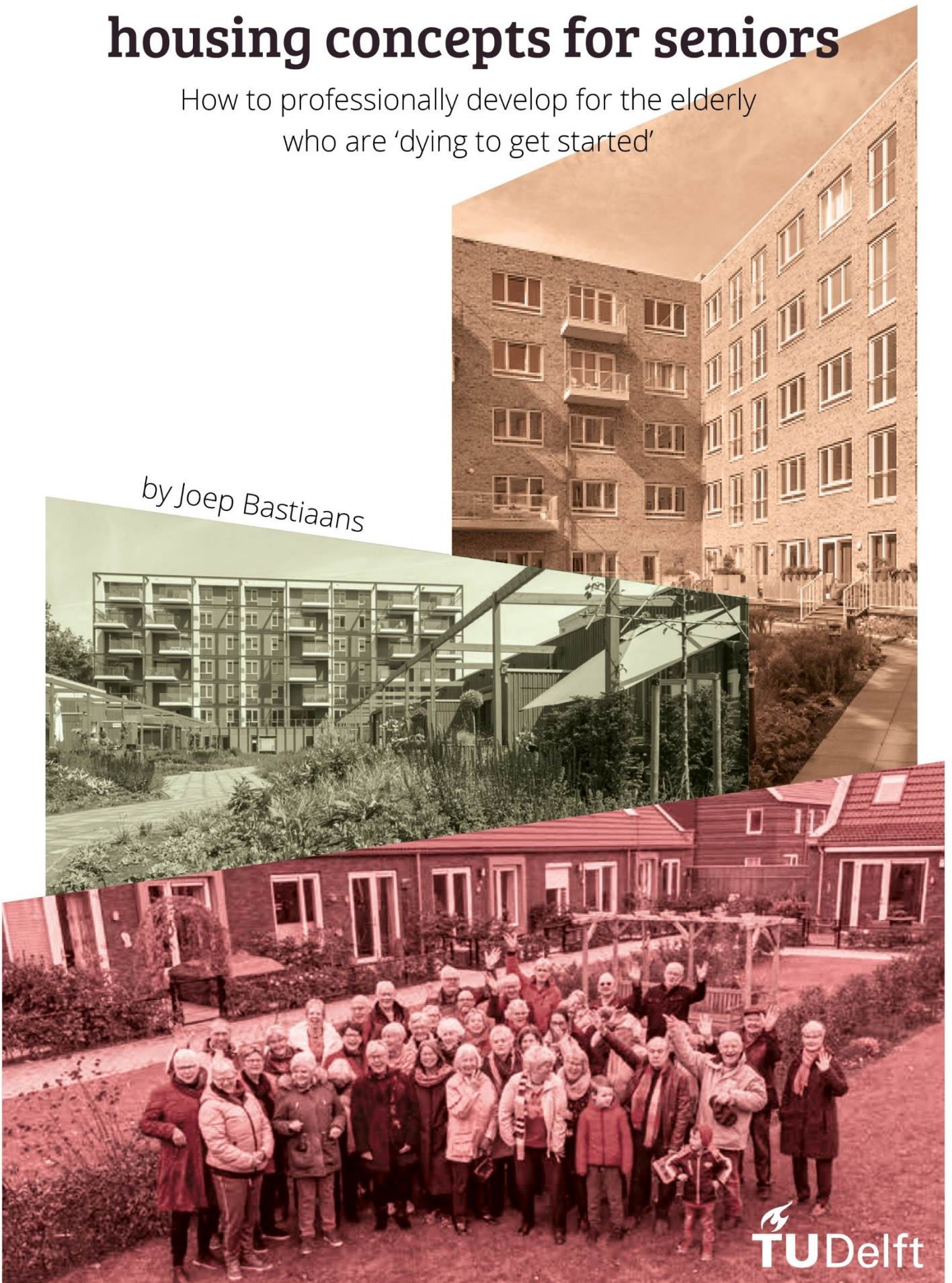


Professional collaborative housing concepts for seniors

How to professionally develop for the elderly who are 'dying to get started'

by Joep Bastiaans



**“The most significant index
to any civilization
is the way it treats its elderly.”**

~ Simone de Beauvoir

Abstract

The Netherlands faces the challenge of a rapidly ageing population, which demands more diverse housing concepts for seniors. Collaborative housing (CH) concepts are a promising solution to promote contact and mutual support, counteract loneliness, and reduce public health expenses.

Professional-led CH concepts is an emerging phenomenon that could allow a faster and more accessible supply of senior dwellings than resident-led projects. However, little is known about the perceived value of use by the residents. This study raises the question: *How do professional collaborative housing concepts for seniors satisfy the end user's demand?*

CH concepts for seniors are defined as a differentiated housing solution that focuses on promoting togetherness, provide at least one shared space, and targets the over-55s. Three professional-led CH projects are in-depth by performing mixed-method research. A thorough analysis of the cases showed that most respondents experienced benefits compared to their former dwelling, like more contact with neighbours, live with like-minded people and enjoy life more. Two types of initiators can be distinguished. The commercial-oriented initiators are the most skilled in a lean and mean development process. They deliver dwellings with high use value by emphasising smart technology and communality as an outsourced service *for the resident*. The ethos-oriented initiators use a custom-fit approach to assemble a motivated group of residents that form a strong foundation based on shared social values. In this development process, the communal organisation is led *by the residents*, in which social values could thrive.

This study shows that the professionalisation of CH for seniors is promising when the initiators stay close to the end-users' needs, which asks for design disruption. However, caution is necessary because commercialising communality can cause residents' responsibility towards each other to disappear. Cases showed how financial objectives could clash with the three fundamentals of CH by 1) as additional selection for an intentional community raises vacancy risk; 2) allowing for user involvement in the design and maintenance asks for intensive guidance and; 3) legal, financial and organisational challenges in delivering a common area causes extra effort and time. Caution is needed for the commercialisation of communality, as responsibility towards each other disappears, diffusing both the concepts and the communal benefits. CH concepts will have little chance without additional organisational and financial support in a scarce housing market ruled by financial interests. Governments and societal initiatives can play an important role in shifting the boundary to demand-driven developments, looking beyond profit and risk minimisation.

Keywords – Senior housing, collaborative housing, professional-led, perceived benefit, ageing society.

Preface

Over the past year, I have been working on my master thesis by exploring the subject of professional collaborative housing for seniors. To be honest, quite a niche, so let me explain how it attracted my interest. Before I was born, my grandparents wanted to move out of their large single-family house with a laborious garden. For 22 years, they browsed real estate brochures but never found the apartment of their dreams. Years passed by, and one day my grandfather stumbled in the garden and was unable to independently get up again. The moment their house started to become an obstacle, they realised that it was necessary to move.

I believe that the story symbolises the story of many parents and grandparents, and I decided to research this topic during my studies in MBE. Since then, I have been caught up in the so-called Baader-Meinhof Phenomenon, also known as the frequency illustration: I noticed the increased demand for new housing concepts for seniors in lectures, media, and all around me. I am grateful for the chance to combine theory and practice during my graduation internship and learnt a great deal of management and housing development. In particular, I would like to thank my mentors, Darinka Czischke and Peter Boelhouwer, for the opportunities, critical look and personal support during this process. I would also like to thank the interviewees and survey participants for sharing their experiences. If there is one thing I have learned, it is enrichment that collaborative housing can have on a person.

Fortunately, my grandparents were lucky to find an apartment, but the market changed. Hopefully, this thesis will inspire you as a reader and more parents and grandparent for housing opportunities in the second half of life. Happy reading!



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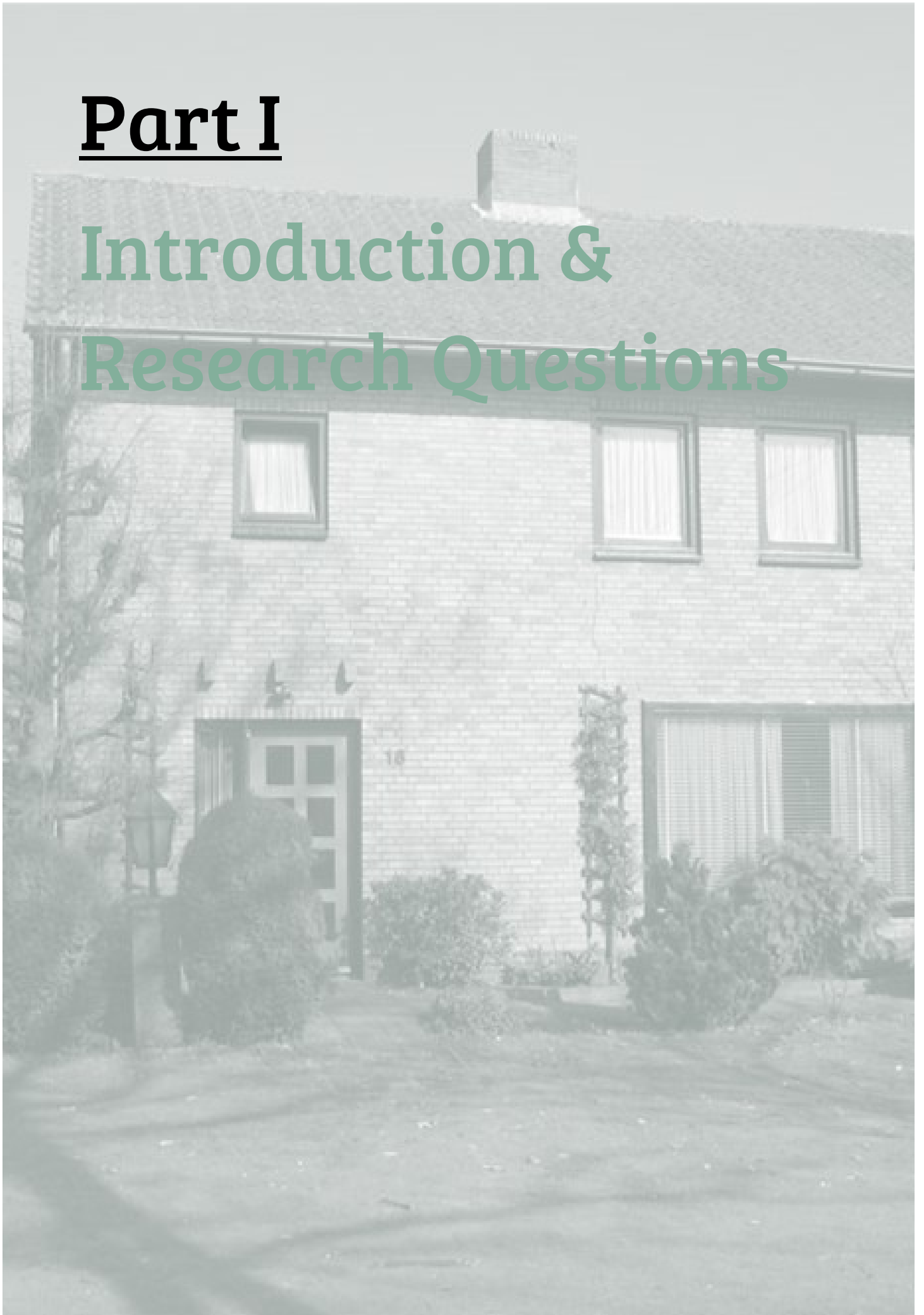
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Part I

Introduction & Research Questions



1. Introduction

Three years ago, the Minister of Housing, Stef Blok, said: "The housing market is never finished, but it is currently functioning sunnily". Partly he was right, as the unfinished Dutch housing market became a hot topic. Screaming headlines can be seen weekly in the media, such as 'Housing market locked: move people over-55s to a different dwelling' (NPO Radio 1, 2018); 'Constructing for the elderly is not sexy enough: Municipalities prefer showing off with beautiful offices' (De Volkskrant, 2020) and 'Need for quarter-million extra homes for the elderly' (Trouw, 2020). What is the context of this problem, and how can research contribute solving it? In this first chapter, the problem statement, research questions, objectives and relevance of the research are described.

1.1 Background information

The ageing Dutch population

The Netherlands is facing a rapidly ageing population. Currently, already 56% of Dutch households are over 50 years old. In 2040, approximately 4,9 million inhabitants will be over 65 years old, equal to 26% of the population compared to 19% at the moment. Additionally, the number of elderly aged 80 and older is doubling as life expectancy is rising, see figure 1 (CBS, 2019b). The Dutch governmental advisory committee on the future care of elderly housing (2020b) concluded that too few appropriate elderly dwellings are being built nor renovated to cope with the changing housing demand. The lack of adequate alternatives requires many older people to remain in their current dwelling. The committee strongly advised constructing more adequate housing in which seniors can remain independent of care. The government and municipalities should revalue and experiment more with promising models around togetherness.

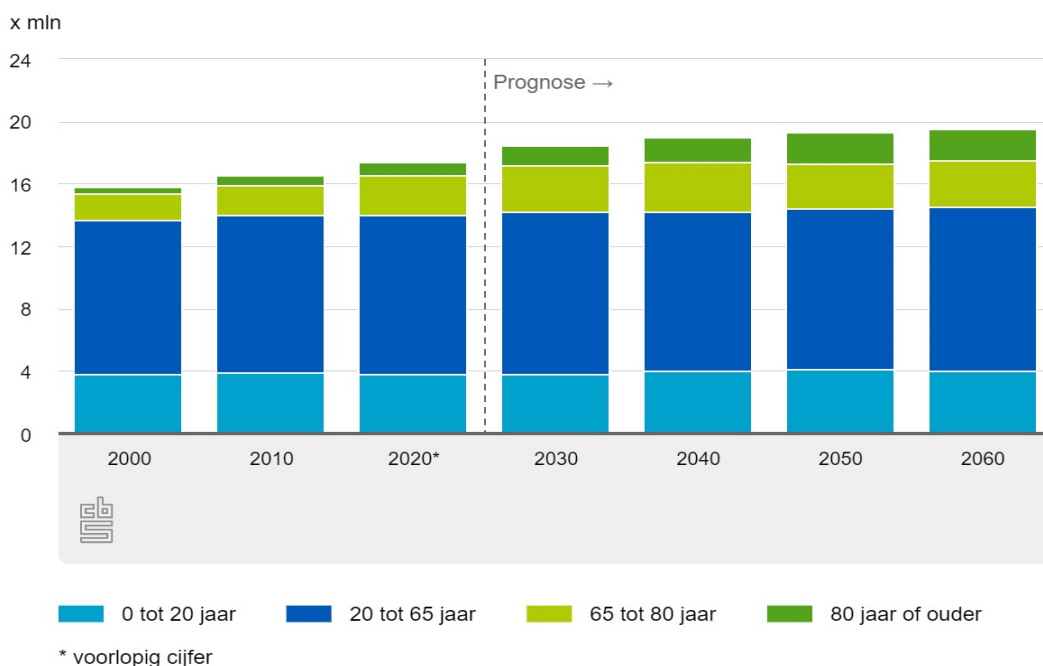


Figure 1 The CBS Population forecast from 2019-2060 according to age on 1st January. Visible is the increase of 65+ in total and the 80+ group within (CBS, 2019a)

The societal costs of living independently at home

The percentage of people independently ageing at home increased in all age groups during the last twenty years (see figure 2). It is a direct result of policy changes supporting this *ageing in place* paradigm to allocate health care more efficiently and increase life quality. However, the quality of the living environment has a strong influence on the quality of life. An inappropriate living environment can lead to feelings of loneliness and exclusion (PBL, 2013). Volksgezondheidszorg (2016) concluded that more than 50% of all over-55s experience feelings of loneliness. The percentage increases as people get older. Besides this negative personal impact, lonely older adults also cause an increase in care costs from the Social Support Act (in Dutch: WMO) (Deloitte, 2016).

Unquestionable, the demand for long-term care will continue to increase with the upcoming population's growth of the over-80's. While the demand for care increases, the working population decreases. It will further pressurise the current 3 million informal caregivers. There are severe doubts about whether ageing in place is more effective and how it will be financially maintained. Without policy changes, the healthcare costs will increase from 19 billion euros to 43 billion in 2040 (Commissie Toekomst zorg thuiswonende ouderen, 2020c). The changing institutional care system has considerably impacted seniors' lives, the societal and financial costs. Redesigning the built environment is inevitable to meet future societal demands.

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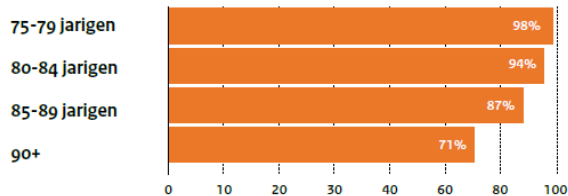


Figure 2 Percentage of elderly living independently (Commissie Toekomst zorg thuiswonende ouderen, 2020a, p. 1)

Structureel afhankelijk van verzorging of verpleging

(in procenten)

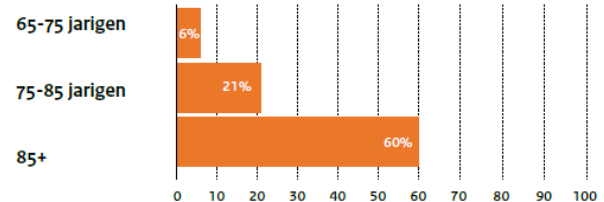


Figure 3 The percentage of elderly dependent of health care (Commissie Toekomst zorg thuiswonende ouderen, 2020a, p. 1)

Collaborative housing as a solution?

Creating a more suitable built environment for the rapidly changing society is easier said than done. Although the propensity to move among the elderly is low at 3% to 4% (WoON, 2018), around 33% of senior citizens say they would like to move at some point in their lives (CBS, 2020b). Accordingly, seniors often move when it is too late due to more intensive care requirements or when the house becomes an obstacle (WoON, 2018). A decade ago, houses were released when people moved to a care home or retirement home. Due to the lack of supply of adequate elderly dwelling, far fewer owner-occupied houses are released to trigger a series of movements. The stagnation of the Dutch housing market is partially caused by this (Platform31, 2021).

The Committee on elderly housing and care (2020c) explicitly advised the revaluation of clustered and collaborative housing for senior residents. Besides the committee, different researchers also concluded that senior collaborative housing concepts are promising solutions for ageing societies as it shows positive effects on ageing, can increase the life satisfaction, creates mutual support between seniors and reduces the feelings of loneliness (Glass, 2013; Labit, 2015; Riedy et al., 2017; Rusinovic et al., 2019). These findings are beneficial for our society as a whole, as the public health care costs for the increasing group of elderly are estimated to keep rising over the coming years. This thesis focuses on how these concepts can be effectively supplied and match the seniors' demand.

1.2 Problem statement

Despite the increased attention for CH concepts, the provision remains challenging for both residents and professionals. Resident-led developments tend to be time-consuming, complex and hard to finance (Platform31, 2020a). Only a few of the many initiatives are successful, and even then, the average process takes around ten years (Labit, 2015; Stavenuiter & Van Dongen, 2008). Professional-led CH provision is an emerging phenomenon (Pirinen, 2016; Scanlon & Arrigoitia, 2015). Research on the professionalisation of CH stated that “*projects require an increased amount of work, exceptions and other special arrangements: reasons why the private sector actors often find collaborative housing projects complex and risky*” (Helamaa, 2019, p. 374). As long as the economics, planning and financing remain barriers for both residents and developers, these developments are dependent on a few risk-taking pioneers (Scanlon & Arrigoitia, 2015). A few Dutch professional parties have already delivered CH concepts specifically for seniors. What is currently missing is understanding why some parties engage and how some were able to develop a pioneering Dutch CH project.

Pirinen (2016) already investigated how four Finnish CH concepts offered a specifically differentiated product for the elderly but left out the residential experience. For this, the marketing, development, and delivered product were analysed. He highlights that it is necessary to focus on the perception of residents of the concepts in use. Current research about the Dutch concepts mainly concentrates on the innovativeness of concepts and the barriers; however, they often exclude the communal benefits of the communities' for residents (Platform31, 2020a). Therefore, this thesis first aims to evaluate how professionals differentiated their Dutch CH concepts for seniors from resident-led or conventional housing provision. Secondly, the concepts will be evaluated based on the residential satisfaction in use, see figure 4. The knowledge gained can enable professionals to better understand the complexities of delivering the communal benefits of CH. On a more holistic level, the achieved senior satisfaction helps us to reflect on the viability of the professionalisation of CH as an answer to the changing societal demand.

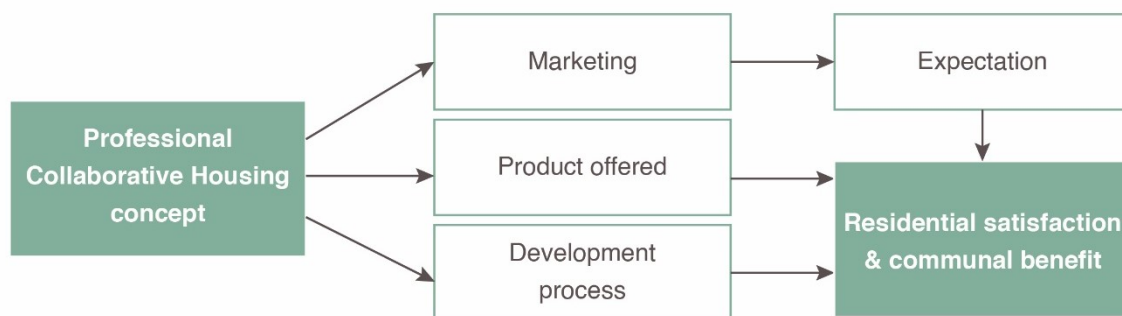


Figure 4 Conceptual framework of the research question (own illustration).

1.3 Goals & objectives

The following objectives have been formulated:

1. Understand why the demand for senior CH is increasing and what benefits CH can offer to the residents.
2. Understand why the current housing system is currently unable to deliver CH concepts for seniors by focussing on the differences in development compared to conventional housing development.
3. Analyse what CH concepts professionals are currently offering regarding the marketing, the product and the development process.
4. Evaluate the residential satisfaction in professional-led CH concepts for the elderly, specifically focussed on the expected communal benefits.

1.4 Research questions

The main question is formulated as follows:

How do professional collaborative housing concepts for seniors satisfy the end user's demand?

Sub-questions

The research has been divided into four sub-questions that have to be answered before the main question can be answered. The order is as follows:

1. Why is there an increasing demand for senior CH in The Netherlands?
2. Why is there a mismatch between the supply and demand of senior dwellings?
3. How do professionals offer CH for seniors as a product?
4. How do the residents evaluate the realised concept, focusing on the communal benefits?

1.5 Relevance

Societal relevance

The Committee on elderly housing and care (2020c) advise to construct more elderly dwelling in general and reevaluate collective and collaborative housing concepts. Due to the continuous undersupply of this typology, a subsidy for innovative housing concepts for the over-55s was launched by Minister Ollongren, responsible for housing. The Housing and Care Incentive Subsidy (in Dutch: Stimuleringsregeling Wonen en Zorg, SWZ) has an annual budget of 116 million euros (Rijksoverheid, 2019), with an additional 20 million made available in 2020 to accelerate the development of clustered housing concepts (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2020). However, this is less than 6% of the total budget of 2 billion euro. Hence, several national interest groups do not consider the budget an adequate stimulus for the needed changes. They demand that the national government imposes a central vision and takes back control. Target percentages for municipalities with a specific focus on clustered housing are one of the demanded measures (ANBO, 2020). Because various political parties have incorporated this in their election programmes, the topic likely remains on the political agenda for the coming years. The advice reports, subsidies and pressure of interest group emphasise the societal relevance of research into the professional development of collaborative housing concepts.

Scientific relevance

The scientific relevance arises from specific recommendations for future research in the field of professional-led collaborative housing. Researchers like Palmer (2019) and Labit (2015) discuss the trend and potential of professional-led collaborative housing and recommend conducting additional research. Scanlon & Arrigiotia (2015, p. 120) were one of the first to focus on the economic aspects and stated that *"It is our hope that with the increasing popularity of co-housing in the UK and London, this first major foray into economic aspects of its development will lead to further analysis of comparative forms"*. Recent master research by Van Loo (2020) examined the municipal role and the different governing mechanisms to steer towards more collaborative housing concepts for seniors. One of the recommendations is to research how market parties and societal organisations can contribute to the construction and operation of CH. Still, little research has been conducted on the satisfaction of the end-users in professional CH developments. Pirinen (2016) explicitly mentioned the value of future research in the pros and cons of user involvement and the perceived value of residents of the concepts in use. These recommendations have been explicitly considered when setting up the research of this thesis to bridge the scientific gap.

Professional relevance

The increasing demand demonstrates a market gap and thus a professional relevance. Stichting Knarrenhof is a professional party that develops, together with future residents, a modern alms-house concept combining privacy with living together in a supportive community. Currently, negotiations take place in more than 38 Dutch municipalities. Since more than 24.000 persons have registered in 300 municipalities, the concept seems to fulfil the growing demand. Due to the difficulty of acquiring locations and organising the process, only two projects have been realised in the last ten years. Traditional professional parties like developer AM and investor Syntrus Achmea are creating similar housing concepts, called Stadsveteranen and Samen Zelfstandig. Getting insight into the approaches used and the end-user satisfaction in these pioneering project could improve and diversify the current concepts. Outcomes of this research will be especially interesting for professionals who are considering or building CH concepts and academics who are interested in the emerging phenomenon of the professionalisation of CH.

1.6 Structure of the report

This first chapter formed the thesis's introduction, including the problem statement, relevance, goals, research questions, and relevance. In part II, the topic of professional CH is viewed from a theoretical and market perspective. Chapter 2 consists of the literature review, after which the sub-questions 1 & 2 are answered in chapter 3. That allows establishing the theoretical model, including the definitions. In part III, the methods and research design are described. Part IV is the desk research, in which current emerging Dutch housing concepts are analysed, and an in-depth study into the selected cases is conducted. The immaterial benefits that arose in the case study are operationalised in chapter 7. In Part V, all the empirical results are presented. Chapter 8 presents the results of professional interviews, chapter 9 the residential results and the synthesis between the two in chapter 10. Part VI is the conclusion, divided into the discussion, chapter 11, the answer to the research question in chapter 12, the recommendations for practice in chapter 13, and the personal reflections in chapter 14. The report's structure is illustrated in figure 5 with the type of research, research question, method and outcome per question.

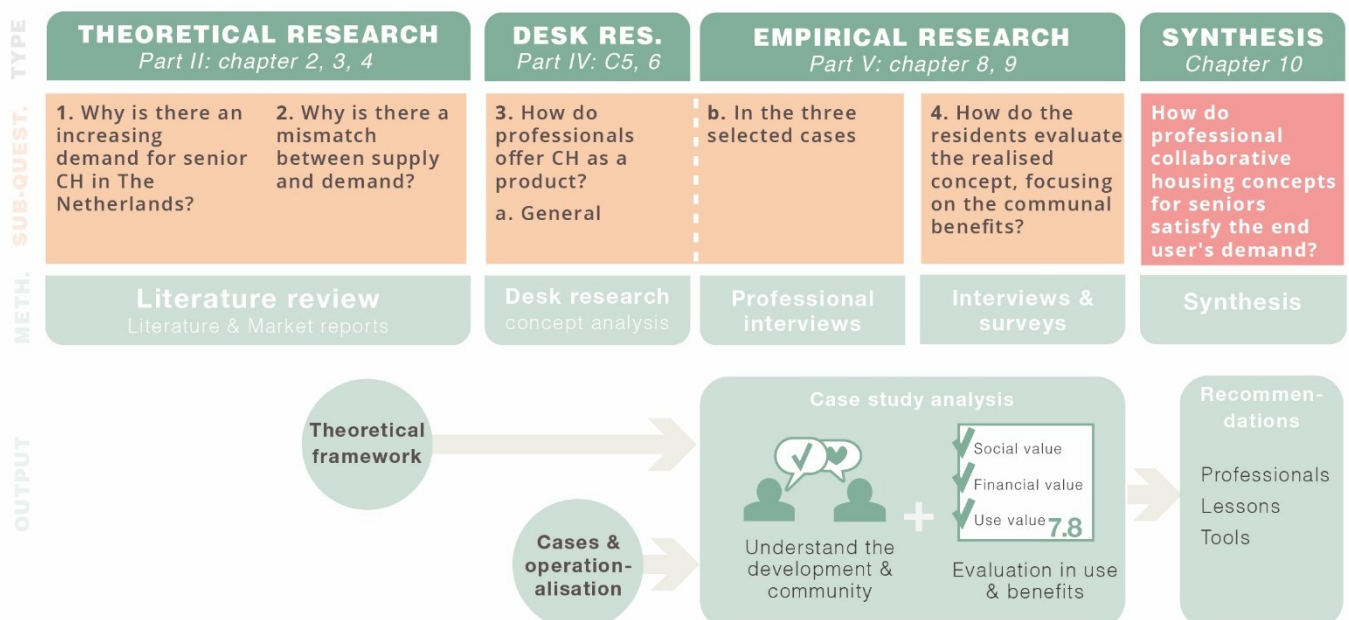
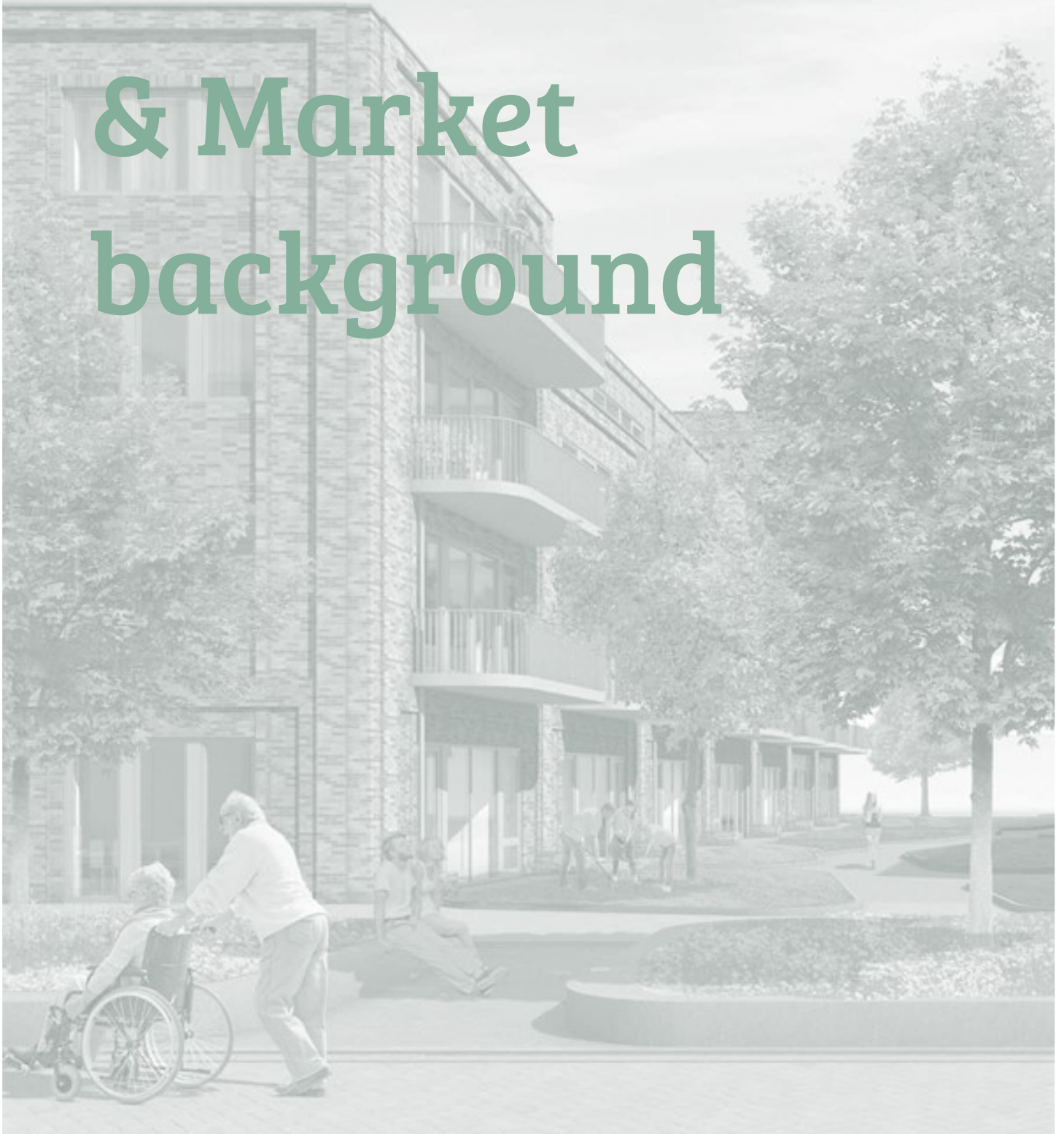


Figure 5 The overview of the research questions and methods (own illustration).

Part II

Theoretical & Market background



2. Literature review

The literature review provides an overview of relevant scientific literature on the concept of professional collaborative housing for seniors. First, the definition and history of CH are described (section 2.1), after which the theoretical benefits for seniors are summarised (section 2.2).

2.1 Collaborative Housing

Vestbro (2010) describes that the first collaborative housing projects were initiated at least 100 years ago. Some were theoretical utopians based on ideals of communitarian societies, while for others, socialistic realism was the base for kitchen sharing in social housing. Sharing facilities did not necessarily result in collaboration between residents. Therefore, housing providers experimented with collective housing in which residents had to maintain the common area themselves. While the goal is often collective organisation, a sense of community might be a side effect.

The term co-housing originated in Denmark in 1960, where the so-called *bofællesskab* (living community) arose (Lang

et al., 2020). Around 20 to 30 families planned these communities to combine individual dwellings with shared spaces and facilities like a kitchen, courtyard, and/or garden. Residents combined living in an individual dwelling with the advantages of communal living (Bamford, 2005). The concept was later translated to English as *co-housing* and often used in academic literature. While the degree of residential participation was initially emphasised, it became a broader term developing differently in other national contexts. In the United States, residents' active participation in the design and operation is a characteristic of co-housing, while in Sweden, co-housing is also characterised by shared activities like a weekly dinner. In the Netherlands, *Centraal Wonen* was a common term in the 80s; in Germany, the word *Wohngemeinschaft* and *Baugruppe* are used and Belgium speaks of *Samenhuizen* (Vestbro, 2010).



Figure 6 One of the early *bofællesskab* projects in Denmark, Sættedammen, finished in 1972 (Bofællesskab.dk, n.d.).

Since the beginning of the 21st century, a re-emergence of self-organised housing has been spreading throughout Europe. A greater variety of models like co-housing, eco-villages, self-build initiatives and Collective Private Commissioning (CPC) were being developed. *Samenhuizen* (Vestbro, 2010). Distinct concepts focussing on togetherness are being developed continuously due to differences socio, national and economic context of countries. Furthermore, developments are not exclusively organised bottom-up anymore but also top-down (Tummers, 2015). These developments caught the interest of researchers, but the terms were used interchangeably. Therefore, Lang, Carriouc & Czischke (2020) introduced the umbrella term collaborative housing to include a wide variety of emerging housing concepts.

Definition

This definition of collaborative housing (CH) is based on three main aspects. The first aspect is the combination of individual households where residents have at least one shared space of facility (Lang et al., 2020; Tummers, 2016; Vestbro, 2010). A garden, a living room, a guest room and/or a kitchen can enable residents to collaborate and organise common activities. The second aspect appears in both the history and systematic literature research (Lang et al., 2020), namely residents participation in the organisation. Whereas the original Danish co-housing refers to a fully residents-led process, CH is more broadly defined by some degree of resident participation. Different authors argue that the roles are changing. Including professionals in collaborative housing projects can help the development process (Krokkfors, 2010; J. Palmer, 2019; Platform31 & Aedes-Actiz, 2017). Participation could positively affect the sense of community that residents perceive. The third aspect found in many kinds of research is residents' intention to form a community (Lang et al., 2020). In an intentional community, residents balance individual life with the

necessities for creating a community, reflected by mutual support. An illustrative explanation of collaborative housing is given in figure 8.

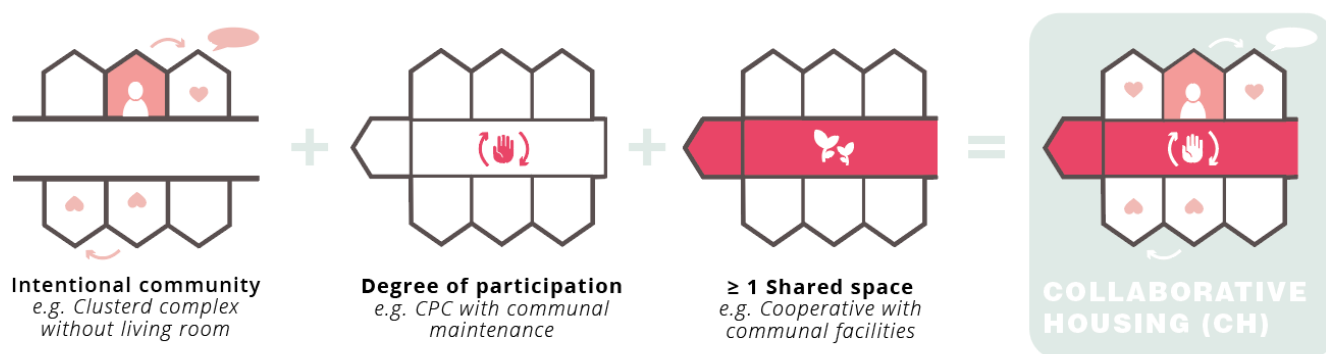


Figure 8 The three fundamentals, that can be found in other projects too, together form the definition of CH (own illustration).

2.2 Benefits for seniors

CH projects are re-emerging all over Western Europe, but the drivers are very diverse. In general, the motivations are not purely utopian but often pragmatic response to develop affordable, inclusive and qualitative housing (Czischke, 2018). Different studies have focussed explicitly on the benefits of CH for senior residents. Especially for the ageing Western societies with an increasing number of single-person households, this aspect could be very promising (Platform31 & Aedes-Actiz, 2017; Vestbro, 2010). A systematic literature review of ten studies resulted in a list of advantages and disadvantages (see [appendix I](#)).

Social value

The main benefit that CH concepts could offer to their residents is creating social capital and empowerment. Especially for seniors, the connectedness with other residents and the ability to voluntarily participate contributes to a happy and healthy old age (Labit, 2015). Although possibilities for encounter and participation can be found elsewhere, the common spaces serve as a hub in which common activities among residents can be organised (Glass, 2020). The comparative case analysis by Choi (2004) identified various activities taking place like drinking coffee, gardening, dining, and meeting by the various committees throughout all the cases. Besides more casual socialising, also helping neighbours is another characteristic of senior CH. Literature referred to it as *mutual help* or *mutual support*. The daily life in these communities enables reciprocal support also gives a sense of purpose and feeling of necessity for residents (Jolanki & Vilkkö, 2015). For the elderly in particular, the ability to socialise and help each other positively affects ageing: it creates a sense of security and enables the elderly to remain active and positive together (Glass, 2013; Labit, 2015).

Financial value

A second reason for residents to choose CH projects is the financial aspect. In general, co-housing is seen as a way to provide affordable housing that is not developed by the market (Tummers, 2015). Residents of CH concepts are often very satisfied with the value for money (Labit, 2015). By developing as a group, construction costs can be saved as projects are not-for-profit. Especially for seniors, a more direct saving is possible by collectively purchasing professional care. A group discount can be charged based on quality and shorter travelling times for nurses. Some researchers hypothetically describe broader societal saving by the possible reduction in health care costs. Labit (2015) describes that mutual help within the community could save public expenses. The lower care demand would arise from less loneliness and allow residents to remain more active and healthy (Stavenuiter & Van Dongen, 2008). Unambiguous evidence for these statements is missing. Rusinovic et al. (2019) even explicitly state that CH is not an alternative to informal or professional care.

Use value

A third category from the literature is the high user value of CH concepts. Palmer (2019) explains the higher user value by the core of the CH concept: developing together to offer alternative solutions from the uniform housing by speculative developments. The motivation stems from a demand for quality, aesthetics and a non-profit product. With the residents in charge, more user-friendly homes can be created. Several authors mention the high level of user satisfaction. Both the dwelling and the living conditions are evaluated positively by 95% of residents, and almost all residents would recommend senior CH concepts to others (Choi, 2004; Pedersen, 2015). Houte et al. (2015) point out their more ambitious environmental objectives. Sharing facilities (such as land, spaces but also cars) reduce the ecological footprint per resident. Collaboratively purchasing (more expensive) sustainable energy installations could be beneficial in the long run, such as PV panels, solar boilers and heat pumps. Besides the user value, there is also a personal value of the homes: the model offers social control that can give feelings of safety (Glass & Vander Platts, 2013), and feelings of loneliness can be alleviated (Rusinovic et al., 2019), altogether resulting in a happier and healthier (Labit, 2015). These aspects partly overlap with social values, and meaningful structure can result in a *sense of purpose* and *belonging* in peoples' lives. Altogether, CH projects can increase seniors overall *well-being* and contribute to more dignified old age.

The various benefits that seniors can encounter in CH concepts can be divided into social value, financial value and use value. Each term has been defined, and exemplary measures are listed to make the possible benefits as explicit as possible:

TYPE OF VALUE	DEFINITIONS	EXAMPLES
SOCIAL VALUE	The social value can be described as buildings and its environment enabling people to make connections and create and enhance opportunities for positive social interaction (Macmillan, 2006)	Several indicators can be used to measure the success level of social value, e.g.: <i>the sense of community, loneliness among residents, the frequency of shared activities</i> and the frequency of <i>mutual help</i> (for a detailed description, see chapter 7).
FINANCIAL VALUE	Building as a commodity to be traded, whose commercial value is measured by the market's price is willing to pay; the owner calls it the book value. (Macmillan, 2006, p. 11)	For the users measured by the willingness to pay or expressed in a price/quality ratio. Developers express financial value often in profitability or return on capital.
USE VALUE	Use value can be described as the level to which the building contributes to the residential usability to live in (MacMillan, 2006). It will be measured for both for the physical as the personal perspective.	Physical use-value refers to usability and appropriateness for the end-user. From a personal perspective, it can be related to the specific benefits that the building delivers, for example, by comparing it to the benefits of the former dwelling

Table 1 The three benefits defined according to MacMillan, including examples of the value.

But a side note has to be made on the literature review. The studies above have mainly been carried out in resident-led projects. These projects are known for a long development duration, resulting in unified and cohesive groups. Therefore, it can be questioned if the same benefits can be expected when residents are less involved in the development or organisation. Several preconditions have to be in place from the beginning to functions, for example the group size, the diversity, the design and managerial factors. In other words, a shared space alone is not a guarantee for a community supporting the ageing process. Although CH is currently emerging in top-down approaches, building a group remains an important and complicated matter. Labit (2015) emphasises the need for communication, conflict solving procedures, design and use of collective and private space and residential involvement. Beck (2020) especially emphasises the necessity to build a group with shared visions and values through self-organisation and social connections. Another side note is that benefits are a subjective experience. Some residents perceived the sense of community as social control rather than neighbourliness, and group relations can lead to tension and bitterness (Glass, 2013).

3. Market of supply & demand

In the chapter, literature is combined with data from the Dutch housing market to understand the increasing demand (section 3.1) and the emerging mismatch (section 3.2), allowing to answer sub-questions 1 & 2:

1. Why is there an increasing demand for senior CH in The Netherlands?
2. Why is there a mismatch between the supply and demand of senior dwellings?

3.1 Increasing CH demand

The previous chapter has shown the advantages of CH concepts for seniors. However, this does not yet answer why CH currently re-emerging in the Netherlands. The answer is sub-divided into three arguments: the ageing society, the changing institutional care landscape and the societal demand for flow on the housing market.

Ageing society

The Netherlands counts about 8.0 million households. Around 28% is household over-65s (2.3 million) and 46% is a 55+ household (3.7 million) (CBS, 2020b). The ageing Dutch population creates an increasing demand for senior housing in general. CBS (2020a) predicted that the Dutch population will continue to grow in the coming decades, to a population of 19 million in 2038. Despite the slightly adjusted growth due to the corona epidemic, the predicted double ageing population remains. Figure 9 shows the first ageing peak in 2040. At that time, around 25% of the population (4.7 million people) will be older than 65, currently 19%. Striking is the doubling of the group ageing over-80s: it will peak at 2,1 million compared to 0,8 million nowadays. Already in 2050, the number of senior inhabitants will again be increasing due to, among other things, the large group of millennials that will turn 65. Another characteristic of our ageing society is the large number of people living alone. Almost 40% of all 55+ households (1,46 million) are single-person households. The older people get, the more often they end up living alone. Thus, it can be assumed that the number of 55+ households will rise even faster than the senior population.

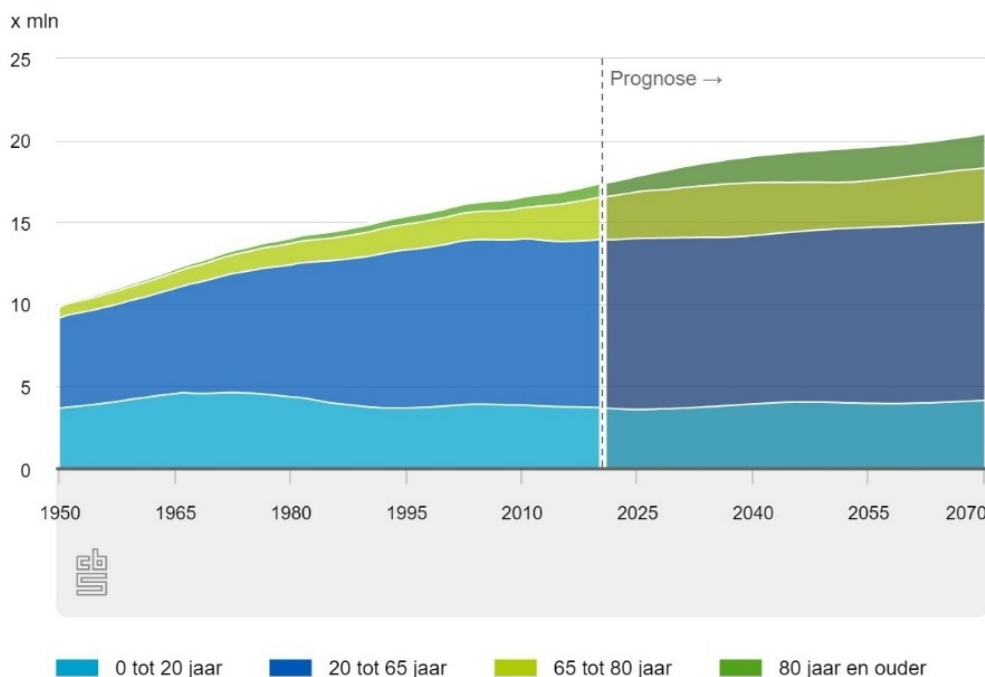


Figure 9 Dutch population on January 1st, divided into age groups (CBS, 2020a).

All Dutch municipalities will be facing an ageing population, even those with a relatively young population, see [figure 10](#). The proportional growth is highest in peripheral areas such as Zeeuws-Vlaanderen, Zuid-Limburg and Noordoost-Groningen. In terms of absolute growth, seniors are increasing in the larger cities in the Randstad. Therefore, the housing market's challenges will be the greatest in the Randstad region (PBL, 2013). Finally, there are some crucial changes relating to health. Besides the increasing life expectancy, the number of older people with diseases will increase both relatively as absolutely. For example, the number of people feeling lonely, the number of people with dementia and first aid visits by the over-85s will double (Commissie Toekomst zorg thuiswonende ouderen, 2020a). Although the elderly will not become healthier, they will remain vital and active for longer. On average, seniors are also more affluent than in the past, although the differences are increasing.

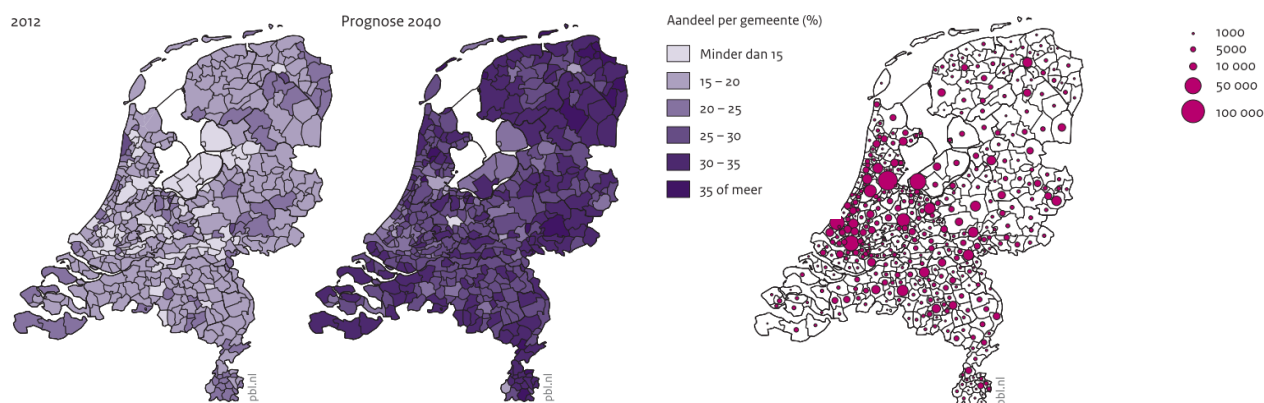


Figure 10 Left: percentage of households over-65s per municipality in 2012 and 2040. Right: prognosis of the increase of over-65s per municipality (PBL, 2013).

Changing care landscape

Ensuring enough availability and affordability of health care becomes challenging due to the increasing life expectancy. With the current growth, there will be a shortage of healthcare staff, and the cost of healthcare will rise from 19 billion to 43 billion. In 2011, the welfare state was transformed into a participatory society to cope with these challenges. In the former welfare state, the over-65s could choose to live in a retirement home. These facilities were closed in 2016 as they did not meet the demands of the more empowered elderly. New policies focused on living independently at home for as long as possible, and facilities have been transformed, see [figure 11](#). Although this 'ageing in place' paradigm has in general increased the quality of life of the elderly, it has also resulted in more loneliness and the risk of being excluded (Mohammadi et al., 2019; PBL, 2013).

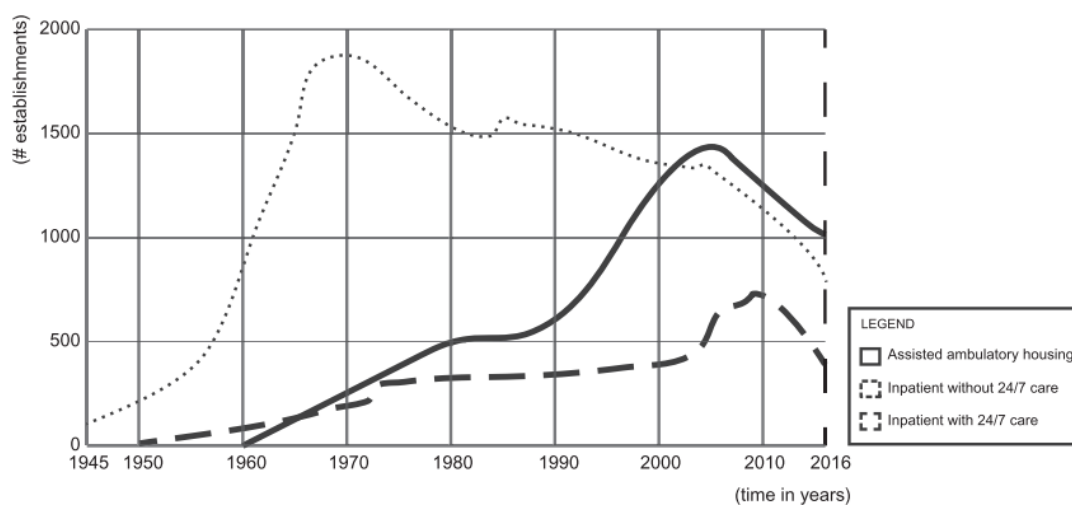


Figure 11 The changing number of facilities in The Netherlands the last decades (Mohammadi et al., 2019, p. 218)

The policy did result in seniors living at home longer, even at higher ages, as shown in figure 12. However, not all homes are suitable to grow old in. A suitable senior dwelling is defined as a dwelling where the resident can access the kitchen, toilet, bathroom and at least one bedroom from the living room without climbing stairs (PBL, 2013). Life-cycle proof dwelling should also consider the direct surroundings, with amenities and possibilities for encounters within walking distance. The recently published databank on elderly housing (2021) reported that 9% of the dwellings occupied by over-55s could not become life-cycle proof, concerning approximately 330,000 households. When also taking the dwellings into account where the living environment is unsuitable due to lack of nearby facilities, the number rises to 57% (see figure 12), concerning more than 2 million households. The policy of living at home for longer had an effect as it is no longer possible to move to an intramural facility without a severe care requirement. But this has also increased the demand for life-cycle proof dwellings. In only a few years, the senior housing shortage rose to estimated 315,000 dwellings (ABF Research, 2019).

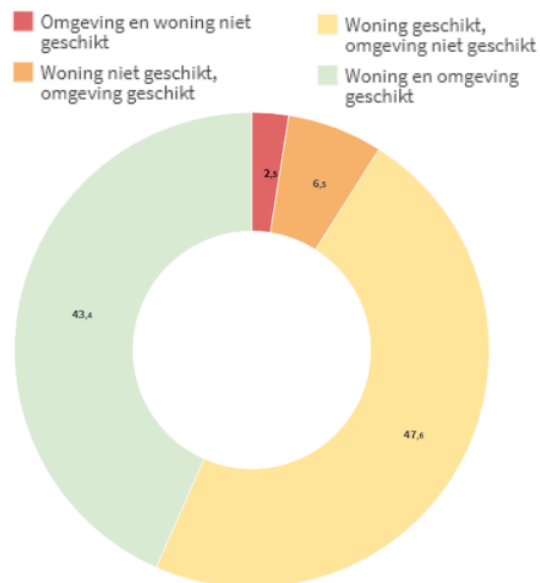


Figure 12 Suitability of the dwelling for the over-55s by segment. (Databank ouderenhuisvesting, 2021)

The changed care landscape has created a gap between the individual home and the nursing home, see figure 13. The umbrella organisation for care providers argues that intermediate suitable housing concepts need to be created urgently, newly built and renovated (Actiz, 2020). Especially vulnerable seniors in social-economical weaker neighbourhoods are becoming more isolated. The report of the Bos commission calculates that until 2030 about 70,000 extra clustered dwellings are needed. As described in the former section 2.2, CH concepts offer many advantages for seniors regarding places for encounter, activities and help that could fill the gap (Commissie Toekomst zorg thuiswonende ouderen, 2020b).

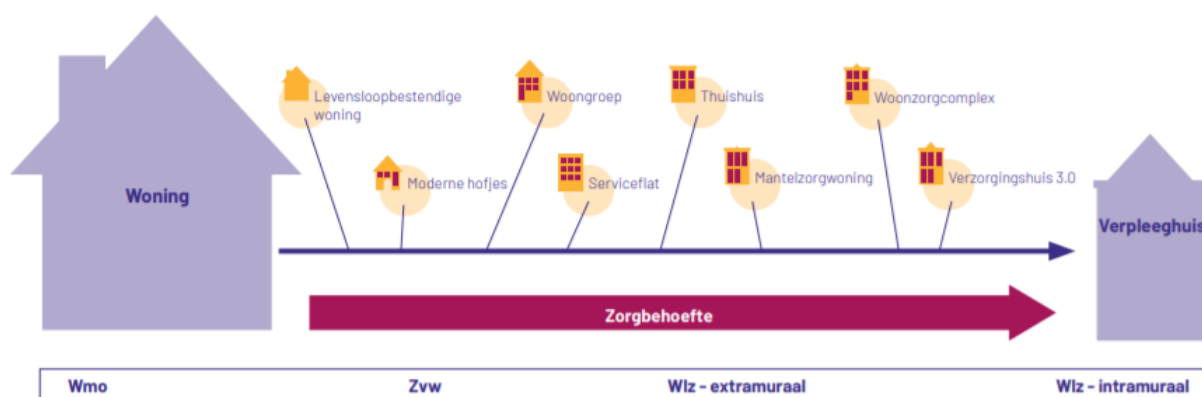


Figure 13 The increasing demand for appropriate intermediate forms of a dwelling and a nursing home (Actiz, 2020, p. 12).

Not only the professionals but also seniors themselves confirm the increased interest in these housing concepts. Ossokina, Arentze, van Gameren & Van den Heuvel (2019) conducted a state choice analysis among 460 Dutch seniors. They derived the factors that seniors find important and are willing to pay more for. The results show that mainly the dwelling size and project size remain the most crucial deciding factor for the willingness to pay. Besides, characteristic connected to safety and social cohesion plays an important role - projects with a communal garden, common space and building size < 20 dwellings are valued better. Apartments without a shared space and garden were even reduced by respectively -5% and -20% in value, see figure 14.

	Size dwelling	Balcony /garden	Openness dwelling	Size building	Parking	Entrance	Common garden	Common space	Location
higher value/ utility	110 m2 (+25% value)	Ground floor, garden 12m2 (+15% value)	Open kitchen, no doorway living-sleeping	< 20 dwellings (+20% value)	Indoor parking garage (+15% value)	Large hall/atrium with lift	Yes, private, residents only	Yes, a small cafeteria or a supermarket	Suburbs of a larger city
reference dwelling	90 m2	No ground floor, balkony 12m2	Closed kitchen, no doorway living-sleeping	20-80 dwellings	Outdoor parking reserved for residents	Small hall with a lift	Yes, public garden	Yes, a recreation area/ a meeting place	Small town more than 15 min driving to larger city
lower value/ utility	70 m2 (-30% value)	No ground floor, balkony 5m2 (-15% value)	Open kitchen, doorway living-sleeping (-15% value)	> 80 dwellings (-15% value)	On-street public parking (-30% value)	Outdoor gallery (-15% value)	NO (-5% value)	NO (-20% value)	Larger city (-10% value)

Figure 14 A consumer toolbox with the best living concepts for the elderly (Ossokina et al., 2019)

The largest elderly interest group in the Netherlands, KBO-PCOB, also researched the preferred housing concept among 1250 panel members. They conclude that many residents would prefer a housing concept that not yet exists: a dwelling in which living and health care are combined or living together with like-minded people with care closer by, such as in a courtyard. The following aspects are considered the most important: the appropriateness, the affordability, additional common facilities, meeting places and living with like-minded people (KBO-PCOB, 2018). A different study by the national elderly association ANBO has shown more precisely the interest in a communal concept. From the 5.626 respondents, 60,7% could imagine that they would move to a more communal concept on condition of having full autonomy (ANBO, 2019).

Flow on the housing market

The national WoON research (2019b) describes a low percentage of around 3 to 4% of seniors with a propensity to move. However, around 33% indicate that they would like to move again at some point in the future, 1.2 million households. The older people get, the lower their will to move. The percentages of people actually moving does not match with the ones willing. While the group older than 55 is about one-third of the population, only 15% of the movements last ten years were from this 55+ group. Moving is often not attractive because it often results in higher living costs, as many seniors live very affordable. If there is no immediate reason, moving is also difficult and a lot of hassle. Many seniors are critical of the homes currently offered because they do not sufficiently meet their requirements. The most important residential wishes for seniors are threefold: a life cycle proof dwelling, preferably in their current neighbourhood, with facilities nearby (such as a supermarket, care and meeting places). In the currently overheated housing market, not many interesting dwellings are offered, and thus this target group will not easily be seduced to move (Platform31, 2021).

The low seniors' propensity to move is an obstacle for young people looking for a house to buy or a family home. The emphasis on 'staying at home' is confusing as it could be interpreted as not moving. Rather anticipating the future needs of an ageing population was meant (Bos, 2020). Constructing suitable senior dwellings is therefore urgently required to ensure a smoothly functioning housing market again. A senior moving from the top of the housing market career creates a chain of movement further down the ladder. The movement will not reduce scarcity but balances the housing market distribution (Platform31, 2021). Supplying adequate senior housing thus fulfils the broader societal needs of seniors, housing seekers, and housing associations who want to resolve waiting lists and municipalities wanting to create a balanced market.

Restoring the flow by adding adequate housing is thus easier said than done. Seniors are the most satisfied residents of all household types: 90% are satisfied or very satisfied with their house, and almost 85% is (very) satisfied with their living environment. Seniors often move when they encounter health problems, or the dwelling becomes an obstacle, especially at higher ages, see figure 15. In these cases, moving becomes a short term desire when it is already too late.

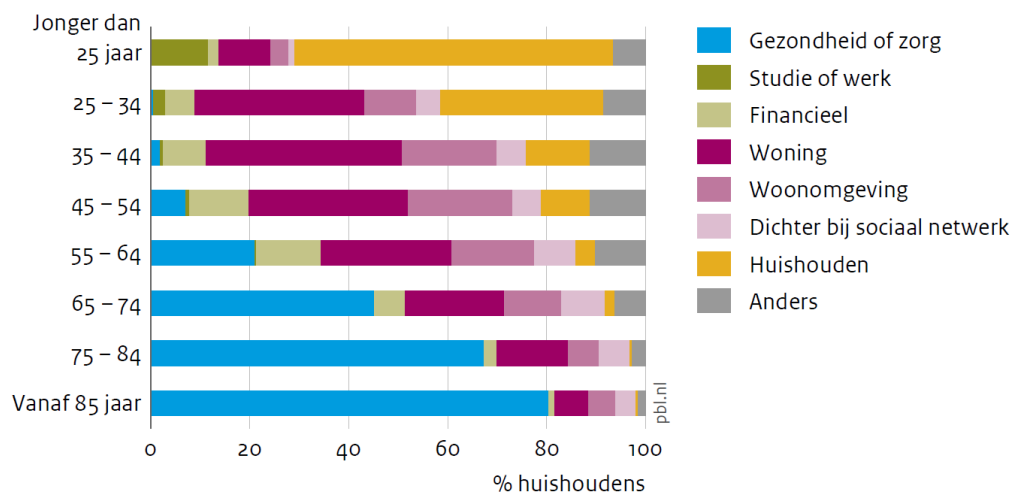


Figure 15 Motivation for moving per age group. Health or care (in blue) becomes an increasingly important reason (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2021)

An additional side note to the demand is the diversity of it. It is often assumed that seniors only want an apartment, but that is incorrect. 6 out of 10 want a flat, but a large part of them also wants a single-family home. The division between owner-occupied and rented houses is approximately 50/50 (CBS, 2020b). An important note here is the differences in wealth, lifestyle and vitality of the target group. A diverse range of concepts in various types of housing and ownership models is required. Therefore, building suitable housing for the elderly is no easy, unambiguous task and requires various stakeholders' efforts (Platform31, 2021). Putting a suitable supply on the agenda is not only a matter for seniors but also municipalities. As a result, many municipalities have started to draw up a housing (care) vision to stimulate developments further. Yet, the supply still lags behind the demand. The reason for this is explained in the next section.

Sub-Question 1: Why is there an increasing demand for senior CH in The Netherlands?

First of all, the ageing of the population results in a larger group of seniors who, on average, are getting older, are more vital and live alone more often. Due to the change from a welfare state to a participation society, care homes have been closed, and people are expected to remain living independently until more severe care is needed. As a result, the demand for life-cycle proof dwellings is increasing significantly, with shortages estimated at 315.000 dwelling. The closure of retirement homes has also resulted in a gap between an individual home and a nursing home. As a result, there is a diverse demand for new housing concepts around togetherness. Approximately 61% of the seniors are interested in some kind of collaborative concept in which full autonomy is maintained. The demand is broader than the target group itself and has multiple stakeholders. An older person's movements to a suitable dwelling can result in a chain of movements and cause a more balanced housing market. Constructing adequate housing concepts, therefore answers responds to three questions challenges at once: 1) Offer a solution for the group in the gap between an individual house and a nursing home. 2) Meet the preferences of senior residents, encouraging them to move before it is too late. 3) Bring back the needed flow on the housing market.

3.2 Professionals solving the mismatch

The current supply

There has been a growing housing shortage in the Netherlands, currently estimated at 1 million homes. The government aims to have a production of 75,000 homes per year. In 2019, 71,548 new homes were built, but the new building permits issued fell to 69,000 in 2020 and even to 65,000 in 2021 (ING, 2020). The needed yearly production of senior dwellings is estimated at 20,000, about 1/3 of the production (Vastgoedmarkt, 2020). However, the records of whether a newly built home is life-cycle proof are not publicly available, making it hard to keep track of the supply.



Figure 16 The average price of a newly built home (CBS, 2020c)

What is known is that the average selling price of a newly built house has been rising for years and reached an average amount of 419,990 euros in 2020, see figure 16 (CBS, 2020c). Of the new-built homes, 61% are single-family dwellings. These are often built on the outskirts of cities, far from amenities. Multifamily dwellings are often built near facilities, but these are significantly smaller in size. The majority of dwellings are smaller than 89 m² (35%), but a substantial proportion is larger than 150 m² (25%), see figure 17 (Rijksoverheid, 2020)

Although much data on the supply is lacking, a rising mismatch can be illustrated - many of these built homes not matching with the formerly described demand. The surface area is so much smaller; the prices are higher what makes it unattractive to move.

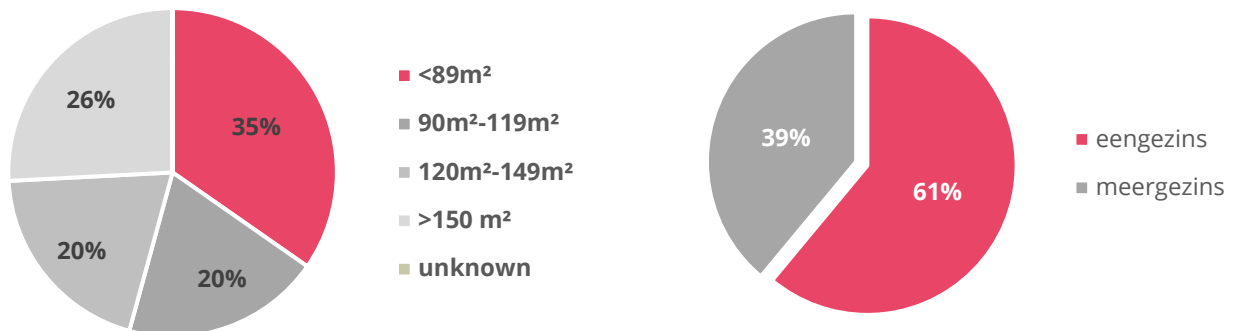


Figure 17 Floorspace newly constructed dwellings 2019 & newly built dwelling types (Own illustration, based on CoWB, 2019)

Lately, a database was launched to be able to monitor the changes in the elderly housing market. Here, the total amount of clustered dwellings is a dwelling that is part of a complex or group of dwellings specifically for senior residents. Some of these housing types have a communal area. The Netherlands currently has around 120.000 clustered housing concepts for seniors (see figure 18). The most significant proportion of these complexes, 93%, is currently owned by housing associations. Only a tiny proportion is private rented (6%) or owner-occupied (1%).

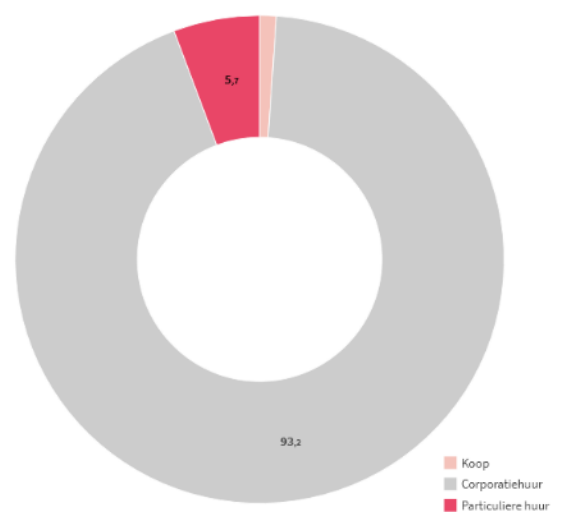


Figure 18 Clustered dwellings by ownership (Databank Ouderenhuisvesting, 2021)

The Dutch housing provision

The large proportion of collaborative housing owned by a housing association housing can be well explained by looking at the Dutch institutional housing provision landscape. The CH provision is always strongly influenced by the national institution. Therefore, changing institutional landscapes influences how CH concepts are provided (Lang & Stoeger, 2018). In general, housing in The Netherlands has always been more organised top-down than bottom-up, as the Netherlands has one of the lowest percentages of self-built homes in the EU. The early version of CH called *Centraal Wonen*, had always been a more top-down process by the partnership between residents and housing associations (Arrigoitia & Tummers, 2019). The social ethos of housing associations ensured the involvement in supporting these groups. But since the introduction of the 2015 Housing Act, the institutional landscape drastically changed. Housing associations were restricted in their activities in the affordable segment (above >€710 per year) and had to focus on their core task, namely, providing affordable housing for households under a threshold of € 44.655 (2020). Meanwhile, the rental market opened up to private investors with loosened restrictions (Czischke & van Bortel, 2018). The institutional landscape of the provision of CH concepts is shifting from housing associations and care providers to market parties. In 2019, The minister of Internal Affairs made a subsidy available for the development of these clustered forms. This SWZ (Subsidie voor Wonen en Zorg) consists of around €115 million euros and is available for residents, housing associations and market parties because *all parties are needed to achieve the objective* of closing the gap between living independently and a nursing home (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2020). This development illustrates the changing Dutch institutional landscape from public to more market-led housing provision for seniors.



Demand-led & supply-led

Co-housing is generally understood as a process organised by residents, in which co-design and self-organisation result in project close to their needs (Tummers, 2016). In such a demand-led provision, the residents themselves are in charge, develop their own taste, are not profit-driven and take the financial risk. But this is a risky process that requires a lot of knowledge of the construction industry. Residents encounter many barriers regarding financing (obtaining a mortgage or finding an investor) group formation, finding a site, complexities in the planning process and understanding the policy context (Arrigoitia & Tummers, 2019). Therefore, the provision of resident-led CH concepts is long-lasting and takes up to 10 years on average (ZorgSaamWonen, 2020). Gained knowledge often remains with the residents, why new initiators have to reinvent the wheel. This is the first reason why residents themselves do not directly supply the increased demand.

On the other hand, the conventional housing provision is a supply-led provision aimed to make a profit. A large number of stakeholders speculatively develop dwellings for an end-user that is not known in advance. The involved actors carry the risks and minimize this by offering a standardized product with often very little user involvement (J. S. Palmer, 2016). Real estate developers are defined by Heurkens (2012, p. 12) as *“the link between the demand and supply of real estate market who is the connection between end-user and the contractor. [The main goal of a project developer is to] maximum yield against a manageable risk level. Their core business is preparing and realising real estate projects at own account and risk.”*

Supply-led and demand-led are not anymore as black and white. Residents encounter many difficulties what makes it attractive to work together with an established housing provider to create CH. The systematic and cautious approach of a municipality is often inconsistent with the pace that initiators have in mind. The experience of a professional party can help convince a municipality (Platform31, 2020). New professional roles are emerging to bridge the gap between alternative housing dreams and the professional sector. Middle agents such as architects, process consultants, social entrepreneurs, and consultants help groups negotiate and communicate and move the sector forward (J. Palmer & Tummers, 2019).

On the other hand, professional parties formulate corporate social responsibility goals beyond profit maximisation. The societal benefits described can be a reason for a professional to become ideologically committed to developing innovative and develop CH concepts (Scanlon & Arrigoitia, 2015). Altogether, the tendency of residential participation, co-creation in housing provision and the demand for more affordable and communal projects create the diffusion of the two ways of provisions (Helamaa, 2019). Supply-led or demand-led provision shouldn't be seen as two separate categories but rather like a continuum (Czischke, 2018; J. Palmer, 2018; Pirinen, 2016). This is mainly characterised by the degree of involvement of the end-user, see figure 19. Palmer (2019) defines this as the professionalisation of the CH sector as a process by which the sector is becoming more self-sufficient and professionally inserted in mainstream housing production processes (Arrigoitia & Tummers, 2019). Helamaa (2019) views professionalisation the other way around: The mainstream sector is adopting niche ideas moving the goalposts to supply a niche-compatible practice. It widens the scope of mainstream housing and can be seen as a hybrid model of provision. More top-down models consult residents in a project while some residents develop the project themselves. Czischke (2018) described the widening of the scope a continuum of user involvement.

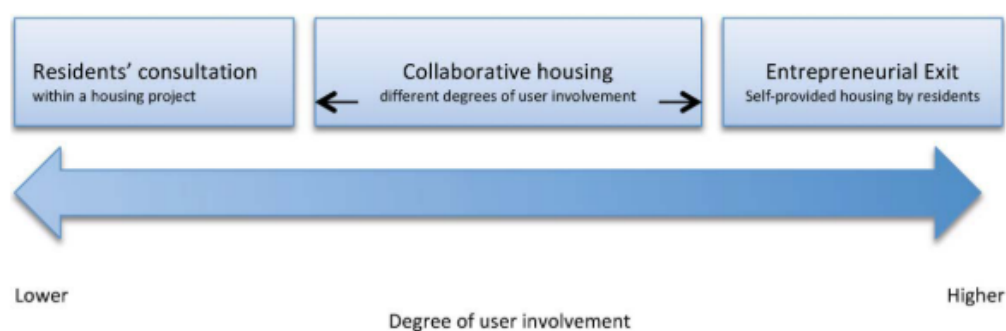


Figure 19 The user-involvement continuum in housing provision (Czischke, 2018, p. 62)

Both advantages as disadvantages of professionalisation are described in the literature. The professionalisation of the community-driven process can offer new ways of affordable, sustainable and accessible housing. Therefore, these CH professionals must combine the traditional relationship between time and money, requiring efficiency and negotiating with the resident groups. On the other hand, the mainstream sector adopting a CH niche could benefit in adopting new ideas to diversify more mainstream housing. Also, professional parties (such as developers and housing corporations) have less difficulty financing projects and could support resident groups. But many barriers remain as existing structures act against adopting collaborative housing ideas (Helamaa, 2019).

Pros of professionalisation	Cons of professionalisation
Speeding up the process by helping groups in the complex field of development (J. Palmer, 2018)	Barriers between working methods; it seems challenging to combine user-driven processes and the desire to organise housing industrially (Helamaa, 2019)
Making CH accessible for a larger target group (Helamaa, 2019)	When organised privately more homogeneous and reserved for the socio-cultural elite (Labit, 2015)
Provide room for experimentation with new working methods and technologies (Helamaa, 2019)	More expensive than 'pure resident-led housing' (Scanlon & Arrigoitia, 2015)

Professional CH development for seniors

In the Netherlands, there is still little supply of CH concepts (Platform31, 2021). And despite all the potential benefits, it is understandable why professionals develop CH to a very limited degree when looking at a CH's characteristics. Scanlon and Arrigoitia (2015) researched the developers' role in co-housing developments and state CH will always be outbid by speculative by the nature of the market-driven residential development process developers for the owner-occupied market. Land suitable for co-housing projects is also suitable for other residential development types that make the acquisition difficult. Development risks of CH will be higher due to the group formation process and the risks of groups falling apart. Helmaa (2019, p. 374) explains that collaborative housing projects require increased work, exceptions, and other special arrangements. This is the reasons why the private sector actors often find these projects complex and risky. With the additional risks, it can be expected that housing providers with a particular ethos aligning will remain active in this field due to the complexities (Czischke, 2018; Scanlon & Arrigoitia, 2015). Despite professional objectives might be at odds with the characteristics of collaborative housing developments, reasons can be found to invest in senior housing concepts. A growing number of reports, interest groups and political interest raise the attention to the increasing shortages. Municipalities formulate goals in housing and care visions and intent to undertake more actions. Meanwhile, some national political parties demand task-setting percentages. This changing context makes it more attractive for market parties to innovate or adopt towards the societal demand in the core business in order to become the leader in a niche (Scanlon & Arrigoitia, 2015).

Senior housing

Additionally, a CH project is not yet an appropriate elderly dwelling. Additional spatial measures have to be taken to anticipate the ageing process. Physical or chronic diseases can become barriers while living in a normal house. The most known action is to ensure that all essential functions can be reached without climbing a stair, such as the living room, bedroom, kitchen, and bathroom. Other measures are lowering or removing the doorsills, designing wide hallways and doors (to use a rollator), making the kitchen, bathroom and toilet senior and wheelchair friendly. The most common quality mark for homes is WoonKeur and WoonKeur Plus. The basic package consists of a number of additional design requirements for the house and the residential building and several requirements for the implementation. After application, the dwelling is suitable for remain living with physical limitations, like a wheelchair. Five aspects are taken into account (SKW Certificatie, 2015):

- Accessibility (for wheelchair users, rollator, other walking aids)
- Safety (accident prevention, burglary and fire prevention)
- Ease of use (comfort aspects related to old age)
- Care provision (adaptability in connection with care provision at home)
- Neighbourhood and residential environment (essential facilities, social safety, barrier-freedom)

Sub-Q 2: Why is there a mismatch between the supply and demand of senior dwellings?

Many newly built dwellings in The Netherlands are unattractive for seniors because of their high price, small size or distance from amenities. It can be expected that the mismatch will continue to increase if not more diversity is offered. The retreating role of housing associations can partly explain the mismatch. As the institutional landscape changes, a more significant role is reserved for professional parties.

The limited supply from professionals can be explained based on the characteristics of CH. First of all, this means involving residents in the process, which is often new for established parties. Involving residents costs more time, leads to greater complexity and often requires additional adjustments. Besides, setting up and keeping a group together creates extra risks due to possible dropouts. Finally, building both a senior citizens' home and communal area results in higher construction costs, while the return remains unclear. All in all, the goals to maximise profit for a minimised risk conflict with the communal goals of CH.

4. Theoretical framework

The literature review presented an overview of current knowledge on collaborative housing, whereas the theoretical framework is a selection of the most relevant theories for this research. The goal is to make a structure from which the selected professional CH concepts can be analysed. At first, the housing market's functioning is described according to theories and the professional parties' role in the housing provision (section 3.1). Secondly, the meaning of collaborative housing concepts and the frictions that could arise when professional are in the lead of the development are explained (section 3.2). The third section describes how a CH project's success level can be measured among residents (section 3.3). The conclusion is the theoretical framework through which the problem will be viewed. All the used definitions are summarised at the end.

4.1 Housing provision

Housing provision can be described as the way a population provides its housing (Priemus, 1983). It can be approached from different disciplines. The stated problem of a senior housing shortage is, first and foremost, a market approach to housing. The housing market is viewed as a market of supply and demand, in which the senior housing can be seen as a sub-market of the entire Dutch housing market. In the ideal theoretical situation, perfect competition always creates an equilibrium between supply and demand, resulting in fair prices. A few conditions have to be met to form an ideal market, such as homogeneous products, many buyers and suppliers, full transparency of information and no transaction costs to enter the market (Investopedia, 2020). However, the housing market is very static and far from ideal, according to the theory. Theoretically, rising demand results in market opportunities to accommodate these demands. Building more houses is easier said than done, and it does not mean that additional construction will immediately provide in segments with the highest demand. Priemus (1983) relates this to the limited supply (due to a limited amount of building sites), the unavoidable basic need of housing, the unfairly distributed knowledge about the market and the high transaction costs. As a result, severe shortages can arise in a market characterised by supply and demand.

The Dutch government used to nationally intervene in the market to safeguard a continuous supply in all segments. Last years, these responsibilities shifted toward the local government, and subsidies disappeared. As described in the literature review, market-led housing provision is seen as a solution for shortages in the non-social segments. The market, real estate developers in this case, are seen as a solution to link supply and demand. Heurkens (2012, p.12) describes that the project developer's primary goal is *to achieve maximum yield against a manageable risk level. Their core business is preparing and realising real estate projects at own account and risk.*" The literature review explained the range of real estate developers and their motivation. The term *professional* is retained to include the broad range meaning:

A providers of housing with prior knowledge of the construction industry who develop housing for a group of end-users other than themselves.

Housing associations as the sole initiator are excluded as they already have much experience developing CH concept also for the elderly. While already research has been conducted on this topic, the market-led housing provision of CH concepts remains under-researched.

The increased market-led provision did not immediately provide more housing in the segments with shortages. Contrary, the construction virtually ground to a halt between 2009 and 2014, resulting in growing shortages (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2019a). Currently, around 1 million homes need to be built to make up for the production shortfall and solve the Dutch housing shortage (Rabobank, 2020). The senior housing shortages are estimated at 315,000 dwellings (ABF Research, 2019).

The term *senior* should be clarified, as it sends out the wrong signals to younger residents who want to prepare for the future. For this reason, the idea of the *second half of life* is adopted from the Stockholms housing conference

proceeding to refer to this broader target group. These households are characterised by focussing on the future after their careers and family lives, often when the children have left the nest (Vestbro, 2010). For some households, this transition happens at 45 when becoming *empty nesters*, others start thinking of the future from their pension at 67, and some never acknowledge the changing circumstances. Although age can vary, the regularly used age boundary of 55 is chosen as the lower limit to simplify the market research. No specific lower age limit is required for the case studies, but extra measures have to be taken to make a dwelling appropriate for the second half of life. As long as it is lifetime friendly or lifecycle proof, several housing types can comply. The life-cycle proof is defined as:

A dwelling and its essential functions (living, sleeping, cooking and sanitary facilities) are accessible without having to climb stairs. Interior adjustments are installed to ensure accessibility even in the event of changing living conditions, for example with a wheelchair or rollator.

The extra measures that have to be taken increase the construction costs. Yet, it is unclear if the additional investments will return on the purchase price. Priemus (1989) states that demanders are in a weaker position in the event of a general housing shortage. Providers make surplus profits on top of the expected profits what creates a little drive for innovation. It is financially unattractive to invest in lifecycle proof measures when a dwelling is sold anyways.

4.2 Collaborative housing

Collaborative Housing (abbreviated as CH) is used as an umbrella term to include the wide variety of emerging concepts focused on togetherness. Lang, Carriou & Czischke (2020) introduced the term and defined it by three main aspects:

1. Housing that combines individual households with at least one shared space or facility;
2. Housing that is developed with some degree of residents' participation;
3. Residents of CH have an intention to live together, aim for togetherness, and give mutual support.

The Bos Committee (2020) states that at least 70,000 additional *clustered and (semi)-collective* dwellings should be realised by 2030. Such types can fill the void after nursing homes have closed, in which residents can support one another, create possibilities to meet, and undertake activities. Therefore, it is further referred to as CH concepts. Despite the clear need, these senior CH shortages are not immediately provided by the market, which can be theoretically explained.

According to Helamaa (2019), this can be explained by the concepts' characteristic to requiring an increased amount of work, more exceptions, and unique arrangements. The private sector often finds this too complex and risky. First of all, communal areas require an extra investment that is not directly returned. The juridical and organisational structures are also more challenging to manage (Platform31, 2020a). Secondly, a participation process is a complex process that involves extra time, effort and expense (Scanlon & Arrigoitia, 2015). Thirdly, the intention to live together is not easy to control for a professional working according to free-market principles. To include the broad range of CH concepts that professionals offer for seniors, residential involvement and an intentional community are not seen as conditions for the cases but rather an investigation of the extent to which this is met. Collaborative housing in this thesis is defined as follows:

Collaborative Housing is an umbrella term to encompass housing projects (initiated by a professional party) that are focussed on togetherness and therefore have at least 1 shared space for the residents.

4.3 Professional development of CH

According to Pirinen (2014), a house could be seen as a product fulfilling a consumer’s demand, see figure 20. A new, differentiated housing solution with a clear set of benefits to meet the end-user’s specific demands is referred to as a *housing concept*. In his view, a house is seen as a layered product that distinguishes itself in the market. This product consists not only of materials but, above all offers unassailable occupant benefits. This product can be described in 3 layers based on Kotler:

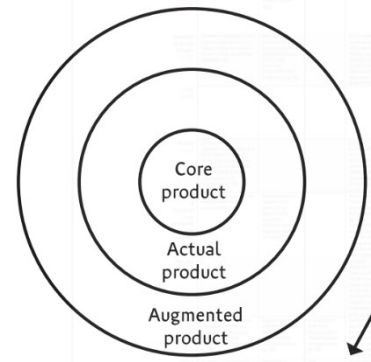


Figure 20 Categorisation to describe a dwelling as a product (Pirinen, 2014, p. 108).

1. Core product → (immaterial) benefit(s) that solves problems for the customer. For a housing concept, this can be described as the main promise targeting a specific group’s needs. This replicable idea is reflected by the marketing towards the consumers, like living comfortably in a cosy community.
2. Actual product → The materials a product is made from to deliver the core benefit. In the case of housing, the actual product is a bundle of essential components on different levels of the built environment. These components differentiate the product on the market and emphasise the specific core benefit.
3. Augmented product → This includes additional customer services and benefits added to the core and actual product to differentiate the product. For dwellings these are often after-sales services, such as personalisation, maintenance services, a host etc.

Only if there is an obvious communicated intention to create a community for the second half of the life target group falls within the case study’s selection criteria (see section 4.3). Therefore it is important to investigate how the professional party presents the concept to the group of residents. According to the literature, the main benefits can be divided into social value, financial value and use value.

An important note needs to be made regarding the difference in the process of professional CH. The literature review revealed that professional-led development differs from resident-led development because of the residents’ position. Palmer (2016) identified nine variables with a potential for resident influencing the development process. This so-called *design disruption* can create more variety in housing types and function. Dwellings can become more qualitative and accessible for groups other than the average renter. The more residents are involved in the housing provision, the higher the potential for design disruption. The motivation of the professional can be described along the scale of ideological commitment and financially driven. The housing provision network model can be used to map cases, resulting in a development path with different potentials for design disruption (see figure 21). This potential for design disruption ideally leads to an efficient development close to the end-users demand.

	FORMATION			PRODUCTION				CONTRIBUTION	
	INSTIGATION	MOTIVATION	DESIGN AMBITION	LOCATION OF FINANCIAL RISK	INITIAL ENGAGEMENT OF OWNERS	LOCATION OF KNOWLEDGE	FINANCIAL MODEL	LAND OWNERSHIP	KNOWLEDGE TRANSFER
HIGH	Potential for Design Disruption via Network Action ↑ ↓ LOW	◻ Professional Ethics ◻ Community Instigated Project	◻ Individualised Product ◻ Specific Design for resident group with changed function and improved quality	◻ Future Residents ◻ Architect Developer and Ethical Investors	◻ Pre-Project Feasibility ◻ Site Purchase ◻ Design Briefing ◻ Sketch Design	◻ Existent in group ◻ Broker with Unique Knowledge	◻ Alternative Development and Mortgage Models ◻ Alternative development funding	◻ Future Residents ◻ NFP Developer or 3 rd party investors	◻ Information available to future groups and other professionals ◻ Information available for future groups and professionals via broker
LOW		◻ Social / Environmental ◻ Professional Frustration	◻ Repeat existing function with improved quality ◻ No Change	◻ NFP Developer ◻ Commercial Developer	◻ Design Development ◻ Pre-Sales post Planning Permission	◻ Broker between existing actants	◻ No Change	◻ Commercial Developer	◻ No information transfer arrangement

Figure 21 Nine variables in housing provision networks with potential for design disruption (Palmer, 2016, p. 9). 28

Residential satisfaction

The above method answers the 'how'-part of the main question but does not yet give insight into the residential experience. Satisfaction research among the end-users helps to determine whether the immaterial benefits are delivered. According to Canter & Rees (1982), a resident's evaluation reflects the degree to which the project helps residents achieve their goals. Satisfaction is based on multivariate considerations, and therefore, it is essential to analyse the initial goals of residents and the level to which they have achieved them. This can be done by asking residents for their reasons for moving and expectations of the project. Likewise, research that has been conducted by Glass (2020) showed that motivations to move to differ. Still, in co-housing, people intentionally choose this model to find a sense of community and mutual support. Glass' approach will be adopted to understand the motivations of residents. The exact measurement and scales used to define the values are described in the operationalisation of chapter 7.

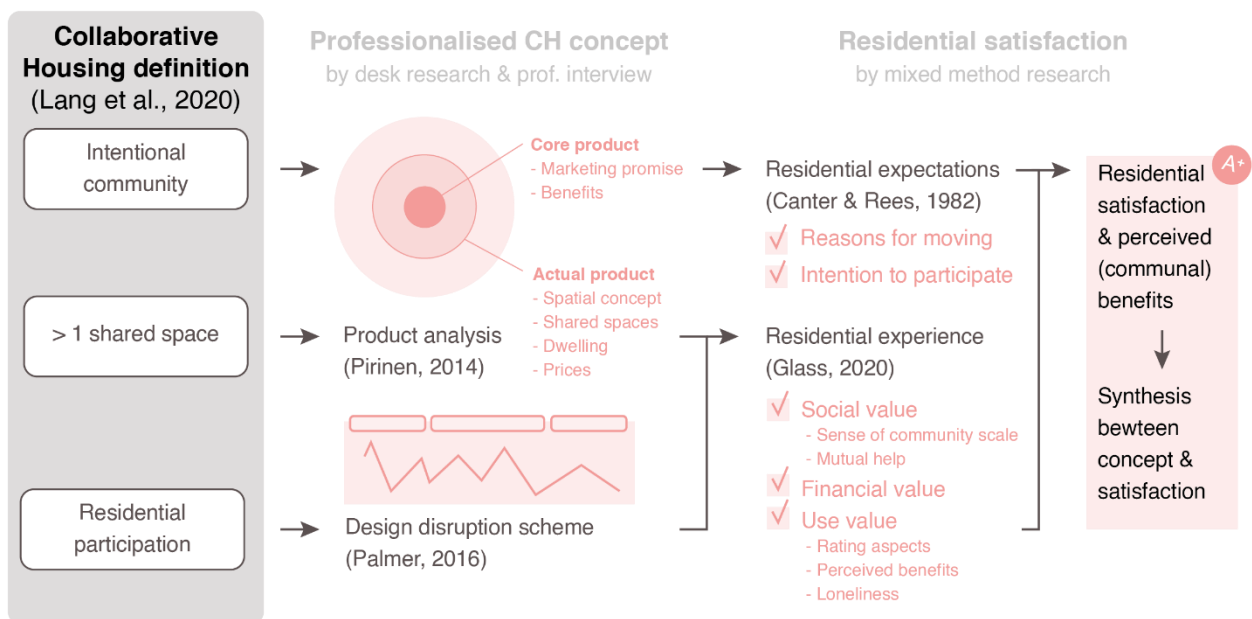


Figure 22 Theoretical framework (own illustration).

Theoretical framework & summary

Market-led housing provision is increasingly seen as a method to effectively supply dwellings that are needed. Despite the growing demand for new housing concepts for seniors around, supply is still lacking. Collaborative housing is characterised by intentional communities that share one space by some degree of residential participation. The characteristics of CH oppose the primary market goal to develop for maximum profit for minimal risk. Therefore it is interesting to learn how some pioneers have succeeded in producing these concepts. The different position of the resident creates challenges in the creation of an intentional community. By analysing the core promise, it can be understood what projects want to achieve. The analysis of the actual product can show how the shared space is implemented. By analysing the design disruption, the degree of residential participation can be understood. Secondly, residential satisfaction will be measured: the degree to which the end-user's goals are met. Consequently, the initial reasons for moving in and the intention to participate in the community are analysed. The theoretical framework is illustrated in figure 22. This allows to answer how professionals can organise CH and if it can be a viable solution for the upcoming senior demand.

Professional collaborative housing concept = A differentiated housing solution organised by a professional with a set of clear benefits around togetherness to meet the end-user's specific demand. It has at least one shared space for residents.

Professionals = A provider of housing with prior knowledge of the construction industry who develop housing for a group of end-users other than themselves. Housing association as sole initiators are excluded.

Seniors = second half of life = people focussing on the future after their careers and family lives, often when the children have left the nest (statistical age 55+).

Part III

Methodology & Research design



5. Methodology

This chapter elaborates on the method for this research, following the knowledge from the theoretical framework. The research framework is described first (section 5.1), followed by the argumentation for the multiple case study method (section 5.2) and finally, a methodical description of the three successive steps (section 5.3).

5.1 Research design

The emergence of professional-led CH concepts for the elderly is a relatively recent phenomenon in which the achieved benefits are under-researched. The few articles are often very context-specific, making it impractical to formulate a hypothesis. Instead, this exploratory research aims to understand the phenomenon in The Netherlands, classifying it as inductive. The methodology consists of three successive steps: analysing the current products offered, performing desk research on the chosen cases, and conducting mixed-method research on each case. The connection between the sub-questions, the methods and outputs are illustrated in figure 23.

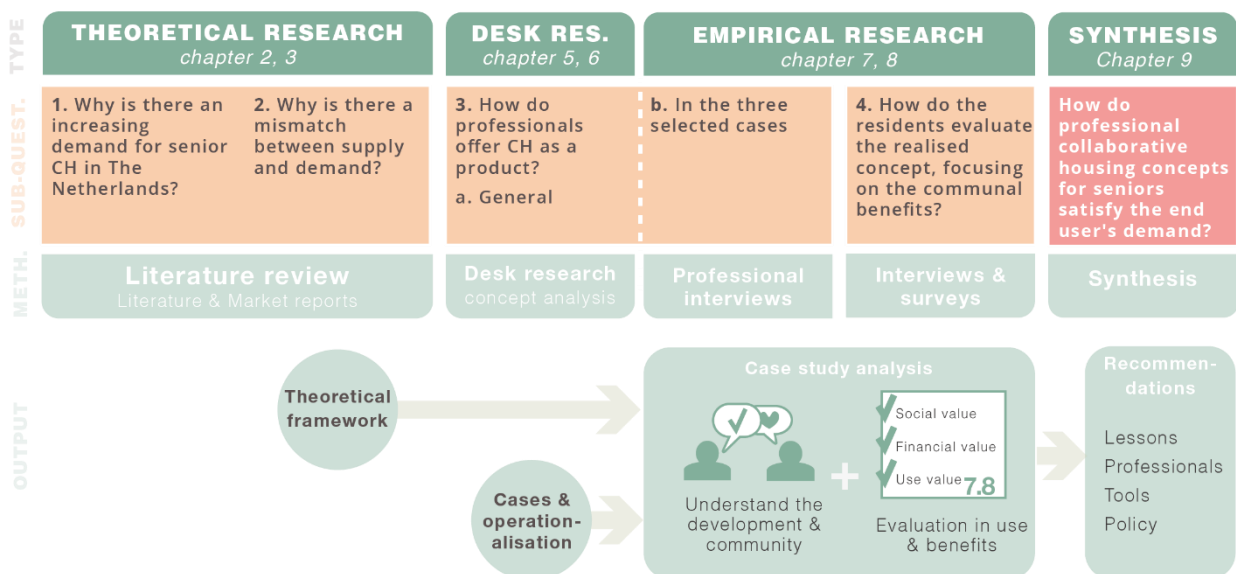


Figure 23 Research framework

5.2 Case study research

Multiple case study research is chosen as the primary method. Gustafsson (2017) describes that method allows for exploring real-life current bounded systems (cases) through in-depth analysis, often qualitative. That gives a deep understanding of a specific phenomenon. When using multiple cases, understanding the context of each case is especially important. Eventually, the differences and similarities between the cases can provide the literature with influential factors. Bryman (2012) stresses that multiple (contrasting) cases can better understand causality by common and differentiation factors. Comparing the cases can result in concepts that are relevant to an emerging theory. A mentioned downside is the extra time effort to study multiple cases leaves less time to analyse one case in detail. One single case will present an in-depth understanding, but only from a limited professional perspective. Three cases are chosen to allow enough time for in-depth analysis and meanwhile examine the role of multiple professionals in the CH production.

Glass (2020) highlighted from recent literature reviews a lack of quantitative data as many CH research is based on interviews solely. Therefore, there is a particular need for post-occupancy evaluations (POE) of CH concepts. It is not a goal to directly compare the qualitative results but understanding how different contexts resulted in different benefits. All cases fit the same institutionally changing context in which professionally developed CH concepts for senior residents is a recent phenomenon. Clearly, the cases' context very different: each was initiated by a different party, in a different municipality with a different development process. The cases' differences enable a more comprehensive exploration of professional CH production within the Dutch housing market.

Case study selection

Three cases were chosen according to the following requirements:

1. A project should be a 'collaborative housing' project, meaning it should have at least one communal space (like a shared living room and/or garden) and focus on the core product of the benefits of togetherness.
2. Projects target people in the 'second half of life', meaning life at the end of or after someone's career when children have left the house. Although ages can vary, this more or less means older than 55 years old.
3. A professional party had to be leading the project during development. Both projects with and without resident participation are taken into account. Although housing associations can also be acknowledged as professional parties, these are excluded as sole initiator. Already a lot of research and knowledge is available on this topic.
4. The project is located in the Netherlands and was completed no later than five years ago.

5.3 Detailed study description: 4 steps

A market analysis is conducted to identify the concepts currently offered. From this list, three cases were selected. Each case will first be analysed in more detail in desk research. The immaterial benefits can be operationalized for empirical research. This last part examines both the residential and professional sides by conducting mixed-method research on the three cases. Each step is briefly explained below and illustrated in figure 24.

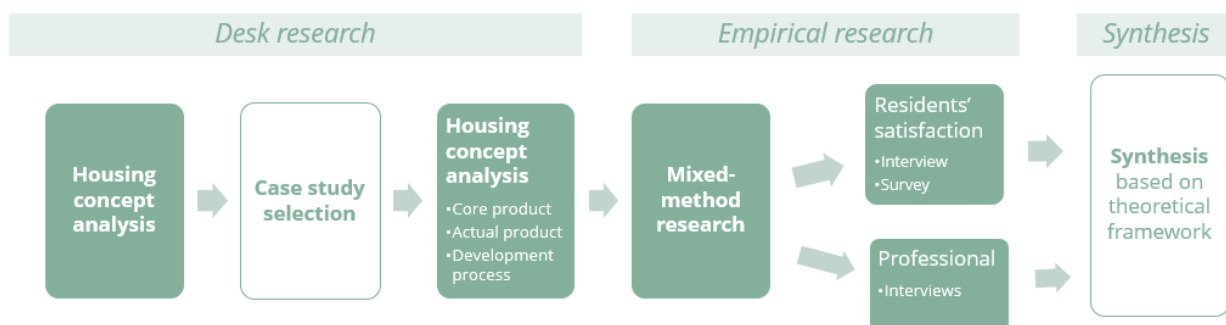


Figure 24 Research process (own illustration).

Step 1: Desk research

A. Market research

The changes in the Dutch housing market were described in chapter 2 in a simple comparison between demand and supply. While the exact number of the limited supply remains unclear, qualitative analysis can support the mentioned literature changes. Publicly available information like reports, expert websites and articles (like ZorgSaamWonen, Platform31 and Kenniscentrum Actiz-Aedes) were used to collect a list of housing concepts being developed. The overviews consist of the sizes, prices, type of professionals, levels of togetherness, and care per project. It gives an overview of how the supply side is developing and describes housing trends for the elderly. From this list, three concepts have been selected that meet the requirements as described in 4.2

B. Desk research case studies

The goal of desk research is to find the core product of the housing concept. The definition of the core concept was presented in the theoretical framework. Sales brochures and the project website from the professional will be the main source of information. Other important data is quantitative data on the number of dwellings, dwelling types, surfaces of collective spaces and the eventual selling prices.

Step 2: Residential perspective

After cases were generally analysed, the in-depth comparative case study started. The order of these methods was differently executed than described in this report. First, the residential perspective is researched by mixed-method research. Later the professional interview was held to communicate the evaluation and reflect on the results directly. The mix of desk research, site visits, residential interviews, surveys and professional interviews also served as triangulation.

A. Resident satisfaction analysis

First, eleven semi-structured in-depth interviews were conducted to as input for the quantitative resident survey. Three to four interviews are conducted per case by sending invitations to randomly selected households. One interview guide was prepared based on the desk research and used for all the interviews (see [Appendix II](#)). Due to the number of interviews and the limited time, interviews were not fully transcribed. After relistening, tags were assigned to each minute, and the most important quotes were transcribed. Commonly referred benefits and drawback are listed per project and clarified by referring to the quotes. An overview of the interviews is made in MS Excel (not included due to privacy). COVID had a considerable impact on the data collection. The initial idea of organising focus group discussions was therefore changed to one-to-one interviews. Four interviews had to be conducted through a Zoom or Whatsapp call.

The qualitative experiences resulted in a set of survey questions that were tested on the entire case population. All residents of each of the cases were invited to fill in a digital survey. Adriaanse (2007) roughly distinguishes two methods for conducting a resident satisfaction survey. Method 1 sees resident satisfaction as a predictor of moving behaviour. The goal is to find differences between residential needs and the current satisfaction to predict moving or renovation behaviour. In method 2, satisfaction is seen as a criterion for resident quality. The goal is to find factors that cause this satisfaction. In this research method 2, is used to evaluate to what extent the projects are a success. It is important to understand how residents assess their satisfaction. Canter & Rees (1982) put the user central in their model. The completed survey is a reflection of the extent to which the project helps them achieve their goals. These goals can be physical goals or individual people-related goals. User satisfaction can be seen as the extent to which a project has succeeded. However, it is essential to determine the resident's initial goals and the survey was divided as follows:

1. **Reasons for moving:** Factors that attracted residents are considered the product's expectations and the goals they want to achieve. Both push and pull factors are asked.
2. **Current living experience:** The current experience and satisfaction is measured on topics like the dwelling, price and general grade. Specific attention is given to the collaborative aspects from literature, like the

intention to form a community (participating in activities), the degree of mutual support and the use of shared facilities.

3. **Benefits:** Just like Glass' evaluation, residents will be asked to rate the sense of community, experienced benefits, and level of loneliness. The specific measures used are described in the operationalisation (chapter 7).
4. **Background information:** Finally, personal characteristics such as age, household size and marital status will be asked. This can be used to assess whether there is an even distribution in the project.

The exact survey questions were developed according to the benefits described in the cases' marketing and the residential interviews. The operationalised is described in chapter 6. The survey was conducted online through the program SurveyMonkey. Residents were invited through a paper letter that I put through the mailbox on December 15th. In the letter, the research is explained, my contact details for further question and a weblink to digital survey. After Christmas, a reminder was sent by e-mail via the residential boards, after which residents had until January 12 to fill in the digital survey.

Since not a selection is made, but the entire population was researched, the response rate, means, and standard deviations are the essential factors in analysing the data. A general analysis was conducted online with the online tools in SurveyMonkey. The final result were examined and illustrated in Microsoft Excel. Finding from the survey were supported with quotes from the interviews to connect the qualitative and quantitative. The results established an understanding of the communities' functioning.

Step 3: professional interviews

The goal of the professional interviews was to understand why and how the professional developed a CH Concept. The three aspects from the theoretical framework were discussed to learn how the professional goals could be combined with a CH project. Attention was given to the extent to which the initial goals are met, and the lessons learnt. With the obtained data, Palmer's provision network model (2016) could be filled in. A semi-structured approach was chosen with a prepared interview protocol (see [appendix III](#)). After the interview, the transcripts were made and code with four different colours:

TAG COLOUR	MEANING
Green	The goals of the project & benefits for the professional
Blue	Project-specific information regarding the development
Yellow	Allowance for design disruption by resident participation/influence
Purple	Lessons learnt

The organisational structure seemed effective to show the differences approaches. Therefore, a communal organisation chart was added for each project. This further supported the question how professionals developed different types of communities.

Step 4: Synthesis

The synthesis combines the information from step 1, 2 and 3. The characteristic of each case was compared to the three fundamentals from the CH definition. A list of professional tools was gathered on how they developed togetherness in a housing concept. Since the residents' evaluation is known, effectiveness could be connected to each tool. This offers valuable lessons and general recommendations for the further improvement of CH developments.

Part IV

Desk Research



6. Housing concept analysis

Which housing concepts for seniors are currently (being) developed in The Netherlands? A list of Dutch projects was established through desk research, including planned concepts that still have to be developed. A comparison between the projects shows the core promises that are made by the different initiators (section 6.1). From the list, three cases are chosen for the case study, based on the requirements explained in the methodology. The chosen projects are: Knarrenhof (Zwolle), ParkEntree (Schiedam) and LIFE (Amsterdam). Each project is analysed with special attention to the promised core benefits stated in the marketing (section 6.2).

6.1 Range of concepts for seniors

The online search demonstrated that several actors are proposing new concepts for the elderly. An overview of the concepts is gathered in Appendix IV, by a short description and image. In table 2, the type of initiator, number of dwellings, type of ownership (owner-occupied, social rent and private rent), sizes, including of care, prices, and core concept are listed for each concept. The last column indicates the degree of communal spaces and the degree of focus on neighbourliness (in Dutch: samenredzaamheid) or on the opposite more focus on professional care.

Project	Professional	Type	Dwel.	Own./soc./pri.	Size (m2)	Care	Prices	Core	Comm spaces	Neighb. Vs. Care
DE HERBERGIER, ARNHEM (2007)	Stichting Thuishuis	Independent developer	15	0% / 100% / 0%	34 - 60	x	€1650 - €2350 p/m	Group living for people with dementia	++	--
THUISHUIS, DEURNE (2012)	Stichting Thuishuis	Independent developer	7	0% / 100% / 0%	40 m2		€550 p/m	A student house for singles over-60s	++	++
DE SCHRIJVER, EINDHOVEN (2016)	KilimanjaroWonen	CPO with advisor	21	100% / 0% / 0%	75 - 10		€ 232k	Renovation to CPO with communal	+/-	+
LEYHOEVE, TILBURG (2016)	Roozen van Hoppe	Independent developer	285	0% / 0% / 100%	67 - 190	x	€1062 - €2638	Enjoying & comfort	+	-
MAKROON, AMSTERDAM (2016)	Syntrus Achmea	Investor	125	0% / 0% / 100%	60 - 15	x	€865 - €1500 p/m	Care and living complex: safe & sheltered	--	-
DE AAHOF, ZWOLLE (2017)	Knarrenhof	Ideologically developer	48	71% / 29% / 0%	60 - 140 m2		€185k - 290k	Modern almshouse for living together	++	++
AKROPOLISTOREN, AMSTERDAM (2017)	De Alliantie	Housing Association	86	0% / 50% / 50%	51 - 84 m2		€550 - €935	Humanistic community for good neighbours	+	+
PARKENTREE, SCHIEDAM (2018)	Blauwhoed	Independent developer	89	89% / 0% / 11%	60 - 140 m2		€150k - 365k	Connecting, enjoying, unfolding. Living	+	+
POLDERHOFFJE, ANNA-PAULONA (2018)	Jennifer Hofmeijer	Social entrepreneur	20	100% / 0% / 0%	> 104 m2	x	> €165k+ €465/month	Living in a courtyard with care and innovation	++	--
HAAG & HOF, HOUTEN (2018)	Bolton	Developer rel. to construction	20	100% / 0% / 0%			-	Sustainable living in a courtyard together	+	+/-
MIRTHEHOF, ZEIST (2019)	HD group & Investor	Investor	150	0% / 0% / 100%	39 - 60 m2	x	€585 - €800 p/m	Living independently, possible with care	+/-	-
DE FREDERIK, WASSENAAR (2019)	Waaier Projectrealisatie	Independent developer	41	100% / 0% / 0%	96 - 325 m2		-	Luxurious apartments in a park	+/-	+/-
ROSA SPIER HUIS, LAREN (2019)	Rosa Spier Huis	Foundation	92	0% / 0% / 100%	52 - 100 m2	x	€100 - €2000 p/m	Live-work-and care environment for artists	++	-
LIFE, AMSTERDAM (2020)	Vorm	Developer rel. to construction	131						+	+
HOF VAN LEIJH, HAARLEM (2021)	Elan Wonen	Housing ass. & others	172	12% / 86% / 2%	49 - 100	x	-	Multigenerational living for people with care	-	--
BURANO, ZAANDAM (2022)	Stebru	Stebru & Syntrus Achmea	144	0% / 0% / 100%	61 - 119 m2	x	> €1090 p/m	Living, care & common space for encounter	+/-	-
CPO WILGENHOF, KAMERIK (FUTURE)	Urbannerdam	CPO with advisor	10	100% / 0% / 0%	90 - 180 m2		€275k - €440k	Together design life-cycle proof dwelling	-	+
STADVETERAAN, AMSTERDAM (FUT)	AM & Woonzorg Nederland	Developer rel. to construction & ass.	150	-	> 45 m2	x	-	Senior cooperation around encounter & collectivity	++	+
SAMEN ZELFSTANDIG, N.P. (N.D.)	Achmea	Investor & others	> 36	-	-		-	Concept around togetherness & interaction	++	++

Table 2 Comparison table of the projects from the online search (own illustration).

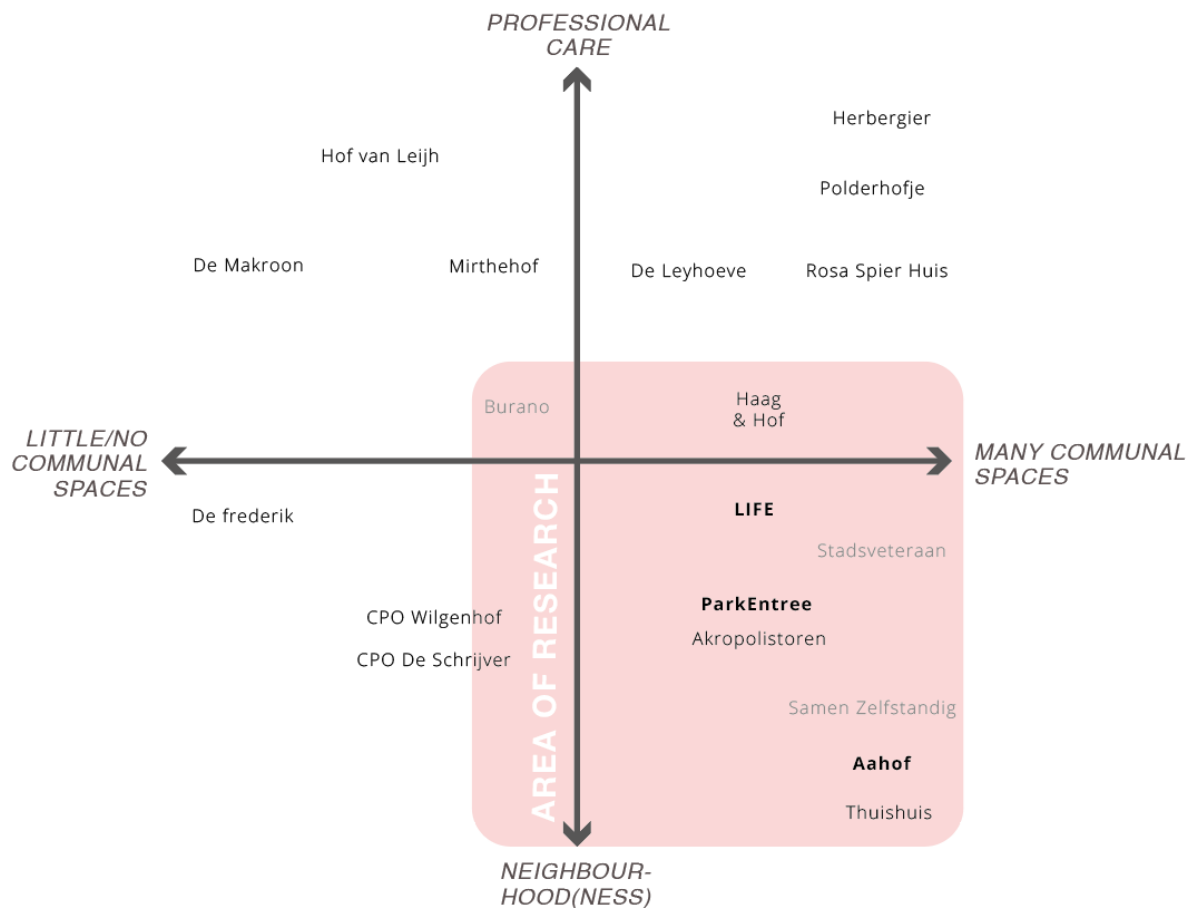


Figure 25 Mapping of the projects from the table, on X-axis the amount of communal space and on the Y-axis neighbour help or professional care (own illustration, based on Platform31, 2020). Bold project are the ones chosen for the case study.

The analysis reveals the range of different initiators of resident groups, (social) entrepreneurs, mainstream developers, housing associations, health care providers and investors. More commercial driven parties focus on large scale projects, while socially-oriented parties deliver more small scale projects. Interesting is also the range of prices: starting from €500 until more than €2600 per month. More expensive concepts seem to focus on an 'all-inclusive' concept, with housing, care and facilities (Leyhoeve & Herbergier). The mapping of the two degrees in a matrix (figure 25) shows how this results in diverse concepts. It aligns with the broad range of concept. Not all the concepts focus on togetherness. Only the cases bottom-left in the matrix will be used to see how professional deliver such concepts.

6.2 Case study selection

Many projects were rejected as case hence being delivered less than six months ago (measuring from august) or presented as unrealised concepts. Realised concepts were often solely developed by a housing association (e.g. Akropolistoren and Thuishuis) and thus out of this research' scope. Professional-led projects did not contain shared facilities or did not intend to start a community (e.g. De Frederik and Haag & Hof). The projects remaining were selected based on the professional's position (in the lead as developer instead of advisor for residents) and the requirement of not being a project for care only (without an obligation to purchase care). Eventually, this resulted in the selection of 3 projects: Knarrenhof (Zwolle), ParkEntree (Schiedam) and LIFE (Amsterdam). The first case was added because of my graduation internship at that foundation, making contacts and information readily available. The second project showed strong similarities in the spatial concept, size and ambitions and was realised by an independent developer. The third project is a relatively new project, delivered in January 2020 and developed by a developer related to a construction firm in collaboration with various other parties. It is a fascinating negative case because some of the private rental apartments have been vacant for months. It could shed light on the stated theory that these housing concepts are desperately needed due to the large demand.

Case 1: Knarrenhof®, Zwolle

Knarrenhof is a foundation started by former developer Peter Prak and consists of an expert team working closely together with local volunteers (called Kartrekkers) and resident groups. The Knarrenhof aims to enable the elderly to age dignified by realising a modern alms-house concept in which residents help each other as good neighbours. On the website, it is stated that the approach is *to develop at cost price with minimal surcharge* (Knarrenhof, n.d.-a). The professional can best be characterised as an ideologically committed developer. Therefore, best be characterised as an ideologically committed developer. By now, more than 22.000 people have registered in more than 300 municipalities in the Netherlands (Knarrenhof, n.d.-b). De Aahof in Zwolle was the first project and completed in December 2017.



Core product	Target group	Active and social people willing to help one another for the coming 20 – 30 years (on average 60 years old) (Knarrenhof, n.d.-c)
	Immaterial benefit	<i>“Knarrenhof® is the combination of the courtyards of yesterday with the convenience of today: safe living privacy and at the same time all the advantages of living together as good neighbours”</i> (Knarrenhof, n.d.-c).
	Initiator	Ideologically committed developer
Actual product	Households & types	48 single family dwellings (29% social 71% owner-occupied)
	Price / m2	€1.937 / m ² - owner-occupied €98 /m ² /year – social rent
	Shared garden	33% of built surface - 2175 m ²
	Shared space / hh	45 m ² / hh (total) 2,0 m ² / hh (living room)
Augmented product	Extra services	-
	Design involvement	A demand-led design process, according to majority voting principle
	Other	Repurchase clause in contract in contract, dwelling is sold to person on waiting list.

Figure 26 Aerial view of the two courtyards (Knarrenhof, n.d.)



“Knarrenhof®: fun, safe and independent living”

“The Knarrenhof concept is the combination of historic courtyards with the convenience of today. A unique concept arises for **safe living**, with **a lot of privacy** and at the same time **all the benefits of living together**. Knarrenhof is intended for people who like to **help each other** from time to time, but do not want any obligation. After all, it is not a commune. It is, however, a **voluntary community** where you benefit from each other's knowledge/skills and **companionship**. This is ideal for the modern senior who wants to **remain independent**, and can rely less on informal care and children. These more-generation courtyards are intended for people aged 19 till 109. In this way starters, older youngsters, young seniors & seniors can live among each other in a **lively community where people know one another**. Co-habitants help friendly neighbours where necessary. Not with care, but with attention. No obligated activities with co-residents, but all the space you need to be able to **organise things together**. By the combination of traditional neighbourliness and 'noaberschap' you will not be alone in the Knarrenhof. The communal garden and shared living room offer the opportunity for **encounters and communal activities**. It is certainly not a commune, because nothing is obligated but a lot is possible. The future courtesans **together organise the maintenance**, and possibly also the care, energy, etc., with the help of the national foundation. By organising as much as possible in-house, **living becomes more active, more fun, better and cheaper**. The concepts of safety, secureness and independence are central. This is also expressed by in the fact that we make plans with interested residents instead of OVER them. **Future resident are involved** as much as possible before, during & after the construction” (Knarrenhof, 2020).

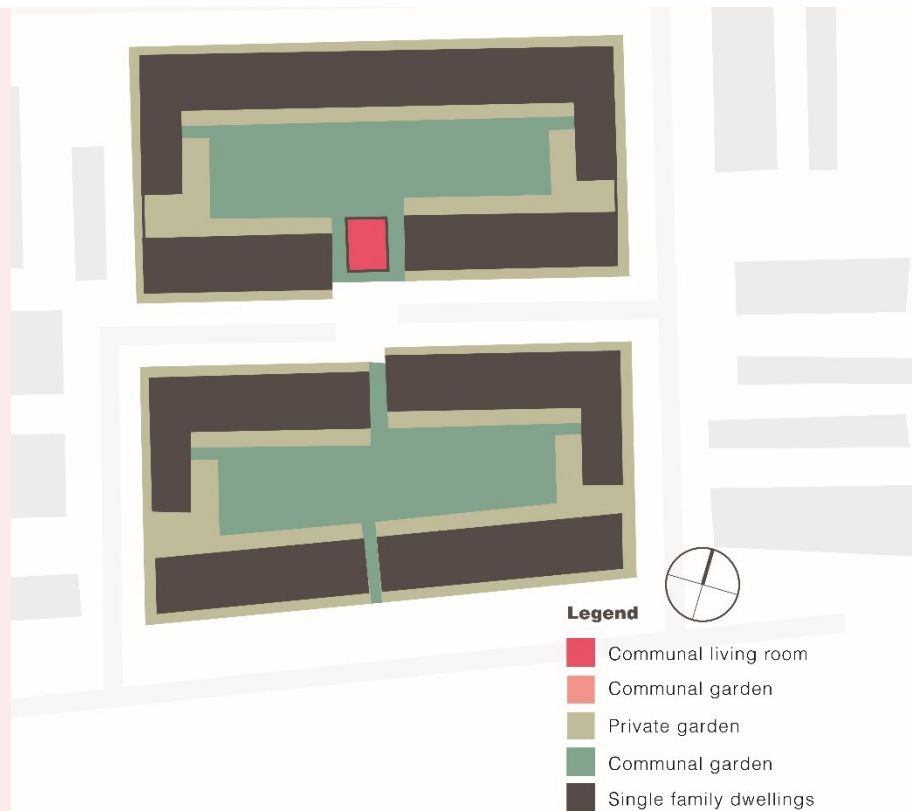


Figure 28 Spatial concept of Knarrenhof Zwolle (own illustration).



Figure 27 Communal room called 't Hofhuys (own picture).

Figure 29 Picture from the inner courtyard (Knarrenhof, n.d.)



Case 2: ParkEntree, Schiedam

Blauwhoed is an established developer from Rotterdam with an outspoken focus on co-creation with end-users. The dialogue early in the process allows concepts to be adapted according to the wishes of potential users. They can be characterised as a small independent developer, focussing on the residential market. One of the concepts offered is called 'senior smart living': a comfortable living environment for senior residents in the midsegment, with special attention for liveability, sustainability, mobility and future-proof dwellings. The one projects realised with this concept called ParkEntree in Schiedam (Blauwhoed, 2020). It consists of 89 dwellings both single family dwellings and apartments in the owner-occupied and private rental segments. The single family dwellings are situated around two common gardens. One of the apartments on the ground floor of the large apartment block is turned into a shared living room. Part of the concept is a hospitality manager managing the living room, organising activities and supporting residents (Senior Smart Living, 2020).



Core product	Target group	Healthy and active seniors who would like to live with peers.
	Immaterial benefit	<i>"The approach of senior smart living is [...] to facilitate vital seniors to take control, stimulate entrepreneurship, make connections, focus on self-development, let looking after each other be natural - not an obligation"</i> (Senior Smart Living, 2020).
	Initiator	Independent developer
Actual product	Households & types	89 total: 25 single family & 64 apartments (11% private rent 89% owner-occupied)
	Price / m2	€2.500 - €2.700 / m ² - owner-occupied +/- €154 /m ² /year – private rent (Funda, 2020)
	Shared garden	9% of built surface - 1.560 m ²
	Shared space / hh	17,5 m ² / hh (total) 0,84 m ² / hh (living room)
Augmented	Extra services	A hospitality manager has a facilitating role for 10 h/week and is the first person of contact for initiatives, the shared living room and in case of arguments (Senior Smart Living, 2020)
	Design involvement	The target group could have contributed during information evenings and co-creation sessions. The garden was designed in collaboration with direct neighbours.
	Other	Marketing focused on technology as demotics, keyless entry and remote light control.

Figure 30 Aerial view (Beyond Now, 2020)



“ParkEntree: Connecting, enjoying & unfolding”

“ParkEntree is the first residential neighbourhood in the Netherlands for active seniors. It is based on the living concept Senior Smart Living with the core values of **connecting, enjoying** and **unfolding**. [...] ParkEntree is co-creation in optima forma, because the participants have been able to think along with us about all the aspects of living. During information evenings and **co-creation** sessions, the neighbourhood, dwellings, encounter and facilities were shaped together with the target group. ParkEntree is based on the concept of **community**. It is a residential environment specifically developed for active seniors. It aims to **counter loneliness** by stimulating **encounter** and allowing resident to **age in place**. Resident can meet each other and undertake **joint activities** in the **shared room (called lounge)** and the two common inner green courtyards. Vitaal & Zo provides a **hospitality manager** to support residents' initiatives. The residents pay a monthly contribution for this. Everything is aimed at increasing social cohesion, thus counteracting loneliness and facilitating **togetherness**. Stakeholder management was an essential part of developing a healthy neighbourhood and creating public support. This meant collaborating with the adjacent secondary school for the use and management of rooms, with the gym in the neighbourhood, the sauna and the shopkeepers' association. Local stakeholders, such as care providers, influencers and associations, were also involved in shaping and informing the concept. Smart living in ParkEntree means a **home demotics system**, keyless entry, smart, remote-controlled lighting, a smart thermostat and high-speed fibre internet. Of course, the dwellings are also **ageing-proof** since all essential functions are on one floor. In this way, residents can continue to live there, even if they have difficulty walking (Blauwhoed, 2020).”

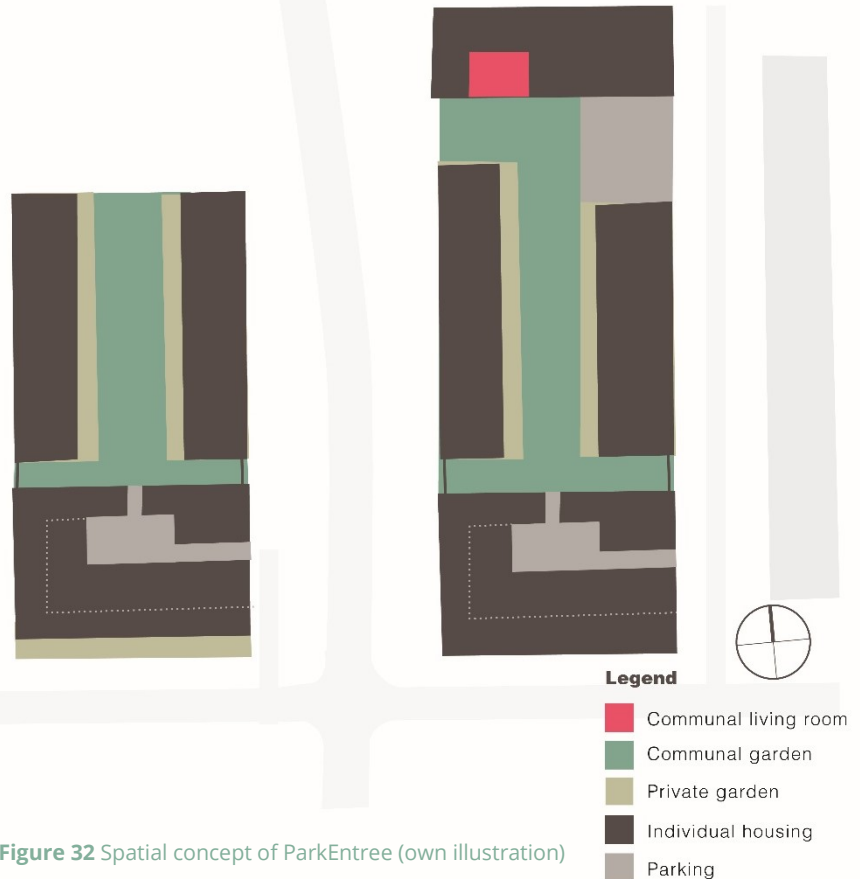


Figure 32 Spatial concept of ParkEntree (own illustration)



Figure 33 Kitchen in the communal space, more space on the right (own picture).

Figure 31 Picture in one of the courtyards (Blauwhoed, n.d.)



Case study 3: LIFE, Amsterdam

The LIFE building has been developed, built and managed by various parties. The developer VORM is a developer related to a contractor. In December 2019, the complex was completed by contractor Hillen-Roosen, and the first moved in January 2020. The building consists of 131 apartments, of which 39 of social housing (owned by social housing provider Habion), 59 private rental apartments (owned by Bouwinvest) and 33 owner-occupied apartments. The plinth of the building is rented out to a general practitioner, a pharmacy and a kindergarten. The building also houses care provider Cordaan, who offer 48 care units for people with dementia. They also manage the neighbourhood room. These care units are excluded from the research as they are disconnected from the dwellings and not categorised as living.



Image 1 Picture of LIFE from park (Zorgsaamwonen, 2021)

Core	Target group	Like-minded and involved people in their 50s and 60s from Amsterdam (LIFE, n.d.).
	Immaterial benefit	<i>“Enjoyable and safe living in a place where you can be yourself, surrounded by like-minded people who care for and care about each other, with or without a care demand (LIFE, n.d.)</i>
	Initiator	Developer related to a construction firm
Actual product	Households & types	131 households (30% social rent 45% private rent 25% owner-occupied)
	Price / m2	€115 - €158 /m ² /year – social rent €199 - €209 /m ² /year – private rent €6.578 - €7.747 /m ² - owner-occupied
	Shared garden	14% of built surface - 690 m ²
	Shared space / hh	5,3 m ² /hh (total) 0,84 m ² hh (unrealised neighbourhood room)
	Extra services	For private rent: A weekly available hostess, contact though app or personal contact on Tuesday. House manager for facility 2 days/week (Nul20, 2020)
Augmented	Design involvement	-
	Other	Minimum age of 50 for the private rent and a selection procedure for the social rent, based on motivation letter and interview.

Figure 34 A brochure render showing the courtyard and the care facility on the right (Van der Linden, 2020).



“LIFE: living for involved over-50s in Amsterdam”

“LIFE is at the heart of the Houthaven. LIFE offers 59 free sector rental flats for involved over-50s. People who **care for and look after each other**. LIFE offers light and modern flats where anyone aged 50+ can live with or without care demand. Bouwinvest rents out 59 private rental apartments. Besides, the LIFE complex also contains owner-occupied dwellings, social housing, horeca, a **neighbourhood room**, care units and a health centre. In LIFE you live together with like-minded Amsterdammers. Everybody has their own appartement, but surrounded by involved neighbours who are **sharing the same approach to life**. **Hostesses** are weekly present to arrange **common activities** and interconnections. Cordaan is also present in part of the building. They provide personal care and support. This means that this neighbour can have a special benefit for your LIFE. You are welcome in their neighbourhood room, a common meeting place on the ground floor. If you require (home) care now or in the future, they have a competent team at your disposal that specialises in all forms of care. Of course you are free to choose your own care provider. LIFE wants to be a place where everyone can be themselves and live **comfortably** and **safely**, surrounded by **like-minded people**. That's why, as residents, we are also looking for **open-minded** people who enjoy working for each other and for their neighbourhood. A handy neighbour, a language lessons volunteer or give drawing lessons as a volunteer at Cordaan where people have coffee together or where residents go to the theatre or museum together. In LIFE we are looking for people who enjoy being in the middle of life, but also value **freedom** and **privacy**. People who want to make life just a little bit **more fun together** with their neighbours (LIFE, 2020).”

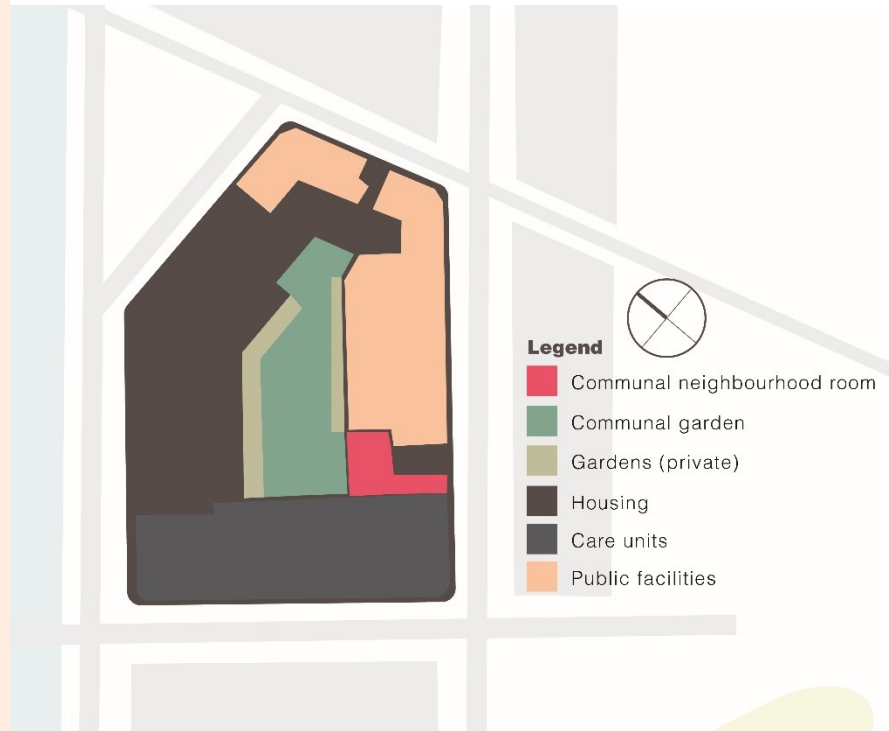


Figure 37 Spatial concept of LIFE (own illustration)

Figure 36 Picture of the unopened neighbourhood room (Cordaan, n.d.)

Figure 35 Picture of the neighbourhood room and courtyard (ZorgSaamwonen, 2021)



Conclusion

Finally, the three projects are briefly compared: the core benefits described in the cases' marketing, the actual delivered product and a brief comparison with the literature.

	Knarrenhof	ParkEntree	LIFE
Target group	Active and social people willing to help one another for the coming 20 – 30 years	Healthy and active seniors who would like to live with peers	Open-minded and involved over-50s from Amsterdam with or without care demand
Immaterial benefit	<i>“Safe living privacy and at the same time all the advantages of living together as good neighbours”</i>	<i>“facilitate vital seniors to take control, stimulate entrepreneurship, make connections, focus on self-development, let looking after each other be natural.”</i>	<i>“A place where everyone can be themselves and live comfortably and safely, surrounded by like-minded people.”</i>
Initiator	Ideological developer	Independent developer	Developer of construction firm
Marketing focus	<ul style="list-style-type: none"> • Voluntary community • Remain independent • Being good neighbours • Affordability 	<ul style="list-style-type: none"> • Community • Enjoying life • Self-development • Technology 	<ul style="list-style-type: none"> • Live with like-minded • Comfortable • Urban city location • Optional care

Table 3 Comparison of the cases core benefit

The core benefits

The target group of the cases all focus on the second half of life. LIFE is the only one that sets this age at a minimum of 50 years and both people with and without care needs. Knarrenhof and ParkEntree describe the target group as active seniors who want to prepare for their future. In terms of marketing, Knarrenhof refers to affordability and ParkEntree to the mid-range segment. Zooming in further on the marketing, it is striking that projects use more or less the same terms. They emphasise togetherness, living with like-minded people and organising communal activities. All projects describe this as entirely without obligation, maintaining privacy and living independently for as long as possible. Although the immaterial benefits are broadly similar, there are also minor differences. Knarrenhof mainly emphasises togetherness and is the only one that also emphasises affordability. Sales are not conducted through a brochure but press conferences at residents' evenings. LIFE and ParkEntree have extensive sales brochures, which do not include the (social) rent. The focus in the brochures is more on the life cycle homes, surface areas and detailed floor plans and artist impressions. Here, communal living is mentioned, as is the appointment of a manager/host to organise it. There is an emphasis on smart technology that provides comfort and convenience for senior living, such as home automation, a door camera and a smart heating system.

	Mentioned aspects in marketing	Knarrenhof	ParkEntree	LIFE
Social	<i>Neighbourliness</i>	x	x	x
	<i>Mutual support</i>	x	x	x
	<i>Like-minded people</i>	x	x	x
	<i>Common activities</i>	x	x	x
Fin.	<i>Social housing</i>	x	x	
	<i>Affordability</i>	x	x	
Use	<i>Ageing-friendly</i>	x	x	x
	<i>Comfort</i>	x	x	x
Other	<i>Enjoying life</i>	x	x	x
	<i>Remain independent</i>	x	x	x
	<i>Technology</i>		x	x
	<i>Personal development</i>		x	
	<i>Care</i>			x

Table 4 Comparison of the mentioned marketing aspects related to CH.

The actual product

While the marketing of the projects is largely similar, the product in the three cases is very different. First, the different sizes are striking. Knarrenhof is the smallest project with 48 single-family homes (SFH), ParkEntree is a factor of 2 larger with 89 dwellings in mixed typologies and LIFE a factor of 3 with 131 multi-dwelling units (MDU) and additional care facilities. Knarrenhof has the largest communal area, both per household and total. It should be mentioned that the communal area in LIFE was announced but never opened due to Covid-19 measures. Because there is a communal garden and the focus in marketing was on communality, the case was chosen after all.

All projects are spatially designed as courtyards. Overall the design is very different in terms of architecture, dwelling typologies and prices. Knarrenhof is the only case where all dwellings have direct access to the courtyard. LIFE is the only project where facilities have been included in the block, such as a general practitioner, a pharmacy and a kindergarten. A part of the complex is an enclosed care facility that also offers care at home if requested.

Comparing prices per square metre reveals large differences, which can be traced back to the context. Knarrenhof was completed at the end of 2017, ParkEntree in autumn 2018 and LIFE in December 2019. Due to the strong price inflation of construction costs, the homes in the latter project are much more expensive. There is also the location: Knarrenhof in a suburb of Zwolle, ParkEntree relatively close to the centre of Schiedam and LIFE in the newly developed timber docks. This has a strong effect on the square metre prices and the final projects.

	Knarrenhof (2017 Q4)	ParkEntree (2018 Q4)	LIFE (2019 Q4)
Dwellings	48	89	131
Average size	102 m ²	89 m ²	83 m ²
Single-family house / multi-dwelling units	100% SFH	28% SFH 72% MDU	100% MDU
Shared spaces			
Shared space surface	2.175 m ²	1.560 m ²	690 m ²
Average per hh (m ² /hh)	45 m ² / hh	17,5 m ² / hh	5,3 m ² / hh
Shared room surface	100 m ²	75 m ²	110 m ²
Per household	2,0 m ² / hh	0,84 m ² / hh	0,84 m ² / hh
Ownership %			
Social	29%	0%	30%
Owner-occupied	71%	89%	25%
Private rent	0%	11%	45%
Prices			
Social rent	€98 /m ² /year	-	€137 /m ² /year – social rent
Owner-occupied	€1.937 / m ²	€2.600 / m ² - owner-occu.	€7.000 / m ² - owner-occu.
Private rent	-	€154 /m ² /year – private rent	€204 /m ² /year – private rent
monthly cost	€30,- p/m to VVE	€55,- p/m	€65,- p/m service
Services	None (self-organisation)	+ Hospitality manager	+ Hosts & concierge + Optional care (excluded)

Table 5 Overall comparison of the cases actual product.

7. Operationalisation

In section 7.1, the abstract core benefits from the case study are linked to the literature. In section 7.2, the found be social, financial and use values are transformed into measurable concepts. The measures are gathered in one table in section 7.3 and converted to survey question that can be found in appendix VI.

7.1 Link benefits to the literature

The immaterial benefits from the three cases are very similar to the benefits from CH concepts in the literature. The projects are described as communities in which like-minded people live in which social connections are made and offer mutual help. Interesting is the additional mention of remaining autonomy and privacy. LIFE and ParkEntree also emphasize personal benefits such as smart technology, the good location and a host organising the communal. This is in line with Pirinen's (2016) analysis in which concepts for seniors are more value-neutral and focus on the individual. Knarrenhof, on the other hand, emphasises self-organisation of the community and affordability. These differences are also reflected in the selling prices and the larger percentages area shared. It can already be concluded that the market is further developing the CH concept. The next goals are to make these immaterial benefits measurable, discover how professionals realised it, and evaluate the end-users' satisfaction.

7.2 Operationalising the intangible benefits

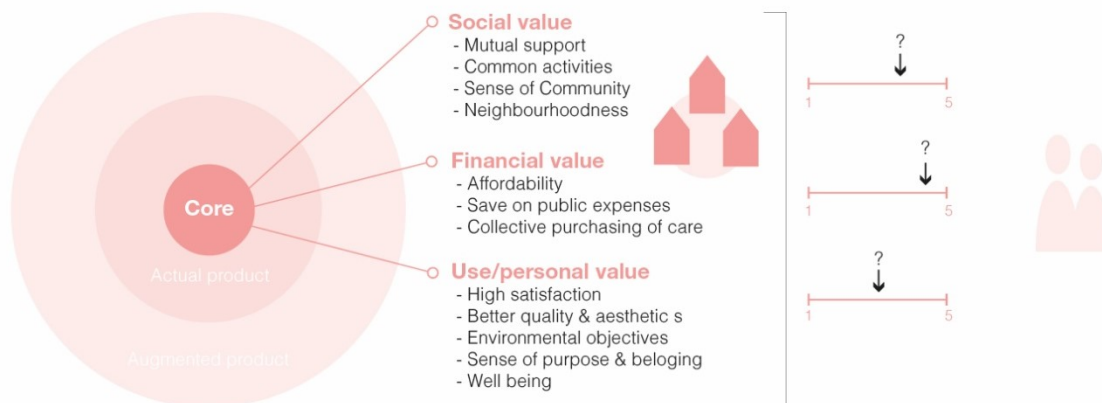


Figure 38 An overview of the use values found and the measurable concepts used (own illustration).

Social value

The social value of a project can be described as buildings and its environment enabling people to make connections and create and enhance opportunities for positive social interaction (MacMillan, 2006). The three case studies promise to create *a community* where neighbours organise *activities* together and *give mutual support*. These three aspects are not unique for these projects and are recognised as essential characteristics of collaborative housing communities. How to measure these aspects is explained below in detail.

Brief Sense of Community Scale

Measuring the level of community that residents experience can be done by using Brief Sense of Community Scale (BSCS). Glass (2020) used the BSCS scale that was developed by McMillan and Chavis (1986) to measure the concept community in five different co-housing projects. The BSCS consists of four dimensions: fulfilment, group membership, influence & shared emotional connection. Each dimension is measured by asking two questions that have to be rated on a 1 to 5 scale. Here, 1 resembles 'strongly disagree' and 5 resembles 'strongly agree'. The sum of these eight questions is the final score on the BSCS and can thus range from 8 till 40. For this thesis, the same questions and

dimensions that Glass (2020) used will be translated into Dutch. Only the word 'neighbourhood' will be changed to 'living project', as the neighbourhood has a different meaning in Dutch. See [table 6](#) for a detailed description.

Common activities

The method of Choi (2004) is used to review common activities. Therefore, the type of activity, frequency and satisfaction with frequency is measured using the same variables.

Six activity types arose from the interview and are the same as Choi's list: 1) coffee or drink; 2) common meals; 3) formal meetings (clubs and boards); 4) common hobby's (gardening, painting, photographing); 5) exercise (walking, sports); 6) other common activities. The frequency per activity is measured by asking residents how often they participate in the type of activity. The predefined options are: Every day; Once or a few times a week; Once or a few times a month; Once or a few times per 3 months; Once or a few times per year; Never. Last, the residents' satisfaction with the frequency of activities is measured by using a 1 to 5 scale ('1' is too little; '5' is too many).

Mutual support

With mutual support, co-residents give help and receive help, a way of looking out for each other. This can be both physical (e.g. helping to do groceries or transport someone (source interview Knarrenhof) as emotional (e.g. listen, having a conversation, cope with ageing (source interview Knarrenhof). First, the frequency of support will be measured, divided in giving and receiving, with the same frequency intervals as the activities: Every day; Once or a few times a week; Once or a few times a month; Once or a few times per 3 months; Once or a few times per year; Never. Secondly, the satisfaction level with mutual support is measured on a 1 to 5 scale as Glass (2020) measured it.

Loneliness

Loneliness is one of the main indicators for the lack of social well-being. Loneliness is a subjective experience of negative mental health related to a lack of social contact. It is different from being alone; that doesn't have to be negative, while loneliness is. Loneliness is expressed in both the amount of social contact and quality of contact (CBS, 2018). Glass (2020) also measures the level of loneliness in her research, according to the 3-item UCLA Loneliness Scale. CBS (2018) states that the UCLA-scale is only based on loneliness, not on the emotional experience. Therefore, CBS advises using a different scale, namely the multidimensional De Jong Gierveld scale. It has six questions that measure overall emotional and social loneliness. Using this longer scale will offer more guidance for a targeted solution and besides, it is preferable as the Dutch averages are known, which is not the case with the shortened UCLA-scale.

The shortened 6-item De Jong Gierveld Loneliness Scale will be used, as it is perceived as a reliable and valid instrument for measuring overall, emotional, and social loneliness (De Jong Gierveld & Van Tilburg, 2006). Precisely the same questions from the paper are copied to the resident survey. Every question has to be rated on a 3 level rating scale (yes, more or less, or no). Yes-answers count for 0 points, and more or less and no for 1 point. For propositions 1, 4 and 6 the score is exactly opposite as the proposition is formulated negatively. The sum of all the points is the loneliness score that runs from 0 to 6. A score of 0-1, is classified as 'not lonely'. Scores 2-3 are classified as 'somewhat lonely' and scores 4-5 are classified as 'very lonely'. According to the shortened De Jong Gierveld scale, 7% of the Dutch population feels lonely, 28% feels somewhat lonely and 65% is not lonely (CBS, 2018).

Financial value

Financial consideration is one of the items that can be chosen as the reason for moving. Residents will also be asked to rate their satisfaction on the price/quality ratio. The last financial value that was referred to in literature is the saving that can be made by collectively purchasing of care. Therefore, residents are asked if they have applied for municipal funds and if they currently use official care.

Use value

Use value can be described as the level to which the building contributes to the residential usability to live in (MacMillan, 2006). The case study analysis revealed that the project offers benefits like 'living becomes more active', 'fun' and 'better than before'. Blauwhoed put a theme like *self-development* in the core concept and LIFE want to make

life more joyful. Two indicators will measure the use value of the project: general satisfaction with the project and a comparison between the new and the old dwelling

Well-being

Three more general questions are added to measure the personal value beyond the social aspect. The questions can be derived from the benefits that were found in the case study. Projects would enable residents to become more active, more enjoyable and giving meaning to life. The questions are answered on a 1 to 5 scale and formulated as described in table 6.

7.3 Residential survey questions

With the operationalisation, the survey structure from the methods section can be filled in. The table below shows all the values of the that had to be operationalised. Together with the structure from the method section, the entire survey was established. The paper version is attached in appendix VI. Eventually, only the digital version in SurveyMonkey was used during the execution of the research.

	Bracket	Variable	Indicator
Reason	Reasons for moving & expectations	Top 3	12-item list, from official CBS surveys and interview data. The degree to which CH played a role in the decision to move
	Level of expectations met	Rating – 1 to 6	Level of satisfaction about the project Grade of general living satisfaction (on 1 tot 10)
Social value	Brief Sense of Community Scale	Yes / more or less / no	<i>Fulfilment</i> - I can get what I need in this project. - This project helps me fulfil my needs
		“	<i>Group membership</i> - I feel like a member of this project. - I belong to this project.
		“	<i>Influence</i> - I have a say about what goes on in this project. - People in this project are good at influencing each other.
		“	<i>Emotional connection</i> - I feel connected to this project. - I have a good bond with others in this project.
	Mutual support	Frequency	Giving support - Day; once or more per week; once or more per month; once or more per 3 months; once or more per year; never.
		“	Receiving support – Same as above
		Satisfaction	Level of satisfaction with mutual support on a 1 to 5 scale.
	Wished participation in common activities	Frequency	On 6 types of activities: Coffee/drinks; meal; formal; hobbies; exercise; other.
		Satisfaction	Rating – 1 to 5 on satisfaction on frequency
	Loneliness	Yes / more or less / no	1. I experience a general sense of emptiness; 2. There are plenty of people I can rely on when I have problems; 3. There are many people I can trust completely; 4. I miss having people around; 5. There are enough people I feel close to; 6. I often feel rejected.
Finan.	Reasons for moving	Rating – 1 to 5	Price/quality ratio
	Satisfaction	-	Making use of municipal funds and/or formal care.
	Health care costs	Rating – 1 to 5	On 10 aspects, 5 related to the dwelling, the price
Use value	Satisfaction	Rating – 1 to 5	1. The private dwelling; 2. The shared space; 3. The common garden; 4. The functioning of technology; 5. The added value of the host / FM
	Well-being compared to previous home	5 level Likert scale	On 8 aspects, comparing the current dwelling with the former dwelling, related to: More active, like-minded people, more contact, enjoy life more, meaning, mutual help, safer, self-fulfilling/development.

Table 6 Operationalisation of the concepts per value for the survey questions.

Part V

Empirical results



8. Professionals results

The desk research showed that all cases offer a newly constructed dwelling around the concept of togetherness. Five interviews with the developing professional (and one initiator) were conducted. The goal was to determine why they started the project and how the development process had been organised. It allows to answer the third sub-question:

3. How do professionals offer CH for seniors as a product?

The interview data is being discussed in one section per case. Each section focuses on the professional's motivation, the allowance of design disruption, the perceived role in CH, and the current maintenance structure. The entire tagged interview transcripts can not included due to privacy. A comparison of the development processes can be found in section 8.4.

8.1 Knarrenhof

The project began as a residential idea to develop a community in the affordable segment. It could really start when a former developer joined out of professional frustration of the lacking qualitative alternatives for seniors. As the residential initiator explained:

*"There is plenty to choose from for wealthy people, but if you're not, 'you are sitting behind the begonias' with nobody looking after you. So I started researching and came across [name of professional], and that's how we got in touch. It started by posting an article in the newspaper in 2011, asking: **Who wants to live in a courtyard, who would like that?** [...] Later, the professional called and asked: how is your courtyard idea going? I said: that's not going to work; I don't have millions on the bank; how can I do that? He said I'll put it on an online platform. [...]. At some point, we had to rent a space for a few hundred members."* ~ Interview Knarrenhof (2)

Knarrenhof is a foundation with a maximum yield percentage taking a risk by investing work on a no pay no cure basis. Their motivation terms from the idea the developers are too financially driven to listen to the user demand. The particular ethos is still reflected by many work hours being unpaid or below average estate market salary. Therefore, many of their professionals work voluntarily or on a no cure, no pay basis (Interview D, l. 374). Resident meetings ensure engagement with future owners to influence the design and process by voting. The product is based on demand but kept in an easily replicable structure. This first project in Zwolle turned into a national concept. This process is repeated in other municipalities with different groups who get access to the necessary information.

In Knarrenhof, residents control the communal spaces through a residential board. Both owners as social renters can be part of the board, although the housing association remains owners and member of the homeowner association (Vereniging Van Eigenaren, abbreviated: VVE). The informal structure with more than 20 committees for activities, maintenance and contact are fully self-organised. The organisational chart is illustrated in figure 39.

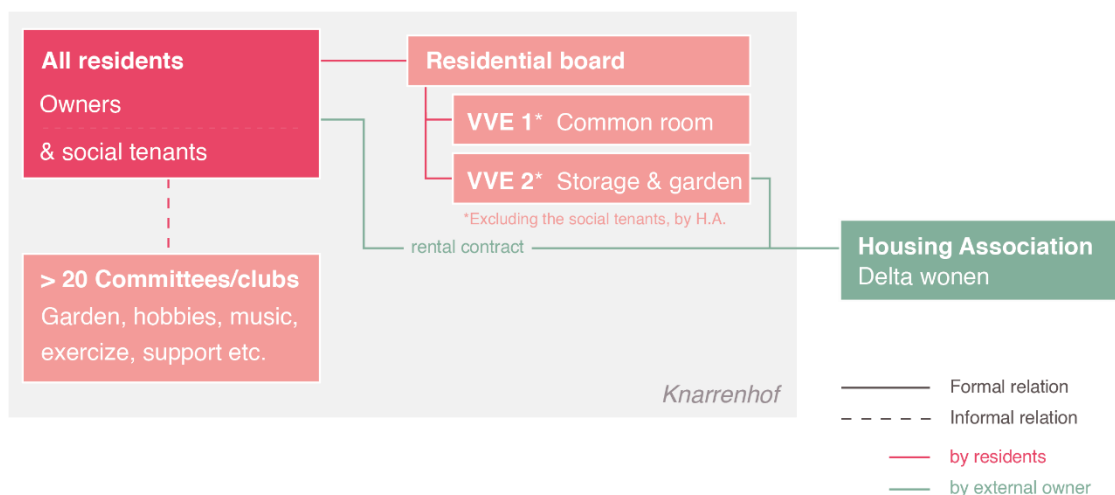


Figure 39 The communal organisation in Knarrenhof, with the elements within the community in grey (own illustration). 50

8.2 ParkEntree

ParkEntree started from the professional frustration that almost no qualitative senior housing concepts were being developed for the upcoming market. The contribution of people's well-being and health has been included in their mission statement and specific developers' profitability objectives. The Senior Smart Living concept by Blauwhoed started as a concept looking for both a site and a community, as the developer explained:

"We really wanted to realise this concept, so perhaps we could have made more money with single-family dwellings, but the question was whether we would have had that opportunity in that place. And we just wanted to, we have seen this trend for years, and we have the motivation to make an extra effort to realise residential concepts for this target group." ~ Interview ParkEntree (1)

Co-creation sessions were organised with a senior target group to decide on the development aspects like floorspace, the concept and architecture. The shared space was added after these sessions, as residents demanded a space for encounter. Design disruption mainly influenced the design, resulting in an attractive spatial concept and product. The sessions could be understood as market research. Besides, common activities were organised by both residents and the professionals to develop the right atmosphere and begin the group formation early.

The developer stated that it is up to the residents themselves to form a group and that it has not been their intention to have an active role. They do want to create the conditions to make it happen (Interview A, l. 62). The second interviewee, the concept developer, had a more outspoken opinion about commonality and perceived it to add meaning to the project. Therefore, a hospitality formula was included to flourish this ideal further. Apart from the monthly SSL association's fee, the dwellings were sold or rented out without additional age or motivational requirements. The broker emphasised this monthly fee to deter future residents who are unwilling to be loyal to each other (Interview B, l. 84). The common lounge opened in August 2020, when also the residential board was established. The two inner gardens are shared property of all the owners in both the low and high-rise. The private investor that owns the apartments also owns the lounge and rents it out for a commercial price to the host. All residents must pay a monthly fee of 55 euros for using the lounge and the host's services in a five-year contract (Interview B, l. 132). The organisational chart with the residents, host and investor is illustrated in figure 40.

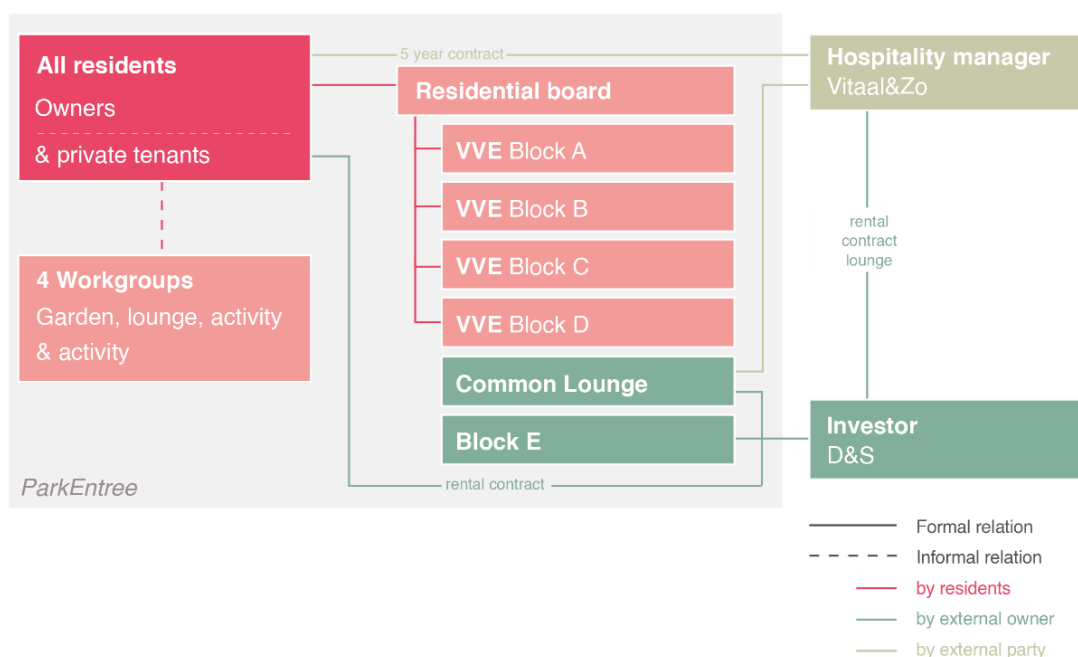


Figure 40 The communal organisation in ParkEntree, with the elements within the community in grey (own illustration).

8.3 LIFE

LIFE is the only case started from a limited qualitative tender issued by the municipality of Amsterdam. The request consisted of 48 care units and a modern residential-care concept with a fixed land price. A collaboration between developer VORM, healthcare provider Cordaan, investor Bouwinvest and housing association Habion resulted in a housing concept over-50's, with lifecycle proof apartments and care-related functions in the plinth. From the developer's point of view, the production of homes and the winning of a qualitative tender were the main objectives:

*"We had a double goal. Project development, of course, is a core activity and a goal in itself. To achieve a project, you have to win tenders, acquire positions. [...]. **Yes, winning on quality, that was really a goal in itself.** Let's show that we don't only acquire a position by bidding a ridiculous amount of money on land." ~ Interview LIFE (developer)*

By collaborating with the right actors, a strong concept arose and positively coloured the proceeding of the tender. Apart from the collaboration between diverse actors, the development process was organised very traditionally without residential involvement. Togetherness was part of the tender but not a goal in itself. It was implemented mainly by adding a neighbourhood room. The interviewee indicated that this was never opened due to corona and remain on a more conceptual plan than becoming very concrete (Interview E, l. 144). Also, the eventual ownership remained mainly in the professionals' hands. Initial developer VORM sold the project the 33 home-owners and the other parts to Bouwinvest and Habion. LIFE seems to be a one-time concept specifically for the tender.

The housing association has established a strong organisational structure by an official board and several committees. The private investor that owns 59 of the apartments appointed a host "who acts as the pivot within the community and actively and pleasantly activates residents to stay vital and involved" (ZorgSaamWonen, 2021). According to the website, 29 of the 59 dwellings were still available in January 2021. There are no additional requirements, and dwellings may eventually also be rented to other target groups than seniors to reduce the risks of structural vacancy (Interview E, l. 132). The housing association organised it differently by appointing an entry committee that selects residents based on a motivation letter and an interview (Interview D, l. 23). Besides, a housing cooperative with the residents was founded, including committees and the expectation that residents act as active members. For Habion, communality, influence and the formation of one entire community were essential goals of the LIFE:

"Because we are looking to see if we could start a community from an experiment-like situation, of people who all wanted to be good neighbours and be involved for each other." ~ Interview LIFE (H.A.)

It seems that corona has amplified the various intentions since three communities can be divided: the 59 private rental dwelling, 39 social rental dwellings, and the Cordaan part. Owners are not included in either of the communities. The organisational structure of these three different communities is illustrated in figure 41.

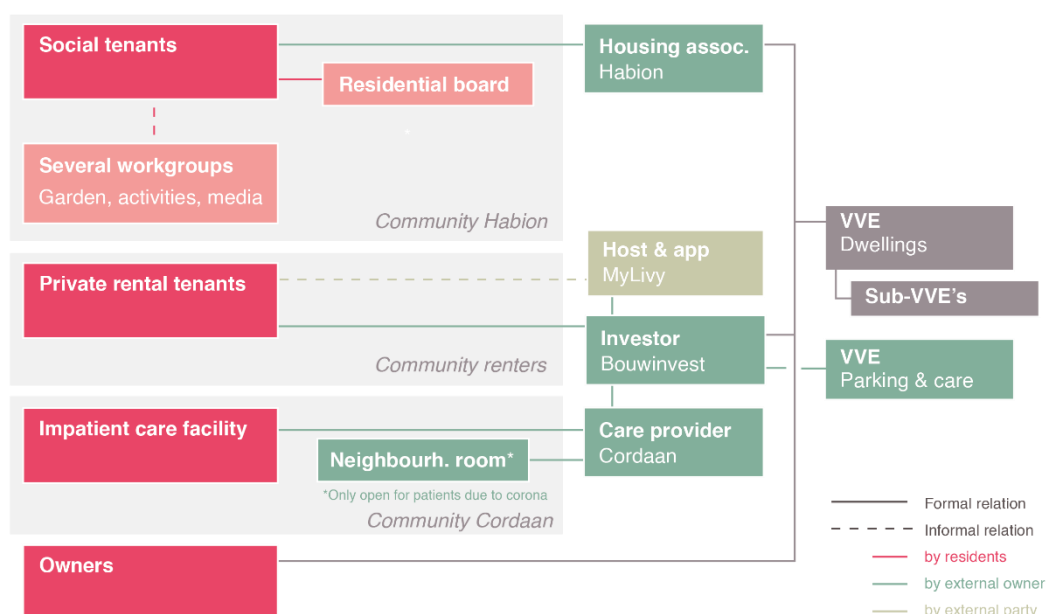


Figure 41 The communal organisation in LIFE, with the three different communities in grey (own illustration).

8.4 Design disruption scheme

All projects share the same type of product, offering togetherness for seniors in a newly constructed dwelling with the possibility for encounter. The different motivations of the professionals have influenced the allowance for design disruption. Based on the desk research, the residential interviews, and professional interviews, three different paths can be drawn in the provision network scheme, according to Palmer (2016), see figure 42. The higher the line of a project, the more potential for design disruption. It becomes visible that the project with the most outspoken motivation from professional ethical consideration (Knarrenhof), offer an alternative by allowing residents to influence the process. The most organisational or financially driven actor (LIFE), left hardly any possibility. In general, it can be seen that professional were in the lead of the development. In the production phase, the financial risk, design and knowledge are located at the professionals.

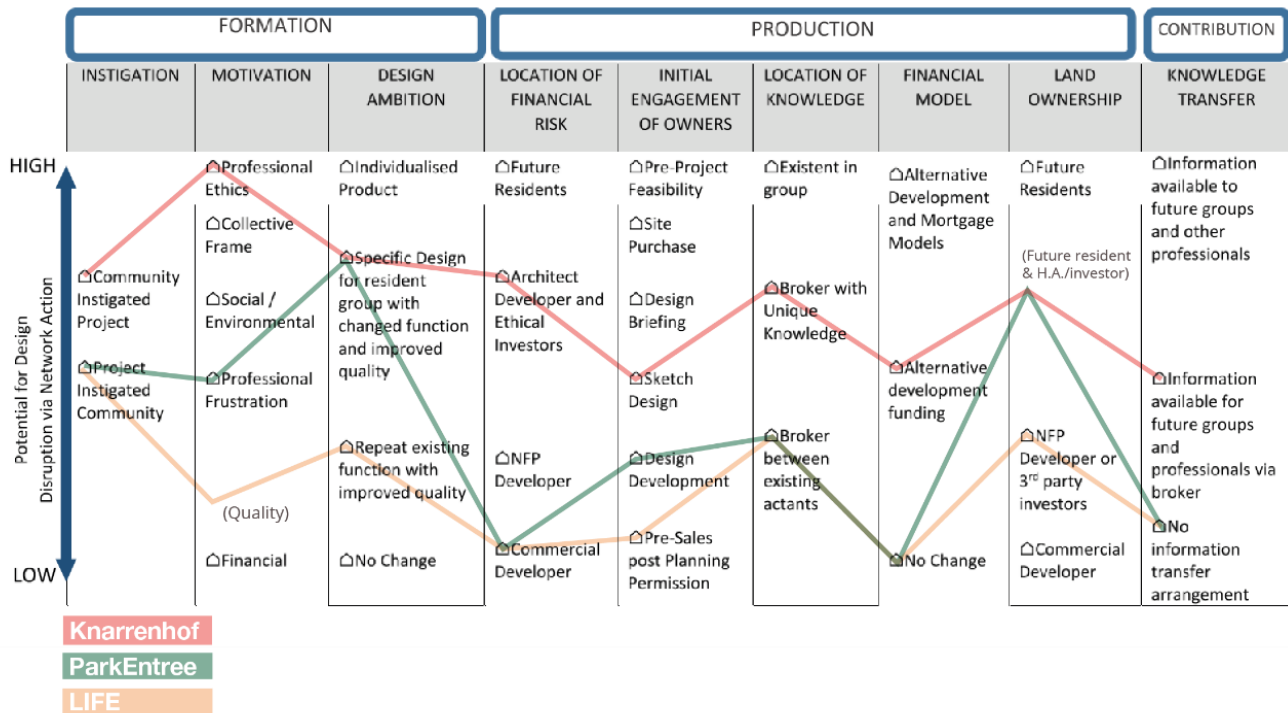


Figure 42 Design disruption path per case (adapted from Palmer, 2016, p. 15)

Sub-conclusion question 3: How do professionals offer CH as a product?

Professionals took the lead in the development and decided where they allowed for design disruption. The diverse motivation of the initiator led to diverse development paths. More ethical initiators allowed residents to influence the process and the later maintenance. More commercially oriented initiators took the lead and approached it like a more mainstream housing project to spare the end-users and use time efficiently

	Knarrenhof	ParkEntree	LIFE
<i>Motivation</i>	Social goals & professional frustration	Professional frustration & financial objectives	Corporate image & financial objectives
<i>Goal</i>	Develop a modern alm-house concept for seniors including communality and mutual help.	Developing a specific concept for seniors for the upcoming market.	Win the municipal tender based on quality (by launching a strong concept)
<i>Initiation</i>	Professional-led (from resident's idea) on municipal land.	Professional-led project on municipal land	Municipal tender, professional-led
<i>Role in community formation</i>	Bring interested residents together, and let them democratically decide what type of community will arise, including starting regulation and starting the first committees.	At first, the host organises activities for and with the residents. Eventually, residents are responsible themselves for forming a community. A host supports this process.	Developer: Not a goal in itself, additional service provided by host H.A: Selecting resident, organising events, setting up the board and developing official statutes.
<i>Tools</i>	- Democratically designing - Design improvements - Group involvement	- Involvement of target group - Setting up initial activities	- Legal structure common space - Influence of residents (H.A.)

9. Residential results

The results of the residential interviews and surveys are presented together. General information about the data is given first (section 9.1), after which the results are subdivided into four topics: the reasons for moving (section 9.2), social value (section 9.3), financial value (section 9.4) and use value (section 9.5). For each topic, a short sub-conclusion is presented, and finally, sub-question four is answered:

4. How do the residents evaluate the realised concept, focusing on the communal benefits?

9.1 Data

Interviews

Eleven interviews have been conducted in October and November: four interviews in Knarrenhof, four interviews in ParkEntree and three interviews in LIFE (due to fewer responses). The interviews were used as a qualitative exploration to get an understanding of the community's functioning. Due to corona, not all interviews could occur one-to-one; hence four interviews were conducted through a Zoom or WhatsApp videocall. All data is processed by relistening, summarising, coding per minute in excel, and transcribing the most significant remarks. The topics discussed per interview are summarized using a co-occurrence table per case, see table 7. The new insights resulted in additional questions for the survey to be tested on the entire population. This is already included in the operationalisation of chapter 7, since this report is not chronologically written. Interviews quotes are added throughout to the survey results to serve as qualitative foundations for the data.

Table 7 Co-occurrence table of values (positive or negative) discussed per respondent per project

	Interv.	Social value		Financial value		Use value		Satisfaction	Positive	Negative
		Pos.	Neg.	Pos.	Neg.	Pos.	Neg.			
Knarrenhof	1	2	2	0	1	2	1	+/-	Better than former dwelling	Privacy, regulations & gossiping
	3	4	1	1	0	1	1	+	Expectation totally fulfilled	
	4	5	1	1	0	3	1	+	Social value and price/quality	Transparency of allocation
	5	3	0	1	0	2	1	+	Lifecycle proof	
ParkEntree	2	2	2	1	1	1	2	+/-	Dwelling and surrounding is perfect	Communal goals not fulfilled, weak organisation
	6	1	1	1	1	3	1	+/-	Perfect dwelling	Juridical structure, size of the lounge
	7	1	0	1	0	2	1	+	Qualitative apartment in a promising concept (despite corona)	No airco, no place for rollator etc.
	11	0	3	1	1	2	2	-	Dwelling & location	Communal organisation, costs and internal frictions
LIFE	8	2	2	0	1	1	2	-	Social intention of neighbours	Common space, children in common garden
	9	3	1	0	1	1	3	+/-	The neighbours	Common space, organisation & functionality building
	10	0	1	1	1	4	1	+	Qualitative housing concept	User-friendliness of technology

Survey

The number of replies counted 87, of which six responses were incomplete and therefore deleted as none response. The 81 filled in surveys result in a response rate of 40% amongst the 3 cases, see table 8. The balance of this response within the projects can be derived from ownership and dwelling type. Fewer tenants responded than one would expect from the project distribution in Knarrenhof (-17%) and ParkEntree (-11%). In the latter, the response rate was higher from the bungalows/low-rise (+13%). Almost all responses from LIFE were from the social tenants (+38%). Five of the twenty responses are from a mix of private and owner-occupied housing, referred to as 'other'. The number of occupied houses by seniors in this part is unknown (based on vacancy from the website, 29 is estimated). This makes it difficult to make strong quantitative statements about this part of the community in LIFE.

The average year of birth from respondents is 1952 (68 years old, with a standard deviation (SD) of 6,1 years) and ages ranging between 42 and 80. The number of people per household is a notable difference per cases, as LIFE has a much lower average size of 1,1. Here, many of the respondents are living alone or are divorced. Another significant difference is the duration of habitation. Knarrenhof was finished in December 2017, ParkEntree had a phased completion between fall 2018 and August 2020, and LIFE was complete January 2020. Therefore, the coronavirus has impacted the establishment and functioning of the communities differently. This implication is continuously considered while discussing the cases.

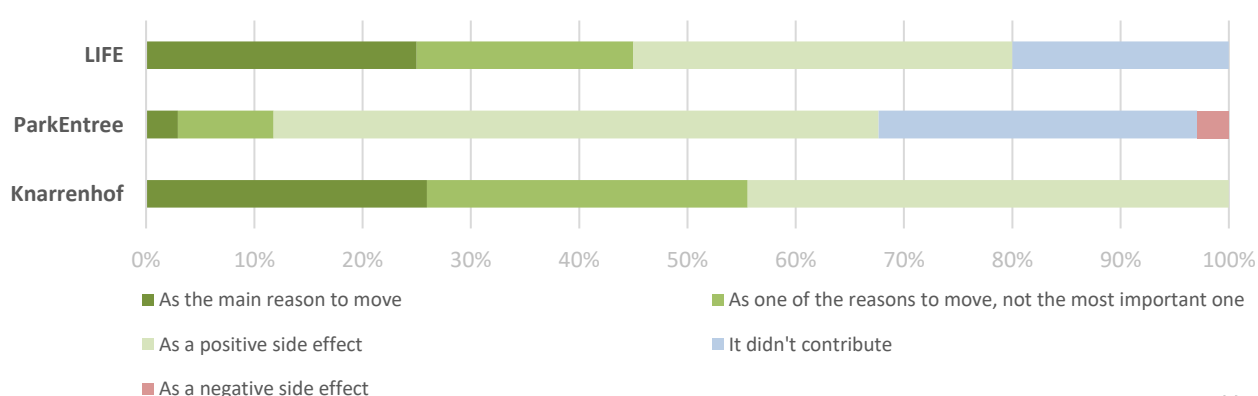
Table 8 Overview characteristics of respondents per case

	Knarrenhof	ParkEntree	LIFE	Total
<i>Respondents survey</i>	27	34	20	81
<i>Resp. Rate</i>	56%	38%	30%	40%
<i>- of which renters (difference %)</i>	12% (-13%)	0% (-11%)	Social: 38%	
<i>- Location in project (difference %)</i>	Schelde: 59% (+11%)	EGW: 41% (+13%)	Other: 21%	
<i>Average year of birth</i>	M = 1950 SD = 4,47	M = 1955 SD = 6,69	M = 1952 SD = 5,74	1952 SD = 6,1
<i>Duration habitation</i>	100% > 2 years	32% < 0,5 year 55% > 1 year	75% between 0,5 and 1 year	
<i>Household size</i>	1,73	1,88	1,1	1,62
<i>Married/partner</i>	73%	81%	5%	57%
<i>% owner-occupied</i>	88%	100%	15%	-

9.2 Reasons for moving

The CH concept played a role in the reasons form moving for many residents, but has not been the only consideration. Only in Knarrenhof, 100% of the respondents considered CH when moving and for 56% it as even one of the main reasons for moving, see figure 43. For 80% of the LIFE's respondents, CH played a role, and for 45% of them as one of the main reasons. In ParkEntree this is significantly lower. For 68% CH played a role but only for 14% as one of the reasons. For one respondent, it was even a negative side effect. In the results will sometimes be zoomed in on the resident that considered CH when moving to create a more equal starting ground. It will be referred to as group that considered CH (all green bars) or group that did not consider CH (blue and red bar).

Figure 43 To what extent did the CH concept contribute as a reason for moving?



The actual reasons for moving and the expectations of the project were also asked. Overall, these reasons for moving were often focused on the unsuitability of the former dwelling regarding life cycle proofness (47). The other reasons were the maintenance on the former dwelling (30), the size of the former dwelling/garden (24) and the few social contacts around (15). The push factors chosen by the LIFE respondents are closer related to collaborative housing, reflected by the top three: the few social contacts around (6), changed household composition (5) and far from friends and family (5). In ParkEntree, none of the top 4 relates to CH. Figure 44 illustrates the moving reasons per case.

Choice	Change in household composition	Former dwelling not life-cycle proof	The maintenance of my former dwelling	The size of the dwelling/garden	Declining health	Need for care	Dwelling far from family/friends	Few social contacts around	Feelings of loneliness	Financial	Other:	Don't know	Total
Knarrenhof	1	0	13	2	1	0	1	3	0	0	2	1	24
	2	1	4	3	3	0	0	0	0	3	0	0	15
	3	1	4	5	2	0	0	2	0	0	1	0	15
		2	21	10	6	2	0	1	5	0	3	3	1
ParkEntree	1	4	16	3	4	2	0	0	0	1	2	0	32
	2	0	3	11	3	4	0	2	2	0	1	0	26
	3	2	3	4	8	0	0	2	0	1	1	0	21
		6	22	18	15	6	0	2	4	0	3	3	0
LIFE	1	4	3	0	2	0	2	3	0	1	4	0	19
	2	1	1	0	1	3	0	1	2	1	2	0	14
	3	0	0	1	0	0	0	2	1	1	1	0	7
		5	4	1	3	3	0	5	6	3	7	0	40
Total	13	47	29	24	11	0	8	15	3	9	13	1	173

Figure 44 What was/were the main reason you moved from your previous dwelling?

The initial expectations are illustrated in Figure 45. The top 5 expectation in general are: A lifecycle proof dwelling (44), the location (29), the proximity of social contacts (25), the price/quality ratio (21) and last a smaller dwelling (19). When zooming into the expectations per project, differences can be found. The Knarrenhof respondents' second expectation is the proximity of social contact, and the third is mutual support. For LIFE, the first reason (living in a community), fourth (proximity of social contact) and fifth mutual support are all related to CH. In ParkEntree, none of the top 5 relates to CH. Living in a community is for none of the respondents an expectation of the project, and the proximity of social contact is chosen relatively few.

Choice	The location	Close to family/friends	The dwelling is life-cycle proof	Less maintenance	Smaller dwelling	Good price/quality ratio	Living in a community	Proximity of social contact	Shared activities	Personal development	Mutual support (neighbourhoodness)	Total
Knarrenhof	1	2	0	16	0	1	2	2	0	0	2	26
	2	2	0	3	3	4	0	5	1	0	3	22
	3	4	0	2	3	1	2	4	0	0	5	22
		8	0	21	6	3	6	4	11	1	0	10
ParkEntree	1	3	2	13	2	6	4	2	1	0	1	34
	2	7	3	1	5	4	5	2	2	0	0	29
	3	4	2	4	2	6	3	3	2	0	0	26
		14	7	18	9	16	12	0	7	5	0	1
LIFE	1	7	3	0	0	0	7	2	1	0	0	20
	2	1	3	2	0	2	0	3	1	1	4	17
	3	0	1	4	0	1	0	2	3	0	3	14
		8	7	6	0	0	3	7	5	1	7	51
Total	30	14	45	15	19	21	11	25	11	1	18	210

Figure 45 What expectations did you have before moving to the project?

Participants were also asked if they had worries before moving to the concept. About 25% answered in the affirmative. Some of the residents who deliberately choose CH had worries the group composition, feared the hassle about the communal maintenance, and feared the loss of privacy by others meddling. The group of residents who did not consider CH indicated that they were reluctant of *to buy an apartment and find the rest not important and to spend money on something not used*. The current experiences are discussed throughout the results.

Interview data

The interview data supports the above findings. All interviewees discussed getting older and preparing for the future by choosing a life cycle proof dwelling, but the focus per project is different, just like the survey projected. In Knarrenhof, two respondents have clearly emphasised the importance of the communal as a reason to move:

"I used to live very nicely in a newly built house in a neighbourhood with many young children. That was nice, but everyone was working all day. I was the one who accepted the parcels. I had good contact with the neighbours, but mainly casual. [...]. I felt quite lonely there." ~ Interviewee 3 (Knarrenhof)

The interviewees from LIFE moved consciously to Amsterdam to live closer to their children. Social tenants were subjected to an interview to test if they would qualify for a CH. The effect is seen in a more outspoken intention and expectation. Owners were not subjected to any requirement and private tenants only to an age threshold of 50. Their consideration is clearly broader than the collaborative aspect alone and more a side effect:

"Ideally, I wanted to live in an environment where I was free, with a mixed population not in the middle of the city but nearby. And where we would have access to care when needed." ~ Interviewee 10 (LIFE)

Also the ParkEntree interviewees gave more diverse reasons for moving and mainly focussed on reducing space and living in a newly built lifecycle proof dwelling. This concept offered the right dwelling type, had a good location near a park, and relatively affordable prices:

"Researcher: What attracted you to this concept? Interviewee: Well, the functions on the ground floor. The bungalow type of housing and the appearance of the entire plan. Those were the most decisive factor, a type of dwelling that we liked and the location in Schiedam." ~ Interviewee 6 (ParkEntree)

Another resident did explicitly mention the collaborative housing concept and perceived it as a positive side-effect:

"Living with a plus, instead of living for the 50 plus, that is how I experienced it and was very appealing to me. Especially in the common lounge downstairs to do things, to undertake things. Unfortunately, this has become a little difficult in these Corona times, but the idea appeals to me. It only still has to develop because not everyone finds the same things interesting and fun." ~ Interviewee 7 (ParkEntree)

Sub-answer on question 4:

How do the residents evaluate the realised concept (expectation-wise)?

For the majority of residents, the communal aspect of the housing concept played a role in their decision to move. However, the priority of this aspect in the reasons to move strongly differ per case and per person. Around one-third consider it a positive side effect and have other, more important, considerations for moving. A key concern for almost all respondents is moving to a life-cycle proof dwelling to prepare for the future. Cases with additional selection methods clearly show higher motivation for CH than projects without criteria. Nonetheless, results show that moving is a broader consideration than just the CH, with various expectations of togetherness and encounter.

9.3 Social value

The social value of the concepts is identified by five measures: the brief sense of community scale, the intention to undertake shared activities, the mutual support, the satisfaction with the social value and the loneliness score.

Sense of community

The Brief Sense of Community Scale (BSCS) score ranges from 8 to 40. The overall mean score is 31.3 (SD = 6,13). Knarrenhof has the highest score of 35,6 (SD = 3,77). LIFE has a mean score of 29,7 (SD = 5,74) and ParkEntree 28,7 (SD = 6,02). Table 9 shows the differences for respondents who considered CH in column two, and residents that deliberately moved to the CH concept as one of the main reasons. In the rows, a sub division has been made according to dwelling type. Some differences stand out. The different courtyards in Knarrenhof have a high but diverse scores and standard deviation, that increase when people deliberately chose CH. Also in LIFE, the BSCS score increases for residents that chose CH. In ParkEntree, the contrary occurs. The average BSCS score of the group that moved for the CH concepts decreases. Also contrary to what could be expected is that the BSCS score in the apartments is on average a bit higher than the low-rise around the shared space. Since Knarrenhof and ParkEntree are both courtyards with single-family dwellings, this results illustrates that other aspects as design influence the perceived level of community.

Project	All residents		Residents chose CH		Deliberate CH decision	
	M	SD	M (CH)	SD	M (CH+)	SD
Knarrenhof	-	-	35,6	3,77	36,5	3,63
Courtyard 1	-	-	36,8	2,48	37,1	2,57
courtyard 2	-	-	33,9	4,58	34,8	5,21
ParkEntree	28,7	6,02	29,3	4,85	28,0	4,85
High-rise	29,2	6,71	30,5	4,60	21,0	-
Low-rise	27,9	5,62	27,9	5,70	30,3	3,09
LIFE	29,7	5,74	30,8	5,83	31,8	5,83
Social rent	30,5	5,41	30,6	5,60	31,8	5,83
Other	27,0	5,87	32,0	0,00	-	-
Total	31,3	6,13	32,4	5,50	33,8	5,50

Table 9 BSCS score per project, divided into building parts and consideration of CH.

Areas for improvements arise when specifically zooming in on the 8 indicators that make up the BSCS score. In general the indicators *group membership & shared emotional connection* reach high scores within the cases. Also specific weak indicators arise, see figure 46. In ParkEntree the *need fulfilment* scores low. The project seems to not help residents fulfilling their needs (M = 3,14; SD = 0,900) and cannot fully get what they need (M = 3,19; SD = 0,792). The lowest indicator is *I have a say about what is going on* (M = 3,0; SD = 1,014). This can be related to the difficult organisational structure as explained further on by the interviews. LIFE could improve the community feeling among residents by focussing on the way people influence each other (M = 3,38; SD = 1,166). Also here, the influence of residents and helping to give residents what they need might help.

		Need fulfillment		Group membership		Influence		Shared emotional connection		BSCS
		<i>I can get what I need</i>	<i>Project helps me to fulfill my needs</i>	<i>Feel like a member of this project</i>	<i>I belong to this project</i>	<i>I have a say about what is going on</i>	<i>People positively influence each other</i>	<i>I feel connected to this project</i>	<i>I have a good relation with others</i>	
Knarrenhof	M	4,19	3,96	4,74	4,67	4,30	4,41	4,59	4,78	35,6
	SD	0,818	0,999	0,583	0,609	0,656	0,681	0,681	0,416	3,77
Parkentree	M	3,19	3,14	3,81	3,90	3,00	3,52	3,71	4,19	29,3
	SD	0,792	0,900	0,837	1,065	1,014	1,096	0,983	0,794	4,85
LIFE	M	3,50	3,88	4,31	4,13	3,50	3,38	3,94	4,13	30,8
	SD	1,061	0,992	0,845	0,857	0,866	1,166	0,966	0,696	5,83
Total	M	3,69	3,67	4,33	4,28	3,67	3,86	4,14	4,42	31,3
	SD	0,959	1,011	0,807	0,909	0,979	1,073	0,950	0,703	6,13

Figure 46 To what extent do the following aspects apply to the project in which you live? In blue the average BSCS score.

Frequency of activities people wish to undertake

Table 9 gives an overview of the wishes of residents to take part in shared activities, also divided for all residents (M all) and residents considering the CH concept (M CH). In Knarrenhof, this selection has been also made for residents deliberately choosing for CH (M CH+). Residents are the most willing to frequency have a coffee or a drink (once every two weeks) while official meetings are not really wanted often (once every 3 months). On average, the means of people considering CH are comparable. Ones deliberately considering CH have a higher motivation to participate. In ParkEntree, the ones for which the CH concept did not play a role clearly push up the average to an activity ounce every 3 months. The large variation is also reflected by the high stander deviations. Such different expectations of each other can make it harder to form a group.

Aspect	Knarrenhof			ParkEntree				LIFE			
	M (CH)	M (CH+)	SD	M	M (CH)	M (CH+)	SD	M	M (CH)	M (CH+)	SD
Drinking coffee, having a drink	2,6	2,4	0,65	3,6	2,8	2,7	1,27	3,0	2,88	2,8	0,57
Eating together	3,7	3,5	0,86	4,5	4,0	4,3	1,08	3,5	3,44	3,4	0,85
Official meeting (ve, board)	4,1	3,9	0,75	4,1	4,0	4,3	0,79	4,1	3,88	3,7	0,70
Hobby activity	3,2	3,5	0,84	4,0	3,7	3,3	1,45	2,9	2,94	2,7	0,60
Excercise	3,1	2,9	1,05	4,3	3,6	3,5	1,58	3,3	3,19	2,8	1,15
Other activities	3,4	3,3	0,64	3,7	3,7	3,0	1,09	3,6	3,56	3,0	0,79

Table 10 In the theoretical framework, the importance of the residents' intention in forming a community was explained. Residents were asked what frequency they would like to participate in activities with neighbours in a normal situation (without corona). The following scale is used: 1 = every day, 2 = once or a few times per week, 3 = once or a few times per month, 4 = once or a few times per 3 months, 5 = once or a few times a year and 6 = never.

Mutual support

Mutual support is one of CH concepts' essential benefits from both the cases' marketing and literature. The graphs below illustrate how often respondents the chose for CH report to provide support (figure 47) and receive support (figure 48). Nobody answered that it takes place daily. In Knarrenhof and LIFE, 65% of respondents re[port to provide the support once every month. 50% of the LIFE respondents reports receiving support every month, while in Knarrenhof only 23%. Quite a substantive groups says to never receive support

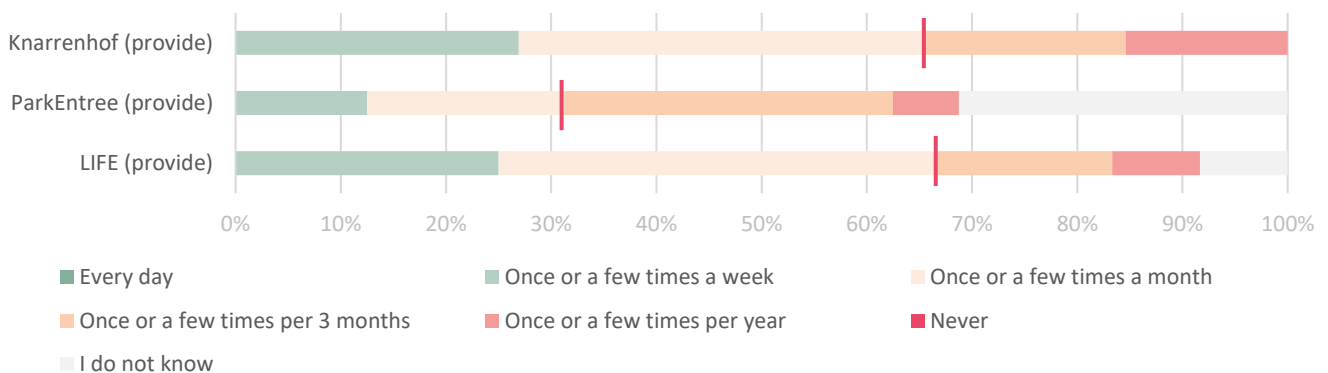


Figure 47 How often do you provide support to other residents?

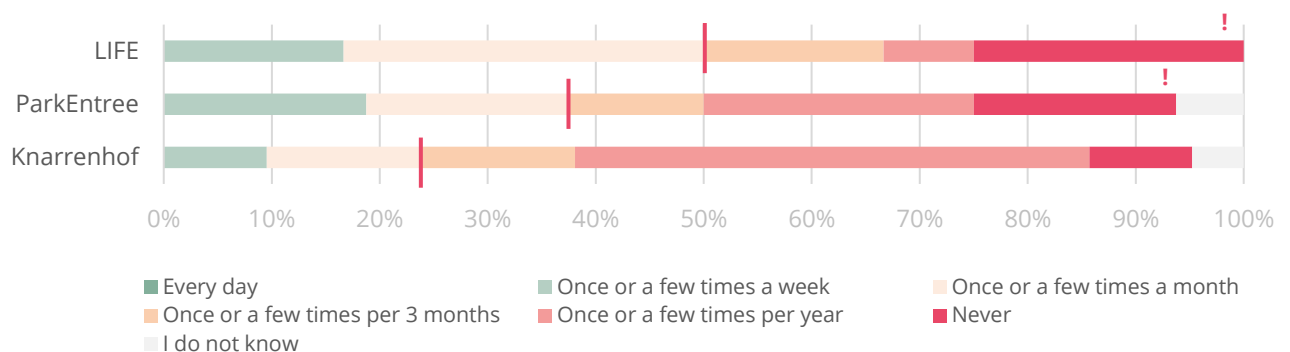


Figure 48 How often do you receive support from other residents?

Satisfaction on social value

How do the residents rate the social value of the housing project? In the survey four aspects had to be rated on a 5-points Likert scale. Figure 49 below shows the mean rating per project. This is subdivided into results that were the most relevant for this research: in ParkEntree a subdivision for interest in CH and in LIFE a subdivision for the social tenants and the private/owner-occupied. Knarrenhof respondents are relatively positive on all social aspects, as everything is rated with 4,0 or higher, without substantial differences in subgroups. ParkEntree residents are the least satisfied and most diverse in their answers. Interestingly, residents that considered CH when moving are not more satisfied while being more willing in their intentions. Only what is organised by residents themselves, namely, mutual support, has a more or less consistent score among residents that specifically chose for CH. In LIFE, especially the organisation of the communal is rated low by the social tenants (M = 2,5; SD = 0,84).

Aspect	Knarrenhof		ParkEntree				LIFE			
	M (CH)	SD	M	M (CH)	M (CH+)	SD	M	social	other	SD
1. The degree of community	4,0	0,79	3,3	3,3	3,0	0,92	3,1	3,1	3,0	0,76
2. The level of mutual support	4,2	0,57	3,5	3,7	3,8	0,76	3,7	3,9	3,0	0,67
3. Frequency of common activities	4,1	0,76	2,8	2,9	2,8	0,79	3,1	3,2	2,8	0,79
4. Organisation of communal	4,0	0,74	2,8	2,7	2,8	0,96	2,6	2,5	3,0	0,84

Figure 49 Respondents satisfaction rating on 10 items, rated on a 1 to 5 Likert-scale. 1 = very satisfied; 5 = very unsatisfied.

Loneliness

The loneliness level is measured by the 6-item De Jong Gierveld Scale, ranging from 0 to 6. Figure 50 shows the loneliness scores from the residents that considered CH when moving. In Knarrenhof, none of the respondents feels very lonely. Contrary in LIFE, the percentage feeling very alone is very high (27%) above the Dutch averages (CBS, 2018).

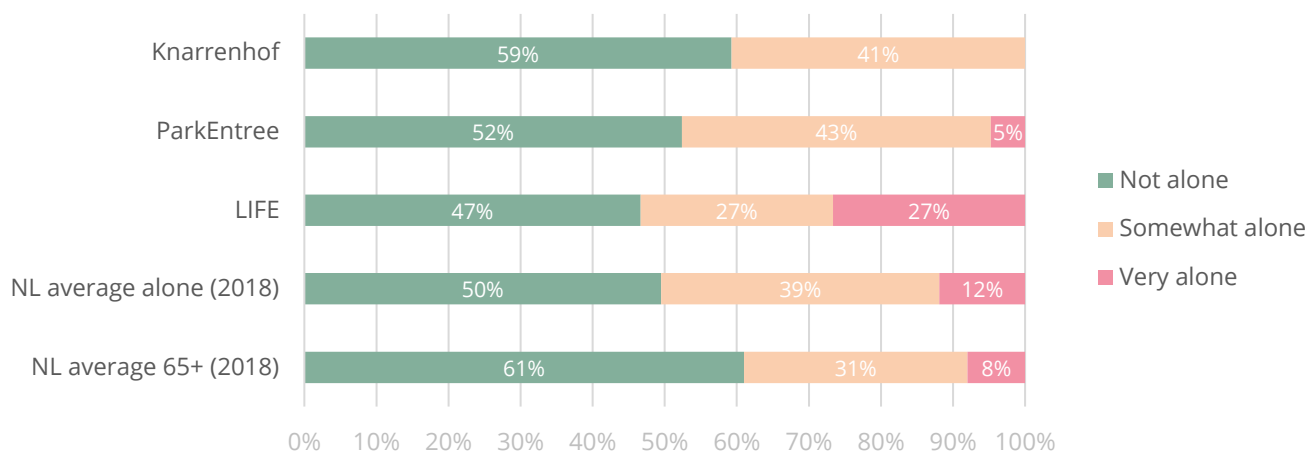


Figure 50 Loneliness percentages per category.

Interview data

The interviews support the limitations described in the beginning: corona has been an enormous bottleneck for LIFE and the last block of ParkEntree in establishing a community, as a LIFE interviewee illustrated:

"There are no common facilities, not even a laundry room or anything like that. [...]. You have less contact, less exchange. So I thought I'd have to be a bit more creative, and I came here with a head full of plans, but then Corona came along." ~ Interviewee 9 (LIFE)

Besides explaining the different BSCS, satisfaction and loneliness scores, the interviews also create an understanding of the community's functioning, that is very different per case. The Knarrenhof interviewees described by comprehensive anecdotes the encountered social benefits: neighbours look after one other in both bad times (illness, death and grief) as good times (birthdays, holidays, weddings). When someone needs help, other residents voluntarily offer to cook, bring groceries, offer transportation to the hospital, or even watch someone regularly. This mutual support can partially be explained by the professional's requirement for residents to sign a social contract. Currently, residents describe the community as a little village, campsite, or even some kind of family. Also important to mention is the difficulties some interviewees encountered initially, such as the number of regulations, range of opinions and fussing between neighbours. These initial little frictions occurred during collective decision-making for example, when designing the garden and making group decisions. Eventually, this created some kind of a familiarisation:

"In the beginning, there was a bit more resistance; sometimes it was 'heart to heart', but now that has all softened. Now it's a bit more, we know each other a bit, you don't all have to be friends, but we are all friendly to each other. [...]. It has become very different now with more personal contact. I call it more our village." ~ Interviewee 4 (Knarrenhof)

The community developed differently in ParkEntree due to development difficulties. The lounge was delivered last instead of first, making it more difficult to organise activities and ensure encounter in the two years before corona. Meanwhile, the so-called SSL-board was led by the developer. Social values like mutual help and good contact with neighbour were described, but only by the residents living in the low-rise single-family houses. These dwellings were delivered at the end of 2018 and directly adjacent to the common garden. One of the interviewees referred to this courtyard as 'our little neighbourhood' and explained the fulfilled expectations:

"As far as house and garden are concerned, the appearance, the way of living together in a courtyard is of course ideal. And when you go on holiday, they [neighbours] take care of our little garden, look after our house and water the plants. And we have already done a lot of nice things together. Like one of the houses next door, they have a big living room and then someone cooks, and we can eat it there. That's very cosy. We've already had a BBQ twice." ~ Interviewee 6 (ParkEntree)

Anecdotes about eating together, good neighbour contact and bringing neighbours to the hospital were told. These stories were not described similarly by interviewees from the apartments. As they moved in later, corona had a larger impact on their group formation. Due to the corona measures, common activities in the lounge were cancelled. And although the common garden belongs to everybody, the apartment residents do not feel welcome. Due to less possibility for encounters, the community feeling in the apartments is more formed owners associations' meeting:

"Researcher: To what extent do you feel part of a community here? Interviewee: Uuhm, as a member of the VVE board and a dwelling with a central location, I am often the first contact person. Friendship is a strong term, but some good contacts have been made." ~ Interviewee 2 (ParkEntree)

In LIFE, the community also worked out differently than the interviewees expected. When talking to residents, the project does not seem to function as one community rather three different ones. As explained before, the social tenants had to write a motivational letter and an interview when applying for the dwelling, while private rental tenants were not checked on their motivation. The interviewee of the private rental apartment was very satisfied with the concept. As a positive surprise, three external hosts organise common activities and launched a digital platform for meeting other residents. Despite, not a strong sense of community was perceived:

"Interviewer: And how is the contact with co-residents, how would you describe that? Interviewee: Just nice, we are new, are enjoying it and are busy. The contact would qualify as the phenomenon that will come'. [...] I am quite willing to support the community feeling, but I need a little more incentive as I am not missing anything in my life. It has not been the main reason" ~ Interview 10 (LIFE)

This sense of community is perceived among the Habion residents. They organise activities themselves such as drawing, Jeu de boules, and dining together. The major drawback is the unrealised neighbourhood room. While the brochures were unequivocal, it could not open for residents due to corona:

"It always said 'shared space', 'community room', and that is the heart of the community. And the fact that you put that in your flyer based on vague, as yet unfinished agreements with a care institution and promise it to people, I just don't think that is fair." ~ Interviewee 9 (LIFE)

Other conflicts arose between the residents and the landlord, like the allocation of dwellings to families with children and the commercial space being rent out to a kindergarten instead of expected cafe. The main issue, in my evaluation, is that expectations had been created, but when altered later, residents were not informed. Some social tenants feel that the promised made are not kept, especially about the community's functioning. Already nine residential boards started and quit because of these conflicts and still try to enforce changes. One resident clearly described that the social value mainly comes from her neighbours as persons, but that the organisation between residents is not functioning:

"Even in this challenging time, I have met very nice neighbours; everyone here is a neighbour. It enriches my life and I think: what luck to meet them. There just has to be a balance between people taking on regular organisation and the informal encounters you have. And the other side is now going to dominate now the residential board is getting bogged down in democratic processes." ~ Interviewee 9 (LIFE)

Sub-answer on question 4:

How do the residents evaluate the realised concept (socially)?

The mixed-method approach showed that the cases' community function differently and are appreciated differently. The Knarrenhof community functions similar to the co-housing communities from literature and BSCS scores are very much alike. Respondents described comparable benefits like mutual help, many group activities and feeling safe. The initial self-organisation led to some friction that eventually led to familiarity, friendliness, and openness to other opinions. Although the low-rise in ParkEntree has a similar spatial structure, the BSCS scores is lower. That proves that also other aspects have to be in place for a community to be perceived. Respondents of ParkEntree and LIFE feel like the project does not precisely offer what was expected but feel like having little influence to change it. The lower social value in the last two cases should first be related to the significant impact and setbacks of Covid on group formation. Nonetheless, some organisational and spatial elements are causing commotion. For ParkEntree, this is mainly due to the divergent expectations, intentions and the little influence that residents perceive. In LIFE, this stems from the expectations of a neighbourhood room that did not open, partly due to corona.

9.4 Financial value

The analysis of reasons for moving already showed that finance is only for 10% of the respondents a reason to move (in 21 of 201 cases, shown in figure 17), relatively little. A lifecycle proof dwelling is perceived more important as a reason to move. This is reflected in the evaluation of the individual dwelling ranked very high. The price/quality ratio is rated especially high in ParkEntree (M = 4.5; SD = 0.50) and Knarrenhof (M = 4.4; SD = 1.00). LIFE's location in the centre of Amsterdam more expensive than Schiedam and Zwolle.

Figure 51 Respondents satisfaction rating on 10 items, rated on a 1 to 5 Likert-scale. 1 = very satisfied; 5 = very unsatisfied.

Aspect	Knarrenhof		ParkEntree				LIFE			
	M (CH)	SD	M	M (CH)	M (CH+)	SD	M	social	other	SD
1. The private dwelling	4,7	0,81	4,7	4,9	4,8	0,63	4,1	3,9	4,6	1,15
2. The price/quality ration	4,4	1,00	4,5	4,5	4,3	0,50	3,5	3,5	3,6	0,67

Interview data

Why the price/quality is highly appreciated can be explained by referring to the interviews. Residents from ParkEntree and Knarrenhof said that the houses were very affordable, especially for a new-build dwelling. The low and competitive prices can be explained when these dwellings were sold, namely just after the housing crisis in 2016.

"The purchase price was very little above the price of a flat that I would have to change a lot. [...] The price was quite good, nothing else had to be done [red. kitchen and toilet renovation] and the sale is under guarantee." ~ interviewee 2 (ParkEntree)

In resident-led project, sharing facilities is besides ideological reasons also a way of saving money by sharing a living room, a laundry space or bike shed. In these senior housing concepts it is primarily considered a bonus, that is an extra convincing factor to move:

"I lived fine in my previous house, I had friends there too. I only had a limited budget for moving and decorating. [...] I did have a few conditions if I was going to move: I wanted the living room to be as big and light. Those were the conditions, but I ended up moving because it was a social project. But the conditions had to be met. That's what won me over." ~ interviewee 4 (Knarrenhof)

Contrary, LIFE was completed in January 2020. Therefore not price, but mainly location was for interviewees a deliberate consideration. The communal aspect and the senior concept with care around the corner cannot be seen apart from this. These are extra reasons to move in, even though the price is relatively high:

"I think the rent is quite high; it is right up to the rent limit. It's quite expensive. Researcher: Would you have moved if it did not have the benefits of togetherness? No, I don't think so." ~ interviewee 8 (LIFE)

Sub-answer on question 4:

How do the residents evaluate the realised concept (financially)?

Finances are inherently connected to decisions making of moving, but rather to the dwelling itself in terms of the actual product in square meters, quality and location. The respondents did not choose CH because of money-saving incentives, while this is often the one of the incentives for sharing in resident-led projects. In professional concepts for seniors, it is instead the other way around: collaborative housing is perceived as a bonus. The collaborative aspect is an additional convincing factor to move and can even compensate for a slightly higher price.

9.5 Use value

Housing satisfaction

How do the end-users rate their overall living satisfaction in the occupied housing concept? The Knarrenhof is rated an 8,7 on average with a low standard deviation of 0,70. ParkEntree scores a 7,8 (SD = 1,30) and LIFE a 7,2 (SD = 1,49). Residents were also asked if they have thoughts of moving out, the percentage that never has thoughts of moving out is 85% in Knarrenhof, 75% in ParkEntree and 40% in LIFE. What aspects residents are satisfied with, was asked on a 5 level Likert-scale. The private dwelling scored in all cases the highest. The communal garden is another point of satisfaction, and in ParkEntree almost equally for residents of both the ones directly connected to it as the apartments. The last aspect used in the marketing of case 2 and 3 was the application of smart technology (such as domotica system) for seniors, and this has been rated rather low in both ParkEntree (M = 3,2, SD = 0,66) and LIFE (M = 2,8; SD = 0,96).

Figure 52 Respondents satisfaction rating on 10 items, rated on a 1 to 5 Likert-scale. 1 = very satisfied; 5 = very unsatisfied.

Aspect	Knarrenhof		ParkEntree				LIFE			
	M (CH)	SD	M	M (CH)	M (CH+)	SD	M	social	other	SD
1. The private dwelling	4,7	0,81	4,7	4,9	4,8	0,63	4,1	3,9	4,6	1,15
2. The shared space	4,1	0,99	2,8	2,7	2,0	1,06	-	-	-	
3. The common garden	4,2	1,02	3,8	3,6	3,5	0,92	3,3	3,2	3,6	1,10
4. The functioning of technology	3,9	0,93	3,2	3,3	3,0	0,66	2,8	2,7	3,2	0,96
5. The added value of the host / FM	-		2,0	2,1	1,8	0,94	-	-	4,0	N=1

Improvements

In order to understand satisfaction qualitatively as well, residents were asked describe disadvantages and to propose improvements. The reactions have been categorised after which 5 themes. [Figure 53](#) illustrate the categorisation of people who deliberately chose CH, arranged per theme.

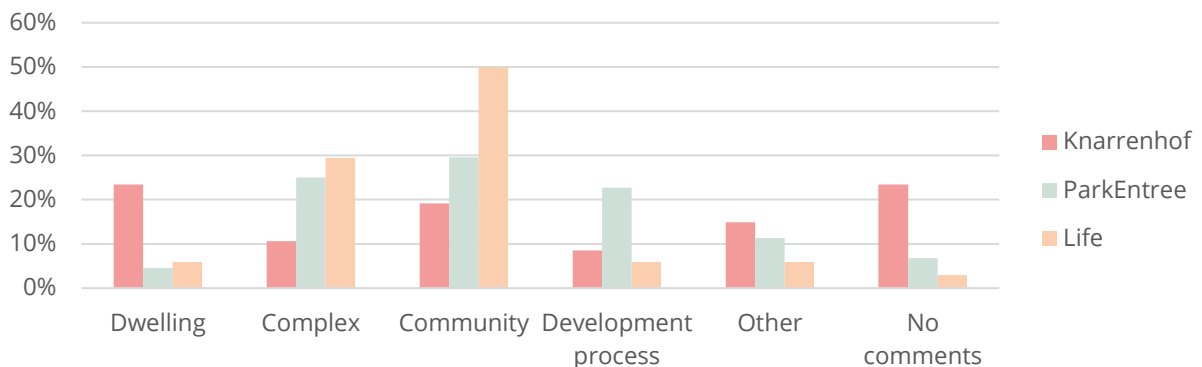


Figure 53 Categorisation of the improvements mentioned by residents that considered the CH concept.

For each project, a number of specific recommendations emerge. In Knarrenhof, the high average age of the residents is mentioned with a simulations declining health, resulting that many tasks become the responsibility of the same residents. Because of the strong social cohesion, deaths have a major impact on the entire community. Apart from this community evaluation, some demand more privacy in the private gardens, complain about the space loss by the high roofs and wish a more ambitious sustainable energy supply without gas. A large proportion also specifically indicate that they have no points for improvement.

In ParkEntree, the improvement focuses on the communal organisation of the residents' association and the VVEs. The atmosphere is dominated by complaints and conflicts instead of pleasant communal activities. Others see improvements in involving residents in both the layout of the lounge and the organisation of management. This point is also made by residents for whom CH was not a consideration when moving. Their argument focuses more on the too-high monthly costs of €55 for the outsourced management, in which more is promised than delivered.

In LIFE, the improvements also focus on the organisation of the communal. There is a clear distinction between private tenants/buyers and social tenants. The former would like to see more integration in activities and organisation as they feel excluded of the activities. In the social tenants, however, some experience a negative atmosphere due to the conflicts in the self-organisation. People would like to experience more neighbourliness by getting a better support from Habion. The unrealised shared space is repeatedly mentioned as a point for improvement.



Figure 54 Word-web improvement response. Red words were mentioned in all cases. The size represent the amount (own).

Benefits compared to former dwelling

The last topic researched in the survey combined the marketing promises and the residents' evaluation: do the housing concepts bring the marketed benefits in everyday life compared to their former dwelling? An 8-item list of benefits from the cases' marketing had to be rated on a 5-level Likert-scale. Agreeing with the statements seemed highly related to the initial motivation to move in because of the CH concepts. Residents that took the CH concept into account when moving in, were agreeing more with the statements. Figure 55 shows the overall result of all respondents considering CH. For 5 out of the 8 statements, more than half of these respondents somewhat or entirely agreed. From high to low, the statements were: more contact with neighbours (77%), more mutual help (70%), more like-minded people around (70%), enjoying life more (63%) and I feel safer (59%), see figure 55. On all aspect, the respondents agreeing with the statement was larger than the ones disagreeing. In the last three statements about belonging, being more active and personal development a larger group did not know it. The figures on the following pages show the scores per project, taking into account all residents.

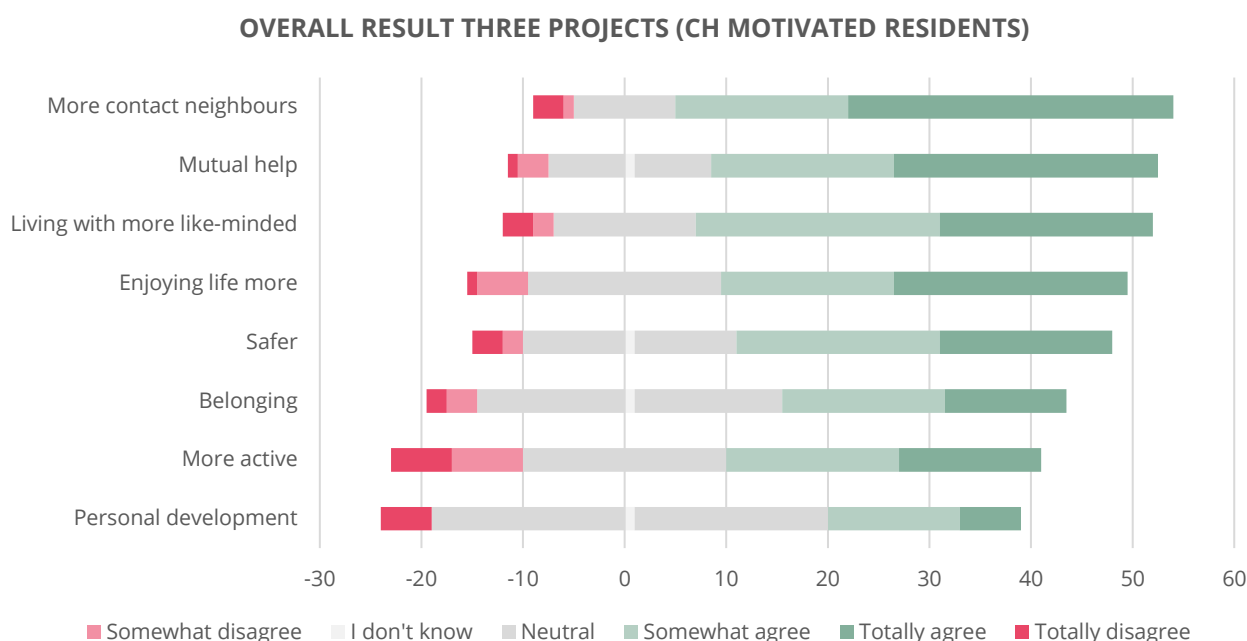


Figure 55 The level to which benefits were perceived compared to the former dwelling.

KNARRENHOF

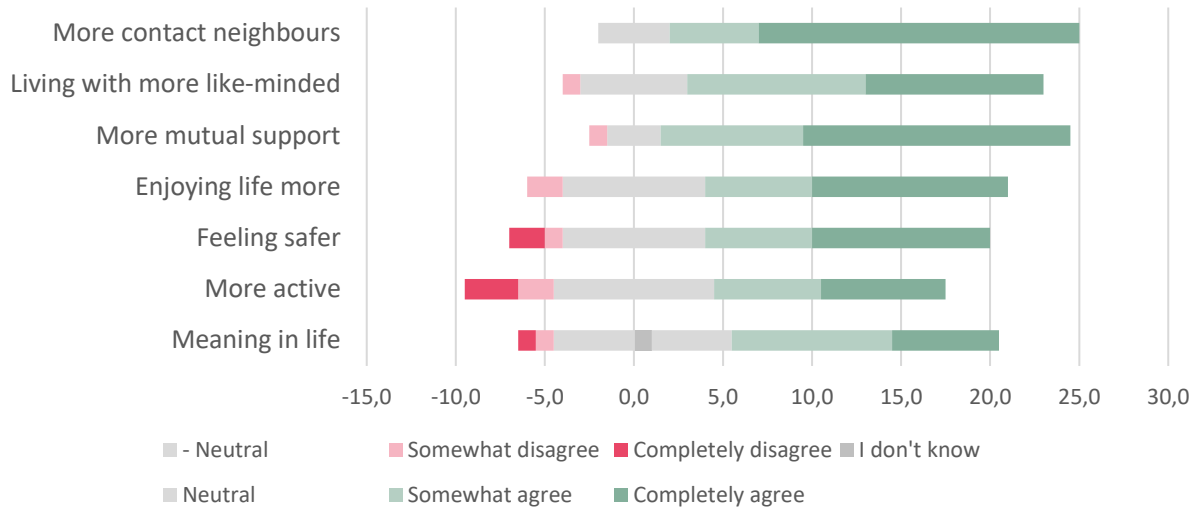


Figure 56 The division in Knarrenhof show that the majority of all residents (somewhat) agree with every statement. The amount of people completely agreeing is standing out.

PARKENTREE

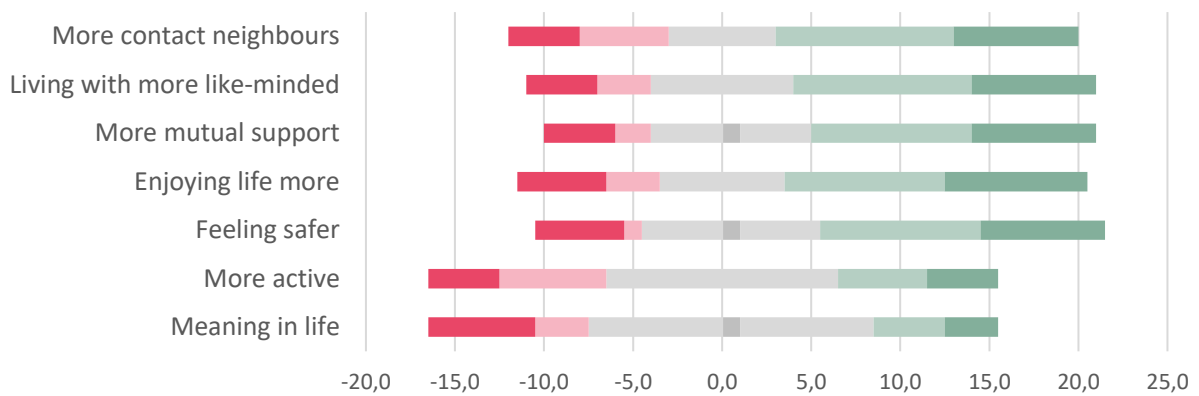


Figure 58 When involving all residents, a large group of people disagreeing with all statements stands out. Ones completely disagree did often not move because of the communal aspect. Their perceived a sense of community far below average (mean is 19 out of 40) and these same people seemed to be less willing to participate in common activities.

LIFE

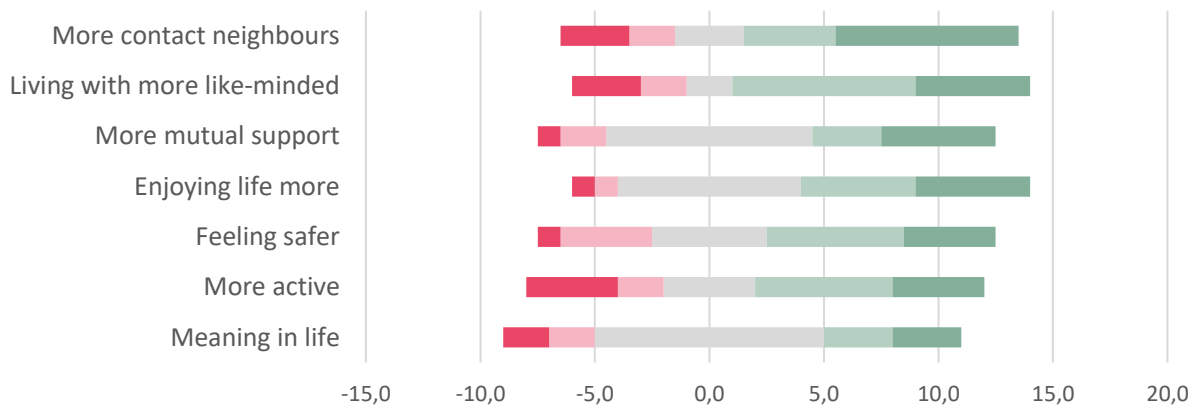


Figure 59 In LIFE a large amount of people is (somewhat) agreeing, although a group between 2 and 8 residents (somewhat) disagree. The ones disagreeing are often owner-occupiers, who feel not part of the community concept or social renters with a very outspoken ideal for the communal.

Interview data

Also interviewees were very satisfied the quality of a newly built dwelling and the fact that it is life-cycle proof. The Knarrenhof residents explained that the design promotes encounter. And although the gardens were initially perceived rather small, eventually residents are happy that it works as *a little campsite*. Especially in corona, residents were able to meet, chat and continue forming a community safely:

"Also with the corona was the advantage that if you are sitting on your terrace, you can just have contact with people when you walk by because it is just 1.5 metres. So as soon as there is a bit of weather, you sit on your terrace, and you have contact. There is also a kind of code." ~ Interviewee 4 (Knarrenhof)

The design of a project plays an important role in encounter. What was initially seen as unwanted eventually tuned out to be helpful for the community. Interestingly, one of the LIFE interviewees commented that for months they couldn't find the entry of the common garden. The level of success in the design to achieve encounter can be linked to the actual goals of a project, as reflected by one of the LIFE interviewees:

"This building is not designed for communal living at all. [...] They haven't constructed it for encounters, but for money." ~ Interviewee 9 (LIFE)

Smart technology was included in two project in order to make life easier and more comfortable. New technologies unfortunately didn't directly work (like the domotic systems in LIFE) and above all was also not explained to residents that weren't handy at all. A ParkEntree interviewee explained:

"I live perfectly here, in a perfect environment. That you don't get everything you want, okay, I can deal with that. But there are some essential things where I feel cheated. If I'm going to buy a keyless entry house, and there are people here with a walker who has to go in and can't get the door open, key the door." ~ Interviewee 2 (ParkEntree)

The communal benefits did not yet work out as hoped, of which some blame corona and expect a sense of community to arise afterwards. Additionally, improvements for the development process are mentioned in legal aspects of the communal, transparency about the monthly service costs (of 55 euro's per month) and a better start of the residents' organisation. The organisation is perceived as too complicated:

"There are elements in it that drive people away from each other instead of bringing them closer together. The common garden and the shared ownership of it causes trouble. They should wrap that up legally in a different way. [...]. In the end, it will all work out, but because of so many ambiguities and the very legal monstrosity of joint ownership, it is very confusing. Developers, don't do that!" ~ Interviewee 6 (ParkEntree)

Sub-answer on question 4:

How do the residents evaluate the realised concept (in terms of usage)?

The dwelling are highly valued in all cases. In two cases the marketing promises create expectations that were not met, resulting in lower satisfaction on the social aspects.

Answer on sub-question 4: How do the residents evaluate the realised concept, focusing on the communal benefits?

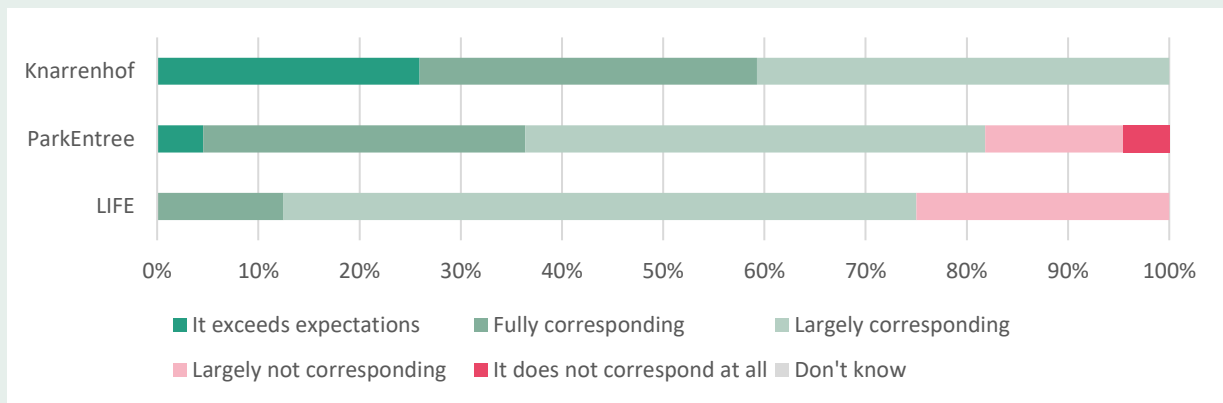


Figure 60 To what extent do the expectations from the beginning correspond to the current living experience?

Knarrenhof

Respondents are generally very satisfied and the concept meets everyone's expectations largely. For 60%, it is what they expected, and it even exceeds their expectations for 25%. In times of corona, residents were supportive, and the garden offered opportunities for meeting. A side note is that the group formation had already taken place before corona. Especially the self-organisation of e.g. the garden, people were forced to collaborate, discuss different opinions and most of all got to know each other. By both long-lasting procedures, selection process and self-organisation, a like-minded group arose in which residents experience a high sense of community and benefits from each other. The selection of residents has proved to be effective. A concern for some is the tension between privacy and community. It relates to the size of the terraces and the perceived regulations within the community. Nevertheless, the far majority is both satisfied with the dwelling and the community that arose.

ParkEntree

Residents state to find the dwellings appealing, live satisfactorily and enjoy the attractive surroundings. Without any additional requirements, the concept has succeeded in getting seniors to move in thanks to the pull factors. But while the marketing of the concept is appealing, residents do have some points for improvement concerning the communal functioning. Due to corona, the promised benefits are hard to deliver, and therefore the high monthly fees are being questioned. This can also be traced back to the diverse motivations to participate, and remarks in the survey such as *only users pay*. By not selecting based on intentions, residents with divergent expectations and goals settled. Whereas outsourcing communal areas should have prevented fuss and led to voluntariness, the roles are now questioned: is the host able to create the community or are the residents themselves? The bottom line is that residents do not feel like being able to influence in the communal. The BSCS indicators showed specifically low scores for influence. The discussion harm the atmosphere. Residents generally live very happily in a life-cycle proof dwelling, but feel the CH concept delivers not all the expected benefits.

LIFE

LIFE functions not as one community but more as a combination of the two previously discussed case. On the one hand, the buyer and private tenant are very satisfied with the home, the architecture and the living environment. Because the other residents were not selected, there is less of this communal feeling. They are also not organised in a residents' association, but are served by a host. As one of the private explained the concept as a praiseworthy aspiration, but not yet totally functioning. This person on the other hand did also not miss anything either. On the other hand, the social tenants are less satisfied with their homes (and the urban price) and the concept, but very satisfied with each other and the mutual help. Due to the strong selection, they perceive quite a high sense of community with more or less the same idea. They are organised in a residential board and organise activities together. But the extensive motivation also created high expectation that aren't fully met. Especially the lack of a common room causes a lot of commotion. Residents comment that the building was not actually designed for encounter, but it was advertised as such. This creates a contrast between the social tenant' and 'the professionals'. The his seems to create solidarity among the residents, but it also leads to a lot of conflict between residents, which causes people to feel that they are influencing each other negatively. The communities arose along the private lines of the professionals, leaving the social tenants, private tenants and owners as three communities. Ones aiming for togetherness are hoping for improvements, while ones without any motivation for CH are happy to have found an apartment in the centre.

10. Synthesis

The professional and the residential empirical results can be linked to answer the main question: *How do professional collaborative housing concepts for seniors satisfy the end user's demand?* The development approaches are compared to three fundamentals of CH from the theoretical framework. Analysing how an intentional community, degree of participation and shared spaces were approached, help to understand how professionals differentiated the concept (section 10.1). The lessons learnt (section 10.2) are gathered and eventually a set of used tools is presented (section 10.3).

10.1 Professional CH

The research framework presented three fundamentals of Collaborative Housing: 1. An intentional community; 2. Self-organisation; 3. At least one shared space combined with individual dwellings. Each fundamental will be shortly discussed by reflecting how this landed in professional CH.

Creating an intentional community was mainly done by selecting residents at the moment of sale, but with different approaches. ParkEntree had the most casual selection, with a sale procedure by a real estate agent highlighting the goal and the additional communal costs, but no additional criteria were set. For the private renters in LIFE, an age requirement of 50 years and older were used, while the social tenants had to write an additional motivation letter and attend an interview to prove their motivation for CH. Knarrenhof applicants were also invited for an interview and had to be on the top of the waiting list. The selection's success is reflected by the survey results, as a significantly larger proportion moved in because of the CH concept. It creates a sort of shared vision among residents as they moved with similar expectations. While communities eventually benefit from streamlined intentions, such additional selection criteria can counteract a commercial party's goals. More criteria make the risk of vacancy higher: *"You want to avoid the risk of having vacant properties, especially unsold properties, while you are stuck in your own concept; unsold is already frustrating enough. And if you can't do anything with it then [by being bound to strict regulation], that's not convenient."* ~ Developer LIFE.

Another method to create a shared vision was involving the user in the design process. That brings forward the second aspect of collaborative housing: the degree of participation. Both Knarrenhof and ParkEntree used co-designing. ParkEntree invited a small target group in their co-creation sessions and discussions. It is mainly used as a tool to stay close to the demand. This model works for pre-sold owner-occupied dwellings, but some residents, for example, private renters, join in a later stage. That is an additional challenge because quite some respondents did not feel that the communal is theirs and therefore lack the feeling of shared ownership. The traditional role division between developer and end-user blocks the establishment of communities: *"I think that we, ones in real estate, we have been very much working with contractors on efficiency and concepts. Then we kind of lost sight of the end-users. [...] And it's not only us who arrange something for you [the residents], but you also have to be willing to take a step to become a community."* ~ ParkEntree. Knarrenhof invited everybody from the waiting list and decided democratically on the design with the 170 people interested. *"Because we always follow the will of the majority, the minorities fall away, and you get an increasingly homogeneous group"* ~ Knarrenhof. This approach does require a different approach and process. An optimum had to be found between designing everything collaboratively versus efficient allocation of the architect's and professional's time. Eventually, selling properties became easier as all the end-users were known in advance. In conclusion, the degree of participation was differently organised in the three professional projects and can be illustrated along the continuum explained by Czischke:

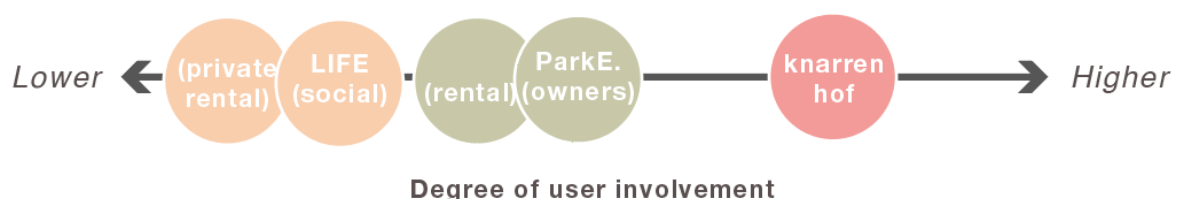


Figure 61 The three cases mapped on the continuum of user involvement (own illustration).

The lack of the feeling of ownership touches upon the possibility to participate in the organisation. It connects to the last fundament of CH: the shared space and its organisation. The interviews clearly showed how professionals had very differently approached both the ownership and the maintenance of the communal spaces. First, in LIFE, the neighbourhood room was developed along private lines and owned by the health care provider. While being an important factor for residents to move, the health care provider never opened it did not even open due to covid. As residents were not involved in this decision making, it creates a lot of commotion. In contrast, Knarrenhof residents were given the responsibility of furnishing the shared space and decorating the garden. The communal ownerships requires them to self-organise the aspects around maintenance and organisation, creating a shared value. In ParkEntree, the lounge is managed by a host, and the garden's maintenance is outsourced to a gardener. Residents are allowed to use the room but do not have ownership. Quite some are unhappy with the eventual decoration and monthly costs of 55 euro's that come along. Outsourcing the communal now creates friction between interest, as the professional explains: *"I rent that room so it is my space. [...] As hospitality manager, I have a five-year contract with the residents association. But after five years we can look at whether we are going to continue this or not. If we stop doing that, then the possibility exists that the shared space will be built back as a dwelling, for example. And then this property can be rented out or sold."* ~ ParkEntree.

Instead of seeing user-involvement a continuum on one axis, for the professional projects a clearer distinction can be made when illustrating it in a matrix of both design involvement and organisational involvement, see figure 62.

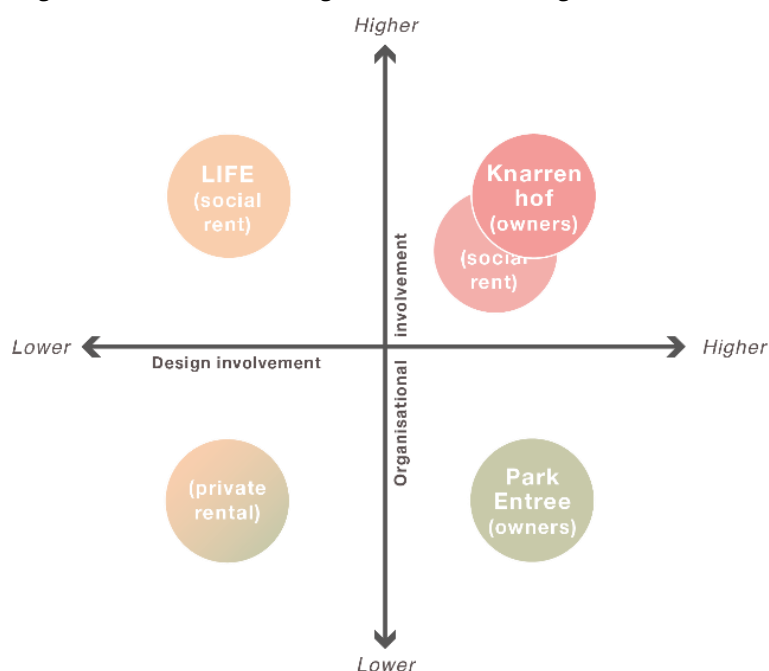


Figure 62 The matrix of user involvement in both design and organisation after completion (own illustration)

10.2 Lessons learnt

Knarrenhof

Lessons learnt from the first project are the complexity of designing collaboratively by giving residents full freedom of choice. It resulted in more efficient replicable standard dwellings with additions in order to remain affordable. After a few years, there seems to be a challenge in reaching equal participation and empowerment between renters and owners. The last lesson is broader and emphasises the difficulty of developing affordable concepts due to high land prices and the residual land value equation. The municipality's sectoral divisions make the development extra complicated and sometimes result in a traditional role division rather than working together on an integral development (Interview D, 2021, r. 54, 162, 172). After seven years of developing, both the interviewees are proud of the result as it was the first project of its kind: *"I think it's great to see that this idea from my mind has been established, thanks to the professional, because without him it wouldn't have succeeded."* ~ Interview Knarrenhof (2)

ParkEntree

The professionals are glad about the appealing result and will continue developing the concept in more locations. Nevertheless, lessons can be drawn from the project 'these concepts do not come about without frictions'. The professionals' illustration of the possibilities in the lounge by a pool table and fitness facility has led to residents feeling promises have not been fulfilled (Interview A, l. 81). Du to these frictions and the impossibilities of organising events during corona, the communal intentions do not work out as intended. An additional difficulty in this process was the project's phasing, so residents moved while the lounge and association were not yet started. The renters were known late (a month in advance), resulting in different degrees of involvement. The broader lesson is that the real estate industry can learn the drive for efficiency while losing sight of the end-users. These professionals point to developers' changing role, in which communication is a part of the process (Interview A, l. 191, 215).

LIFE

The developer names it a success because the tenant organisations are satisfied, and the architecture is very appealing; something unique has been created by being the first private development to include woonkeur-plus dwellings. They did encounter challenges when legally organising the communal garden's ownership. H.A. Habion drew other lessons from the project. Moving in during corona had a significant impact on social contacts and group formation, and the expectations created unrest among the residents (Interview C, l. 71). The unopened neighbourhood room is for both the association and the tenants a setback because the concept could not fully operate as intended. Next time, such agreements must be written down. At the same time, allowing residents to have more influence was difficult because a housing corporation also has broader organizational interests in managing the portfolio efficiently. This sometimes clashes with the desire to set up self-organisation (Interview C, l. 242, 246). The investor, Bouwinvest, has not (yet) been interviewed for this study.

10.3 Tools

From this synthesis, a list of tools can be established that professionals used to instigate a community and the effectiveness of the tools according to the residents. For an intentional community, group formation and selection were used. The shared space was developed with different degrees of design involvement and ownership models. Participation was given a place in the organisation of the communal.

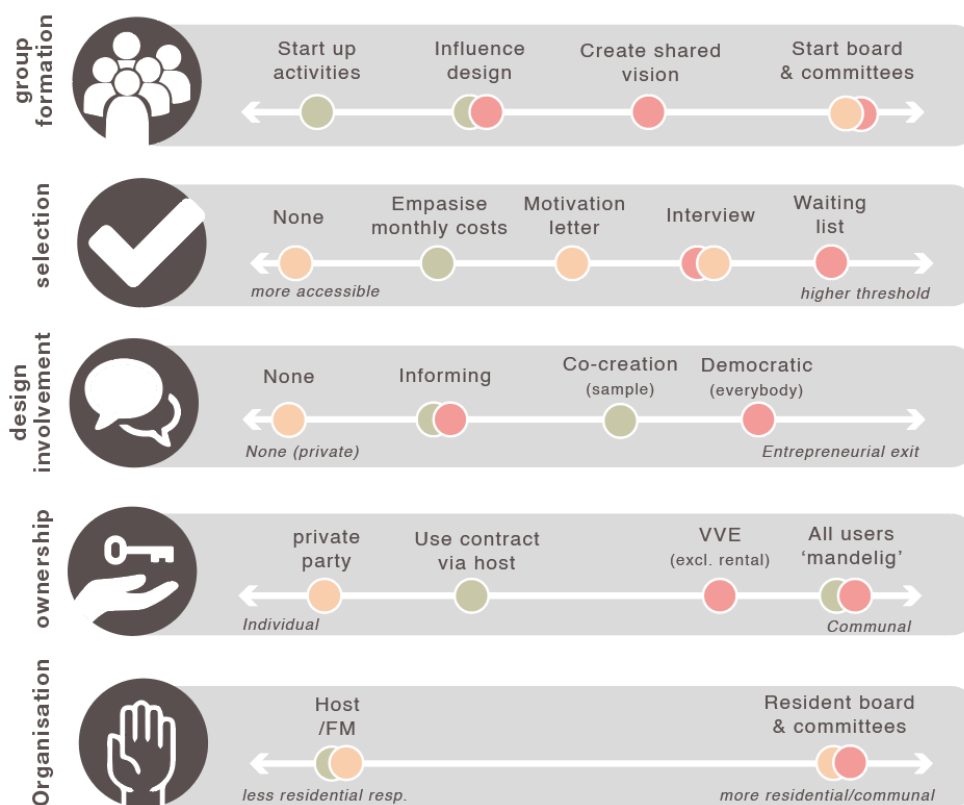


Figure 63 The tools used to develop a differentiated CH concept. The scale represents the effectiveness for more communal, the colours represent the projects: red = Knarrenhof; green = ParkEntree; yellow = LIFE (own illustration).

Part VI

Conclusion & Reflection



11. Discussion

Before arriving at the conclusions, the results of the desk research and the empirical results are evaluated and mirrored by the literature. Also, the research's limitations and directions for future research are discussed.

Comment on the result

This research aimed to identify how the professional-led CH for seniors is organised and whether this is a viable solution for the changing societal demand. The cases themselves respond to the increased gap between individual living and the increased threshold for entry into a nursing home. The cases' marketing related to this demand by emphasising the benefits of living in a like-minded community by the possibilities for encounter, common activities and mutual help. However, cases were differently organised along the continuum of design involvement and organisational involvement, resulting in differentiated housing solution for seniors.

These findings from the concept analysis are partly in line with conclusions of Pirinen (2016), who identified concepts *for the elderly* and *by the elderly*. The more commercially driven parties (Vorm, Blauwhoed) focused indeed more on offering an individualised product in which moving is a broader consideration than CH alone. They emphasised the functionality of a life-cycle proof dwelling, the appropriateness of the location, and the smart technologies to offer comfort and convenience in the ageing process. In these concepts, commonality became a professionally organised service *for the elderly*, without the need to be bothered about the communal organisation. Professionals with a particular ethos (Knarrenhof & Habion from LIFE) focused more on the lifestyle of living in a community as an answer to social needs. They saw the creation of a community partially as their responsibility by establishing the right foundation for it to thrive by selecting a motivated group and preparing the right juridical structures. The management and maintenance of the communal became a task executed *by the elderly*.

In addition to previous research, the thesis connected the concepts with the perceived residential satisfaction using a mixed-method post-occupancy evaluation focused on the communal benefits. Earlier, this was conducted by Glass (2020) but only in American co-housing projects and not in these emerging professional concepts. When comparing the results, only Knarrenhof reaches similar BSCS scores ($M = 35.6, SD = 3.77$) as Glass' research, with averages around 34.9 ($SD = 4.47$). The lower scores of other cases can be related to different approaches in creating an intentional community and participation. The reasons for moving were also very diverse, with around one-fifth of the residents not considering CH, while this turned out to be the most important factor in Glass' research. A sub-selection of respondents deliberately choosing CH was made to circumvent the impact of this group. Even then, differences remained in both BSCS score and satisfaction on the communal, while CH is often known to have highly satisfied users.

Loneliness scores were higher than expected, namely around the Dutch average, and LIFE even far above, while projects aim to reduce loneliness. A possible explanation is an extra caution taken by the elderly 'risk group' in times of a Covid lockdown. Many organisations report that loneliness among seniors has almost doubled (Nivel, 2021). The comparison with data from 2018 is outdated, but recent data on the same scale could unfortunately not be found. On the percentage of very lonely, the average is 8%, where Knarrenhof (0%) and ParkEntree (5%) are below and could be seen as a positive effect of the concept.

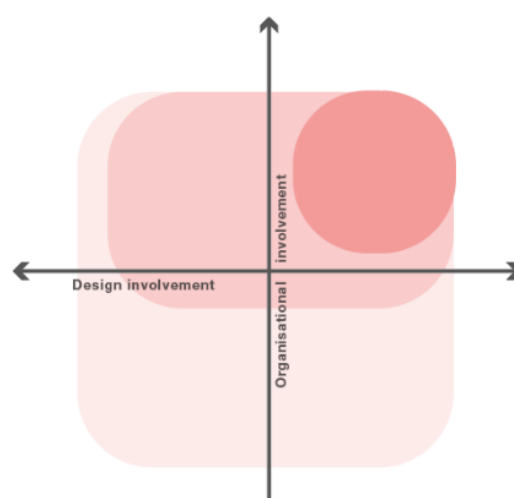


Figure 64 The diffusion of CH along two axis (own illustration).

The different approaches and results from commercially driven cases match with the findings of Helamaa (2019). She describes that the mainstream construction sector is adopting niche ideas and moving the goalposts. The more mainstream parties like Blauwhoed and VORM indeed canalized the concepts in the accustomed structures with being fully aware of it. It allowed diffusing the CH concept as a more mainstream housing type for a broader target group, but in the meantime, scatters the concept of CH and the benefits for the end-users.

Limitations

The most evident limitation is directly connected to the research method of a multiple case study, the use of a limited number of cases. The contextual information makes it hard to generalise the statements. Additional cases from different type of initiators would have given a broader overview of the phenomenon of professionalisation of CH, but was time-wise not possible. Caution should be used when comparing the survey results one-to-one, as each case was developed in a very different context. The different professional goals, development processes and occupation durations should be considered when making any comparison.

Secondly, the effect of the coronavirus can not be separated from the empirical result. The pandemic undoubtedly affected the group formation process (mainly LIFE and partially ParkEntree) and, therefore, the benefits residents perceived. Survey questions about the frequency of common activities had to be adapted to hypothetical situations. For LIFE, the envisioned neighbourhood room has not been opened, leaving many residents disappointed. Nonetheless, the cases provide an overview of how different professionals chose different approaches to deliver a CH concept.

The last limitation is more practical. Although the survey response rate did not disappoint, more responses from LIFE would have made the results more valuable. Only six households from the private rental and owner-occupied apartments responded, while from the social dwellings, 14 responses were collected. Higher response rates would have been interesting to compare communities within the same project. A possible explanation for the low response rate could be the that residents recently moved in, that many dwellings were still vacant or lower interest in the commonality why the survey did not catch their interest.

Implications

The limitations do not make the results less relevant. It is precisely professionalisation that can be of great value for seniors. In resident-led CH projects, people cooperate for years, creating a motivated group with high levels of cohesion. Only a few people have the ability, the courage or the perseverance to start a project themselves. Eventually, many projects strand for numerous reasons, making it less attractive. Older adults do not all have the knowledge, risk appetite or the time to start a project themselves. Professionally developing projects is a promising solution as it lowers the threshold to engage. According to the Committee Bos (2020b), adding clustered dwellings can increase the mutual support and belonging among the elderly and potentially save formal and informal care. The research even showed that it could reach similar benefits as resident-led projects when executed appropriately.

The results illustrated that not all forms of professionalisation offer the right conditions for this to occur. This thesis provided insight into how the professional goals can be add odds with decisions favourable for the community. The professional concepts became more accessible by demanding less from the resident. Especially in the overheated housing market, innovating in a niche is less attractive with the low risks and high profits of general developments. Commercial parties had difficulties gathering similar intentions and allow for participation. In itself, that is not a problem as there is not one ideal model of collaborative housing, as there is a range of different demands. But when projects are marketed to answer a societal demand and created expectations that cannot be met, the concepts of CH starts to diffuse. As Beck (2020) described, communities are formed along a shared vision with shared rituals, by self-organisation and

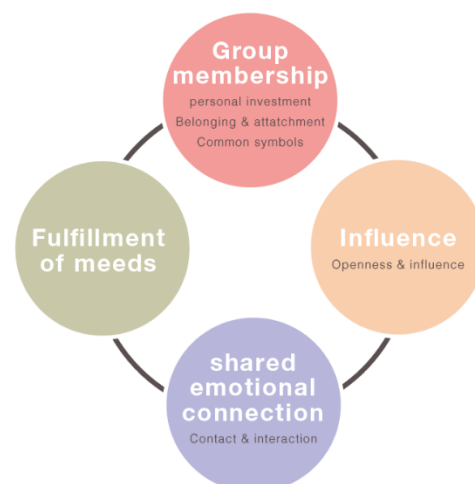


Figure 65 The four elements of the Sense of Community Scale for measuring and designing (own illustration, based McMillan & Chavis, 1986)

social relations. The Sense of Community Scale by McMillan and Chavis (1986) is an acknowledged tool to measure but also design communities (see figure 54). The core of this issue is that communality is turned into a product, reduced to a financial transaction with the little obligation to keep the product as accessible as possible. Group discussions are streamlined, and the possibilities for self-organisation are outsourced. Ultimately, the fundamentals of CH unconsciously fade away, the responsibility towards each other disappears, and little conditions are left for a community to thrive. As the Dutch saying goes: *zonder wrijving geen glans*.

Further research

The research sheds light on the professionalisation of CH but studied only three cases. When more different concepts are analysed, a complete overview can be made. It is interesting to also take into account professionals as advisors, developing architect or the restricted housing associations. This research probed to measure the perceived benefits by residents quantitatively but did not look at the cost-saving related to the benefits, such as health care and municipal funds like WMO. Future research could try to make the benefits more measurable, and further support the societal need for CH quantitatively. Besides the further evaluation of completed projects, it would also be interesting to look forward and see how actors could ideally collaborate to create the right conditions for more mutual support and togetherness amongst the elderly. Since the CH sector's professionalisation does not appear a typically Dutch phenomenon, it could be interesting to look from an international frame for the best practices from abroad.

12. Conclusion

This research aimed to identify how professionals developed collaborative housing concepts for seniors to satisfy the end-users' demand. As Dutch seniors are supposed to remain living independently as long as possible, many additional life-cycle proof dwellings are needed, including around 70.000 dwellings collaborative housing (CH) concept. Due to the changing institutional landscape of housing provision, professional-led developments are increasingly seen as a solution to close the gap between the individual dwelling and the less easily accessible nursing homes. CH concepts for seniors are defined as a differentiated housing solution that focuses on promoting togetherness, provide at least one shared space, and targets the over-55s.

A mixed-method approach investigated three different professional-led Dutch CH projects in-depth: Knarrenhof, ParkEntree & LIFE. Desk research and interviews with professionals gives insight into how the CH concepts were developed and turned into a product. The end-users' satisfaction is evaluated by conducting eleven interviews and eighty-one surveys from residents. The desk research showed that the professionals described projects with similar immaterial benefits to emphasise the social, use and personal value of their CH concept for the elderly. Despite, the diverse professional motivations resulted in different approaches to deliver the benefits. Two types of professionals can be distinguished: more commercial-orient and more ethos-orient. The commercially-oriented developers from ParkEntree and LIFE focused on an individualised product with technology to make ageing more comfortable. Community is managed by an external host and more like an additional service. More ethos-oriented professionals from Knarrenhof and the social housing in LIFE focused on togetherness by establishing residential participation. The projects can be distinguished by a different approach towards the fundamental of CH: creating an intentional community, allowing for design disruption in the development, and allowing for end-user participation in the shared space organisation.

The residential satisfaction survey demonstrated that the differentiated concepts resulted in the diverse functioning of the communities. In general, moving to a professional CH concept is a broad consideration. Moving to a life-cycle proof dwelling was the most crucial reason for moving in for the majority of the residents. The benefits around togetherness are by many perceived as an exciting addition to the dwelling. The CH concept's communal aspect was only for a small minority of the respondents the main reason to move. Sharing facilities is not considered for financial reasons, as it often is in residential-led CH, but as a means to instigate commonality. Despite the cases marketed to have similar benefits, the experienced benefits are perceived very differently. The more important CH was in consideration of moving, the more communal benefits were perceived. In LIFE and ParkEntree, COVID-19 had a considerable influence on the group formation process. Therefore, their functioning and benefits may be subject to change in the future. Nevertheless, a majority of the residents experience benefits compared to their previous home. Among the three cases, more neighbourly contact, living with like-minded people, mutual help, fun and safety were often mentioned as benefits.

This research has contributed by connecting the professional CH concept development to the perceived residential satisfaction in use. In an exploratory manner, it has shed light on three pioneering projects that are a phenomenon of a time when the retreating

government no longer provides easy-accessible housing and care, and resident-led projects are for many too complicated to realise. The cases have shown how, in the future, the concept of CH can be further diffused to accommodate the growing social demand. This can be a promising trend, especially for seniors, allowing the concepts to become more accessible for those unable to develop themselves but are open to living together with complete autonomy. Professionalisation could lead to the prompter completion of projects, thanks to the professional's network, prior knowledge of the construction industry, experience with the municipal structure, and financing possibilities. Additional selection criteria can create an intentional community, but this is contrary to the professional's goal to minimise vacancy risk. Participation of residents, especially renters, can be time-consuming and requires a different approach to a professional's perceived role. Also, the development of shared spaces and life-cycle proof dwellings is more expensive, and unclear if it will be financially returned. Due to the clashing of professional objectives with the fundamentals of CH, it is unlikely that professional will solve the increasing demand, especially without additional governmental support.

A limitation of this research is the limited number of cases used and the differences between the cases, making it hard to compare outcomes one-to-one. Nevertheless, the in-depth data shows how professionals take different approaches in delivering CH. After this evaluation, future research should look forward and describe how actors can better collaborate to provide the right conditions to offer the benefits expected.

Some practical implication arose for practitioners. Incorporating togetherness in a senior housing concept can serve as an additional pull factor to give an incentive to move a target group that is too often regarded immobile. Using the independent variables of the sense of community scale could help practitioners to create communities delivering communal benefits. Allowing residents to influence the communal is an important factor in increasing the BSCS score and creating a shared vision among residents. When attention is given to establish the right intention and shared vision, professional CH can answer the societal demand. However, the commercialisation of CH is something to be aware of. Collaborative housing requires some shared intention and a degree of participation. Concepts in which collaboration is reduced to a financial transaction are implausible to deliver CH's benefits. Communitary is not easily for sale.

13. Recommendations

The residents' feedback and the conclusions come up with a number of practical recommendations for professionals to create housing products that are more in line with the wishes of seniors. Because the cases and the synthesis showed how professional interests can conflict with the communal interests, also a number of recommendations are made for the government.

Professionals

The residents' survey demonstrated that life-cycle proofness was by far the most important reason for moving. Already, multiple concepts are launched from parties like AM, Rabobank and Achmea to serve this market. The potential of this market should not be underestimated. Nevertheless, the target group is critical and needs some convincing factors as a pull factor. Therefore, do not develop standard products, but try to understand what the target group needs. The cases that allowed for design disruption created products closer to residents' needs resulting in a higher satisfaction. Palmer (2016) shows eight other possibilities for design disruption that can establish a shared housing vision. With more attention for these opportunities, projects can deliver closer to the end-users needs.



Figure 66 New concept for Amsterdam by AM & Woonzorg NL (Stadsveteraan, 2021)

The form of collectiveness can further distinguish concepts from standard solutions. Aiming for CH can possibly reach a target group that was previously not willing to move. Yet, keep in mind that forming a community is not as straightforward as building dwellings. What first seem to go against the commercial interest can ultimately save a lot of hassle—for example, setting up a residents' organisation at an early stage, a suitable (new) legal structure and extra attention to the involvement of all users in the design process. Possible ways to steer this more are: selecting the right group of resident based on motivation, create some kind of a shared vision and finally giving residents responsibility and influence. Trainings and including a professionals with a sociological perspective could help professional developers to look beyond the accustomed practises and business models.

If the cases have taught us anything, it is to be careful with making promises. Outlining the possibilities with promises of a pool table and neighbourhood room has in two cases led to disappointed residents. This even created a defensive attitude towards the professional that seemed unproductive for the atmosphere and influence between neighbours. Don't make promises you can't keep but rather extra attention to the expectations of residents. What is unclear is filled by residents themselves and can ultimately become a divisive crack in the community. Clearly communicate in advance: 1) The responsibilities that residents have towards each other; 2) The proposed communal organisation & its monthly costs; 3) And the future professional's role.

As a final general point, I would like to emphasise the complexity of integrating tenants and buyers. Especially for tenants, there are additional challenges in early involvement since they are often known late, a month in advance. Unlike owners they aren't investing in 'their' property what could make it more difficult to let them equally participate. Project with only renter or owners will also more easy to manage with regards to the owners-association structure. New tenure structure like cooperatives and community land trusts might therefore be extra interesting for CH project.

Government

The importance of housing for seniors has become a widespread local and national consensus. This research showed that the market alone cannot solve this societal challenge on its own. By the nature of these concept the construction costs are always higher due to the common space and life-cycle proof dwellings, while the value of more general developments will always outreach them. Inherently, CH concepts will financially lose against mainstream developments. Without additional support, the demand for innovative housing concepts will not be filled. Support could on the one hand be financially, by compensating initiators with lower land prices or making more subsidies available to

finance life-cycle proof dwellings and common space. On the other hand professionals come along many sectoral divisions within the municipality and juridical difficulties. Organisational support in the cases were given by allowing a one-to-one negotiation due to the special societal characteristic of the project. Internal support by municipal projects teams can considerably speed-up the completion. These professionals' interests are not that contrasting with municipalities' societal interests: rather than a traditional opposing role division, actors need each other to meet the ambitions.

The last recommendations are for the national government. While CH concepts are relatively new for the market, housing associations had been contributing both qualitative and quantitative in the past. Limitations by policies such as *passend toewijzen* and the *landlord levy* make it currently extremely difficult to launch new pilot projects. The knowledge potential of H.A.'s can be regained by providing them with the legal possibilities and financial resources. Finally, the conflicting interests within municipalities are a point for attention. Housing for elderly are potential future cost on the *WMO* and *WLZ*, what makes municipalities reluctant. Due to the shortages, professionals explained that many municipalities are anxious to attract seniors from neighbouring cities. Provide housing for families is both more attractive for the land prices and the future yearly budget. Centrally managing could alleviated this barriers by for example setting mandatory percentages or compensating for the loss on expected land value.



Figure 67 The municipality of Rotterdam made an agreement with 40 parties to allow seniors grow old in their neighbourhood & develop more. (Gemeente Rotterdam, 2020)

14. Reflection

In this final chapter, I look back at my graduation process, the final product, and whether my approach worked to solve the problem statement.

Before starting the reflection, I briefly want to go back to 2017. My grandparents moved from their beloved single-family house to a senior apartment from a housing association. This moving process that took 25 years seemed a metaphor for a larger story: why is the market providing so few appropriate senior dwellings? As I began to read into the issue, the Bos Committee published their report with a clear message: build, build, build. For the development of these dwelling, all types of parties are desperately needed. Soon I formulated a broad problem statement: how can professionals develop housing concepts for senior residents? Collaborative housing concepts seemed like a panacea for many problems. In this reflection, I look back on by describing three defining moments in my thesis: the problem definition, my graduation internship, and the extra time spent.

Concretising the broadly defined problem continued to be a quest until the P2. Because of the broad ambition, I wanted to understand the problem in-depth. Therefore, I read many papers and reports and thus encountered various theories, frameworks, and perspectives. However, it remained unanswered what I was going to research myself. Looking back on this time, I found it very difficult to define further the used concepts and the main research question, such as a clear definition of collaborative housing, development strategy, user involvement, social sustainability and added value. What seemed logically organised in my mind became incoherent on paper. Because working from home became the standard, it seldomly happened that I could spar with other students. I was wandering around and lacked different perspectives to see which direction I had to go. I made progress when I started to work out the concrete deliverables, such as the P2 (retake) presentation, the drafting of interview and survey questions. Sometimes the larger idea 'why' was incomplete, so then I took a step back. During this alternation of doing and thinking, I finally accomplished operationalising the abstract concepts for the research.

This process accelerated during my graduation internship at Knarrenhof. Encounters with colleagues required me to explain my ideas briefly and provided me with broad feedback. Besides my thesis topic, the internship showed me the complexity of setting up communities in practice:

- Organising the decision-making process with future residents
- Convincing local politics
- Elaborating on the juridical details

I saw the extra work needed to set up a community and the shift of the professional role. Besides learning a lot, the involvement in Knarrenhof also confronted me with a research dilemma. How to objectively analyse the cases now the Knarrenhof approach has shaped my view? I tried to limit this by first talking to residents (key informants interviews) before conducting the survey and finally conducting two professionals interviews from the other cases to understand their goals better. All in all, a storyline started to emerge on how professionals develop projects with commonality.

That brings me to the central question: did the chosen approach work? The answer is both no and yes. No, as the survey results did not enable me to prove seniors' benefits by a one-to-one comparison. The fallacy lies in adopting a method from other studies comparing similar resident-led projects. However, these professional projects had very different objectives. Taken into account the effect of corona on the community's formation, I couldn't draw a reasonable comparison. Thanks to the feedback, I turned the comparative method into a multiple case study resulting in a more reasonable story. The one-to-one comparison might not have worked; the mixed-method research successfully revealed the communities' current functioning. Desk research and interviews made it clear why professionals got involved, how they marketed their products and the influence of the context on its functioning. In retrospect, the professionalisation in CH ensures diversification of the CH concept, but also to the advantages offered.

Other research methods would possibly not have led to these current insights. Corona may have significantly influenced the ability to compare the project; nevertheless, the mixed-methods approach remained appropriate to describe this emerging phenomenon.

Looking back on the entire process, it took three months longer than intended. In terms of planning, I could have planned more cleverly. Not only did the problem definition take longer, but the preparation of the empirical research and the processing of the results should have been allocated more time. In this, I underestimated the effect of corona on both the study and the cases. It impacted the formation of communities and, therefore, the professionals' explanation of the current functioning. Looking back, I should have chosen cases completed earlier. Unfortunately, little concepts were realised with communal space, especially not by developers. Looking back, I could better have compared different actors, including housing associations, professionals as group managers and health care institutions. At that time, the developer side seemed so upcoming that I stuck to the initial idea. Studying alone at home also did not support efficient decision-making in this. Therefore the internship at Knarrenhof was an enjoyable hands-on experience besides studying. I visited initiators in Zeeland, North-Holland, assisted the sales procedure in Zutphen and, as a highlight, attended the information meeting for members of the parliament. During these activities, I only should have planned more supervisions and taken on fewer responsibilities. Therefore, writing my thesis has taken longer, but the extra time spent is not misused: I feel better prepared for starting my career.

This research adopted a broad position of MBE by market, management, and development. The end product reflects this multi-sided approach, including a literature study, an analysis of the Dutch housing market, a comparison of different concepts offered, and, finally, three cases examined in detail. At the end, this also made it hard to find the main line of what binds it all together. When looking back, I sometimes should have tempered my broad interest, and try to focus more on a single aspect. Although I sometimes had difficulties writing efficiently and concisely in English, I feel satisfied with the final product. I believe that it fits our faculty's role in developing knowledge on improving the built environment for a better society. The results of the BSCS scores show how not just the design, but especially the management of the people and the process influence the establishment of a community. The topic thus has a clear link to the MBE department overlaps both in the domain of the housing market and housing management. This graduation research has changed my view on project development and the definition of 'added value' considerably, far beyond money-making. Interviewing the Knarrenhof residents further opened my eyes to the impact of housing on our lives. For this reason, I became very enthusiastic about being involved in the development of a housing community for myself after graduating. How to developing for starters desperate to get started?

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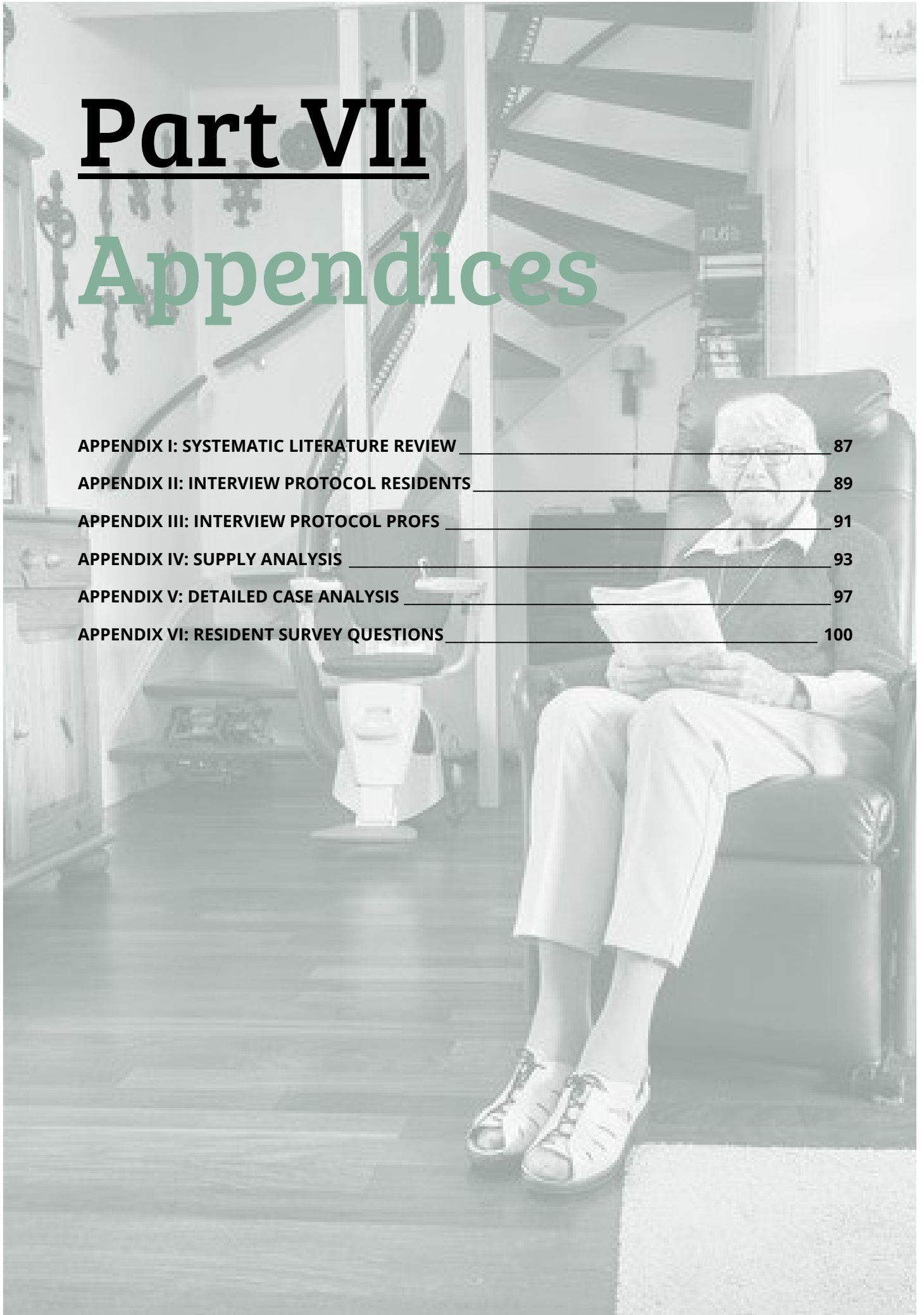
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Part VII

Appendices

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Appendix I: Systematic literature review

	Social value				Benefits		Financial value		Cultural value	Drawbacks			Other aspects		
	Connections	Mutual help	Feeling safe	Empowerment	Use value / personal value	Satisfaction	Well-being (mental & physical health)	Value for money	Quality	Broader benefits/savings	Development	Risk and costs	Social challenges	Continuation	Advices/comments/observations
<i>Labit (2015)</i>	Communal life flourishes in projects based on voluntary participation. This result is several clubs and activities, of which some are open for the larger neighbourhood (p. 10). Co-housing creates social capital (p., 4).			Co-housing enables the empowerment of citizens (p. 4)	Current residents are overwhelmingly positive: mutual assistance, solidarity, security and satisfaction (p. 11)		Connectedness and social participation contribute to a happier and healthier old age, so co-housing is seen as the right solution for seniors (p. 4).		Co-housing residents are satisfied with the quality of the building and the 'value for money' (p. 11)	It allows a reduction in the public expenditure necessitated by the demands of an ageing population (p. 1)	Projects are challenging to set up and continue: group decision making, conflicts, sound mix, and manage ageing (p. 11-12). Maintaining communal life is (especially in intergenerational CH) very difficult. (p., 11).	Projects designed and managed along private lines tend to be more homogeneous and tend to be reserved for socio-cultural elite (p. 13)	Organising communal life and mutual assistance is a vital element, with particular attention to communication, conflict solving procedures, design and use of collective and private, and involvement (p. 13)	Newcomers are sometimes hard to get equally involved (p. 5)	- Some preconditions have to be in place from the beginning to function: group size, diversity, design & financial, social and managerial factors (p. 4) - The right proximity and diversity in the group undeniably results in greater solidarity. (age, social class, political and cultural values) (p. 13) - Intergenerational CH is a deliberate choice, but not the main element that drives the decision. Those are: housing quality, location & balance between privacy/communal (p. 9)
<i>Rusinovic, Van Bochove & Van de Sande (2019)</i>	CH enables residents to easily get in touch (to chat, help, or activities) and provide valuable social contacts	Neighbourly support instrumentally and emotionally. Like get groceries, have conversations and give advise.	CH offers social control, contributing to feeling safe and secure.		Feelings of emotional loneliness & emptiness can be alleviated by creating a safe environment		The activities in a CH community helps residents at old age to stay active instead of sitting at home (common living needed for this)					(In)formal rules and laws can lead to social exclusion and are challenging for newcomers. Subgroups sometimes arise.		- Senior CH has limitations regarding care: it is not a substitute for formal & informal care. Especially not a solution for social, emotional and physical problems: care services are still needed. But, CH with care facilities is promising.	
<i>Scanlon & Arrigoitia (2015)</i>		The model of senior cohousing fosters mutual help					Living in a community might reduce or delay the need for residential care		Some cost reductions can be attributed to cohousing: Smaller size, shared facilities and self-built	The senior cohousing model avoids social health costs of people living in isolation	Cohousing is expected to be more expensive: shared living room, qualitative materials and increased development time increase costs	Developer-led cohousing does not necessarily makes housing more affordable: risks and long development drive towards near market prices	Cohousing often takes longer due to complexity in group decision-making, legal delays and complexity in actor negotiations		- The current market mechanisms are not operating to produce cohousing at a more mainstream level. - Finding a location is extremely difficult: Finding a site is very difficult, as regular housing will always outbid co-housing developments.
<i>Stavenuiter & Van Dongen (2008)</i>	Residents experience both cosiness and safety. Co-habitants feel connected to each other as positive aspect (p. 24)	Residents give mutual support (emotionally and practically) based their more intensive connection with neighbours (p. 24)		CH can give meaning to life after retiring. Mainly by helping one another and new meaningful structure in their life (p. 24)	Residents are often very positive about the physical environment and experience in living as a group (p. 46)		Very suitable for the elderly seeking to be more connected and more responsible for the well-being of co-habitants and friendship (p. 46)		Residents tend to be more active. It results that few residents make use of the regular health care offer (thuiszorg) (p. 33)		Resident-led projects tend to take very long: finding locations is hard, delays occur and completing groups is difficult for residents.		Arguments and gossiping sometimes occur and are a threat for mutual relationships. Group discussions about informal care can become a burden	This type of living concepts attracts only a few people. Many associate it with social control instead of social contact	- Collaborative housing is not a solution for increased health care requests and not an alternative for informal care. - The influence of the residents in the communal organisation is crucial to maintain: e.g. no impact on allocation can adversely affect group process.
<i>Choi (2004)</i>					Residents are very satisfied (95%) and strongly recommend it to others		The CH residents are healthy.		Profit sectors in CH are expected to expand and diversify the concept to meet a more different resident's needs.					Allocation by housing associations can lead to unwilling residents (e.g. not joining activities).	- It is essential for the solidarity that residents have the same expectations and intentions. - Early involvement of residents is adequate to make a community more successful. - Not worry about the maintenance of an owner-occupied house is an often-heard reason for elderly to move. - Interestingly: 2/3 of the residents are female, more singles, and above average is university schooled (20%).
<i>Fromm (2012)</i>	CH encourages residents to socialise, care and interact with each other. The collaboration process of residents can stretch into the entire neighbourhood/ community (p. 25)			CH has a positive effect on the surrounding neighbourhood: caring and interacting with the community (p. 1).					Collaborative housing can play a limited but important role in neighbourhood stability and repair. Benefits are beyond its walls.		Not enough collaboration with residents can result in less use of the common spaces	Common facilities inside CH should not be shared with outside, due to difficulties in managing over a long time and communication issues			Prerequisites for neighbourhood collaboration: - Residents should have a strong interest in collaboration + able to collaborate regarding age, health, finance. - Help with site acquisition - Guidance and support in the design process and selecting residents Ongoing support is often required to keep collaboration functioning, just like a mix in the residents' age and background.
<i>Commissie Toekomst zorg thuiswonen de ouderen (2020)</i>	Possibilities for encounter and activities create a social cohesion	Generations can support each other, bring demand and supply for informal care together (based on mutuality)		Promote self-reliance and togetherness. Give meaning by social contribution. 'noaberschap', neighbourliness: being good neighbours for each other	Mogelijkheid doorstroming te organiseren, vroeger dan nursing home		Current residents are enthusiastic about it regarding self-reliance, privacy, like-mindedness and give meaning.				Creating collaborative housing in the social segment is strongly hindered by the new housing law. Reforming regulation is necessary	The positive effects of CH are only known in small circles. Promotion is necessary	Housing law makes it difficult to finance, bring different incomes together and create a like-minded group.		- The savings on the municipal health care budgets (WMO & long term care budgets) tend not to return to the municipality. Because the department is strictly separated, there is no motive to invest in health care savings.
<i>Van den houte et al. (2015)</i>				In social housing, CH can save costs as residents are responsible for a number of management, supervision and maintenance tasks (p. 80)				Realising affordable housing is the core of the welfare state on which it can be stimulated by the government (p. 30).	CH often strive for ecological added value (low footprint, energy efficiency, car sharing, sharing water/green facilities) (p. 32).	Forms of CH have the intention, besides living, to also realise well-being and care. These are valid motivation to support it policy-wise (p. 29).	The realisation of CH has many barriers compared to standard developments, which make its completion more difficult (p. 80).	Acquisition of seed capital and land acquisition is complicated in CH projects, because banks are reluctant to grant loans and because the site has some additional requirements (p. 80).			
<i>Pedersen (2015)</i>	The majority of residents expressed satisfaction towards the democratic and organisational practice in the community (p. 15)	A great majority of residents helped each other extensively in practical matters (p. 16)	A majority of 91% were positive about the integration of newcomers (p. 18)	Feeling secure by good knowing others and keeping an eye for one another well-being (p. 19).			95% of the residents were satisfied or very satisfied with living in their community as the communal aspects were functioning (p. 19)						Some of the interviewees find collective decision making time consuming or complained about some residents not participating in tasks.	One of the challenges is recruiting new residents for the board (p. 19)	
<i>Glass (2013)</i>	Avoiding social isolation and finding a community of like-minded people are the most common reasons for moving to an age-specific housing type	Residents in the community give basic and specific mutual support (p. 14)	The togetherness and looking out for each other gives residents a feeling of safety (p. 14)	Living with the same ages helps in the acceptance of ageing (p. 14)			Residents report to positively influence each others health by prepare healthier meals and do exercises (p. 15)						Mutual support can exceed the residents' ability due to others' ageing and physical/mental health (p. 13). The group relations (residents, board and clubs) can lead to tension & bitterness (p. 12).		- Create a shared vision in the initial process is vital for a community to evolve (p. 8) - Living together without prior knowledge of others can be very difficult (p. 13). - A care/support coordinator can help when needs arise (p. 14)

Appendix II: Interview protocol residents

Benodigheden interview

- Ondertekend informed consent formulier
- Aangemaakt gesprek via Zoom/Skype of gesprek volgens RIVM-richtlijnen
- App om het gesprek op te nemen met indexing (key informants interviews worden niet getranscribeerd)
- Pen/papier voor notities

Vorbereiding

Voordat we gaan beginnen wil ik je bedanken voor je deelname aan dit interview. Mijn naam is Joep Bastiaans, ik ben laatstejaarsstudent aan de Faculteit Bouwkunde van de TU Delft in de master Management in the Built Environment. Voor mijn afstudeerscriptie doe ik onderzoek naar de toegevoegde waarde van gemeenschappelijk wonen voor senioren. Hierover zal ik u zo een toelichting geven.

AVG/Recorder instructie

Om het interview te kunnen transcriberen wil ik u vragen of u het goed vindt dat ik dit interview opneem. De opname zal enkel worden gebruikt door mijzelf om terug te luisteren voor academische doeleinden, waarna ik de opname zal verwijderen. De informatie uit het interview zal wel worden gedeeld met het directe onderzoeksteam, bestaande uit mijn drie afstudeergeleiders Darinka Czischke, Peter Boelhouwer & Peter Prak. Bent u daarmee akkoord?

Informed consent

Voordat we beginnen met het interview zou ik u willen vragen om het informed consent formulier getekend aan mij terug te sturen/samen door te nemen. Hierin verklaard u akkoord te zijn met de deelname en de bovengenoemde afspraken. OF: Tot slot wil ik u bedanken voor het invullen van het informed consent formulier.

In dit onderzoek evalueer ik gemeenschappelijk wonen voor senioren, in het bijzonder van professionele-geleid projecten (zoals ontwikkelaar en maatschappelijk ondernemers). De hoofdvraag van het onderzoek luidt: *In hoeverre kunnen professionele partijen gemeenschappelijke woonconcepten voor senioren ontwikkelen die een meerwaarde creëren voor de bewoners & de professionals?* Dit interview zal worden gebruikt om het bewonersperspectief beter te duiden, ter voorbereiding op een bewonersenquête. Het interview bestaat uit 5 onderdelen: algemeen over uzelf, uw verhuisredenen, het proces, uw huidige woonervaring en meerwaarde van het project. Voor alle vragen geldt: er zijn geen goede of foute antwoorden. Als u iets niet weet of een vraag niet wil beantwoorden is dat altijd mogelijk!

1. Algemeen (5 minuten)

- 1.1. Kunt u allereerst kort omschrijven wie u bent?
(volledige naam, leeftijd/geboortjaar, beroep)
- 1.2. Kun je omschrijven in wat voor type woning u woont?
(Type woning: huur of koop, grootte, lengte van huidige woonbezetting)
- 1.3. Hoe bent u bij het project betrokken geraak?
(Betrokkenheid sinds wanneer, hoe)

2. Verwachtingen en verhuisredenen (10 minuten)

- 2.1. Wat was/waren de doorslaggevende factoren die u overtuigde om in het project te gaan wonen?
(Vraag naar zowel pull factoren (groep, woning, tuin, prijs etc) en push factoren (gezondheid, grote woning etc.)
- 2.2. Welke verwachtingen had u van wonen in [naam project] op basis van de verkoopinformatie?
(probeer tot een omschrijving te komen: core product/benefit, materiaal product en extra services)
- 2.3. Zijn de verwachtingen uitgekomen?
(Wat ervaart u als de belangrijkste voordelen aan het wonen in [naam project]? En wat ervaart u als verbeterpunten of nadelen aan wonen in [naam project]?)

- 2.4. Wat zijn de verbeterpunten aan [naam project]?
(vanuit de huidige organisatie, in woningkwaliteit of vanuit het ontwikkelingsproces. Alles mag!)

3. Gemeenschappelijkheid (20 minuten)

- 3.1. In hoeverre was er sprake van een woongemeenschap voordat u naar [naam project] verhuisde?
(kennen van andere mensen, gezamenlijke betrokkenheid, ontmoetingen rond verhuizing)
- 3.2. Welke manieren zijn er om actief te zijn binnen de woongemeenschap?
(vragen naar clubs, activiteiten en of de geïnterviewde hierbij betrokken is)
- 3.3. Op welke manier bent u betrokken geweest in het ontwerptraject van [naam project]? Wat is voor u hiervan de waarde?
(teken de moment van betrokkenheid op deze schaal, in hoeverre dit is meegenomen in het ontwerp en de waarde hiervan)
- 3.4. In hoeverre voelt u zich onderdeel van een gemeenschap? Welke aspecten dragen daar aan bij? Wat vindt u van de rol van de beheerder van de gemeenschappelijke ruimte?
- 3.5. Hoe zou u het contact met medebewoners omschrijven?
(Vrienden binnen gemeenschap? Is er sprake is van wederkerige hulp en hoe vaak?)

4. Meerwaarde (20 minuten)

- 4.1. Wat vindt u van de prijs/kwaliteit verhouding van uw aankoop (woning en de bijkomende voordelen)?
- 4.2. Hoeveel bent u bereid meer te betalen voor de voordelen die u noemde?
(Als de vraag lastig is, vragen naar de mate waarin ze bijdroegen aan de koop en of ze hetzelfde zouden hebben betaald zónder deze voordelen)
- 4.3. Welke aspecten aan dit project zijn voor u het belangrijkste in woontevredenheid? *(Of: Kunt u de volgende aspecten van [naam project] in volgorde leggen die voor u het belangrijkste zijn?)*
- 4.3.1. Gemeenschappelijke ruimtes
 - 4.3.2. Comfort van de woning (zoals levensloopbestendigheid)
 - 4.3.3. Mate van privacy
 - 4.3.4. Wonen in een gemeenschap
 - 4.3.5. Hulp geven aan elkaar
 - 4.3.6. Zingeving van het project
 - 4.3.7. Participatie in ontwerptraject
 - 4.3.8. Prijs/kwaliteitverhouding van de woning
- 4.4. Zou u in de toekomst hier willen blijven wonen of voor een zelfde project kiezen?

5. Afronding (5 minuten)

Bedank de geïnterviewde voor de deelname. Leg nog eens uit dat de resultaten worden gebruikt bij het opstellen van de bewonersenquête, en dat u hieraan ook mag deelnemen. Zijn er nog aspecten die ik ben vergeten of heeft u nog andere feedback? Als u dat wil, zal ik u op de hoogte houden van het eindwerk, dat in januari af zal zijn.

Appendix III: Interview protocol profs

Interview requirements

- Signed informed consent form
- Zoom/Skype recorded call or call according to RIVM guidelines
- App to record the conversation with indexing (key informants interviews are not transcribed)
- Pen/paper for notes

Preparation

Before we start, I would like to thank you for participating in this interview. My name is Joep Bastiaans, I am a final year student at the Faculty of Architecture at TU Delft in the master programme Management in the Built Environment. For my graduation thesis, I am doing research into the added value of collaborative housing for senior citizens. I will give you an explanation about this in a moment.

AVG/Recorder instruction

In order to transcribe the interview, I would like to ask you if you are okay with me recording it. The recording will only be used by myself to listen back for academic purposes, after which I will delete the recording. The information from the interview will, however, be shared with the direct research team, consisting of my three thesis supervisors Darinka Czischke, Peter Boelhouwer & Peter Prak. Do you agree?

Informed consent

Before we start the interview, I would like to ask you to sign the informed consent form and return it to me. In it, you declare that you agree with the participation and the above-mentioned agreements. OR: Finally, I would like to thank you for completing the informed consent form.

In this research, I evaluate collaborative housing concepts for senior citizens, especially from professionally managed projects (such as developer and social entrepreneurs). The main question of the research is: *To what extent can professional parties develop collaborative housing concepts for seniors that create added value for residents & professionals?* This interview will be used to better interpret the residents' perspective in preparation for a residents' survey. The interview consists of 5 parts: general about yourself, your reasons for moving, the process, your current living experience and added value of the project. The following applies to all questions: there are no right or wrong answers. If you do not know something or do not want to answer a question, that is always possible!

1. General (5 minutes)

- 5.1. Can you briefly describe yourself and your responsibilities within the project?

2. Initiative

- 1.1. How did the project come about? (*ask about the year, ownership of the land, role of the municipality and possible involvement of citizens*)
- 1.2. Which parties have been involved in the further development of the project?
- 1.3. Were there specific requirements from the municipality regarding the target group and the programme?

3. Design process

- 1.4. At what points in the process are the end users involved in the design?
 - 1.4.1. If so, what percentage of the total number of households were affected? Was anything promised to these households?
 - 1.4.2. Did the co-creation with the residents lead to a change/added value in the design?
- 1.5. Have you, as a developer, dealt with the creation of a sustainable community (*selection process, group composition, involvement of residents, architecture, setting up an organisational association or clubs, process of growing older*)?

2. Product

- 2.1. From a business perspective, what was your main objective in this project? (*financial, CSR*)
- 2.2. What type of end product did you have in mind? And were there any additional objectives regarding the organisation of the common? (*space, garden, morality*)
- 2.3. What measures have been taken to make the dwellings life-cycle friendly? (*additional costs in construction*)
- 2.4. How were the sales prices/rents arrived at? →appropriate for a particular target group.

3. **Added value**

- 3.1. Are there additional *risks* in developing CH?
- 3.2. What are the *additional costs*, compared to standard housing in this type, of developing these homes? (*with regard to the concept, the houses, the development process and the community*)
- 3.3. What is the greatest added value for you as an organisation of the completed project? Does this concept provide a competitive advantage over other developers?
- 3.4. On a scale from 1 to 7, how satisfied were you with your financial earnings? Could you please explain? (*Can you tell what the profit was on this project, in terms of % (IRR)*)

4. **Results communality/ neighbourliness**

- 4.1. Part of the group is satisfied, but part is also disappointed. Is this about you as the developer or the concept?
- 4.2. Community living for seniors is more than bricks. What is the developer's role in ensuring the communality, if it is explicitly mentioned in the marketing?
- 4.3. The survey shows that expectation management sometimes failed, due to ambiguities in promises and possibilities (the communal space itself, accessibility of the garden, monthly costs). Do commercial interests inherently contradict the ideal of communality? (*examples: organising participation, setting up a strong residents' organisation, choosing technology that residents do not understand, monthly costs of a host vs. self-organisation*)

5. **Future**

- 5.1. Do you expect more parties to develop collaborative housing?
- 5.2. This living concept is pioneering. Would you develop it again? And if so, what would you do differently?

Appendix IV: Supply analysis

The third sub-question research focuses on currently offered CH concepts in The Netherlands. The projects in the table are shortly described based on publicly available information from websites and newspaper articles. In the end, all projects are compared and pictured in the project matrix in chapter 5.

Realised developments

Senior Smart Living (ParkEntree, Schiedam)

Blauwhoed is an established developer from Rotterdam who strongly believes in co-creation with end-users. The dialogue early in the process allows concepts to be adapted according to the wishes of potential users. They can be characterised as a small independent developer, focussing on the residential market. One of the concepts offered is called 'senior smart living': a comfortable living environment for senior residents in the midsegment, with particular attention for liveability, sustainability, mobility and future-proof dwellings. The one projects realised with this concept called ParkEntree in Schiedam (Blauwhoed, 2020). It consists of 89 dwellings situated around two open courtyards. Both the garden in between is a communal just like the lounge. These are managed by a hostess, who helps organising activities and supports residents with a (health care) request (Senior Smart Living, 2020)



Figure 23 ParkEntree. The newly constructed project with dwellings for seniors in an open courtyards typology in Schiedam (<https://schiedam24.nl/nl/nieuws/wonen/48-woningen-park-entree-in-verkoop/4323>)

Knarrenhof (Aahof, Zwolle)

Knarrenhof is founded by former developer Peter Prak who manages the concept Knarrenhof. The team consists of several experts who work closely together with local volunteers ('Kartrekkers') and resident groups. On the website, it is stated that the approach is 'to develop at cost price with minimal surcharge' (Knarrenhof, n.d.-a). This distinguishes the foundation from regular developers and can best be characterised as an ideologically committed developer. The Knarrenhof aims to enable the elderly to age dignified. In execution, this is characterised by the courtyard concept in which the residents help each other as good neighbours where possible (Knarrenhof, n.d.-c). The first project was completed in 2017, and five projects are being constructed, which all have a communal courtyard/garden and a communal space for activities. By now, more than 18,500 people have registered, spread over 314 municipalities in the Netherlands (Knarrenhof, n.d.-b).



Figure 25 De Knarrenhof in Zwolle is the first completed project. This picture show the communal garden surrounded by the living room and the individual dwellings (INBO)

KilimanjaroWonen (De Schrijver, Eindhoven)

The KilimanjaroWonen Foundation was founded in 2013 and supported small-scale housing projects in the province of Brabant. They are not a developer but an advisor who help 50+ residents groups to develop with their financiers. The foundation assists with researching possible locations and supervising the initiative group in a Collective Private Commissioning (CPC) development. Registration is free of charge, but the initiative group signs an agreement of intent with the obligation to purchase professional services from KilimanjaroWonen when the initiative results in a concrete housing project (KilimanjaroWonen, 2020b). The first project, De Schrijver, was the first out of the four realized projects. 21 Dwellings are realised in a former school with communal space. The renovation included a communal space and courtyard roof garden, bicycle shed, fitness room, clerk's room, laundry room and guest room (KilimanjaroWonen, 2020a).



Figure 26 Project De Schrijver in Eindhoven is the renovation of a former school with new constructions added around a internal roofgarden.

Polderhofje (Anna Paulowna)



The Polderhofje is a residential health care project in Anna Paulowna. It was set up by a health care entrepreneur who previously developed two small scale health care projects for vulnerable elderly. She can be described as an industry-led project developer, mentioned that it was partly a reaction to the national elderly policy and some distressing situations (Platform31, 2020b). The project consists of 20 owner-occupied houses around a central courtyard. All residents pay a service fee of 465 euros per month, which allows them to appeal for the available health care by a team of 7 nurses and the possibility to have a daily chat. Residents can make use of the communal living room and garden (Reformatorisch Dagblad, 2019).

De Leyhoeve (Tilburg)

The residential care concept 'de Leyhoeve' is a private health care centre for seniors with and without a demand for care. An entrepreneur started this development. The developments are often realised by Public-Private Partnerships (PPP) with the municipality (Regio Business, 2016). At this moment, the two concepts that have been realised are sold to an American investor to be able to grow from 2 to 10 locations in the Netherlands. The concept unites hospitality and health care by offering a total all-in service with private rent apartments (De Leyhoeve, 2020). Additional care can be provided. The project targets more affluent seniors of 55 years and older. Due to the size of the projects, meaning more than 250 homes, and the outsourcing of the maintenance, it does not classify as collaborative housing. Still, it does show the spectrum of current developments after the abolishing of the retirement homes. It consists of 200 luxury apartments and 85 care suites, 2 restaurants, a cafe, a swimming pool, fitness, wellness and a range of clubs and activities. Residents can choose how to furnish, but everything comes with a price tag. Residents are referred to as 'guests', and average apartment in the complex costs 1410 euros per month (De Groene Amsterdammer, 2018).



LIFE (Amsterdam)

In the Houthaven district in Amsterdam, the project LIFE has been realised by the developer VORM. VORM is VORM is a developer related to a construction company. The project has been sold to the housing association Habion, the investor Bouwinvest and individual home-owners. Altogether, 131 apartments have been realised in the different



segments around an inner courtyard. The project includes a kindergarten, pharmacy, GP and a neighbourhood room (literally translated to Dutch 'buurkamer') (Habion, n.d.). The project is meant as an LHBT-friendly elderly complex in the city's centre, but changed to a more broad senior concept through the development. Thirty-one apartments are sold to homeowners from €710.000 (VORM, 2018). The rental apartments cost around 1.395 euro per month, but as 80% of the apartments weren't let, it has dropped to 995 euro per month (De Westkrant, 2020).

Mirthehof & Bladderhof (Zeist)

HD Group is a delegated developer who develops for investors, companies, health care organisations and governments. They can be characterised as another type of developer. One of their three main focus areas is senior and health care housing. Many projects are being developed for individual living and health care in the middle-income segment (HD Groep, n.d.). Depending on the client, projects are strongly focused on people with dementia or especially for owner-occupied households on individual living. Nothing is stated about the participation of residents in this process. The renovation of a former nursing home to independent living for the elderly. The projects includes a restaurant and kitchen where activities are being organised



Figure 2468 De Mirthehof & Bladdenhof in Zeist. (<https://www.mirtehofwonen.nl/>)



Urbahnerdam (CPO Kamerink)

Urbahnerdam advises resident groups for CPC development. They focus on a diverse range of target groups, depending on the initiative. In Kamerink, ten single-family dwellings are being developed, specifically for seniors. The project was initiated by the municipality who organised a tender for residents. The winning team decided to be advised by Urbahnerdam in the process as well. The issues with these projects are often pre-financing it with the small group of initiators and the development's long timespan. Luckily here, the municipality had anticipated and did not require the residents to buy the land instantly.

Although this project does not qualify as collaborative housing since no shared space is included, its business model is attractive. The interview stated that they do not develop for own risk and the business model is based on an advisory role. Although collaboration with developers is sometimes established, these parties are not as eager to develop with long participation processes. This does not create added value for the project and often more costs (Thiel, 2020).

Akropolistoren (Amsterdam)

This urban tower was developed in cooperation between the housing association De Alliantie and a group of residents. It consists of 86 dwellings, in which people live independently in a (humanist) community with activities and being good neighbours, but not all informal care. There is a community room called the tower room. Resident groups are active within their own community and the neighbourhood. Half of the homes are social rent, the other half private rent scattered throughout the project (Parool, 2019).



Rosa Spier Huis

The renovated Rosa Spier House opened in 2019 and consists of one main building with three annexe blocks. It is situated in an oasis of green, where the shared factor is art. Residents must be admitted by an admission committee, which tests for merit in art or science. There is a shared space, studios, exhibition space and theatre. Care is also provided, and people with dementia can also live there. It was initially founded in 1969 at a different location, and since the move, it has grown from 68 to 92 rental flats. Interestingly, the foundation initiated the development with help from a developer/contractor that constructed eight villas on the former location.

Under construction/concept development

Groupius wonen (Apeldoorn)

Groupius Wonen is a developer related to an investor with the mission to develop future-proof living environments focussed on the elderly. The vision focuses on connecting the elderly within the complex with communal spaces and



connecting neighbours and generations (Groupius Wonen, n.d.). By involving the future residents and neighbourhood organisation in the process, the diverse demands are listed. One project in Apeldoorn is currently in development, where a former church is renovated to 31 apartments, including a meeting facility for residents and neighbours. Groupius want to maintain the building themselves, including a concierge responsible for supporting residents with organising initiatives and health care requests (De Senator, 2020). The high land price is currently a problem, as the assumed positive effects on decreased health care costs are not taken into account (Gebiedsontwikkeling.nu, 2020).

Zaanse Hout (Stebru & Syntrus Achmea)

Developing construction company Stebru is working on the construction of Burano in Zaandam. Once again, Syntrus Achmea is the investor in this project. It is aimed at senior citizens who may require care in the future. The project's slogan is independent living in a life-cycle proof (rental) apartment, within walking distance of Zaandam's centre and nature. The 144 life-long-proof homes have semi-public gardens in between. A large living room for meeting people and care facilities will be realised on the ground floor, intending to stimulate the encounter and activities between residents.



Stadveteraan (Stadsveteranen, Amsterdam)



Developer AM is part of the construction firm Koninklijke BAM and one of the larger Dutch project development firms. They develop dwellings, offices, neighbourhoods and Area Developments (AM, n.d.) and can be characterised as a developer related to construction firms. In 2016 they launched the concept called 'Stadveteraan' together with architecture firm Heren5. The concept is centred around seniors consciously sharing facilities and living compact to remain living in a city (AM, 2018). The concept is made for new construction and is currently designed for the Amstelkwartier in Amsterdam. In this project, inhabitants will live alone or share an apartment according to the friends-contract. Both the landlord and the two tenants and the tenants together close a contract. The hallways will be designed for encounters ('tare space') and chats with neighbours and some facilities will be shared with all residents, like the laundry room, the garden, the courtyard and a guest room (Witter, 2020).

Samen zelfstandig Zilveren Kruis/Achmea

Investor Syntrus Achmea and health insurer Zilveren Kruis launched a competition. Juli's design aimed to reduce loneliness among the elderly, relieve carers and activate residents. One court module consists of 36 dwellings that can be stacked. At the moment, it is a concept that has been made for inner-city and stacked housing (Juli architecten, 2020).



Appendix V: Detailed case analysis

Knarrenhof

	Aspect	Explanation			
Core product	Core benefit	"Knarrenhof® is the combination of the courtyards of yesteryear with the convenience of today: safe living with a lot of privacy and at the same time all the advantages of living together and being together as neighbours."			
	Main concepts	Helping one another, organising things together, remain independent, safety, security & companionship.			
	Target group	People interested in Knarrenhof are social people who are, in principle, quickly ready for others. Our participants are on average 60 years old and are often active in helping others.			
	Type of developer	Social entrepreneur with professionals from different sectors			
Actual product	Type of housing	The 48 dwellings surround two communal courtyards (total +/- 6.750 m ²). The size of the single family households are different and spread throughout the project. The communal living room is located in the centre of the project to facilitate activities and create encounters. Concepts like living independently, neighbourhoods and privacy are central. (INBO, 2017).			
	Pricing	14 Social rent	84 m ²	€ 651 - € 720 p/m	€8,2 / m ²
		17 Owner occupied (S)	97 m ²	> € 185.000	€ 1.907
		13 Owner occupied (M)	114 m ²	> € 220.000	€ 1.930
		4 Owner-occupied (L)	142 m ²	> €290.000	€ 2.042
		48 households	102 m ²	€ 210.735	€ 1.937
	shared facilities	Around 30% of the total service is shared, including a garden and living room: <ul style="list-style-type: none"> - Shared area: 1200 + 975 = 2175 m² / 48 = 45 m² per household - Shared living room: 75 + 25 (2nd floor) / 48 = 2,0 m² / household 			
	Extra features	-			
Life cycle proof	The dwellings are both life cycle resistant and prepared for being cared for at home. Life cycle resistance includes low thresholds, door between bathroom and bedroom, wide doors, lazy stairs and higher power sockets.				
Location	An after-war neighbourhood in Zwolle, 2 km from city centre, 700 meters from a shopping centre.				
Type of design	Rigid brick design referring to the traditional courtyard				
Augmented	Co-design	Demand-led design process, according to majority voting principle			
	Extra services	Potentially a shared car			
	Special service features	Long term commitment by the foundation to help the board with collaborative housing matters The repurchase clause in the contract ensures that dwelling aren't sold to the highest bidder, but for market value to someone on the waiting list.			

ParkEntree

	Aspect	Explanation			
Core product	Core benefit	"The approach is [...] to facilitate vital seniors in their own directing, to stimulate entrepreneurship, to create connections, to pay attention to development and to allow each other to take each other for granted."			
	Main concepts	Connecting, enjoying and unfolding. Living.			
	Target group	Active seniors, interested in encountering, enjoying and unfolding. Specifically focused on the mid segment rental and owner-occupied			
	Type of developer	Independent developer			
Actual product	Location	Schiedam North			
	Type of housing	Park entrance is a mix of housing types (flats, single-family houses and bungalows) around two communal gardens. There is one communal living room in the flat block on the north side, managed by a facility manager. The two courtyards are separated by a road.			
	Pricing (Blauwhoed, 2016; Funda, 2020)	25 Single family/bungalow	84 - 117 m ² (some 133 m ²)	Between €250.000 - € 300.000	€2.700 / m ²
		6 Small app.	60 m ²	€ 150.000	€2.500 / m ²
		26 Medium app.	+/- 80 m ²	€ 220.000 (interview 7, 2020)	€ 2.700 / m ²
		19 Large app	+/- 90 m ²	?	
		3 XL app	102 - 140m ²	€365.000	2.640 / m ²
		10 Private rental	60 - 140 m ²	€ 1.129 (for 88 m ²)	€12,8 / m ² (2020)
		89 households	Av 89 m ²	+/- €238.000	+/- €2.600 over time
	shared facilities	The total area is 17.160 m ² , around 9% of the total service is shared: <ul style="list-style-type: none"> - Shared garden: 13*55 + 13*65 = 1.560 / 80 = 17,5 m² per household - Shared living room: 75 m² / 89 = 0,84 m² / household 			
Extra features	Housing strongly focussed on technology (smart domotica system)				
Life cycle proof	Seemingly yes, although				
Augmented	Co-design	Co-design with residents and surrounding actors in an early stage.			
	Food/health/activity service	<ul style="list-style-type: none"> - A hospitality manager - A Shared electric car 			
	Special service features	<ul style="list-style-type: none"> - Group formation during construction - Becoming member of the ParkEntree association - An app to organise and see activities 			

Development proces

Actors involved

- Blauwhoed
- Gemeente Schiedam
- D&S investment
- Inbo
- Bots Bouwgroep (contractor)
- Beyond now housing concepts

LIFE

	Aspect	Explanation			
Core product	Core benefit	Plezierig en veilig wonen op een plek waar je jezelf kan zijn, omringt door gelijkgestemden die zorgen voor en geven om elkaar, met of zonder zorgvraag (LIFE, n.d.)			
	Aspects	Like-minded people, involved resident, look after each other, care, technology & environmental neutral building.			
	Target group	Like-minded and involved people in their 50s and 60s from Amsterdam (LIFE, n.d.)			
	Type of developer	Developer related to construction firm.			
Actual product	Location	Inner city location, close to public transport (300 meters), shops (500 meters) and GP, pharmacy & kindergarten in building.			
	Type of housing	A 5 storey high enclosed apartment complex of 131 dwellings, around a common living garden including diverse facilities like a shared neighbourhood living room, health care service and horeca. Total 19.300 m ² housing and 4.000 m ² facilities.			
	Pricing (Nul20, 2020) (LIFE, n.d.)	39 Social rent	53 till 75 m ²	€698 €721 p/m	€173 /m ² /year €126 /m ² /year
		59 Private rental	64 til 86 m ²	€1.060 €1.501 p/m	€199 /m ² /year €209 /m ² /year
		33 Owner-occupied	109 till 142 m ²	€528.000 €1.100.000	€6.578 /m ² €7.747 /m ²
		131 households	Av 83 m²	-	-
	Extra features (shared facilities)	The total area is 5.010 m ² , in total 19.300 m ² function of which 4.000 facilities. 14% of the built surface is shared: <ul style="list-style-type: none"> - <i>Shared garden</i>: $30 \cdot 16 + 0.5 \cdot 25 \cdot 17 = 690 / 131 = 5,3 \text{ m}^2$ per household - <i>Intended shared living room</i>: $10 \cdot 11 = 110 \text{ m}^2 / 131 = 0,84 \text{ m}^2 / \text{household}$ 			
Life cycle proof	Woonkeur plus (highest level of ageing-friendly appartement)				
Augmented	Co-design	No co-design, only the standard possibility to choose kitchen and sanitary (VORM, 2017)			
	Food/health/activity service	For private rent: A weekly available hostess, contact though app or personal contact on Tuesday. House manager for facility 2 days/week.			
	Special service features	Minimum age of 50 for the private rent and a selection procedure for the social rent, based on motivation letter and interview.			

Actors involved

- VORM (developer & contractor)
- Gemeente Amsterdam (tender initiator)
- Habion (social housing owner)
- Cordaan (Health care organisation)
- Bouwinvest (owner private rental dwellings)

Appendix VI: Resident survey questions

Beste deelnemer,

Bedankt dat u wilt deelnemen aan deze vragenlijst over uw woonervaring. De enige voorwaarde voor deelname is dat u woont in ofwel De Aahof (Zwolle), ParkEntree (Schiedam) of LIFE (Amsterdam). De vragenlijst bestaat 25 vragen en het invullen duurt ongeveer 15 minuten. De vragen zijn onderverdeeld in 4 onderdelen: A. uw verhuisredenen, B. uw huidige woonervaring, C. de meerwaarde & D. achtergrondinformatie.

Ik stel uw mening zeer op prijs. Mocht u iets niet weten of niet willen invullen, kunt u altijd 'ik weet het niet' aanvinken.

Heel veel succes!

Onderdeel A: Verhuisredenen

1. In welke van de onderstaande projecten woont u? Selecteer daarnaast het juiste deel waarin u woont.

- De Aahof/Knarrenhof - Zwolle
 - Arnehof (hof tussen Arne en Sloe)
 - Eem/Scheldehof (hof tussen Eemlaan en Sloe)
- ParkEntree - Schiedam
 - Appartementen (hoogbouw)
 - Eengezinswoningen (laagbouw)
- LIFE - Amsterdam
 - Habion-gedeelte
 - MVGM/koop gedeelte
 - Cordaan-gedeelte

2. Hoe lang woont u in uw huidige woning?

- < ½ jaar
- ½ – 1 jaar
- 1 – 2 jaar
- > 2 jaar

3. Wat was/waren de belangrijkste redenen dat u verhuisde vanuit uw vorige woning?

Beoordeel de verhuisredenen van 1 tot 3, waarbij 1 de belangrijkste reden is, enzovoorts. Kies minimaal één en maximaal 3 redenen. Kruis daarvoor maximaal één vakje aan per kolom. Als de verhuisreden er niet tussen staat, kunt u deze zelf toevoegen bij het laatste kopje 'Anders, namelijk:'

1 2 3

- Verandering huishoudenssamenstelling (bijv. scheiding, kinderen uit huis of overlijden)
- Vorige woning was niet gelijkvloers / levensloopbestendig / bereikbaar zonder trap

- Onderhoud van vorige woning/tuin
- Grootte van de woning/tuin
- Afnemende gezondheid
- Behoeftte aan zorg
- Woning te ver weg van familie/vrienden
- Weinig goede contacten in de buurt
- Gevoelens van eenzaamheid
- Financieel
- Anders, namelijk: _____
- Anders, namelijk: _____
- Anders, namelijk: _____
- Weet ik niet

4. Wat waren de belangrijkste verwachtingen van het project, die u van tevoren overtuigden

om te verhuizen? Beoordeel de verwachtingen van 1 tot 3, waarbij 1 de belangrijkste verwachting is, enzovoorts. Kies minimaal één verwachting en maximaal 3. Kruis daarvoor maximaal één vakje aan per kolom. Als de verwachting er niet tussen staat, kunt u deze zelf toevoegen bij het laatste kopje 'Anders, namelijk:'

1 2 3

- De locatie van de woning (t.o.v. gewenste voorzieningen)
- In de buurt van familie/vrienden
- Levensloopbestendigheid van de woning
- Minder onderhoud aan woning/tuin
- Een kleinere woning
- Goede prijs/kwaliteitverhouding
- Leven in een woongemeenschap
- Aanwezigheid van sociale contacten
- Gemeenschappelijke activiteiten
- Persoonlijke ontwikkeling
- Wederkerige hulp (nabuurschap) z.o.z.
- Beschikbaarheid van zorg
- Anders, namelijk: _____
- Anders, namelijk: _____
- Anders, namelijk: _____
- Weet ik niet

5. In hoeverre speelde het gemeenschappelijke woonconcept mee als verhuizenredenen?

- Als belangrijkste verhuisredenen
- Als één van de verhuisredenen, niet de belangrijkste
- Als een positieve bijkomstigheid
- Het heeft geen rol gespeeld
- Als een negatieve bijkomstigheid
- Weet ik niet

6. Waren er aspecten van het woonconcept waar u tegenop zag? Dit kan alles zijn wat u ervan weerhield om te verhuizen naar het project.

- Ja, namelijk: _____

- Nee
- Weet ik niet

Onderdeel B: Huidige woonervaring

7. In hoeverre komen de verwachtingen die u in het begin had overeen met de huidige woonervaring?

- Het komt helemaal niet overeen
- Het komt grotendeels niet overeen
- Het komt grotendeels overeen
- Het komt helemaal overeen
- Het overtreft de verwachtingen
- Weet ik niet

8. Hoe vaak zou u in een normale situatie (zonder corona) meedoen aan de onderstaande bewonersactiviteiten?

Hierbij moet u ervan uitgaan dat er geen beperkingen zijn door corona en dat u aan de onderstaande activiteiten deelneemt met één of meer medebewoners uit het project.

	Elke dag	Eens of vaker per week	Eens of vaker per maand	Eens per 3 maanden	Eens per jaar	Nooit	Weet ik niet
A. Koffie drinken / borrelen (met één of meer andere bewoners)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Gezamenlijk eten (met één of meer andere bewoners)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Een vergadering (met bijvoorbeeld de VVE, het bestuur en/of een club/commissie)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

D. Een activiteit gerelateerd aan een hobby (bijv. schilderen, tekenen, muziek, zang etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Een beweeg of sport activiteit (wandelen, hardlopen, zwemmen etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Overige activiteit (voetbal kijken, naar de film, museumbezoek etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Hoe vaak is er spake van ondersteuning tussen u en andere bewoners? Dit kan zowel gaan om fysieke hulp (een boodschap doen/iemand wegbrengen) als emotionele hulp (naar iemand luisteren, naar iemands situatie vragen).

	Elke dag	Eens of vaker per week	Eens of vaker per maand	Eens of vaker per 3 maanden	Eens of vaker per jaar	Nooit	Weet ik niet
A. Ik bied hulp aan andere bewoners	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Ik krijg hulp van andere bewoners	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. Hoe vaak bent u aanwezig in de onderstaande gemeenschappelijke faciliteiten?

	Elke dag	Eens of vaker per week	Eens per maand	Eens of vaker per 3 maanden	Eens of vaker per jaar	Nooit	Weet ik niet / niet van toepassing
A. De gemeenschappelijke tuin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. De gemeenschappelijke ruimte	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. Beoordeel de volgende aspecten. In hoeverre bent u tevreden met ...:

	Ze er ontevreden	ontevreden	Neutraal	tevreden	Ze er tevreden	Weet ik niet / niet van toepassing
Uw eigen woning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De prijs/kwaliteit verhouding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De gemeenschappelijke ruimte	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De gemeenschappelijke tuin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De mate van gemeenschappelijkheid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De mate van wederkerige hulp tussen bewoners	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De hoeveelheid gemeenschappelijke activiteiten	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De toegevoegde waarde van de host/facility manager (n.v.t. voor Aahof & Habion)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De werking van de technologie	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De organisatie rondom het gemeenschappelijk wonen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. Welk rapportcijfer geeft u uw algehele woontevredenheid op een schaal van 1 tot 10? (1 = heel erg ontevreden, 10 = helemaal tevreden)

1 2 3 4 5 6 7 8 9 10

Onderdeel C: De meerwaarde

13. Ziet u uzelf als actief binnen het woonproject?

- Ja, namelijk (meerdere antwoorden mogelijk):
- Lid van het bestuur
 - Actief binnen de VVE (vereniging van eigenaren)
 - Onderdeel van een van de commissies / clubs
 - Als deelnemer aan activiteiten
 - Heb goed contact met mijn medebewoners
 - Anders, namelijk:
- Nee, nog niet
- Nee
- Weet ik niet

14. In hoeverre zijn de onderstaande aspecten van toepassing op het project waarin u woont?

	Helemaal mee oneens	Enigszins mee oneens	Neutraal	Enigszins mee eens	Helemaal mee eens	Weet ik niet
A. In dit woonproject kan ik krijgen wat ik nodig heb	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Dit woonproject help mij mijn behoeften te vervullen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Ik voel me deelnemer van dit woonproject	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Ik hoor thuis bij dit woonproject	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Ik heb iets te zeggen over wat er gebeurt in dit woonproject	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Mensen in dit woonproject kunnen elkaar op een goede manier beïnvloeden	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Ik voel me verbonden met dit woonproject	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Ik heb een goede band met anderen in dit woonproject	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. Beoordeel de volgende persoonlijke aspecten. In hoeverre ben u het eens met de volgende stellingen?

	Ja	Min of meer	Nee	Weet ik niet
A. Ik ervaar een leegte om me heen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Er zijn genoeg mensen op wie ik in geval van narigheid kan terugvallen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Er zijn veel mensen die ik volledig kan vertrouwen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Ik mis mensen om me heen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Er zijn voldoende mensen met wie ik me nauw verbonden voel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Ik voel me in de steek gelaten	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. In hoeverre bent u het eens met de onderstaande stellingen op gebied van welzijn? Alle stellingen zijn een vergelijking ten opzichte van uw vorige woning. In mijn huidige woning ...

	Helemaal mee oneens	Enigszins mee oneens	Neutraal	Enigszins mee eens	Helemaal mee eens	Weet ik niet
A. Ben ik actiever dan in mijn vorige woning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Zijn meer gelijkgestemden om me heen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Heb ik meer contact met burens	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Geniet ik meer van het leven	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Vind ik meer zingeving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Is meer wederkerige hulp tussen bewoners	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Voel ik mij veiliger	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Komt ik tot meer zelfontplooiing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. Wat zijn de belangrijkste verbeterpunten en/of de nadelen aan het project waarin u woont? (maximaal 3 aspecten, geprioriteerd van hoog naar laag)

1 =

2 =

3 =

18. Denkt u er wel eens over om te gaan verhuizen naar een andere woning?

- Nooit
- Soms
- Ja, vanwege: _____
- Weet ik niet

Onderdeel D: Achtergrondinformatie

19. In welk jaar bent u geboren?

-
- Wil ik niet zeggen

20. Uit hoeveel personen bestaat uw huishouden? Dit is inclusief uzelf.

- 1 persoon
- 2 personen
- 3 personen
- 4 personen of meer

21. Wat is uw burgerlijke staat?

- Alleenstaand
 - Weduwe
 - Getrouwd
 - Gescheiden
 - Wil ik niet zeggen
-

22. Heeft u momenteel een huur of een koopwoning?

- Een koopwoning
 - Een huurwoning
 - Weet ik niet/ Wil ik niet zeggen
-

23. In welk segment koopt/huurt u? (Als u niet de huidige prijs weet, vul dan de laatst bekende prijs van de woning in)

- Minder dan €724,50 p/m (huur) | Minder dan €180.000 (koop)
 - Tussen €725 - €1000 p/m (huur) | Tussen €180.000 - € 280.000 (koop)
 - Tussen €1000 - €1250 p/m (huur) | Tussen €280.000 - €365.000 (koop)
 - Meer dan €1250 p/m (huur) | Meer dan €365.000 (koop)
 - Weet niet / wil ik niet zeggen
-

24. Maakt u op wekelijkse basis gebruik van ondersteuning of hulp? (meerdere antwoorden mogelijk)

- Ja, ik krijg (soms) ondersteuning van mijn medebewoners (zoals boodschappen, hulp in het huishouden of andere ondersteuning)
 - Ja, ik krijg mantelzorg van familie/vrienden
 - Ja, ik krijg thuiszorg van een officiële instantie
 - Ja, anders namelijk: _____
 - Nee
-

25. Heeft u aanspraak gemaakt op de gemeentelijke Wet Maatschappelijke Ondersteuning (WMO)?

- Ja, namelijk: ter waarde van euro (bedrag in cijfers invullen, als u het niet weet, dan 0)
 - Nee
 - Weet ik niet
-

Bedankt!

Hartelijk dank voor het invullen van deze vragenlijst, ik waardeer uw deelname enorm! Mocht u graag op de hoogte worden gehouden van de uitkomst, kunt u hieronder uw mailadres opgeven. Deze gegevens worden alleen gebruikt om u de resultaten op te sturen. Deze worden rond februari 2021 verwacht.

Wilt u op de hoogte blijven van de uitkomsten van het onderzoek?

- Ja, nl via mijn emailadres of mobiel nummer: _____
 - Nee
-

Als u nog opmerkingen heeft over de vragenlijst, antwoorden of in het algemeen kunt u die hieronder kwijt: