces between the house and the sidewalk (Van Ulden et al., 2015). In other literature, transition zones are named as semi-private zones.
or spaces (Skjaeveland & Garling, 1997). Gehl (1986) calls these spaces ‘soft edges’. Examples are front yards, forecourts, porches and balconies. The graduation of outdoor spaces with more private semi-public, intimate spaces, and familiar public spaces near the residence play an important role in the creation of meetings between neighbours and strangers, gives a greater feeling of security and a stronger sense of belonging to the areas outside the private home (Gehl, 2011). Besides, shared access paths and common areas also encourage informal social contact and friendship formation between neighbours (Kuo et al., 1998). A prerequisite is the probability of unplanned social interaction. According to Gehl (1986) opportunities for staying, sitting and doing in soft edges and (semi-) public spaces enhance life in streets and social contact between residents. Transition zones between 1 m and 2 m function the best (Ulden et al., 2015).

Summary of theory

In the theoretical framework the general characteristics of the urban environment that facilitate elderly to age in place in a pleasant way according to the existing literature are reviewed. This resulted in the following criteria.
**Services & facilities**

Services & facilities provide destinations for older people to walk or bike to, to be part of public life and increase the independency of elderly people.

1. Visiting daily facilities can be combined with other activities or needs, this stimulates older people to go out (Mahmood et al., 2012; Gehl, 2011).

2. Facilities and services are located together or nearby each other (WHO, 2007b).

3. Houses for seniors and residential homes are located nearby each other and are part of the network of existing public spaces and facilities. In order that they can work together and create support for facilities and activities (Graaff, 2016).

4. Distance to essential and secondary services and facilities (Burton & Mitchell, 2006).
**Mobility & street characteristics**

Access to public transport and good accessible streets that stimulate walking or biking integrate elderly people in the social fabric of the community and keep elderly physical active which is important for maintaining their well-being, health and vitality (Sugiyama & Thompson, 2007; Borst et al., 2009; Mahmood et al., 2012). Besides, it affects the independence of elderly people.

1. Accessible wide (2 m) sidewalks with smooth paving and no physical obstacles (Burton & Mitchell, 2006; Borst et al., 2008; Borst et al., 2009; Mahmood et al., 2012).

2. Buffer zones that separate pedestrians, bicycles and car traffic from each other (Michael et al., 2006; Burton & Mitchell, 2006).

3. Pedestrian crossings are safe and sufficient in number (WHO, 2007b).


5. There are enough places to rest (Burton & Mitchell, 2006; Mahmood et al., 2012; Gehl, 2011) and attractive or interesting things to look at such as art and green (Michael et al., 2006; Penninx & Royers, 2007; Mahmood et al., 2012).
Social interaction & contacts
Social interaction, connections and contacts positively affect the well-being of older people. It contribute to the prevention of loneliness. Besides, aging in place asks more help from others. A good social network is therefore important.

Social interactions and contacts can be stimulated and enhanced by:

1. Transition zones (private ------ public)

Transition zones, the transition between the private and the public space, play an important role in the creation of meetings between neighbours and strangers and the creation of liveliness in the public domain (Ulden et al., 2015; Gehl, 2011).

2. Third places. These are informal public gathering places, located outside of the home (first place) and workplace (the second place); a park, a café, a square, a community center or shop. They are inclusive, accessible and local (Oldenburg, 1999, Gardner, 2011).
3. A mix of functions. This provides opportunities to meet others (Blokland, 2009). In a neighbourhood with multiple functions it is likely that residents encounter each other in the daily use of these facilities and start to recognize each other (Raad voor de Volksgezondheid en Zorg, 2015).

4. Opportunities to stay (benches) near/at functional facilities and public places in order to become a “meeting point”. Seating and shelter.

Due to this, going to a functional facility can easily include a social component which in turn stimulate elderly to go out (Mahmood et al., 2012). Besides, staying for a while near/at a place or facility which a lot of people visit could lead to an encounter with a friend, neighbour or stranger who pass by (Gehl, 2011).
SURVEYS

Approach

In order to get a better understanding of how elderly in the Regentessekwartier experience their neighbourhood, which barriers they encounter and which places they visit, I made a survey. The survey can be found in the appendix.

First, I started to interview elderly people on the street and I used the survey as a guideline. However, this took a lot of time. Therefore I decided to do it a bit different. At the independent senior houses of Het Zamen and Jonker Frans I put the questionnaire in all mailboxes. And at the reception of the residential care centers Het Zamen and Jonker Frans I left a box where the residents could hand in the survey. I received 10 surveys back in total. It is not representative of all the elderly in the area, but nevertheless it gives a good image of how elderly experience their neighbourhood.

Due to the few responses, I cannot give statistics of the outcomes. Therefore, I will first give some general conclusions and besides I will show some remarkable quotes.

Outcomes

According to the survey, the elderly who responded and who are living at Jonker Frans were quite happy with their situation. The proximity of nursing home Jonker Frans and the proximity to the shopping street Weimarstraat were seen as positive and were also reasons to stay and become old there.

Elderly living at Het Zamen, were less satisfied with their living environment. Some of the respondents do not know if they want to become old in that place. They suspect that other places might be nicer to live in. One person was quite optimistic and wrote that due to a lot of new buildings there is a chance that shops, restaurants and horeca will appear. In general, most of respondents who are living at Het Zamen complained about the lack of shops nearby. A supermarket, shops in general, a mailbox, post office, horeca and restaurants are mentioned most often as facilities which are missing in the area.

Most elderly from the surveys, move on foot. This corresponds to the literature. To visit destinations further away, the city center for example, public transport is used. Some respondents are not so mobile anymore and make use of a scoot mobile or taxi bus. Most respondents from Jonker Frans and Het Zamen said that they do not encounter much problems when they move. However when I spoke to elderly on the street, uneven and small sidewalks and many bicycles on the sidewalk were mentioned as problems.

A lot of respondents visit places where they can do activities or meet others. Such as community centers, Emma’s Hof and the restaurant in Het Zamen. However one respondent also complained about the prices of this restaurant. Therefore he prefers another place.

Walking in general, walking to shops, walking in parks and visiting shops were most mentioned as leisure activities in the public space. Trees, plants, nature (more wild, no planters or flower boxes), a nice building, architecture, animals and art were often mentioned as nice things to look at, while being outside.
<table>
<thead>
<tr>
<th>&quot;I like to maunder about and linger, and do not need much more.&quot;</th>
<th>&quot;I call it my village: The Weimarstraat, between the Beeklaan and the Regentesseplein. (...) Here I often encounter acquaintances.&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;This neighborhood is boring. There is no contact with the neighborhood. Terrible if you have lived in the city center for 60 years.&quot;</td>
<td>&quot;I only walk to several shops.&quot;</td>
</tr>
<tr>
<td>&quot;Due to a lot of new buildings there is a chance that shops, restaurants and horeca will appear.&quot;</td>
<td>&quot;There is nothing to experience. No stores and only breaking and building activities.&quot;</td>
</tr>
<tr>
<td>&quot;I visit community center De Kronkel.&quot;</td>
<td>&quot;There is a huge lack of general shops, supermarket and cosy cafés or restaurants in the area.&quot;</td>
</tr>
<tr>
<td>&quot;I live more or less in a industrial/business area.&quot;</td>
<td>&quot;I prefer to walk along the street side with plants.&quot;</td>
</tr>
<tr>
<td>&quot;I miss easy accessible places with conviviality, without obligation and cheap coffee.&quot;</td>
<td>&quot;I visit Soos de Inval. It is fun and relaxing. (...) I meet acquaintances and do activities.&quot;</td>
</tr>
<tr>
<td>&quot;I combine walking with groceries, preferably every day.&quot;</td>
<td>&quot;Tiles and uneven sidewalks are tough, I prefer to walk on asphalt.&quot;</td>
</tr>
<tr>
<td>&quot;I would like to have a postoffice and mailbox near my home.&quot;</td>
<td></td>
</tr>
</tbody>
</table>
The Hague elderly platform

The Hague elderly platform conducts a research three times a year where elderly think about and give their opinion on several themes. It consists of a panel of elderly who are between 65 and 84 years old. The experiences and opinions of these elderly are a source of information for several organisations concerning living and care for elderly. In the fall of 2015, the theme senior-friendly neighbourhoods was discussed. The Hague’s elderly identified which aspects are very important to them in a senior-friendly neighbourhood (Haags Ouderenplatform, 2016).

Positive aspects of a senior-friendly neighbourhood:
1. Daily groceries and shops nearby
2. Good public transport and public transport stop nearby
3. Green, park, to walk in, neighbourhood/community garden, hobby gardens
4. Quiet area, nice neighbourhood, enough space
5. Presence of a doctor and other health care facilities
6. Facilities nearby
7. Community center, neighbourhood center
8. Activities for elderly
9. Social contacts with neighbourhood residents
10. Neighbourhoodcare

Weak aspects of a senior-friendly neighbourhood:
1. Uneven, badly maintained sidewalks
2. Shops too far away, no shops nearby
3. Public transport too far to walk to, bad connections
4. Safety, presence of police
5. Heavy traffic, hard driving traffic, dangerous situations
6. Litter, not clean
7. Difficulty with crossing streets: high sidewalks, lack of pedestrian crossings
8. Lack of ATM, mailbox and waste container nearby
9. Lack of community center, neighbourhood center
10. Lack of contacts with neighbourhood residents

Most aspects are similar to the elements mentioned in the literature (theoretical review).
In the theoretical framework the general characteristics of the urban environment that facilitate elderly to age in place in a pleasant and healthy way according to the existing literature were reviewed. This has led to a set of criteria. Besides, the surveys, the outcomes of The Hague elderly platform, gave new insights in what elderly in The Hague and residents of the neighbourhood Regentessekwartier consider as important.

This leads to a slightly different division of the themes and a combined set of qualities and principles which are useful in the design process. The qualities are divided in the themes: destinations, movement, and features of the living environment.

Destinations: the reason or stimulation to go outside and to move (walk or bike) to a place. This often includes meeting other people.

Movement: physical features which makes it easy and attractive to move from one destination to another.

Features of the living environment: features of the environment which are seen as attractive by elderly. Besides, most of them stimulate encounters or social interaction between people and residents.
Destinations (facilities)

- supermarket
- mailbox
- health care
- community center
- park / public space
- neighbourhood gardens / hobby gardens
- recreational destinations
- mix of functions and users (intergenerational)
- recreational destinations close to functional destinations
- third places / accessible places
Movement (routes)

- pedestrian-friendly routes
- wide bicycle roads
- wide sidewalks with smooth paving
- safe crossings
- places to stop and rest
- buffers against traffic
- speed limits
- continuous routes
- public transport and public transport stops
- bicycle parking facilities
- differentiation in streets
Features of the living environment

- Front gardens
- Transition zones (between 1-2 m)
- Green (trees, plants, flowers)
- Art in the public space
- Identity of the area highlighted
- Recognizable/historical markers
- Benches near facilities and with interesting views
- Seating and shelter
- Houses for seniors nearby each other and part of the public space network
- Enough space for activities outside (to stay or move)
CONCLUSION

Elderly and the urban living environment

In the chapter “Defining the Project” the aim of this project was defined. The aim of this project is to create a neighbourhood that keep elderly active (social and physical) and healthy. Due to this, elderly are able to stay longer independently at their home. Besides, it postpones the vulnerability of elderly.

According to the literature, neighbourhood environments can contribute to the health of elderly through (Sugiyama & Thompson, 2007; Gardner, 2011):
> The stimulation of outdoor activity, such as walking;
> The provision of opportunities to meet and interact with others.

Besides, in the literature review was found that this can be achieved by the presence of:
> Destinations (facilities & (green) public spaces)
  Because destinations are a stimulation to go outside and to be physical active (Michael et al., 2006). Besides going to a facility often includes a social component (Mahmood et al., 2012).
> Attractive routes
  Attractive routes are needed to move from A to B and they stimulate outdoor activity.
> Other features of the living environment that provide opportunities for interactions and encounters with neighbours or others.
LOCATION ANALYSIS
THE HAGUE

Location analysis

The Hague
As described before the municipality of The Hague tries to become a senior-friendly city. An example of their program is to offer and stimulate the creation of elderly clubs and community centers of the future. Besides their age-friendly city program, this year the municipality of The Hague published the Agenda Room for the City, a vision for the future of The Hague. The vision explains the spatial policies of the municipality for the upcoming years. One essential point is that they want to give priority and more room to bicycles and pedestrians in the city. City streets will be redesigned to create attractive routes for pedestrians and cyclists. Besides, they want to improve the usability of city parks (Gemeente Den Haag, 2016b). This goal of the municipality can be used to also improve the conditions of the sidewalks and the outdoor environment for elderly.

The neighborhood
The Regentessekwartier is located on the west side of the city centre. It is built between 1885 and 1910 in the polder ‘t Kleine Veentje. Till 1902, the western boundary of the Regentessekwartier, the Beeklaan, was also the municipal border of The Hague (Koopmans, 1994). The Regentessekwartier is the first neighbourhood with a diagonal in the street pattern, the Regentesselaan. The Regentesselaan crosses the secondary axis, the Weimarstraat, at the Regentesseplein. This street pattern was designed by I.A. Lindo, the director of the Public Works Department of the municipality at that time (Koopmans, 1994). The neighbourhood has a north and a south part. The houses north of the Weimarstraat were meant for the middle class. The houses south of the Weimarstraat were meant for workers and lower income groups.

The neighbourhood is characterized by long rows of continuous facades in neo-renaissance style (Koopmans, 1994). The common typology of the houses in the area are upper-and ground floor dwellings. In newer (20th century) or transformed parts of the neighbourhood, partiekwoningen and apartment blocks are also common typologies.

In the south eastern part of the area the municipal industrial area (GIT) was located here. In 1871 the waste collection of the municipality was built on this area. Subsequently, the Municipal Gasworks at the Gaslaan arose in 1875 (Koopmans, 1994). This area was the edge of The Hague at that time. Due to the growth of the city, the city reached the outlying municipal industrial area and closed it in with urban development. The power plant at the Constant Rebecqueplein was built in 1904.

Nowadays, only the power plant at the Constant Rebecqueplein still exist. In 2005, the former site of the gasworks and the waste disposal site is transformed into a big park; De Verademing. Besides, the former municipal industrial area (GIT) is in development to become a residential area. Recently an apartment building for elderly was opened here.

The Regentessekwartier is quite a densely built neighbourhood. The Regentesseplein is the main square in the neighbourhood. On the Regentesseplein there used to be a large Protestant church, the reformed Regentessekerk from 1901. The church was demolished in 1975. At this place a apartmentcomplex for elderly was built. Besides, in this building the service center of the neighbourhood is located here.

The area is also characterized by the channel. It was dug in 1889 to discharge the dirty canal water into the sea (Koopmans, 1994). The Weimarstraat is the shoppingstreet of the neighbourhood with a lot of services and facilities. Therefore it is a quite lively street.
Regentesseplein

Suezkade

Weimarstraat

Newtonplein
Location of Regentesse-South in the city (Gemeente Den Haag, 2015c)
Main road (traffic) structure (Gemeente Den Haag, 2015c)
Cycle network (Gemeente Den Haag, 2015c)
Main green structure of the city (Gemeente Den Haag, 2015c)
Room for the city, one of the plans of the municipality (Gemeente Den Haag, 2016b)
Network of main streets in the neighborhood and in adjacent neighborhoods.
Network of public spaces

- Semi-public spaces within a building block
- Neighborhood public spaces
- Public spaces on city scale
- Streets with a concentration of services and functions
Facilities in the neighborhood
Overview of the presence of necessary facilities for elderly

- Library
- Supermarket
- Post office
- Doctor
- Pharmacy
- Nursing home / residential care home
- Group housing project for elderly
- Senior housing
- Neighborhood/community center

Scale: 0 - 100 m
Network of public spaces and essential facilities for elderly combined.

- Nursing home / residential care home
- Group housing project for elderly
- Senior housing
- Neighborhood/community center
- Supermarket
- Library
- Post office
- Doctor
- Pharmacy

100 m
Overview of the necessary facilities and the concentration of elderly in the areas.
Fieldtrip - the movement of elderly in the city
personal observations from Friday 2 December & Thursday 8 December 2016
Conclusions analysis

From the analysis, several conclusions can be drawn.

- The neighbourhood Regentessekwartier has not many public spaces and little public green.
- The neighbourhood is very dense with small streets and parking is often dominant.
- The neighbourhood is part of an important cycle route of the city. From west to east and from south to north.
- The neighbourhood is surrounded by several big roads. The Loosduinseweg and the Koningin Emmakade/Waldeck Pyrmontkade, these are the municipal main roads. The Laan van Meerdervoort and Beeklaan are neighbourhood access roads. It is remarkable that the Regentesselaan, a road with a big profile, is not part of the neighbourhood access roads. It is not considered as a main road. Therefore it has the potential to become a residential street.
- The green, trees, and channel along the Asmansweg and Suezkade are part of the main green structure of the city. The quays could be used as green public open space. At this moment they are not accessible.
- Some places have a lot of essential functions for elderly located together, for example health facilities and community centers. These areas could be strengthened and the public space around it improved in order to make these places attractive for elderly to go there.
- Park de Verademing is not easily accessible and does not interact with the functions and area/ neighbourhood around it.
- The new built residential care center in the south part of the Regentessekwartier stands quite alone with no supporting facilities nearby.
- A lot of elderly still cycle, but most bike paths are too small.
- Mobility scooters are parked on the sidewalk in front of doors because there is no room to park them elsewhere.
Assessment of the area

Criteria from the literature review
Based on the criteria from the literature review, I made an assessment of the area.

Services & facilities
Overall, most essential facilities are reachable within 500 meters. However, residential care center/retirement home Het Zamen is an exception. It has no supermarket or other shops nearby. As mentioned earlier, this was confirmed by the respondents of the survey who live in Het Zamen. They mentioned this as a great shortage.

Moreover, in the whole area there is no post-office, which is often mentioned in the surveys as a lack.

In addition, the relations between facilities and public spaces could be reinforced. In order to combine other activities or needs while visiting daily facilities. This stimulates older people to go out (Mahmood et al., 2012; Gehl, 2011).

Moreover, retirement homes / residential care homes Jonker Frans and Het Zamen could interact more with the public spaces close by. They are introvert at this moment but they could attract more facilities and neighbourhood functions.
Essential facilities reachable within 500 meters.
Mobility & street characteristics

A lot of sidewalks are uneven, small and have many bicycles parked on it. Some respondents of the survey also mentioned this as a problem. The bicycle parking problem is seen as a negative thing by many residents of the area (Gemeente Den Haag, 2015d). Many residents do not have the opportunity to park their bikes inside or on their own ground. This leads to cluttered streets. The number of parking places for bicycles must be increased.

Besides, many residents are not satisfied with the quality of the public space and the traffic safety of the characteristic streets and lanes, Regentesselaan, Beeklaan and Weimarstraat, in the south part of the neighbourhood (Gemeente Den Haag, 2015d).

In the whole neighbourhood, there are not many (safe) pedestrian crossings. Especially on the Beeklaan & Regentesselaan where residential streets in West-East direction cross these big, wide streets. In addition, most streets are similar in the neighbourhood. Car parking is often dominant in the streets. Besides, there is a lack of a pedestrian-friendly network within the smaller residential streets.
Social interactions & contacts

Most streets do not have transition zones. They have a dense character with continuous facades. Because of the many houses and buildings, and the profile of the streets, there is little space to do anything outside. The public space could be better used. In the neighbourhood program ReVa (Regentesse- en Valkenboskwartier), the focus is mainly on urban farming, more green in the public space, initiatives for movement and recreation in the living environment (Gemeente Den Haag, 2015d).

A lot respondents of the survey said that they visit community centers and other places with activities. Places which are easily accessible, where you can have a cheap coffee and with no obligations. Some would like to have more of this type of accessible facilities.

In addition, facilities or streets with facilities often don’t have opportunities to stay there for a while. They function more as a crossing space. If there are opportunities to stay, a bench for example, going to a functional facility can easily include a social component which in turn stimulate elderly to go out (Mahmood et al., 2012). Besides, staying for a while near/at a place or facility which a lot of people visit could lead to an encounter with a friend, neighbour or stranger who pass by (Gehl, 2011).
transition zones

no transition

small transition

front garden
DESIGN
CONCEPT

Introduction

In the theoretical framework three main themes that facilitate elderly to age in place in a pleasant way were defined: services & facilities (destinations), mobility & street characteristics (movement), social interaction & contacts. Together with the surveys, the analysis of the neighbourhood and the assessment of the neighbourhood I found that routes (movement) and the network of facilities and public spaces (destinations) are also the key elements to work on in the neighbourhood Regentessekwartier. The goal is to strengthen the network of streets with more differentiation and to strengthen the network of facilities and public spaces. In order to make them more attractive and accessible for elderly, to stimulate elderly to go outside and to make more suitable places for social interaction. By doing this, the public spaces and streets will also become more attractive and liveable for all residents of the neighbourhood and for those who visit the area. This resulted in four lines, (four lines of intervention), where the goal can be best achieved.

4 lines

The concept of the design consists of “4 lines”: green structure, blue structure, neighbourhood shopping street and the main lane of the neighbourhood.

The four lines are derived from the analysis of the neighbourhood Regentessekwartier.

Green structure

In the neighbourhood Regentessekwartier are not many public open spaces. The neighborhood is very dense. More green, less brick is a good ambition for cities to create a liveable city for everyone. Even though the Regentessekwartier has a very dense layout, it already has a big park, park De Verademing. Besides, the public green spaces Newtonplein and Kortenbos are close by. Adjacent to these public green spaces are a lot of essential facilities for elderly located (fig. 9). Besides, residential care homes/senior housing Jonker Frans and Het Zamen are located next to the green spaces. By connecting these three public green spaces, a nice green structure can be created. This green structure with its facilities and open spaces could function as a destination for elderly people to move to. Besides, the streets that connect the three public spaces with each other will become pedestrian and bicycle friendly in order to create a small and clear network in the larger network of streets. This makes the neighbourhood more legible for elderly.

Figure 9: analysis - potential green structure
**Neighbourhood shopping street**

The Weimarstraat is important in the neighbourhood because it is the street with shops (fig. 12). According to the surveys and the fieldtrip, the street is also used by a lot of elderly. Shops and the proximity of it are important for elderly. It keeps them independent and shops are important meeting places.

However, the Weimarstraat is not elderly friendly at this moment. There are no benches to rest on or safe crossings in the street. Besides, the street is more a crossing space instead of a place to stay. However, the Weimarstraat can become a high quality shopping street with both a recreational and functional function and a pedestrian friendly profile. This should invite elderly to use the street as a destination for their daily walk. Moreover, the street and the facilities located here can respond to a greying society by providing new types of shops and community centers. This will also prevent vacancy in the street, which is bad for the liveliness of it.

**Blue structure**

Once The Hague was a city with canals. Nowadays, The Hague has little open water. The Verversingskanaal is a big canal in the city. It runs from the city centre, through Regentessekwartier, to the coast (fig. 10). At this moment, the canal has no recreational function. It is difficult to get access to the water due to the quays. The Verversingskanaal and Suezkade are part of the green structure of the city and has the potential to get a recreational function. On neighbourhood level, the blue structure will be a destination for recreational purposes. At city scale, the canal is a clear line for movement, from the city centre to the beach. Therefore, for elderly the blue structure will become a destination, to stay or recreate, and a line to move along.

Figure 10: blue structure, from city centre to the coast

Figure 11: analysis - blue structure
Main lane of the neighbourhood
The Regentesselaan has a wide profile and it connects a lot of streets in west east direction. Besides, it connects a lot of streets where many older people are living (30-35 elderly per ha) (Fig. 13). Therefore it is an important line. According to the analysis, the Regentesselaan is not a main access road.

A lot of residents are not happy with the quality of the public space and the safety of this road. Cars are allowed to drive 50 km/h and the road is wide enough to drive this speed or even faster. The Regentesselaan could be easily transformed into a residential street with more public spaces and places for residents. Besides the road can be made smaller so cars have to drive slower. Moreover, safe crossings should be made because they are now lacking. By doing this, the street will be an attractive place for residents and an attractive route for elderly residents to move through the neighbourhood.
GREEN STRUCTURE
The green structure runs from west to east and connects three big public open spaces: the Newtonplein, park de Verademing and park Kortenbos. Besides, a lot of essential facilities for elderly are located along this route and these facilities are expanded in the design. Together with the pedestrian friendly streets that connect the three public spaces with each other, a small and clear green network in the larger network of streets is created. This makes the neighbourhood more legible for elderly and the facilities and public spaces easier to find.
Newtonplein

The main concept of the design of the Newtonplein is that the relation between retirement home/ senior housing Jonker Frans and the Newtonplein will be reinforced. In order to attract elderly, who are living there, to make use of this public space. The transition between Jonker Frans and the public space is made more gradually by flower gardens and green, so that elderly at Jonker Frans already can experience the green character of the place. Another part of the concept is the creation of a square, together with the monument and a new neighbourhood building. This square will be a node of liveliness and a place where different residents and ages could encounter or meet each other. The new neighborhood building has different facilities that attract different residents: activities for elderly and others who are interested, a parcel service where residents can pick up their internet order and a Haags Hopje, for lending play equipment. According to the surveys, elderly would like to have more of this type of accessible facilities. The new neighborhood building is an answer to this need. The statue is a characteristic element of the square and is part of its identity. By placing the statue more prominent, elderly can use this as a reference.

At this moment, the Newtonplein only function as a playground for children. Due to this intervention, the square will attract more different age groups and residents. Therefore, it has a stronger neighbourhood function.

Concept

Added qualities

- park / green
- recreational destinations close to functional destinations
- community center
- mix of functions and users
- identity of the area highlighted recognizable/ historical markers
- enough space for activities outside
Park De Verademing

Park de Verademing is known for its sport fields. This function will be kept. Under one of the sport field, an parking garage will be made in order to reduce the parking pressure in the neighbourhood. In the garage is room for approximately 500 parking places. The park is also known for its elevation. However, this makes the park less accessible and safe. Therefore, the difference in height will be made more gradually, just like the landscape of The Hague, and the walls along the edge of the park will be removed. At the side of the canal, the edges of the park are curved and at the side of the dwellings, the edges are more angular. Besides, a transition zone between the dwellings and the park is made. People can choose if they would like to walk more close to the dwellings or close to the park.

In the south part of the park, a new neighbourhood building is added. The new building is positioned across the building where some functional facilities are located, a doctor and pharmacy and on the same axis as retirement home/senior housing Het Zamen. This should attract elderly who are living at Het Zamen to the park. Besides, visiting the existing functional facilities, doctor or pharmacy, can now easily be combined with other recreational activities in the park. This stimulates older people to go out. The new neighbourhood building has the same facilities as the building at the Newtonplein; activities for residents who are interested, a parcel service where residents can pick up their internet

Concept

Qualities

- park / green
- recreational destinations close to functional destinations
- community center
- recreational destinations / sports
- mix of functions and users
- transition zones (between 1-2 m)
order and a Haags Hopje, for lending play equipment. Therefore the park is attractive to be used by different residents, users and ages, which foster the opportunity to meet others. This could lead to social interactions and/or new connections, which is important for elderly since their social network decreases as they age.

The recreational activities, the neighbourhood building and a better connection between the park and Het Zamen, should invite elderly to use the park as a destination to move to, to be physical active and to meet others.
Park Kortenbos

Park Kortenbos is characterized by community gardens. This function will be expanded since there are long waiting lists to get a garden. Besides, according to the literature and “The Hague elderly platform” elderly like to work in a community or hobby garden. It provide opportunities to meet others and at the same time it keeps elderly active. For the purpose of the community gardens, a new building will be added on the same axis as the two schools and the community center. In this shed things can be stored for the community gardens and events can be organized.

A new bridge over the North-West Buitensingel connects the Zamenhofstraat (park De Verademing) with the park. Due to this, pedestrians and bicycles do not need to move along the busy street, Loosduinseweg, to go to the park, the facilities, or to that area in general. In the park itself, a main path connects all the entrances of the park and can be used by both pedestrians and bicycles. Smaller pedestrian paths in the park are meant to stroll along.

Moreover, the relation between the facilities along the street Westeinde and the park will be reinforced. The community center located on Westeinde will become more part of the park. In addition, the profile of the street will change a bit, to give more public space to the community center.

Concept

Qualities

- park / green
- recreational destinations close to functional destinations
- neighbourhood gardens / hobby gardens
- community center
- mix of functions and users
- pedestrian-friendly routes
Parkstreet

The parkstreet is the name of the streets that connect the three green public spaces with each other. The parkstreet will get his own street profile, which is different from the profile of the other streets in the neighbourhood. Due to this intervention, a smaller and clear network in the larger network of streets is created. The street is distinctive and therefore will be more recognizable by elderly.

The design of the parkstreet consists of two phases. The first phase is the actual intervention, the second phase a desired situation in the future.

In phase one, the street becomes a woonerf. The pedestrian gets more attention. Besides, parking facilities are situated on one side of the street. By doing this, the sidewalk becomes wider and there is more room for gardens, play areas and bicycle parking facilities. In addition, every house has a transition zone which gives residents the opportunity to create a small front garden.

In phase two, the street becomes a pedestrian zone with a bike path in the middle of the street. In this situation cars are no longer allowed to drive through the street or to park here. There is even more room for green, gardens and play areas.

Due to this intervention, the street becomes a living street. It will be more accessible and attractive for elderly to move along this street. Besides, by making the transition between the home and public space softer and by creating more space for activities outside, encounters between neighbours and other residents will be enhanced. These could lead to a stronger sense of community and social support from neighbours, which is desirable when people age in place.

Qualities

differentiation in streets
pedestrian-friendly routes
front gardens
transition zones (between 1-2 m)
green (trees, plants, flowers)

enough space for activities outside
Parkstreet, phase 1  1:200

Parkstreet, phase 2  1:200
Parkstreet, phase 1
Parkstreet, phase 2
BLUE STRUCTURE
Suezkade

The Verversingskanaal becomes a new public open space; to stay, to recreate or to move along. The Hague has little open water. The advantage of this canal should therefore be better used. The blue structure makes more room for recreation and it reinforces the green and blue character of the neighbourhood. At city scale, the canal is a clear line for movement, from the city centre to the beach.

The quay of the Verversingskanaal on the side of the Suezkade will become a recreational destination. A promenade, with a curved shape, connects the sidewalk on street level with the path close to the water. A curved shape is chosen to bridge the difference in height without any stairs in order to make the quay easily accessible for elderly and other people who have difficulties with stairs. This promenade runs from park De Verademing to the north of the neighbourhood.

Along park De Verademing, where the promenade starts, the recreational function of the canal is of greater size due to the facilities that are located here. A new café/restaurant is placed under the curve of the park. In addition, under the second curve of the park, the canteen of the sport fields is placed here. Both facilities have their main entrance positioned towards the canal and they should make the waterside and this part of the neighbourhood more attractive. Because at this moment, it is a neglected space.

The old power station, which is part of the identity of the neighbourhood will be made more green so that it fits better with the environment of the park and the river.

The canal and the new quay should invite elderly to make use of it, to recreate here, to walk along, to feed the ducks or to walk the dog.

Qualities

- green (trees, plants, flowers)
- park / green
- recreational destinations
- continuous routes
- pedestrian-friendly routes
- identity of the area highlighted recognizable/historical markers
SHOPPING STREET
Weimarstraat

The Weimarstraat is the shopping street of the Regentessekwartier. It is the liveliest street in the neighbourhood. A lot of elderly visit this place. One person from the surveys mentioned this street as “his village”. Local shops are important meeting places and fulfil an important social function in the neighbourhood for elderly. It is the place where they meet acquaintances, neighbours and where they have a small talk with the shop employees.

Despite being the liveliest street of the neighbourhood, it is also a busy streets with conflicts: cars, bikes, pedestrians, car parking, shop signing on the sidewalk, crossings, etc. The street function more as a crossing space. There are no benches which invite elderly to rest or to stay there for a while. However, if there are opportunities to stay, such as a bench, going to a functional facility can easily include a social component, which in turn stimulate elderly to go out.

In the design the street has a new street profile.

The street is a bicycle street, where the car is a guest and has to drive slower. Besides, car parking is reduced. Therefore the sidewalk is wider. There is more room for public space, green and benches.

A promenade is added, made of big pervious concrete tiles for a smooth paving, and meant for the pedestrian. Besides, it defines the transition zone between the shop and the sidewalk.

Like any other shopping street in the Netherlands there is a lot of vacancy in the street. However, by responding to a greying society by providing new types of shops and community centers the street can keep its liveliness. The impression shows how a community function on the ground floor can be combined with housing for elderly on the upper floors.

The new intervention should invite more elderly to use the street as a destination for their daily walk and as a place for social interaction.

Qualities

- supermarket
- community center
- mix of functions and users
- benches near facilities and with interesting views
- wide sidewalks with smooth paving
- transition zones (between 1-2 m)
NEIGHBOURHOOD LANE
30 km zone

gardens

separate bicycle path

safe crossings

gardens

30 km zone
Regentesselaan

The Regentesselaan is a big street in the neighbourhood Regentessekwartier and it connects a lot of streets in west east direction. At this moment a lot of residents are not happy with the quality of the public space and the safety of this road. Cars are allowed to drive 50 km/h and the road is wide enough to drive this speed or even faster.

In the design, the lane is a 30 km zone and the road is made smaller which forces cars to drive slower. Because of this, the lane is made more pedestrian friendly with safe crossings. Besides the bicycle path is separated from the road by a bufferzone and is made wide enough for motorized wheelchairs.

The area in the middle of the lane, is given back to the residents as a green space with plants, gardens and areas to play. Cars can be parked in the garage under the soccer field of park De Verademing.

The new profile of the lane provides more space for activities outside and places where residents can encounter each other. The lane will be an attractive place for residents and an attractive route for elderly residents to move through the neighbourhood. Moreover, due to the characteristic design and appearance of the lane, the street differs from other streets in the neighbourhood. This makes the street more distinctive and legible for elderly.

Qualities

- differentiation in streets
- continuous routes
- safe crossings
- enough space for activities outside
- buffer against traffic
- green (trees, plants, flowers)
PROCESS

Stakeholders

In order to make the plan and design successful, the interest of several companies, people and organizations must be gained.

The municipality of The Hague is one of the largest and most influential stakeholder. One of the goals of the municipality is to become a senior-friendly city. Besides, according to the Agenda Room for the City (Gemeente Den Haag, 2016b), the municipality wants to give priority and more room to bicycles and pedestrians in the city. Moreover they want to improve the usability of city parks. The expanding of bicycle connections and improving the use of city parks are part of the theme “healthy city”, a trend that the municipality wants to respond to.

The design proposals and interventions should convince the municipality that the improvement of parks in the neighbourhood and the creation of pedestrian- and bicycle friendly routes can be combined with the goal to become a senior-friendly city.

Another important stakeholder are the residents of the neighbourhood. They do not have the most power, but they profit the most of the new interventions. In addition, when the design is realised, they can play an important role in the maintenance of the green and they can work as a volunteer in the new community buildings.

Green structure

In the green structure the involved main stakeholders are: the municipality of The Hague, the community centers, retirement home Jonker Frans, retirement home Het Zamen, soccer club REMO, the schools along the parks and the residents. In the green structure, the schools, the community centers, retirement home Jonker Frans, retirement home Het Zamen can contribute to improve the public green spaces. In the case of the schools, the argument to provide more attractive places to play can be used. Foundations such as the cruyff-foundation and the krajicek foundation may be involved. The community centers, retirement home Jonker Frans and Het Zamen can provide support by the expansion of the neighbourhood facilities and argue that there is a need for elderly and other residents to make use of the green space close by.

In the Parkstreet, the streets that connect the three green public spaces, the interest of the residents must be gained in order to make front gardens and to expand gardens and activities in the street.

In the green structure, soccer club REMO is an unpredictable stakeholder. The soccer fields of this club are moved in the park. If they do not agree, they can frustrate the plan.

Blue structure

In the blue structure, the main stakeholders are the municipality of The Hague, the Province of South Holland and the Energy company of the power plant. In order to revitalize the canal and the quays, the Province of South Holland can be involved to provide grants. They may be interested in the improvement of the quality of the water and nature here.

In the design the facade of the power plant will be made more green so that it fits better with the environment of the park and the river. It is necessary that the energy company who owns the power plant is willing to cooperate with that plan.

Shopping street

In the shopping street, the main stakeholders are the municipality of The Hague, the shop owners, entrepreneurs and the residents. The municipality and the owners of the buildings where the shops are located are important by making the street more lively. The municipality is responsible for giving the street a new profile. The municipality and the property owners of the shops are important in determining what kind of facilities are allowed or needed in this street. This prevents vacancy. Besides, community functions or places where people can meet each other should be given priority.

The shops can make the street more lively and elderly friendly by places to sit.

Neighbourhood lane

In the shopping street, the main stakeholders are the municipality of The Hague, the residents and property owners. By making the lane a living street with more green, a reduction of car parking and a reduced driving speed, it becomes more attractive to live along this street.

As a result, the value of the houses will rise.
Besides, interest of the residents must be gained in order to create and maintain gardens in the middle of the lane and to expand activities in the street.

**Green-blue structure**

<table>
<thead>
<tr>
<th>Power</th>
<th>Low</th>
<th>High</th>
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<tbody>
<tr>
<td>Low</td>
<td>Residents</td>
<td>Energy company</td>
</tr>
<tr>
<td></td>
<td>Soccer club</td>
<td>REMO</td>
</tr>
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<td></td>
<td>Province of</td>
<td>South Holland</td>
</tr>
<tr>
<td>High</td>
<td>Visitors</td>
<td>Schools</td>
</tr>
<tr>
<td></td>
<td>Retirement homes</td>
<td>Residents</td>
</tr>
<tr>
<td></td>
<td>Community centers</td>
<td>Municipality</td>
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</tbody>
</table>

**Shopping street / main lane**

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<tr>
<td>Low</td>
<td>Residents</td>
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<tr>
<td>High</td>
<td>Customers</td>
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<td></td>
<td>Residents</td>
<td>Shop owners</td>
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<td>Municipality</td>
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**Phases of the design**

The realization of the interventions consists several phases.

Phase 1:
The public space near Het Zamen and the green route to park Kortenbos will be developed. Because they are already working here, and this area needs a lot of improvement. Moreover, elderly are less satisfied to live at Het Zamen.

Phase 2:
The green route will be extended to the Newtonplein. In order to create an attractive route within the bigger network of streets and to create a route that connects several important facilities for elderly.

Phase 3:
The Weimarstraat will get an upgrade, this is important because this is the place where a lot of elderly residents do their groceries and find their essential daily shops.

Phase 4:
The green-blue network will be developed further and the Regentesselaan will get a new profile.
CONCLUSION
The world’s population is aging. In the Netherlands this trend is also visible. Here, the percentage of people over the age of 65 was 18% in 2015 and this will increase to 27% in 2040 (Kooiman et al., 2016). In numbers this means that the amount of people aged 65 and over will grow from 3,0 million in 2015 to 4,8 million around 2040 (Van Duin et al, 2015). Besides the growing amount of elderly people, there is an increase of elderly who remain living at their homes. Because of their wish and policies which foster this.

It becomes a challenge to maintain the independence of elderly, to let elderly age in place in a healthy way and to prevent social isolation among this group. The neighbourhood plays an important role in keeping elderly active (social & physical) and healthy. In order to allow elderly to live longer independently at home and to make them less vulnerable.

In order to create a neighbourhood that promotes aging in place and active aging, the follow research question was formulated:

Which spatial interventions and interventions in the public space are needed to create a more suitable and pleasant urban living environment for elderly aging in place in The Hague?

The research question is already focused on the chosen city and location.

According to the literature, neighbourhood environments can contribute to the health of older people through:
- the stimulation of outdoor activity, such as walking
- the provision of opportunities to meet and interact with others. This could lead to an increased social network and the development of strong and supportive social relationships.

In the theoretical framework became clear that in order to stimulate outdoor activity and to provide opportunities to meet others, destinations (facilities and public spaces), attractive routes and features of the living environment, such as transition zones, are needed.

Destinations (facilities & public spaces) could have a functional or recreational purpose or both. Destinations are a stimulation for elderly to go outside and to be physical active. Besides going to a facility or public space often includes a social component, such as meeting a friend or neighbour. The possibility to combine daily facilities with other activities or needs is very important for elderly. Attractive routes makes it possible for elderly to move from A to B without uncertainties. Besides, it stimulates outdoor activity.

Furthermore, there are features of the living environment that provide opportunities for interactions and encounters with neighbours or others. Examples are transition zones, shared access paths, front gardens, third places, a mix of functions and opportunities for staying, sitting and doing in (semi-)public spaces.

In the analysis of the chosen location of study, the Regentessekwartier in The Hague, several layers were explored: the public space network, important facilities for elderly, the road network and the concentration of elderly. Together with observations and the surveys, it gave insight in how the area works.

It became clear that the neighbourhood Regentessekwartier is very dense with small streets where parking is often dominant. Besides, it has not many public spaces and little public green of high quality. In addition, the relations between facilities and public spaces in the area could be reinforced. In order to combine other activities or needs while visiting daily facilities. This is attractive for elderly. For example, the Weimarstraat which is the shopping street of the neighbourhood has very little public space or opportunities to stay or sit. However, it is the liveliest of the neighbourhood and the street where you easily can encounter a friend.

Moreover, there are less attractive routes for elderly
in the neighbourhood. Due to the small streets and parking, a lot of sidewalks are narrow. Uneven and narrow sidewalks hinder elderly to go outside, to move and to be physical active. A pedestrian-friendly network of streets within the bigger network of streets is lacking. Furthermore, due to the dense character of the neighbourhood and the profile of the streets, there is little space to do activities outside. Besides most streets do not have transition zones. This creates alienation between people because it does not promote encounters between residents. Also, places which are easily accessible, like a library, are desired.

The research and the design, have contributed to answer the main question of this project. The design showed how an attractive living environment for elderly aging in place can be created in a neighbourhood in The Hague. In general, the design improved the public space of the neighbourhood by making it more attractive, accessible and as a representation of all ages. Public spaces function as a destination for elderly. An improvement of public space should stimulate elderly to go outside more often, to recreate, the be active and to meet others. In the design, the improvement of public space is applied in each of the lines of intervention: an improvement of public space at the parks, along the canal, in the Weimarstraat and in the middle of the Regentesselaan. The improvement of public space is the largest at the green structure and along the canal (blue structure). Moreover, attractive pedestrian-friendly routes in the bigger network of streets are created. In order to link important facilities for elderly and to create more room for activities outside and possibilities for encounters and social interaction. At this moment, these smaller routes are lacking. This intervention also should stimulate elderly to go outside and to be physical and social active. In the design, these attractive routes are created along the Parkstreet and the Regentesselaan.

Furthermore, facilities are added in the design. They are located in the public green spaces and part of the green structure. They should strengthen the (existing) facilities along the green structure. In order to make this green structure with facilities more attractive and a reason for elderly to go there. The new buildings in the design and its services have a social function and serve several ages in order to attract a lot of residents. This should lead to a stronger sense of community.

Altogether, the research and the design not only create an attractive neighborhood for the elderly but for everyone.
REFLECTION

In the reflection I will look back on the results of the research and the design and reflect if the used approach worked. The reflection includes four aspects.

The relationship between the graduation lab and the chosen subject
The graduation project "Elderly living in the city" is part of the Graduation Lab Urban Transformation and Sustainability. Within this Graduation Lab, I worked within the research group "Design of the Urban Fabric". The goal for this research theme is to understand how we can contribute to make sustainable, attractive and vital urban design (Semesterbook Fall 2016). In my graduation project I wanted to create a more suitable and pleasant urban living environment for elderly aging in place in The Hague. Hereby, the goal is to keep elderly physical active, healthy, vital and social active.
Sustainable has not only to do with energy and water problems. A sustainable environment should also support and maintain the health of people. Health is increasingly playing an important role in the design of public spaces. The concept of the healthy and liveable city, for example. Therefore, a sustainable, attractive and vital urban design approach fits into my project.

The relationship between research and design
The aim of this research was to gain more insight in how to intervene in the urban environment in order to create neighbourhoods that keep elderly active and that facilitate the preference of the majority of older people to remain in their homes and community for as long as possible.
I started to do research from the beginning of the project in order to define the problem field and problem analysis. During this exploration I already found literature that was more specific and which discussed characteristics of the urban environment that facilitate elderly to stay active and to age in place in a pleasant way. This literature was used in the literature review and resulted in three themes. During the literature review I was so focused on
literature concerning elderly, that I reviewed little literature on urban design in general. I think that is a pity.

At the same time as the literature review, I made an urban analysis. In order to get a better understanding of the urban context and the role elderly played or could play in it. I started quite late to assess the area on the themes and criteria which derived from the literature review. Looking back, this could have saved me more time and doubts. Still, I think, the elaboration of the assessment of the area is not the most strong part of my research and project. However, the assessment showed to me what the spatial problems in the area are and what could become better.

Next to the methodologies literature review, urban analysis and observations, I used surveys and interviews to gain more information from the elderly themselves. The interviews on the street were not very productive. The surveys which I put in all mailboxes of the independent senior houses of Het Zamen and Jonker Frans, were more a success. Only ten responded, but I received nice answers and quite a lot of answers were consisted with the literature. If I had more time and if I knew it earlier, I would have liked to visit and participate in a debate of the urban elderly committee of The Hague. Perhaps they could have given me a lot of information and statistics. All the information I gained during the process, through literature, surveys, research and so on, were inputs for the final design.

I started quite late with designing. I often was too busy to get the story clear and to validate my thoughts. Maybe, I was also a bit afraid that the research and analysis would end up in nothing, in no potential design direction. I had more control over the research, so it was easier to get back to that and to postpone the design. If I could do the project over, I would create a better balance between design and research as a method, design by research and research by design. I noticed that the amount of research and the validation of my thoughts and story, blocked the creative part of me. However, this was a good learning process for me.

**Application in other cities**

A lot of research has been done on elderly from the perspective of gerontology, sociology and health. However these studies do not often explicit address how these outcomes can be applied in neighbourhood design. I tried to find my own way to cope with this. Even though I choose a specific neighbourhood in a particular city, the method I used can also be applied in other neighbourhoods and cities.

When designing for elderly, it is important to look first to the existing public space network. How are public spaces used and where are elderly and important facilities for elderly located? Is there a match or a mismatch? A match could be strengthened and become more attractive. A mismatch should be analysed further. Is it possible to expand public spaces near the facilities or to add facilities near the existing public spaces. Is it possible to build new elderly friendly houses near the facilities or to bring facilities to the place where many older people already live? Besides, note that the public spaces and facilities should serve different ages and people.

Moreover, you could look to a smaller pedestrian-friendly network within the bigger network of streets. It is desirable that this pedestrian-friendly network connects several public spaces and facilities. If this is not the case, you could look if it is possible to create a new pedestrian-friendly network that connects public spaces and facilities.
LITERATURE
LITERATURE


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Retrieved on 12 May, from https://www.google.nl/maps.

Assessment of the area

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Places for aging and aging in place
Elderly in society in the Netherlands

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Abstract – The world’s population is aging. In the Netherlands this trend is also visible. In past centuries the position of elderly in society and their housing opportunities changed a lot. Until the second half of the 20th century old age and poverty were linked to each other. When elderly became a separate group in society, housing specifically built for elderly and adapted to their needs were constructed. One of the purposes was to keep elderly in the neighborhood where they came from by providing alternative elderly houses when they got older. This did not work out well. Elderly were actually separated from society and preferred to remain in their own houses. Nowadays, we aim for the same goal to keep elderly in their own neighborhood: aging in place. This asks for some requirements otherwise elderly will not benefit from it. Besides aging in place, other ways to deal with an aging population are reviewed the last few years. Retirement communities are an example, but one can question if these communities meet the needs of elderly people and an ageing population. However, most Dutch elderly feel attached to their living environment and their social network and do not want to move. Besides, only small-scale initiatives are preferred. It emphasis that residential environments should become more dynamic in their availability of facilities and housing types. Besides, we should think beyond the traditional types and beyond the design for specific age groups.

Key words – aging in place – elderly – housing – retirement homes – retirement communities

1 Introduction
The world’s population is aging. This means that worldwide the amount of persons aged 65 and over is growing faster than any other age groups. This is due to the increase in life expectancy and the decrease in the number of births (United Nations, 2015). In the Netherlands this trend is also visible. Since 2010 the amount of people aged 65 and over has grown rapidly in the Netherlands. This is because of the babyboogeneration (the generation born between 1945 and 1970) who started to reach the age of 65. The percentage of people over the age of 65 was in 2015 18% and this will increase to 27% in 2040 (Kooiman et al., 2016). In numbers this means that the amount of people aged 65 and over will grow from 3,0 million in 2015 to a maximum of 4,8 million around 2040 (Van Duin et al, 2015).

Governments, policymakers, health care providers, practitioners, theorists and designers are looking for ways how to deal with an aging society: for example how to organize affordable health care and how to create suitable living environments for elderly. On this subject, different ideas and opinions exist. Although, the growth of elderly to this extent, as earlier described, has not yet taken place, in the 20th century they also had to deal with a growing number of elderly due to the increasing life expectancy and the emergence of elderly as a separate group in society. In the 20th century, this led to several new developments in the care, welfare and housing of elderly and the position of them in society. The current changes in visions and policies on elderly and care are a reaction on these previous developments and ideas.

This paper will review how the position of elderly in society and their housing opportunities has changed through history and what the current views on it are. Because according to Latten (Aedes-Actiz Kenniscentrum Wonen-Zorg, 2016), "How are we going to live in the future, depends on our current behavior but also on our behavior in the past".
2 Elderly as a separate group

When people start to reach the age of 60-65 we have the tendency to label them as elderly. Even if they do not consider themselves as old. In our society, this is seen as normal. Although our image of elderly as a homogeneous group with the same characteristics did not change the past few years, the elderly of today are not the elderly of the past.

2.1 Old and poor

In the 19th and in the early 20th century, old age and poverty were inextricably linked together in the Netherlands. In 1830 approximately 80% of the Dutch elderly lived in poverty (De Wildt et al., 1993). Who did not work, earned no money. Therefore, elderly often worked until death. When they became older and weaker and were no longer able to work, they were dependent on poor relief (De Wildt et al., 1993; Deen, 2004). This charity was mainly arranged by the church, wealthy individuals and sometimes by the city government.

Elderly became a separate group in society. Since the distinction between rich and poor anymore. Elderly people, the amount of vital elderly is also very prevalent in our society. Aging is seen as a negative thing and a lot of people have negative associations with it: becoming slow, weak, decline in health, loss of independence, transience of life and so on (Kits & Schut, 2011; Doorten, 2012).

The aging population and the uncertainties it entails, influence the current image of the elderly as a burden and a problem. Besides, the focus is often on the negative aspects of an aging society, which undermine the potential of elderly in society (Doorten, 2012). When we think of elderly, we often have a stereotype of the elderly in mind and link this to the negative associations as described before. However, “the” elderly does not exist, the diversity within this age group is as large as, or maybe even larger than in other age groups (Doorten, 2012).

In general, we see elderly as vulnerable, fragile and slow. According to Doorten (2012), young people and elderly people, who are not related to each other, have little contact with each other. This only encourage the prejudices against older people and the preservation of the stereotype of the elderly.

Besides, facilities and housing especially meant for elderly, leads to distance between generations and contribute to the negative image of them (Gomes & Mink, 2012). The term ageism is used, to describe prejudices and discrimination against older people (Gomes & Mink, 2012).

2.2 Elderly as needy people

The introduction of the Emergency Act Retirement Provision by minister Drees in 1947 gave everyone 65 years and older the assurance of an income when they were no longer working. In 1956 this act was replaced by the AOW (General Retirement Act / basic state pension) and brought an end to poverty among elderly (De Wildt et al., 1993; Deen, 2004; Mens & Wagenaar, 2009). Elderly care was meant for all older persons, there was no distinction between rich and poor anymore.

Elderly became a separate population group in society. Since the distinction between rich and poor had disappeared, in society they were looking for common characteristics that distinguished older people from other groups and each other. Elderly were seen as a group that do not participate in the labor market anymore and as needy people. Their degree of reliance on care distinguished elderly from each other (Mens & Wagenaar, 2009). Even though in the 1950s they already emphasized that elderly are equal to other groups in society and that they should be considered as independent individuals in society, nowadays independent and healthy elderly are still seen as needy people.

2.3 Vital elderly

“Everyone wants to grow old, but nobody wants to be old” (De Bruin, 2012). It is a paradox which is
potential and the meaning of the (active) role of the elderly in society (Doorten, 2012).

The question is whether elderly – a very diverse group – will be still considered as a specific homogenous group in the future. The current desired view on elderly asks for a balance. Elderly not only as vulnerable older persons who are a burden to society or as vital older persons who enjoy their well-deserved retirement and where nothing is expected from, but as persons who participate in community life and society among other generations and people, sometimes with some help and sometimes independently.

3 Housing for elderly 1900 - now
Through history, a large part of the elderly lived in normal houses. The emergence of elderly people as a separate group in society, was also the beginning of the construction of housing specifically built for elderly and adapted to their needs.

3.1 1900 - 1940
In the 19th century and in the early 20th century, the majority of the elderly lived independently (De Wildt et al., 1993). In general, the living conditions were very poor and most elderly were dependent on poor relief.

In the case elderly could no longer live independently even with the help of poor relief, then they could get a place in an “oudenliedenhuis” (home or institution for old poor people) (De Wildt et al., 1993; Deen, 2004). In these institutions the living conditions were also miserable; they slept in overfull dormitories, the beds often had to be shared and sanitary facilities were often lacking. For some, this was not the worst thing; entering an institution for old poor people also meant that you had to give up your freedom. The residents had to adhere to strict rules (De Wildt et al., 1993; Deen, 2004). Elderly with more money could live in a proveniershuis or hofje (both almshouses) (Mens & Wagenaar, 2009; De Wildt et al., 1993; Daniels & Stichting Young Designers, 2013).

The poor living conditions of the elderly reflected their low social status. Besides, except for the hofjes there hardly existed specifically for elderly built houses (Mens & Wagenaar, 2009).

Since 1920, pensionehuizen (retirement home) arose but these were only for wealthy seniors affordable (De Wildt et al., 1993).

3.2 1940 - 1960
The introduction of the basic state pension after World War II gave every older person the assurance of a basic income. Even though this income solved most of the poverty among older people, still a lot of them had to spend their old age in miserable living conditions because homes of good quality for elderly were lacking. Both normal dwellings and senior institutions did not meet the minimum requirements. Besides, a lot of elderly lived in normal houses even though their disabilities asked for housing with specific characteristics that met their needs. The availability of these houses were limited. (De Wildt et al., 1993; Mens & Wagenaar, 2009).

The improvement of elderly housing was used as a means of improving the position of elderly in society. Besides, good housing could prevent decay and could contribute to the ideal of a harmonious society. Elderly housing became a major pillar of the welfare state and the elderly care (Mens & Wagenaar, 2009).

After the war there was a shortage of housing. This enormous shortage of housing was used to stimulate the construction of homes for the elderly. Herewith, houses were made available for young families (De Wildt et al., 1993, Deen, 2004). They had the aim to provide adapted houses for every older person which would meet their specific needs. The types houses and the elderly were distinguished from each other based on their reliance on care (Mens & Wagenaar, 2009). Examples are, independent elderly houses, retirement home, serviceflats and nursing homes.

When elderly were going to move to a suitable house or retirement home it was preferred that elderly remained close to or in the neighborhood they came from. This was promoted by the ideal of the “wijkgedachte” (the postwar reconstruction and expansion of cities is based on this urban planning concept), which also paid attention to the urban integration of the elderly houses in new neighborhoods in order to promote the active role of elderly in society and to reduce social isolation (Mens & Wagenaar, 2009).

From 1950, the construction of retirement and elderly homes increased enormously.

3.3 1960 - 1980
Around 1970, almost a third of elderly lived in buildings and houses that were specifically built for them (Mens & Wagenaar, 2009).

In this period, the cost of the construction of retirement homes and elderly care increased to a certain extent that elderly care would become no longer affordable if no action was taken (De Wildt et al., 1993). A lot of vital elderly lived in a retirement homes even though they could live independently in a normal house. They lived in a retirement home for the convenience of amenities close by and to be able
to avoid the nursing home. This led to a lack of places in retirement homes, elderly who needed a place because of their defects could not get one, and the costs increased which made a place in a retirement home no longer affordable for some elderly people (Mens & Wagenaar, 2009).

In 1976, in each region only 7% of the elderly are allowed to be included in a retirement home (De Wildt et al., 1993). The image of the retirement home changed from a normal residential facility to a healthcare institution (Mens & Wagenaar, 2009; Deen, 2004).

An aversion for the retirement homes arose. In the beginning, they were meant to integrate older people in society and their familiar neighborhood. People thought the opposite about it. Most of the retirement homes were built in new built neighborhoods which were unknown to the elderly. The buildings itself were introvert and separate the elderly from society and social life (Mens & Wagenaar, 2009).

Since 1970, the focus on living in a retirement home or specifically designed home for elderly started to shift to living in a normal regular house. Elderly wanted to live independently for as long as possible (De Wildt et al., 1993, Deen, 2004). Facilities arose which could support that, for example a service building in the neighborhood.

3.4 1980 – now
After World War II, hundreds of thousands specific houses for elderly were built. This approach did not persist anymore. Housing and care were now separated from each other. The old retirement homes were replaced by residential care complexes (“woonzorgcomplexen”). Elderly in need of care could rent an apartment here and according to their need, receive customized care (De Wildt et al., 1993; Schuitt-Lucassen et al., 1997). The nursing homes and the retirement homes became more similar to each other. In the nursing homes, the focus became more on the housing instead of only care providing (Mens & Wagenaar, 2009).

The housing market did not separate the elderly from others anymore; the specific elderly home disappeared. New ideas arose; instead of building houses for a specific group that meet their needs, the regular housing market should be better used. This means modify the existing stock and the construction of lifetime homes (Mens & Wagenaar, 2009). This will result in homes which are suitable for elderly but also for other target groups. Age and reliance on care will not play a role anymore and lifestyles become more important. “The elderly house” does not exist.

Due to a growing amount of elderly people living independently, the amount of care facilities in the neighborhood increased. The concept of the “woonzorgzone” is often used as approach. The woonzorgzone is a neighborhood or part of a neighborhood with a set of living, care and welfare facilities which support elderly and people with disabilities to live independently (Van Rossum, 2005). The house is not only of importance by supporting elderly to live independently. A good living quality is more than a house. The outdoor environment, with its public space, public life and amenities, is also important (De Jong, 2006). In the beginning of the development of elderly housing, the neighborhood was also considered as important in the housing of elderly. Later on, the focus was more on housing and care and less on the social interaction with the neighborhood.

Nowadays, still a lot of elderly life independently. Current policies stimulate older people to live at their home as long as possible and moving to a nursing home is made more difficult by stricter criteria. This trend is also called “aging in place”.

4 Aging in place
Aging in place is often defined as the ability to remain living independent in the community or environment of one’s choice, even when disabilities arise which threaten the level of independence, rather than living in a residential care institution (Emlet & Moceri, 2012; Wiles et al., 2012). Besides, aging in place does not only mean being independent in choosing where you want to live but also in choosing and receiving the service and support of one’s choice (Emlet & Moceri, 2012; Wiles et al., 2012). This makes the link between aging in place and independence more stronger.

4.1 Aging in place as wish and policy
In recent years, it became clear that most elderly have a preference to remain in their home independent as long as possible instead of entering a retirement home or nursing home (De Wildt et al., 1993; Horner & Boldy, 2008; Sixsmith & Sixsmith, 2008).

Nowadays aging in place is not only a wish of older people to stay in their home, it is also part of policies in the Netherlands on care, care institutions and older people (Van Dam et al., 2013). In period between 1970-1980, due to a huge expansion of retirement home, one was afraid about the escalating costs of the institutional elderly care. Remaining longer at home was also desirable in that time. Since the increasing of an older population, which has not taken place before, and the rising costs of care, aging is in place is seen as a solution to lower these costs of “aging” to an acceptable level (Van Staalduinen, 2014; Sixsmith & Sixsmith, 2008).
Sixsmith, 2008). Customized care at home is seen as less expensive than moving to institutional care (Sixsmith & Sixsmith, 2008).

4.2 Benefits and requirements
Aging in place could have several benefits; not only for the elderly itself but also for the community. In general, aging in place is seen as a benefit for the quality of life of elderly people (Sixsmith & Sixsmith, 2008). Aging in place enables elderly to maintain social connections and friendship with neighbors, friends and family, where they could benefit from (Wiles et al., 2012; Buffel et al., 2012). Besides, a long-term emotional attachment to a place or environmental surrounding gives meaning and security to older people and contribute to their well-being (Wiles et al., 2012). Moreover, elderly can offer a lot of advantages to a community or neighborhood because of their experience and knowledge and the commitment and attachment to their communities and the immediate surrounding (Buffel et al., 2012). However, aging in place is not only beneficial, it also asks some assistance and requirements.

Although aging in place is often associated with the home, the personal environment, which is often seen as an essential component, aging in place requires more components. The neighborhood and community are as important and should also facilitate the wish and ability of the majority of elderly to remain in their homes as long as possible (Vasunilashorn et al., 2012). This is supported by Wiles et al. (2012) who found that the advantages of aging in place operate at community and neighborhood level – people and places –, and that they are not just linked to a particular house. Components, beside the home, that assist aging in place are good access to services and amenities, community care, recreational opportunities, facilities that stimulate physical activity and transportation (Wiles et al., 2012; Horner & Boldy, 2008).

In addition, social interaction and social connection are seen as important (Horner & Boldy, 2008; Wiles et al., 2012; Cannuscio et al., 2003). Aging in place ask more involvement of friends, neighbors, informal caregivers, volunteers or relatives, (Vasunilashorn et al., 2012). Besides, due to the loss of a part of the social ties or partner, elderly are more dependent on the social connections and relations within their community (Cannuscio et al., 2003). Therefore a good social network is necessary.

4.3 Risks of the concept aging in place
As stated before, aging in place provide advantages which contribute to the quality of life of older people. However, in some cases it can diminish the quality of life. Some elderly people try to cope at home for too long or they ask too late for help and necessary services, which led to physical and mental exhaustion. The reason for this can be the strong desire of an older person to remain in their home, even when it is no longer feasible (Horner & Boldy, 2008). Elderly do not want to move out of their house, they are afraid of the alternative. The deinstitutionalization has result in an image of a residential care home or nursing home as a last destination (Vasunilashorn et al., 2012). Besides the expectation from society that most elderly should age in place can feel as a pressure to meet this expectations. In our society dependency is seen as a weakness with the result that people avoid help and services (Horner & Boldy, 2008; Sixsmith & Sixsmith, 2008).

Moreover, aging in place ask for some requirements which are often still lacking. In the living environment and the home a lot of elderly encounter difficulties (Penninx & Royers, 2007; Sixsmith & Sixsmith, 2008). In the neighborhood there are uneven pavements, poorly designed public spaces and a lack of facilities. Besides, a lot of houses are not easily accessible which creates a barrier for the elderly who is living there but also for an aging friend or family (Sixsmith & Sixsmith, 2008; Mens & Wagenaar, 2009)

Aging in place is popular among policy makers, governments and the older people themselves. However, we should not romanticize it. There are not only benefits and it requires a good integration of several components. Besides, aging in place is not a one-size-fits-all concept (Vasunilashorn et al., 2012). We should respond to the diverse needs that still will exist. A place is not for everyone the same and older people are not a homogenous group. Some people need more care than others but they all deserve a suitable living environment which is integrated in the community.

Aging in place, provides care at less cost, in the neighborhood or at home, and asks more involvement of informal caregivers, relatives and neighbors. However, it should not become a burden.

Retirement communities
Aging in place is not only popular in the Netherlands. In other western countries, most elderly have a preference to stay in their home for as long as possible (Masotti et al., 2006; Sixsmith & Sixsmith, 2008). However, in the United States another way of living is popular among older people; Retirement Communities, Active Adult Communities and Continuing Care Retirement Communities. They are planned communities, sometimes gated, and contain features of a small city or town (Cannuscio et al., 2003). In 1960, developer Del Webb built the first retirement community, Sun City, in Arizona. This large-scale is surrounded by walls and only people over the age of
55 are allowed to live there. In 2007, Sun City counted around 48,000 inhabitants (Lijzinga et al., 2009; McHugh & Larson-Keagy, 2005). Since the opening of Sun City, hundreds of retirement communities and villages have proliferated in the United States and beyond (Cannuscio et al., 2003; McHugh & Larson-Keagy, 2005). In the United Kingdom retirement communities also exist, the extracare villages. They are similar to continuing care retirement communities. They are not fully self-sufficient and are often located on the outskirts of a neighborhood. Even though there are a lot of amenities and services for the residents, like shops, a restaurant, health and sport facilities in the village, they are still connected with the surrounding neighborhoods (Lijzinga et al., 2009; Heins, 2005). 5.1 Retirement communities as havens Interviews of Sun City residents (McHugh & Larson-Keagy, 2005) revealed that retirement communities are places of affirmation and that they give a sense of belonging and worth, something which elderly could not find in their old community anymore. Words like “in most cities, the elderly are not accepted as full” and “they got turned off in their former communities (...) it was as though people were being pushed away because now they were retired, and the assumption was they had nothing to contribute” (McHugh & Larson-Keagy, 2005) emphasize this. Besides, retirement communities are praised for providing certain services and benefits for elderly: security, activities, neighborliness, low-traffic streets, activities and social networks (Streib, 2002; Cannuscio et al., 2003). However, there are indications that retirement communities and gates do not guarantee safety or improved community integration (Cannuscio et al., 2003). Besides, as Blakely & Snyder (1997, cited in Cannuscio et al., 2003) argue “gated communities are no better or worse than society as a whole in producing a strong sense of collective citizenship”. Although these retirement communities seem to offer benefits to elderly and contains features which some older people are missing in communities that include all ages, they also foster segregation by excluding other age groups and social classes (McHugh & Larson-Keagy, 2005). Besides, it is more desirable to solve these problems concerning ageism, security and social cohesion in society itself because existing communities could also offer a lot of benefits for older people and vice versa.

5.2 Retirement communities in the Netherlands A few years ago, the discussion arose whether it was desirable and feasible to build a retirement community in the Netherlands (Lijzinga et al., 2009). However, there appears to be little support for this idea. Most Dutch elderly feel attached to their living environment and their social network and do not want to move. If they do, it is on a short distance and most preferably in the same neighborhood (De Groot, 2013). Besides, the creation of segregation between elderly and other age groups caused by retirement communities is often seen as a disadvantage (Heins, 2005). Moreover, it undermine the potential and the meaning of the role of the elderly in society as stated earlier. Furthermore, due to the trend and policy to age in place the integration of elderly in society becomes more important because they are more dependent on their social ties and relations within the community (Vasunilashorn et al., 2012; Cannuscio et al., 2003) A study, commissioned by the Dutch government (Lijzinga et al., 2009) investigated among Dutch elderly whether it was desirable to live with only seniors in a certain spatial setting. The research found that in general there was little demand for it and only small-scale initiatives in a central located densely populated area were preferred. In certain areas of existing neighborhoods and residential environments, the public places, houses and amenities could be adapted to the needs of elderly people (Heins, 2005). They will provide pleasant places for elderly where they are still surrounded by other ages and types of people. Residential environments should become more dynamic in their amenities and housing. They are now mainly focused on families and young people. According to Jan Latten (Gaëtlière van Weezel, 2010), the housing stock in the Netherlands should become more creative. Due to the demographic shifts there is more demand for different types of housing, especially collective housing (Van Hoogstraten, 2014). These types of housing, for example independent houses with collective facilities, could foster social interaction and social cohesion, which is seen as desirable for aging in place (Cannuscio et al., 2003; Wiles et al., 2012). Transition zones will also become more of importance in encouraging unplanned social interaction, because housing in locations with more opportunities for unplanned social interaction show stronger ties among the residents (Sugihara & Evans, 2000). The typology of old “hofjes” can be used for inspiration.

6 Conclusions Among a lot of people, becoming old is seen as something negative. This view is partly caused by the way we arrange people in groups in society. When people start to reach the age of 65, we label them as old people and often focus on the negative aspects of it, which sometimes undermine their potential in society. Besides, we tend to design for elderly in an age-segregated way. This started in the beginning of the 20th century, when elderly became a separate group in society instead of poor people. In that century, a lot of retirement homes and other
types of housing specifically built for elderly, were constructed. However, it led to an aversion for these houses. Retirement communities are also an example of coping with aging in an age-segregated way; in order to meet the needs of elderly, we place them somewhere else, outside the neighborhood. In the Netherlands these communities do not exist yet and there seems little support from elderly to construct a retirement community in our country. In general, older people want to stay independent and valuable for society. The image of an aging society as a burden should be changed.

What did not change through the years, is the preference of elderly to remain independently or with some level of independence in their own house. Nowadays, they are even forced to it with the current policies on care and care institutions. Aging in place could offer a lot of benefits. However, it can also be disadvantageous and diminish the quality of life and health if the environment does not support aging in place. Therefore, it is still necessary that we keep thinking about living environments that not only provide a house or living space for elderly but that also see and stimulate their potential in society. We should look beyond the traditional and try to create different new types of living environments that meet the needs of different types of people, old and young.

Bibliography


APPENDIX II
Vragenlijst

Geslacht: Man / Vrouw

Leeftijd: 

Postcode: 

1. Wilt u in deze buurt oud worden? Waarom?

2. In wat voor woning woont u?
   Bijvoorbeeld een eengezinswoning, flat, portiekwoning, aanleunwoning etc.

3. Stimuleert uw buurt en woning u om actief en vitaal te blijven?
   Bijvoorbeeld door het aanbod aan voorzieningen, weinig obstakels op straat, plekken in de wijk of stad die u stimuleren om naar buiten te gaan of te bewegen.

4. Welke voorzieningen of plekken in de wijk bezoekt u wekelijks?
   Bijvoorbeeld een park, een supermarkt, bakker of bibliotheek.

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<thead>
<tr>
<th>Voorziening/plek</th>
<th>Naam van de voorziening/plek</th>
<th>Straatnaam waar deze voorziening/plek zich bevindt</th>
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5. Met welke reden bezoekt u deze voorzieningen of plaatsen?
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6. Zijn er ook voorzieningen of plaatsen in een ander deel van Den Haag waar u vaak komt? Zo ja, welke en waarom bezoekt u deze?
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7. Welke voorziening(en) mist u dicht bij huis?
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8. Op welke manier verplaatst u zich meestal in de wijk of stad?
Te voet / Fiets / Openbaar vervoer / Auto / Anders, namelijk………………………………………………
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9. Ervaart u moeilijkheden als u zich naar een plek in de wijk of stad wilt verplaatsen? Zo ja, welke?
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11. Wie ontmoet u op deze plek(ken) en welke activiteit(en) voert u dan uit?

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12. Vindt u dat er genoeg geschikte plekken zijn om andere mensen te ontmoeten of bijeen te komen? Bijvoorbeeld een buurthuis of park.

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13. Zijn er nog andere plekken in de wijk of in Den Haag waar u geregeld dezelfde mensen tegenkomt die u persoonlijk niet heel goed kent, maar deze wel kort begroet?

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14. Welke vrijetijdsbesteding oefent u graag buiten uit (bijvoorbeeld wandelen of een sport) en is hier genoeg ruimte voor?

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15. Als u buiten bent of op straat loopt, wat vindt u dan mooi om te ervaren of naar te kijken? Bijvoorbeeld bomen en planten, een kunstwerk of een mooi gebouw.

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16. Wilt u verder nog iets kwijt of vertellen?

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EINDE

Hartelijk dank voor uw deelname!

Wilt u kans maken op een waardebon, vul dan hieronder uw gegevens in:

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Adres:...........................................................................................................................................................................
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Uw gegevens zullen niet aan derden worden verstrekt
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Bijvoorbeeld bomen en planten, een kunstwerk of een mooi gebouw.

Wilt u verder nog iets kwijt of vertellen?

Hartelijk dank voor uw deelname!

Wilt u kans maken op een waardebon, vul dan hieronder uw gegevens in:

Naam:

Adres:

E-mail:

APPENDIX III
Old drawings and models which are made during the design process, but which are not included in the chapters, are shown here.
Design park De Verademing
Design Parkstreet

Proposal street kiosks - information point for residents

Design Regentesseplein
Design waterside at park De Verademing