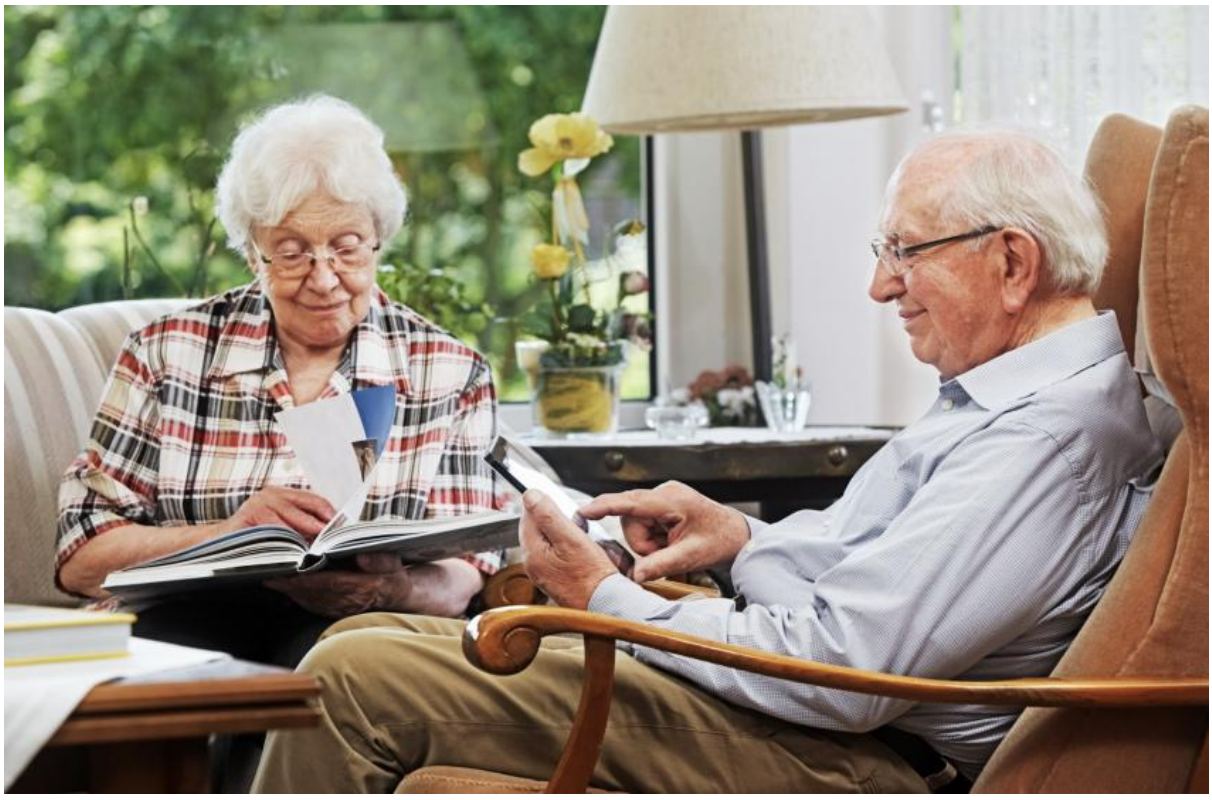
Repurposing real estate to elderly living places

An assessment framework for repurposing vacant real estate to vital 65+ elderly homes



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Preface

This master's thesis is my graduation project for the master's track *Management in the Built Environment* at the Faculty of Architecture and the Built Environment at Delft University of Technology. When selecting a graduation topic, I wanted to focus on a societal challenge and explore opportunities for change within the built environment. Two interconnected challenges immediately stood out: the severe housing shortage in the Netherlands and the rapidly growing elderly population. Rather than looking solely at new construction solutions, I became interested in the potential of vacant buildings. I saw clear advantages in repurposing these buildings for elderly housing, especially considering their often central locations, size and unique architectural character. It was for me no surprise that this this direction excited me, as it aligned with my passion for transformation and user-oriented design, an interest I discovered during my Bachelor of Architecture. This research explores how vacant buildings can be repurposed into suitable housing that meets the needs and preferences of vital elderly residents. In doing so, it contributes to broader societal challenges.

I would like to thank my supervisors, Gerard van Bortel and Harry Boumeester, for their valuable guidance throughout the graduation process. Your expertise on research methods and the topic itself provided me with many new and valuable insights. I appreciated the combination of independent research and structured feedback, as well your enthusiasm and all the relevant (news) articles you shared with me. Furthermore, I want to thank my colleagues at Platform31, especially my supervisor Susan van Klaveren, for your support over the past six months. I valued our moments of brainstorming and the freedom to explore the broader theme of senior housing within Platform31. This enabled me to gain not only in-depth knowledge for my thesis, but also a broader perspective on the societal challenges surrounding elderly housing. In addition, I would like to thank my friends and family for their continued and for always being available to spar with. Lastly, I want to thank all the interviewees and experts who participated in this research and openly shared their thoughts and views on the topics. Your openness, time, and input were essential to the outcome of this study.

Enjoy reading this research!

Isabel de Bruijn
June 2025, Delft

A note: The summary and the developed assessment framework, including the step-by-step guide, are written in Dutch, as the research focuses on the Dutch housing market and these elements are intended for practical application within the Netherlands.

Abstract

This study investigated in what way vacant real estate in the Netherlands can be repurposed to meet the housing needs of the growing 65+ population. The study addresses two interrelated societal challenges: the severe housing shortage and the increasing demand for suitable elderly housing, as the number of people aged 65 and older continues to rise while current options for independent senior living remain limited. The research employed qualitative methods, starting with a literature review to outline elderly needs and preferences, and to explore the opportunities and barriers to repurposing real estate. This was followed by case study analysis of two case studies: De Getijden (a former school in Nijmegen) and De Benring (a former care home in Voorst), including semi-structured interviews with real estate experts and vital 65+ residents. The outcome of the study is an assessment framework, embedded in a step-by-step guide, to help evaluate whether vacant buildings can be repurposed to meet elderly housing preferences and needs. The framework was validated by a group of experts during a focus group session. The aim of the research was to develop a framework to help assess the suitability of vacant buildings for elderly housing, which can assist as a conversation tool in effective decision-making for developers, municipalities, architects, contractors, housing associations, and property owners or investors. Ultimately, this research supports the housing market by helping to address the needs of the aging population while stimulating housing flow through adaptive reuse strategies.

KEYWORDS – Elderly housing, Repurposing real estate, 65+ population, Elderly living needs

Samenvatting

Introductie:

In Nederland is sprake van een grote woningcrisis, de vraag naar woningen overstijgt het aanbod fors. Tegelijkertijd staat er een aanzienlijke hoeveelheid vastgoed leeg, zoals woningen, kantoren, winkels en maatschappelijke gebouwen. In totaal gaat het om circa 36 miljoen vierkante meter aan leegstaand vastgoed, verdeeld over 226.000 objecten (CBS, 2024). Deze leegstand biedt kansen om het woningtekort deels op te lossen door herbestemming van bestaande panden.

Een andere ontwikkeling die de woningmarkt onder druk zet, is de vergrijzing. Het aantal 65-plussers neemt sterk toe, van 3,6 miljoen in 2023 tot mogelijk 5,4 miljoen in 2050. Deze groeiende groep ouderen moet langer zelfstandig thuis blijven wonen, mede door de toenemende druk op de zorg. Veel ouderen wonen echter in te grote of ongeschikte woningen. Daardoor ontstaat er niet alleen een mismatch tussen woning en behoefte, maar blijven ook gezinswoningen bezet die aantrekkelijk zouden zijn voor jonge gezinnen.

Deze dubbele uitdaging van het woningtekort én vergrijzing biedt ook een kans. Door leegstaand vastgoed om te vormen tot geschikte ouderenhuisvesting, kunnen ouderen comfortabel ouder worden op een passende plek. Tegelijkertijd komen grotere woningen vrij voor andere doelgroepen, wat bijdraagt aan doorstroming op de woningmarkt.

Hoewel er al veel onderzoek is naar ouderenhuisvesting en de transformatie van vastgoed, is er nog weinig bekend over hoe leegstaand vastgoed (zoals kantoren of scholen) specifiek geschikt gemaakt kan worden voor vitale 65-plussers. De vitale 65-plussers in dit onderzoek worden omschreven als ouderen die nog fysiek en mentaal zelfstandig zijn, maar wel toekomstbestendig willen wonen. De hoofdvraag van dit onderzoek is: *Op welke manier kan leegstaand vastgoed in Nederland worden herbestemd naar woningen die aansluiten bij de woonwensen en -behoeften van vitale 65-plussers?*

Voor het beantwoorden van de hoofdvraag zijn de volgende sub vragen opgesteld:

1. Wat zijn de belangrijkste woonwensen en -behoeften van vitale 65-plussers op het gebied van locatie, gebouw en woningtype?
2. Wat zijn de grootste obstakels en kansen bij het herbestemmen van leegstaand vastgoed naar ouderenhuisvesting?
3. Hoe kunnen deze obstakels worden overwonnen bij het inpassen van de wensen en behoeften van ouderen?

Waarbij het doel van dit onderzoek is het ontwikkelen van een beoordelingskader met een stappenplan dat partijen helpt om te beoordelen of een leegstaand gebouw geschikt is om te transformeren tot passende en aantrekkelijke woning voor de vitale 65+’er.

Methode:

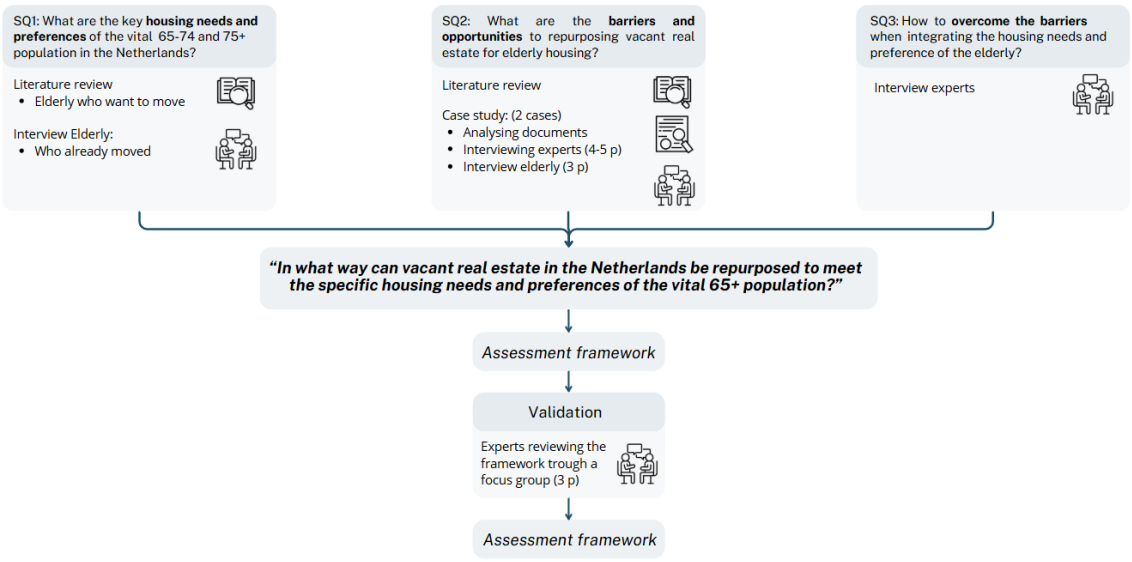

Figure 1: Methode (eigen werk)

Deze studie richtte zich op het creëren van een beoordelingsraamwerk om te evalueren of leegstaande gebouwen kunnen worden herbestemd tot ouderenwoningen die aansluiten bij hun behoeften en voorkeuren. Het beoordelingsraamwerk is het resultaat van het onderzoek en is gebaseerd op meerdere kwalitatieve methoden: literatuurstudie, praktijkinzichten via casestudy's met inzichten van ouderen (doelgroep) en experts via semigestructureerde interviews.

Als eerste werd er een literatuurstudie uitgevoerd om de specifieke behoeften en voorkeuren van de vitale 65+ populatie te identificeren, evenals de barrières en kansen met betrekking tot het herbestemmen van leegstaand vastgoed naar woningen. De literatuurstudie werd gebruikt als input om subvragen één en twee te beantwoorden en om verschillende thema's te ontwikkelen voor het structureren van de interviews en het analyseren van de interviews en casedocumenten.

Na de literatuurstudie werden twee casestudy's geselecteerd en geanalyseerd aan de hand van casedocumenten en semigestructureerde interviews met experts (Aannemer, architect en eigenaar) en ouderen die in het gebouw wonen. Dit om subvragen twee en drie te beantwoorden. De interviews met ouderen die in het gebouw wonen leverden ook praktijkinzichten op voor subvraag één.

Alle beantwoorde subvragen samen beantwoordden de hoofdvraag, en werden gebruikt om het beoordelingsraamwerk op te stellen dat beoordeelt of leegstaand vastgoed herbestemd kan worden tot ouderenwoningen die aansluiten bij hun behoeften en voorkeuren.

Tot slot werd het onderzoek afgerond met een focusgroep, waarin drie experts het beoordelingsraamwerk beoordeelden en suggesties gaven voor aanvullingen en verbeteringen, om te valideren of het raamwerk toepasbaar is in de praktijk.

Resultaten

Resultaten theorie:

Het literatuuronderzoek laat zien dat de woonvoorkeuren en -behoeften van vitale 65-plussers samenhangen met drie schaalniveaus: de woning, het woongebouw en de woonomgeving.

Op woningniveau is er een voorkeur voor levensloopbestendige appartementen Ouderen willen graag dat de woonkamer, keuken, badkamer en ten minste één slaapkamer zich op dezelfde verdieping bevinden of bereikbaar zijn met een lift. Vooral ouderen van 75 jaar en ouder en alleenstaanden hechten hier veel waarde aan. Er is een verschuiving zichtbaar van koop-eengezinswoningen naar huurappartementen, met name naar betaalbare huurwoningen. De voorkeur voor de koopprijs ligt tussen €200.000 en €300.000 (prijspeil 2020). Voor huur geldt een gewenste maandelijkse huurprijs tussen €432 en €737 (prijspeil 2020). Alleenstaanden zijn doorgaans bereid minder te betalen dan meerpersoonshuishoudens. De meest gewenste woninggrootte is drie kamers (inclusief woonkamer).

Op woongebouwniveau is goede fysieke toegankelijkheid belangrijk, de woning moeten toegankelijk zijn door een lift of gelijkvloerse toegang. Daarnaast is sociale toegankelijkheid belangrijk voor het ‘aging in place’. Gebouwen die interactie tussen bewoners ondersteunen, door middel van gemeenschappelijke ruimtes of georganiseerde activiteiten, dragen positief bij aan de kwaliteit van leven, vooral voor ouderen die alleen wonen.

Op woonomgevingsniveau blijkt dat ouderen locatie belangrijker vinden dan jongere doelgroepen. Ze willen het liefst in hun vertrouwde buurt blijven wonen. Buurten aan de rand van de stad worden vaak vermeden vanwege het gebrek aan voorzieningen. Essentiële voorzieningen zoals een supermarkt, huisarts, apotheek en openbaar vervoer moeten het liefst binnen 500 meter bereikbaar zijn of binnen 400 meter als de “rollatorafstand” al wordt meegerekend. Ouderen geven de voorkeur aan sociaal gemengde wijken met een mix van huishoudens. Jongere ouderen (65–74) hechten meer aan buurtkenmerken, terwijl voor ouderen van 75 jaar en ouder de woning zelf belangrijker wordt.

Naast voorkeuren benoemt de literatuur ook een aantal obstakels en kansen voor transformatie naar woningen in het algemeen. Obstakels zijn onder andere fysieke en technische uitdagingen zoals structurele beperkingen, missende of verouderd sanitair, slechte isolatie en ventilatiesystemen, verouderde staat van het gebouw en de mogelijke aanwezigheid van een monumentale status. Tegelijkertijd hangt de waarschijnlijkheid van een succesvolle transformatie naar woning af hoe langer een pand leegstaat, hoe groter de kans op verkoop of herontwikkeling. In de krappe woningmarkt bieden structureel leegstaande gebouwen kansen, mits de locatie geschikt is, aanpasbaar voor doelgroepen en afgestemd met de gemeente en woonprioriteiten. Hoewel deze inzichten

betrekking hebben op transformaties in het algemeen, kunnen sommige van deze factoren sterker of beperkend werken bij transformatie specifiek ten behoeve van ouderenhuisvesting.

Resultaten empirisch onderzoek:

De resultaten van het empirisch onderzoek naar de woonwensen en -behoeften van vitale 65-plussers laten zien dat zelfstandigheid, comfort en sociale verbinding centraal staan op drie niveaus: woning, gebouw en locatie. Ondanks verschillen tussen de twee casussen, De Getijden (Case A) en De Benring (Case B), komen er gedeelde voorkeuren, obstakels én kansen naar voren.

Op woningniveau geven bewoners in beide casussen de voorkeur aan levensloopbestendige en toegankelijke woningen. Drempelloze indelingen, brede deuren en gelijkvloerse plattegronden maken zelfstandig wonen mogelijk. Ook zijn comfort, daglicht en een prettige sfeer belangrijke voorwaarden. Een kans in beide projecten is de ruimtelijke kwaliteit van bestaande gebouwen. In case A zorgen de hoge plafonds, zichtbare balken en ruime kamers voor karakter en woongenot, terwijl de gelijkvloerse opzet van het voormalige zorggebouw in Case B praktisch is. Tegelijkertijd zijn er obstakels, zoals inefficiënte plattegronden, hoge drempels naar balkons en beperkte buitenruimte in Case B. In beide casussen blijkt de technische integratie van moderne installaties complex en kostbaar, doordat de gebouwen oorspronkelijk niet zijn ontworpen voor individuele woonfuncties. Hoewel de voorkeuren voor grootte en indeling uiteenlopen, blijkt betaalbaarheid in beide gevallen cruciaal en kan ook een obstakel zijn. in Case A worden koopwoningen binnen NHG-grens aangeboden, maar de kosten lopen hoog op. In Case B is de huur sociaal, maar bewoners zijn minder tevreden over gedeelde energiekosten. Toch laten beide casussen zien dat met maatwerk betaalbare ouderenwoningen te realiseren zijn.

Op gebouwniveau is toegankelijkheid essentieel, met liften, gelijkvloerse overgangen en toegankelijke buitenruimtes. Een kans in beide projecten is het creëren van ontmoetingsplekken door de bestaande structuur, zoals de gezamenlijke woonkamer in Case A of de centrale kern in Case B. Dit bevordert sociale interactie en voorkomt eenzaamheid. Bewoners waarderen deze plekken, maar hechten ook waarde aan hun privacy en de vrijheid om zelf te kiezen wanneer ze deelnemen. Ook sociale veiligheid via informele zorg en burenhulp komt in beide projecten terug. Een belemmering op gebouwniveau is de technische en ruimtelijke inflexibiliteit, vooral in Case B, waar delen van het gebouw niet geschikt bleken voor bewoning. Ook de esthetiek speelt mee: het monumentale karakter van Case A wordt als positief ervaren, terwijl het voormalige zorggebouw in Case B als sober wordt gezien. Dit is ook een kans bij Case A en obstakel bij Case B.

Op locatieniveau speelt nabijheid van voorzieningen een grote rol. In Case A is de ligging in een stedelijke omgeving een duidelijke kans, de bewoners waarderen dat diverse winkels, zorgvoorzieningen en openbaar vervoer op loopafstand zijn. In het dorpse Case

B is het gebrek aan voorzieningen een beperking de bewoners zijn blij dat er wel nog een supermarkt aanwezig is op loopafstand. Wel wordt er bij Case B de mogelijkheid om in de vertrouwde gemeenschap te blijven benadrukt en wordt dit als waardevol gezien. In beide projecten vinden bewoners het belangrijk om sociale interactie met de buurt te hebben. Een kans is dan ook dat beide gebouwen dragen sociale interactie met de buurt, bij Case A waar af en toe een evenement is georganiseerd en bij Case B waar het gebouw openbaar toegankelijk is en de buurt aan alle activiteiten mee mogen doen.

Overkoepelend blijkt uit beide casussen dat transformatie van leegstaand vastgoed tot ouderenhuisvesting veel kansen biedt, mits er goed wordt ingespeeld op de specifieke context. Belangrijke obstakels zijn de technische integratie van installaties, beperkte ruimtelijke flexibiliteit door gebouwstructuur en financiële haalbaarheid. Kansen liggen in het behoud van karaktervolle gebouwen, het creëren van sociale ontmoetingsplekken, en het inspelen op de wens om in de eigen buurt te blijven wonen. Obstakels kunnen worden overwonnen met creatieve ontwerpkeuzes, nauwe samenwerking en vroegtijdige betrokkenheid van experts.

Resultaten beoordelingsraamwerk:

De inzichten van de theorie en het empirisch onderzoek vormden de basis voor het beoordelingsraamwerk met bijhorend stappenplan dat in dit onderzoek is ontwikkeld. Dit raamwerk is een gesprekshulpmiddel om te bepalen in hoeverre een leegstaand gebouw geschikt is om te worden getransformeerd tot ouderenhuisvesting die daadwerkelijk aansluit bij de behoeften van vitale 65-plussers.

Het beoordelingsraamwerk is vervolgend gevalideerd in een focusgroep met drie experts uit de praktijk. Het doel van de sessie was dat de experts gingen beoordelen of het ontwikkelde stappenplan en het bijbehorende raamwerk toepasbaar zijn in de praktijk, en welke aanvullingen en/of opmerkingen er nog zijn. De experts bevestigden de praktische bruikbaarheid van het instrument en benadrukten het belang van flexibiliteit in de toepassing. Ook werd geadviseerd om onderscheid te maken tussen wat een woning geschikt maakt voor ouderen (zoals toegankelijkheid) en persoonlijke voorkeuren (zoals architectonische uitstraling). Verder waren de experts het mee eens om het kader vooral in te zetten als hulpmiddel voor het gesprek tussen betrokken partijen om te kijken of er voor transformatie wordt gekozen.

Het beoordelingsraamwerk dat in dit onderzoek is ontwikkeld, helpt als gesprektool voor professionals bij het beoordelen van de geschiktheid van een leegstaand gebouw om herbestemd te worden tot ouderenhuisvesting die aansluiten bij de woonwensen en behoefte van deze doelgroep. Het raamwerk combineert woonvoorkeuren van vitale 65-plussers met ruimtelijke en functionele kenmerken van gebouwen en hun omgeving.

Om het gebruik van het beoordelingskader in de praktijk te vergemakkelijken, is het ingebed in een vijfstappenplan. In stap 1 wordt gekeken naar de bereidheid tot herontwikkeling of verkoop bij de huidige eigenaar. Stap 2 betreft een technische

quickscan waarbij wordt beoordeeld of het gebouw in voldoende staat verkeert en of noodzakelijke aanpassingen technisch haalbaar zijn, bijvoorbeeld op het gebied van toegankelijkheid of installaties. In stap 3 volgt een financiële quickscan om te toetsen of de transformatie financieel realiseerbaar is binnen de beoogde prijsklasse, zoals sociale huur of betaalbare koop. Stap 4 is het invullen van het beoordelingskader, waarbij op basis van criteria op woning-, woongebouw- en woonomgevingslevel wordt geëvalueerd in hoeverre het pand aansluit op de woonbehoeften van vitale ouderen. Tot slot wordt in stap 5 de transformatieklasse bepaald, wat een indicatief advies aangeeft of een gebouw en op welke level, woning, woongebouw of woonomgeving, (on)geschikt is voor herbestemming.

De structuur van het beoordelingsraamwerk bestaat uit drie schaalniveaus: woning, woongebouw en woonomgeving. Per niveau zijn meerdere variabelen opgenomen die voortkomen uit het literatuuronderzoek, empirische onderzoek en de expert focusgroep. Denk hierbij aan zaken als de mogelijkheid tot gelijkvloers wonen, toegankelijkheid, en de nabijheid van voorzieningen. Binnen de variabelen is een twee splitsing gemaakt tussen wat een woning geschikt maakt voor ouderen en persoonlijke voorkeuren.

Elke variabele heeft een weegfactor gekregen om aan te geven hoe belangrijk deze is voor de vitale 65+ groep. De variabelen kunnen door de gebruikers van het raamwerk worden aangepast, omdat de belangrijkheid per variabele binnen deze doelgroep kan verschillen. Verder geeft de gebruiker per variabele een score voor de ingeschatte haalbaarheid van die variabele tijdens de transformatie.

Door per variabele de gegeven score met de weging te vermenigvuldigen, krijgt elke variabele een puntenaantal. Als deze punten vervolgens worden opgeteld en gedeeld door de som van de wegingen, ontstaat er een totaalscore per level tussen de 0 en 5. Net zoals bij de variabelen kan er een verschil zijn in belangrijkheid tussen de verschillende levels. Daarom wordt ook een totaalscore van het project berekend. Hierbij wordt de totaalscore per level vermenigvuldigd met de weging van dat level, waardoor er punten per level ontstaan. Vervolgens wordt de som van deze punten gedeeld door de som van de wegingen. Hieruit komt een totaalscore tussen de 0 en 5 voor het project. Deze eindscore en de totaalscores per level geven een indicatie van de transformatieklasse waarin het gebouw valt: van niet transformeerbaar (< 1) tot zeer transformeerbaar (> 4). De indicatie kan vervolgens dienen als basis voor de beslissing om wel of niet tot transformatie over te gaan. Het raamwerk is geschikt om inzicht te geven in welke wensen en behoeften wel of niet inpasbaar zijn binnen het transformatieproject. De transformatieklasse biedt een indicatie van de haalbaarheid, maar is geen definitief meetinstrument voor succes.

Het beoordelingsraamwerk biedt daarmee een concrete en toepasbare methode om op een gestructureerde manier af te wegen of transformatie van leegstaand vastgoed naar ouderenhuisvesting haalbaar, wenselijk en passend is bij de doelgroep.

Conclusie

"Op welke manier kan leegstaand vastgoed in Nederland worden herbestemd om te voldoen aan de specifieke woonbehoeften en -voorkeuren van vitale 65-plussers?"

Leegstaand vastgoed kan worden herbestemd tot geschikte huisvesting voor vitale ouderen, mits de woning, het gebouw en de locatie ruimte bieden voor ouderenvriendelijke kenmerken zoals toegankelijkheid, betaalbaarheid, sociale interactie en nabijheid van voorzieningen. Het succes van een transformatie hangt echter af van de mate waarin deze wensen en voorkeuren kunnen worden geïntegreerd binnen de fysieke en ruimtelijke beperkingen van het bestaande gebouw en de omgeving.

Het in dit onderzoek ontwikkelde stappenplan met beoordelingsraamwerk biedt betrokken partijen een praktisch en flexibel hulpmiddel om te beoordelen of herbestemming haalbaar en wenselijk is. Het kader ondersteunt op maat gemaakte besluitvorming, bevordert samenwerking tussen partijen en draagt uiteindelijk bij aan meer aantrekkelijke en toekomstbestendige huisvesting voor ouderen. Dit vergroot de bereidheid onder vitale ouderen om te verhuizen naar een woning waarin zij zelfstandig oud kunnen worden, en stimuleert daarmee de doorstroming op de woningmarkt.

Het beoordelingskader kan worden ingezet door gemeenten, ontwikkelaars, architecten, aannemers, eigenaren, woningcorporaties en investeerders als gespreks- en beslisinstrument om de woonvoorkeuren van ouderen beter te laten aansluiten op de projecthaalbaarheid. Aanbevolen wordt om toekomstige bewoners al vanaf de start van het proces actief te betrekken, zodat de transformatie daadwerkelijk aansluit op hun specifieke behoeften en wensen.

Table of Contents

Chapter 1 Introduction

1. Introduction

1.1. Problem statement

The demand for new homes in the Netherlands is significantly exceeding the supply, resulting in a serious housing crisis. According to estimates, hundreds of thousands of new dwellings are needed to meet the current demand (Ministerie van Volkshuisvesting en Ruimtelijke Ordening, 2024a).

Figure 2: Housing demand VS supply in the Netherland
(Ministerie van Volkshuisvesting en Ruimtelijke Ordening, 2024)

At the same time, a substantial amount of vacant real estate exists across the country, representing an untapped resource that could potentially help address the housing shortage. According to CBS (2024), there are 186,000 administratively vacant homes in the Netherlands, accounting for over 20 million square meters. Additionally, there are 16 million square meters of vacant offices, shops, commercial buildings, churches, sports halls, schools, agricultural properties, and more. Together, this amounts to 36 million square meters spread across 226,000 'residential objects' (CBS, 2024). This shows that there is a significant amount of non-residential property available that could potentially be repurposed. Compounding this issue is the fact that many existing homeowners are living in homes that no longer match their current needs, such as elderly households of one or two people living in family-sized homes. This inefficient use of housing contributes to the broader housing shortage.

Furthermore, the aging population further worsens this challenge. In 2023, there were 3.6 million people aged 65 and older in the Netherlands, and this number is projected to rise to between 4.2 and 5.4 million by 2050, depending on increases in life expectancy (CBS, 2024). Due to the aging population and the growing pressure on the healthcare system, elderly people will need to live independently at home for longer, as there will not be enough capacity to provide care for everyone (Ministerie van Volksgezondheid, Welzijn en Sport, 2022). However, many elderly currently live in housing that is too large or not suited to their needs. Therefore, the need for specialized senior housing where they can age in place is rising. These types of homes enable elderly to continue living independently while having access to care when needed.

As the Netherlands faces a growing elderly population and housing shortage, thousands of elderly struggle to find homes suited to their needs. However, the aging population could create an opportunity to address the housing shortage by repurposing vacant real estate for elderly housing. This will not only provide seniors with a comfortable living condition explicitly designed to their needs but also contributes by stimulation the housing flow. Elderly will move into age-friendly accommodations, their larger homes become available, which will benefit young families and first-time buyers searching for a home (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022).

The focus of this research will be on the vital 65+ population, those who are still active and independent and are looking for their aging in place home. These individuals, who will likely remain independent for another 10 to 25 years, that are searching for homes that offer both comfort and easy access to potential care services if needed. It is crucial to understand how to build, design and facilitate for this group and how the vacant buildings in the Netherlands could be adapt to these specific housing needs and preferences of the 65+ population.

There is already a lot of literature on the housing needs and preferences of elderly, on the support that elderly need while moving and, on the willingness to moving for elderly and on how elderly can age in place. Also, there is already research done on transforming existing real estate, such as offices, to homes. However, there is not yet researched about how repurposing existing real estate can be suitable for elderly living places that adapt to their needs and preferences. This is especially relevant now due to the huge housing shortage in the Netherlands. There is a need to find solutions next to new build to create extra homes. Also, now and in the future more homes for elderly are needed.

It is particularly interesting to explore the transformation of non-residential real estate into residential properties, as this type of repurposing has been less commonly implemented compared to transforming existing residential properties into more suitable living arrangements for elderly.

This research holds significant societal relevance as it aims to address the pressing housing crisis while enhancing the quality of life for elderly individuals. By creating suitable housing options for the 65+ population, it supports independent aging and frees up larger homes for younger families and first-time homebuyers, contributing to a more balanced and accessible housing market.

This research is scientifically relevant as it addresses the pressing housing crisis in the Netherlands by providing a method to repurpose vacant and inefficiently used buildings into suitable homes for the elderly. By focusing on the specific needs of the 65+ population, the study aims to develop a framework that guides decision-makers in adapting vacant real estate to support independent living for seniors.

1.2. Research question

Main research question:

"In what way can vacant real estate in the Netherlands be repurposed to meet the specific housing needs and preferences of the vital 65+ population?"

Sub questions:

SQ1: What are the key housing needs and preferences (on housing unit, building and location level) of the vital 65+ population in the Netherlands?

SQ2: What are the main barriers and opportunities to repurposing vacant real estate for elderly housing?

SQ3: How to overcome the barriers when integrating the housing needs and preference of the elderly?

The main aim of this research is to create an assessment framework with a step-by-step guide to help to assess if the vacant building if it is suitable to be repurposed to housing needs and preferences of the vital elderly.

1.3. Goals and deliverables

This research has aimed to provide valuable insights into in what way vacant real estate in the Netherlands can be repurposed to meet the housing needs and preferences of the vital 65+ population. To achieve this, a practical assessment framework with a step-by-step guide has been develop. This tool helps stakeholders in assessing whether a vacant building is suitable for transformation into senior housing that matches their preferences and needs. The framework is based on an analysis of literature, case studies (including interviews with experts and elderly individuals), and a focus group with experts." By offering a practical and adaptable tool, the study contributes to more effective decision-making in transformation projects and supports the broader goal of addressing the housing shortage. This approach aims to increase the availability of suitable housing for elderly, allowing them to transition into new homes while making their previous residences available for others in the housing market.

1.4. Dissemination and audiences

This study is useful for stakeholders who want to learn more about how suitable elderly housing, aligned with the preferences and needs of the vital 65+ elderly, can be created when transforming a building. The assessment framework and its step-by-step guide, developed as part of this study, will be particularly valuable for developers, municipalities, architects, contractors, housing organizations, and property owners or investors. These stakeholders can use the framework as a collaborative tool to assess whether vacant real estate can be effectively repurposed into housing suitable for the vital 65+ population. Additionally, this research may also benefit a broader audience, including individuals interested in the topic or those seeking to conduct further research in this area.

Chapter 2 Literature review

2. Literature review

In this literature review chapter, first the conceptual model of the research is explained and the concepts. Afterwards a broader context to the researched topic is explained to understand the demografic changes, policies the Dutch government has implemented on the elderly housing “Programma Wonen en Zorg voor Ouderen" and the concept aging in place better.

2.1. Conceptual model

The conceptual model in figure 3 is developed from the research questions and literature. On the left side of the model is the target group for this study: vital individuals aged 65 and older who currently live independently but wish to move to a new home where they can age in place. The arrows marked with '1' relate to the sub-question: ‘*What are the key housing needs and preferences* (on housing unit, building and location level) *of the vital 65+ population in the Netherlands?*’ These needs and preferences are categorized into three levels: the first level is their housing unit; the second level involves the specific characteristics of the building that houses this unit; and the third level concerns the broader environment in which they wish to live.

The arrow labelled '2' explores the relationship between the levels (housing unit, building and location) of needs and preferences of the target group and the vacant building who could be repurposed, reflecting the second sub-question: *'What are the barriers and opportunities to repurposing vacant real estate for elderly housing?'* Lastly, the labelled arrow '3' raises the question: ‘*How to overcome the barriers when integrating the housing needs and preference of the elderly?*’ By addressing these barriers, the repurposed building can better align with the preferences and needs of the elderly population, thereby supporting a smoother transition into new housing and stimulating overall housing flow.

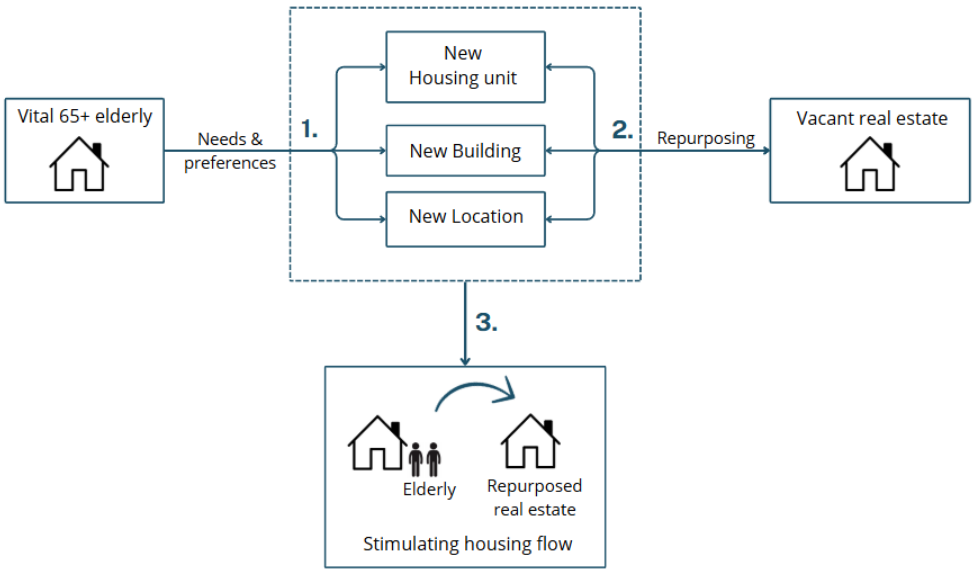

Figure 3: Conceptual model (own image)

2.2. Vital 65+

The research focuses on the vital 65+ population in the Netherlands who are looking for a new place where the can age in place. The vital elderly are individuals, who are physical and metal independent (World Health Organization, 2015). This group can be further divided into subcategories: the young-elderly (65-74 years) and the old-elderly (75 years and older). Within these subcategories, there are those actively seeking housing in the rental or owner-occupied sector, as well as those who have already relocated to new homes in these sectors.

The vital 65+ elderly for this research can be categorized into the next different groups:

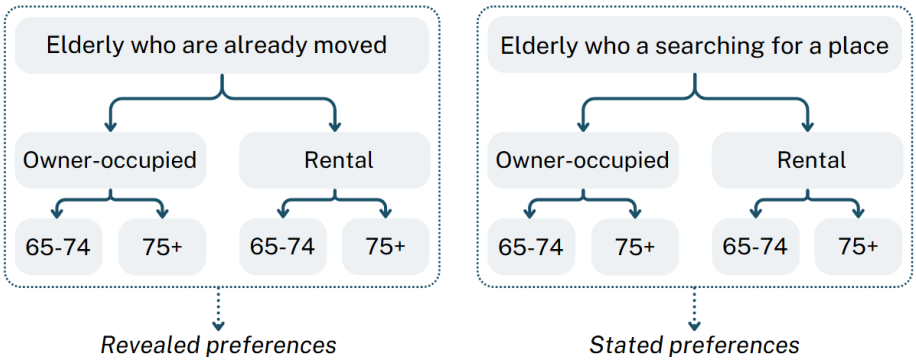

Figure 4: Elderly in the research (own figure)

In housing research, a distinction could be made between revealed and stated residential preferences (Timmermans et al., 1994). The already moved elderly are included in this research to understand why they decided to move, these are the revealed preferences and needs of the elderly. Revealed preferences refer to the actual choices made by individuals in real-world situations, which can be observed through their behaviour and decisions (Vasanen, 2012). These individuals have already moved into a transformed property, providing insights into whether such transformed properties align with their housing preferences.

On the other hand, elderly individuals who express a desire to move but have not yet done so are included to explore their stated preferences and needs. Stated preferences are the preferences that individuals express when asked about hypothetical scenarios or future choices (Kim et al., 2005). This group can also help to understand the considerations or barriers that have prevented them from relocating, especially to repurposed real estate.

2.3. Vacant real estate

As stated in 1.1. the Netherlands, approximately 186,000 administratively vacant homes account for over 20 million square meters. Beyond residential spaces, there are 16 million square meters of vacant offices, shops, commercial buildings, churches, sports halls, schools, and agricultural properties. Combined, this represents an immense opportunity for repurposing, totalling 36 million square meters across 226,000 real estate objects (CBS, 2024). This highlights the significant availability of non-residential real

estate in the Netherlands, offering substantial potential for repurposing to elderly living places that is aligned with their preferences and needs.

However, it's essential to note that not all vacant properties are immediately available for transformation. A portion constitutes "frictional vacancy", temporary vacancies due to transitions such as moving, selling, or renovating. Frictional vacancy is necessary to maintain the dynamics of the housing market, allowing flexibility and mobility.

The manifesto "Most of the Homes Already Exist", initiated by the Nationaal Renovatie Platform and Natuur & Milieu, outlines recommendations on how the untapped potential of vacant and underutilized properties in the Netherlands can be leveraged to create new housing solutions (NRP and Natuur&Milieu, 2024).

The manifesto emphasizes that space in the Netherlands is scarce and becoming even more so. Therefore, it calls for a greater focus on valuing and utilizing the existing built environment to create additional housing opportunities. Currently, fewer people are living in the vast stock of existing homes, and many other buildings remain vacant for long periods or could be repurposed in the future, such as elderly homes, By taking a closer look at what is already available, there is enormous potential to build on existing structures and optimize the use of space and buildings (NRP and Natuur&Milieu, 2024).

This approach saves space, materials, energy, and time. It also keeps local facilities viable and opens opportunities for innovative living and care concepts. These solutions are precisely what is needed to address the housing crisis, create sustainable and resilient living environments, and enhance the quality of our landscapes (NRP and Natuur&Milieu, 2024).

The focus of this research is on the transformation of vacant properties from non-residential functions into housing for elderly, as well as transformation within the same function (e.g., residential to residential). Transformations within the same function are already widely practiced, allowing us to learn from past experiences with these types of projects.

Furthermore, the transformations from non-residential functions into housing for elderly share fewer overlapping characteristics than within same-function transformation and have rarely been implemented in practice, making them particularly interesting to study. The variety of building types (schools, offices, shops, barracks, churches, commercial spaces, warehouse, and museums) often requires project-specific solutions and the change in functionality is so significant that it requires sometimes a complete redesign of the installations (Remøy et al., 2024).

2.4. Housing unit, Building and Location level

A suitable housing supply is crucial to achieve a housing flow, and suitable housing supply does not just mean the housing itself. Appropriate housing supply for the elderly includes housing suitable for remaining self-sufficient at home for as long as possible. To

make such a age-friendly housing for elderly, the dwelling must be suitable, the housing complex and the environment to live in (Bluemink et al., 2021).

For example, by the housing unit is that all the spaces of the dwelling must be all on one floor to have an age-friendly home. For the housing building that there is a lift to get to the housing unit floor or that there are communal meeting places in the building and for the housing environment that there are amenities such as daily amenities, public transport and healthcare services nearby.

So, an appropriate housing supply is not just about cheap and small housing but it is the combination of living and living environment (Bluemink et al., 2021). Hence, the levels housing unit, building and location are included in the study to make the best possible age-friendly housing and living environment for the elderly where the elderly want to move to. In which the vacant property is tested for whether it meets the preferences and needs of the elderly on these three levels.

2.5. Housing flow

A housing flow begins when a specific type of home becomes available, in this research the vacant buildings that are repurposed for elderly livings. These individuals seeking the qualities of this home will move into it, leaving their previous home vacant. This, in turn, allows others to move into the now-available house, creating a chain reaction of housing exchanges. This process continues until a new household enters the market (Zeelenberg & Van Kessel, 2014).

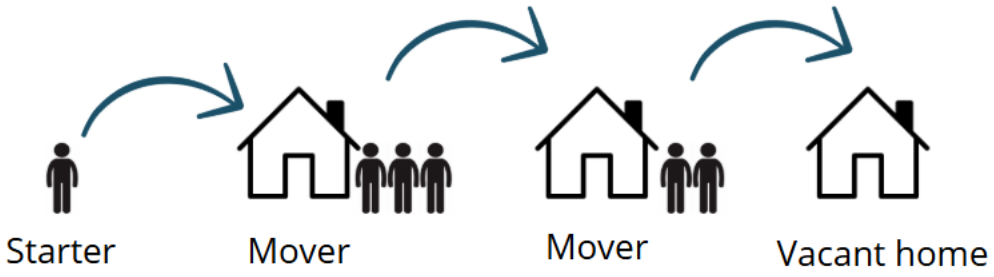

Figure 5: Housing flow concept based on Zeelenberg & Van Kessel, 2014 (own image)

The housing flow in the Netherlands has slowed due to older adults remaining in their large family homes even after their children moved out. This limits the availability of homes for younger families and first-time buyers (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022a). Housing flow is not a goal in itself, but a means to stimulate more relocations, thereby giving people the opportunity to find a home that suits their housing preferences, budget, or household size (Hoetjes, 2023).

The elderly are the first link in this housing chain, which can result in multiple movers further down the chain, referred to as intermediate links. In the following analysis done by Buys (2023) from RIGO on the WoON21 research, the Netherlands is considered as one closed housing market, meaning the chain ends with people entering the housing market, known as "starters."

Figure 6 shows which type of housing becomes vacant when individuals aged 55+ move to a new home, divided into housing types. It highlights that, when moving to larger apartments or single-family homes, a significant number of single-family homes become available on the housing market, compared to elderly moving to a to 1-2 room apartments. In cases where no housing becomes available, it may be due to situations such as divorces, or inflows from institutions or social care.

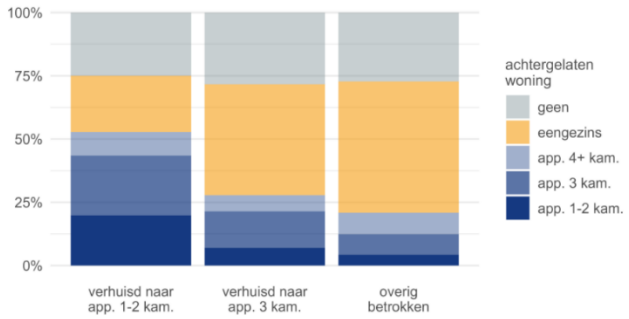

Figure 6: Homes moved into and vacated by 55+ individuals, WoOn21 edited by (Buys, 2023)

The study from RIGO also examined the housing flow chain resulting from the delivery of 100 new homes. The study shows that if 100 new 3-room apartments are built in the rental sector, with an average of 28% of the initial movers are older adults, resulting in a total of 114 links in the housing flow chain from the existing housing stock for these 100 homes. In contrast to if all 100 new 3-room apartments were allocated only to senior housing, the housing chain would increase to 193 links in the housing flow. This is significantly higher than with the average 28% elderly initial movers.

When looking at 100 new 3-room apartments delivered for the owner-occupied sector, the number of links increases to 301, significantly more than in the rental sector. Furthermore, the research also shows that the larger the home from which the first link originates, the bigger the total housing flow links are (Buys, 2023).

Elderly are less likely to move compared to younger households (Rigo, 2022). However, because they represent an increasingly large subpopulation, older adults will still account for a significant number of housing flows (De Jong, 2021).

2.6. Demographic

There is no universal age when people are becoming ‘old’. Aging is typically measured by the proportion of people aged 65 and older within the total population (De Jong, 2021). On 1 January 2024, there were almost 3,7 million people over 65 living in the Netherlands, that is 20,5 percent of the total number of inhabitants. The ageing of the population in the Netherlands has increased, in 1990 this percentage was still 12,8 (CBS, 2024). Additionally, the number of households headed by individuals aged 65 and older has grown substantially and is expected to continue increasing in the coming years (see Figure 7). Elderly have therefore become a proportionally larger part of the entire population.

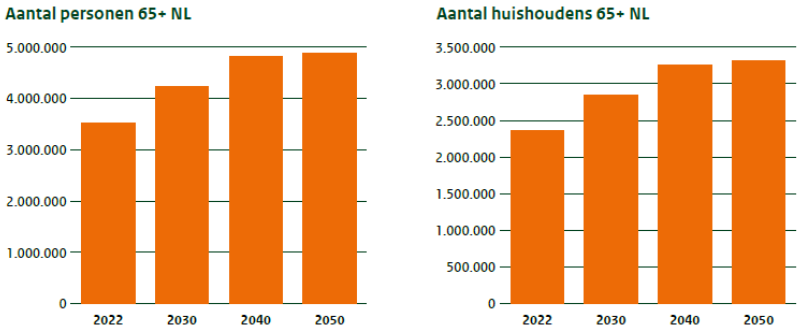

Figure 7: Growing 65+ population in the Netherlands (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022a)

This demographic transition is largely attributed to the post-war baby boom generation (born between 1946 and 1955) and improvements in healthcare and prosperity, which have resulted in longer life expectancy (De Jong, 2021). Aging is not evenly distributed across the country, regions with higher concentrations of elderly individuals face unique challenges and opportunities in the housing market (see Figure 8).

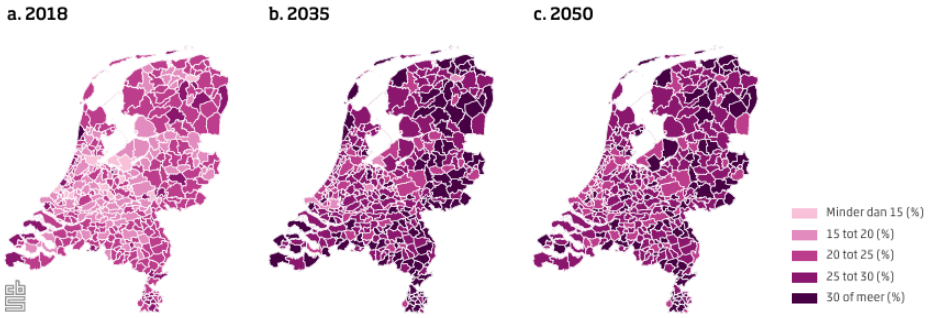

Figure 8: Aandeel 65-plussers per gemeente PBL werkt vanuit CBS (PBL, 2019b)

The number of households over 65+ is increasing, especially the number of households over 75+. In addition, an increasingly large group over 65 has a higher income (see figure 9). The group of elderly people receiving rent allowance is also rising, but less rapidly (De Jong, 2021). These developments have significant implications for the housing market, as older households have specific requirements for their living environment and facilities (De Jong, 2021).

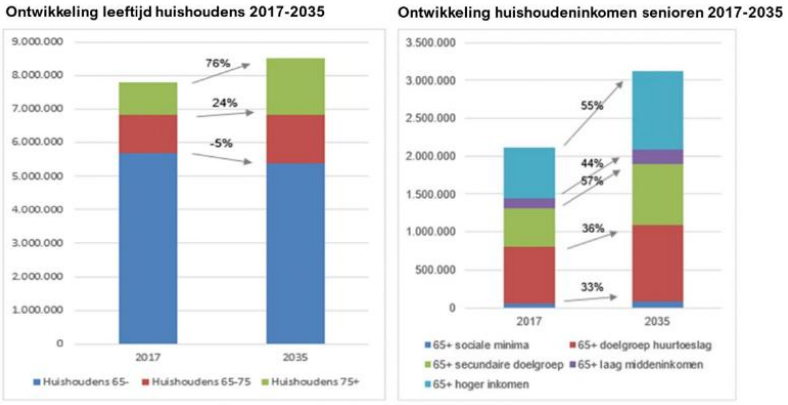

Figure 9: Development of the age of all households and the development of household income of seniors in the Netherlands (RIGO, 2018)

2.7. Programma wonen en zorg voor ouderen

The Dutch government has implemented the "Programma Wonen en Zorg voor Ouderen" to address the growing housing and care needs of the aging population (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022a). Given the expected increase in the 65+ population, this program is intended to ensure that elderly have access to suitable housing options, thereby supporting both independent living and broader housing flow within the market.

By 2030, the program aims to construct 290,000 housing units specifically for the elderly within the larger national goal of 900,000 new homes (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022a). In this program, the focus is on provided three categories of elderly housing where seniors can live independently: zero-step homes (nultredenwoningen), clustered housing forms (geclusterde woonvormen), and nursing care places (verpleegzorgplekken). In these living situations, elderly residents sometimes access care services, such as district nursing, a "fully integrated home care package" (VPT 'volledig pakket thuis'), a modular home care package (MPT 'modulair pakker thuis'), or a personal budget (PGB 'Persoonsgebonden pakket')(Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022a).

To provide good housing for the group elderly requires effort. The actual demand for suitable homes for the elderly lags the forecast of demand in the Dutch housing market. De Jong (2021) therefore wonders whether such a 'generic' housing policy for the elderly should be continued.

2.8. Aging in place

In the glossary of the World Health Organization (2004) the concept aging-in-place is defined as: *"Meeting the desire and ability of people, through the provision of appropriate services and assistance, to remain living relatively independently in the community in his or her current home or an appropriate level of housing. Ageing in place is designed to prevent or delay more traumatic moves to a dependent facility, such as a nursing home."* (World Health Organization, 2004). Similarly, aging-in-place can be defined as the preference of elderly to age, often through the end of their lives, in their homes, surrounded by spaces that reflect their lives and ideally located near family and friends (Ahmed et al., 2023).

This research focuses on aging-in-place homes for the elderly, particularly in the context of transformed real estate buildings. These buildings must incorporate aging-friendly features to support the independence and well-being of their residents effectively.

In figure 10 it is seen that ageing in place (AIP) is shaped by five key components: (1) place integration, (2) place attachment, (3) independence, (4) mobility, and (5) social participation. These components are influenced by four main factors: individual characteristics, the accessibility of the built environment, the proximity of services and amenities, and the development and maintenance of meaningful social connections. At

the center of the framework lies the concept of "Aging in Place," which is interconnected with all other elements, either directly or indirectly (Bigonnesse & Chaudhury, 2021).

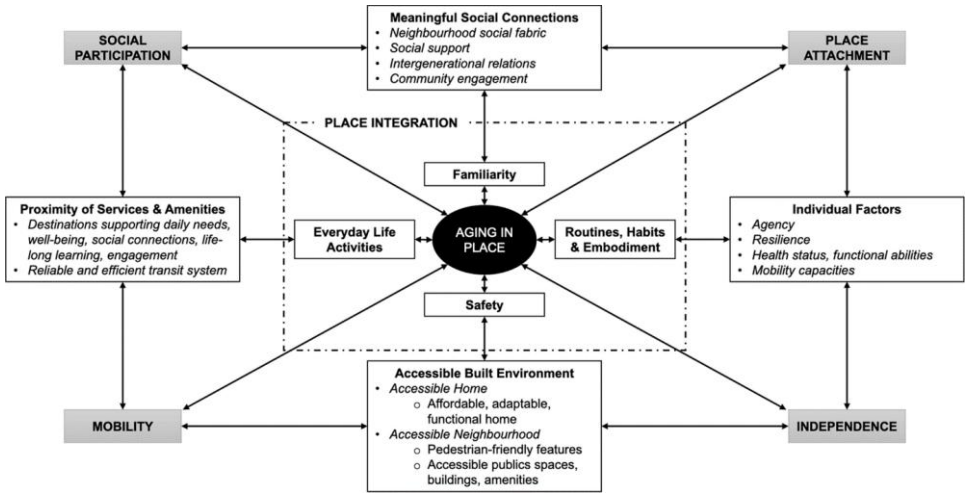

Figure 10: Conceptual framework for aging-in-place in the neighbourhood environment (Bigonnesse & Chaudhury, 2021)

A vacant real estate building that could be repurposed is on a specific location and has its own building characteristics. From this perspective it is important to look at the place characteristics and the building characteristics from the framework in figure 10. Therefore, the accessible built environment with home and neighbourhood characteristics are important and the proximity of the services and amenities. The individual characteristics are the characteristics of the vital 65+ elderly. For this target group, establishing and maintaining meaningful social connections is crucial when transitioning to a new home, as these connections significantly support successful aging in place.

A suitable aging in place home in the Netherlands is described in the “Project Longer Independent Living for Elderly” (Project Langer Zelfstandig Wonen van Ouderen) from the PBL (2019a). Where a home is considered "suitable" if the living room, bedroom, and bathroom are located on the same level or accessible without steps. The neighbourhood’s suitability for independent living is determined by three factors: the physical factors, for example the design of the built environment, the functional factors for example the proximity to primary and secondary amenities, and the social factors for example the community connections (PBL, 2019a).

A functionally suitable neighbourhood is defined as where essential amenities, such as a general practitioner, supermarket, pharmacy, and public transportation stop, are within 500 meters walking distance. Areas with fewer than two of such amenities within this range are considered less suitable. The quality of public spaces (such as seating areas, safe crossings, meeting points) and seniors' perceptions of their neighbourhood’s suitability are not assessed.

Chapter 3 Research Methodes

3. Research Methodes

3.1. Type of study and methods

The study focused on creating an assessment framework to evaluate whether vacant buildings could be repurposed to elderly living places that matches their needs and preferences. So, if the vacant building can be aligned with the elderly housing needs and preferences. The assessment framework is an outcome of the main research question: *"In what way can vacant real estate in the Netherlands be repurposed to meet the specific housing needs and preferences of the vital 65+ population?"*

This study applied multiple qualitative methods to build a valid assessment framework grounded in literature, in practise insights with case study and insights from the elderly (target group) and experts by doing semi-structured interviews.

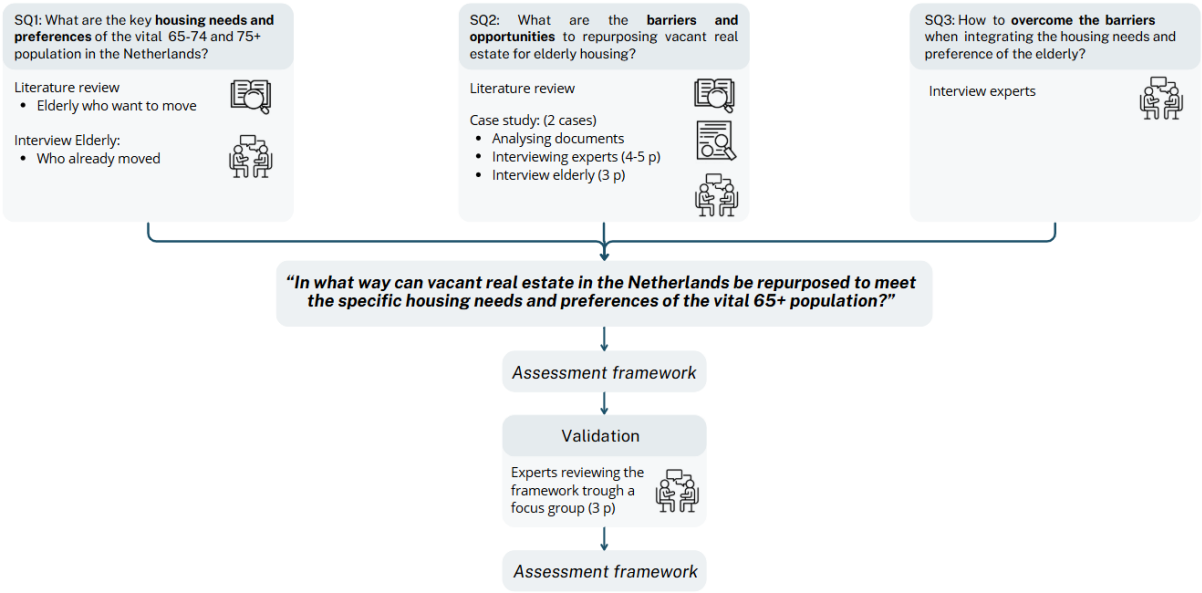

Figure 11: Methodes (own image)

At first, literature was explored to understand the broader context of the research topic and to identify and formulate the research gap. After this exploratory phase, a more in-depth literature review was conducted to identify the specific needs and preferences of the vital 65+ population, as well as the barriers and opportunities related to repurposing vacant real estate into housing.

The literature review was used as input to answer sub-questions one and two and to develop different themes for structuring the interviews and analysing the interviews and case documents. This allowed for adjustments based on direct feedback from elderly participants, ensuring the framework reflect in practice.

After the literature, two case studies were selected and analysed by case documents and semi-structured interviews with experts (contractor, architect and owner) and elderly living at the case. This to answer sub-questions two and three. The interview with the

elderly who live at the case also gathered practical insights on the literature-based answer to sub-question one.

All the answered sub-questions together answer the main research question, which is used to create the assessment framework to assess vacant real estate if it could be repurposed to elderly living places that is aligned with their preference and needs.

In the end, the research used a focus group with experts by letting the experts review the framework to validate the assessment framework to see if the experts think the framework is applicable in practise.

Through these qualitative methods, the research produced a validated, flexible tool that assess the alignment of repurposed vacant real estate with the housing needs and preferences of the 65+ population. This to stimulate the housing flow, which is a contribution to the solution of the housing crisis in the Netherlands.

3.2. Data collection and analysis

	Methode	Data collection	Data analysis
SQ1: What are the key **housing needs and preferences** of the vital 65-74 and 75+ population in the Netherlands?	Literature review Semi-structured Interview	Scientific articles, books, and reports Elderly interview, recorded and transcribed and summarized	Systematic analysis Thematical analysis
SQ2: What are the **barriers and opportunities** to repurposing vacant real estate for elderly housing?	Literature review Case study with document analysis and semi-structured interviews	Scientific articles, books, and reports Case selection criteria, case documents, expert interviews, recorded and transcriped Elderly interviews recorded, transcribed and summarized	Systematic analysis Thematical analysis Thematical analysis
SQ3: How to **overcome the barriers** when integrating the housing needs and preference of the elderly?	Semi-structured Interview	Experts interview, recorded and transcribed	Thematical analysis
Validation assessment framework	Focus group	Recorded and summarized	Thematical analysis

Figure 12: Methode and data collection and analysis by sub-questions and validation step (own image)

At first the data for the context and literature review were collected through searches on the TU Delft repository, ResearchGate, Google Scholar, and Scopus, as well as by using the AI program Consensus to find relevant articles for collecting scientifical articles, books and reports. Additionally, resources like ‘Centraal Bureau voor de Statistiek’ and ‘Rijksoverheid’ were used to provide context and statistical data for the review. The articles and data were then systematically analysed to give input for answering the first and second sub-question based on literature and identify key themes for the interviews and the assessment framework.

For the sub-question one first a literature review was conducted on the topics aging in place, age-friendly home and on the preferences and needs of the elderly. The preferences and needs literature is from other researchers’ findings of the WoOn 2021 data set. The WoON21 survey analysis focused on the housing preferences of households who want to move within two years, the stated preferences. Furthermore, the

data from the elderly interviews, who had already moved, were used to answer sub-question, these were the revealed preferences. The data were collected by recording the already moved elderly interviews and making a transcript and summary of this recording. The data was analysed thematically on the preferences and needs of the elderly. The themes from the thematical analysis were derived from the literature and are separated on the three different levels. It could be that new themes might have emerged from the interviews. The already moved elderly are the elderly who are living in the building of the case and were asked by email or by a letter to voluntarily participate in the research.

For the second sub-question, a literature review was also conducted on the topic of barriers and opportunities in transforming real estate, particularly into elderly living spaces. The literature was systematically analysed. For the second sub-question, case studies were used to identify practical opportunities and barriers in repurposing vacant real estate to meet the needs and preferences of elderly residents. The case studies were selected using a set of predefined selection criteria. Data for each case study were collected through the analysis of project documents and by conducting interviews with both elderly residents and experts involved in the project. The interviews with experts and elderly participants were recorded, transcribed, and thematically analysed. The collected data from the transcripts were analysed by though a thematical analysis. For this research two cases within the selection criteria were selected. T This number of cases was chosen due to the time constraints of the research, the number of interviewees per case, and the depth of analysis required to thoroughly explore the research question. Each case included a minimum of three experts (architect, developer/project manager, investor/owner) and three elderly participants.

For the third sub-question, the interview with experts on the case were used to answer the question. The interviews were recorded, transcribed, and thematically analysed.

Once all data had been collected, the sub-questions and main research question were answered, and the assessment framework was developed using the collected data.

The final step was to validate the assessment framework. This was done through a focus group in which three experts reviewed the framework and assessed its applicability in practice. The experts in the interview are a diverse group of experts who are all active and have relevant experience in the elderly housing market or transformation. The three experts don't have the same function and are from different sectors. Expert E1 works at a housing association as a sales and rental advisor and has done research on how aging population affects the strategy of housing associations. Expert E2 works at a national knowledge platform about care, housing, and well-being, and shares knowledge about housing for older people. Expert E3 also works at a knowledge platform and focuses on housing and the housing market, especially on transforming buildings into homes. The focus group is recorded and summarised.

3.3. Casus selection

As described in section 2.3, this research focuses on the transformation of vacant properties from non-residential functions into housing for elderly, as well as transformations within the same function (e.g., residential to residential). Transformations within the same function have been widely practiced, allowing us to learn from past experiences with these types of projects. In contrast, transformations from non-residential functions into housing for the elderly share fewer overlapping characteristics with same-function transformations and have rarely been implemented in practice, making them particularly interesting to study.

For selecting of the case studies, the following selection criteria were made:

Type of transformation: From non-residential to residential and from residential to residential.	A non-residential function, such as an office, school, or hospital, and has been repurposed into residential housing. A residential, such as a nursing home, has been repurposed to residential housing.
Target group: vital 65+	The project must specifically focus on housing for the elderly, the vital 65+ population who are physically and mentally independent.
Time Period: <15 years	The transformation project must preferable have been completed most recently. Recent projects are more likely to reflect current market conditions and elderly housing preference and needs. Additionally, participants involved in these projects are more likely to recall the choices and challenges they faced during the process of moving into a transformed building.
Data accessibility: minimum three experts and three elderly residentials to interview.	Cases where enough sufficient data is available such as the project document and experts and residentials who are willing to participate in the interviews. The experts to be interviewed include developers, architect, investors and property owners.

A note on selection criteria is that in the first place one of the selection criteria was to find one non-successful project and one successful project. This with the reason that including a non-successful case would help to better identify barriers that may not be as visible in successful cases. A non-successful project is defined as one that failed to attract, or barely attracted, the intended elderly target group. However, a non-successful case is hard to find and therefore has not been found. To help identify the barriers in this thesis specific questions to the experts are asked on the opportunities and barriers of the case and if they knew other projects that faced significant barriers. In addition, elderly residents were asked what they perceived as barriers and opportunities in transformed buildings for elderly housing, whether they had considered other (transformed) housing options, and what their considerations were.

The search for case studies was conducted through online research (including the use of AI). Additionally, Platform 31, the graduation company, sent various emails to housing

associations to identify potential cases. Further efforts included contacting companies and experts in the field of transformation and making a LinkedIn call for case study suggestions. Through this search, five categories of transformations of vacant real estate into elderly housing emerged, see Appendix C for the case long list:

A: From non-residential to residential (Focus: vital 65+)
B: From residential to residential (Focus: vital 65+)
C: From non-residential to residential (Focus: mixed target groups)
D: From non-residential to residential for care (Focus 65 +, however not vital)
E: Transformation not yet completed or not yet started

Categories D and E were excluded from the study because the target group does not (yet) reside in these transformed properties. Since the research focuses on how vacant properties can be transformed into elderly housing, it is essential to examine different types of transformations. Therefore, the aim was to select one case from each of category's A, B, and C. However, upon further investigation, it became clear that the casus in category C contained little to no elderly residents. As a result, the final selection included category A and category B, each with one case study. The decision to select only one case per category was also influenced by the time constraints of this research and for this research it is important to research the cases in-depth due to finding barriers and opportunities of transforming vacant real estate to elderly living places that is aligned with their preferences and needs.

When selecting the two cases from this long list, the researcher aimed for diversity in transformation type, size, tenure type, individual vs. collective living arrangements, and location. This approach ensures that the findings are broadly applicable. Based on these criteria, the following two case studies were selected:

A: De getijden Veldstraat Nijmegen (2018)

Old function: School
Tenure type: Owner occupied
Size: 17 dwellings
Location: Urban area

B: De Benring in Voorst (2014)

Old function: Nursing home
Tenure type: Rental (social)
Size: 72 dwellings + building with 18 starters
Location: Rural area

For the casestudy, multiple individuals were interviewed per case. Here is an overview:

Interviewees De Getijden:

- A1: Architect
- A2: Landscape architect
- A3: Resident 65-74
- A4: Resident 65-74 & CPO (client)
- A5: Resident 65-74
- A6: Contractor

Interviewees De Benring:

- B8: Electrotechnical installation company
- B9: Housing association (owner): Transformation manager
- B10: Coordinator location
- B11: Resident 75+
- B12: Resident 75+
- B13: Resident 75+
- B14: Housing association (owner): Technical asset manager
- B15: Contractor

3.3.1. De Getijden

De Getijden is a transformation project in Nijmegen, urban area, where a former school is transformed into a living environment for elderly. The project is developed between 2012 and 2019 through a Collectief Particulier Opdrachtgeverschap (CPO), the initiative allowed future residents to actively participate in the planning process (Stichting de Getijden, 2019).

The project consists of 17 apartments, eleven apartments in the repurposed school building, three of which are in the former gym, and six new-build homes. There are now currently living 25 residents in total. The residents are almost all between 60 and 80 years old, only one person around 40. The home size diverse from 60 m^2 to 116 m^2 with an average home size of 100 m^2.

History: The school, originally the O.L.V. Lourdes school, was built in 1928 in a modest Amsterdam School architectural style and is on the attention list of cultural heritage of the municipality of Nijmegen. It was originally established as a primary school connected to the nearby Lourdes Church. The building continued to serve educational purposes and was later used by PRO-school De Zonnegaard, a school for practical education. After the relocation of De Zonnegaard the building is transformed to a residential complex. During this transformation, later extensions and additions to the building were removed to restore its original character (Stichting de Getijden, 2019).

Figure 13: Original O.L.V. Lourdes school (Interviewee A5, 2025)

Stakeholders: The transformation project of De Getijden involved a diverse group of stakeholders, each playing a crucial role in its realization. The client, Stichting De Getijden, was founded by future residents as a collective private commissioning (CPO) initiative the residents were able to shape the design of their shared needs and preferences (Stichting de Getijden, 2019). They were supported by CPO advisor Bouwen in Eigen Beheer (BIEB), who guided them on financial, risk, and organizational matters (Hans Steeman, 2021). Nexit Architecten led the architectural design, focusing on age-friendly living while also guiding the non-professional client group through the

complexities of the project. Landscape architect INVO, also a future resident, designed and oversaw the age-friendly site. Construction company Gebroeders Van Herpen was involved in the design process and executed the transformation and new construction. The company was involved from an early stage, working collaboratively with the architect and future residents. Finally, the Municipality of Nijmegen Supported the project through facilitating zoning and permit processes and assisting in resolving legal and technical challenges.

3.3.2. De Benring Voorst

De Benring is located in Voorst, a small rural village in the province of Gelderland. It offers 72 apartments for the elderly. The village is characterized by its green surroundings and relatively aging population (Voorsternieuws, 2015). The Benring was originally built as a traditional care home for the elderly. Over the years, the Dutch national policy shifts in elderly care changed the way these institutions were used. The government shifted to encouraging elderly people to live independently for longer and the intramural care became limited to those with formal care indications. Therefore, traditional care homes like De Benring lost their original function and became underutilized (Omroep gld, 2015). The elderly who wanted to remain living in De Benring and the owner Habion wanted to give de Benring a new purpose. De Benring was one of the first projects in the Netherlands where a former care facility is repurposed to elderly living places.

Stakeholders: Habion is a housing corporation specializing in senior housing and was already the owner of the building and the landlord of the residences. Habion involved future residents and the local community in the transformation process through the rØring methodology. The aim was not only to create housing for the elderly but also to make it a home for the elderly. With the ambition to reinvent the concept of the "nursing home," this approach shifts ownership and responsibility to the local community (Habion, 2017).

Figuur 14: Habion's interpretation of Maslow's Pyramid with the integrated rØring methodology (Habion, 2017).

The input from the rØring methodology formed the basis for the transformation, which students from the Academy of Architecture used as inspiration for various design proposals. Habion processed the students design input and took the lead in guiding the

transformation process. An installation company, Van Lente Systeemintegratie, was appointed by Habion as the main contractor, and a construction company, Temmink Bouwprojecten, was brought in to carry out the transformation work. Habion remained involved during the transformation.

The residents of Voorst founded their own residents' cooperative, the Woonzorgcoöperatie Voorst, which is committed to preserving housing and care facilities in De Benring, thereby creating a vital living community where young and old live together and support one another. The cooperative does not provide care itself, residents are responsible for arranging care when needed (*De Benring Woonzorgcoöperatie*, n.d.).

After the transformation, a coordinator was appointed at the location to organize activities and support volunteers. This coordinator is paid by Habion and through a subsidy from the municipality of Voorst.

3.4. Data plan and ethical considerations

The data management plan was created using DMPonline and is included in appendix 2. It outlines how data is collected, stored, published, and for whom it is available. All participant data is collected anonymously, with participants providing informed consent before data collection begins. Participants are assigned unique identifiers to ensure anonymity in the research and any publications. During the research phase, data access is restricted to the researcher, the first and second mentors, and the company mentor. All data during the research is stored on the researcher's TU Delft project data storage drive.

The human research ethics checklist with a risk assessment and mitigation plan is included in appendix 1. All the participants have voluntarily contributed to the research. Participants are written an email to participate in the research or asked on location, this is done in this way so no one else can see who was invited to participate. Before collecting the data from participants, consent of the participants was asked and the participants were informed about how the data will be used, the anonymity of the data and how it is stored. Only the necessary information is collected for the research. The participants in this research have a unique identifier assigned, so they will stay anonymous. No personal information has been asked in the interviews if it not required for the research, this to keep the participants anonymously. The only personal information needed by the experts' interviews is the email address for contact and their function within the company. The only information needed of the elderly interview is in which age group and tenure type, the age groups are 65-74 or 75+ and owner-occupied or rental. With all the personal information collected it is not expected that it will harm one of the participants. This data is only available to the researcher and the mentors, after the final publication of the report the personal data will be deleted.

Chapter 4 Results: Theory

4. Results: Theory

In this chapter, the results from the literature review are presented for sub-question one, "What are the key housing needs and preferences (at the housing unit, building, and location level) of the vital 65+ population in the Netherlands?", and sub-question two, "What are the main barriers and opportunities to repurposing vacant real estate for elderly housing?"

4.1. Needs and preferences 65+ population

As explained, this research aims to develop an assessment framework to evaluate whether vacant real estate can be repurposed to meet the needs and preferences of the vital 65+ population. To create this framework, it is essential to understand the housing needs and preferences of this population. This is addressed in sub-question one: *"What are the key housing needs and preferences (at the housing unit, building, and location level) of the vital 65+ population in the Netherlands?"*. Although there is existing research on the broader 65+ population, much of it does not specifically focus on *vital* elderly or make clear distinctions between the rental and owner-occupied sectors. Nevertheless, this literature provides a valuable theoretical basis for constructing the assessment framework.

This literature review uses research on the most recent WoOn, WoOn21, and research on preferences and needs of older people. WoOn is a comprehensive survey conducted by the "Ministerie van Binnenlandse Zaken en Koninkrijksrelatie" (BZK) in collaboration with "Centraal Bureau voor de Statistiek" (CBS). It is conducted every three years, and it provides detailed insights on the housing situation, living conditions, and housing preferences of households across the Netherlands (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022b). The research question in this chapter from WoON are filled in by the elderly who are moving inclined, their preferences are explored.

4.1.1. Preferred type of dwelling

	Huidige woning (%)	Gewenste woning (%)	Aanbod-vraag saldo
Eengezins koop	87.850 (51%)	32.470 (19%)	+55.380
Eengezins huur	34.310 (20%)	13.620 (8%)	+20.700
Appartement koop	14.810 (9%)	48.490 (28%)	-33.680
Appartement huur	34.460 (20%)	76.850 (45%)	-42.390
Totaal actief zoekend 65-plus	**171.430 (100%)**	**171.430 (100%)**	**0**

Bron: WoON21, bewerking ABF en auteurs

(NB Bij een groep doorstromers is hun totale vraag even groot als het woningaanbod, de aantallen woningen die zij achterlaten als zij hun gewenste woning kunnen betrekken, vandaar het vraag-aanbod saldo nul)

Figure 15: Current and Desired Housing for 65+ Elderly by Housing Type and rental and owner-occupied (WoningBouwersNL, 2022)

In Figure 15, the current housing situations of elderly individuals who wish to move and the types of homes they aim to move into are shown. The current housing situations of elderly individuals seeking to move highlight a notable shift in preferences. While half of

the elderly are currently living in owner-occupied single-family homes, 45% of 65+ home seekers express a preference for rental apartments. Followed by 28% owner occupied apartment, 19% owner occupied single-family homes and 8% rental single-family homes (WoningBouwersNL, 2022). The data reveals a trend of transitioning from owner-occupied housing to rental properties, with many prioritizing apartments over single-family homes.

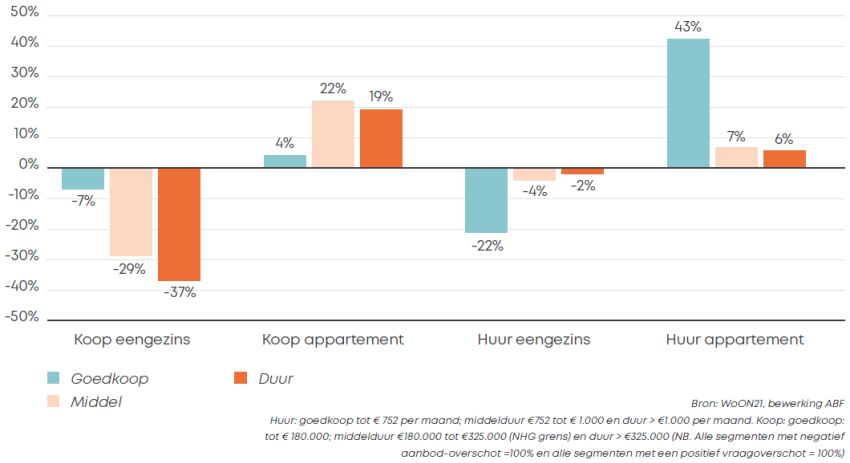

Figure 16: Housing preferences of households aged 65+ by housing type, rental and purchase price segments (WoningBouwersNL, 2022).

Figure 16 visualizes the supply and demand balance in the Dutch housing market for different types of homes and price segments, based on the WoON21 dataset. The negative percentages indicate an oversupply of homes in that segment (supply exceeds demand) and where the positive percentages indicate a shortage of homes in that segment (demand exceeds supply). Concluding from the graph, there is a significant demand for apartments, especially “cheap” rental apartments, while there is an oversupply of single-family homes, especially owner-occupied single-family homes.

Preferred dwelling type	Age and household size group						
	Aged 55 to 65		Aged 65 to 75		Aged 75 and older		Total
	Single person	Multi-person	Single person	Multi-person	Single person	Multi-person	
Apartment	51.0%	37.6%	67.8%	60.1%	65.2%	71.2%	54.8%
Terraced, or (semi) detached	37.0%	49.8%	17.6%	27.4%	7.9%	15.4%	31.0%
Other	12.0%	12.6%	14.6%	12.5%	26.9%	13.4%	14.2%

Figure 17: Preference for dwelling type households aged 55 and older by and household size group (n=5311) (Mancoulov, 2024)

Most of the respondents 65+ prefer an apartment as desired type of dwelling. Then a terraced dwelling, semi-detached or detached dwelling and then another dwelling, such as a dwelling with shared bathroom or kitchen. When looking the age difference and household size, the 75+ group has a lower preference for a terraced or (semi) detached dwelling than the 65-74 age group. This is the same for single person households, they have also a lower preference for terraced or (semi) detached dwellings than multi-person households.

4.1.2. Preferred tenure type

Preferred tenure type	Age and household size group						
	Aged 55 to 65		Aged 65 to 75		Aged 75 and older		Total
	Single person	Multi-person	Single person	Multi-person	Single person	Multi-person	
Rental	**45.7%**	21.7%	**58.6%**	32.5%	**66.7%**	**49.1%**	**39.7%**
Owner occupied	35.4%	**59.5%**	21.4%	**38.9%**	11.3%	20.3%	37.5%
No preference	18.9%	18.8%	20.0%	28.6%	21.9%	30.6%	22.8%

Figure 18: Preference for tenure type of households aged 55 and older by age and household size group (n=5311) (Mancoulov, 2024)

The preference for rental or owner-occupied dwellings of the 65+ age groups has a significant higher preference for rental (51.7%) than for owner occupied dwellings (23%). When looking at age difference the higher the age group in the figure, the higher the percentage of rental as preferred tenure type and the lower the preference for owner-occupied dwelling. Also, the single person household size has a higher percentage of rental as preferred dwelling type than the household size multi-person.

4.1.3. Preferred purchase and rental price

Purchase price:

Preferred for sale price	Age and household size group						
	Aged 55 to 65		Aged 65 to 75		Aged 75 and older		Total
	Single person	Multi-person	Single person	Multi-person	Single person	Multi-person	
0-100,000	1.9%	2.3%	4.1%	2.8%	7.3%	1.5%	2.7%
100,000-200,000	19.9%	11.1%	23%	14.5%	22.6%	12.9%	14.8%
200,000 - 300,000	**34.7%**	**29.3%**	**39.2%**	**30.8%**	**32.3%**	**33.7%**	**31.7%**
300,000-400,000	21.0%	26.9%	17.6%	28.4%	17.7%	25.7%	25.2%
400,000-500,000	14.0%	16.9%	9.5%	13.0%	16.1%	16.3%	14.8%
500,000-600,000	3.5%	6.1%	4.5%	4.4%	2.4%	3.0%	4.8%
600,000 or more	5.1%	7.4%	2.3%	6.2%	1.6%	6.9%	6.1%

Figure 19: Preferred maximum for sale price of households aged 55 and older by age and household size group (n=2743) (Mancoulov, 2024)

The above table shows the maximum for sale price that households are willing to pay among those who are looking for an owner-occupied dwelling. Where for both the age group and the household size groups the most are willing to pay between 200,000-300,000 for sale price. Followed by a sale price between 300,000 and 400,000 euros, then between 100,000-200,000 euros and then between 400,000-500,000 euros. When looking at the single person household they are willing to pay less on average than a multi person household. The single person households are frequently willing to pay less than 300,000 euros for a sale price. The above prices are based on 2020 house price index.

Looking at the development of house price index since 2020, the preferred range in 2024 would be between 275,200 and 412,800 euros [1] (CBS, 2025).

Rental price:

Preferred rent price	Age and household size group						
	Aged 55 to 65		Aged 65 to 75		Aged 75 and older		Total
	Single person	Multi-person	Single person	Multi-person	Single person	Multi-person	
0-432 euros	6.8%	3.4%	5.6%	1.8%	3.3%	1.4%	3.6%
432-737 euros	71.1%	56.5%	72.4%	55.9%	69.0%	58.7%	63.8%
737-986 euros	16.2%	24.5%	14.5%	25.3%	17.1%	21.5%	20.4%
986 or more Euros	5.8%	12.6%	7.5%	16.9%	10.6%	18.4%	12.2%

Figure 20: Preferred maximum rent prices of households aged 55 and older by age and household size group (n=3317) (rent limits in 2020) (Mancoulov, 2024)

The above table shows the maximum for rent price that households are willing to pay among those who are looking for a rental dwelling. Where for both the age group and the household size groups the most are willing to pay between 432-737 euros. Followed by a rent price between 737-986 euros and 986 or more euros. When looking at household size, single person household are willing to pay less rent price than multi-person households. The range between 432-737 euros is based on the 2020 'kwaliteitskortingsgrens' and 'liberalisatiegrens'. In 2024, this range is between 454-880 euros (Ministerie van Volkshuisvesting en Ruimtelijke Ordening, 2024b).

4.1.4. Preferred number of rooms

Preferred number of rooms	Age and household size group						
	Aged 55 to 65		Aged 65 to 75		Aged 75 and older		Total
	Single person	Multi-person	Single person	Multi-person	Single person	Multi-person	
1 or 2	8.5%	1.9%	10.2%	2.0%	26.6%	7.2%	6.7%
3	54.8%	33.3%	63.6%	50.3%	55.4%	56.5%	49.0%
4	23.0%	37.7%	17.0%	29.7%	12.2%	27.3%	27.5%
5	7.1%	13.2%	4.0%	8.9%	2.2%	3.6%	8.1%
6 or more	3.9%	7.8%	0.9%	3.5%	0.0%	1.5%	4.0%
No preference	2.7%	6.0%	4.4%	3.9%	3.5%	3.9%	4.7%

Figure 21: Preferred number of rooms of households aged 55 and older by age and household size group (n=3539) (Mancoulov, 2024)

Off both the age groups and the household size group, the most preferred number of rooms is 3. In the number of rooms, the living room is included. Followed by 4 rooms and then by 1 or 2 room. When looking at the household size, single person households less frequently prefer a number of rooms higher than 3 than multi-person households. When looking at the age, the higher the age, more preference for less rooms.

[1] The house price index 2024 is 137, 2020 =100

4.1.5. Living environment

The location is more important for elderly than for other target groups, such as starters or families. Elderly prefer to stay in their own neighbourhood (Duivenvoorden et al., 2023). When looking at the housing preferences of households aged 65+ based on housing type, rental or purchase, and residential environment (see figure 22), it can be concluded that there is a clear preference for apartments, both for rent and purchase, particularly in village and outside city centre areas. This data highlights the importance of aligning housing stock with the preferences of the elderly, particularly increasing the availability of apartments in outside city centre and village environments.

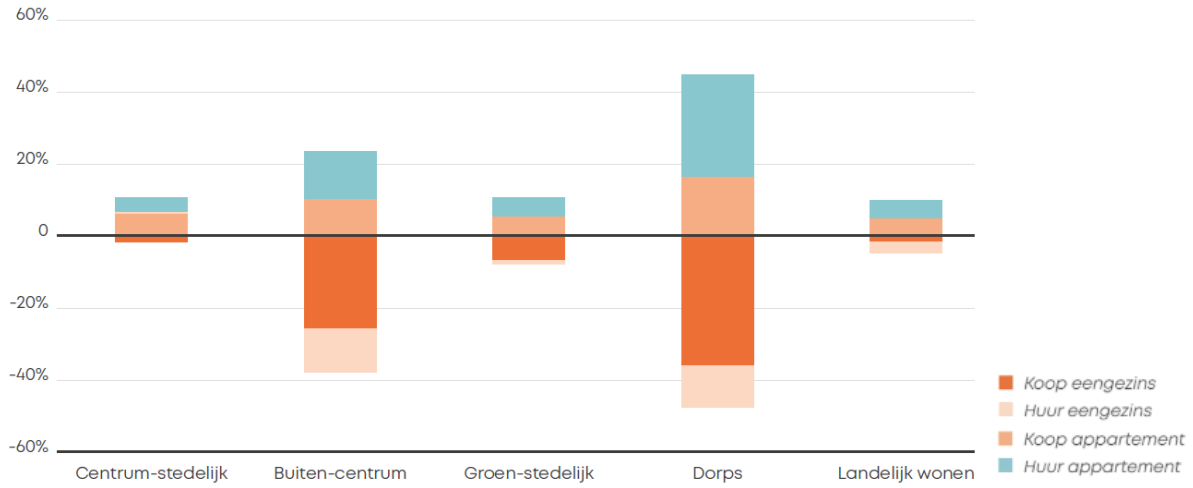

Figure 22: Housing preferences of households aged 65+ based on housing type, tenure (rental or purchase) (WoningBouwersNL, 2022).

For the living environment Petra de Jong (2021) says that elderly prefer not to live in neighbourhoods on the outskirts of a city. This preference is supported by their desire to have essential facilities, such as daily amenities, public transport and healthcare services, close by their homes.

Additionally, elderly favour living in mixed neighbourhoods with a variety of household types, including single-person households, families, and other elderly individuals. Furthermore, it is desirable for the elderly to stay in their current neighbourhood, many prefer to remain in their familiar surroundings (Bluemink et al., 2021).

For younger elderly age groups (65-74 years), neighbourhood characteristics are more significant, whereas for the oldest elderly age group (75 years and older), the features of the home itself play a more prominent role.

Proximity to facilities

According to CBS, at least two out of four essential facilities (supermarket, general practitioner, pharmacy, and public transport stop) must be located within 500 meters of the property (HEVO, 2022). Sometimes, the rule of the "rollator distance" is applied to consider a 400-meter "rollator distance" to facilities. While the elderly in this group are still vital, however as they age and their health potentially declines, their mobility radius gradually becomes smaller (Duivenvoorden et al., 2023).

4.1.6. Age-friendly homes

Furthermore, de Jong (2021) investigated the residential mobility and housing preferences of elderly in the Netherlands, focusing on their choices and needs related to age-friendly housing and living environments. The research showed that, based on the preferences expressed by elderly regarding housing characteristics, they prefer "age-friendly" homes. This is evident in their strong preference for apartments where the primary spaces (living room, kitchen, bathroom, and at least one bedroom) are located on the same floor, and homes that are either accessible by a lift or are single-level (De Jong, 2021).

4.1.7. Conclusion

Literature shows that the vital 65+ population in the Netherlands has clear housing needs and preferences at three levels: housing level, building level and location level. The theory results are from literature from preferences elderly living places and stated preferences, so the elderly who are willing to move. This part is a summary of the literature research from chapter two and four for answering the first sub question theoretically: "*What are the key housing needs and preferences (on housing unit, building and location level) of the vital 65+ population in the Netherlands?"*.

At the housing unit level, the literature shows a strong preference for age-friendly dwellings. Elderly prefer apartments where the living room, kitchen, bathroom, and at least one bedroom are located on the same floor or can be accessed via an elevator. This preference is especially strong among the oldest age group (75+) and single-person households. There is a notable shift from owner-occupied family homes to rental apartments. The strongest demand is for cheap rental apartments, while there is an oversupply of owner-occupied single-family homes.

In terms of affordability, most of the 65+ households looking to buy prefer a maximum purchase price between €200,000- €300,000 (price level 2020). Based on 2024 house price level the estimate would be now between €275,200-€412,800. For rent, the preferred range lies between €432- €737 per month. In 2024, this range is between €454-€880. Single-person households are in generally willing to pay less than multi-person households. Regarding the dwelling size, the most preferred number of rooms is three (including the living room), with a less frequently preference for more rooms among the older elderly and single-person households.

Literature emphasizes the importance of barrier-free dwellings, zero-step homes, and elevators to support independent living. Also at the building level, accessibility is seen as essential. In addition to physical accessibility, social participation is considered an important aspect of ageing-in-place. Buildings that support interaction between residents, through communal areas or organized activities, contribute positively to quality of life, especially for elderly who live alone.

At the location level, elderly attach more importance to location than younger target groups like starters or families. A strong preference exists to remain in the current neighbourhood, and elderly tend to avoid neighbourhoods on the outskirts of cities due to a lack of amenities nearby. The neighbourhood's suitability for independent living is determined by three factors: the physical factors, the functional factors and the social factors.

Apartments in village or outside-city-centre locations are particularly popular. There is a preference to have essential facilities, such as supermarkets, general practitioners, pharmacies, and public transport, close by. Ideally, at least two of these should be located within 500 meters, or within a 400-meter when already considering the "rollator distance".

Lastly, the literature emphasizes the importance of socially mixed neighbourhoods with a combination of household types, including families, singles, and other elderly. For the young-elderly (65–74), neighbourhood characteristics play a stronger role, whereas for those aged 75 and older, the features of the home become more important.

The literature explains that the vital 65+ population in the Netherlands prefers affordable and accessible appartements, with three rooms, located in a familiar environment with essential facilities nearby. The home and its environment should be age-friendly and facilitate social interaction to support independent living and ageing in place.

4.2. Transformation of real estate

Determining whether a vacant building is suitable for transformation involves assessing several key factors. While technical, functional, and financial feasibility are critical, this research focuses on aligning the building's characteristics with the preferences and needs of the elderly target group. The assessment framework will be therefore mainly focused on the needs and preferences of the elderly and not on all the technical, functional, and financial feasibility details of the 'transformation'.

Although these details will not be explored in depth, it is essential to acknowledge their relevance. Therefore, they are briefly examined in this chapter through a literature review, and during the interviews, it will be assessed whether they differ for elderly housing compared to general transformations. The focus will be on identifying specific opportunities and barriers in transforming vacant real estate into housing that aligns with the needs and preferences of the elderly.

The Dutch Building Decree states that all new constructions and extensive renovations are required to meet certain standards for being life-cycle proof to some extent. A commonly used term is a "life-cycle proof dwelling." A life-cycle proof dwelling is designed to accommodate specific features that may be needed in later stages of life, such as walk-in showers, lowered thresholds, wider doorways, or stairlifts. It involves a combination of accessibility (toegankelijkheid), safety, accessibility (bereikbaarheid) and privacy. However, there is no mandatory set of requirements. (Duivenvoorden et al., 2023)

4.2.1. Barriers and opportunities of transformation in general

SQ2: What are the main barriers and opportunities to repurposing vacant real estate for elderly housing?

The information for the literature concerns transformations in general to housing, it could be that some of these barriers or opportunities may be more prominent or restrictive when transforming vacant buildings into housing specifically for the elderly. This will be further explored in the empirical part of this research.

Barriers

A vacant property is not necessarily suitable for transformation. The following general factors should be examined to assess feasibility (Remøy et al., 2024):

- Surroundings of the building: Accessibility, proximity to amenities, parking options, and environmental factors such as safety, noise, or odors all impact the residential quality of the area.
- Structure, grids, and heights: Adapting structural elements like floor heights and grid dimensions can be extremely costly.
- Existing staircases: These must comply with the Dutch Building Decree and modifying them is often difficult and expensive.
- Sanitation facilities: Adding or upgrading plumbing systems to meet residential needs is a significant financial burden.
- Insulation, heating, and ventilation: Adequate insulation (both external and between units), heating systems that can be regulated individually, and proper ventilation to ensure sufficient fresh air are critical for residential use.
- Maintenance condition and potential historical value: The building's condition is crucial for determining renovation costs. Poor maintenance can make transformation financially unattractive. Additionally, if the property has historical or monumental status, changes may be restricted, complicating the transformation process (Van der Voordt, 2007).

Opportunities

According to experts on the likelihood of a successful transformation into residential use depends primarily on three factors (Remøy et al., 2024).

At first the vacancy duration, the longer a property remains vacant, the more willing the current owner may be to sell or transform it themselves, making negotiations and planning easier.

The second factor is the reason of vacancy which could be on different levels, market, location, and/or building level. With a structural vacancy in a tight housing

market as it is in the Netherlands today, where demand exceeds supply, vacant buildings can create strong potential for transformation. This depends on the suitability of the location for residential use and the adaptability of the building into an attractive housing option for specific target groups.

Lastly it depends on the municipal policy, if the building does not have a residential zoning designation, cooperation from the municipality is necessary to adjust the zoning. Transformation is more feasible if the property is located in a municipal priority area for housing, as it aligns with local government interest.

4.2.2. Conclusion

The literature shows that repurposing vacant real estate for residential use in general could face several barriers. These include physical and technical challenges such as structural limitations, adding or outdated plumbing, insulation, and ventilation systems, as well as compliance with the Dutch Building Decree, maintenance condition and the possible presence of monumental status (Remøy et al., 2024; Van der Voordt, 2007). In addition, the location quality, in terms of accessibility, proximity to amenities and environmental factors that could impact the quality of living, is a key factor in determining suitability for residential purposes (Remøy et al., 2024).

At the same time, the likelihood of a successful transformation into housing depends on three factors, seen as changes. The longer the vacancy duration, the more likely owners are willing to sell or redevelop the property. Moreover, in the current tight housing market, structurally vacant buildings offer strong potential. This depends on if the building is in suitable living environment and can be adapted to meet the needs of specific target groups. The cooperation with the municipality and alignment with housing priority areas further increase the feasibility of transformation (Remøy et al., 2024).

While this information concerns transformations in general, some of these barriers and opportunities may be more pronounced or restrictive when repurposing vacant buildings specifically into housing for the elderly, particularly to meet their specific needs and preferences. This will be further explored in the empirical part of this research.

Chapter 5 Results: Empirical research

5. Results: Empirical research

In this chapter, the key findings from the empirical research are presented. Two case studies were selected for the empirical research. These cases were analysed using both collected documents and conducted interviews, as outlined in section 3.3.

The interview transcripts and collected documents were analysed thematically, based on a set of themes. These themes, derived from both the research design and literature findings, are presented in appendix D. In addition to analysing each case per theme, a cross-case analysis is done to identify similarities and differences between and within the two cases.

Furthermore, an overview was created indicating which interviewee discussed which aspects. This can also be found in appendix G. This overview helped determine the key housing needs and preferences, as well as the main opportunities and barriers. It also supported the thematic analysis and the cross-case analysis.

This chapter begins with a more detailed description of each case compared to section 3.3, followed by an in-depth analysis from empirical research. It concludes with a summary of the preferences and needs, the identified opportunities and barriers, and potential solutions for barriers. Finally, the two cases are compared with each other and the empirical findings with the theoretical findings.

5.1. Case description

5.1.1. De Getijden

Figure 23: De Getijden Nijmegen (Noviomagnus, n.d.)

De Getijden is located at Veldstraat 2-4 in the Sint Anna neighbourhood, on the southern edge of Nijmegen. The location combines proximity to urban amenities with the calm of surrounding natural areas. Its position ensures that shops, healthcare facilities, nature reserves, public transport, sports facilities, and cultural venues are all nearby.

As mentioned in chapter 3.3.1. the home size diverse from 60 m^2 to 116 m^2 with an average home size of 100 m^2. The homes are based on the former classroom layout of the building, with the original corridor incorporated into the residence. The homes on the ground floor are accessible from outside and on the first-floor trough a gallery outside.

Each household has a parking space, so in total there are 17 parking spaces. In addition, each household has its own storage room outside and everyone has their own balcony or terrace. The largest part of the garden is communal (Stichting de Getijden, 2019).

Next to the eleven apartments, there is a communal space located in the former teacher's lounge of the old school building (Stichting de Getijden, 2019). This space serves multiple purposes, including for meetings, joint activities, and private celebrations such as family gatherings. It also functions as a guest accommodation, as it has a kitchen, bathroom, and bedroom. At one point, a Ukrainian family stayed there for a year (Interviewee A4, 2025). Adjacent to the common room is a shared terrace, which is also used for both communal and private occasions. The residents sometimes eat together there or play pétanque together (Interviewee A2, 2025). Furthermore, in the garden there are several common seating areas, there is a common garden shed and there is a greenhouse where common vegetables are grown (Interviewee A1, 2025).

The project was guided by several key ambitions established by the future residents. A primary objective was to preserve the former school building. Furthermore, the next table shows the residents ambitions (Stichting de Getijden, 2019):

Age-friendly home and living environment	Allowing residents to live independently for as long as possible. Accessibility is a key feature to remain active, physical and social, for as long as possible (Stichting de Getijden, 2019).
Social interaction and privacy	Within the de Getijden the residents have the motto "What good neighbours do for each other", it is a social concept where people know each other, organize activities together, and offer mutual support without obligations. The residents want to find a balance between personal privacy and opportunities for social engagement (Stichting de Getijden, 2019).
Sustainability	It was an ambition for the residents to be sustainable, be climate adaptive and reduce the energy costs.
Financial Feasibility	The residents wanted to have affordable houses. Thirteen of the seventeen housing units are delivered within the Nationale Hypotheek Garantie (NHG) standards, including the communal spaces and the surrounding (Stichting de Getijden, 2019). The NHG price in 2016 was €245.000 (Stichting Waarborgfonds Eigen Woningen, 2016). The home size diverse from 60m2 to 116m2 with an average home size of 100 m^2, with a total cost of €2,300 per square meter on 16 March 2016 (Stichting de Getijden, 2019; Interviewee A5, 2025).

From the beginning of the project planning several working groups were active. The working groups were for the energy saving plan, the design of the garden/site,

accessibility, activities, communication, sustainability and a group of residents participated in the construction site meetings. The working groups have declined over the years. Interviewee A3 explains that in the beginning, there was still a lot of enthusiasm. As a result, they decided to put an end to the working groups and introduced a task list instead. Residents can now sign up for tasks voluntarily, nothing is mandatory, but if you do sign up, you're expected to follow through. The list is still used today (Interviewee A5, 2025).

Furthermore, work weekends are organized to maintain the garden and carry out small repairs. A list is made in advance indicating who wants to do what, this could be from gardening tasks to maintenance work like installing new light fixtures (Interviewee A2). Originally, there were three work weekends per year, but this has increased to five due to the growing workload and the fact that more residents spend longer periods away, often travelling with campers (Interviewee A2). Also, several residents are no longer physically able to contribute. Interviewee A5 expressed concern for the future, saying, *"More and more people are sick, weak, or travelling a lot. We're slowly trying to figure out how to maintain everything in the next ten years."*

The residents are already thinking about their future in de Getijden. What they then want to outsource and how are they going to do that. They are exploring how the site can be made easier to maintain, how tasks can remain distributed, and whether a professional gardener should be brought in once or twice a year (Interviewee A2, 2025). Furthermore, when thinking about future care, several residents have suggested practical solutions to support aging in place. One idea is to hire a caregiver who could live in the guest apartment, providing an on-site support as the care needs increases. In addition, the shared space could be a place where residents can stay when they are ill. Another suggestion is to assign a single care provider for all households in the complex making it easier to coordinate care (Interviewee A4 & A5, 2025).

5.1.2. De Benring

Figure 24: De Benring Voorst (Voorsternieuws, 2015)

When the nursing home was under-occupied, Habion wanted to explore whether they should sell the building, preserve and transform it, or demolish and rebuild it. Interviewee B9 explains that Habion asked the neighbourhood what they wanted to do with the building, but initially, there was no response. When a “For Sale” sign suddenly appeared in front of De Benring, residents and neighbours can into action to preserve the building. The community expressed that it was important to prevent depopulation in rural areas and to allow elderly people to continue living in their own neighbourhood (Interviewee B9, 2025).

As described in Chapter 3.3, Habion discussed with residents and the local community about what the new Benring should look like. Habion developed a 15-year plan, considering whether to transform the building or to demolish and rebuild. However, the business case for new construction did not work out, as the plan was to preserve De Benring for another 15 years, leading to the choice for transformation (Interviewee B14, 2025).

Since this was Habion’s first transformation project transforming a nursing home into independent senior housing, the project was designated as an “experiment.” This meant that additional funding was available to research residents' needs and preferences and how these could be realized within the existing nursing home structure. As a result, there was more freedom in the preliminary design phase and during implementation in case anything went wrong, whether foreseen or unforeseen (Interviewee B14, 2025).

Habion wanted to create a modern housing facility, where people could live with their own front door. Previously, in the nursing home, residents had an all-in-one living-sleeping room and it was not an independent living unit. A large part of the units were turned into two-room apartments, by connecting two rooms through a door in the wall. One room became a bedroom and bathroom, and the other room became a hallway with storage space and an open living room with kitchen. The rooms were transformed from non-independent rooms into independent two-room apartments (interviewee B9, 2025).

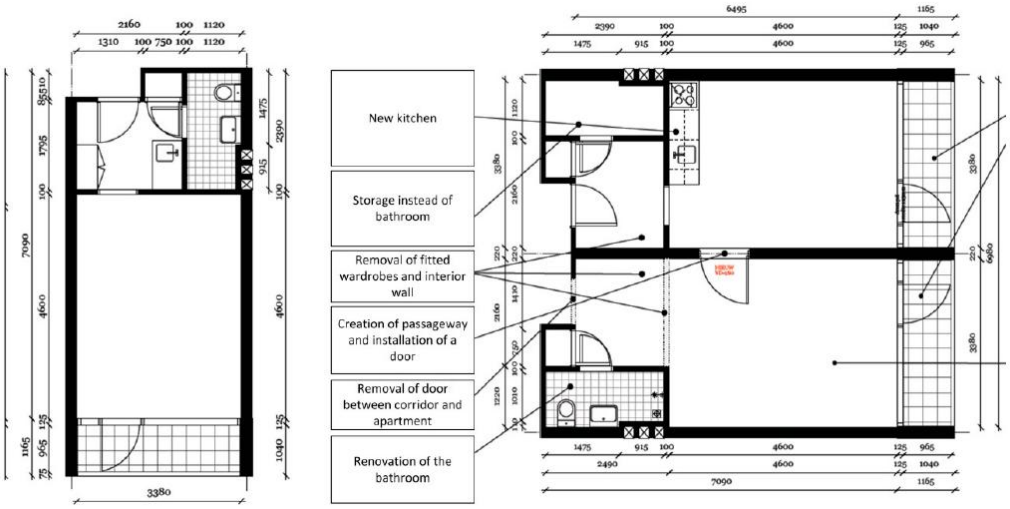

Figure 25: One room floor plan (left) before the transformation to two-room apartment (right) (Van Hoof & Boerenfijn, 2018).

The key ambitions project from the initiatives trough rØring methodology was a new form of residential environment, one that supports aging in place, privacy, affordability and social interaction (Van Hoof & Boerenfijn, 2018; Woonzorgcoöperatie Voorst, n.d.).

Aging in place	Elderly residents can continue living independently in their own familiar environment. Elderly, when needed, can independently arrange care for at home.
Privacy	Residents have their own front door and separate living spaces, ensuring independence.
Affordability	Housing units need to be financially accessible for seniors with lower incomes. Therefore, some of the appartement are kept one-room apartments, this for the residents who cannot afford two-rooms. The two-room apartments are within the maximum rent for social housing as well.
Social interaction	Creating communal spaces and activities to encourage residents and neighbours to connect with and support each other.

At De Benring, residents have the opportunity to participate in joint activities several times a week and to meet each other in the shared communal spaces. The activities program is put together based on the needs and preferences of the residents. Approximately once a year, a survey is distributed to assess the types of activities residents would like to see offered (Interviewee B10, 2025). The activities are organized either by the residents or by volunteers.

The weekly standard activities are the regular coffee gatherings, which are held multiple times per week, card game groups on Friday and communal cooking on Monday evenings. During these cooking sessions, volunteers prepare meals for the elderly residents, while the residents contribute by performing preparatory tasks such as chopping vegetables and washing dishes. Due to the high popularity of the Monday evening cooking event, it was necessary to divide participants into two rotating groups that alternate weekly (Interviewee B10, 2025).

Other regularly scheduled activities include film afternoons, bingo sessions, musical events, physical exercise classes, karaoke, bridge games, and even pampering days for the women (Interviewee B12, 2025). Furthermore, the building and all these activities are also open to the neighbourhood.

5.2. Preferences and needs

This section presents the empirical findings related to the key housing needs and preferences of the vital 65+ population, based on semi-structured interviews with the residents and experts from the two transformations to elderly housing casus: De Getijden (Case A) and De Benring (Case B). Although the residents in both cases share many needs and preferences, some differences emerge between the casus. This section explores the empirical findings for answering sub-question one: *What are the key housing needs and preferences (on housing unit, building and location level) of the vital 65+ population in the Netherlands?*

Housing Unit Level

Accessibility and layout:

The most common theme across both cases is the preference for life-cycle proof dwelling, accessible housing units. In Case A, several residents emphasized the importance of active anticipating for future physical limitations in the dwelling design.

"'Most important feature is that it should just be at one level, good wide doors, sliding doors. You have to be able to pass everywhere with your wheelchair, in your shower, in your bedroom, everywhere, in your toilet. Well, those are the main things.' " (Interviewee A5, 2025).

This was confirmed by experts who indicated that wide doors, barrier-free and adaptable floor plans are essential to continue living independently. At case A some have a two-storey dwelling however for every apartment its was originally designed by the Architect that all the main function could be on the ground floor.

"It did have a basic layout, with a bedroom still downstairs, for life-cycle proofing, so to speak. But yes, we were like, yes, why downstairs already? I mean, we can still do quite well going upstairs." (Interviewee A3, 2025).

In Case B, the design was already accessible due to the previous care function, residents mentioned fewer adaptations. The only thing named by residents is there is still a high threshold to the balcony.

Affordability:

Regarding affordability, Residents in case A emphasised controlling the purchase price within the NHG limit by strictly adhering to this during the design and construction phase. In contrast, Case B is a rental complex with a fixed rental price with a social rent price what makes it for the residents affordable. The only problem according to a resident and experts is that there is a shared service costs for the energy use and that is divided between al the apartments considering the number of square meters.

Outdoorspace:

Concerning the amenities, the residents in Case A valued to have a private outdoor space next to a large common outdoor space. For the common outdoor space, the residents

share responsibility to maintain the garden. In case B the residents prefer an easy-to-maintain or shared green space. In this case every resident has its own balcony. The location coordinator mentioned that the balconies are small but also mentioned there where never complaints about it. However, interviewee B11 does mention that the size of the balcony mattered by making the moving decision:

"We are lucky then that we have such a big balcony because on those other flats that is terrible. Then you can't even put a chair like that. Then you have to put it like that and then you just sit and don't move. That's terrible, the balconies." (interviewee B11, 2025)

Additionally, the lack of storage space in case B was mentioned as a drawback by one of the residents (Interviewee B11, 2025). In case A all the residents have its own storage space, however this preference is not mentioned directly during the interviews.

Ambiance:

The ambiance of the dwelling also played a role. Case A residents appreciated the character of the transformed school building:

"The beams are still visible, that's what I love most about the home" (Interviewee A3, 2025).

In Case B, residents mentioned the daylight they have and views on the park behind or on the village.

Size:

Preferences regarding the housing size are context dependent. Interviewee A4 (2025) mentioned that in case A, a space of 100 m2 was seen as ideal, combining spaciousness and affordability. In Case B the apartments are smaller, around 46–48 m2, some residents find this size large enough, however one resident finds this size a bit too small. in the next quotation of an expert:

"The size of the flats that's also kind of tricky. How big should you have it? Yes, you name it. The one that are with two and they are 60 or 70 years old. And they still want 100 square metres. And the others say well I come from a house of 150 square metres. I now have enough with 70, 80 square metres. And I always find that a tricky thing. Where is the most yes the most common size in that?." (Interviewee A6, 2025).

What was similar is that some residents mentioned they wanted to live in a smaller space, and experts noted that elderly often want to live in a smaller home than before.

Building Level

Accessibility:

At the building level, accessibility was mentioned as a preference in both projects. In Case A, accessibility had to be incorporated into the building by making it wheelchair accessible and installing an elevator. One resident addresses the importance of an elevator: *"We have an elevator here and if it's broken, there are people who really need the*

elevator to get upstairs" (Interviewee A3, 2025). Experts reinforced that such elements are crucial to enable independent living.

Case B was already accessible due to its previous care facility, there were already several elevators, no thresholds and its was already suitable for rollator and wheelchair users. Coördinator B10 confirmed that these elements are well-functioning and not questioned by residents.

In addition to building accessibility, the surrounding site also needs to be accessible for residents in both cases. In Case B, the site was already accessible because of its former care function and is currently maintained by the landlord. In Case A, site accessibility was a key preference. Expert A2 emphasized during the interview that the site needed to be physically accessible, socially accessible, and easy to maintain.

While accessibility is essential, expert B9 addresses the importance of encouraging movement and maintaining physical skills:

"However, also where they can continue to train their own skills. So, I think stairs and with good handrails are also kind of important. That those are also just there. That you can just climb stairs from time to time. You don't have to remove all the stairs or anything. But yes, if you walk with a walker, of course you must be able to walk around"(Interviewee B9, 2025).

Social interaction:

Another key preference for the residents from both cases is the social interaction and having spaces for social interaction. At case A, there are common spaces like a common (guest) room, the hallway and sitting areas in the garden offer opportunities to meet each other. Furthermore, several activities are organized during the year, where residents can voluntarily participate. Resident A4 addresses the need of more places for social interaction in the garden.

In contrast, Case B is designed to actively encourage daily interaction. Residents can voluntary and weekly basis eat, drink coffee, and do activities together in shared spaces. As Coördinator B10 explained, this design reduces loneliness and creates community.

Social safety:

Also, the social safety is important for the residents of both cases. Several residents from case A highlighted their motto "What good neighbours do for each other." For them meaning helping each other when needed. At case B, there is a more active approach on taking care of each other:

"If someone has missed coffee a few times. Then someone knocks on the door. That's taking care of each other. Very important." (Interviewee B12, 2025)

Resident B11 also highlighted the social safety net that exists when someone passes away:

"If one of them falls away, then you are alone, but not completely alone. You've come together here; you've settled in together." (Interviewee B11, 2025)'

Privacy:

Furthermore, privacy is also a desired in both cases. Residents appreciate that participation in activities is not mandatory and value the privacy of their own homes, allowing for a balance between private and communal.

Characteristics building:

Lastly, a preference from the residents of case A is to live in an old characteristic building. This is also confirmed by experts, who note that elderly often enjoy moving into older buildings:

"Yes, here the elderly people often enjoy living in an old building. As long as it meets the requirements — in terms of accessibility, an elevator, you name it, those kinds of things. But they can still appreciate the value of an old building, so to speak. They also like that, yes, okay, my room is a bit less nicely shaped and there's a corner in it. But I do like that I have those big windows and that the ceiling is 3.5 meters high. They often really appreciate that." (Interviewee A6, 2025)

In Case B, expert B10 points out that the building still has the appearance of a care facility, which discourages people from just walking in. Additionally, resident B11 mentioned the soberness of the main entrance.

Location Level:

Proximity to amenities

Case A is located in an urban area where many facilities are nearby, while Case B is situated in a rural village with one supermarket, one general practitioner, a bus stop, and two takeaway restaurants. For all other amenities, residents need to travel to the nearest city, Zutphen, which is six kilometers away. All residents from case B found it important that the supermarket is still located in the village and within walking distance of their homes. Resident B11 emphasizes that it is a shame that amenities such as the butcher and baker are no longer there. In Case B, the presence of a nearby elderly day care center was noted, offering additional support options and reinforcing the suitability of the location for aging in place. Despite this, a certain liveliness is lacking, both residents and the coordinator express a need for a coffee spot or hospitality venue where people can meet informally outside the complex. Resident B13 explains it as follows:"

"Somewhere you can just walk in and grab a beer, how nice would that be." (Interviewee B13, 2025)

In Case A, residents appreciate that all primary amenities are so close by, which was also one of their preferences. Additionally, they value that secondary amenities are within walking or cycling distance, or easily accessible by public transport. Experts agreed that

for elderly, amenities should be within walking distance. Residents also appreciated that the setting is green and quiet, yet close to the city.

"I don't need to live above a café, this is of course ideal. You have a bit of greenery around you, peace and quiet, but you also have the city within reach, with shops and various amenities, which is very convenient when you're older, having some amenities nearby." (Interviewee A4, 2025)

Social environment and familiarity:

A social living environment is emphasized as important by several residents and experts. Expert A1 specifically highlights this in relation to increasing loneliness among elderly. In Case A, the neighbourhood was invited several times to events, such as the New Year's celebration and the opening. In Case B, the building is also accessible to residents from the surrounding neighbourhood, which is experienced positively by the residents.

"That's what I really like about this. It's not just for the residents; they also try to involve people from outside. For example, there are senior housing units across the street, and they try to include those people too. And it actually works. So, people do come to the film afternoons and other activities, just from outside they come here. They walk in and out, so it's not a closed group. They really open it up to the village, and that's very nice. You get to talk to different people. You're not always sitting with the same group." (Interviewee B11, 2025)

Furthermore, in both cases, it becomes clear that elderly appreciate staying in the same environment. This is also confirmed by expert B9, who noted that because the village is small, people want to continue living there.

Lastly, the accessibility of the building is not mentioned very often. However, resident A5 highlights its importance in the following quote:

"We were even offered a beautiful historic building by the municipality. Right in the city center, next to the Stevenskerk. But yeah, you couldn't actually live there." Why not? "You can't even get there by car. It also barely had a backside." "And accessibility is very important." (Interviewee A5, 2025)

The table below provides an overview of the barriers and opportunities discussed above in the cross-case analysis of Case A and Case B.

Level & theme	Preferences & needs Case A	Preferences & needs Case B	Comparison A vs B
Housing unit – Accessibility & Layout	To have a life-cycle proof design with primary functions on ground floor, that is accessible	It was already accessible due to former care function, balcony threshold is an issue	Both value accessibility; Case A required adaptations; Case B already accessible
Housing unit – Affordability	Affordable purchase price within NHG limit	Fixed rent, problem is the shared energy costs	Affordability is crucial in both. Case A (owner-occupied), Case B (rental)
Housing unit – Outdoor space & storage	Own private outdoor space and large communal garden, shared responsibility to maintain the garden. Residents have private storage room (not mentioned)	Small balconies for all residents, some found it to small. Residents wanted an easy-to-maintain or shared green space. Lack of private storage space.	Both want an outdoor space and/or their own private outdoor space. Case B private storage is missing while in case A it is not mentioned, however everyone has one.

Housing Unit – Size & ambiance	Spacious apartment (around 100 m^2) with historic charm (e.g. beams)	Compact apartments (46–48 m^2), daylight and views appreciated, some find size too small	Case A more spacious and characterful; Case B more compact, some find it too small.
Building – Accessibility	Buildings and surroundings are wheelchair accessible, elevator installed	Multiple elevators, threshold-free, accessible outdoor area maintained by landlord	High accessibility preference in both.
Building – Social interaction & safety	Voluntary social activities, communal spaces, informal care among neighbours	Voluntary social activities, shared spaces for daily activities, promotes routine social contact	Both cases they value voluntary social interaction; Case B more structurally embedded
Building – Privacy	Privacy valuated	Private units respected	Privacy valued in both
Building - Character	Appreciation & preference for old building aesthetics	To sober appearance of entrance and care facility feel noted or not mentioned	At case A building aesthetics were appreciated and at case B it was negatively mentioned or not mentioned
Location – Proximity to amenities	All essential amenities nearby and secondary amenities within walking or cycling distance.	Residents value the supermarket on walking distance, other amenities are missed.	Both value amenities nearby; Urban (A) vs rural (B); A has better access to amenities
Location – Social environment & familiarity	Stayed within the same city, invited neighborhood several times	Stay within the village and integration with neighbourhood through open activities	Familiarity important is important; A sometimes organize events for the neighbourhood, B neighbourhood open to participate with activities

Table 1: Overview cross-case analysis (Own work, 2025)

5.2.1. Conclusion

The housing needs and preferences of vital 65+ elderly reflect a strong desire for autonomy, comfort, and meaningful social interaction across housing unit, building, and location levels. Although there are contextual differences between the two cases (De Getijden and De Benring), clear themes emerge across both resident and expert perspectives. This conclusion summarises the empirical findings for the first sub-question: *"What are the key housing needs and preferences (on housing unit, building and location level) of the vital 65+ population in the Netherlands?"*

At the housing unit level, both cases highlight the importance of life-cycle proof and accessible homes. Residents and experts consistently refer to barrier-free layouts, wide doors, and adaptable living spaces. While residents describe these elements in terms of daily functionality, experts support them as essential design conditions for aging in place. While affordability is key in both cases, it manifests differently, through controlled purchase prices in Case A and fixed rental price at Case B with concerns over shared service cost. Preferences regarding private outdoor space, storage, and interior ambiance vary, yet both cases underline the importance of a comfortable, natural light with a sense of character. Desired housing size is context-dependent, with preferences ranging from compact units to larger spaces, based on personal housing history and affordability.

On the building level, accessibility again plays a central role. Elevators, threshold-free transitions, and accessible outdoor spaces are considered essential by the residents of both cases. Experts confirmed their importance, while also noting that some physical challenges (like stairs with handrails) can positively contribute to maintaining independence. This was not mentioned by residents, who primarily emphasized ease of use and reliability.

Social interaction and safety were clearly appreciated in both settings, with communal areas and organized activities supporting social interaction and counter loneliness. Social safety, through neighbourly care and informal checks, is a recurring theme in both cases. Residents in both cases emphasized voluntary participation and valued privacy. When looking at the aesthetic preferences also arise, with Case A residents valued the character of the old school, while in Case B some residents and the expert criticized the building's sober and impersonal look of the former care function.

At the location level, proximity to amenities is vital. Residents of Case A benefited from an urban location with facilities within walking distance. In rural Case B, residents appreciated the nearby supermarket but missed other amenities and expressed a desire for more local meeting places. Experts also stressed the importance of accessibility to basic services, however the local meeting places were not mentioned by the expert. A socially vibrant and inclusive environment is appreciated in both cases, with positive experiences of community outreach and interaction with surrounding neighbourhoods. Staying in one's familiar environment is also valued, supporting the idea of aging in place.

Overall, the findings highlight the importance of designing housing for elderly that balances functional accessibility, affordability, opportunities for social connection, personal autonomy, proximity to familiar amenities, and staying within familiar environment, while considering both individual preferences. While perspectives of residents and experts largely align, small differences emerge in emphasis, residents express needs more experientially and emotionally, drawing from their personal context and values, whereas experts articulate them in general design principles and policy terms. These insights underline the importance of designing elderly housing that not only meets functional requirements but also reflects the personal and social dimensions that matter most to its residents.

5.2.2. Comparison with literature

To incorporate the findings from the empirical research into the framework designed from the theory, it is important to compare the empirical research with the theory findings to see where they match and where they may differ, this is done in the next table. Sometimes more background information is given about the cases, due to not explicitly mentioning of the interviewees.

Level & Theme	Literature insights preferences and needs	Case comparison vs literature
Housing unit – Accessibility & layout	Elderly prefer apartments with all functions on one level or with elevator/stair lift (De Jong, 2021; PBL, 2019a)	Both cases align with literature. Case A is more focused on anticipative design and B on existing accessibility.
Housing unit – Affordability	Preference for affordable housing, especially cheap rental apartments (WoningBouwersNL, 2022; Mancoulov, 2024)	Confirmed: affordability key for acceptance. Implementation varies with tenure type
Housing unit – Outdoor space & storage	Desire for private outdoor space and storage; compact, easy-maintenance preferred (De Jong, 2021; Bluemink et al., 2021)	Case A more aligned with preference for private outdoor space. Case B shows limitations
Housing unit – Size & ambiance	Preferred size is ~3 rooms; older and single-person households prefer smaller units (Mancoulov, 2024) Ambiance is not mentioned in literature.	Interviewees, case A have 2 or 3 rooms with a shared guest room and are satisfied. At case B the interviewed elderly were older and lived smaller in 2 rooms, where some found it too small. Theory and empirical are quite similar. The ambiance case A historic charm and in case B daylight and views are appreciated
Building – Accessibility	Accessibility is key for ageing in place; barrier-free and zero-step housing preferred (Ministerie van BZK, 2022a)	Both confirm the need for accessibility.
Building – Social interaction & safety	Social participation is important; communal areas and activities help reduce loneliness (Bigonnesse & Chaudhury, 2021)	Both support literature on social needs; Case B shows stronger embedded with weekly activities.
Building – Privacy & character	Privacy and autonomy highly valued; aesthetic quality appreciated but secondary (De Jong, 2021)	Both reflect need for privacy; Case A matches desire for unique living, B more modest
Location – Proximity to amenities	Essential amenities within 400–500m preferred, accessibility declines with mobility (Duivenvoorden et al., 2023; HEVO, 2022)	Literature supports the importance of proximity; Both cases highlight the importance of amenities nearby. Case A more fully meets this preference
Location – Social environment & familiarity	Elderly wish to stay in familiar surroundings and mixed neighbourhoods (Bluemink et al., 2021)	Both confirm the wish to stay in a familiar area, about the mixed neighbourhoods nothing is mentioned. The cases both value social interaction with neighbourhood, in case B the building is open for the neighbourhood.

Table 2: Case comparison with the literature (Own work, 2025)

5.3. Barriers and Opportunities

This section presents the empirical findings related to main barriers and opportunities to transforming vacant real estate to elderly living places that is aligned with their preferences and needs, based on semi-structured interviews with the experts and residents from the two transformations to elderly housing casus: De Getijden (Case A) and De Benring (Case B). This part explores the empirical findings for answering the second question: *What are the main barriers and opportunities to repurposing vacant real estate for elderly housing?*

5.3.1. Barriers

Housing Unit Level:

Accessibility and layout:

To make the home accessible is one of the main barriers during the transformation. Old buildings were not always designed with single level living in mind. The presence of height differences, stairs, and varying floor levels makes it complex to create wheelchair-accessible homes. However, with significant interventions, the homes in Case A were made accessible, and all primary facilities could be placed on a single floor. Only in the two-story apartments is there a structural beam on the upper floor that residents need to duck under when moving from one side to the other, explains resident A3.

In Case B, the homes were already suitable for single level living due to the building's former use as a care facility, but several modifications still needed to be made. Expert B9 reports that the doorframes had to be widened, which turned out to be costly. However, at case B there are still high threshold to the balcony which makes it inaccessible for some of the residents.

"That threshold to the balcony is way too high. So, something needs to be done about that. If you have a walker." (Interviewee B11, 2025)

In Case B, the reported downside includes a lack of variety in housing types and limitations in the internal layout of the homes. The proportions of the bedroom and bathroom are too large compared to the living room and kitchen.

"Well, they did it in a makeshift way. But it's not the most practical solution. They turned two apartments into one home. But yes, if it had been newly built, you could have arranged it much more efficiently." (Interviewee B11, 2025)

Furthermore, almost all the apartments only receive daylight from one side, as explained by Expert B9. Expert B10 also mentions that the balconies are all the same size due to the retention of the old structure, with only the balconies in the corners being larger. The residents often find the balconies to be small.

Expert A6 also provides a general example of the limitations of reconfiguring a classroom, within the existing structure of the school building:

"Furthermore, I can imagine that if you had a classroom, some might prefer to sleep at the back, while others might prefer the front, for the noise, for example. Those kinds of things play a role. You are bound by the existing building." (Interviewee A6, 2025)

Comfort and technical quality:

A commonly mentioned obstacle at the housing level is the technical challenge of adapting old buildings to modern comfort standards. In case B, both residents and an expert, who received complaints during the operational phase, highlight that a key obstacle at the housing level is the technical challenge of adapting the old building to

meet modern comfort standards. Complaints concern drafts, noise and a heating system that does not function properly.

“What we mostly heard during the operational phase was that there were still some complaints about cold. The old radiators remained in place, and we couldn’t install the ventilation supply in the window glass because it already had double glazing. So, we had to make an opening in the balcony panel. There’s now a vent that can be opened and closed. It’s partially warmed by the radiator behind it, but people still experience some drafts and cold complaints. So, the intended level of comfort wasn’t fully achieved.” (Interviewee B14,2025)

“It's an incredibly noisy building. It's a concrete structure, so if your neighbour has the TV on really loud, you can definitely hear it. And if your upstairs neighbour is moving a chair around, you hear that too." (Interviewee B10, 2025)

In addition, in case A, there was a noise disturbance complain between two units. However, tests have been conducted, and the noise levels comply with building regulations. However, on adapting the old buildings to modern comforts standards, expert A6 explained that is possible to have the comfort of a new build in an old building.

“We can confidently say that we place people in an old building with high ceilings, beautiful window frames, and whatever else. And they have the comfort of a new build." "The comfort is simply there. It’s just good. That’s not a problem." (Interviewee A6, 2025)

Building Level:

Affordability:

One of the most common obstacles is securing sufficient financing for the project. In both cases, there was a budget ceiling within which everything had to be done. To make the rent and purchase price affordable for the elderly. Financial constraints can lead to adjustments in the initial ambitions in order to make the project feasible. Interviewee A5 explains that costs can be high when transforming due to hiring skilled workers, unforeseen expenses, and the need for proper guidance during construction.

"Yes, the biggest challenge with existing real estate is always the unforeseen factor. Here too, we encountered structural elements that only became visible once demolition started. So those are all surprises you really need to budget for under unforeseen costs. And yes, that budget is always too small." (Interviewee A1, 2025)

A major cost item in both cases was the removal of asbestos. In older buildings, there is a high chance of encountering asbestos. However, in Case A, this had no financial impact because an agreement had been made with the municipality, previous owner of het building, that it would cover the costs if asbestos was found in the building.

Furthermore, experts indicate that in the case of very extensive transformations, demolition and new construction can be a cheaper option.

“I do think that if a lot has to be done during the transformation, then new construction would be cheaper.” (Interviewee A6, 2025)

"Back then, we actually wanted, in the context of sustainability, to demolish as little as possible and transform as much as possible. But now we've realized that if you want to do a proper transformation, you're basically at demolition level anyway." (Interviewee B9, 2025)

Expert A6 also mentions that the purchase price can sometimes be the bottleneck, and that it can often be the biggest obstacle.

Functional:

For the layout of the apartment in the building at case A, the decision was made to combine the wide hallways of the school building with classrooms to create larger apartments. As a result, they created a corridor access system with entrances at the back of the building. However, the apartments downstairs can't be accessed through the main entrance.

"What's not convenient is that you can't walk straight through the orange door, which is the main entrance, to get here. If you have mail or visitors, they have to walk around here. Outside, they have to walk around the block houses." "Because you can't go through that door there, as you'd need a key. It's logical, but still. So, they have to walk all the way around like this, and then here's the front door. So, the front door is actually in a bit of an odd location, in my opinion." (Interviewee A4, 2025)

Expert A6 also points out the complexity of creating 12 different apartments within the building, whereas in new construction everything can be made the same. However, this does make each apartment unique. The size of the elderly apartment that can be made is influenced by the building.

""What is a common size? Yes, seventy, eighty square meters, I think. But that's often not achievable in an existing complex. Because it's often, as you've seen, they are very diverse." (interviewee A6, 2025)

In Case B, some apartments remained vacant because nothing could be done with them in terms of the building's layout.

"For example, with one wing having an even number of apartments, 16 units, it's very easy to make 8 apartments, each with 2 rooms. But if you had 15 apartments, one would be left over, and that last one was positioned somewhere in between. Because it wasn't easy to fit it with plumbing and such, it just didn't work. I think there were 2 or 3 small units in there that we really couldn't do anything with. You couldn't rent them out as apartments; they were too small for that." (Interviewee B14, 2025)

Also, some facilities rooms became vacant and could not be transformed into apartments. In new construction, it is now taken into account that the facility spaces are integrated within the framework of the apartments, explains expert B14.

Expert B14 makes a remark on how important it is that housing can be made in the structure of the building:

“You really have to look at the flexibility, the functionality of your existing building, to achieve your goals with as little investment as possible. And if the floor plan isn’t suitable, or the walking distances are too long, then it’s simply not feasible.” (Interviewee B14, 2025)

Facility parking:

In Case B, several comments were made about the lack of sufficient parking spaces on the site. For elderly residents, it is important that they can park close by, which means either on the site itself or directly adjacent to it.

"If they do have one, they need to be able to park it somewhere. They can't be expected to walk another 300 meters just because they can't park near their home. So, buildings that have some space for that, those that are more spaciously designed, with maybe a backyard or something similar, are naturally the most suitable.” (Interviewee A6, 2025)

Technical installations:

In both cases, it was noted that integrating installations such as ventilation systems, heat pumps, and technical shafts proves to be challenging in buildings that were not originally designed for them. This results in layout constraints and additional costs. This obstacle is not specific to housing for the elderly but represents a general issue in real estate transformation projects.

In Case A, the focus is primarily on incorporating new installations into the building, whereas in Case B, the emphasis is on separating or decentralizing the existing installations.

Accessibility:

Making the building and site accessible is a recurring obstacle in the transformation of case A, as concessions must be made to the design or aesthetics, at case B due to the original function the site and the building was already accessible, so no huge adjustments needed to be made.

At Case A, for the site, Expert A2 mentioned that the obstacle was that there were many height differences on the terrain, which all had to be addressed so that there were no steps or level changes, making the site accessible.

When looking at the building accessibility expert A6 addresses some less ideal solutions when making the building accessible, such as a small ramp by the elevator and how to preserve the old elements when integration the accessibility.

"Preserving the old elements in relation to the new requirements and making it wheelchair accessible for the elderly." (Interviewee A6, 2025)

Resident A5 also points out this problem in general when it comes to making monumental buildings life-cycle adaptable:

"A lot of requirements for the life-cycle adaptability of homes. Yes, and that is especially difficult in old buildings, which you have to work on quite extensively on the inside. Look at those truly

monumental buildings, where you can't change anything on the inside. I think that becomes very difficult." (Interviewee A5, 2025)

In addition, in Case A, people with disabilities must use a different entrance because the main entrance has stairs, which is common in older buildings, and due to the narrow width, a ramp could not be installed.

“Accessibility, we’ve actually mostly solved that from a structural perspective. With the exception, for example, of the old main entrance of the school building. Yes, you enter there via a small staircase. People with limited mobility have to make a detour to another entrance, where they can enter at ground level.” (Interviewee A1, 2025)

Furthermore, regarding accessibility, if the building has multiple floors, an elevator or stairlift must be installed to ensure accessibility. Expert A6 explains that such a building can have three or four different levels, and while elevators can often be configured to stop at various heights without issue, the layout of some buildings may prevent access to all areas with a single elevator. This raises the question of whether the entire building must be fully accessible, or whether multiple elevators should be installed to achieve that.

Building appearance:

Another obstacle is the character of the building in Case B, it still resembles a nursing home. Interviewee B10 explains that because of the building’s institutional appearance, people from the neighbourhood tend to avoid coming inside.

Location Level:

Proximity to amenities:

At the residential environment level, it was noted that in Case B, a small village in a rural area, there is often a lack of direct access to amenities such as secondary shops or restaurants. In smaller communities, this limited access makes independent living more difficult for elderly, especially when mobility is reduced.

"In Voorst, there really isn’t a big town center or anything, you know. So yeah, if you say that’s an ideal location for elderly housing, I wouldn’t really say that about the Benring." (Interviewee B9, 2025)

Other:

As also mentioned at the building level, the ability to park close to the home is important for elderly residents. If on-site parking is not possible, there must be a nearby alternative.

Other obstacles such as participation challenges, grid congestion, and zoning constraints are primarily related to inner-city development and are not specific to the creation of elderly housing.

5.3.2. Opportunities

Housing Unit Level:

Spatial quality:

One of the most frequently mentioned opportunities in housing-level transformations concerns the spatial quality of older buildings. Former schools often have generously sized rooms and wide hallways, which lend themselves well to being repurposed into housing. This 'spatial surplus' allows for flexible layout of functional zones, contributing to life-cycle proof and comfort living. For Case B, expert B9 mentioned that the care institution already had a suitable room layout, and that two rooms could be combined into one simply by adding a door in the wall between them. In either case, all the primary living facilities may be on the same level.

“There is a kind of spatial surplus in those old buildings, which makes them very flexible.” (Interviewee A1, 2025)

Furthermore, in case A the experience of the home is also perceived as positive. Residents appreciate the authentic character of the building, such as high ceilings, exposed beams, and large windows, which contribute to spaciousness and natural light.

"Well, the best thing about the home, for me, is that we can still see those beams and everything." (Interviewee A3, 2025)

On a technical level, they can still enjoy the comfort of a new building, while also benefiting from the unique characteristics of the old building that would not be found in new constructions.

“We can confidently say that we place people in an old building with high ceilings, beautiful windows, and all sorts of other features, and they have the comfort of new construction." "The comfort is simply [...] it’s just good. That’s not a problem." (Interviewee A6, 2025)

Furthermore, the building from case A already has very thick walls which will keep the heat outside.

Finally, the affordability of the housing is mentioned as an opportunity. Since existing structures with spatial quality are preserved during transformation, construction costs can be kept low, which in turn helps keep rental prices or the purchase price affordable.

“With new construction, you no longer get the communal spaces, like the ones you still have at De Benring, and you can keep the rent low. It's usually more affordable, because with new builds nowadays, you're already dealing with extremely high rental prices. New construction is just expensive.” (Interviewee B9, 2025)

In Case B, a resident mentioned that housing doesn’t need to be brand-new or luxurious, and pointed out that newly built apartments are often expensive, too expensive for some of the residents at De Benring. In Case A, residents mentioned that most of the apartments needed to fall within the NHG (National Mortgage Guarantee) limit, a goal that was successfully achieved. One resident also emphasized that the transformation had been inexpensive:

"It's actually really cheap here, even though transformation is often seen as something that can get very expensive." "If you've got a bare building, you can just install exactly the equipment that's fit for the future, you really can't make it any cheaper than that." (Interviewee A5, 2025)

Building Level:

At the level of the residential building, opportunities arise due to the original function. Older care institutions, monasteries, or schools often have an existing structure that lends itself to communal use. An important advantage hereby is the availability of shared spaces. These can be used for social interaction, activities, or shared facilities, which contributes to social cohesion, this is applicable to both case A and B.

"Those are often those old spaces; they really lend themselves to that. If there's enough space, they can certainly create something where people can do things together. And I think that will become very important in the future." (Interviewee A6, 2025)

In Case A, the former teachers' lounge near the communal hallway was transformed into a shared space. In Case B, expert B14 explained that the building is structured like a windmill, it already has a central core where social interaction takes place. The windmill layout also helps separate private and communal areas, the core serves communal functions, while the extending wings contain the private residences. Additionally, because of the building's original function as a care facility, it was already fully accessible.

Furthermore, if the original layout of the building is suitable for residential use, no major structural changes must be made. In case A, for example, the former classrooms were reconfigured into apartments, while in case B, the original rooms were either preserved or two rooms are combined into one dwelling.

In addition, old buildings often offer sufficient physical space to create apartments of various sizes, resulting in housing diversity within a single building and allowing for unique, customized homes. This is evident in case A, where:

"In principle, they designed twelve completely different apartments there. And yes, that's certainly more challenging, but it also makes it unique." (Interviewee A6, 2025)

Existing buildings often have a pitched roof that was originally used only for insulation purpose, this was also the case in case A. By modifying the structure, it was possible to create additional square meters of living space.

Furthermore, an old building could have an attractive selling price. Municipalities can, for example, set a lower sales price to encourage reuse of the building, which contributes to financial feasibility.

Lastly, in case A, there was sufficient space available on the site to create several functions. Often, those old buildings have lots of space available around the building. Case B also has a huge site, and the site was already accessible because it used to be a

nursing home. This offers a financial advantage, as there are no costs involved in making the site accessible.

Location Level:

Transformation projects often take place in or near existing cities or village centers. This creates the opportunity to develop housing for the elderly in locations with close proximity to amenities such as shops, general practitioners, and public transportation. Interviewee A5 addresses that school buildings are mostly located near by the centre.

"Location, location, location. Everything, your amenities, general practitioners, shops, pharmacies, should all be within walking distance. But well, old buildings are often located in the city." (Interviewee A5, 2025)

Another opportunity is the creation of more housing for the elderly within existing neighbourhoods or districts. For case B, expert B9 mentioned that due to being in a small village, people want to stay within the village. Furthermore, expert B9 points out, when elderly residents can remain within their own neighbourhood, it becomes easier for family and friends to visit.

"Creating additional housing for the elderly in the neighbourhood also provides new alternatives within the area. Older people often want to remain in their own neighbourhood, but suitable alternatives are often lacking." (interviewee A1, 2025)

Moreover, preserving a characteristic building has a positive impact on neighbourhood identity and community engagement. Older characteristic buildings, such as the former school building from case A, often serve as landmarks and can be a social meeting place within the neighbourhood. This allows elderly residents to interact socially with the neighbourhood. In Case B, the building also functions as a community space for the neighbourhood, which is experienced positively by the residents. In Case A as well, the building is often used to organise events for the neighbourhood such as New Year's receptions.

"A school building like that also serves the entire neighbourhood as a landmark and meeting place. That's really the main opportunity." (Interviewee A1, 2025)

The table below provides an overview of the barriers and opportunities discussed above in the cross-case analysis of Case A and Case B.

Level & Theme	Case A	Case B	Comparison case A and B
Housing Unit – Accessibility & layout	Barrier: Life-cycle proof design; adaptations required to improve accessibility	Opportunity: Already accessible layout from care function; Barrier: doorframes needed to be widened, high balcony thresholds, lake of variety housing type and inefficient internal layout	Both value accessibility, A required adaptations (Barrier), B had already a baseline accessibility (Opportunity) General: Barrier: limitations of reconfiguring a classroom
Housing Unit – Comfort & technical quality	Opportunity: Comfort equals new-build, with character of old building and building has thick	Barrier: adaption technical modern comfort: still complaints about draft, noise, and poor heating performance	A, achieved comfort within character of old building (Opportunity) with adaptions (Barrier), B still faces technical shortcomings (Barrier)

	walls. Barrier: adaption technical modern comfort	& complaints about shared electricity costs	
Housing Unit – Affordability	Opportunity: Affordable; most apartments within NHG limits; perceived as cheap	Opportunity: Affordable rent due to transformation instead of new build.	Both cases the housing is seen as affordable to the residents. (Opportunity)
Building – Communal space & social interaction	Opportunity: Teachers' lounge reused as common room; supports social contact and huge site for communal garden and functions	Opportunity: Central core fosters social interaction, spaces for social interaction and communal garden	Both leveraged existing spaces for community (Opportunity)
Building – Flexibility & structural constraints	Opportunities: 12 unique units designed; Barrier: 12 different designs layout	Opportunity: from two rooms to a two-room apartment; Barrier: Rigid layout, lack of variation, unused spaces	In both cases no huge constructive changes needed to be made for creating the dwellings. However, in case B some spaces stayed unused.
Building – Site accessibility & function	Opportunity: Huge site adapted for multifunctional use; Barrier: height differences had to be removed for accessibility	Opportunity: Site already accessible due to former care function and had already a parking function and communal garden; Barrier: Complaints about the amount of parking places	Both cases have a huge outdoor space which can be used for several functions (Opportunity) For the accessibility A required site adaptations (Barrier) while B was already accessible (opportunity)
Building & Housing Unit– Affordability	Opportunity: Asbestos risk for municipality; Barrier: strict budget ceiling, unforeseen issues, therefore budgeting on housing preferences	Opportunity: Business case for 15 years new build was not possible, however transformation was; Barrier: strict budget, unforeseen issues (e.g. asbestos)	In both cases, transformation is an affordable option (Opportunity); Unforeseen costs affected project budgeting (Barrier); General: Opportunity: attractive selling price. Barrier: when extensive transformations, new build can be a cheaper option; purchase price can be bottleneck.
Building-Appearance	Opportunity: The elderly wanted to live in a characteristic building, or they now appreciate it.	Barrier: negative "nurse home" appearance	At case A the building appearance is an opportunity while at case B it is Barrier
Location – Proximity to amenities	Opportunity: Close to city center and amenities	Barrier: Rural setting lacks nearby amenities	A close to amenities (Opportunity), B isolated (Barrier)
Location – Extra elderly building within the neighbourhood	Not mentioned explicitly as an opportunity	Opportunity: to stay in the village by residents and the neighbourhood wanted to have the options for elderly where they can live	Opportunity: to create extra elderly homes within the area so the elderly have more options to stay within the area. Both cases a opportunities, however not explicitly mentioned in case B
Location – Community engagement	Opportunity: Acts as neighbourhood landmark and space for neighbourhood events.	Opportunity: Building used for community, however the "nurse home" appearance limits this engagement	Both engaged community, case A sometimes events are organized, case B building open for the neighbourhood with weekly activities

Table 3: Overview cross-case analysis (Own work, 2025)

5.3.3. Conclusion

This part gives a conclusion of the empirical findings for answering the second question: *What are the main barriers and opportunities to repurposing vacant real estate for elderly housing?*

At the housing unit level, both cases show that older buildings offer valuable spatial qualities. In Case A, the generous room sizes and architectural character, such as high ceilings and visible beams, were appreciated by residents. These features enhanced comfort and aesthetics, while the integration of modern technical installations ensured contemporary living standards. In Case B, the original layout of the care facility allowed for single-floor living, which was appreciated by both experts and residents. However, several housing-specific barriers were also identified. In Case B, residents and an expert highlighted functional limitations, such as an inefficient internal layout and high thresholds to the balconies. Moreover, the daylight entry from one side and small outdoor spaces were experienced as downsides. While Case A also faced the challenge of working within an existing structure, residents experienced fewer issues, and experts believed modern comfort could still be achieved. Residents focus on practical barriers such as thresholds, drafts, and daylight. Experts emphasize technical feasibility and structural layout. This shows how daily usability and long-term adaptability are seen through different lenses. Nonetheless, both cases acknowledged the broader difficulty of making older buildings accessible and technically up to date.

At the building level, creating communal spaces emerged as a shared opportunity. In Case A, the transformation of the former teachers' lounge into a shared living room contributed to social cohesion, while in Case B, the building's windmill structure naturally facilitated interaction around a central core. Another mutual opportunity was the physical structure (spatial quality) of the buildings, which allowed for functional diversity and the inclusion of various apartment types. In Case A, this led to the creation of twelve unique apartments, perceived as a strength despite the design complexity. However, in Case B, structural rigidity meant that some parts of the building could not be converted into viable housing units, resulting in unused spaces. Moreover, an expert noted that corridor access in Case A created inconveniences for residents, particularly regarding entrance location and circulation. When looking at the buildings appearance, at Case A it is opportunity as all the residents admire the building characteristics and at Case B is seen as an barrier. Experts highlight technical complexity, budget constraints, and structural challenges. Residents evaluate functionality based on daily use—like entrance convenience or noise. These differing views underline the gap between technical design and lived experience.

The integration of technical installations proved to be a barrier in both cases. These buildings were not originally designed for separated systems for housing, making it spatially challenging and costly. This barier was mentioned by multiple experts and is not specific to elderly housing, but rather a recurring issue in transformation projects. While Case A focused on integration, Case B leaned toward decentralisation of installations, each with its own challenges.

Financial feasibility emerged as a central barrier in both transformations. In Case A, experts pointed out the high costs associated with unforeseen issues and the need for skilled labour. However, a key advantage was that the municipality, previous owner of the

building, agreed covering the costs for asbestos removal. In Case B, asbestos removal also represented a major cost item, but this expense had to be borne by the owner. Experts in both cases acknowledged that, under certain circumstances, new construction could be cheaper than an extensive transformation, especially when large structural adjustments are required. One expert in Case B even reflected that the transformation eventually approached demolition-level intensity. Additionally, the purchase price of the building was noted by an expert in Case A as a potential financial barrier. However, the selling price is also mentioned as an opportunity when buying the building from the municipality and the municipality want to preserve the building, so they are willing to sell the building for less. Nevertheless, both cases succeeded in delivering affordable housing, Case A with most of the apartments within the NHG limits and case B within in the social rent limit. However, at case B the residents still share the electricity costs, which some of them don't like.

At the location level, Case A benefitted from its urban setting, with amenities such as shops, public transport and healthcare within walking distance. This was explicitly mentioned by residents as an important advantage for elderly living. In contrast, Case B is situated in a small village, not nearby a lot of amenities, which residents and experts identified as a limiting factor for independent living. While residents placed more emphasis on proximity to daily amenities and maintaining social ties in the neighbourhood, professionals often highlighted planning advantages such as available plots and ownership status. This reflects how emotional and social factors weigh more heavily for residents. Still, the rural location of Case B was also experienced as an opportunity, residents were able to remain in their familiar community, which supported continuity and social ties. Furthermore, both cases benefited from the ability of the building to serve the wider neighbourhood. In Case A, the building functions as a local landmark and sometimes a venue for neighbourhood events, reinforcing identity and social cohesion in the neighbourhood. Case B, the building is open for everyone to join the weekly activities, it provides a meeting space for the village.

Both cases demonstrate that the adaptive reuse of vacant real estate can offer significant spatial, social, locational, and affordability opportunities for elderly housing. However, the effectiveness of these opportunities is highly dependent on the specific context and original building function. Elements such as spatial flexibility or affordability may act as enablers in one case but as barrier in another. Key barriers can be accessibility, spatial inflexibility, technical integration, and financial constraints. The comparison between the views of residents and professionals reveals that while their goals often align, their priorities and evaluation criteria differ. Integrating both perspectives is essential to create elderly housing that is both feasible to realize and meaningful to live in.

5.3.4. Comparison with literature

To incorporate the findings from the empirical research into the framework designed from the theory, it is important to compare them with the theory findings to see where they match and where they may differ, this is done in the next table. Sometimes more background information is given about the cases, due to not explicitly mentioning of the interviewees.

Level & Theme	Literature Insights	Case Comparison – Opportunities/Barriers Identified
Housing Unit – Accessibility & layout	Elderly prefer age-friendly, life-cycle proof homes (e.g. same-level, wide doors, lifts) (De Jong, 2021; PBL, 2019a) No barriers or opportunities mentioned in the literature.	**Case A:** Barrier, lifecycle proof design through adaptations, however accomplished; **Case B:** Opportunity, former care layout already accessible, however only the threshold to balcony remained barrier. Barrier: Layout
Housing Unit – Comfort	Barrier: Insulation, heating, ventilation often substandard and difficult to modernize (Remøy et al., 2024)	**Case A:** Opportunity: Thick walls and comfort of new build achieved with characteristics of the old building; **Case B:** Barrier: draft, noise, and heat complaints.
Housing Unit – Affordability	Strong preference for affordable, especially cheap rental apartments (WoningBouwersNL, 2022; Mancoulov, 2024) Opportunity: Long vacancy increases likelihood of sale/transformation (Remøy et al., 2024)	**Case A:** Opportunity: affordable (within NHG) Barrier: Unforeseen cost with budget limit and preference list; **Case B:** Opportunity: rent transformation relative to new construction cheap, Barrier: affordability issues due to shared energy cost. **General:** Opportunity: attractive selling price. Example, municipality willing to sell for lower price when building remains preserved and can take the asbestos risk (Case A cost municipality, Case B costs for owner). Barriers: purchase price may be the bottleneck.
Housing Unit – Preferred type & size	Barrier: Structural adaptation (grids, heights) is costly and complex (Remøy et al., 2024)	**Case A:** Barrier & Opportunity, offers varied apartments with different sizes, **Case B:** Opportunity: from two rooms to a two-room apartment, Barrier: rigid layout and unused spaces
Building – Accessibility	Barrier-free accessibility in the building and on site support independence (De Jong, 2021) No barriers or opportunities mentioned in the literature.	**Case A:** Barrier: adaptation for accessibility, height variations on site; **Case B:** Opportunity: former care function accessibility.
Building – Communal use & social interaction	Communal spaces enhance ageing in place and social connection (Bigonnesse & Chaudhury, 2021) No barriers or opportunities mentioned in the literature.	**Case A:** Opportunity: teacher's room reused as communal space and huge site with communal outdoor space. **Case B:** Opportunity: central core for social interaction
Building – Privacy	No barriers or opportunities mentioned in the literature.	**Case B:** Opportunity: central core for communal and side corridors for housing
Building – Structural fit	Barrier: Structural adaptation (grids, heights) is costly and complex (Remøy et al., 2024) Structural inflexibility and high transformation costs hinder feasibility	**Case A:** Opportunity: flexible reuse of spaces, classroom to apartment; **Case B:** Opportunity: Making from two rooms a two-rooms apartment. Barrier: some spaces unusable; confirms structural barriers in literature
Building - Affordability	Barrier: Poor maintenance can make transformation financially unattractive (Remøy et al., 2024)	**Both cases:** transformation is an affordable option (Opportunity); Unforeseen costs affected project budgeting (Barrier); **General:** Opportunity: attractive selling price. Barrier: when extensive transformations, demolition and new construction can be a cheaper option; purchase price can be bottleneck.
Location – Proximity to amenities	Elderly avoid outskirts; need 2+ key amenities within 400–500m (HEVO, 2022; De Jong, 2021) No barriers or opportunities mentioned in the literature.	**Case A:** Opportunity: near city amenities; **Case B:** Barrier: rural location lacks amenities
Location – Familiar environment	Strong desire to stay in familiar neighbourhood or village (Bluemink et al., 2021) No barriers or opportunities mentioned in the literature.	Opportunity: to create extra elderly homes within the area so the elderly have more options to stay within the area. Both cases an opportunity, however not explicitly mentioned in case B.
Location – Community engagement	Community role and interaction promote enhance ageing in place. (Bigonnesse & Chaudhury, 2021) No barriers or opportunities mentioned in the literature.	**Case A:** Opportunity, community events and landmark function; **Case B:** Opportunity with Barrier: community use but institutional look; aligns with literature emphasis on interaction

Table 4: Case comparison with the literature (Own work, 2025)

5.4. How to overcome the barriers?

This section presents the empirical findings related how the main barriers that arise by transforming vacant real estate to elderly living places that is aligned with their preferences and needs can be overcome, based on semi-structured interviews with the experts and residents from the two transformations to elderly housing casus: De Getijden (Case A) and De Benring (Case B). This part explores the empirical findings for answering the third question: *What are the main barriers and opportunities to repurposing vacant real estate for elderly housing?*

The transformation of vacant buildings into elderly housing is often accompanied by structural, technical, and financial barriers. Nevertheless, the empirical cases show that many of these obstacles can be overcome through a combination of creative design interventions, stakeholder collaboration, technical expertise, and process flexibility. This section outlines key solutions observed in practice.

Life-cycle proof and accessibility:

Creating life-cycle proof, accessible homes is one of the main barriers in the transformation of buildings into housing for elderly. In both cases, the dwellings were made life-cycle proof and accessible. However, in Case B, the threshold to the balcony remains too high. The interviewees did not explicitly mention whether this issue will still be addressed. In Case B, additional modifications were needed, such as widening doorframes and removing thresholds in the bathroom. According to Expert B9, these obstacles were mainly costly due to the scale and complexity of the interventions required.

In Case A, several modifications were necessary to make the building and the housing units accessible. Experts noted that the entrances of older buildings often include stairs. This was also the case at case A, where the issue was addressed by creating a second entrance that is wheelchair accessible. It was mentioned that installing a ramp at the main entrance was not possible due to limited space, although in other cases, this could be a viable solution.

"So, there's a second entrance that is fully wheelchair accessible. But yeah, things like a main entrance with stairs are often difficult to make accessible for wheelchairs or walkers." (Interviewee A1, 2025)

Furthermore, in case A, to improve accessibility to the first floor, a compact platform lift was chosen, which requires no lift pit or additional headroom above the final stop, making it especially suitable for older structures.

"A relatively compact lift has been installed, a platform lift. This type of lift requires the least amount of structural space: it doesn't need a pit underneath or three meters of clearance above the final stop." (Interviewee A1, 2025)

In addition, Expert A6 explains that less aesthetically pleasing solutions are often chosen when the decision is made to preserve original architectural elements.

"So, do I have to demolish that beautiful part? The nice entrance, you know. These are the kinds of things you have to consider if you want to make everything perfectly accessible, so that no one even notices there's a difference in height, or at least so that everyone can move around freely. Or do we place the lift on the original floor and just add a small ramp of about 10 centimeters? It might not look as nice, but at least the original structure stays intact." (interviewee A6, 2025)

A general remark was also made that if a building is not fully suitable for converting into entirely life-cycle proof apartments, or if the costs become too high, an alternative approach could be to only adapt the units that can be made life-cycle proof relatively easily and designate the remaining units for a different target group.

"The most adaptable apartments were those on the ground floor and the first floor. And the attic space, which was also very usable, was actually used to create starter apartments for young people. Not all of those are accessible by lift. So in fact, having a mixed target group made the transformation of the building more practical, because we didn't have to go to great lengths to make every single apartment accessible by elevator. We could simply say: on the ground floor, we'll create as many age-friendly units as possible, and the rest will be starter homes suitable for able-bodied residents." (Interviewee A1, 2025)

Expert A1 does not see an obstacle in making the building age-friendly, as it already needs to be thoroughly stripped, which allows age-friendly features to be incorporated in the process.

"This type of building often requires such a thorough approach, especially in terms of insulation techniques and the entire plan. The life-cycle adaptability that you also need to create can be easily incorporated into that. In other words, the renovation is so extensive that these measures are naturally included as part of the process." (Interviewee A1, 2025)

Functional: Layout Constraints

Another barrier mentioned is that the layout is often constrained by the existing structure of the building. Expert A6, for example, pointed out that when converting a classroom into an apartment, the design is limited by the fact that there is usually only one window, which determines where key functions must be placed. However, Case A demonstrates a creative solution, the wide hallways of the former school building were incorporated into the apartments, and a new external gallery was added along the outside of the building to provide access to the upper floor.

"Then the architect came up with the idea to extend outwards on the first floor, completely alongside the building. That way, you still ended up with nice apartments. So yes, I actually think it mostly comes down to creativity." (Interviewee A5, 2025)

"Because those corridors were quite generously sized, they actually provided the perfect layout for placing an entrance hall, toilet, technical room, and in some cases even a kitchen." (Interviewee A6, 2025)

In addition, in Case B, the building's appearance was mentioned as a barrier. Expert B10 explained that small adjustments are continuously being made to make the building more attractive, which is gradually making it easier for people to enter. For example, small adjustments are made by the entrance by adding a green wooden structure to make it more appealing.

"Yes, I find the entrance a bit plain. I would prefer something different. But the wood has made it a bit more pleasant." (Interviewee B11, 2025)

Furthermore, in Case B, the spaces that remained vacant and were not suitable for housing were repurposed as additional communal areas for the residents. For instance, an extra coffee room was added on the ground floor.

Affordability:

Work with a fixed price:

Financial feasibility played a crucial role in the development of both cases. In Case A, a fixed budget was established at the start of the project, and the work had to be completed within that limit. When hiring both the contractor and the architect, the total cost was agreed upon in advance, and they were paid a fixed amount rather than an hourly rate to ensure the budget was maintained.

In Case B, a fixed budget was also in place, and with the contractor's agreement, the project had to be completed within that financial framework.

"No, I do think the plan was achieved and with minimal resources. But that was during the construction phase, where the budget was already set, and the project had to be carried out within that budget. And if you reach an agreement based on that, then you can also execute it accordingly." (Interviewee B15, 2025)

Major unforeseen cost item:

The unforeseen factor was explicitly identified as a major obstacle in both cases. In vacant buildings, original floor plans are often missing, which means that certain obstacles only become visible during the demolition process, such as asbestos found in both cases, and in Case A, a structural element that only became visible once demolition started.

"I think most of the additional work was related to asbestos removal, those were unexpected costs. But apart from that, I don't think there were any major setbacks." (Interviewee B15)

Therefore, several experts mentioned including a major unforeseen cost item in the budget. In Case A, for example, the seller of the building assumed the risk for the asbestos. After long negotiations during the sale, an agreement was made with the residents and the municipality stating that if asbestos were to be found, the municipality would take responsibility for the associated risk.

"You're allowed to include the risk in the purchase price. We want to know in advance what we're getting into. We don't want to deal with asbestos risks [...] We're not a project developer, they can factor that in, discover it during the process, and sell at the end. But as a CPO, we have to buy everything straight from the drawing board." (Interviewee A5, 2025)

Creating extra dwellings:

If the project does not appear to be financially feasible, several interviewees indicated that creating additional housing on the site could be a solution. Often, these types of vacant buildings are surrounded by large plots of land. Constructing new homes, as was done in Case A, can be a possible way to make the project financially feasible. Expert A6 mentioned an example of a project where this approach was also applied:

"In Eindhoven, I did it with an old school, eleven apartments were created inside the school, and ten luxury apartments were added alongside it, including an underground parking garage. But one depended on the other to make it financially viable. That combination is still often possible, because these buildings are usually located on sites with open space — like a school with a playground, or a monastery, which often has surrounding land. We had several barracks here as well, and all of them had some land around them." (Interviewee A6, 2025)

Self-work within the project:

In Case A, in order to stay within budget, the residents took initiative themselves. Several working groups were formed to develop plans, reducing the need for professionals. Additionally, the residents carried out part of the demolition work themselves and took on the landscaping of the garden.

"The garden was completely laid out by ourselves; everyone helped out. There was actually very little money left after construction. So, we all gathered a bit of money together, and started with just tiny plants." (Interviewee A5, 2025)

Prioritising project goals:

When a project is not financially feasible or requires significant subsidies, choices sometimes have to be made about what is most important. In Case B, for example, the decision was made to focus on creating a liveable interior living environment, while minimal changes were made to the exterior of the building.

"The business case didn't add up either. And sure, you could invest a lot of money in the exterior. But we were really focused on the interior, on living, and on creating a pleasant, beautiful living environment. A lot of the money went into that, of course. You had to make choices somewhere. Still, we pulled it back quite a bit in terms of design and materials, using sustainable materials." (Interviewee B14, 2025)

In Case A, the budget was set so strictly that residents agreed with the architect and contractor that if setbacks occurred, cost-saving measures would be implemented and accepted by the residents, as the agreed price would remain unchanged If there were any financial windfalls, they would be used to cover those setbacks (Interviewee A5, 2025).

Technical Barriers

The technical barriers are focused on creating residential units, which applies to transformation projects and not specifically to senior housing. However, in both cases, it is evident that the transformation process introduces technical complexities, which is why in both cases a contractor became involved during the design phase, known as early contractor involvement. In the case of Benring, even a technical installation company was the main contractor with a construction subcontractor, as the electrical work presented a larger obstacle than the structural elements.

Furthermore, Interviewee A5 for Case A pointed out that for such complex projects, skilled tradespeople must be engaged, and it is important to have proper guidance to resolve the issues.

"You always come across things that need to be unexpectedly funded. It's not new construction, where everything can be made standard in a factory and assembled. So, you still need skilled professionals. And good guidance is necessary to ensure all problems are solved, because that's what you encounter in an old building, and for that, you need to have the funds."
(Interviewee A5, 2025)

Location barriers:

Location-related barriers are difficult to address because there is no direct control over them. However, one expert mentioned that if local amenities are lacking, it could be considered whether these can be integrated within the transformation project itself, provided that the business case for these amenities are financially feasible.

"We've also collected data on that by now, within what radius certain amenities need to be available. If they're farther away, then you need to make sure you can offer them yourself."
(Interviewee B14, 2025)

5.4.1. Conclusion

This part gives a conclusion of the empirical findings for answering the third question: *How to overcome the barriers when integrating the housing needs and preferences of the elderly?*

The empirical findings from the transformation projects Case A and Case B reveal that while significant barriers arise in aligning elderly housing with their specific needs and preferences, many of these can be overcome through targeted strategies. Structural and accessibility barriers are best addressed through adaptive design interventions, such as compact lift systems, alternative entrances, and choosing units most suited for transformation for elderly and left over units for another target group. Functional limitations related to building layout can be mitigated through creative architectural solutions and the repurposing of underutilized spaces for communal functions.

Financial feasibility remains a major hurdle, particularly in managing unforeseen costs. The financial feasibility can be tackled by working within fixed budgets with architect and

contractor, a major unforeseen cost item in the budget, see if any risks could be absorbed by the seller, integrating additional housing units on-site, and involving residents in cost-saving measures such as working groups or physical contributions. Furthermore, making explicit choices about priorities for the project also proved a pragmatic solution.

Technical barriers highlight the importance of early contractor involvement and the engagement of skilled professionals capable of navigating the complexities of older buildings. While location-related constraints are often beyond the control of the developers, integrating amenities into the project may offer a solution.

Overall, there need to be creative, organisational and financial strategies rooted in an understanding of the specific needs of elderly residents so stakeholders to transform vacant real estate into an attractive housing environment for the elderly.

Chapter 6 Results assessment framework

6. Results: Assessment framework

This chapter presents the developed framework and the accompanying step-by-step guide, along with the results from the focus group.

The framework and step-by-step guide were initially developed using elements from the literature on the preferences and needs of the elderly and on real estate transformation. The step-by-step guide was inspired by the "Transformatiemeter" for office transformations to homes from Remøy et al. (2024). They were then further refined by comparing theoretical insights with findings from empirical research conducted through two case studies, including case documents and interviews with experts and elderly residents who had already moved into the transformed buildings. Finally, the framework and the step-by-step guide were reviewed by experts in a focus group to evaluate their practical applicability and to gather suggestions for improvements and additions.

The final version of the assessment framework can be found in appendix J, and the accompanying step-by-step guide in appendix I. The assessment framework and its step-by-step guide have been written in Dutch, as they are only applicable to the Netherlands. This is because both focus on the housing needs and preferences of vital 65+ elderly in the Netherlands, as well as transformation projects within the country.

This chapter first discusses the results from the focus group, then explains the step-by-step guide in which the framework is embedded and then elaborates on the structure and use of the framework. Finally, the framework is applied to both cases to support the interpretation of the results.

6.1. Results: Focus group

As already mentioned, the framework and the accompanying step-by-step guide were developed based on theoretical insights and empirical research and refined through a focus group session with various experts, as described in Section 3.2. The feedback from the focus group was then processed and resent to the experts for a second round of feedback. A detailed summary of the focus group and second feedback round is provided in appendix K. This section discusses the main comments and insights that emerged from the experts of the focus group.

The session evaluated the framework and accompanying step-by-step guide in terms of structure, clarity, and practical applicability. Overall, the experts agreed that the step-by-step guide was logically structured and clearly formulated, and the expert recognized the framework as a valuable conversation starter rather than a definitive assessment tool.

“I do find the step-by-step guide clear, and the framework as well.” (Expert E1, 2025)

Several improvements were suggested. First, the distinction between the step-by-step guide and the framework itself should be more clarified, the plan assesses general

transformation potential, while the framework focuses specifically on suitability for elderly residents and the preferences and needs of the elderly.

"There is a limit to whether a building can even be transformed into housing at all. [...] Some buildings can of course be transformed quite well for all types of young people, but for elderly, it's a bit more difficult." (Expert E3, 2025)

Second, a clearer separation is needed between variables housing requirements for elderly and personal preferences of elderly.

"Well, housing preferences are something different from suitability. There's a big difference there when it comes to housing suitable for elderly. That might be about a quarter of all homes. And homes that are more attractive to elderly are just a small part of that, they're suitable anyway." (Expert E3, 2025)

Additionally, the readability should be improved and the alignment with official definitions, such as those used in subsidy scheme from the government, was recommended.

"It's definitely helpful if you can view it clearly on a single page. [...] I have to keep dragging my cursor around and then I completely lose track." (Expert E3, 2025)

"There are so many different types of definitions. [...] I would choose to use those terms in the framework as well." (Expert E1, 2025)

Regarding its practical application, the framework was considered useful by the experts for a range of stakeholders, including municipalities, architects, housing corporations, and contractors. The importance of flexibility was emphasized, with experts noting that buildings designed for elderly residents should ideally remain adaptable to other target groups in the future.

"The flexibility of the real estate is very important. So, what do we do when this target group moves out? Will it still be suitable? Can another target group move in more easily?" (Expert E1, 2025)

In terms of content, several suggestions were made. These included relocating general comfort-related features from the framework to the step-by-step guide. Additionally, new items were proposed for in the assessment framework, such as window height that allows seated residents to look outside, and shared, covered bicycle storage.

"Elderly people always like to be able to look outside while sitting on a chair, so the window needs to be at the right height." (Expert E3, 2025)

On the weighting system within the framework, experts advised using a smaller scale for the 0–10 weighting scale to reduce complexity. The experts agreed that weights should remain adjustable by users, as preferences among the vital 65+ population vary widely depending on factors such as age, household composition, location, tenure type, and individual health outlook.

"*Yes, because you also see with elderly people, yes, as many people as there are, there are as many wishes. Some want to live together, but some absolutely do not want that." (Expert E1, 2025)*

Furthermore, it was mentioned several times that the decision to move is often influenced more by personal preferences, rather than age-friendly factors such as the proximity of amenities. Various examples were given of situations where elderly moved due personal preferences instead of age-friendly features.

"They had developed a complex where they gave priority to certain people. But it was actually located entirely outside the city center, away from facilities. However, it was beautifully situated on the ridge near Rhenen with a view of the Rhine. That made it a success, many elderly specifically wanted to move there because of the beautiful view." (Expert 1, 2025)

This is why the assessment framework is used to start the conversation about the preferences and needs of the elderly that can be incorporated into the transformed building, and not as a testing framework for success.

The session confirmed the assessment framework's added value in initiating discussions about transformation potential and including elderly housing needs and preferences within the transformation. The gathered insights have been used to refine the assessment framework and its step-by-step guide.

6.2. Step-by-step guide

In this section, the assessment framework embedded within the step-by-step guide is explained. The complete version of the guide can be found in Appendix I.

As mentioned, the step-by-step guide is inspired by the Transformatiemeter, a tool developed to assess whether vacant office buildings are suitable for repurposing to housing (Remøy et al., 2024). While the original Transformatiemeter focuses on general residential transformation, this research addresses the specific transformation of vacant real estate into housing tailored to the needs and preferences of vital elderly residents. Therefore, the original steps have been adapted and extended to match the scope of this research. Compared to the Transformatiemeter, which introduces risks only at the end of the assessment process, this step-by-step guide integrates barriers and mitigation strategies specific to elderly housing already in Steps 2 and 3. This early identification ensures that such barriers can still be addressed in the decision-making process. There is a possibility that the Transformatiemeter may present risks too late in the process, limiting the possibility to adapt or reconsider key decisions.

The step-by-step guide provides a structured approach to assess whether an existing building can be transformed into vital 65+ elderly housing that meets the needs and preferences of these elderly. The guide is divided into five steps. The first three steps are designed to explore whether the building can be transformed into housing in general. These steps address ownership and willingness to transform, technical feasibility, and financial feasibility. While some considerations relevant to elderly housing, such as specific transformation to elderly homes barriers and their mitigation strategies, are

already included in these early steps, the primary focus remains on general residential transformation. This general assessment ensures that transformation is realistic before considering adaptations for elderly specifically. From step 4 onwards, the focus shifts specifically to the transformation of the building into suitable housing for elderly that aligns with their preferences and needs.

Step 1: Willingness to transform to housing

The first step assesses whether there is a willingness to transform the building into housing. If the building is owned (by your organization or a partner), possible future uses are evaluated, such as transformation, demolition/new construction, vacancy, repurposing, or sale. If not owned, the current owner and their willingness to collaborate or sell is identified. The influenced factors are the duration and reason for vacancy, alignment with municipal housing policies, and the flexibility of the building play a central role in this assessment. Conversations with the owner help determine mutual interests and willingness to develop or sell.

Step 2: Technical quickscan

The second step assesses the technical condition and adaptability of the building. Key aspects include maintenance status, historical or monumental designation, structural layout and ceiling heights, existing stairwells, and the feasibility of upgrading comfort elements such as insulation, ventilation, and plumbing. This analysis identifies possible barriers and costs related to physical transformation.

Step 3: Financial quickscan

In this step, the financial feasibility of the project is examined by comparing estimated costs (acquisition and renovation) to potential revenues. This includes a first exploration of the number and type of housing units that can be implemented in the building. This can already be done with the target group preferences on size and price.

The technical and financial assessments in steps 2 and 3 are intended as quickscans. Once the next steps clarify which specific needs and preferences of elderly will be integrated and how these influence the transformation design, a renewed assessment of technical and financial feasibility is needed.

Step 4: Application of the assessment framework

If the outcomes of the previous steps are positive, the assessment framework is applied to assess to what extent the building can accommodate the specific housing needs and preferences of the vital 65+ elderly after the transformation. The framework serves as a tool to guide the conversation for decision-making whether to transform the building to elderly housing or not and identifying which aspects can realistically be integrated into the transformation. A detailed explanation of the structure and other components of the framework is given in section 6.3.

Step 5: Determination of transformation class and design implications

When the framework has been filled, a score is calculated to determine the transformation class of the project, which is ranging from “not transformable” to “highly transformable.” This score provides an indicative recommendation that supports decisions on whether to proceed with transformation to elderly housing and which design choices should be prioritized to meet the needs of elderly. A detailed explanation of scores is given in the next section.

6.3. Assessment framework

This section explains the assessment framework is build up and how it can be used. The framework incorporates the housing preferences and needs of the vital 65+ elderly that should be taken into account during the transformation process. It serves as a conversation tool to guide the discussions on whether a building can be transformed into suitable elderly housing that aligns with their preferences and needs. The framework provides insight into which elements can or cannot be integrated into the transformation project. It offers an indication of feasibility, however, is not a definitive measure of success. The framework can be used by multiple stakeholders, municipalities, contractors, architects, real estate developers or investors and housing associations.

	Measurement	Score 0-5	Weighting 0-5	Points	Explanation
Housing unit level					
• Number of rooms • ….	• 3 number of rooms • ….	• ….	• ….	• ….	• ….
Total score level					
Building Level					
• Accesibility to housing unit • ….	• By stair chair lift or elevator or on single floor • ….	• ….	• ….	• ….	• ….
Total score level					
Location Level					

• Amenities
  ○ General practitioner
  ○ ….
• ….
	○ Less than 500 meters
	○ ….
	• ….
		• ….	• ….	• ….	• ….

Total score level					
Total score project					

Figure 26: start design of the assessment framework (own work)

Figure 26 gives an overview on how the framework is designed, it can be seen that the framework is divided into three levels: housing unit, building, and location. These levels are essential for creating age-friendly homes for the elderly. For each of these levels, variables have been identified that influence the housing preferences and needs of the vital 65+ population. For each variable, the required level to meet these preferences and needs is specified. Within variables of each level, a distinction is made between variables

that apply to nearly all vital 65+ elderly to make a suitable and those that depend on individual preferences within the 65+ target group. The user of the framework can assign a score from 0 to 5 to indicate how easily a variable can be incorporated during the transformation of a building. The scores range from 0 (not suitable) to 5 (fully suitable, directly or with minimal adjustments).

Since some variables carry a higher importance than others, a weighting factor has been included to the variable. The weighting factors range from 0 to 5, with 0 indicating that the variable is not desired and 5 indicating that it is highly desired. he weightings in the framework are based on the literature review, case studies (interviews with elderly and relevant stakeholders), and feedback from the expert focus group conducted as part of this graduation research.

To determine the exact values of the weighting factors, additional quantitative research is required. This graduation project provides a general estimation of the weightings for the vital 65+ population. However, differences within this group, as well as individual preferences, must always be taken into account. Several factors may influence these preferences: tenure type (rental or ownership), socio-economic status, preferred housing type (such as individual vs. communal), household composition (single or two-person households), geographic location and varying outlooks on future vitality.

Users of the framework can adjust the weighting factors themselves due to possible differences within the vital 65+ population. The framework can either be applied directly for a specific target group or used to identify a suitable target group based on the outcomes.

Outcome of the framework

The framework is a conservation tool for assessing whether a building is suitable for transformation into housing for elderly that aligns with relevant living preferences and needs. Its use is not linear but intended to facilitate discussion about what matters to the target group and the feasibility of the project. Based on this, well-founded design decisions can be made. When the framework has been filled in, a score is generated for each level as well as for the framework as a whole. The score per level is calculated by dividing the sum of the points by the sum of the weighting factors in that level. This results in a score between 0 and 5 per level, indicating the transformation potential at that level.

Total score per level = sum of points / sum of weightings

Each level has a total score between 0-5

Figure 27: Calculation of core per level (own work, 2025)

To calculate the overall project score, the level scores are first multiplied by the weighting assigned to each level. These results are then added together and divided by the sum of the level weighting factors, which results in total score also ranging from 0 to 5. The weightings of the levels, like those of the variables within the framework, were

determined as part of this graduation research and reflect the general preferences of vital elderly. Just like the variable weightings, they may vary within the 65+ population.

	Score (0-5)	Weging (0-5)	Points
Housing unit level			
Building level			
Location level			

Total score project = sum of points / sum of weightings

Total score project has a score between 0-5

Figure 28: Calculation of total framework score (own work, 2025)

Based on the score per level and total score, an advice indication is given of the transformation class the project falls into with regard to elderly housing. This recommendation can serve as a basis for deciding whether or not to proceed with the transformation. The framework is intended to provide insight into which preferences and needs can or cannot be accommodated within the project. The transformation class offers an indication of feasibility but is not a definitive measure of success.

Weighted Score (Housing unit, Building, and location level, and total)	**Transformation Class**
Weighted total score < 1	Class 1: Not transformable
Weighted total score 1 – 2	Class 2: Hardly transformable
Weighted total score 2 – 3	Class 3: Limited transformability
Weighted total score 3 – 4	Class 4: Transformable
Weighted total score 4 – 5	Class 5: Highly transformable

Table 5: Determining transformation class for vital elderly housing. Based on Remøy et al. (2024), adapted by author.

It is recommended to always look at the scores from the different levels in the framework, if there is a match between transforming the vacant building and meeting the preferences and needs of vital 65 and older elderly. It is preferable that both the building and location of the project are transformable to the preferences and needs as seen in figure 29.

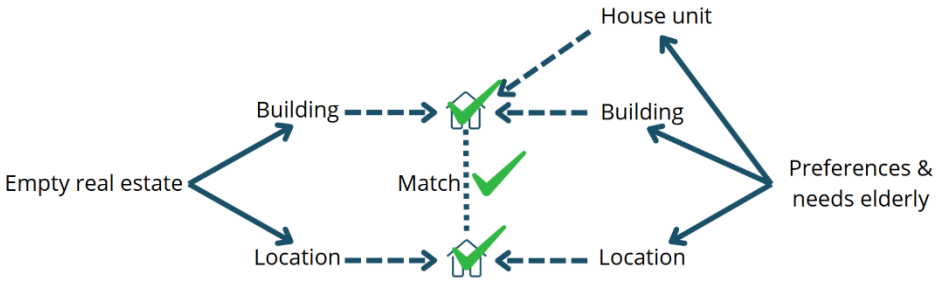

Figure 29: Match building and location from assessment framework (own work)

In figure 29 it is shown that on all levels are seen as transformable to the preferences and needs of the elderly. The building is therefore seen as suitable to repurpose to elderly living places.

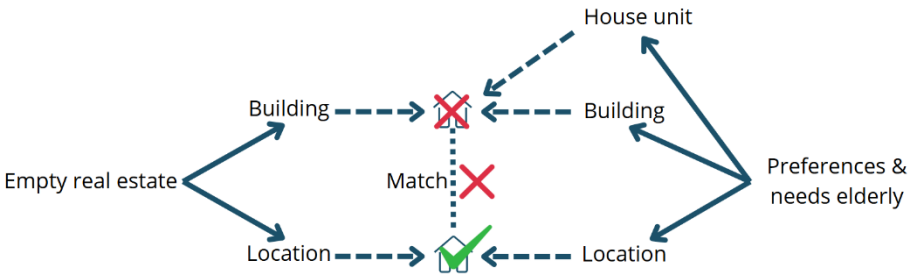

Figure 30: Match location and mismatch building from the assessment framework (own work)

In figure 30 it is shown that the location of the vacant building is aligned with the preferences and needs of the elderly. However, the vacant building has a low transformability to the preferences and needs of the housing unit and/or the building level.

At this moment, it can be evaluated which variables the building does not meet and whether this is at the housing unit level, the building level, or both. Further analysis can then determine whether a structural solution is possible to make the building suitable, such as partially demolishing the building and replacing that section with new construction. If no feasible structural solution is available, a complete demolition and new build can be considered.

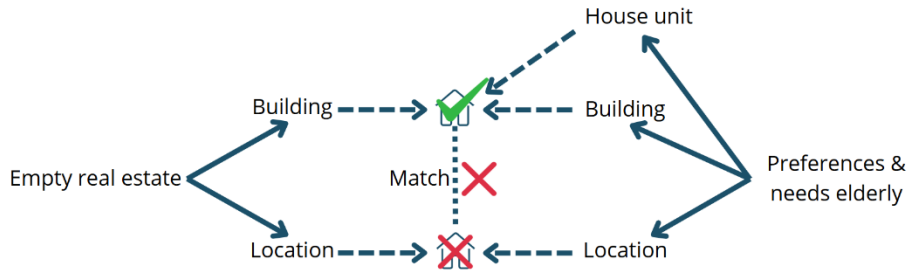

Figure 31: No/les building and mismatch location from the assessment framework (own work)

In figure 31 it is shown that the building is transformable to the needs and preferences. However, the location does not align with the elderly needs and preferences. It can be evaluated which variables the location does not meet and see if it could be adapted by the location, such as an extra bus stop so the public transport is within the 500 meters of the elderly building. To realize an additional bus stop, consultation with the municipality will be required. Their decision-making falls within a certain sphere of influence.

6.4. Interpretation of the outcome

To interpret the scores per level and for the overall project, the researcher applied the developed step-by-step guide and filled in the assessment framework for both case studies. The completed frameworks can be found in Appendices L and M. Adjusted weightings are indicated in red. The frameworks were filled in retrospectively by the researcher, based on available documents, online research, and interview transcripts.

This means the framework was filled in using the researcher's interpretation of how stakeholders might have assessed the project at its initial stage, given the available information.

	Total level score	Weighting level 0–5	Framework score
Total points housing unit level	**3.78**	4	15.13
Total points building level	**3.62**	4	14.46
Total points location level	**4.02**	4	16.43
Sum of weights & points		12	46.02

Total framework score: 3.84

Table 6: Calculation total framework score Case A (own work, 2025)

Table 6 shows the scores per level and for the overall project for Case A. According to the transformation class, the location is seen as *highly transformable* for elderly living places. This is not surprising, as both resident and expert interviews emphasized the favourable location: close to the city centre, but situated in a quiet and safe residential area, with all primary amenities within walking distance and other facilities easily accessible by public transport or bicycle.

At both the housing unit and building level, the transformation class advises that the building is *transformable* for elderly living. A reason for this is that the building was a former school, making it relatively easy to adapt the units: each classroom was already ground-level and open in layout, supporting accessibility and ageing-in-place with minimal interventions. However, some more substantial adaptations were still required. For instance, all residents wanted a private balcony or garden, but the second-floor classrooms lacked balconies, and attaching them structurally was not feasible. A creative solution was implemented: freestanding balcony structures were placed instead. At the building level, accessibility was a major challenge, as discussed in Section 5.3.1. The main entrance stairs could not be adapted, so a second entrance was created, and a new elevator had to be installed to provide access to the upper floor. This case shows that even with a positive overall transformation class, it is essential to examine the scores at each level and pay particular attention to highly weighted variables with lower scores.

	Total level score	Weighting level 0–5	Framework score
Total points housing unit level	**4.18**	4	16.72
Total points building level	**4.11**	4	16.46
Total points location level	**2.97**	4	11.86
Sum of weights & points		12	45.04

Total framework score: 3.74

Table 7: Calculation total framework score Case B (own work, 2025)

Table 7 presents the level and overall scores for Case B. The location received the assessment *limited transformability* for elderly living places. Huge influence on this score is that several amenities are lacking in the direct environment. However, interviews from this case revealed that many elderly valued the ability to remain in their familiar neighbourhood, which in this case positively influenced their decision to move to De Benring. This demonstrates that a lower score for a level does not necessarily mean that elderly people will not move to the location.

At both the housing unit and building level, the transformation class assessed the building as *highly transformable* for elderly living. The building previously functioned as a care facility, meaning it already had a residential function and accessible layout. One drawback was the building's appearance, which still resembled a healthcare institution. This was identified as a barrier, as the building's visual identity discouraged some individuals from entering. This case again shows that even with a positive overall transformation class, it is essential to examine the scores at each level and pay particular attention to highly weighted variables with lower scores.

These results demonstrate that the score per variable reflects the ease or difficulty of adaptation during transformation. The resulting transformation class provides an indication of the project's potential to be repurposed into elderly housing that is aligned with their preferences and needs. However, it does not guarantee success: even if the transformation is considered difficult, it may still be feasible, for example through more extensive interventions. Moreover, the overall transformation class and the scores per level should be regarded as indicative advice for deciding whether to proceed with the transformation and which elements of elderly preferences and needs will be included in the project. It remains essential to evaluate the transformation potential at each level and to identify which variables can or cannot be realised during the process.

Chapter 7 Discussion

7. Discussion

This chapter provides a critical reflection on the results of the research. It begins with a summary of the key findings in relation to the main research question, followed by an interpretation of the results and their meaning. The other sections explore the broader implications for society, science, and practice. At the end, the limitations of the study are mentioned and recommendations for future research are made.

7.1. Key findings

The study addresses the pressing challenge of suitable housing shortages for the growing 65+ population in the Netherlands by investigating in what way vacant real estate can be repurposed to meet their specific housing needs and preferences. The findings demonstrate that vacant real estate, both residential and non-residential, holds strong potential for transformation into elderly housing, provided that it aligns with the needs of the target group across housing unit, building, and location levels. The data suggest that elderly residents prefer accessible, life-cycle proof homes with affordability, social safety, proximity to essential amenities, and both private and communal spaces.

When transforming the building to elderly housing that is aligned with the vital elderly preferences and needs the data reveals several barriers and opportunities. Barriers identified include technical constraints, layout limitations, financial feasibility, and lack of nearby amenities. Opportunities identified include spatial quality in existing structures, authentic character, affordability through reuse, communal potential, and inner-city location or close to village centre. Although several barriers are identified, the study demonstrates that these can often be overcome with creative design, stakeholder collaboration, and flexible budgeting. The developed assessment framework serves as a conversation tool to help assess the suitability of vacant buildings for elderly living places that is aligned with the preferences and needs, supporting informed decision-making and promoting aging in place while contributing to a more efficient housing flow.

7.2. Interpretation of results

Housing preferences and needs

Both theoretical and empirical findings underscore a high degree of alignment in elderly housing preferences, particularly concerning accessibility, affordability, and social interaction. The case studies confirmed expectations from the literature: the vital 65+ population prefers age-friendly apartments with the possibility of placing primary functions (living, sleeping, bathing) on one level, a compact apartment with a 3-room apartment, situated in familiar and socially active environments, and to have an own outdoor space with less maintenance. While the perspectives of residents and experts were largely aligned, yet not entirely identical. Subtle differences in emphasis could be observed, for instance, in how affordability, comfort, and lived experience were more frequently brought up by residents, whereas experts more often referred to feasibility,

design flexibility, and future-proofing. These distinctions raise interesting questions about the dynamics between user needs and professional considerations in transformation processes. It is notable that the differences did not appear to result in visible conflicts or mismatches in the outcomes. One possible explanation for this might lie in the way both cases were organised: in both De Getijden and De Benring, early collaboration between residents and professionals was a feature. This may have helped to surface and address different priorities early in the process. Rather than viewing the perspectives of residents and experts as strictly opposed, the empirical findings suggest they can complement one another. Design decisions should therefore be informed by a dialogue between professional expertise and resident lived experience.

Furthermore, the literature already suggested variation in preferences depending on age and household composition. However, the empirical data and focus group sessions revealed additional influencing factors, including tenure type, socio-economic status, location, preferred housing concept (individual or collective), and one's perception of their own future vitality. The last influence, in particular, was not anticipated by the researcher beforehand.

This confirms the need for adaptable and flexible assessment frameworks, as there is no such thing as a uniform vital 65+ elderly group. This heterogeneity aligns with earlier comment by De Jong (2021), who questioned the suitability of the ‘generic’ housing policies for elderly in the Netherlands, as also discussed in section 2.7. The findings underscore that transformation strategy for the vital 65+ elderly must be tailored and nuanced to also reflect the diversity within the elderly population.

Although this research focuses on the housing preferences of vital elderly residents, the case studies reveal that they already anticipate a future in which their vitality may decline. In Case A, for example, residents indicated that they are considering to make the garden easier to maintain or outsourcing the maintenance of their garden in the future. They also discussed the potential for transforming the shared space into an area that could accommodate care-related functions, as described in section 5.1.1. The developed assessment framework takes such changing needs into account by including variables related to flexibility and adaptability. Functionally, this may refer to the reprogramming of communal spaces, while physically it includes lifetime-proof features such as barrier-free layouts, wider doorways, and walk-in showers. At the location level, proximity to services becomes increasingly important as mobility declines. The framework therefore explicitly mentioned walking distances suitable for people using walkers. Case B has a nearby elderly day care center, highlighting how access to care-oriented facilities support aging in place. However, there are limits to how long elderly residents can remain in their current homes when physical or mental health significantly worsens, and they can´t live independent anymore. In such cases, relocation to more specialized forms of housing, such as care homes or dementia-friendly environments, becomes necessary. The framework thus supports aging in place up to a point but acknowledges that not all future care needs can be met within a transformed building.

Barriers and opportunities

Technical, functional, and financial barriers were highly building-specific and often tied to the original function and structure of the real estate. For example, accessibility challenges in Case A required structural adaptations, whereas Case B benefited from its prior use as a care facility, which already included key accessibility features. The appearance of the building also played a role: in Case A, the characteristic aesthetic of the former school was valued by residents and seen as a positive feature, while in Case B, the building appearance was still linked to the old care function negatively. These findings support the conclusion that not all vacant buildings are equally suitable for transformation. However, many can still be adapted through creative spatial solutions, where an early contractor involvement is recommended for these complex projects as well as hiring craftsmen.

Affordability emerged as one of the central preferences of elderly residents. Both cases showed that reuse of existing structures and limited demolition can contribute to delivering affordable homes. Nonetheless, financial risks, particularly those involving unforeseen costs were common. Both projects employed mitigation strategies such as fixed-price agreements with architects and contractors, budgeting for major unforeseen costs, and arranging for the seller to take on certain risks. In addition, resident involvement in specific project tasks helped lower overall costs. However, when financial setbacks occur, compromises must often be made, sometimes at the expense of integrating certain elderly preferences and needs. This highlights the thin line between affordability and integrating the preferences and needs in the transformation process. It also highlights the importance of the involvement of residents within the project to know which specific preferences and needs they value the most, because the framework is about the vital 65+ population in general, however during the research it became more clear that there are differences within this groups so therefore it is recommended to involve the residents within an early stage so the project reflects their preferences and needs.

On the opportunity side, the study illustrates how building characteristics (e.g., high ceilings, wide hallways) and location quality (e.g., local integration, proximity to amenities) can be leveraged to fulfil both housing and social needs. These findings suggest that repurposing vacant buildings can provide not only housing as a function but also contribute positively to quality of life.

As vitality declines, certain barriers identified in this study may become more pronounced. For instance, the distance to daily amenities, initially acceptable, can turn into a limitation when mobility decreases. However, repurposed vacant buildings also present specific opportunities. Both case studies showed strong social cohesion among residents, who offer each other informal support. This sense of community contributes to a trusted and caring environment, helping residents age in place longer despite increasing support needs. Such social dynamics can partly compensate for the absence

of formal care and reduce the urgency to relocate. Therefore, in addition to physical adaptations, fostering social interaction and mutual support within the building can be a powerful tool to extend the period elderly can live independently.

In some cases, a feature can be a barrier, while in other cases it can be an opportunity, depending on how well the existing building already aligns with the preferences and needs of the elderly. The ease with which the building can be adapted to these needs is integrated into the framework, where the user scores each variable based on how adaptable the building is for integrating that variable. This is reflected in the total score per level and in the overall framework. It provides an indication on the levels and overall, of how suitable the project is for incorporating the needs and preferences of the elderly. Based on this indication, stakeholders can make an informed decision about whether or not to proceed with the transformation.

Similar to the findings on housing preferences, subtle differences between residents and professionals also emerged in how they perceived barriers and opportunities. Residents primarily focused more on the practical day-to-day usability. While professionals, on the other hand, focused more on technical feasibility, early risk mitigation, and long-term adaptability.

Validation and practical use of the Framework

The assessment framework, validated through expert focus groups, was regarded as clear, structured, and useful as both a conversation starter and a prioritization tool. While it does not offer definitive transformation success predictions, it serves as a dynamic aid for evaluating the suitability of vacant real estate for elderly housing based on a building's characteristics and the preferences of the vital 65+ population.

A key strength of the framework lies in its flexibility: users can adjust weightings to reflect the needs of different subgroups within the vital 65+ population. The framework also distinguishes between essential requirements and personal preferences, helping to prioritize elements in the design and development process.

The findings from the expert focus group confirm that the framework is well-suited for a range of stakeholders, including municipalities, developers, housing associations, and architects. By translating abstract needs into tangible design criteria and transformation potential, the framework contributes to more inclusive and targeted housing solutions for the aging population.

7.3. Implications

This section discusses the societal, scientific, and practical implications of the findings in light of the existing theories and planning practice.

Societal relevance

The research confirms that aligning elderly housing needs with transformation strategies offers a societal benefit. It supports the principle of aging in place, allowing vital elderly to remain in their familiar environments, which is associated with improved well-being and social continuity. Furthermore, it frees up larger homes for younger households starting a housing flow as described in section 2.5, thereby it is contributing to a better functioning housing market and mitigating pressure on the housing supply.

Scientific contribution

This research supports existing theories on elderly housing, especially those that highlight accessibility, affordability, and social interaction as key principles. This study advances academic understanding by bridging the gap between elderly housing preference research and transformation practice. The study's finding that there is no single general elderly profile highlights the need for more tailored housing solutions. This contributes to the academic debate by challenging the notion of a generic elderly profile and providing evidence for the need for differentiated housing approaches.

Moreover, the developed assessment framework bridges the gap between abstract theory and practical application by offering a flexible tool to assess transformation potential based on real world constraints and user needs.

Practical implications

From a practical perspective, this study provides usable insights for design and planning process. It highlights the need to start transformation projects with a thorough analysis of user needs, combined with technical and financial feasibility studies. The study also stresses the importance of involving end-users, the elderly, in co-design processes to ensure that preferences are accurately reflected in the final design. The assessment framework developed in this study serves as a tool to support structured decision-making, identifying trade-offs, and communication among stakeholders. Its flexible, score-based structure allows practitioners to tailor evaluations to specific user groups, increasing the likelihood of better tailored outcome.

7.4. Limitations

This study has several limitations. At first, the number of case studies was limited to two. While this allowed for in-depth, qualitative exploration, it constrains the generalizability of the findings. The selected cases were deliberately contrasting in tenure type, location (urban vs. rural), scale, and transformation type to increase relevance. Nevertheless,

broader empirical validation across a more diverse sample is needed to confirm the wider applicability of the results.

Furthermore, the study only examined successful transformation projects. Despite attempts to include an unsuccessful case, this proved difficult because it could not be found, as described in section 3.3. As a result, it could by that potential barriers may have been underreported. To partially address this gap, interview questions were asked for examples beyond the specific case study. However, including failed transformations would have given more depth to understanding why some projects fail.

Another limitation concerns the sample of elderly interviewees. All participants in the empirical research had already moved to repurposed housing, which may bias. These individuals are likely to be more positive about transformed buildings. Including individuals who are hesitation to move or don't want to move to transformed buildings might have revealed different needs and barriers. However, the WoOn21 data has been included, which reflects the stated preferences of individuals who plan to move within the next two years.

In addition, a more recent data set of WoON (WoON24) was published during the final phase of the research, showing updated insights, such as increasing acceptable rental and purchase price levels. This may affect the continued relevance of the assessment framework and suggests the need for periodic updates to keep the framework aligned with current preferences and needs.

Furthermore, the focus group included only three experts. While their input was valuable, a broader expert group including stakeholders such as investors, architects, contractors, or municipal representatives could have provided additional insights on financial feasibility, practical implications, and design trade-offs.

Lastly, the assessment framework developed in this study was validated qualitatively through an expert focus group. While the experts input ensured professional relevance, the framework lacks quantitative testing. The weights and thresholds in the framework are based on literature, empirical results, and expert judgement, however, have not yet been statistically validated.

Despite these limitations, the study provides meaningful insights into in what way vacant real estate can be repurposed to meet the housing needs of the vital elderly. By combining literature result, empirical results and experts' judgement for validation this research gives a comprehensive assessment framework and research report.

7.5. Recommendations for future research

While this study provides valuable insights and a practical assessment framework, there are several areas that need further investigation to expand, refine and validate the findings.

One recommendation is that future research should aim to quantitatively validate the assessment framework. This includes statistically substantiating the weights and thresholds assigned to the different variables in the levels. Quantitative data collection among larger and more diverse samples of the vital 65+ population could help determine how preferences vary by factors such as age, tenure type, household composition, social-economic status, and perceived future vitality. This would improve the precision and robustness of the framework and make it suitable for broader application across the elderly housing sector.

Furthermore, researchers could investigate how the assessment framework adapts to different lifestyles or elderly housing concepts, such as individual living, co-housing, clustered living, or mixed-age communities. Customizing the framework for various elderly living typologies would support more inclusive and targeted transformation strategies.

Another recommendation is that future studies should apply and test the framework in practice, using real vacant real estate cases that are still in early transformation stages. This would test not only the usability of the tool by practitioners but also its actual effectiveness in supporting decision-making.

Finally, longitudinal research could follow residents over time to observe how housing needs evolve as vitality declines. While this study incorporated expected future housing needs and the concept of aging in place, it remains hypothetical. Monitoring residents in actual transformation projects would generate deeper insights into how adaptable a transformed building needs to be to accommodate future support needs. These findings could help optimize the framework and guide the design of housing that enables residents to age in place for as long as possible.

By addressing these areas, future research can enhance the applicability, inclusiveness, and quantitative foundation of the framework.

Chapter 8 Conclusion

8. Conclusion

The goal of this research was to explore how vacant real estate in the Netherlands can be repurposed to meet the growing demand for suitable housing for the vital 65+ population. The aim was to develop a practical assessment framework that enables stakeholders to assess whether a vacant building is suitable for transformation into elderly housing that aligns with the specific needs and preferences of this group. By connecting insights from literature, case studies, and expert validation, the study contributes to both improved decision-making in transformation processes, more suitable and attractive housing for the elderly and a more effective housing flow in the Netherlands.

8.1. Research questions

The main research question in this graduation thesis was:

In what way can vacant real estate in the Netherlands be repurposed to meet the specific housing needs and preferences of the vital 65+ population?

To answer the main research question, three sub-questions were addressed.

Sub-question 1: What are the key housing needs and preferences (on housing unit, building and location level) of the vital 65+ population in the Netherlands?

The results show that the vital 65+ population has clear and diverse preferences. At the housing unit level, a life-cycle proof design, accessibility, affordability, own outdoor space with less maintenance and compact apartments with 3 rooms are preferred. At the building level, accessibility, a characteristic building, opportunities for social interaction, and to still have privacy are important. At the location level, elderly strongly prefer to live in a familiar and socially environment with essential amenities such as daily shops, public transport, and healthcare nearby. While many needs are shared, preferences can vary within the vital 65+ group based on age, household composition, preferred housing form (e.g. Individual vs. collectively), tenure type, social-economic status, and perceived vitality.

Sub-question 2: What are the main barriers and opportunities to repurposing vacant real estate for elderly housing?

Barriers include technical and structural limitations of older buildings, layout inflexibility, adapting accessibility, high renovation costs and unforeseen costs leading to financial constraints, and insufficient amenities in the surrounding area. Opportunities lie in the spatial quality and character of existing buildings, the potential for communal facilities, affordability trough reuse, the chance to create elderly housing in familiar locations and central location with sufficient amenities nearby. The barriers and opportunities highly context dependent and linked to the adaptability of the building structure. In some cases, a feature can be a barrier, while in other cases it can be an opportunity, depending on how

well the existing building project already aligns with the preferences and needs of the elderly.

Sub-question 3: How to overcome the barriers when integrating the housing needs and preferences of the elderly?

Overcoming the barriers identified in repurposing real estate for the vital 65+ population requires a combination of creative, organisational and financial strategies. At the design level, smart architectural solutions, such as compact lifts, can help improve accessibility and comfort without extensive structural change. Early involvement of the contractor and even other technical experts is essential to identify and solve technical issues in an early stage. For the financial feasibility, including large unforeseen cost items in the budget, and establishing clear fixed budget agreements with contractors and architects proved effective in maintaining affordability. The feasibility can also be improved by adding new residential units to the site. Involving future residents and allowing them to influence priorities or take on tasks themselves can reduce costs, prioritisation of the preferences and needs and increase social cohesion.

8.2. General conclusion

Returning to the main research question:

"In what way can vacant real estate in the Netherlands be repurposed to meet the specific housing needs and preferences of the vital 65+ population?"

Vacant real estate can be repurposed into suitable housing for the vital 65+ population when the building and location allow for age-friendly features, in the dwelling, the building and the environment, such as accessibility, affordability, social interaction, and proximity to amenities. However, successful transformation depends on the extent to which these needs and preferences can be integrated within the constraints of the existing structure the building and environment. By using the developed assessment framework, embedded in a step-by-step guide, stakeholders have a practical and flexible conversation tool to assess whether the transformation is feasible and desirable. The framework supports tailored decision-making, improves collaboration, and ultimately contributes to more age-friendly and attractive housing for the elderly, which encourage them to move to a new home where they want to age in place and thereby improving the housing flow in the Netherlands.

The assessment framework, embedded in a step-by-step guide, can be used by municipalities, developers, architects, contractor, owners, housing associations, and investors, as a conversation and decision-making tool to align the preferences and needs of the elderly with the project feasibility. It is recommended to involve further residents from the start to ensure the transformation responds to their specific needs and preferences and to always examine all levels of the framework, as well as the variables within those levels, to determine which needs and preferences can realistically be implemented and which may require adjustment.

Chapter 9 Reflection

9. Reflection

This part presents a final reflection on my graduation process within the master track Management in the Built Environment (MBE). The reflection is structured around the learning goals I formulated at the start of my graduation process.

Approach

At the beginning of my graduation, one of my main learning objectives was to learn how to create a valid assessment framework that people in the field can use to assess vacant properties. To achieve this, I took a multiple qualitative approach consisting of a literature review, two case studies with interviews with experts and elderly residents, and validation through a focus group with experts. This combination was deliberately chosen to ensure both academic depth and practical relevance. Reflectively, this approach worked very well. The iterative development of the framework, starting with building the framework from theory, then refining it with the empirical findings and finally validating and refining it through a focus group, allowed me to explore the complexity of the framework in stages and make it more practical. I learnt that creating such a tool is not a linear process, it requires structuring, prioritisation and constant critical reflection. When I initially created the framework, it became a very long list of criteria. By making a clear separation between the general transformation to housing conditions (technical/financial) and the preferences and needs specific to vital elderly people, I was able to make it more structured and usable. This insight led directly to the development of a step-by-step guide prior to the framework.

Combination research and product (how and why)

Another important objective was creating the framework by drawing on insights from existing literature, case analysis with interviews with the elderly residents and the expert, and expert focus group. The research and product influenced each other strongly. Theoretical findings guided my initial framework design, while insights from interviews, particularly from the elderly themselves, revealed more specific and individual preferences. The focus group confirmed this need and suggested a clearer structure. Conversely, the need to build a practical tool influenced my research. I focused during the interviews and the focus group on variables how to make it measurable and therefore usable in practice. I learned that the design of a decision-making tool requires translating the concepts into tangible indicator and measurements. This goes something beyond literature summaries and demands analytical design thinking.

Learning from my own work

One of my key learning goals was to deepen my expertise on the needs and preferences of the elderly as well as strategies for repurposing buildings. I achieved this through literature, but even more through talking to elderly residents and experts with experience in elderly housing. These conversations gave me insight into both shared needs and

variability within the elderly group. I still agree that a one-size-fits-all approach does not work, and that designing elderly housing should not just be suitable, but it need to be an attractive environment where elderly want to move to. I also became more aware of the challenges and unique opportunities of transforming vacant real estate to elderly housing has. It is more complex than transforming for another target group were not everything needs to be accessible, however throughout my research it became more and more clear that these buildings offer lots of opportunities due to the old character, size and location that elderly value.

This understanding was further deepened through my internship at Platform31, where I aimed to gain more insight into daily practice in the field of elderly housing. My experience there was very positive, colleagues were always open to talk about my topic. I gained a lot of insight into ongoing projects by attending team meetings of the 'leefbaarheid en inclusie' team. I focused specifically on projects related to housing for the elderly. For example, I joined an interview about a pilot using VR glasses to help seniors visualise new housing options to stimulate the housing movement, assisted during an event about housing coaches for the elderly, and observed several webinars about senior housing. These experiences provided valuable context and strengthened the practical relevance of my graduation topic.

Another learning goal was to improve my interview skills and learn how to analyse and integrate qualitative data effectively. This went easier than I expected because I was deeply immersed in my subject, the interviews were smooth and natural conversations. Through extensive preparation, formulating detailed questions and expected answers, I could easily anticipate the interviewee's responses. Furthermore, analysing the interviews thematically was a fine structure where I could keep the overview in my detailed research. However, I underestimated how much time it would take to transcribe and analyse all the interviews.

Process and planning

At the beginning of the project, I set a personal goal to plan ahead, create deadlines for writing tasks, and avoid writing everything last-minute. Overall, I managed this goal well, despite significant delays for approval of my second case study. I decided to leave the rest of my schedule intact, especially the timing of the focus group. This created a hectic period in which I quickly had to analyse case B, a cross-case analysis and analyse those results with the literature so I could refine the framework and its step-by-step approach and sent it to the experts for the focus group. I did these analyses in a short draft version due to the time. It was stressful, but also a key moment that showed me I still hold a clear overview and deliver it one time. Later, when writing out the full results, I already had a structured rough draft, which made it easier to turn this into final text. I learned that writing becomes easier if you first do the analysis and write down the core insights in bullet form.

I also planned every week in advance, usually at the beginning or end of the week, and stuck to these plans. During the final weeks, I worked in blocks with daily goals and didn't move on to the next part until the previous was finished. That helped me maintain both structure and quality when writing the thesis.

Feedback from mentors

There was a good balance between on working on my thesis and the scheduled feedback sessions with my mentors. When additional questions or uncertainties arose between meetings, I could always reach out via email, and my mentors were responsive and supportive, this flexibility proved very helpful throughout the process.

I also appreciated the opportunity to discuss various aspects of my project with them in a more informal and open manner. Their tips were often practical and directly applicable. For example, they advised me to not only prepare detailed interview questions but also to note down the expected answers in advance. This helped me to guide the interviews more effectively and ensure I gathered the necessary depth. Another valuable piece of advice concerned the organisation of the focus group. My mentors suggested asking someone to assist by taking notes and supporting the session, allowing me to fully focus on my role as moderator. I followed this advice by involving my internship supervisor from Platform31, who also has substantial expertise in elderly housing preferences. After the session, we were able to reflect together on the key insights and areas for improvement, which was very useful.

Relevance: master track and MSc programme

The topic of this graduation project aligns closely with the MBE track, it focuses on the strategic and practical aspects of real estate transformation, stakeholder collaboration, and housing concepts. Societally, it contributes to two urgent themes in the Netherlands: the ageing population and the housing shortage. By facilitating suitable and attractive housing for the elderly, the project supports housing flow, freeing up family homes and improving match between housing demand and supply. Academically, this work addresses a gap: while much is known about elderly housing preferences and about real estate transformation, little research exists on how to assess the potential of vacant buildings for this target group. This framework aims to bridge that gap.

When I am a vital elderly person

When I will be a vital elderly myself, I would genuinely like to live in a project similar to the ones I visited during my research. I have been deeply inspired by the combination of private autonomy and shared social structures that these transformations offer. Especially the sense of security, mutual support, and the ability to organise collective activities together appealed to me. These aspects not only make life more enjoyable but also take away some of the worries that may arise when ageing, especially when ageing alone. Additionally, at case a A, I became genuinely enthusiastic about how beautifully the former school building had been transformed into life-cycle proof apartments. The

old character of the space was still very present, and I personally value that kind of atmosphere. I really appreciate it when a living environment has a sense of identity and history.

One quote I encountered during the case selection process stayed with me: “Not visibly prepared for your future.” It reflects a reality I now understand better: many elderly housing complexes are still associated with outdated images of retirement homes (in Dutch bejaardentehuis), places people moved seen as ‘last resort’. But due to increasing life expectancy and an ageing population, it makes much more sense to relocate while you are still vital, to a comfortable and future-proof environment where one can continue to live for many years. This shift in mindset is essential to creating housing options that people actively choose, rather than accept as a last resort.

I sincerely hope more attractive housing options for elderly people will become available in the near future. If so, I would love to live together with others, just like I do now, in a place where everyone has their own space, yet also shares the benefits of community, social connection, and informal care. And if this happens to be a beautifully transformed characteristic building, then that would be ideal!

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Appendix

A. Human Research Ethics

I. Applicant Information

PROJECT TITLE:	
Research period: *Over what period of time will this specific part of the research take place*	**Sept 2024 – June 2025**
Faculty:	**Architecture, Urbanism and Building Sciences**
Department:	**Management in the Built Environment**
Type of the research project: *(Bachelor's, Master's, DreamTeam, PhD, PostDoc, Senior Researcher, Organisational etc.)*	**Master's**
Funder of research: *(EU, NWO, TUD, other – in which case please elaborate)*	**TUD**
Name of Corresponding Researcher: *(If different from the Responsible Researcher)*	**Isabel de Bruijn**
Position of Corresponding Researcher: *(Masters, DreamTeam, PhD, PostDoc, Assistant/ Associate/ Full Professor)*	**Master**
Name of Responsible Researcher: ***Note:*** *all student work must have a named Responsible Researcher to approve, sign and submit this application*	**Gerard van Bortel**
Position of Responsible Researcher : *(PhD, PostDoc, Associate/ Assistant/ Full Professor)*	**Professor**

II. Research Overview

a) Please summarise your research very briefly (100-200 words)

What are you looking into, who is involved, how many participants there will be, how they will be recruited and what are they expected to do?

Add your text here – (please avoid jargon and abbrevations)
My research aims to develop a assessment framework to assess whether vacant real estate can be repurposed into elderly living spaces that meet the preferences and needs of the elderly. The focus is on the vital 65+ population in the Netherlands who are considering or have recently moved into elderly living spaces, specifically in transformed buildings. The study explores the preferences and needs of this group through a literature review and interviews with elderly individuals. Additionally, the barriers and opportunities associated with repurposing real estate are examined through case studies of buildings that have already undergone such transformations. These case studies involve analysing documents related to the transformations and conducting interviews with experts and elderly residents who have moved into the repurposed spaces.

Both the case studies and interviews with elderly residents contribute to refining the assessment framework. The number of participants will be around 10-20 people. The final step is to ensure the framework's applicability to vacant real estate by letting experts review the framework to validate its practical implementation.

III. Risk Assessment and Mitigation Plan

			If YES please complete the Risk Assessment and Mitigation Plan columns below.		*Please provide the relevant reference #*	
ISSUE	**Yes**	**No**	**RISK ASSESSMENT – what risks could arise?** *Please ensure that you list ALL of the actual risks that could potentially arise – do not simply state whether you consider any such risks are important!*	**MITIGATION PLAN – what mitigating steps will you take?** *Please ensure that you summarise what actual mitigation measures you will take for each potential risk identified – do not simply state that you will e.g. comply with regulations.*	**DMP**	**ICF**
A: Partners and collaboration						
1. Will the research be carried out in collaboration with additional organisational partners such as: • One or more collaborating research and/or commercial organisations • Either a research, or a work experience internship provider[1] [1] *If yes, please include the graduation agreement in this application*	**X**		In collaboration with the internship company Platform 31.		x	
2. Is this research dependent on a Data Transfer or Processing Agreement with a collaborating partner or third party supplier? *If yes please provide a copy of the signed DTA/DPA*		**X**				
3. Has this research been approved by another (external) research ethics committee (e.g.: HREC and/or MREC/METC)? *If yes, please provide a copy of the approval (if possible) and summarise any key points in your Risk Management section below*		**x**				
B: Location						
4. Will the research take place in a country or countries, other than the Netherlands, within the EU?		**x**				
5. Will the research take place in a country or countries outside the EU?		**x**				
6. Will the research take place in a place/region or of higher risk – including known dangerous locations (in any country) or locations with non-democratic regimes?		**x**				
C: Participants						
7. Will the study involve participants who **may** be vulnerable and possibly (legally) unable to give informed consent? (e.g., children below the legal age for giving consent, people with learning difficulties, people living in care or nursing homes,).		**x**				
8. Will the study involve participants who **may** be vulnerable under specific circumstances and in specific contexts, such as victims and witnesses of violence, including domestic violence; sex workers; members of minority groups, refugees, irregular migrants or dissidents?		**x**				

			If YES please complete the Risk Assessment and Mitigation Plan columns below.		*Please provide the relevant reference #*	
ISSUE	**Yes**	**No**	**RISK ASSESSMENT – what risks could arise?** *Please ensure that you list ALL of the actual risks that could potentially arise – do not simply state whether you consider any such risks are important!*	**MITIGATION PLAN – what mitigating steps will you take?** *Please ensure that you summarise what actual mitigation measures you will take for each potential risk identified – do not simply state that you will e.g. comply with regulations.*	**DMP**	**ICF**
9. Are the participants, outside the context of the research, in a dependent or subordinate position to the investigator (such as own children, own students or employees of either TU Delft and/or a collaborating partner organisation)? *It is essential that you safeguard against possible adverse consequences of this situation (such as allowing a student's failure to participate to your satisfaction to affect your evaluation of their coursework).*		x				
10. Is there a high possibility of re-identification for your participants? (e.g., do they have a very specialist job of which there are only a small number in a given country, are they members of a small community, or employees from a partner company collaborating in the research? Or are they one of only a handful of (expert) participants in the study?		x				
D: Recruiting Participants						
11. Will your participants be recruited through your own, professional, channels such as conference attendance lists, or through specific network/s such as self-help groups		x				
12. Will the participants be recruited or accessed in the longer term by a (legal or customary) gatekeeper? (e.g., an adult professional working with children; a community leader or family member who has this customary role – within or outside the EU; the data producer of a long-term cohort study)		x				
13. Will you be recruiting your participants through a crowd-sourcing service and/or involve a third party data-gathering service, such as a survey platform?		x				
14. Will you be offering any financial, or other, remuneration to participants, and might this induce or bias participation?		x				
E: Subject Matter *Research related to medical questions/health may require special attention. See also the website of the CCMO before contacting the HREC.*						
15. Will your research involve any of the following: • Medical research and/or clinical trials • Invasive sampling and/or medical imaging • Medical and *In Vitro Diagnostic Medical* Devices Research		x				
16. Will drugs, placebos, or other substances (e.g., drinks, foods, food or drink constituents, dietary supplements) be administered to the study participants? *If yes see here to determine whether medical ethical approval is required*		x				
17. Will blood or tissue samples be obtained from participants? *If yes see here to determine whether medical ethical approval is required*		x				

			If YES please complete the Risk Assessment and Mitigation Plan columns below.		*Please provide the relevant reference #*	
ISSUE	**Yes**	**No**	**RISK ASSESSMENT – what risks could arise?** *Please ensure that you list ALL of the actual risks that could potentially arise – do not simply state whether you consider any such risks are important!*	**MITIGATION PLAN – what mitigating steps will you take?** *Please ensure that you summarise what actual mitigation measures you will take for each potential risk identified – do not simply state that you will e.g. comply with regulations.*	**DMP**	**ICF**
18. Does the study risk causing psychological stress or anxiety beyond that normally encountered by the participants in their life outside research?		x				
19. Will the study involve discussion of personal sensitive data which could put participants at increased legal, financial, reputational, security or other risk? (e.g., financial data, location data, data relating to children or other vulnerable groups) *Definitions of sensitive personal data, and special cases are provided on the TUD Privacy Team website.*		x				
20. Will the study involve disclosing commercially or professionally sensitive, or confidential information? (e.g., relating to decision-making processes or business strategies which might, for example, be of interest to competitors)		x				
21. Has your study been identified by the TU Delft Privacy Team as requiring a Data Processing Impact Assessment (DPIA)? *If yes please attach the advice/ approval from the Privacy Team to this application*		x				
22. Does your research investigate causes or areas of conflict? *If yes please confirm that your fieldwork has been discussed with the appropriate safety/security advisors and approved by your Department/Faculty.*		x				
23. Does your research involve observing illegal activities or data processed or provided by authorities responsible for preventing, investigating, detecting or prosecuting criminal offences *If so please confirm that your work has been discussed with the appropriate legal advisors and approved by your Department/Faculty.*		x				
F: Research Methods						
24. Will it be necessary for participants to take part in the study without their knowledge and consent at the time? (e.g., covert observation of people in non-public places).		x				
25. Will the study involve actively deceiving the participants? (For example, will participants be deliberately falsely informed, will information be withheld from them or will they be misled in such a way that they are likely to object or show unease when debriefed about the study).		x				
26. Is pain or more than mild discomfort likely to result from the study? And/or could your research activity cause an accident involving (non-) participants?		x				
27. Will the experiment involve the use of devices that are not 'CE' certified? *Only, if 'yes': continue with the following questions:*		x				

			If YES please complete the Risk Assessment and Mitigation Plan columns below.		*Please provide the relevant reference #*	
ISSUE	**Yes**	**No**	**RISK ASSESSMENT – what risks could arise?** *Please ensure that you list ALL of the actual risks that could potentially arise – do not simply state whether you consider any such risks are important!*	**MITIGATION PLAN – what mitigating steps will you take?** *Please ensure that you summarise what actual mitigation measures you will take for each potential risk identified – do not simply state that you will e.g. comply with regulations.*	**DMP**	**ICF**
• Was the device built in-house?						
• Was it inspected by a safety expert at TU Delft? *If yes, please provide a signed device report*						
• If it was not built in-house and not CE-certified, was it inspected by some other, qualified authority in safety and approved? *If yes, please provide records of the inspection*						
28. Will your research involve face-to-face encounters with your participants and if so how will you assess and address Covid considerations?	**x**		I will keep enough distance between me and the participant			
29. Will your research involve **either:** a) "big data", combined datasets, new data-gathering or new data-merging techniques which might lead to re-identification of your participants **and/or** b) artificial intelligence or algorithm training where, for example biased datasets could lead to biased outcomes?		**x**				
G: Data Processing and Privacy						
30. Will the research involve collecting, processing and/or storing any directly identifiable PII (Personally Identifiable Information) including name or email address that will be used for administrative purposes only? (eg: obtaining Informed Consent or disbursing remuneration)		**x**				
31. Will the research involve collecting, processing and/or storing any directly or indirectly identifiable PIRD (Personally Identifiable Research Data) including videos, pictures, IP address, gender, age etc and **what other Personal Research Data** (including personal or professional views) will you be collecting?	**x**		I will collect their age in the categories 65-74 and 75+. Also information about with type of personality they have and living status.		x	
32. Will this research involve collecting data from the internet, social media and/or publicly available datasets which have been originally contributed by human participants	x		I will collect data from WoOn21, Woonzorg Nederland and platform 31.		x	
33. Will your research findings be published in one or more forms in the public domain, as e.g., Masters thesis, journal publication, conference presentation or wider public dissemination?	**x**		My thesis will be uploaded on the TU Delft repository.		x	
34. Will your research data be archived for re-use and/or teaching in an open, private or semi-open archive?		**x**				

IV. Signature/s

Please note that by signing this checklist list as the sole, or Responsible, researcher you are providing approval of the completeness and quality of the submission, as well as confirming alignment between GDPR, Data Management and Informed Consent requirements.

Isabel de Bruijn

Signature of Corresponding Researcher:

Date: 19-12-2024

Gerard van Bortel

Signature (or upload consent by mail) Responsible Researcher:

Date:

B. Data Management Plan

Plan Overview

A Data Management Plan created using DMPonline

Title: Transforming empty real estate into elderly housing

Creator: Isabel de Bruijn

Affiliation: Delft University of Technology

Funder: Delft University of Technology

Template: TU Delft Data Management Plan template (2021)

Project abstract:

This study investigates how vacant real estate in the Netherlands can be repurposed to meet the housing needs of the growing 65+ population, to stimulate the housing flow. The problem is the increasing demand for suitable elderly housing as the number of people aged 65 and older continues to rise, with limited current options for independent senior living. The research employs qualitative methods, beginning with a literature review to outline elderly needs and repurposing real estate opportunities, followed by cases analysis with semi structured interviews with real estate experts and vital 65+ elderly to refine the proposed framework. The goal is to develop a assessment framework to help assess the suitableness of the vacant real estate to a senior living, which can assist in effective decision-making for consultants, developers and housing organisations. Expected deliverables include a final report, a structured assessment framework, and a public presentation. This framework is designed to facilitate the transition of seniors into new housing while making larger homes available, thus enhancing overall housing flow.

ID: 166008

Start date: 02-09-2024

End date: 04-07-2025

Last modified: 13-01-2025

Transforming empty real estate into elderly housing

0. Administrative questions

1. Name of data management support staff consulted during the preparation of this plan.

My faculty data steward, Janine Strandberg, has reviewed this DMP on 19-12-2024.

2. Date of consultation with support staff.

2025-01-13

I. Data description and collection or re-use of existing data

3. Provide a general description of the type of data you will be working with, including any re-used data:

Type of data	File format(s)	How will data be collected (for re-used data: source and terms of use)?	Purpose of processing	Storage location	Who will have access to the data
Audio recordings from interviews	.mp3 files	Audiorecording. with an audio recorder (my personal iphone).	To transcribe and summary the interviews	Temporarily be saved on a audio recording device, my iphone. After making the transcription of the recording, the audio recording will be deleted.	Isabel de Bruijn (researcher)
Anonymised elderly interviews transcipts and summaries (age group 65-74 or 75+ and owneroccupied or rental) Informed and signed consent forms.	.pdf files	From the audio recordings. Mannually transript and summarised Interview elderly are conducted on case location where they have shared spaces. Elderly have been approached through a letter in their letterbox.	To analyse, The elderly on their preferences and needs SQ1 & SQ2	TU Delft project data storage drive	Isabel de Bruijn (Researcher) G.A.van Bortel (1st supervisor) H.J.F.M. Boumeester (2st supervisor)
Anonymised experts interviews transcipts (Email addresses for digital communication) Informed and signed consent forms.	.pdf files	From the audio recordings. Mannually transript and summarised Interview experts are conducted on case location, on their office or online. They have been approached by email.	To analyse the case on barriers and oppertunities of transforming vacant real estate to elderly living places. SQ2& SQ3	TU Delft project data storage drive	Isabel de Bruijn (Researcher) G.A.van Bortel (1st supervisor) H.J.F.M. Boumeester (2st supervisor)

Case documents	.pdf files	Provided by the architect, real state developer and/or housing association	To analyse the case on barriers and oppertunities of transforming vacant real estate to elderly living places. SQ2	TU Delft project data storage drive	Isabel de Bruijn (Researcher) G.A.van Bortel (1st supervisor) H.J.F.M. Boumeester (2st supervisor)

4. How much data storage will you require during the project lifetime?

- < 250 GB

II. Documentation and data quality

5. What documentation will accompany data?

- Other - explain below
- Methodology of data collection

The dataset will not be shared in a data repository, but the methodology of data collection will be explained in the MSc thesis, which is made available in the TU Delft Education repository.

III. Storage and backup during research process

6. Where will the data (and code, if applicable) be stored and backed-up during the project lifetime?

- Project Storage at TU Delft
- Another storage system - please explain below, including provided security measures

External recording device: Used as a temporary storage location for recorded on-site interviews. Interviews will be deleted from device as soon as they are transcript and/or summarized.
Analysis of the already exsiting elderly interviews of my intership company will be also saved on the storage drive (secured environment) from the internship company Platform31.

IV. Legal and ethical requirements, codes of conduct

7. Does your research involve human subjects or 3rd party datasets collected from human participants?

- Yes

8A. Will you work with personal data? (information about an identified or identifiable natural person)

If you are not sure which option to select, first ask yourF aculty Data Steward for advice. You can also check with the privacy website . If you would like to contact the privacy team: privacy-tud@tudelft.nl, please bring your DMP.

- Yes

8B. Will you work with any other types of confidential or classified data or code as listed below? (tick all that apply) If you are not sure which option to select, ask yourF aculty Data Steward for advice.

- No, I will not work with any confidential or classified data/code

9. How will ownership of the data and intellectual property rights to the data be managed?

For projects involving commercially-sensitive research or research involving third parties, seek advice of yourF aculty Contract Manager when answering this question. If this is not the case, you can use the example below.

This research is for a master's thesis executed by a student. Therefore, the researcher will be the owner of the data and the output of this data will be shared with the university. Also, the information used in the thesis will only be the main findings from the results.

10. Which personal data will you process? Tick all that apply

- Other types of personal data - please explain below
- Data collected in Informed Consent form (names and email addresses)
- Signed consent forms
- Gender, date of birth and/or age
- Email addresses and/or other addresses for digital communication

audio-recordings (interview only)
professional opinion on building transformation to elderly living places (interview only)

11. Please list the categories of data subjects

Interview participants are experts on building transformation to elderly living places in urban areas from the Netherlands.
Interview participants are elderly who are already moved to a transformed building for elderly in the Netherlands.

12. Will you be sharing personal data with individuals/organisations outside of the EEA (European Economic Area)? No

15. What is the legal ground for personal data processing?

- Informed consent

The HREC informed consent guide and template will be used to create the informed consent forms for the interviewees (template 2 in the HREC guide). For the anonymous surveys, an Opening Statement (template 1 in the HREC guide) will be used in place of the explicit Informed Consent form.

16. Please describe the informed consent procedure you will follow:

Interviews: All interview participants will be asked for their written consent for taking part in the study and for data processing before the start of the interview. Interviewees will also be allowed to review the anonymous transcriptions from their interviews before they are finalised and used for analysis.

17. Where will you store the signed consent forms?

- Same storage solutions as explained in question 6

18. Does the processing of the personal data result in a high risk to the data subjects?

If the processing of the personal data results in a high risk to the data subjects, it is required to perform aDat a Protection Impact Assessment (DPIA). In order to determine if there is a high risk for the data subjects, please check if any of the options below that are applicable to the processing of the personal data during your research (check all that apply).
If two or more of the options listed below apply, you will have to complete the DPI A. Please get in touch with the privacy team: privacy-tud@tudelft.nl to receive support with DPIA.
If only one of the options listed below applies, your project might need a DPIA. Please get in touch with the privacy team: privacy-tud@tudelft.nl to get advice as to whether DPIA is necessary.
If you have any additional comments, please add them in the box below.

- Data concerning vulnerable data subjects

19. Did the privacy team advise you to perform a DPIA?

- No

22. What will happen with personal research data after the end of the research project?

- Personal research data will be destroyed after the end of the research project
- Anonymised or aggregated data will be shared with others

V. Data sharing and long-term preservation

27. Apart from personal data mentioned in question 22, will any other data be publicly shared?

- I do not work with any data other than personal data

29. How will you share research data (and code), including the one mentioned in question 22?

- My data will be shared in a different way - please explain below

Anonymised data collected during the project will be included in the body and appendix of the MSc thesis, made available in the TU Delft Educational repository.
The dataset is not shared in a data repository

30. How much of your data will be shared in a research data repository?

- < 100 GB

31. When will the data (or code) be shared?

At the end of the research project

32. Under what licence will be the data/code released?

- Other - Please explain

Research data are only shared within the MSc thesis, which is automatically placed under copyright in the Education repository.

VI. Data management responsibilities and resources

33. Is TU Delft the lead institution for this project?

- Yes, the only institution involved

34. If you leave TU Delft (or are unavailable), who is going to be responsible for the data resulting from this project?

Thesis supervisor, Gerard van Bortel of Management in the Built Environment

35. What resources (for example financial and time) will be dedicated to data management and ensuring that data willbe FAIR (Findable, Accessible, Interoperable, Re-usable)?

Research data are only shared within the MSc thesis: no additional resources are required.

C. Case Longlist

Categorie A: van niet verblijfsfunctie naar woonfunctie:

De Getijden – Veldstraat, Nijmegen (2019)
Transformatie van school naar levensloopbestendige koopwoningen.

De Schrijver – Akkerstraat, Eindhoven (2016)
Transformatie van school naar levensloopbestendige woningen.

Vermeerschool – Hilversum (2007)
School getransformeerd naar seniorenwoningen.

Saraburcht – Rotterdam (2003)
Kantoor getransformeerd naar woonfunctie voor woongroep 55+.

Domus Valuas (diverse locaties, recent)
Luxe huurappartementen voor senioren.

B: Van verblijf functie naar woonfunctie:

Loosduinse Hof – Den Haag (2022)
Verzorgingstehuis naar zelfstandige woningen voor 65+ met lichte zorgvraag.

Brinkpark – Blokker (2018)
Verzorgingshuis getransformeerd tot seniorenwoningen

Foreschate – Boschgeest (2023)
Van woonzorgcentrum naar zelfstandig wonen voor ouderen.

Huis Assendorp – Zwolle (2018)
Zorgkamers samengevoegd tot 2/3 kamerappartementen voor ouderen (met en zonder zorg) en jongeren.

De Benring – Voorst (2014)
Verzorgingstehuis tot ouderenwoningen in hoofdgebouw en jongerenwoningen in de losstaande aanleunwoningen gemaakt

Oosterparkheem – Groningen (2024)
Verblijfsfunctie naar 40 zorgstudio's en 37 zelfstandige seniorenwoningen met vitale mix.

Livv Inn – Hilversum (2020)
Voormalig zorgcentrum De Boomberg getransformeerd tot wooneenheden met leefmodules.

’t Nieuwe Kampje – Loenen (2017)
Verzorgingshuis naar gemengd wonen voor vitale ouderen, zorgbehoevenden en jongere huurders.

Buiten Zorg – Zuid-Scharwoude (2018)
Verzorgingstehuis vernieuwd tot moderne seniorenhuisvesting met zorgaanwezigheid.

C: Van niet woonfunctie naar woonfunctie met gemengde doelgroep:

Meisjesschool – Rotterdam (2018)
Monumentale school naar woningen voor tweeverdieners, doorstromers en senioren.

Bassein – Wormer (2020)
Pakhuis naar levensloopbestendige woningen; gemengde doelgroep, koop en huur.

Mariëngaerde – Warmond (2020)
Groot seminarie naar wonen voor gemengde doelgroep.

D: Van niet verblijf functie naar zorgcomplex:

Rosorum Koningsschool – Apeldoorn (2021)
School getransformeerd tot zorgcomplex.

Residentie Joannes de Deo – Haarlem (2014)
Transformatie naar zorgwoningen voor ouderen.

Onnastraat – Steenwijk (2022)
Kerk naar ouderenwoningen voor mensen met verstandelijke beperking.

Oosterkerk – Aalten (2022)
Kerk naar seniorenwoningen voor mensen met dementie.

Bartholomeus Gasthuis – Utrecht
Historisch complex met zorgfunctie.

Residence De Stek – locatie onbekend (2019)
School naar woonzorgcomplex voor minder valide ouderen.

Landgoed Groot Bijstervelt – Oirschot (2020)
(Deels) nieuwbouw op voormalig kloosterterrein, nu zorgwoningen voor ouderen met dementie.

E: Bouw is bezig of moet nog starten:

De Laak De Ronde – Eindhoven (planning)
Project OKKO; divers project met o.a. ouderenwoningen, deels sloop/nieuwbouw.

Landgoed Blom – Amersfoort (planning)
Kloosterterrein voor wonen voor iedereen; mix van studenten, senioren en zorgwoningen.

Haarendael – Haaren (planning)
Van klooster naar zorgcomplex.

Kloosterkwartier – Veghel (in ontwikkeling)
Ziekenhuisterrein en klooster naar wonen voor diverse doelgroepen, inclusief ouderen.

Kapteynsterrenwacht – Roden (initiatiefase)
Initiatiefgroep actief voor toekomstig woonproject (woongroep ouderen).

D. Themes from literature

In dit document staan de thema's vanuit de literatuurstudie die gebruikt zijn om de interview transcripten thematisch te analyseren.

Preferences and needs:

Levels: woning, woongebouw en woonomgeving

Thema's:

Levensloopbestendig

Toegankelijkheid

Sociaal

Betaalbaarheid

Voorzieningen & faciliteiten

Bereikbaarheid

Veiligheid

Privacy

Omgevingskenmerken

Overig

Barriers and opportunity's

Levels: woning, woongebouw en woonomgeving

Thema's: Alle thema's van de preferences and needs zijn meegenomen om zo te onderzoeken welke barriers and oppertunities er kunnen zijn bij het transformeren specifiek naar de ouderen woonwensen en behoefte. Verder zijn de volgende thema's nog toegevoegd op basis van de literatuur over transformatie

Technisch haalbaar

Functioneel haalbaar

Financieel haalbaar (gekoppeld met betaalbaarheid)

E. Interview protocol residents

Introductie

Bedankt dat u wilt deelnemen aan dit interview. Ik ben Isabel de Bruijn en ben momenteel aan het afstuderen van de master Management in the Built Environment aan de Technische Universiteit van Delft. Ik loop mijn afstudeerstage bij Platform31.

Dit interview is onderdeel van een master thesis onderzoek aan de TU Delft, hierin wordt onderzocht hoe leegstaand vastgoed getransformeerd kan worden naar vitale ouderenwoningen die aansluiten bij de woonwensen en behoefte.

Het doel van het interview is om in kaart te brengen wat uw woonwensen en behoefte zijn en hoe deze wel of niet gerealiseerd zijn in het transformatie project. Verder is het doel om te onderzoeken welke kansen en obstakels u ziet bij het transformeren van leegstaand vastgoed tot ouderenwoningen.

Het interview zal 45 tot 60 minuten in beslag nemen waarbij ik u eerst wat algemene vragen ga stellen over de reden waarom u verhuisd bent en dan ook waarom specifiek naar dit project.

Daarna volgen er vragen over uw woonwensen en behoefte, en hoe dit aansluit op uw huidige woning op drie verschillende niveaus: uw woning, het gehele woongebouw en over de woonomgeving. Er zal gevraagd worden (op de verschillende levels) of uw woonwensen en behoefte in het project gerealiseerd zijn (welke wel en welke niet).

Als laatste voordat we gaan afsluiten zal ik u weer algemenere vragen stellen over welke kansen en obstakels u ziet bij het transformeren naar leegstaand vastgoed tot ouderenwoningen die aansluiten bij de woonwensen en behoefte. Tenslotte zal er ook nog tijd zijn voor onderwerpen die nog niet besproken zijn die u wel wilt toevoegen.

Informed consentformulier (doorlopen en laten ondertekenen + Ik zal zo de recorder aanzetten en u opnieuw vragen of akkoord gaat met dat het interview zal worden opgenomen.)

Heeft u nog vragen en opmerkingen voordat we gaan beginnen?

Recording aanzetten en akkoord vragen.

Algemeen

Voor de verhuizing

1. Kunt u mij vertellen waarom u heeft besloten om te verhuizen? (Verhuismotieven: kosten, locatie, te grote woning(onderhoud), ongeschikt toekomst, dichter bij familie en vrienden)
2. In wat voor soort woning woonde u voorheen? (koop/huur, eengezinswoning/appartement, ligging)
3. Waren er specifieke dingen in uw vorige woning die niet meer voldeden aan uw wensen of behoeften? Toekomstig behoefte? *(Locatie, huis niet geschikt, betaalbaarheid, voorzieningen, sociale contacten)*
4. Wat waren uw wensen toen u keek naar een mogelijke nieuwe woning? *(Locatie (in dezelfde buurt?), woning type (koop/huur/eengezinswoning/appartement), betaalbaarheid, levensloopbestendige woning, voorzieningen, sociale contacten)*

Keuze voor dit project

5. Kunt u vertellen hoe u bij dit woonproject terecht bent gekomen en wat u aansprak? *(Locatie (in dezelfde buurt?), betaalbaarheid, levensloopbestendige woning, voorzieningen, sociale contacten)*
    - Wat was de meest doorslaggevende factor om te verhuizen naar uw woning? De woning zelf, het gebouw of de woonomgeving?
        - Veranderd dit denkt u naar mate u oudere wordt?
    - Had u een specifieke keuze voor verhuizen naar een getransformeerd gebouw?
6. Is op ***lange termijn*** deze woning voor u nog steeds geschikt? Toekomst bestendig (Gezondheid: slechter ter been, zorg nodig)
    - Moeten er nog aanpassing gedaan worden? Zijn deze te realiseren?
7. Heeft u ook naar *andere woningen gekeken*? Waarom wel/niet?
    - En waren dit ook transformatie projecten?

Beoordeling een getransformeerde woning

8. Hoe ervaart u het wonen in een gebouw dat vroeger een andere functie had?
    - Positieve aspecten? *(Ruimte, sfeer, karakter van het gebouw, duurzaamheid)*
    - Uitdagingen of nadelen? (Onhandige ruimte/indeling, locatie, voorzieningen)
9. Als u terugkijkt op uw verhuizing, zou u opnieuw de keuze maken om te verhuizen naar getransformeerd vastgoed? Waarom wel/niet?

Woning Level

Woning kenmerken

10. Wat vindt u prettig aan uw woning? (Groote, aantal kamers, gelijkvloers/nultrede, comfort)
11. Wat zijn voor u de *belangrijkste kenmerken* van de woning, op basis van uw *huidige en toekomstige situatie*? (Drempelloos, gelijkvloers/nul-trede, brede deuren, inloopdouche, comfort)
12. Zijn er dingen die *u mist*, *niet gerealiseerd* konden worden *of graag anders* had gezien? Speelde de transformatie naar woning functie hierbij een rol?

Gebouw Level

Toegankelijkheid en faciliteiten

13. Hoe ervaart u de *toegankelijkheid* van het gebouw? (Bereikbaarheid, ingang, gangen, evt. liften)

14. Zijn er voorzieningen/gemeenschappelijke ruimtes in het gebouw (Ontmoetingsruimten, gedeelde keukens, binnentuinen, logeerfunctie, zorgvoorzieningen, sociale interactie (eenzaamheid)) Maakt u hier *gebruik* van? Vindt u dit *belangrijk* in het woongebouw waarom wel/niet? *Mist u* nog voorzieningen/gemeenschappelijke ruimtes?

Sociale interactie

15. Hoe belangrijk vindt u *sociale interactie* bij de keuze die u heeft gemaakt? (In de buurt wonen van ouderen, gezamenlijk activiteiten)

Kansen en obstakels van transformatie (gebouwniveau)

16. Zijn er kenmerken van het gebouw dat er *goed* werken, *of beter* zouden kunnen? (Geluidsoverlast, isolatie, toegankelijkheid)

Woonomgeving Level

Bereikbaarheid, voorzieningen, omgevingskenmerken

17. Hoe ervaart u de ***ligging*** van het gebouw? (Soort wijk (gemixte huishoudens) bereikbaarheid, toegankelijkheid, voorzieningen en faciliteiten, parkeermogelijkheden en omgevingskenmerken: veiligheid, geluid of geuren)
    - Belangrijkste kenmerken ligging?
    - Geschikt voor *ouderenhuisvesting*? Waarom wel/niet? (+ algemeen)

18. Zijn er voldoende voorzieningen en faciliteiten in de buurt? (Winkels, huisarts, apotheek en welzijn, sociale interactie en openbaar vervoer)
    - Zo nee? Welke mist u?
    - Welke voorzieningen zou u echt niet kunnen missen?
    - *Hoe ver* vindt u dat deze voorzieningen *maximaal* van de woning kunnen liggen?

19. Hoe ervaart u de *omgeving rondom* het gebouw? (Voetgangersvriendelijke kenmerken, bankjes, toegang openbare ruimtes gebouw en voorzieningen?
    - Geschikt voor ouderen?
    - Welke aanpassingen kunnen er nog gedaan worden? (Toevoegen zitbankjes, hellingbanen, drempelloos,

Kansen en obstakels van transformatie (Woonomgeving level)

20. Wat ziet u als kansen en obstakels van de locatie/woonomgeving van leegstaand vastgoed?

Algemeen richting afsluiting

21. Denkt u dat een *nieuwbouwproject betere ouderenwoningen* had kunnen opleveren dan de transformatie van dit gebouw? Waarom wel/niet?

22. Denkt u dat dit gebouw van oorsprong geschikt was om te transformeren naar woningen voor ouderen? Waarom wel/niet?

23. Wat ziet u in het *algemeen als obstakels en kansen* bij het transformeren van leegstaand vastgoed naar een gebouw met woningen voor ouderen (woning, gebouw en omgeving)?

24. Heeft u nog andere opmerkingen of suggesties? (Getransformeerde woning, het gebouw of de omgeving level)

Bedanken voor deelname

F. Interview protocol experts

Introductie

Bedankt dat u wilt deelnemen aan dit interview. Ik ben Isabel de Bruijn en ben momenteel aan het afstuderen van de master Management in the Built Environment aan de Technische Universiteit van Delft. Ik loop mijn afstudeerstage bij Platform31.

Dit interview is onderdeel van een master thesis onderzoek aan de TU Delft, hierin wordt onderzocht hoe leegstaand vastgoed getransformeerd kan worden naar vitale ouderenwoningen die aansluiten bij de woonwensen en behoefte.

Het doel van het interview is om in kaart te brengen welke kansen en obstakels u ziet bij het tuin ontwerp voor ouderenwoningen bij deze transformatie casus, maar ook in het algemeen (andere casussen) en hoe deze obstakels verholpen kunnen worden dan wel beperkt kunnen worden.

Het interview zal 30 minuten in beslag nemen waarbij ik u eerst wat algemene vragen ga stellen over uw rol binnen het project. Daarna volgen er vragen over de kansen en obstakels die je bent tegengekomen bij het ontwerp van de buitenruimte bij de ouderenwoningen die aansluiten bij de woonwensen en behoefte en hoe deze obstakels zijn opgelost (of niet). Tenslotte zal er ook nog tijd zijn voor onderwerpen die nog niet besproken zijn die u wel graag nog wilt toevoegen.

Informed consentformulier (doorlopen en laten ondertekenen + Ik zal zo de recorder aanzetten en u opnieuw vragen of akkoord gaat met dat het interview zal worden opgenomen.)

Heeft u nog vragen en opmerkingen voordat we gaan beginnen?

Recording aanzetten en akkoord opnemen vragen.

Algemeen

1. Kunt u kort **uw rol** binnen dit project beschrijven? (Ontwerp, besluitvorming, regelgeving, technische uitvoering, bewonersparticipatie)

2. Waarom is er voor deze locatie met leegstaande functie gekozen? (Bereikbaarheid, voorzieningen, sociale cohesie en omgevingskenmerken)

3. Wat waren de uitgangspunten en ambities voor dit transformatieproject? (Betaalbaarheid, toegankelijkheid, duurzaamheid, sociale cohesie)
    - Waren deze uitgangspunten specifiek gericht op wonen voor ouderen?

4. Welke ***uitdagingen*** kwam u tegen bij het transformeren van de (casus) naar ouderenhuisvesting die aansluiten bij de woonwensen en behoefte van ouderen? ((Bouw)technische, functionele, financiële, regelgevende en sociale obstakels.)
    - Hoe zijn deze uitdaging (gedeeltelijk) opgelost?

5. Welke ***kansen*** zag u specifiek bij de transformatie van dit gebouwtype (casus) naar ouderenwoningen? *(Ruimte, sfeer, karakter van het gebouw (hoge plafonds), duurzaamheid, financieel)*

6. Is bij dit project ook gekeken naar de optie sloop nieuwbouw? Waarom wel/niet?

7. Denkt u dat een nieuwbouwproject betere ouderenwoningen had kunnen opleveren dan de transformatie van dit gebouw? Waarom wel/niet?

Gebouw Level

Kansen en obstakels van transformatie:

8. Welke bestaande gebouwkenmerken droegen *positief* bij aan ouderenhuisvesting? (Brede gangen, grote ramen, herkenbare structuur.)

9. Wat waren de grootste uitdagingen bij het aanpassen van het gebouw voor woongebouw voor ouderenhuisvesting? Hoe zijn deze opgelost? (Akoestiek/geluidsoverlast, isolatie, energieprestaties, beperkte uitbreidingsmogelijkheden, financieel.)
    - Waren er obstakels bij het behouden of aanpassen van de bestaande structuur? (Indelingsvrijheid, brandveiligheid, daglichttoetreding)

10. Zijn er dingen in het gebouw die *niet gerealiseerd* konden worden? Of niet optimaal werken/beter hadden gekund? (Toegankelijkheid, liften, door financiële redenen niet uitgevoerd)

Toegankelijkheid en faciliteiten

11. Hoe is het gebouw aangepast om de *toegankelijkheid* voor ouderen te verbeteren? (Bereikbaarheid, ingang, bredere gangen, automatische deuren, liften)

12. Welke *gemeenschappelijke ruimtes/faciliteiten* zijn gecreëerd? Waarom en hoe functioneren deze? (Ontmoetingsruimten, gedeelde keukens, binnentuinen, logeerfunctie, zorgvoorzieningen, sociale interactie (eenzaamheid))
    - Zijn er wensen van gemeenschappelijke ruimtes/faciliteiten van bewoners die niet gerealiseerd konden worden?

Woning Level

Woning kenmerken specifiek op de casus

13. Hoe is de woningindeling afgestemd op de behoeften van ouderen? (Bijv. drempelloos, nul-trede, brede deuren, inloopdouche, goede verlichting, flexibiliteit)

- Zijn er specifieke ontwerpkeuzes gemaakt om de zelfredzaamheid van ouderen te ondersteunen? (Slimme technologie, aanpasbare woningen, sociale ruimten)
- Welke **obstakels** kwamen jullie hierbij tegen? Hoe zijn deze (gedeeltelijk) opgelost?
- Welke **kansen** zag u in het creëren van de woningen in het gebouw?

14. Zijn er dingen voor de woning die niet gerealiseerd konden worden of anders gepland waren? Speelde de transformatie naar woning functie hierbij een rol?'

Kansen en obstakels van transformatie (woningniveau)

15. Welke bestaande gebouwkenmerken droegen positief bij aan ouderenhuisvesting? (Hoge plafonds, grote ramen, brede gangen, herkenbare entree.)

16. Welke elementen vormden juist een obstakel voor creëren van woningen en hoe zijn deze opgelost? (Akoestiek, isolatie, beperkte privacy, standaardisatie van woningen.)
    - Bestaande structuur veranderd? (Draagmuren, installaties, ventilatie, akoestiek.)

Woonomgeving Level

Bereikbaarheid, voorzieningen, omgevingskenmerken

17. Wat maakt een locatie geschikt (of ongeschikt) voor ouderenhuisvesting? (Bereikbaarheid, voorzieningen, sociale cohesie en omgevingskenmerken)
    - Hoe ziet u de ligging van dit project? Geschikt voor ouderenhuisvesting? Waarom wel/niet?'

18. Zijn er aanpassingen zijn gedaan om de directe omgeving geschikter te maken voor ouderen? (Zitbanken, verlichting, veilige looproutes, mobiliteitshulpmiddelen.)
    Zijn er voorzieningen toegevoegd? (Ov stop of winkels)

Kansen en obstakels van transformatie (Woonomgeving level)

19. Welke voordelen biedt de locatie van het leegstaande gebouw? Dit project en algemeen? (Sociale samenhang, nabijheid voorzieningen, hergebruik bestaande structuren.)

20. Welke uitdagingen zijn er bij het inpassen van ouderenhuisvesting in een bestaande omgeving? (Voorzieningen, toegankelijkheid, ruimtelijke inpassingen, sociale interactie)

Algemeen

21. Wat ziet u in het ***algemeen als obstakels en kansen*** bij het transformeren van vastgoed naar een gebouw met woningen voor ouderen op woning, gebouw en omgeving niveau?

22. ***Welke soort type*** leegstaande gebouwen denk u dat het meest geschikt zijn voor het transformeren tot ouderenwoningen? En waarom? En welke minder? (Verzorgingstehuis, kerk, scholen, kantoren, winkels, kazernes, kerken, kloosters, commerciële ruimtes, magazijnen en musea)
    (Niet) overlappende kenmerken, project specifieke oplossingen, compleet herontwerp installaties.
    - Denkt u dat dit type gebouw geschikt is om te transformeren naar woningen voor ouderen? Waarom wel/niet?

23. Heeft u nog andere opmerkingen of suggesties? (Woning, het gebouw of de omgeving level)

Bedanken voor deelname

G. Insights topics directly or indirectly addressed by interviewees

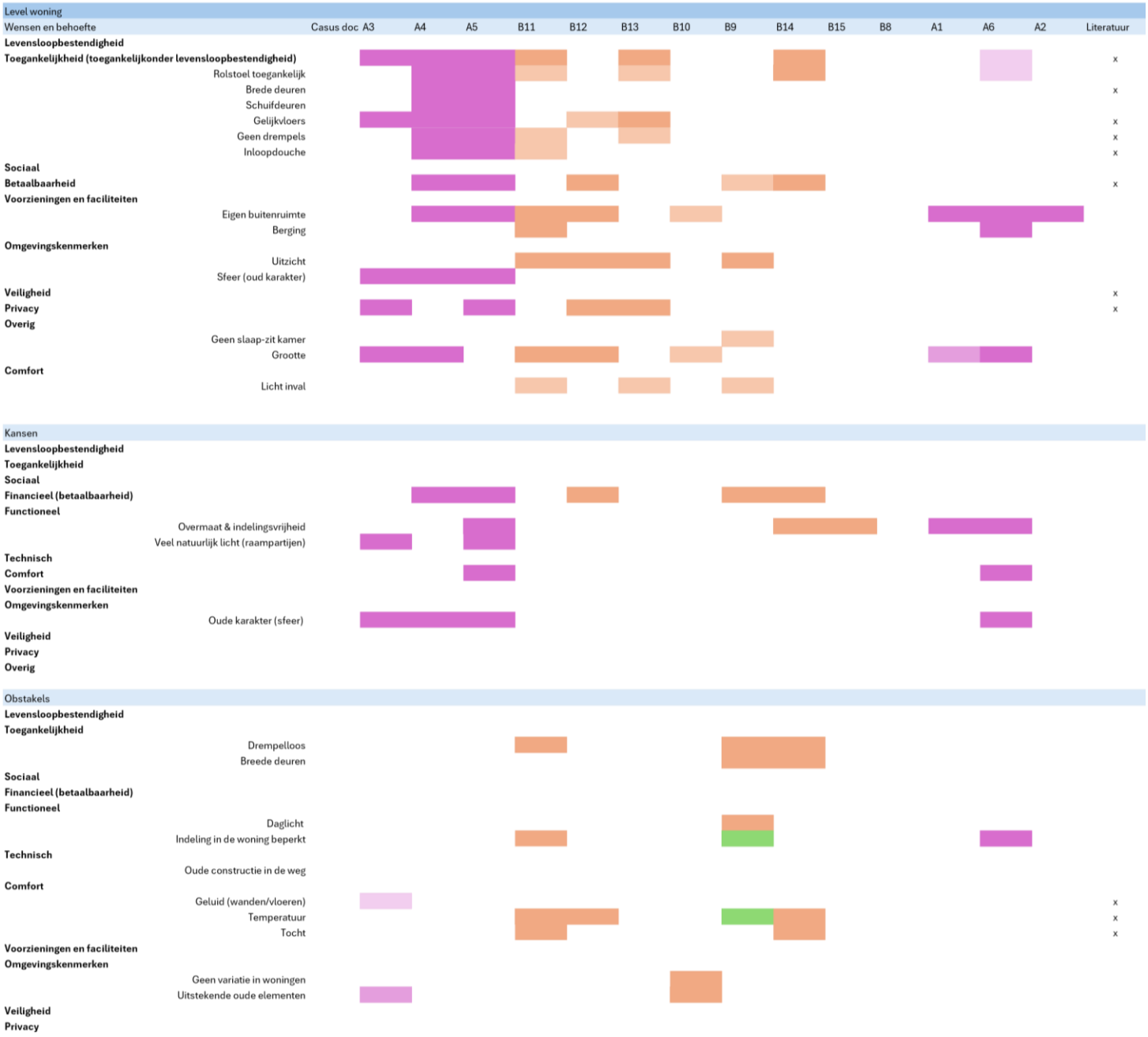
Per onderwerp wordt er aangegeven welke geïnterviewde persoon er iets direct of indirect heeft gezegd. Hiermee kan er zowel binnen de casus geanalyseerd worden als tussen de twee casussen, kijkend naar de verschillen en overeenkomsten. De kleur groen is meegenomen als er algemene opmerkingen over kansen en obstakels over transformatie projecten is gemaakt.

	Direct	Indirect
Case A		
Case B		
Algemeen		

Notitie: Als er over hetzelfde onderwerp is gesproken zowel in het algemeen als casus heeft het de kleur van de casus

Direct: Een wens of behoefte die rechtstreek invloed heeft op woonvoorkeur. Voorbeeld: *" We gaan geen schuttingen bouwen tussen alle appartementen maar de natuurlijke beplanting die geeft dan op den duur een zekere vorm van privacy. Dus dat was ook wel een vertrekpunt. Ja want privacy was ook een wens ja."*

Indirect: Een factor die meeweegt, maar niet doorslaggevend is of niet expliciet als wens wordt benoemd. Voorbeeld: "De muren zijn hier een beetje dun maar dat is niet heel storend."



Level woongebouw

Wensen en behoefte	Casus doc	A3	A4	A5	B11	B12	B13	B10	B9	B14	B15	B8	A1	A6	A2	Literatuur
Levensloopbestendigheid																
Toegankelijkheid																x
Gebouw																
Rolstoel/Rollator Toegankelijkheid																
gelijkvloers of Lift																x
Geen drempels																x
Automatische deuren																
Terrein																x
Geen hoogte verschillen																
Goed beloopbaar																
Breedde paden																
Onderhoudsvriendelijk																
Sociaal																x
Gemeenschappelijke ruimte binnen																
Gemeenschappelijke ruimte buiten																
Betaalbaarheid																
Voorzieningen en faciliteiten																
Grote tuin																
Gezamelijke keuken																
Zorg toekomst																
Hobbyruimte																
Parkeerplaatsen																
Kapster																
Gezamelijke wasmachines																
Omgevingskenmerken																
Veiligheid																x
Sociale veiligheid																
Privacy (eigen woning maar toch samen)																x
Overig																
Sfeer oude functie gebouw																
Kansen																
Levensloopbestendigheid																
Toegankelijkheid																
Sociaal																
Ruimte gemeenschappelijke ruimtes																
Financieel (betaalbaarheid)																
Functioneel																
Extra m2 woonopervlakte creeren																
Inpassen van de woningen																x
Indeling van gebouw																
Technisch																
Normen transformatie bouwbesluit ipv nieuwbouw																
Voorzieningen en faciliteiten																
Lift aanwezig																
Omgevingskenmerken																
Grote buitenruimten op terrein																
Veiligheid																
Privacy																
Overig																
Unieke woningen																
Samen wonen compact gebouw																
Gemeentelijk pand bestemming wijziging																x
Obstakels																
Levensloopbestendigheid																
Toegankelijkheid																
Plaatsen lift																
Oude hoofd entrée trappen																
Rolstoeltoegakelijkheid																
Hoogte verschillen terrein																
Sociaal																
Financieel (haalbaarheid)																
Onvoorziene factor																
Vakwerklui en begeleiding																
Aankoopprijs de bottelneck																
Functioneel																
Functie indeling van het gebouw (gebondenheid ruimtes)																x
Verschillende woningen ontwerpen																
Technisch																
Constructies pas zichtbaar tijdens sloop/verandering																
Inpassen instalaties																x
Voldoen aan eisen (andere functie)																x
Comfort:																x
Isolatie																x
Geluid																x
Bolkons niet tegen de gevel aan gehangen worden																
Asbest																
Voorzieningen en faciliteiten																
Parkeergelegenheid																
Ruimte scootmobiels & electrische fietsen																
Omgevingskenmerken																
Monumentalen bomen																
Veiligheid																
Privacy																
Overig																
Monumentaal pand																x
Waterwindgebied (binnenstedelijk ontwikkelen)																
Duurzaamheids ambities																
Oud pand / Bouwval (geen beginnen aan)																x
Oude zorg functie zichtbaar																

Level woonomgeving

Wensen en behoefte	Casus doc	A3	A4	A5	B11	B12	B13	B10	B9	B14	B15	B8	A1	A6	A2	Literatuur
Levensloopbestendigheid																
Toegankelijkheid																
Voetgangervriendelijke kenmerken																x
Openbaren gebouwen																x
Bereikbaarheid																x
Sociaal																x
Betaalbaarheid																x
Voorzieningen en faciliteiten (primair)																x
Supermarkt																x
Apotheek																x
Zorg/Huisarts																x
Openbaar vervoer																x
Secundaire voorzieningen																x
Winkels en speciaal zaken																
Culturele voorzieningen																
Recreatie voorzieningen																
Horeca gelegenheden																
Sport voorziening																
Omgevingskenmerken																x
Veiligheid																x
Privacy																
Overig																
Eigen buurt blijven																

Kansen

Levensloopbestendigheid																
Toegankelijkheid																
Sociaal																
Financieel (betaalbaarheid)																
Functioneel																
Technisch																
Voorzieningen en faciliteiten																
Binnenstedelijke locatie dicht bij voorzieningen																
Omgevingskenmerken																
Blijven wonen in eigen omgeving																
Veiligheid																
Privacy																
Overig																
Landmark / karaker van de wijk																

Obstakels

Levensloopbestendigheid																
Toegankelijkheid																
Sociaal																
Financieel (betaalbaarheid)																
Functioneel																
Technisch																
Voorzieningen en faciliteiten																
Niet dicht bij voorzieningen																x
Parkeren (binnenstedelijk ontwikkelen)																x
Omgevingskenmerken																
Binnenstedelijke ontwikkeling																
Veiligheid																
Privacy																
Overig																

H. Agenda focus group

Rol van de deelnemers:

De laatste stap van het onderzoek is dat experts (jullie) gaan beoordelen of het ontwikkelde stappenplan en het bijbehorende raamwerk toepasbaar zijn in de praktijk, en welke aanvullingen en/of opmerkingen jullie hierbij hebben. Verder heb ik jullie visie nodig voor het bepalen van de wegingen.

Hieronder staat de agenda van de focus groep. Hierin wordt aangegeven wat er aan bod komt tijdens de sessie. Het hoofdthema van de sessie is het raamwerk: dit gaan jullie bediscussiëren, verbeteren, aanvullen en beoordelen. Aan het begin zullen we ook het stappenplan doorlopen waarin het raamwerk is opgenomen. Hierover zou ik graag ook jullie mening willen horen.

Agenda: (met persoonlijke notities)

Introductie: (10 min)

- Voorstelronde
- Korte toelichting onderzoek
- Doel van de sessie: “De experts beoordelen of het raamwerk met stappenplan of het toepasbaar is in de praktijk, geven aan waar er nog verbeteringen nodig zijn, geven aanvulling aan het raamwerk en geven de wegingen aan de variabelen.”
- Uitleg van het raamwerk

Beoordeling van het raamwerk:

1. Stappenplan (10 min)
    a. Is het stappenplan duidelijk?
    b. Is het gebruik van het raamwerk binnen het stappenplan duidelijk?
    c. Is het vergelijkbaar met hoe het in de praktijk wordt gedaan?
2. Algemene indruk (10 min)
    a. Wat is je eerste indruk van het raamwerk?
    b. Welke onderdelen vallen je direct op (positief of negatief)?
    c. Mis je op het eerste gezicht iets belangrijks?
3. Toepasbaarheid in de Praktijk (15 min)
    a. Stel dat je dit raamwerk in een project moet gebruiken:
        i. Is de opbouw logisch en begrijpelijk?
        ii. Waar loop je direct tegenaan?
        iii. Welke onderdelen zijn makkelijk/moeilijk te gebruiken?
        iv. Wie zullen het raamwerk gebruiken in de praktijk?
4. Verbeterpunten en aanvullingen (15 min)
    a. Hoe kan het raamwerk duidelijker of praktischer worden?
    b. Welke termen of onderdelen moeten beter uitgelegd worden?
    c. Zijn er extra variabele nodig die je nog mist? Of missen er nog criteria bij variabelen?
5. Weging (15 min)

    De experts vullen de wegingen in bij het raamwerk en wordt vergeleken met de bevinden van het onderzoek.

    a. Waar zijn we het over eens?
    b. Welke variabele verdient volgens jullie meer/minder gewicht en waarom?
    c. Als er één weging echt aangepast moet worden, welke zou dat zijn?

d. Het raamwerk voor de vitale 65+er in het algemeen. Het zou eventueel zo kunnen dat er factoren zijn die invloed hebben op de wegingen. Een voorbeeld vanuit de literatuur is, dat oudere senioren de woning belangrijker vinden en jongere senioren de omgeving belangrijker vinden.
    i. Zijn er een of meerdere factoren die invloed hebben of een kanttekening erbij moeten hebben?

Samenvatting & conclusies: (10 min)

a. *Wat waren de belangrijkste lessen uit deze sessie?*
b. *Zou je dit raamwerk in je werk/praktijk gebruiken? Waarom?*
c. *Zijn er nog dingen die nog niet besproken zijn?*

Extra: Als het niet lukt om alles binnen de tijd te behandelen: We hebben een aantal onderwerpen niet besproken, is het goed als ik wat gerichte vragen na stuur en jullie hier nog opmerkingen over geven?

I. Stappenplan raamwerk

Stappenplan: beslissing tot transformatie tot ouderenwoningen.

Het stappenplan is bedoeld als gesprekshulpmiddel om samen te beoordelen of het vastgoed getransformeerd kan worden tot geschikte, vitale ouderenwoningen die aansluiten bij de woonwensen en behoeften van deze doelgroep. Dit stappenplan is geïnspireerd door de Transformatiemeter kantoren van het boek 'Transformatie naar woningen' van Remøy et al. (2024). Waar de Transformatiemeter zich richt op van kantoor naar woningtransformaties, is dit stappenplan specifiek aangepast en uitgebreid voor de transformatie naar ouderenhuisvesting. Anders dan bij de Transformatiemeter, waarin mogelijke risico's aan het eind van het stappenplan worden besproken, zijn in dit stappenplan reeds in stap 2 en 3 de obstakels en bijbehorende oplossing strategieën voor ouderenhuisvesting opgenomen. Hierdoor kunnen deze al vroeg in het proces worden meegenomen in de afweging, wat bijdraagt aan een betere beoordeling van de haalbaarheid tot transformatie voor de doelgroep vitale ouderen. Dit stappenplan richt zich specifiek op de transformatie naar ouderenwoningen en laat daarmee aantal algemene aspecten van woningtransformatie buiten beschouwing. De Transformatiemeter is daarom een waardevol hulpmiddel, omdat het inzicht biedt in algemene aspecten van transformatie tot woningen, zoals juridische kwesties, bestemmingsplanwijzigingen en procedures.

Voor het stappenplan naar transformatie tot ouderenwoningen wordt er in stap 1 tot en met 3 onderzocht of het gebouw geschikt is voor transformatie naar woningen in het algemeen. Deze stappen gaan in op het eigendom en de bereidheid tot transformatie, de technische haalbaarheid en de financiële haalbaarheid. Hoewel in deze fase ook al aandacht kan zijn voor ouderenhuisvesting, zoals indicatie van mogelijke obstakels van transformatie tot ouderenwoningen en manieren om die aan te pakken, ligt de focus nog op de algemene woningtransformatie. Deze eerste verkenning is bedoeld om te kijken of transformatie naar woningen in het algemeen realistisch is, voordat er wordt ingezoomd op de mogelijkheden voor ouderen. Vanaf stap 4 gaat het specifiek over de vraag of het gebouw geschikt is voor transformatie naar ouderenwoningen die aansluiten bij de wensen en behoeften van deze doelgroep. Het stappenplan vervolgt met een verdiepende analyse aan de hand van het raamwerk, waarmee er onderzocht wordt wat de mogelijkheden zijn om het pand te transformeren naar vitale ouderenwoningen. De uitkomst hiervan is een transformatieklasse: een indicatief advies over de potentie van het gebouw voor transformatie naar ouderenhuisvesting.

Het raamwerk biedt inzicht in welke wensen en behoeften wel of niet kunnen worden ingepast binnen het transformatieproject. Het geeft een indicatie van de haalbaarheid, maar is geen definitief meetinstrument voor succes. Het raamwerk is vooral bedoeld om het gesprek te ondersteunen over de keuze voor transformatie en in welke maten de woonwensen en behoefte ingepast kunnen worden tijdens de transformatie.

Het raamwerk is bedoeld voor vitale ouderen: mensen van 65 jaar en ouder die nog fysiek en mentaal zelfstandig zijn, en op zoek zijn naar een toekomstbestendige woning. Bijvoorbeeld: *Kees is 76 jaar en woont nog in een eengezinswoning. Hij wil graag verhuizen naar een appartement waar hij zelfstandig kan blijven wonen, ook als zijn vitaliteit langzaam achteruitgaat. Zijn wens is een woning waarin hij kan blijven tot het moment dat zelfstandig wonen echt niet meer mogelijk is.*

STAP 1: Bereidheid tot transformatie naar woningen

Als het gebouw in eigen bezit is (of van een samenwerkende partij), wordt er gekeken of het pand uiteindelijk getransformeerd zal worden, gesloopt wordt en er nieuwbouw komt, leeg blijft staan, een andere functie krijgt of verkocht zal worden. Als het gebouw niet in eigen bezit is, wordt eerst

onderzocht van wie het pand is en of er bereidheid bestaat om het gezamenlijk te ontwikkelen of te verkopen. *Factoren die van invloed zijn op de bereidheid tot transformatie of verkoop:*

Duur van de leegstand: hoe langer een pand leegstaat, hoe groter de kans dat de huidige eigenaar bereid is om het te verkopen (onderhandelingen verlopen dan vaak soepeler) of om zelf tot ontwikkeling over te gaan.

Redenen voor leegstand: een pand kan leegstaan vanwege de verwachting dat de marktwaarde zal stijgen, of omdat men verwacht dat de vraag naar de huidige functie weer zal toenemen. Als deze verwachtingen ontbreken, is de bereidheid tot verkoop of zelfontwikkeling vaak groter.

Gemeentelijkbeleid: transformatie is beter haalbaar wanneer het pand zich bevindt in een gemeentelijk prioriteitsgebied voor woningbouw, omdat dit aansluit bij de belangen van de lokale overheid. Dan is herbestemming naar woningen kansrijk.

Als het gebouw eigendom is van de gemeente, onderzoek dan wat de visie van de gemeente is. Gaat het om een historisch pand met culturele of maatschappelijke betekenis, dan is de gemeente zelfs soms ook bereid een lagere verkoopprijs te hanteren, mits het gebouw behouden blijft en in goede staat wordt gehouden.

Flexibelheid van het gebouw: als het gebouw kan worden getransformeerd naar woningen en bovendien flexibel is om in de toekomst aangepast te worden voor een andere doelgroep of functie, is de bereidheid om te transformeren groter.

Ga in gesprek met de betreffende partij en onderzoek wat de gezamenlijke belangen zijn, om te beoordelen of er bereidheid is tot ontwikkeling of bereidheid tot verkoop aan jullie.

STAP 2: Technische QuickScan:

Vervolgens wordt een technische en financiële quickscan uitgevoerd om globaal te beoordelen of het project haalbaar is. Deze twee quickscans hangen nauw met elkaar samen: als er technisch gezien veel aangepast moet worden aan het gebouw, brengt dit extra kosten met zich mee, wat weer invloed heeft op de financiële haalbaarheid. Daarom wordt in de technische quickscan gekeken naar technische aspecten die het makkelijker of juist moeilijker maken om het gebouw te transformeren tot woningen. Vanaf stap 4 wordt er specifiek gekeken of het ook haalbaar is voor het creëren van geschikte ouderenwoningen die aansluiten bij de woonwensen en behoefte. Grote ingrepen brengen doorgaans ook hoge kosten met zich mee. In deze stap moet daarom naar de volgende aspecten worden gekeken:

Onderhoudsconditie: De staat van het gebouw is cruciaal voor het bepalen van de transformatiekosten. Slecht onderhoud kan een transformatie financieel onaantrekkelijk maken. Als de staat van het gebouw echt slecht is, moet hierin worden geïnvesteerd, terwijl je die investering juist wilt inzetten voor het inpassen van de woonwensen en behoeften van ouderen. Ook is het belangrijk dat het gebouw onderhoudsvriendelijk is voor ouderen.

Historische of monumentale status: Als het pand een historische of monumentale status heeft, kunnen aanpassingen beperkt zijn, wat het transformatieproces bemoeilijkt. Monumentale gebouwen kunnen daarom een obstakel vormen voor het realiseren van levensloopbestendige woningen. Er moet worden gekeken in hoeverre de bestaande indeling al geschikt is voor woningcreatie, of in hoeverre aanpassingen überhaupt mogelijk zijn.

Structuur, stramien en hoogtes: Het aanpassen van constructieve elementen, zoals verdiepingshoogtes en stramienmaten, kan extreem kostbaar zijn. Daarom is het belangrijk om na te gaan in hoeverre de bestaande structuur al geschikt is voor de indeling van (ouderen) woningen.

Bestaande trappenhuizen: Bij functiewijziging moet het gebouw voldoen aan het Bouwbesluit. Aanpassingen zijn vaak lastig en kostbaar. Ook de eisen voor brandveiligheid veranderen bij een andere functie. Trappenhuizen moeten geschikt te maken zijn voor ouderen, bijvoorbeeld met een stevige leuning. Daarnaast moet het mogelijk zijn een lift of traplift te realiseren.

Comfort: Isolatie, akoestiek, daglicht, elektra, verwarming en ventilatie: Deze voorzieningen moeten per individuele woning gerealiseerd kunnen worden. Er moet voldoende isolatie aangebracht kunnen worden (zowel aan de buitenzijde als tussen de woningen), geluidsisolatie tussen de woningen, voldoende daglicht toetreding, individueel regelbare verwarmingssystemen en elektra, en een goed ventilatiesysteem.

Sanitaire voorzieningen: Hoe meer sanitaire voorzieningen al op logische plekken aanwezig zijn, hoe voordeliger. Het aanbrengen van nieuwe sanitaire voorzieningen is kostbaar, evenals de aansluiting op het riool tot aan de openbare weg. Deze kosten wil je bij voorkeur vooraf inzichtelijk hebben.

De genoemde elementen kunnen bij grotere aanpassingen aanzienlijke obstakels vormen binnen het project. Het is daarom essentieel om deze belemmeringen in een vroeg stadium te signaleren en te beoordelen of er passende oplossingen mogelijk zijn. Vroegtijdige betrokkenheid van de aannemer en andere technische experts is daarbij essentieel om technische knelpunten tijdig te signaleren en aan te pakken. Deze professionals beschikken over kennis en ervaring met vergelijkbare transformatieprojecten en kunnen risico's vroegtijdig inschatten en aanpakken.

Constructieve en levensloopbestendige maken belemmeringen kunnen het best worden aangepakt met creatieve en adaptieve ontwerpmaatregelingen, zoals compacte liftsystemen, alternatieve entrees en het kiezen van units die het meest geschikt zijn voor transformatie tot ouderenwoningen. Overgebleven units kunnen dan benut worden voor een andere doelgroep. Functionele beperkingen van de gebouwindeling kunnen worden opgelost met creatieve architectonische oplossingen en het herbestemmen van onderbenutte ruimtes tot bijvoorbeeld gemeenschappelijke voorzieningen.

Naast de aspecten van het gebouw, moet ook worden gekeken of de omgeving een geschikte woonomgeving biedt. Daarbij is het belangrijk dat er geen overlast is van verkeer, geen gevaarlijke situaties, en geen hinder door stank of geluid. Verder is de nabijheid van voorzieningen belangrijk. Hoewel locatie gerelateerde beperkingen vaak buiten eigen invloed vallen, kan het integreren van voorzieningen in het project een oplossing bieden. Voor andere situaties kan er contact opgenomen worden met de gemeente om te kijken wat de mogelijkheden zijn.

Door deze aspecten in een vroeg stadium te onderzoeken, geeft de technische en financiële quickscan een eerste indicatie van de haalbaarheid van de transformatie. Dit helpt om realistische keuzes te maken in het verdere ontwerpproces en voorkomt onverwachte kosten of vertragingen. Een goede afstemming tussen technische mogelijkheden en financiële randvoorwaarden is daarmee essentieel voor een succesvolle herontwikkeling tot ouderenwoningen.

STAP 3: Financiële QuickScan

De financiële quickscan is bedoeld om globaal te kijken of het project financieel rendabel is. Hierbij moeten de kosten (aanschaf en verwachte verbouwkosten) vergeleken worden met de opbrengsten. Voor de opbrengsten is het bepalend hoeveel woningen er van een bepaald type en prijsniveau voor ouderen gerealiseerd kunnen worden. Het is hierbij belangrijk om een globaal schetsontwerp te maken in de bestaande plattegrond van het

vastgoed om zo een indicatie van het aantal mogelijk in te passen woningen te krijgen. De verkoop- en huurprijs is afhankelijk van de doelgroep binnen de ouderen; bijvoorbeeld bij sociale huurwoningen zal de sociale huurgrens genomen worden voor de berekening

Uit het WoOn21, blijkt dat de maximale verkoopprijs die huishoudens in de doelgroep bereid zijn te betalen voor een koopwoning tussen de €200.000 en €300.000 ligt, prijspeil 2020. Gevolgd door een verkoopprijs (prijspeil 2020) tussen €300.000 en €400.000, dan tussen €100.000 en €200.000, en vervolgens tussen €400.000 en €500.000. Eenpersoonshuishoudens zijn over het algemeen minder bereid te betalen dan tweepersoonshuishoudens. Eenpersoonshuishoudens zijn meestal bereid om maximaal €300.000 te betalen voor een koopwoning. Als het prijspeil van 2020 wordt omgerekend naar het prijspeil van 2024, dan ligt de maximale bereidheid tot betalen, die in 2020 tussen de €200.000 en €300.000 lag, prijspeil 2024 tussen de €275.200 en €412.800. Deze berekening is gebaseerd op de woningprijsindex zoals verstrekt door het CBS.

Ook uit het WoOn21 blijkt dat de maximale huurprijs die huishoudens bereid zijn te betalen tussen de €432 en €737 ligt, prijspeil 2020. Gevolgd door een huurprijs (prijspeil 2020) tussen €737 en €986, en vervolgens €986 of meer. De grens van €432 tot €737 is gebaseerd op de 'kwaliteitskortingsgrens' en de ‘liberalisatiegrens’ van 2020, in 2024 liggen deze grenzen respectievelijk op €454 en €880. Als we kijken naar de grootte van het huishouden, zijn eenpersoonshuishoudens bereid minder huur te betalen dan meerpersoonshuishoudens.

Uit het WoOn21 blijkt dat de meeste ouderen willen wonen in een driekamerappartement. Volgens Remøy et al. (2024) is de indicatie voor de woningoppervlakte van een driekamerappartement 45-75 m^2. Gevolgd door een vierkamerappartement en daarna een een- of tweekamerappartement. Als er alleen naar eenpersoonshuishoudens wordt gekeken, is nog steeds een driekamerappartement het meest gewild, gevolgd door een een- of tweekamerappartement en vervolgens een vierkamerappartement. Ook geldt, hoe hoger de leeftijd van de ouderen, hoe minder kamers ze willen.

WONINGTYPE	Indicatief Woning-oppervlak
Kamer	15-25 m²
Studio	25-35 m²
2-kamerwoning	35-45 m²
3-kamerwoning	45-75 m²
4-kamerwoning	75-95 m²

Figuur 1: Woning type met indicatie van woning-oppervlakte (Remøy et al. 2024)

De financiële en technische haalbaarheid hangen sterk samen, ook met het inpassen van de woonwensen en de behoeften van ouderen. Dus in het begin wordt er een quickscan gedaan, en na het invullen van het raamwerk en het maken van de ontwerpkeuzes wordt er gekeken of het haalbaar is. De financiële haalbaarheid kan nog worden verbeterd door te onderzoeken of er op het terrein uitbreidingsmogelijkheden zijn, zoals het plaatsen van nieuwbouw, het toevoegen van een extra verdieping, of het realiseren van woonfunctie in het gebouw in combinatie met commerciële functies. Verder bleken vaste budgetprijs met aannemers en architecten effectief om de betaalbaarheid te behouden. Aangezien er bij transformatieprojecten vaak sprake is van onzekerheden voorafgaand aan het proces, wordt tevens geadviseerd om een ruime post voor onvoorziene kosten op te nemen in de begroting. Dit voorkomt dat er tijdens het proces bezuinigd moet worden op onderdelen die juist belangrijk zijn voor het realiseren van de woonwensen en behoeften van ouderen.

Verder is het raadzaam om ouderen al in een vroeg stadium van het proces te betrekken. Zo ontstaat er een duidelijk beeld van welke wensen en behoeften prioriteit hebben voor de toekomstige bewoners. Deze informatie is waardevol wanneer er later in het proces bezuinigd moet worden: er kan dan gerichter gekozen worden welke elementen behouden blijven en welke eventueel komen te vervallen. Verder door toekomstige bewoners te betrekken, kunnen niet alleen de prioriteiten beter worden afgestemd, maar kunnen ook kosten worden bespaard als de bewoners bereid zijn om zelfwerkzaamheden te verrichten voor het project. Bovendien draagt dit bij aan het versterken van de sociale samenhang in het toekomstige woongebouw.

STAP 4: Invullen raamwerk ouderen wensen en behoefte

In het raamwerk zijn de woonwensen en -behoeften van de vitale 65+ ouderen opgenomen waarmee rekening moet worden gehouden tijdens de transformatie. De vitale 65+er is iemand die verhuis geneigd is, nu nog vitaal is en na verhuizing op die plek oud worden. Het raamwerk dient als hulpmiddel om het gesprek te begeleiden bij de afweging of een gebouw wel of niet getransformeerd kan worden tot geschikte ouderenwoningen die aansluiten bij deze woonwensen en -behoeften. Het raamwerk geeft inzicht in welke wensen en behoeften wel of niet inpasbaar zijn binnen het transformatieproject. Het biedt een indicatie van de haalbaarheid, maar is geen definitief meetinstrument voor succes.

Zoals te zien is in figuur 2, is het raamwerk opgedeeld in drie niveaus: de woning, het woongebouw en de woonomgeving. Voor elk van deze niveaus zijn variabelen vastgesteld die van invloed zijn op de woonwensen en -behoeften van de vitale 65-plusser. Bij elke variabele wordt aangegeven welk niveau bereikt moet worden om aan de wensen en behoeften te voldoen. Gebruikers van het raamwerk kunnen hiervoor een score toekennen van 0 tot 5 (zie de betekenis van de scores in het raamwerk). Omdat sommige variabelen zwaarder wegen dan andere, zijn er wegingsfactoren toegevoegd.

Binnen de levels wordt onderscheid gemaakt tussen variabelen die voor vrijwel alle ouderen van toepassing zijn en variabelen die juist afhangen van individuele voorkeuren binnen de 65+ doelgroep.

	Meting	Score (0-5)	Weging (1-10)	Punten	Uitleg
Woning level					
• Aantal kamers •	• 3 kamer appartement •	•	•	•	• ....
Totaal score level					
Woongebouw level					
• Toegankelijkheid •	• Gelijkvloerse toegang of lift •	•	•	•	• ....
Totale score level					
Woonomgeving level					
• Voorzieningen ◦ Huisarts ◦ .... •	• Minder dan 500 meter afstand • ... •	•	•	•	• ....
Totale score level					
Totaal score project					

Figuur 2: Opbouw raamwerk (zie bijlage in de mail voor het gehele raamwerk) (eigen werk, 2025)

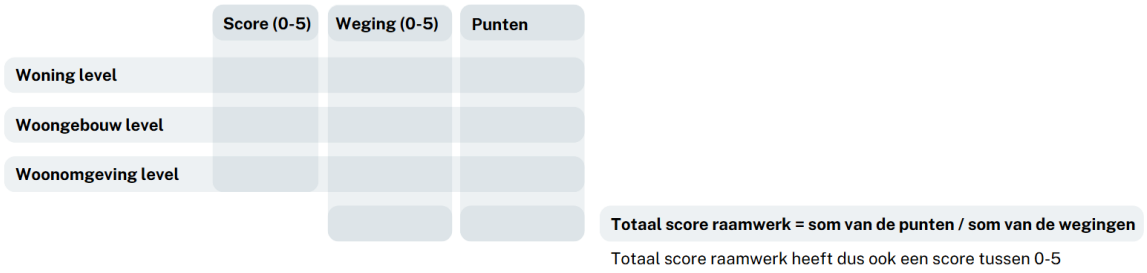
De wegingen in het raamwerk zijn gebaseerd op de literatuurstudie en casestudies (interviews met ouderen en betrokken partijen) die zijn uitgevoerd in het kader van dit afstudeeronderzoek. Om de exacte waarden van deze wegingsfactoren vast te stellen, is aanvullend kwalitatief onderzoek nodig. De literatuur- en casestudyresultaten geven een algemene inschatting van de wegingen voor de vitale 65-plus doelgroep. Binnen deze groep bestaan echter onderlinge verschillen. Verder onderzoek is nodig om het raamwerk specifieker af te stemmen op subgroepen binnen deze doelgroep. De volgende aspecten kunnen hierop van invloed zijn: leeftijd, huishoudensgrootte: een- of tweepersoonshuishoudens, sociaaleconomische status, woonstatus: huur of koop, woonlocatie, voorkeur voor woonvorm en beleving van eigen vitaliteit in de toekomst.

De gebruiker van het raamwerk kan zelf de wegingsfactoren aanpassen en bepalen welke variabelen wel of niet worden meegenomen in het transformatieproces. Het raamwerk kan direct ingevuld worden voor een specifieke doelgroep, of gebruikt worden om op basis van de uitkomsten een passende doelgroep te bepalen. Het wordt geadviseerd om toekomstige bewoners van het project vroegtijdig te betrekken bij het project zodat het raamwerk echt de woonwensen en behoefte van de toekomstige bewoners reflecteert.

De wegingen vallen tussen de 0 en 5, waarbij 0 het niet gewenst is en 5 het zeer gewenst is. Bij het invullen van 0 zal de variabelen niet meewegen in het raamwerk. Het raamwerk is een gespreksinstrument om gezamenlijk te beoordelen of een gebouw geschikt is voor transformatie tot ouderenwoningen die aansluiten bij de relevante woonwensen en -behoeften. Het gebruik ervan is niet lineair, maar bedoeld om het gesprek te faciliteren over wat belangrijk is voor de doelgroep en wat de haalbaarheid van het project is. Op basis daarvan kunnen onderbouwde ontwerpkeuzes worden gemaakt.

STAP 5: Bepaling van transformatie klassen en keuze ontwerpbeslissingen.

Wanneer het raamwerk is ingevuld, komt er per level én voor het gehele raamwerk een score uit. De score per level wordt berekend door de som van de punten te delen door de som van de wegingsfactoren. Dit levert per level een score op tussen de 0 en 5, die een indicatie geeft van de transformatieklasse op dat level. Om de totaalscore voor het project te berekenen, worden eerst de scores per level vermenigvuldigd met de weging van elk level. De uitkomsten hiervan worden bij elkaar opgeteld en vervolgens gedeeld door de som van de level-wegingsfactoren. Ook deze totaalscore ligt tussen de 0 en 5. Dit is weergegeven in afbeelding 3.



Figuur 3: Berekening totaalscore raamwerk (eigen werk, 2025)

Op basis hiervan wordt een advies gegeven over in welke transformatieklasse het project valt met betrekking tot ouderenwoningen. Dit advies kan vervolgens dienen als basis voor de beslissing om wel of niet tot transformatie over te gaan. Het raamwerk is geschikt om inzicht te geven in welke wensen en behoeften wel of niet inpasbaar zijn binnen het transformatieproject. De transformatieklasse biedt een indicatie van de haalbaarheid, maar is geen definitief meetinstrument voor succes.

Gewogen totaalscore woning, woongebouw en woonomgeving levels	Transformatieklasse
Gewogen totaalscore < 1	Klasse 1: niet transformeerbaar
Gewogen totaalscore 1 - 2	Klasse 2: nauwelijks transformeerbaar
Gewogen totaalscore 2 - 3	Klasse 3: beperkt transformeerbaar
Gewogen totaalscore 3 - 4	Klasse 4: transformeerbaar
Gewogen totaalscore > 4	Klasse 5: goed transformeerbaar

Figuur 4: Transformatie klasse bepalen tot vitale ouderenwoningen. Gebaseerd op Remøy et al. (2024), eigen bewerking

De totaalscore per level en voor het totale raamwerk ligt tussen 0-5. Het wordt geadviseerd om naar de scores van alle levels te kijken en naar de totaalscore tijdens de keuze om wel of niet tot transformatie over te gaan.

J. Assessment framework

The assessment framework, with the left side showing how it was developed based on theory and empirical research.

Score defenition:
0 - Niet geschikt
1 - Zeer lastig inpasbaar, grote structurele beperkingen.
2 - Beperkt inpasbaar, aanzienlijke knelpunten
3 - Matig inpasbaar, haalbaar met significante ingrepen.
4 - Goed inpasbaar, kan met beperkte aanpassingen geschikt worden gemaakt.
5 - Zeer geschikt, direct of met minimale aanpassingen te transformeren.
Opmerking: Sommige variablen zijn gewoon, het is geschik of niet geschikt dan is het 5 of 0

	Level Woning					
		Meting	Scoren 0-5	Weging 0-5	Punten	Uitleg/opmerkingen
	Variabelen vitale 65+-ers					
Theory: 2.8., 4.1.3., Empirical: A4, A5, B9, B12, B14	*Betaalbaarheid:*					Naarmate personen ouder zijn hebben ze een hogere voorkeur voor huur. Bij alleenstaanden is dit nog versterkt zichtbaar
	Aankoopprijs	Afhankelijk van doelgroep (Prijsbereidheid algemeen ouderen vanuit WoOn21: €200.000-300.000)		5		Prijs is afhankelijk van de doelgroep. Bijvoorbeeld sociale woningcorporaties zullen de sociale huur grens nemen als grens.
	Huurprijs	Afhankelijk van doelgroep (Prijsbereidheid algemeen ouderen vanuit WoOn21: €432-737)		5		Prijs is afhankelijk van de doelgroep, Als doel is het creeren van betaalbare woningen dan kan de NAG grens genomen als grens.
Theory:4.1.1., 4.1.5., 4.1.6.,	*Woning type*	Appartementen kunnen ontwikkeld worden in het woongebouw		4		Ouderen willen liever verhuizen naar appartementen dan rijtjeshuizen en (half)vrijstaande woningen. (WoOn21)
Theory: 2.8., 4.1.6., Empirical: A1, A3, A4,	*De primaire ruimtes op dezelfde verdieping*	De primaire ruimtes (woonkamer, keuken, badkamer en ten minste één slaapkamer) kunnen op dezelfde verdieping gemaakt worden		5		Deze eigenschap hoeft niet direct in de woning gemaakt te worden maak het wel aanpasbaar zijn tot deze kwaliteiten.
Theory: 4.1.4., Empirical: A3, A4, B11, B12	*Aantal kamers*	Drie kamer appartementen kunnen ontwikkeld worden in het gebouw		4		De woonkamer wordt meegenomen in het aantal kamers. Uit literatuur meest gewenste aantal kamer is 3 en hoe hoger de leeftijd de meer de wens naar minder dan 3 kamer toeneemt. (WoOn21)
Theory: 2.8,4.1.6., 4.2., Empirical: A3, A4, A5, B13	*Toegankelijkheid/Levensloopbestendigheid*	Er zijn geen trappen of verhoginen aanwezig. Of er kan een trap lift ingebouwd worden of een lift naar gelijkvloerse verdieping		5		Het zodanig inrichten van ruimtes dat mensen er gedurende verschillende fasen van hun leven gebruik van kunnen (blijven) maken. Deze eigenschap hoeft niet direct in de woning gemaakt te worden maak het wel aanpasbaar zijn tot deze kwaliteiten.
Theory: 4.2., Empirical: A4, A5, B11, B13		De woning kan drempelloos gemaakt worden		5		Het zodanig inrichten van ruimtes dat mensen er gedurende verschillende fasen van hun leven gebruik van kunnen (blijven) maken. Deze eigenschap hoeft niet direct in de woning gemaakt te worden maak het wel aanpasbaar zijn tot deze kwaliteiten.
Theory: 4.2., Empirical: A4, A5		Er kunnen bredere deuren in de woning gemaakt worden		4		Het zodanig inrichten van ruimtes dat mensen er gedurende verschillende fasen van hun leven gebruik van kunnen (blijven) maken. Deze eigenschap hoeft niet direct in de woning gemaakt te worden maak het wel aanpasbaar zijn tot deze kwaliteiten.
Empirical: A4, A5, B13, B14		De woning kan rolstoelgankelijk gemaakt worden		5		Het zodanig inrichten van ruimtes dat mensen er gedurende verschillende fasen van hun leven gebruik van kunnen (blijven) maken. Deze eigenschap hoeft niet direct in de woning gemaakt te worden maak het wel aanpasbaar zijn tot deze kwaliteiten. Indien het huurappartementen betreft en niet alle appartementen zijn rolstoeltoegankelijk te maken (of heel kostbaar) zou het ook een mogelijk zijn om door te schuiven naar een rolstoeltoegankelijk appartement binnen het complex mocht dit noodzakelijk zijn voor de bewoner.
Theory: 4.2., Empirical: A4, A5, B11		Er kan een inloopdouche in de woning gemaakt worden		4		Het zodanig inrichten van ruimtes dat mensen er gedurende verschillende fasen van hun leven gebruik van kunnen (blijven) maken. Deze eigenschap hoeft niet direct in de woning gemaakt te worden maak het wel aanpasbaar zijn tot deze kwaliteiten.
Theory: 2.8., 4.2., Empirical: B9, B13	*Veiligheid*	Goede verlichting, brandveiligheid, veilig gevoel in huis, mogelijkheid tot op slot doen van deur		5		Alle aspecten van veiligheid moeten gerealiseerd worden in de woning.
Empirical: A6, B9	*Ramen openen*	Ramen zijn makkelijk te openen		5		Soms bij de oude gebouwen zijn er alleen ramen boven in, deze kunnen niet (gemakkelijk) geopend worden door de ouderen.
Theory: 4.1.1., 4.2., Empirical: A3, A5, B12, B13	*Privacy*	De woning is privé		4		Achter de voordeur van de woning is het prive, geen toegang voor anderen.
	Variabelen vitale 65+ individuele voorkeur					
Empirical: A1, A2, A4, A5, A6, B11, B12	*Buitenruimte*	Eigen prive buitenruimte (balkon en/of tuin)		4		De ruimte moet weinig onderhoud zijn en moet groot genoeg zijn om met een stoel te zitten en ernaast nog genoeg beweegruimte is om te passeren.
Empirical: A6, B11	*Berging*	Eigen berging		3		Binnen de woning of buiten.
Empirical: B13, Focusgroup	*Ramen hoogte*	Ramen zijn te maken op zit ooghoogte voor ouderen		3		Ouderen vinden het fijn om als ze in de stoel zitten dat er naar buiten gekeken kan worden.
Empirical: B9, B11, B12, B13	*Uitzicht*	Uitzicht op reuring en/of groen (natuur)		3		Persoonlijke voorkeur: veel terug komend thema's zijn hierin het uitzicht op groen of op reuring/levendigheid.
	Optellen wegingen & punten					
	Totaal score:	**Som van de punten / Som van de wegingen**				Hieruit komt dan een totaal level score uit van tussen de 0-5 van de woonomgeving

	Level Woongebouw					
		Meting	Scoren 0-5	Weging 0-5	Punten	Uitleg/opmerkingen
	Variabelen vitale 65+-ers					
Theory: 2.8, 4.2., Empirical: A3, B12, B13	*Veiligheid*	Het gebouw kan geheel afgesloten worden		5		Als het gebouw openbaar toegankelijk wordt moeten er afspraken gemaakt worden wanneer het gebouw dicht en op slot gaat.
		Er kan genoeg verlichting binnen en rondom het gebouw geplaatst worden		5		Verlichting helpt bij het veilig voelen en fysiek veilig kunnen bewegen.
Empirical: A3, A4, A5, B9, B10, B11, B12	*Sociale veiligheid*	Toegang en zicht naar de woning en aanwezigheid van ontmoetingsplekken		5		Het gebouw moet een gemeenschapsvorming hebben zodat er sociale veiligheid ontstaat.
Empirical: B14,	*Brandveiligheid*	Het gebouw kan brandveilig worden gemaakt met duidelijke looproutes		5		Voor ouderen is het belangrijk dat de looproutes duidelijk zijn en zo kort mogelijk.
Empirical: B10, B15	*Indeling functies gebouw*	De indeling van het gebouw leent zich ervoor dat er logische looproutes zijn en functies op een logische plek geplaatst kunnen worden		3		Een logische ingang en volgorde van functies met bijhorende looproutes.
Theory: 2.8, 4.2., Empirical: A3, A5, B10	*Toegankelijk Gebouw*	Gelijkvloerse toegang of lift		5		De woningen en het gebouw hebben een gelijkvloerse toegang of dit is opgelost met een lif (of eventueel een korte hellingbaan).
Literatuur, A4, A5, B13		Rolstoeltoegankelijk		5		Oude gebouwen kunnen een hoofd entrée hebben met alleen trappen waardoor deze niet rolstoeltoegankelijk is, optie is om een tweede gelijkvloerse ingang te maken of een hellingbaan.
Theory: 4.2., Empirical: A4, A5, B13		Geen drempels		5		Alles in het gebouw kan dempeloos gemaakt worden.
Empirical: A3		Automatische deuren		3		Afhankelijk van de doelgroep.
Theory: 2.8, 4.2., Empirical: A2, A5, B10	*Toegankelijk terrein*	Geen hoogte verschillen		4		Hoogte verschillen kunnen ook opgelost worden door het creëren van een hellingbaan. Volg hiervoor de bouwbesluit normen.
Empirical: A2		Terrein moet goed belopbaar zijn dus geen mogelijkheiden tot wegrakkingen		5		Het is vooral belangrijk dat de looproutes goed belopbaar zijn en duidelijk.
Empirical: A2, A5		Brede paden (minstens 80 centimeter)		4		Zodat er genoeg ruimte is om elkaar ook te passeren.
Empirical: A2		De tuin kan onderheidsvriendelijk worden ingedeeld		3		Het creëren van een onderhoudsvriendelijke tuin kan duurder zijn.
Theory: 2.8., Empirical: A2, A3, A4, A5, B9, B11, B12, B13, B14	*Sociale interactie*	Er kan een gemeenschappelijke ruimte gecreerd worden in het gebouw voor sociale interactie en activiteiten		4		Gemeenschappelijke ruimte: (de toegang tot) overdekte ruimte die toegankelijk is voor alle bewoners van het appartementencomplex, bijvoorbeeld een portiek, hal, galerij en/of ontmoetingsruimtes. De gemeenschappelijk ruimte kan uitnodigen tot sociale interactie, met eventueel bepaalde voorzieningen zoals een gemeenschappelijk keuken. De soorten voorziening en faciliteiten is afhankelijk van type bewoners.
		Er kan een gemeenschappelijke ruimte gecreerd worden buiten op het terrein voor sociale interactie en activiteiten		4		Een ruimte dat uitnodigt tot sociale interactie, zoals een gemeenschappelijke moestuin. De soorten voorziening en faciliteiten is afhankelijk van type bewoners.
Theory: 4.2., Empirical: A1, A2, A3, A5, B10, B11, B12, B13,	*Prive*	Prive en gemeenschappelijk kunnen gescheiden worden.		4		De scheiding tussen prive en gemeenschappelijk moet in balans zijn.
	Variabelen vitale 65+ individuele voorkeur					
Empirical: A1, A3, A4, A5, A6, B11, B10	*Uitstraling van het gebouw*	Het pand heeft oude karakteristieken die behouden kunnen worden / het pand kan getransformeerd zodat het geen zorg uitstraling heeft		4		Het gebouw mag geen uitstraling hebben dat het een zorgfunctie heeft zoals het voormalige functie dan geweest was.
Empirical: B9	*Optie om ook de trap te nemen*	Trappen met ondersteunende leuningen en antislip		4		Ouderen blijven hierdoor zichzelf trainen, om dit te faciliteren moet er wel goede ondersteuning zijn voor de ouderen. Er moet ook altijd naast deze optie een toegangelijke optie zijn zoals een lift of ramp/schuine hellingbaan
Empirical: A2, A5, B11, B10	*Ruimte gemeenschappelijke tuin*	Er is genoeg ruimte voor het creëren van een gemeenschappelijke tuin		4		Ouderen vinden het fijn om genoeg groen om zich heen te hebben waar ze niet de eigen verantwoordelijkheid hebben om het te onderhouden.
Empirical: A5, B9, B14	*Ruimte voor voorzieningen*	Er is mogelijkheid tot het creëren van een flexible ruimte voor voorzieningen		2		De behoefte aan voorzieningen verschilt per buurt en kan door de jaren heen veranderen. Ook hangt het ervan af welke voorzieningen in de omgeving ontbreken.
Theory: 4.2.1., Empirical: B10, B11, B13	*Parkeerplaatsen auto's*	Iedereeen heeft tenminste een eigen parkeerplaats		4		Het is belangrijk voor ouderen om een parkeerplaats dicht bij de woning te hebben.
Empirical: B10, E1, E2, E3	*Fietsen*	Er is mogelijkheid tot het overdekt stallen van fietsen		4		Ouderen vinden het fijn om de fiets (of driewieler afhankelijk van de doelgroep) overdekt te stallen dit mag ook gezamenlijk met elektrische fietsen worden gedaan.
Empirical: B13, B10	*Electrische fietsen*	Er is ruimte voor het overdekt plaatsen en opladen van electrische fietsen dat voldoet aan de brandveiligheids normen		2		Hoe groot deze ruimte moet zijn is afhankelijk van de doelgroep.
Empirical: B10, B14	*Scoot mobiels*	Overdekt en opladen mogelijkheid en moet voeldoen aan de brandveiligheids normen		2		Hoe groot deze ruimte moet zijn is afhankelijk van de doelgroep.
	Optellen wegingen & punten					
	Totaal score:	**Som van de punten / Som van de wegingen**				Hieruit komt dan een totaal level score uit van tussen de 0-5 van de woonomgeving

	Level Woonomgeving					
		Meting	Scoren 0-5	Weging 0-5	Punten	Uitleg/opmerkingen
	Variabelen vitale 65+-ers					
Theory: 4.2., 4.2.1., Empirical: A3, A5, A6, B12	*Bereikbaarheid*	Het gebouw moet bereikbaarzijn met zowel de auto, fiets, openbaar vervoer of te voet		5		Het gebouw moet in al deze opzichten goed bereikbaar zijn.
Theory: 2.8., 4.2., 4.2.1., Empirical: A3, B10, B14	*Veiligheid*	Het is een veilige omgeving voor ouderen en er is goede verlichting op straat		5		Informatie is te vinden op veiligheids monitor CBS.
Theory: 2.8., 4.1.5., Empirical: A1, A4, A6, B9, B11, B12, B14	*Eigen buurt / vertrouwde omgeving*	Het gebouw staat in een buurt waar momenteel ouderen niet passend wonen en/of verhuisgeneigd zijn.		5		Ouderen willen graag in hun eigen woonomgeving blijven.
	Voorzieningen:					Let op: Indien minder dan 2 van deze voorzieningen op loopafstand wordt het als minder geschikt gezien.
Theory: 2.8., 4.1.5. Empirical: A3, A4, A5, B9, B11, B12 ,B13, B15	*Supermarkt*	Is op minder dan 500 meter van de woning		4		Er kan ook al rekening meegehouden worden dat men minder valide wordt dan wordt er minder dan 400 meter aangehouden
Theory: 2.8., 4.1.5. Empirical: A3, A4, A5,	*Apotheek*	Is op minder dan 500 meter van de woning		4		Er kan ook al rekening meegehouden worden dat men minder valide wordt dan wordt er minder dan 400 meter aangehouden
Theory: 2.8., 4.1.5. Empirical: A3, A4, A5,	*Huisarts*	Is op minder dan 500 meter van de woning		4		Er kan ook al rekening meegehouden worden dat men minder valide wordt dan wordt er minder dan 400 meter aangehouden
Theory: 2.8., 4.1.5. Empirical: A3, A4, A5, B12	*Openbaar vervoer*	Is op minder dan 500 meter van de woning		4		Het openbaar vervoer moet efficient en betrouwbaar zijn. Er kan ook al rekening meegehouden worden dat men minder valide wordt dan wordt er minder dan 400 meter aangehouden
	Toegankelijkheid: (omgevings kenmerken)					
Theorie: 2.8., 4.2., Empirical: A3, B9, B10, B13	*Voetgangervriendelijke kenmerken*	De buurt heeft een brede stoep		3		Vooral op de kortste route naar de voorzieningen. Routes die dagelijks gebruikt worden.
		Heeft geen losse stoeptegels		3		Vooral op de kortste route naar de voorzieningen. Routes die dagelijks gebruikt worden.
		Heeft veilige oversteekplekken zoals zebrapaden en stoplichten		3		Het beste als deze oversteekplaatsen gestuurd zijn op de kortste route richting de voorzieningen. Routes die dagelijks gebruikt worden.
		Zit mogelijkheden (bankje)		3		Zit plekken bij voorkeur steeds op de dezelfde afstand van elkaar.
	Variabelen vitale 65+ individuele voorkeur					
Theory: 2.8, Empirical: A1, A3, A4, A5, B9, B10, B11, B12, B13	*Secundaire voorzieningen*	Er zijn secundaire voorzieningen te bereiken op loopafstand (minder dan 500 meter) of met openbaarvervoer		2		Voorbeelden van secundaire voorzieningen zijn: cultuurvoorzieningen zoals een museum of bibliotheek, horecagelegenheden, recreatieve voorzieningen zoals een park, religieuze voorzieningen zoals een kerk, sportfaciliteiten zoals een zwembad, winkelcentra en speciaalzaken.
Theory: 2.8, Empirical: B11	*Toegankelijkheid openbaren gebouwen*	Publieke plekken en gebouwen zijn toegankelijk		2		Zoals het park, de bibliotheek, winkelcentrum etc.
Theory: 4.2.1., Empirical: B13	*Parkeer mogelijkheden*	Er zijn genoeg parkeer mogelijkheden in de buurt		3		Als er genoeg parkeerplaatsen op het terrein gemaakt kunnen worden is deze niet van toepassing
Empirical: A1, A4, A6, B15	*Omgevingskenmerken*	Het is een groene omgeving en/of reuring.		4		Ouderen willen niet midden in de stad waar er 'te veel' reuring is. Ze willen dat er wel een vorm van reuring is maar niet te veel.
Theory: 2.8, Empirical:A1, A4, A5, B11	*Sociaal betrokken buurt*	Er zijn meerdere activeiteiten per maand met de buurt.		3		Een sociaal betrokken buurt zorgt voor sociale veiligheid, activiteiten in de buurt en verminderen van eenzaamheid.
	Optellen wegingen & punten					
	Totaal score:	**Som van de punten / Som van de wegingen**				Hieruit komt dan een totaal level score uit van tussen de 0-5 van de woonomgeving

	Berekening totaalscore raamwerk				
	Om de score voor het totale raamwerk te krijgen worden de totaal scores van de levels gemenigvuldigd met de bijhoorde weging. Deze punten van de drie levels worden opgeteld en gedeeld door de som van de weging van totaal level score.		Totaal score level	Weging 0-5	Punten raamwerk
		Totaal punten woon level		3	
		Totaal punten woongebouw level		3	
		Totaal punten woonomgeving level		3	
	Optellen wegingen & punten				
	Totaalscore raamwerk	**Som van de punten totaal raamwerk / som wegingen voor de levels**			Hieruit komt dan een totaal score uit van tussen de 0-5 van het raamwerk

K. Samenvatting bevindingen focus groep

Algemeen

De focusgroep bestond uit drie experts met verschillende achtergronden:
- Expert 1: Werkzaam bij een woningcorporatie als adviseur verkoop, verhuur, maatschappelijk vastgoed en zorgvastgoed. Heeft onderzoek gedaan naar de invloed van vergrijzing op de strategie van woningbouwcorporaties.
- Expert 2: Werkzaam in een landelijk kennisplatform over zorg, wonen en welzijn en is actief in kennisdeling over seniorenhuisvesting en woonvormen voor senioren.
- Expert 3: Is werkzaam bij een kennisplatform en is actief op thema's wonen en woningmarkt, waaronder ook de transformatie van vastgoed.

Tijdens de sessie beoordeelden de experts het ontwikkelde stappenplan en raamwerk en gaven zij verbeteringen en aanvullingen. De sessie vond online plaats via Teams, waarbij de onderzoeker eerst kort het onderzoek toelichtte, vervolgens het doel van de sessie, het stappenplan en tot slot de opzet van het raamwerk. De experts hadden een week van tevoren het raamwerk met het bijbehorende stappenplan en achtergrondinformatie over het onderzoek en de focusgroep ontvangen, zodat ze dit alvast konden doornemen. Tijdens de focusgroep werden eerst het stappenplan en het daarin opgenomen raamwerk besproken. Vervolgens werd dieper ingegaan op het raamwerk, waarbij aandacht werd besteed aan de eerste indruk, de logica, de toepasbaarheid in de praktijk, mogelijke aanvullingen en verbeteringen, en de wegingen binnen het raamwerk. De bedoeling was om via Miro met post-it notes te werken. Door technische problemen bij een van de deelnemers werkte dit echter niet, waardoor is overgegaan op een mondelinge bespreking van de vragen van het Miro-bord, die op het scherm werden gedeeld. De experts noteerden eerst zelf hun bevindingen en deelden deze daarna met de groep. De bevindingen van deze focusgroep worden in deze samenvatting beschreven.

Stappenplan en raamwerk in het stappenplan

Algemene beoordeling:

Het stappenplan werd door alle drie de experts als duidelijk ervaren, en de volgorde werd als logisch beschouwd. *"Ik vind het stappenplan inderdaad duidelijk en het raamwerk ook." (Expert E1, 2025)*

Verbeterpunten:

Expert E3 benadrukte dat er duidelijker onderscheid gemaakt moet worden tussen de stappen die bedoeld zijn om te beoordelen of een gebouw geschikt is voor transformatie naar woningen in het algemeen, en het raamwerk zelf, dat specifiek ingaat op de vraag of het gebouw getransformeerd kan worden tot geschikte ouderenwoningen die aansluiten bij de woonwensen en -behoeften van deze doelgroep. De andere twee experts stemden

hiermee in. *“Er zit ergens een grens of je het überhaupt zou kunnen transformeren tot woningen. […] Sommige gebouwen zijn natuurlijk prima te transformeren voor alle type jongeren, maar voor ouderen een beetje moeilijker.” (Expert E3, 2025)*

Later in de focusgroep benadrukte expert E3 dit nogmaals: *“Wat is nou universeel voor iedereen, dat je je eigen temperatuur kan regelen? En, wat is nou specifiek voor ouderen bijvoorbeeld even kijken hoor, de woning kan rolstoel toegankelijk worden gemaakt. De primaire ruimtes zit er op een verdieping. Dat is juist specifiek voor ouderen.”*

Aanvullingen:
De flexibiliteit van het vastgoed is ook belangrijk voor de eigenaren, zodat, wanneer de huidige doelgroep wegvalt, een nieuwe doelgroep kan worden aangetrokken of het vastgoed naar een andere functie kan worden getransformeerd (expert 1). *“Ja, dat zie je ook bij meerdere corporaties. De flexibiliteit van het vastgoed is heel belangrijk, dus wat gaan we doen als deze doelgroep eruit is? Past het dan nog steeds? Kan er dan makkelijker dan andere doelgroep in dat dat zie je, dat zie je heel goed terug.” (Expert E1, 2025)* Expert 3 is het hiermee eens en voegt eraan toe dat een gebouw dat geschikt is voor ouderen, meestal ook geschikt is voor andere doelgroepen. Wel brengt het vaak extra kosten met zich mee om woningen voor ouderen te creëren, vergeleken met woningen voor andere doelgroepen.

Raamwerk: Eerste indruk, toepasbaarheid, verbeteringen en aanvullingen

Eerste indruk:

Alle drie de experts vonden het raamwerk logisch opgebouwd en gestructureerd, waarbij expert 1 expliciet de structuur van de niveaus benoemde. *“Ik vind het niveau is ook begrijpelijk, dus level woning, gebouw en omgeving. Dat is ook wel logisch.” (Expert E1, 2025)*

Expert 3 noemde het *“een mooie checklist”*, en expert 2 stemde hiermee in.

Expert 2 geeft aan dat brandveiligheid een belangrijk aspect is bij ouderenwoningen, net zoals sociale veiligheid van groot belang is. *“Brandveiligheid, dat is ook zo’n hot item bij transformatie. En de sociale veiligheid, heel belangrijk.” (Expert E2, 2025)* Deze aspecten waren al in het raamwerk verwerkt.

Een verbetering, volgens expert 1 en 3, is de leesbaarheid. Het moet mogelijk zijn om de volledige breedte van het bestand op het laptopscherm te zien. *“Het is wel handig als je het leesbaar op een pagina kan zien. […] Ik moet allemaal schuiven met mijn lopertje en ben dan totaal kwijt.” (Expert E1, 2025)*

Een andere verbetering die expert 1 noemde, is dat het goed zou zijn om dezelfde definities te hanteren zoals die in de subsidieregeling voor levensloopbestendige woningen worden aangegeven, binnen het raamwerk. Er werd echter opgemerkt dat er

veel verschillende definities bestaan, maar volgens de expert is het het beste om die van de subsidieregeling aan te houden, omdat deze het meest in de praktijk wordt gebruikt. *"Er zijn heel veel verschillende soorten definities. [...] Ik zou dan ervoor kiezen om die termen dan ook te gebruiken in het raamwerk." (Expert E1, 2025)*

Toepasbaarheid in de praktijk:

Alle experts waren het eens over het doel van het raamwerk: het is bedoeld om het gesprek te starten en te onderzoeken wat de doelgroep nodig heeft, en of het gebouw getransformeerd kan worden naar geschikte ouderenwoningen die aansluiten bij de woonwensen en behoeften van deze doelgroep. Het raamwerk is geen definitief meetinstrument.

De experts denken dat het raamwerk door verschillende partijen gebruikt kan worden. Zo noemde expert 3 bijvoorbeeld gemeenteambtenaren, zodat zij voor leegstaand vastgoed bij de gemeente een soort checklist hebben om te beoordelen of het leegstaande vastgoed kan worden getransformeerd naar ouderenwoningen. *"Ambtenaren kunnen het gebruiken als checklist bij leegstaand vastgoed [...] En dat ze toch een soort checklist hebben ze het maar om te kijken, is dit überhaupt geschikt te maken? En die weten Natuurlijk. Wij hebben heel veel senioren bij ons, in het dorp of In de stad. (Expert E3, 2025)*

Expert 3 gaf ook aan dat een aannemer door het gebouw kan lopen en op die manier snel kan beoordelen of het geschikt is voor transformatie. Daarnaast stelde expert 2 voor dat ook een architect het raamwerk kan gebruiken. *"Ik kan me ook voorstellen dat de architect het kan gebruiken." (Expert E2, 2025)*. Waarop expert E3 antwoorden: *"Dat is ook wel een goede doelgroep."*

Ook werden woningcorporaties door alle drie de experts genoemd. Expert 1 gaf echter aan dat woningcorporaties het pand vaak al in eigen bezit hebben en in zulke gevallen liever kiezen voor sloop en nieuwbouw. Op die manier kunnen ze het gebouw flexibeler maken, zodat het in de toekomst makkelijker aan een nieuwe doelgroep kan worden aangepast wanneer de huidige doelgroep wegvalt.

Advies van expert 3 was om ook een aannemer naar het raamwerk te laten kijken en iemand van de gemeente. *"Je zou het ook met zo'n vastgoed verbouwer, ja, noem het zo, maar iemand die ervaring heeft met oude gebouwen verbouwen moeten doornemen hoe die dat bekijkt." (Expert 3, 2025)*

Verbeteringen:

De onderzoeker stelde de vraag of het onderdeel comfort en kwaliteiten van de woonomgeving uit het raamwerk gehaald zou moeten worden, omdat het weliswaar belangrijk is voor ouderen, maar niet specifiek voor deze doelgroep. Expert 1 gaf aan dat comfort iets vanzelfsprekends is voor alle doelgroepen en daarom uit het raamwerk kan

worden weggelaten. *“Ja, dat is vanzelfsprekend.” (Expert E1, 2025).* Expert 2 stemde hiermee in, en expert 3 deed dat non-verbaal. Wel werd geconcludeerd dat het onderdeel comfort en kwaliteiten van de woonomgeving beter opgenomen kan worden in de voorbereidende stappen vóór het gebruik van het raamwerk.

Expert 3 benoemde dat de volgorde van de variabelen in het raamwerk beter een onderscheid kan maken tussen wat een woning geschikt maakt voor ouderen (en dus voor alle ouderen geldt) en persoonlijke voorkeuren, die apart benoemd moeten worden. Experts 1 en 2 stemden hiermee in. Expert 3 gaf ook aan dat ongeveer 1 op de 4 woningen al geschikt is voor ouderen, maar dat slechts een klein deel van deze woningen daadwerkelijk aantrekkelijk is voor ouderen. *“Nou woonwensen is iets anders als geschikt. Want daar zit een groot verschil tussen voor ouderen geschikte woningen. Dat is nou Misschien wel 1/4 van alle woningen. En voor ouderen aantrekkelijker woningen dat is daar maar een klein onderdeeltje van, die zijn sowieso geschikt.” (Expert E3, 2025)*

Er werd ook meerdere keren aangegeven dat de verhuisbeslissing vaak een variabele kan zijn die te maken heeft met persoonlijke voorkeuren, en niet per se met aspecten zoals levensloopbestendigheid of nabijheid van voorzieningen. Expert 3 noemde bijvoorbeeld dat sommige ouderen ervoor kiezen om in het bos te wonen omdat ze daar mooi kunnen wandelen. *“Dat ouderencomplex de Kwakkenberg, dat ligt helemaal in de bossen aan het eind van de bebouwing. […] Dat ligt dus voor senioren aantrekkelijk, omdat het zo mooi in die bossen ligt, want dan kunnen ze mooi wandelen.” (Expert E3, 2025)*

Expert 1 gaf een voorbeeld van een complex met uitzicht op de Rijn, dat een succes was omdat ouderen juist naar dat complex wilden verhuizen voor het uitzicht. *“Ze hadden een complex ontwikkeld waar ze ook mensen inderdaad voren gaven. Maar die lag helemaal eigenlijk buiten het centrum buiten voorzieningen. Maar die lag heel mooi op de stuwwal bij Rhenen met uitzicht op de Rijn. Dus dat dat dat maakt het dat het gewoon een succes werd dat er heel veel senioren juist daarna wilden voor dat mooie uitzicht.” (Expert E1, 2025)*

Expert 2 noemde ook dat ouderen vaak goed kunnen wonen in complexen waar de voorzieningen niet dichtbij zijn of waar de parkeernorm juist laag ligt. *“Soms kun je een hartstikke goed complex hebben waar ouderen ontzettend fijn wonen. En dan ja, zijn die voorzieningen best ver weg, maar is dat voor hun geen probleem. Ja, voor mij zou dat wel een, hoe noemen we dat een no go zijn, maar voor anderen niet en hetzelfde geldt voor die parkeernormen.” (Expert E2, 2025)*

Alle drie de experts gaven aan dat het voor ouderen verschilt waar ze op willen uitkijken: de één wil graag op reuring uitkijken, terwijl de ander liever op groen uitkijkt. Dit is een persoonlijke voorkeur. *“De een wil graag vogeltjes zien en eekhoorns, de ander wil graag iets zien bewegen.” (Expert E3, 2025)*

Expert 3 maakte een opmerking over de rolstoeltoegankelijkheid en het levensloopbestendig maken van de woningen in het gebouw. Het is niet noodzakelijk dat dit voor alle woningen in het gebouw geldt. Er werd aangegeven dat, wanneer er behoefte is aan dergelijke woningen, dit vaak een doelgroep betreft waarvoor regelmatig woningen vrijkomen, waardoor het meestal snel kan worden geregeld. Deze opmerking gaat over huurwoningen. *"Nou is dat ook wel een bevolking die ook wel waar nog wel eens regelmatig snel een na een kamer of een woning vrijkomt. Dat gaat meestal wel. Maar dat kun je natuurlijk ook als criterium meenemen, dat niet het hele gebouw allemaal rolstoel- of rollatorproof hoeft te zijn, maar in ieder geval een aantal woningen." (Expert E3, 2025)*

Aanvullingen:

Expert 3 gaf aan dat het voor ouderen vaak prettig is om een overdekte fietsruimte te hebben, die ook gedeeld mag worden met andere bewoners. Experts 1 en 2 knikten non-verbaal instemmend. *"Mensen stellen het ook op prijs dat je je fiets binnen kan zetten. Al dan niet in je eigen berging, maar dat mag ook best samen." (Expert E3, 2025)*

Expert 1 gaf aan dat er ook een brancardgeschikte lift in het gebouw geplaatst moet worden. Echter werd er opgemerkt dat dit alleen nodig is bij zorgwoningen en daarom buiten het raamwerk valt.

Expert 3 gaf aan dat ouderen vaak graag op een stoel naar buiten willen kijken, en dat de ramen daarom op een geschikte hoogte gerealiseerd moeten worden. Expert 2 bevestigde dit. *"Ouderen die willen altijd graag op de stoel naar buiten kunnen kijken, dus dat raam moet wel op de goede hoogte zitten." (Expert E3, 2025)*

Wegingen

In eerste instantie was het de bedoeling dat de experts tijdens de sessie wegingen zouden geven over de algemene vitale 65+'er en deze zouden vergelijken met de wegingen van de onderzoeker. Echter, er was tijdens de sessie te weinig tijd hiervoor. Er is afgesproken om de opmerkingen over de wegingen wel alvast mee te nemen en te verbeteren, en deze vervolgens naar de experts te sturen. De experts kunnen dan aangeven welke wegingen zij anders zien en welke aspecten invloed kunnen hebben op de verschillen in weging binnen de algemene 65+-ers. Tijdens de sessie is wel besproken wat de functie van de wegingen is, hoe de wegingen aangepast kunnen worden en welke verschillen er kunnen zijn binnen de vitale 65+ groep.

Tijdens de meeting bedacht de onderzoeker om in plaats van een weging van 1-10, een schaal van 0-10 te gebruiken, aangezien eerder in de sessie naar voren kwam dat een variabele ook niet van toepassing kan zijn. Alle drie de experts beschouwden dit als een goede verbetering.

Expert 3 gaf aan dat de schaal van de wegingen te groot is en dat het beter zou zijn om de schaal te verkleinen naar een schaal van 0-5 in plaats van 0-10, of zelfs een tot drie.

Expert 2 stemde hiermee in, terwijl expert 1 geen reactie gaf. *“Je zou dus misschien al nul tot 5 of zo. Of een tot drie misschien nog wel genoeg al.” (Expert 3, 2025)*

Alle experts waren het erover eens dat gebruikers van het raamwerk de wegingen zelf moeten kunnen aanpassen, omdat deze kunnen verschillen binnen de diverse groep van vitale 65-plussers.

Tijdens de sessie zijn ook de invloeden op de woonvoorkeuren binnen de vitale 65-plussers besproken. De volgende invloeden werden aangegeven:

Toekomstbeeld van ouderen (Expert 3): Expert 3 geeft aan dat ouderen verschillende toekomstbeelden hebben. *“Ouderen hebben ook een ander toekomstbeeld. De een denkt dat hij morgen in een rollator terechtkomt, en de ander denkt daar nog niet over na.” (Expert E3, 2025)*

Leeftijd (Experts 1 & 3): Er wordt benadrukt dat vitaliteit niet gelijk staat aan leeftijd. Expert 1 geeft aan dat binnen de sociale huursector de gezondheid gemiddeld 10 tot 15 jaar eerder achteruitgaat. *“Niet doen alsof de gemiddelde 65-plusser meteen kreupel is.” (Expert 3, 2025) & “Onze huurders daar beginnen de lichamelijke klachten toch wel iets eerder. Dat is volgens mij ook al onderzocht en bewezen. Ja, daar beginnen de klachten toch wel iets eerder.” (Expert E1, 2025)*

Locatiegebonden behoeften (Experts 2 & 3): De locatie van de woning kan invloed hebben op de behoeften van ouderen; deze kunnen per gebied verschillen. *“Ik was een keer in Groningen daar zeiden ze: ‘Zie jij hier binnen de straal van 1 km voorzieningen?’ En zeiden: ‘Nou, dat lossen we onderling wel met elkaar op.’” (Expert E2, 2025) & “In hartje Amsterdam dan zeggen ze: Ik wil elke 5 minuten een bus, want anders vind ik het niet veel.” (Expert 3, 2025)*

Huur vs. koop (Expert 1): Expert 1 geeft aan dat er verschillen zijn in woonwensen en realisatie tussen huur- en koopwoningen. *“Bij huur zit je meestal aan een vast bedrag, dus dat dan kunnen bepaalde voorzieningen niet uit in de begroting. En bij koop kan je er altijd nog extra geld op de koopprijs bij rekenen of geïnvesteerd worden.” (Expert E1, 2025)*

Sociaal-economische klasse: Genoemd door de onderzoeker op vervolg van expert 1 opmerkingen over verschil koop en huur en bevestigd door de experts als relevante factor die invloed heeft op woonvoorkeuren en mogelijkheden.

Behoefte aan type woonvorm (Experts 1 & 2): Beide experts geven aan dat er verschillen zijn in de behoefte aan woonvormen binnen de doelgroep. Waar de één de voorkeur geeft aan individueel wonen, kiest de ander juist voor een meer gemeenschappelijke woonvorm. “*Ja, want je ziet ook bij ouderen ja, zoveel mensen zoveel wensen sommigen die willen erbij Mekaar wonen, maar sommige die willen dat absoluut niet.” (Expert E1, 2025)*

Huishoudgrootte eenpersoonshuishouden of een tweepersoonshuishouden (Experts 1 & 3): Er wordt aangegeven dat de grootte van het huishouden invloed heeft op de woonwensen en de benodigde voorzieningen. *"Ja, waarbij het aantal kamers dat scheelt Natuurlijk ook weer schelen Als je met zijn Tweeën bent of alleen."*

2de feedback ronde

Na de focusgroep is de feedback verwerkt en opnieuw via de mail naar de deelnemende experts gestuurd voor feedback op de splitsing van de variabelen, de wegingen en de factoren die invloeden hebben op verschillende wensen binnen de vitale 65+ groep. Verder is er gevraagd aan de experts hoe de variabel een sociaal actief betrokken buurt in de woonomgeving level meetbaar gemaakt kan worden. Alleen expert 2 heeft geen antwoord gegeven.

Expert 1 geeft aan dat het een overzichtelijk geheel is geworden, raad aan om het voor te leggen aan vertegenwoordiger van een ouderen zelf en geeft de volgende opmerking om een sociaal actieve buurt te meten: *"Een sociaal actieve buurt kan misschien gemeten worden door te kijken hoeveel plekken van ontmoeting er zijn (bieb, buurthuis, kerk) en hoeveel commissies (buurtcommissies, ouderenbonden, wijkraden, wijkcomités). Het aantal zegt niet alles over het gebruik en hoeveelheid activiteiten maar wellicht kun je kijken wat er in een maand aan activiteiten zijn." (Expert E3, 2025)*

Expert 3 geeft schriftelijk feedback met een mondelinge toelichting over dat het duidelijker mag zijn dat het voor vitale ouderen is en het geen noodgedwongen verhuizers zijn en dat de kinderen al uit huis zijn. Expert 3 adviseert om een profiel aan te geven. *"Alle beoogde doelgroepen voor van jou: willen wellicht verhuizen, zijn nu nog vitaal, denken na over hun toekomst en dit is hun laatste te kiezen huis"* Expert 3 geeft aan *"Je hebt als het ware een 'persona' in gedachten: vitale jonge 70-er...."*

Verder geeft expert 3 aan dat het belangrijk is om te weten of ze alleen zijn of met tweeën verhuizen omdat er dan ook meer te besteden is. *"Zijn ze alleen of met zijn tweeën? Er zijn evenveel huishoudens met 1 AOW-er als met 2 AOW-ers dus 1/3 van de AOW-ers woont alleen."* Dit valt onder de factoren die invloed hebben op de individuele wensen binnen de vitale 65+ groep.

Verder geeft expert 3 aan dat maken van onderscheid tussen wat voor alle ouderen geldt en wat meer van individuele voorkeur afhangt goed gescheiden is. Expert 3 vraagt zich wel af of brandveiligheid niet gewoon een eis is dat geld voor iedereen. Echter is expert 3 het wel mee eens dat het belangrijk voor ouderen is dat de looproutes kort en duidelijk moeten zijn dus het wel invloed heeft op ouderen.

Expert 3 geeft als enige expert op papier veranderingen van wegingen aan. De veranderingen die expert 3 aangeeft zijn bij indeling functies gebouw naar weging 3 kan in plaats van 4, flexibele ruimte voor voorzieningen naar weging 2 kan in plaats van 3, de

voorzieningen bij de omgeving allemaal naar 3 kunnen in plaats van 4, de voetgangersvriendelijke kenmerken naar 3 allemaal kunnen in plaats van 4, de secundaire voorzieningen in de omgeving naar 1 kan in plaats van 3, de toegankelijkheid openbaren gebouwen naar 1 kan in plaats van 3 en de omgevingskenmerken naar weging 4 kan in plaats van 3.

L. Filled-in assessment framework - Case A

The assessment framework for Case A, in which any modified weightings are indicated in red.

Score defenition:
0 - Niet geschikt
1 - Zeer lastig inpasbaar, grote structurele beperkingen.
2 - Beperkt inpasbaar, aanzienlijke knelpunten
3 - Matig inpasbaar, haalbaar met significante ingrepen.
4 - Goed inpasbaar, kan met beperkte aanpassingen geschikt worden gemaakt.
5 - Zeer geschikt, direct of met minimale aanpassingen te transformeren.
Opmerking: Sommige variablen zijn gewoon, het is geschik of niet geschikt dan is het 5 of 0

Level Woning					
	Meting	Scoren 0-5	Weging 0-5	Punten	Uitleg/opmerkingen
Variabelen vitale 65+-ers					
Betaalbaarheid:					Naarmate personen ouder zijn hebben ze een hogere voorkeur voor huur. Bij alleenstaanden is dit nog versterkt zichtbaar
Aankoopprijs	Afhankelijk van doelgroep (Prijsbereidheid algemeen ouderen vanuit WoOn21: €200.000-300.000)	4	5	20	Prijs is afhankelijk van de doelgroep. Bijvoorbeeld sociale woningcorporaties zullen de sociale huur grens nemen als grens.
Huurprijs	Afhankelijk van doelgroep (Prijsbereidheid algemeen ouderen vanuit WoOn21: €432-737)		0	0	Prijs is afhankelijk van de doelgroep, Als doel is het creeren van betaalbare woningen dan kan de NAG grens genomen als grens.
Woning type	Appartementen kunnen ontwikkeld worden in het woongebouw	4	4	16	Ouderen willen liever verhuizen naar appartementen dan rijtjeshuizen en (half)vrijstaande woningen. (WoOn21)
De primaire ruimtes op dezelfde verdieping	De primaire ruimtes (woonkamer, keuken, badkamer en ten minste één slaapkamer) kunnen op dezelfde verdieping gemaakt worden	5	5	25	Deze eigenschap hoeft niet direct in de woning gemaakt te worden maak het wel aanpasbaar zijn tot deze kwaliteiten.
Aantal kamers	Drie kamer appartementen kunnen ontwikkeld worden in het gebouw	3	4	12	De woonkamer wordt meegenomen in het aantal kamers. Uit literatuur meest gewenste aantal kamer is 3 en hoe hoger de leefijd de meer de wens naar minder dan 3 kamer toeneemt. (WoOn21)
Toegankelijkheid/Levensloopbestendigheid	Er zijn geen trappen of verhogingen aanwezig. Of er kan een trap lift ingebouwd worden of een lift naar gelijkvloerse verdieping	4	5	20	Het zodanig inrichten van ruimtes dat mensen er gedurende verschillende fasen van hun leven gebruik van kunnen (blijven) maken. Deze eigenschap hoeft niet direct in de woning gemaakt te worden maak het wel aanpasbaar zijn tot deze kwaliteiten.
	De woning kan drempelloos gemaakt worden	4	5	20	Het zodanig inrichten van ruimtes dat mensen er gedurende verschillende fasen van hun leven gebruik van kunnen (blijven) maken. Deze eigenschap hoeft niet direct in de woning gemaakt te worden maak het wel aanpasbaar zijn tot deze kwaliteiten.
	Er kunnen bredere deuren in de woning gemaakt worden	3	4	12	Het zodanig inrichten van ruimtes dat mensen er gedurende verschillende fasen van hun leven gebruik van kunnen (blijven) maken. Deze eigenschap hoeft niet direct in de woning gemaakt te worden maak het wel aanpasbaar zijn tot deze kwaliteiten.
	De woning kan rolstoelgankelijk gemaakt worden	4	5	20	Het zodanig inrichten van ruimtes dat mensen er gedurende verschillende fasen van hun leven gebruik van kunnen (blijven) maken. Deze eigenschap hoeft niet direct in de woning gemaakt te worden maak het wel aanpasbaar zijn tot deze kwaliteiten. Indien het huurappartementen betreft en niet alle appartementen zijn rolstoeltoegankelijk te maken (of heel kostbaar) zou het ook een mogelijk zijn om door te schuiven naar een rolstoeltoegankelijk appartement binnen het complex mocht dit noodzakelijk zijn voor de bewoner.
	Er kan een inloopdouche in de woning gemaakt worden	4	4	16	Het zodanig inrichten van ruimtes dat mensen er gedurende verschillende fasen van hun leven gebruik van kunnen (blijven) maken. Deze eigenschap hoeft niet direct in de woning gemaakt te worden maak het wel aanpasbaar zijn tot deze kwaliteiten.
Veiligheid	Goede verlichting, brandveiligheid, veilig gevoel in huis, mogelijkheid tot op slot doen van deur	4	5	20	Alle aspecten van veiligheid moeten gerealiseerd worden in de woning.
Ramen openen	Ramen zijn makkelijk te openen	2	5	10	Soms bij de oude gebouwen zijn er alleen ramen boven in, deze kunnen niet (gemakkelijk) geopend worden door de ouderen.
Privacy	De woning is privé	4	4	16	Achter de voordeur van de woning is het prive, geen toegang voor anderen.
Variabelen vitale 65+ individuele voorkeur					
Buitenruimte	Eigen prive buitenruimte (balkon en/of tuin)	3	5	15	De ruimte moet weinig onderhoud zijn en moet groot genoeg zijn om met een stoel te zitten en ernaast nog genoeg beweegruimte is om te paseren.
Berging	Eigen berging	5	3	15	Binnen de woning of buiten.
Ramen hoogte	Ramen zijn te maken op zit ooghoogte voor ouderen	5	3	15	Ouderen vinden het fijn om als ze in de stoel zitten dat er naar buiten gekeken kan worden.
Uitzicht	Uitzicht op reuring en/of groen (natuur)	3	3	9	Persoonlijke voorkeur: veel terug komend thema's zijn hierin het uitzicht op groen of op reuring/levendigheid.
Optellen wegingen & punten			69	261	
Totaal score:	**3,782608696**				Hieruit komt dan een totaal level score uit van tussen de 0-5 van de woonomgeving

Level Woongebouw					
	Meting	Scoren 0-5	Weging 0-5	Punten	Uitleg/opmerkingen
Variabelen vitale 65+-ers					
Veiligheid	Het gebouw kan geheel afgesloten worden	5	5	25	Als het gebouw openbaar toegankelijk wordt moeten er afspraken gemaakt worden waneer het gebouw dicht en op slot gaat.
	Er kan genoeg verlichting binnen en rondom het gebouw geplaatst worden	4	5	20	Verlichting helpt bij het veilig voelen en fysiek veilig kunnen bewegen.
Sociale veiligheid	Toegang en zicht naar de woning en aanwezigheid van ontmoetingsplekken	4	5	20	Het gebouw moet een gemeenschapsvorming hebben zodat er sociale veiligheid ontstaat.
Brandveiligheid	Het gebouw kan brandveilig worden gemaakt met duidelijke looproutes	3	5	15	Voor ouderen is het belangrijk dat de looproutes duidelijk zijn en zo kort mogelijk.
Indeling functies gebouw	De indeling van het gebouw leent zich ervoor dat er logische looproutes zijn en functies op een logische plek geplaatst kunnen worden	3	3	9	Een logische ingang en volgorde van functies met bijhorende looproutes.
Toegankelijk Gebouw	Gelijkvloerse toegang of lift	2	5	10	De woningen en het gebouw hebben een gelijkvloerse toegang of dit is opgelost met een lif (of eventueel een korte hellingbaan).
	Rolstoeltoegankelijk	1	5	5	Oude gebouwen kunnen een hoofd entrée hebben met alleen trappen waardoor deze niet rolstoeltoegankelijk is, optie is om een tweede gelijkvloerse ingang te maken of een hellingbaan.
	Geen drempels	2	5	10	Alles in het gebouw kan dempeloos gemaakt worden.
	Automatische deuren	5	3	15	Afhankelijk van de doelgroep.
Toegankelijk terrein	Geen hoogte verschillen	3	4	12	Hoogte verschillen kunnen ook opgelost worden door het creëren van een hellingbaan. Volg hiervoor de bouwbesluit normen.
	Terrein moet goed beloopbaar zijn dus geen mogelijkheiden tot wegzakkingen	4	5	20	Het is vooral belangrijk dat de looproutes goed beloopbaar zijn en duidelijk.
	Brede paden (minstens 80 centimeter)	4	4	16	Zodat er genoeg ruimte is om elkaar ook te passeren.
	De tuin kan onderheidsvriendelijk worden ingedeeld	4	3	12	Het creëren van een onderhoudsvriendelijke tuin kan duurder zijn.
Sociale interactie	Er kan een gemeenschappelijke ruimte gecreerd worden in het gebouw voor sociale interactie en activiteiten	5	4	20	Gemeenschappelijke ruimte: (de toegang tot) overdekte ruimte die toegankelijk is voor alle bewoners van het appartementencomplex, bijvoorbeeld een portiek, hal, galerij en/of ontmoetingsruimtes. De gemeenschappelijk ruimte kan uitnodigen tot sociale interactie, met eventueel bepaalde voorzieningen zoals een gemeenschappelijk keuken. De soorten voorziening en faciliteiten is afhankelijk van type bewoners.
	Er kan een gemeenschappelijke ruimte gecreerd worden buiten op het terrein voor sociale interactie en activiteiten	5	4	20	Een ruimte dat uitnodigd tot sociale interactie, zoals een gemeenschappelijke moestuin. De soorten voorziening en faciliteiten is afhankelijk van type bewoners.
Prive	Prive en gemeenschappelijk kunnen gescheiden worden.	3	4	12	De scheiding tussen prive en gemeenschappelijk moet in balans zijn.
Variabelen vitale 65+ individuele voorkeur					
Uitstraling van het gebouw	Het pand heeft oude karakteristieken die behouden kunnen worden / het pand kan getransformeerd zodat het geen zorg uitstraling heeft	5	4	20	Het gebouw mag geen uitstraling hebben dat het een zorgfunctie heeft zoals het voormalige functie dan geweest was.
Optie om ook de trap te nemen	Trappen met ondersteunende leuningen en antislip	4	4	16	Ouderen blijven hierdoor zichzelf trainen, om dit te faciliteren moet er wel goede ondersteuning zijn voor de ouderen. Er moet ook altijd naast deze optie een toegangelijke optie zijn zoals een lift of ramp/schuine hellingbaan
Ruimte gemeenschappelijke tuin	Er is genoeg ruimte voor het creëren van een gemeenschappelijke tuin	5	4	20	Ouderen vinden het fijn om genoeg groen om zich heen te hebben waar ze niet de eigen verantwoordelijkheid hebben om het te onderhouden.
Ruimte voor voorzieningen	Er is mogelijkheid tot het creëren van een flexible ruimte voor voorzieningen	2	2	4	De behoefte aan voorzieningen verschilt per buurt en kan door de jaren heen veranderen. Ook hangt het ervan af welke voorzieningen in de omgeving ontbreken.
Parkeerplaatsen auto's	Iedereeen heeft tenminste een eigen parkeerplaats	4	4	16	Het is belangrijk voor ouderen om een parkeerplaats dicht bij de woning te hebben.
Fietsen	Er is mogelijkheid tot het overdekt stallen van fietsen	3	4	12	Ouderen vinden het fijn om de fiets overdekt te stallen dit mag ook gezamenlijk met elektrische fietsen worden gedaan.
Electrische fietsen	Er is ruimte voor het overdekt plaatsen en opladen van electrische fietsen dat voldoet aan de brandveiligheids normen		0	0	Hoe groot deze ruimte moet zijn is afhankelijk van de doelgroep.
Scoot mobiels	Overdekt en opladen mogelijkheid en moet voeldoen aan de brandveiligheids normen		0	0	Hoe groot deze ruimte moet zijn is afhankelijk van de doelgroep.
Optellen wegingen & punten			91	329	
Totaal score:	**3,615384615**				Hieruit komt dan een totaal level score uit van tussen de 0-5 van de woonomgeving

Level Woonomgeving					
	Meting	Scoren 0-5	Weging 0-5	Punten	Uitleg/opmerkingen
Variabelen vitale 65+-ers					
Bereikbaarheid	Het gebouw moet bereikbaarzijn met zowel de auto, fiets, openbaar vervoer of te voet	5	5	25	Het gebouw moet in al deze opzichten goed bereikbaar zijn.
Veiliheid	Het is een veilige omgeving voor ouderen en er is goede verlichting op straat	4	5	20	Informatie is te vinden op veiligheids monitor CBS.
Eigen buurt / vertrouwde omgeving	Het gebouw staat in een buurt waar momenteel ouderen niet passend wonen en/of verhuisgeneigd zijn.	3	4	12	Ouderen willen graag in hun eigen woonomgeving blijven.
Voorzieningen:				0	Let op: Indien minder dan 2 van deze voorzieningen op loopafstand wordt het als minder geschikt gezien.
Supermarkt	Is op minder dan 500 meter van de woning	5	4	20	Er kan ook al rekening meegehouden worden dat men minder valide wordt dan wordt er minder dan 400 meter aangehouden
Apotheek	Is op minder dan 500 meter van de woning	5	4	20	Er kan ook al rekening meegehouden worden dat men minder valide wordt dan wordt er minder dan 400 meter aangehouden
Huisarts	Is op minder dan 500 meter van de woning	5	4	20	Er kan ook al rekening meegehouden worden dat men minder valide wordt dan wordt er minder dan 400 meter aangehouden
Openbaar vervoer	Is op minder dan 500 meter van de woning	5	4	20	Het openbaar vervoer moet effcient en betrouwbaar zijn. Er kan ook al rekening meegehouden worden dat men minder valide wordt dan wordt er minder dan 400 meter aangehouden
Toegankelijkheid: (omgevings kenmerken)					
Voetgangervriendelijke kenmerken	De buurt heeft een brede stoep	4	3	12	Vooral op de kortste route naar de voorziengen. Routes die dagelijks gebruikt worden.
	Heeft geen losse stoeptegels	1	3	3	Vooral op de kortste route naar de voorziengen. Routes die dagelijks gebruikt worden.
	Heeft veilige oversteekplekken zoals zeebrapaden en stoplichten	3	3	9	Het beste als deze oversteekplaatsen gesitueerd zijn op de kortste route richting de voorzieningen. Routes die dagelijks gebruikt worden.
	Zit mogelijkheden (bankje)	0	1	0	Zit plekken bij voorkeur steeds op de dezelfde afstand van elkaar.
Variabelen vitale 65+ individuele voorkeur					
Secundaire voorzieningen	Er zijn secundaire voorzieningen te bereiken op loopafstand (minder dan 500 meter) of met openbaarvervoer	5	2	10	Voorbeelden van secundaire voorzieningen zijn: cultuurvoorzieningen zoals een museum of bibliotheek, horecagelegenheden, recreatieve voorzieningen zoals een park, religieuze voorzieningen zoals een kerk, sportfaciliteiten zoals een zwembad, winkelcentra en speciaalzaken.
Toegankelijlheid openbaren gebouwen	Publieke plekken en gebouwen moet toegangelijk zijn	4	2	8	Zoals het park, de bibliotheek, winkelcentrum etc.
Parkeer mogelijkheden	Er zijn genoeg parkeer mogelijkheden in de buurt		0	0	Als er genoeg parkeerplaatsen op het terrein gemaakt kunnen worden is deze niet van toepassing
Omgevingskenmerken	Het is een groene omgeving en/of reuring.	5	4	20	Ouderen willen niet midden in de stad waar er 'te veel' reuring is. Ze willen dat er wel een vorm van reuring is maar niet te veel.
Sociaal betrokken buurt	Er zijn meerdere actieviteiten per maand met de buurt.	2	3	6	Een sociaal betrokken buurt zorgt voor sociale veiligheid, activiteiten in de buurt en verminderen van eenzaamheid.
Optellen wegingen & punten			51	205	
Totaal score:	**4,019607843**				Hieruit komt dan een totaal level score uit van tussen de 0-5 van de woonomgeving

Berekening totaalscore raamwerk				
		Totaal score level	Weging 0-5	Punten raamwerk
	Totaal punten woon level	3,7826087	4	15,130435
	Totaal punten woongebouw level	3,61538462	4	14,461538
	Totaal punten woonomgeving level	4,01960784	4	16,078431
Optellen wegingen & punten			12	45,670405
Totaalscore raamwerk	**3,805867051**			Hieruit komt dan een totaal score uit van tussen de 0-5 van het raamwerk

M. Filled-in assessment framework - Case B

The assessment framework for Case A, in which any modified weightings are indicated in red.

Score defenition:
0 - Niet geschikt
1 - Zeer lastig inpasbaar, grote structurele beperkingen.
2 - Beperkt inpasbaar, aanzienlijke knelpunten
3 - Matig inpasbaar, haalbaar met significante ingrepen.
4 - Goed inpasbaar, kan met beperkte aanpassingen geschikt worden gemaakt.
5 - Zeer geschikt, direct of met minimale aanpassingen te transformeren.
Opmerking: Sommige variablen zijn gewoon, het is geschik of niet geschikt dan is het 5 of 0

Level Woning					
	Meting	Scoren 0-5	Weging 0-5	Punten	Uitleg/opmerkingen
Variabelen vitale 65+-ers					
Betaalbaarheid:					Naarmate personen ouder zijn hebben ze een hogere voorkeur voor huur. Bij alleenstaanden is dit nog versterkt zichtbaar
Aankoopprijs	Afhankelijk van doelgroep (Prijsbereidheid algemeen ouderen vanuit WoOn21: €200.000-300.000)		0	0	Prijs is afhankelijk van de doelgroep. Bijvoorbeeld sociale woningcorporaties zullen de sociale huur grens nemen als grens.
Huurprijs	Afhankelijk van doelgroep (Prijsbereidheid algemeen ouderen vanuit WoOn21: €432-737)	4	5	20	Prijs is afhankelijk van de doelgroep, Als doel is het creeren van betaalbare woningen dan kan de NAG grens genomen als grens.
Woning type	Appartementen kunnen ontwikkeld worden in het woongebouw	5	4	20	Ouderen willen liever verhuizen naar appartementen dan rijtjeshuizen en (half)vrijstaande woningen. (WoOn21)
De primaire ruimtes op dezelfde verdieping	De primaire ruimtes (woonkamer, keuken, badkamer en ten minste één slaapkamer) kunnen op dezelfde verdieping gemaakt worden	5	5	25	Deze eigenschap hoeft niet direct in de woning gemaakt te worden maak het wel aanpasbaar zijn tot deze kwaliteiten.
Aantal kamers	Drie kamer appartementen kunnen ontwikkeld worden in het gebouw	1	3	3	De woonkamer wordt meegenomen in het aantal kamers. Uit literatuur meest gewenste aantal kamer is 3 en hoe hoger de leefijd de meer de wens naar minder dan 3 kamer toeneemt. (WoOn21)
Toegankelijkheid/Levensloopbestendigheid	Er zijn geen trappen of verhogingen aanwezig. Of er kan een trap lift ingebouwd worden of een lift naar gelijkvloerse verdieping	5	5	25	Het zodanig inrichten van ruimtes dat mensen er gedurende verschillende fasen van hun leven gebruik van kunnen (blijven) maken. Deze eigenschap hoeft niet direct in de woning gemaakt te worden maak het wel aanpasbaar zijn tot deze kwaliteiten.
	De woning kan drempelloos gemaakt worden	4	5	20	Het zodanig inrichten van ruimtes dat mensen er gedurende verschillende fasen van hun leven gebruik van kunnen (blijven) maken. Deze eigenschap hoeft niet direct in de woning gemaakt te worden maak het wel aanpasbaar zijn tot deze kwaliteiten.
	Er kunnen bredere deuren in de woning gemaakt worden	3	4	12	Het zodanig inrichten van ruimtes dat mensen er gedurende verschillende fasen van hun leven gebruik van kunnen (blijven) maken. Deze eigenschap hoeft niet direct in de woning gemaakt te worden maak het wel aanpasbaar zijn tot deze kwaliteiten.
	De woning kan rolstoelgankelijk gemaakt worden	4	5	20	Het zodanig inrichten van ruimtes dat mensen er gedurende verschillende fasen van hun leven gebruik van kunnen (blijven) maken. Deze eigenschap hoeft niet direct in de woning gemaakt te worden maak het wel aanpasbaar zijn tot deze kwaliteiten. Indien het huurappartementen betreft en niet alle appartementen zijn rolstoeltoegankelijk te maken (of heel kostbaar) zou het ook een mogelijk zijn om door te schuiven naar een rolstoeltoegankelijk appartement binnen het complex mocht dit noodzakelijk zijn voor de bewoner.
	Er kan een inloopdouche in de woning gemaakt worden	4	4	16	Het zodanig inrichten van ruimtes dat mensen er gedurende verschillende fasen van hun leven gebruik van kunnen (blijven) maken. Deze eigenschap hoeft niet direct in de woning gemaakt te worden maak het wel aanpasbaar zijn tot deze kwaliteiten.
Veiligheid	Goede verlichting, brandveiligheid, veilig gevoel in huis, mogelijkheid tot op slot doen van deur	5	5	25	Alle aspecten van veiligheid moeten gerealiseerd worden in de woning.
Ramen openen	Ramen zijn makkelijk te openen	5	5	25	Soms bij de oude gebouwen zijn er alleen ramen boven in, deze kunnen niet (gemakkelijk) geopend worden door de ouderen.
Privacy	De woning is privé	5	4	20	Achter de voordeur van de woning is het prive, geen toegang voor anderen.
Variabelen vitale 65+ individuele voorkeur					
Buitenruimte	Eigen prive buitenruimte (balkon en/of tuin)	4	4	16	De ruimte moet weinig onderhoud zijn en moet groot genoeg zijn om met een stoel te zitten en ernaast nog genoeg beweegruimte is om te paseren.
Berging	Eigen berging	1	3	3	Binnen de woning of buiten.
Ramen hoogte	Ramen zijn te maken op zit ooghoogte voor ouderen	5	3	15	Ouderen vinden het fijn om als ze in de stoel zitten dat er naar buiten gekeken kan worden.
Uitzicht	Uitzicht op reuring en/of groen (natuur)	5	3	15	Persoonlijke voorkeur: veel terug komend thema's zijn hierin het uitzicht op groen of op reuring/levendigheid.
Optellen wegingen & punten			67	280	
Totaal score:	**4,179104478**				Hieruit komt dan een totaal level score uit van tussen de 0-5 van de woonomgeving

Level Woongebouw					
	Meting	Scoren 0-5	Weging 0-5	Punten	Uitleg/opmerkingen
Variabelen vitale 65+-ers					
Veiligheid	Het gebouw kan geheel afgesloten worden	4	5	20	Als het gebouw openbaar toegankelijk wordt moeten er afspraken gemaakt worden waneer het gebouw dicht en op slot gaat.
	Er kan genoeg verlichting binnen en rondom het gebouw geplaatst worden	3	5	15	Verlichting helpt bij het veilig voelen en fysiek veilig kunnen bewegen.
Sociale veiligheid	Toegang en zicht naar de woning en aanwezigheid van ontmoetingsplekken	5	5	25	Het gebouw moet een gemeenschapsvorming hebben zodat er sociale veiligheid ontstaat.
Brandveiligheid	Het gebouw kan brandveilig worden gemaakt met duidelijke looproutes	5	5	25	Voor ouderen is het belangrijk dat de looproutes duidelijk zijn en zo kort mogelijk.
Indeling functies gebouw	De indeling van het gebouw leent zich ervoor dat er logische looproutes zijn en functies op een logische plek geplaatst kunnen worden	5	3	15	Een logische ingang en volgorde van functies met bijhorende looproutes.
Toegankelijk Gebouw	Gelijkvloerse toegang of lift	5	5	25	De woningen en het gebouw hebben een gelijkvloerse toegang of dit is opgelost met een lif (of eventueel een korte hellingbaan).
	Rolstoeltoegankelijk	5	5	25	Oude gebouwen kunnen een hoofd entrée hebben met alleen trappen waardoor deze niet rolstoeltoegankelijk is, optie is om een tweede gelijkvloerse ingang te maken of een hellingbaan.
	Geen drempels	5	5	25	Alles in het gebouw kan dempeloos gemaakt worden.
	Automatische deuren	4	3	12	Afhankelijk van de doelgroep.
Toegankelijk terrein	Geen hoogte verschillen	5	4	20	Hoogte verschillen kunnen ook opgelost worden door het creëren van een hellingbaan. Volg hiervoor de bouwbesluit normen.
	Terrein moet goed beloopbaar zijn dus geen mogelijkheiden tot wegzakkingen	5	5	25	Het is vooral belangrijk dat de looproutes goed beloopbaar zijn en duidelijk.
	Brede paden (minstens 80 centimeter)	5	4	20	Zodat er genoeg ruimte is om elkaar ook te passeren.
	De tuin kan onderheidsvriendelijk worden ingedeeld	4	1	4	Het creëren van een onderhoudsvriendelijke groene tuin kan duurder zijn.
Sociale interactie	Er kan een gemeenschappelijke ruimte gecreerd worden in het gebouw voor sociale interactie en activiteiten	4	4	16	Gemeenschappelijke ruimte: (de toegang tot) overdekte ruimte die toegankelijk is voor alle bewoners van het appartementencomplex, bijvoorbeeld een portiek, hal, galerij en/of ontmoetingsruimtes. De gemeenschappelijk ruimte kan uitnodigen tot sociale interactie, met eventueel bepaalde voorzieningen zoals een gemeenschappelijk keuken. De soorten voorziening en faciliteiten is afhankelijk van type bewoners.
	Er kan een gemeenschappelijke ruimte gecreerd worden buiten op het terrein voor sociale interactie en activiteiten	5	4	20	Een ruimte dat uitnodigd tot sociale interactie, zoals een gemeenschappelijke moestuin. De soorten voorziening en faciliteiten is afhankelijk van type bewoners.
Prive	Prive en gemeenschappelijk kunnen gescheiden worden.	5	4	20	De scheiding tussen prive en gemeenschappelijk moet in balans zijn.
Variabelen vitale 65+ individuele voorkeur					
Uitstraling van het gebouw	Het pand heeft oude karakteristieken die behouden kunnen worden / het pand kan getransformeerd zodat het geen zorg uitstraling heeft	1	4	4	Het gebouw mag geen uitstraling hebben dat het een zorgfunctie heeft zoals het voormalige functie dan geweest was.
Optie om ook de trap te nemen	Trappen met ondersteunende leuningen en antislip	4	4	16	Ouderen blijven hierdoor zichzelf trainen, om dit te faciliteren moet er wel goede ondersteuning zijn voor de ouderen. Er moet ook altijd naast deze optie een toegangelijke optie zijn zoals een lift of ramp/schuine hellingbaan
Ruimte gemeenschappelijke tuin	Er is genoeg ruimte voor het creëren van een gemeenschappelijke tuin	5	4	20	Ouderen vinden het fijn om genoeg groen om zich heen te hebben waar ze niet de eigen verantwoordelijkheid hebben om het te onderhouden.
Ruimte voor voorzieningen	Er is mogelijkheid tot het creëren van een flexible ruimte voor voorzieningen	4	2	8	De behoefte aan voorzieningen verschilt per buurt en kan door de jaren heen veranderen. Ook hangt het ervan af welke voorzieningen in de omgeving ontbreken.
Parkeerplaatsen auto's	Iedereeen heeft tenminste een eigen parkeerplaats	3	4	12	Het is belangrijk voor ouderen om een parkeerplaats dicht bij de woning te hebben.
Fietsen	Er is mogelijkheid tot het overdekt stallen van fietsen	3	3	9	Ouderen vinden het fijn om de fiets overdekt te stallen dit mag ook gezamenlijk met elektrische fietsen worden gedaan.
Electrische fietsen	Er is ruimte voor het overdekt plaatsen en opladen van electrische fietsen dat voldoet aan de brandveiligheids normen	2	3	6	Hoe groot deze ruimte moet zijn is afhankelijk van de doelgroep.
Scoot mobiels	Overdekt en opladen mogelijkheid en moet voeldoen aan de brandveiligheids normen	1	4	4	Hoe groot deze ruimte moet zijn is afhankelijk van de doelgroep.
Optellen wegingen & punten			95	391	
Totaal score:	**4,115789474**				Hieruit komt dan een totaal level score uit van tussen de 0-5 van de woonomgeving

Level Woonomgeving					
	Meting	Scoren 0-5	Weging 0-5	Punten	Uitleg/opmerkingen
Variabelen vitale 65+-ers					
Bereikbaarheid	Het gebouw moet bereikbaarzijn met zowel de auto, fiets, openbaar vervoer of te voet	4	5	20	Het gebouw moet in al deze opzichten goed bereikbaar zijn.
Veiligheid	Het is een veilige omgeving voor ouderen en er is goede verlichting op straat	3	5	15	Informatie is te vinden op veiligheids monitor CBS.
Eigen buurt / vertrouwde omgeving	Het gebouw staat in een buurt waar momenteel ouderen niet passend wonen en/of verhuisgeneigd zijn.	4	5	20	Ouderen willen graag in hun eigen woonomgeving blijven.
Voorzieningen:				0	Let op: Indien minder dan 2 van deze voorzieningen op loopafstand wordt het als minder geschikt gezien.
Supermarkt	Is op minder dan 500 meter van de woning	5	4	20	Er kan ook al rekening meegehouden worden dat men minder valide wordt dan wordt er minder dan 400 meter aangehouden
Apotheek	Is op minder dan 500 meter van de woning	0	4	0	Er kan ook al rekening meegehouden worden dat men minder valide wordt dan wordt er minder dan 400 meter aangehouden
Huisarts	Is op minder dan 500 meter van de woning	1	4	4	Er kan ook al rekening meegehouden worden dat men minder valide wordt dan wordt er minder dan 400 meter aangehouden
Openbaar vervoer	Is op minder dan 500 meter van de woning	3	4	12	Het openbaar vervoer moet effcient en betrouwbaar zijn. Er kan ook al rekening meegehouden worden dat men minder valide wordt dan wordt er minder dan 400 meter aangehouden
Toegankelijkheid: (omgevings kenmerken)					
Voetgangervriendelijke kenmerken	De buurt heeft een brede stoep	4	3	12	Vooral op de kortste route naar de voorziengen. Routes die dagelijks gebruikt worden.
	Heeft geen losse stoeptegels	4	3	12	Vooral op de kortste route naar de voorziengen. Routes die dagelijks gebruikt worden.
	Heeft veilige oversteekplekken zoals zeebrapaden en stoplichten	3	3	12	Het beste als deze oversteekplaatsen gesitueerd zijn op de kortste route richting de voorzieningen. Routes die dagelijks gebruikt worden.
	Zit mogelijkheden (bankje)	1	3	3	Zit plekken bij voorkeur steeds op de dezelfde afstand van elkaar.
Variabelen vitale 65+ individuele voorkeur					
Secundaire voorzieningen	Er zijn secundaire voorzieningen te bereiken op loopafstand (minder dan 500 meter) of met openbaarvervoer	0	2	0	Voorbeelden van secundaire voorzieningen zijn: cultuurvoorzieningen zoals een museum of bibliotheek, horecagelegenheden, recreatieve voorzieningen zoals een park, religieuze voorzieningen zoals een kerk, sportfaciliteiten zoals een zwembad, winkelcentra en speciaalzaken.
Toegankelijlheid openbaren gebouwen	Publieke plekken en gebouwen moet toegangelijk zijn	1	2	2	Zoals het park, de bibliotheek, winkelcentrum etc.
Parkeer mogelijkheden	Er zijn genoeg parkeer mogelijkheden in de buurt	3	3	9	Als er genoeg parkeerplaatsen op het terrein gemaakt kunnen worden is deze niet van toepassing
Omgevingskenmerken	Het is een groene omgeving en/of reuring.	4	4	16	Ouderen willen niet midden in de stad waar er 'te veel' reuring is. Ze willen dat er wel een vorm van reuring is maar niet te veel.
Sociaal betrokken buurt	Er zijn meerdere actieviteiten per maand met de buurt.	4	3	12	Een sociaal betrokken buurt zorgt voor sociale veiligheid, activiteiten in de buurt en verminderen van eenzaamheid.
Optellen wegingen & punten			57	169	
Totaal score:	**2,964912281**				Hieruit komt dan een totaal level score uit van tussen de 0-5 van de woonomgeving

Berekening totaalscore raamwerk				
Om de score voor het totale raamwerk te krijgen worden de totaal scores van de levels gemenigvuldiged met de bijhoorde weging.				
Deze punten van de drie levels worden opgeteld en gedeeld door de som van de weging van totaal level score.		Totaal score level	Weging 0-5	Punten raamwerk
	Totaal punten woon level	4,17910448	4	16,716418
	Totaal punten woongebouw level	4,11578947	4	16,463158
	Totaal punten woonomgeving level	2,96491228	4	11,859649
Optellen wegingen & punten			12	45,039225
Totaalscore raamwerk	**3,753268744**			Hieruit komt dan een totaal score uit van tussen de 0-5 van het raamwerk