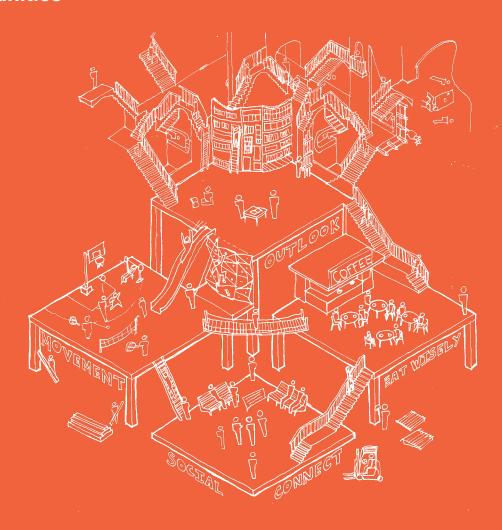
# BETTER TOGETHER.

Reimagining Architecture for Inclusive and Connected Ageing Communities



#### **Graduation Research Plan**

**AR3AD110 Designing for Health & Care** 

Arno Decorte 5704391

**Tutors:** 

**Birgit Jurgenhake** 

**Kobe Macco** 

**Leo Oorschot** 

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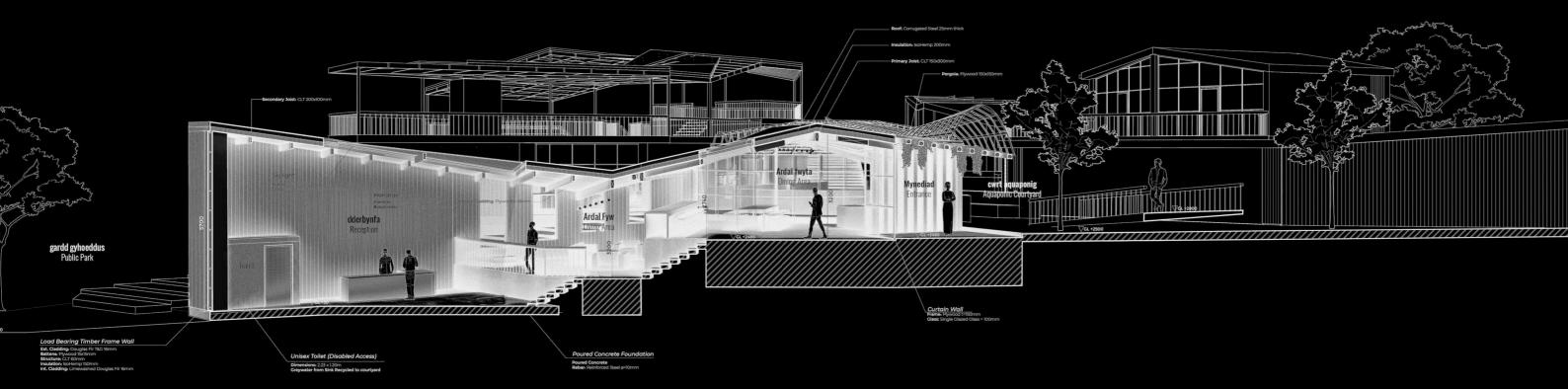
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### 1.

## **Background of Research**

#### **PAST FACTORS**

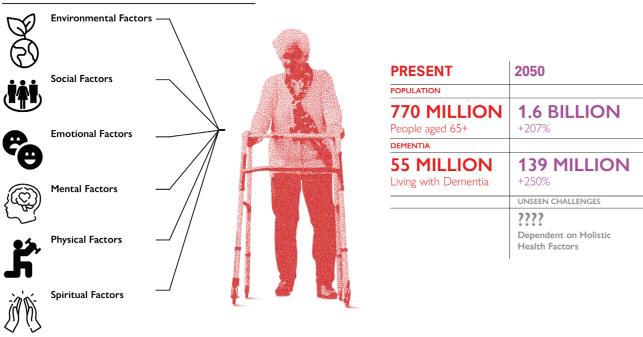


Fig. 1: The Growing Issue of an Ageing Population Diagram by Author, statistics sourced from World Social Report 2023 (United Nations Department of Economic and Social Affairs)

#### The Ageing Population - Elderly as the New Norm

Globally, we are witnessing an undeniable trend indicating a significant demographic shift, with the proportion of people aged 65 and above projected to more than double by the year 2050, as reported by the United Nations Department of Economic and Social Affairs in 2023. This demographic transformation is not unique to the global landscape; the Netherlands, too, is set to experience a substantial change. By 2040, the percentage of the Dutch population aged 65 or older is anticipated to rise from the current 16% to a staggering 26%, as per data from the Central Bureau of Statistics (CBS) in 2012.

As the elderly population grows, it is evident that the challenges faced by this demographic will increase in both scale and complexity. As society adapts to this shift, the very nature of these changes may evolve in an unexpected way. In light of these transformations, there is an urgent need to redefine our perspective, recognizing the elderly not as the exception but as the norm (Hammond & Saunders, 2021). It is time to consider how our architectural designs can become more inclusive, accommodating, and responsive to the diverse needs of this growing segment of our society. This research proposal seeks to address these critical issues and explore how architecture can be harnessed to promote the well-being of the elderly population in our evolving world.

#### **Learning From Blue Zones**

'Blue Zones' are regions in the world where the population has been observed to have high levels of longevity while sharing a common lifestyle and environment (Poulain et al., 2014). Since the term's first appearance in academia in 2004 based on studies in Sardinia, Italy; several other blue zones have been identified: Okinawa, Japan; Ikaria, Greece; Nicoya, Costa Rica and Loma Linda California. Interest in these areas have piqued in relation to the rising challenges associated with ageing populations. Specifically, several of theories and studies have been developed to try to understand why these areas have such high longevity (Buettner, 2023). These studies have highlighted observations that, as well as having a healthy diet, exercise regime and positive outlook, the people living within blue zones also seem to have a commonality in having strong social relationships and genuine connections with their community members (Buettner, 2023). The research paper will take inspiration from these observations to underscore the significance of social interaction and overall well-being.

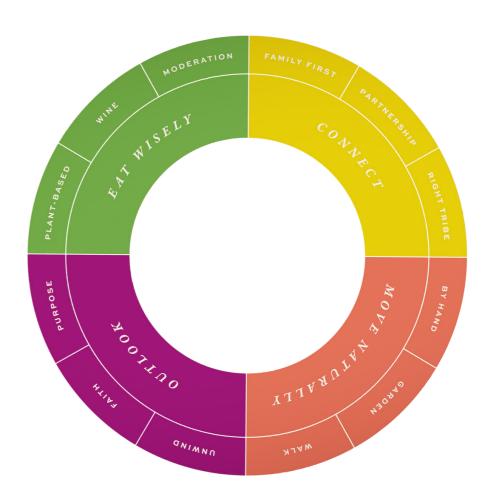


Fig 2: Four Commonalities between Blue Zones (Live to 100, 2023)

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1.2

## **Problem Statement**

'Incorporating social support and connections is critical for overall health and for healthy habits to be sustainable'

(Martino et al., 2015)

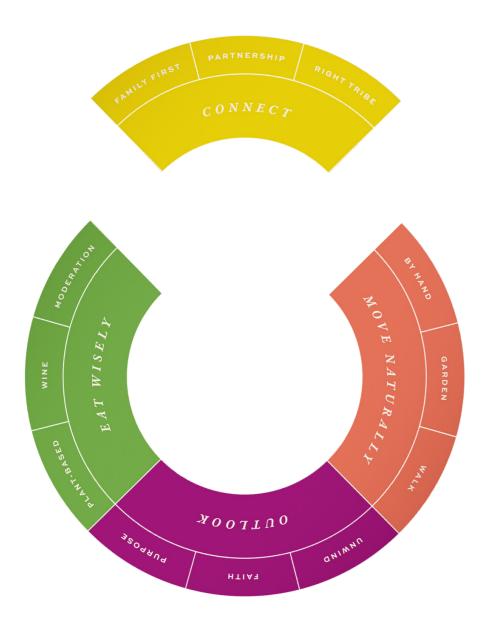


Fig. 3: Social Connection as a Focus for the Architect, Adapted from the Netflix Series Diagram in 'Live to 100' by the Author (Live to 100, 2023)

#### **Defining Social Connection**

Social connection can be defined as 'The feeling or sense of belonging to a group and generally feeling close to and cared by other people' (O'Rourke & Sidani, 2017). As we all know, humans are inherently social creatures (Young, 2008) and therefore social life plays an important role in our survival and self-actualization (Maslow, 1987). The concept of 'social connection' can be further broken down in to three domains of varying scale and intimacy: Intimate, Relational and Collective connectedness (Brewer & Gardner, 1996). Intimate social connectedness is defined as our perceived closeness to those we share a deep, mutual bond of affection and trust, such as spouses, best friends, or close family members (Perry, 2023). Relational social connectedness refers to the perceived presence of family and friendship connections who provide support and mutual aid (Perry, n.d., p. 101). Finally, collective social connectedness is the sense of belonging to a wider group of people, such as teams, organizations, schools etc (Perry, n.d., p. 101). The fulfilment of these three domains are essential in creating social connection in individuals and without it, social isolation becomes a major risk.

#### **Social Connection as a Catalyst Towards Well-Being**

Unfortunately, contemporary healthcare has neglected social connection as a key aspect of living and preventing disease, as we see a shift in recent times towards the pathogenic approach of medicine and reacting to disease (Battisto, 2019). This neglect increases the risk of social isolation, which in turn can lead to increased occurrence of disease, un-healthy living conditions and even death (Holt-Lunstad et al., 2010). On the other hand, a strong sense of social connectedness can be more than the simple avoidance of disease. In fact, it has been shown to be positively conducive to well-being on the behavioural, physiological, and psychological level (Umberson & Montez, 2010). Therefore, within this research proposal, we can understand social connection as an important catalyst towards well-being. A catalyst that, when promoted, can unlock various pathways to well-being, and when neglected, can create the opposite effect. This is important for this research proposal, as our pursuit of designing for well-being can be hindered by the fact that well-being is an extremely subjective term that can have many different meanings depending on the individual (Fletcher, 2015). Rather than prescribing a one-size-fits-all definition of wellness, architecture can take on the responsibility of creating environments where the potential for personal well-being is maximized. This is achieved through the deliberate promotion of social connectedness, recognizing it as a catalyst that opens doors to diverse pathways on our personal journeys towards well-being.

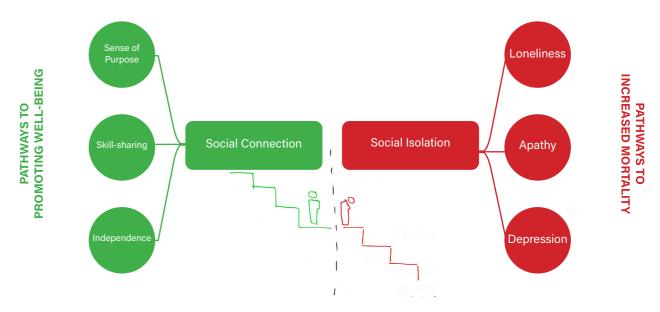


Fig. 4: Social Connection and Wellness by the Author

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#### Social Isolation is a Growing Problem In Society

The lack of social connection is evidenced by the common occurrence of loneliness among elderlies. According to a study conducted by CBS, one-third of over-75s in the Netherlands experience loneliness, with about 10% saying that loneliness is a common occurrence (Statistics Netherlands, 2020). A large proportion of this is most likely linked to the fact that elderly people represent the largest population living alone in the Netherlands (Statistiek, 2019). This trend is expected to continue as the elderly population grows, thereby increasing the amount of elderly people living alone. As mentioned before, social isolation is detrimental for health, and this is especially true for elderly people. In fact, it should be noted that the detriments of social isolation are more serious in elderly people as they are more vulnerable and face unique challenges already in their daily lives (Medicine National Academies of Sciences et al., 2020) This lack of social connection can lead to wider issues especially as the ageing population grows such as the exacerbation of the generational gap, the rise of mental health issues and overall poorer quality of life for the elderly (Van Der Brug & Rekker, 2021).

#### Not Everyone Can Age at Home

'Ageing in Place' is defined as remaining in a community-based dwelling during one's late years in life (Ratnayake et al., 2022). It is the most preferred option for most elderlies as it allows them to maintain their autonomy and independence in a community that offers social connections and access to services (Wiles et al., 2012). Elderly people may end up ageing in place alone at home as a result of the death of a spouse or children leaving the household. Most studies are in agreement that ageing in place can be effective in prolonging the life of the elderly and fostering well being if it is conducted within a strong and supportive community (Ratnayake et al., 2022). Studies suggest that without a strong community, ageing in place at home may pose more risks than it does benefits (Ratnayake et al., 2022). Despite these risks, it can be hypothesized that an elderly person may still choose to remain at home simply because the alternative options are lacking. Furthermore, in the case of the Netherlands, the healthcare system currently relies on care being delivered at home as a means of reducing stress on hospitals, but as the amount of elderly people living alone at home rise, this will inevitably create further issues (Baks, n.d.).

In 2015, Netherlands virtually abolished 'bejaardentehuizen' (retirement homes), designed for providing a place for the elderly to live who were not necessarily sick but rather just wanted to be with other retirees, as part of a 'long-term care reform' (van Doorslaer et al., 2020). Although this was initially done to increase 'financial sustainability', it has arguably generated more problems than it has solved (van Doorslaer et al., n.d.). Instead of increased efficiency, the elimination of retirement homes in exchange for more nursing homes created a predicament for elderlies who were living alone as it significantly reduced their options for living. As explained by Paul Baks, the threshold for nursing home care today has been set so high that only those who are exceptionally sick can have access (2017). As a result, an elderly person, living alone at home despite still being healthy, can only choose to either: move in with family (Torres, 2014), continue staying at home, or wait to get sick enough to go to a nursing home. The gap to highlight here is that more consideration should be given to elderly social housing that encourages independent living, fosters social connection and overall well-being for active elderlies that are looking to age in a community environment.



Fig. 5 - 'Tussen wal en schip': The Need to Create more Independent Living Facilities by Author

INTEGRATING ELDERLY HOMES IN TO THE

SURROUNDING COMMUNITY

Motivation and Personality, Maslow, 1987

## 2 Theoretical Framework

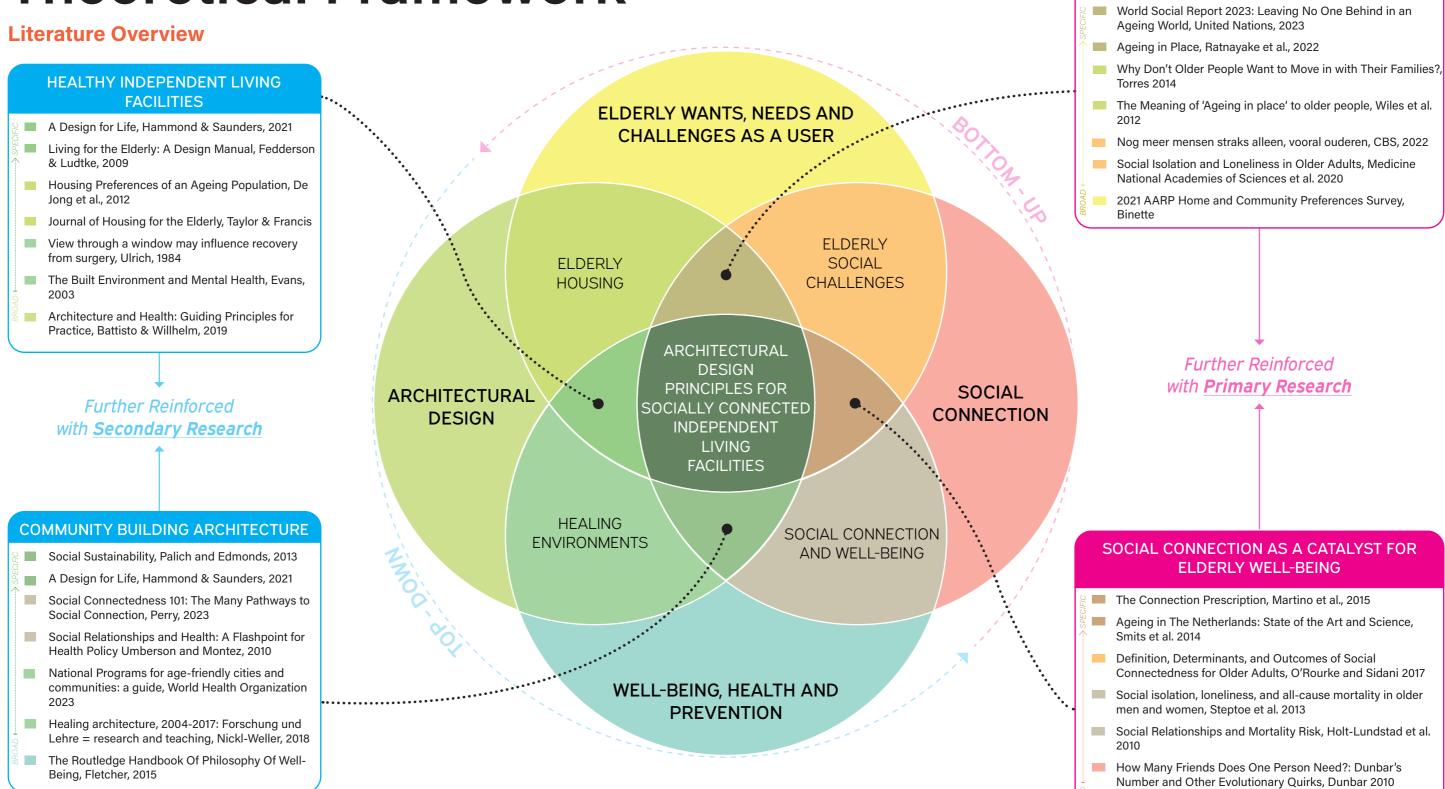


Fig. 6: Literature Overview Diagram Inspired by Zuzunaga's 'Ikigai' Diagram, by Author

## 2.1

## **Theoretical Framework**

#### **Key Theories**

#### Overview

The theoretical framework outlined below is composed of key theories extracted from the four aforementioned domains of Architectural Design, Well-Being, Social Connection and Elderly Wants/Needs. These theories have been selected based on their theoretical, historical and practical significance in relation to the ambition of the research.

#### 1. Architectural Design - 'Universal Design Principles For Elderly Living Environments'

The Design Manual: Living for the Elderly by Fedderson & Lüdtke (2018) contains important guidelines adapted from the 7 universal design guidelines created by Ron Mace that aimed to promote design that would be accessible for everyone regardless of any conditions (Mitrasinovic, 2008). In the case of the manual, these principles have been adapted towards the same user group (elderlies) that the research focuses on within a similar problem statement (the ageing population). This theory serves as a solid starting point in providing practical design principles to consider when creating elderly living environments. It is important to note that the theory comes as a result of extensive case studies from countries around the world, and therefore the research would seek to further adapt these specifically for the context of the Netherlands, the research topic and the target user group.

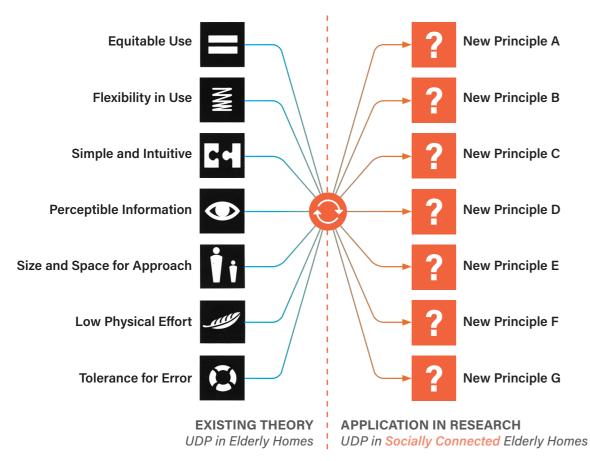


Fig. 7: Theory of Universal Design Principles (UDP) and Planned Application in the Research, by Author, inspiration from 'Living for the Elderly: A Design Manual' (Feddersen & Lüdtke, 2009)

#### 2. Well-Being - 'Architecture for Health'

'Architecture for Health' is a term used by Battisto and Wilhelm in 'Architecture and Health: Guiding Principles for Practice' to describe a theory that underscores the importance of preventative features in our built environment (2019). The theory is built upon historical observations of how our approach towards architecture and health has shifted from a salutogenic dominated approach towards a pathogenic dominated approach in recent times (Antonovsky, 1979). In other words, contemporary architecture is too reliant on the treatment aspect of diseases and not incorporating enough preventative features. In response, 'Architecture for Health' as described by Battisto promotes design principles that seek to return to a balance between prevention and treatment, one that is regenerative in its approach to create open, accessible, flexible and adaptable health environments. This research will aim to take this wider philosophy and explore its application in socially connected elderly independent living facilities with the hopes that the outcome is resilient in responding to current issues (pathogenesis) and preventing future issues (salutogenesis).

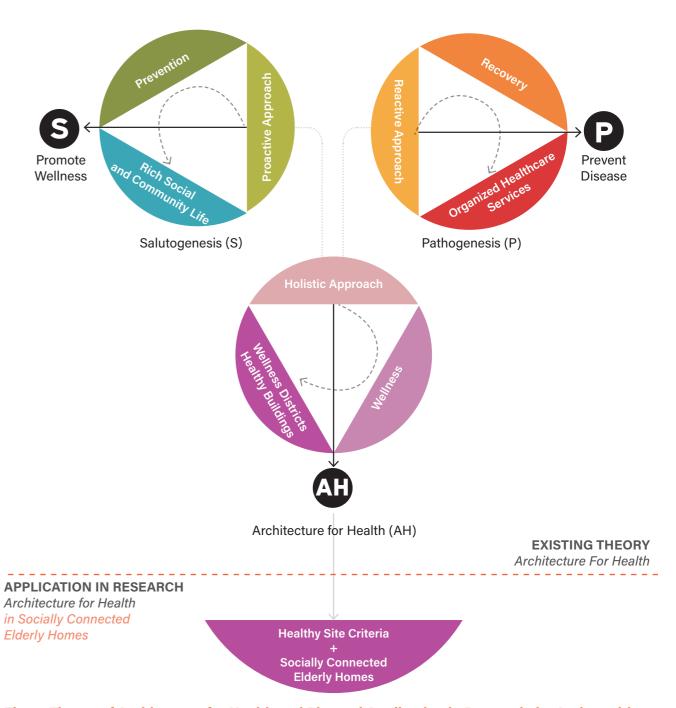


Fig. 8: Theory of Architecture for Health and Planned Application in Research, by Author with Inspiration from 'Architecture and Health: Guiding Principles for Practice ' (Battisto, 2019)

#### 3. Social Connection - 'The Connection Prescription'

As stated in Chapter 1, Social Connection can be understood as a catalyst for unlocking well-being and promoting health. An important theory related to this is proposed in the 'Connection Prescription' by Jessica Martino et al. (2017). The study proposes a theory that positions 'Social Connection' as a necessary prescription for the promotion of important well-being aspects. In elaborating this proposition, the paper takes the mnemonic normally associated with your typical medicinal prescription, FITT (Frequency, Intensity, Time and Type) and applies it to the component of social connection. In doing so, this theory provides a useful framework for the measurement of social connection. This research can then employ this theory as a methodology when conducting primary research during fieldwork or interviews.



Fig. 9: Theoretical Framework and it's intersections between Practice, Theory and History by Author

#### 4. Elderly Wants & Needs: - 'Social isolation and loneliness in older adults'

'Social isolation and loneliness in older adults' is a broad-based study on the prevalence of social isolation specifically in older adults (Committee on the Health and Medical Dimensions of Social Isolation and Loneliness in Older Adults, 2020). Although the paper itself is not necessarily highly 'theoretical', it does provide a hypothesis that suggests that elderly people are at a high-risk of experiencing social isolation due to pre-disposing factors such as living alone, the loss of family or friends, chronic illness and sensory impairments. Furthermore, it also suggests that isolation can be episodic or chronic. Since this hypothesis is based on an extensive study conducted in the United States, it can be utilized in the research as a framework for the development of interview questions and fieldwork. To be specific, interviews can be done to test whether or not this hypothesis is true within the research design context.

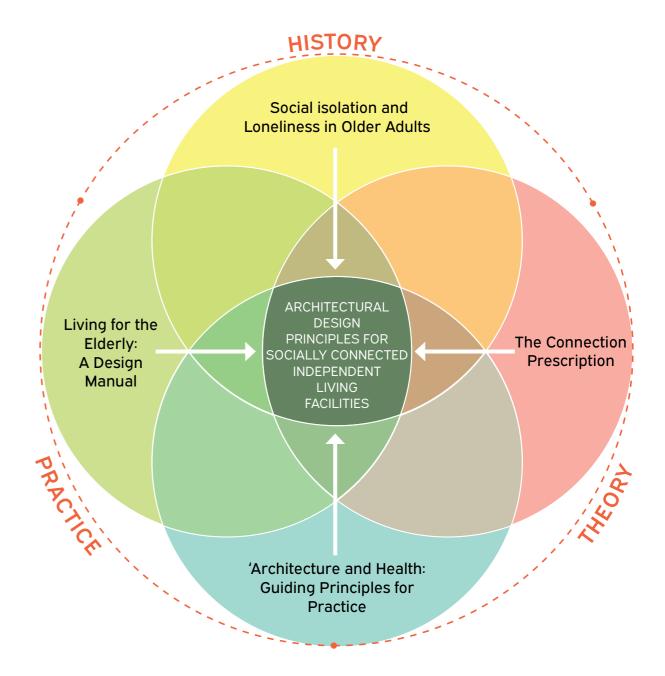


Fig. 10: Theoretical Framework and its intersections between Practice, Theory and History by Author



Fig. 10: Housing Progression Of Elderly and The Gap to Be Filled by Author

## 2.2 The Gap

#### In Between the Home and the Nursing Home

#### **Recognizing Architects as Shapers of Social Connection**

The built environment plays a considerable role in loneliness, social connection and overall wellbeing as our surroundings have been proven to have both direct and indirect effects on our mental health (Evans, 2003). This relationship can significantly influence the health and ageing process of elderlies. In fact, a recent study conducted on Dutch nursing homes revealed a strong positive correlation between apathy and mortality in patients (Nijsten et al., 2017). Architecture can either facilitate or impede the quality, potential and presence of social connectedness, especially in elderly living environments (Palich & Edmonds, 2013). In the case of this research proposal, I will explore the role architecture plays as a conductor of social connection in elderly living environments and how it can be utilized to strengthen the social fabric with the hopes of creating principles for a healthy living environment.

#### The Gap to Fill - Independent Living Facilities that Promote Social Connection

As highlighted before, there is a lack of options for places where solitary elderly people can choose to age while maintaining strong social connections and a sense of belonging to a community. As architects, more focus should be given towards creating a new option that exists in between the option to age in place at home and moving to a care facility. A place where an elderly person can continue living with full independence, while forming new meaningful social connections that promote well-being. A place that does not represent the end of their story, but a new beginning.

In doing so, there is potential to not only promote well-being to prolong the quality of life and health span of elderly people as their population increases, but also to relieve the increasing pressure on the healthcare system. In creating an environment where several independent elderlies live together, care can be made available in a much efficient manner. Fewer nursing staff would be required and travel time would be saved since elderly people can be concentrated in a single community where they can all be monitored (Baks, 2017). Furthermore, collective housing is proven to be much more affordable than individual housing due to the pooling of resources, and this allows for the possibility of creating affordable homes within urban areas, keeping elderlies close to facilities, public transport links and communities (Griffith et al., 2022).

'Planners, developers and designers must stop thinking about older people as patients or a burden, but as citizens.'

(Hammond & Saunders, 2021)

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## 3.1 **Research Question**

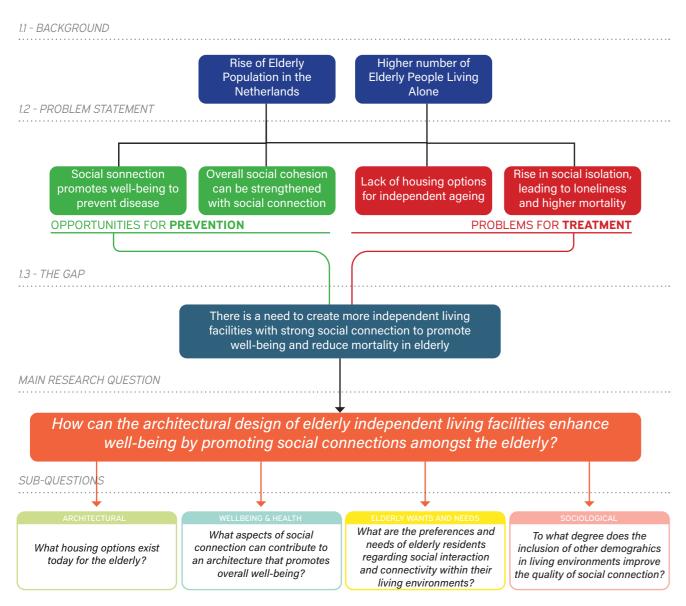


Fig. 11: Line of Reasoning Towards Research Question, By Author

#### **Proposed Hypothesis**

My hypothesis is that social connection within elderly living environments are not only necessary to combatting loneliness and other mental diseases, but is also a key catalytic component to promoting overall well-being. In doing this research, I am working towards the outcome of creating Architectural Design Principles for Socially Connected Independent Living Facilities.

#### **Research Goals**

The aim of this research is to generate a set of guiding principles for socially connected independent living facilities that focus on solitary elderly people who do not want to age at home. The hope is that in doing so, we can generate a prototypical approach that can be applied across the Netherlands that can create places for this marginalised group as they grow in size.

#### **Main Research Question**

How can the architectural design of elderly independent living facilities enhance well-being by promoting social connections amongst the elderly?

#### **Sub Questions**

- What housing options exist today for the elderly?
- What aspects of social connection can contribute to an architecture that promotes overall well-being?
- What are the preferences and needs of elderly residents regarding social interaction and connectivity within their living environments?
- To what degree does the inclusion of other demographics in living environments improve the quality of social connection?

#### **Keywords and Definitions**

- Independent Living Facilities: Independent living communities are for adults, generally ages 55 and older, who don't need assistance with activities of daily living (ADLs) but are looking for a living environment that offers additional support, onsite amenities and socializing opportunities and activities. (Heyn, 2022)
- **Social Connection:** The feeling or sense of belonging to a group and generally feeling close to and cared by other people (O'Rourke & Sidani, 2017)
- Age-Friendly Living Environments: 'Environments designed to account for the wide diversity of older people, promote their autonomy, inclusion, and contributions in all areas of community life, respect their decisions and lifestyle choices, and anticipate and respond flexibly to ageing-related needs and preferences' (World Health Organization, 2023)
- **Well-being:** 'a state in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community' (World Health Organization, 2022)
- Elderly: People aged 65 or older (United Nations Department of Economic and Social Affairs, 2023)

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## Methodology

#### **Balancing Top Down and Bottom Up Methods**

#### Overview

The ambition of this research proposal is to produce design principles for socially connected independent living facilities that can be applied across the Netherlands in anticipation of an ageing population. However, in order to make the research more effective, the methodology applied will be within a framework that positions the research between top-down and bottom-up methods.

#### **Top-Down: In Pursuit of Archetypal Principles**

The 'top-down' component of the methodology aims to generate universal design principles that outline the key components for an archetypal independent living facility that promotes social connection and by extension, overall well-being. This research will delve in to secondary sources, exploring literature detailing theories and concepts relevant to the theoretical framework as well as exploring its application in case studies on the architectural and urban scale.

#### **Bottom Up: In Pursuit of Methodologies**

The 'bottom-up' component of the methodology aims to investigate the target user's wants and needs regarding their living environments. In doing so, the aim is to fuse this with the aforementioned top-down principles to ensure that the design is responsive to the unique needs of the user as well as the surrounding context (avoiding 'rubber-stamping'). In doing this primary based research, the hope is to also detail participatory methods for how future architects with the same ambition can extract specific types of information from their target users and most importantly, get them involved in the design process!

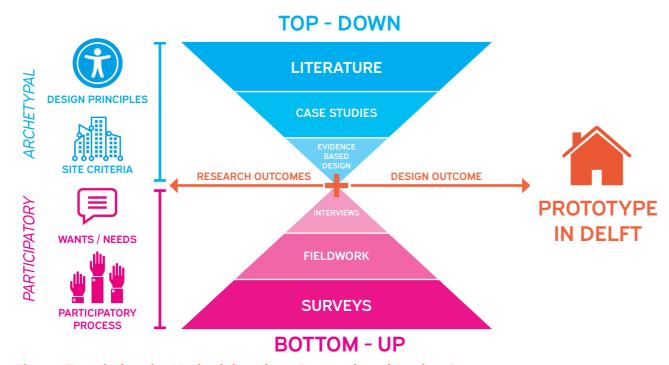


Fig. 12: Translating the Methodology in to Research and Design Outputs

#### How can the architectural design of elderly independent living facilities enhance well-being by promoting social connections amongst the elderly? SUB-QUESTIONS What are the preferences and What aspects of social To what degree does the needs of elderly residents What housing options exist connection can contribute to inclusion of other demograhics regarding social interaction today for the elderly? an architecture that promotes in living environments improve and connectivity within their overall well-being? the quality of social connection? living environments? **METHODOLOGY** SECONDARY SOURCE BASED PRIMARY SOURCE BASED

### **CASE STUDIES**

- Make Sense: Architecture by White, White Architekter
- What is Co-Dividuality?, Liotta et al.
- Building Community: New Apartment Architecture, Wehh

#### **LITERATURE**

- National Programmes for age-friendly cities and communities: a guide, WHO
- A Design for Life, Urban Practices for an agefriendly city, Hammond and Saunders

#### **FIELDWORK**

- Day in the Life Studies with a focus on where social interaction happens
- Mapping social activity within an elderly living environment

#### **INTERVIEW**

- Interviews focusing on:
- Perception of other demographic groups such as young adults, children and middle-aged people
- Amount of positive and negative experience with different demographics

#### **LITERATURE**

- Living for the Elderly, A Design Manual, Fedderson and Ludtke
- Design against loneliness: service design toolkit for social connectivity among the elderly, Weng

#### **CASE STUDIES**

- Architecture and Health: **Guiding Principles for** Practice, Battisto and
- Healing Architecture Nickl-Weller

#### **INTERVIEW**

- Interviews focusing on:
- How much social interaction does an elderly person like?
- What forms of social interaction are most fulfilling and are typical for elderly?

#### **FIELDWORK**

- Mapping moments of contact between different demographic groups
- Data collection of forms of inter-generational contact and activities

#### OUTPUT

#### ARCHETYPAL COMPONENT

SECONDARY OUTCOME - SITE CRITERIA FOR INDEPENDENT LIVING FACILITIES

Design principles that promo social connection within the building as well as with the surrounding context.

Design principles and site criteria that leverage social connection to maximise wellbeing in elderly homes

Overview of wants and needs regarding social interaction for the elderly.

Overview of wants and needs regarding inter-generational living in independent living facilities

SECONDARY OUTCOME - METHODS FOR USER ENGAGEMENT IN DESIGN

PARTICIPATORY COMPONENT

ARCHITECTURAL DESIGN PRINCIPLES FOR SOCIALLY CONNECTED INDEPENDENT LIVING FACILITIES

Fig. 13: Methodology and Expected Primary and Secondary Results

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## 3.3 Fieldwork Planning

#### **Visiting an Independent Living Facility**

#### **Description of Fieldwork Location**

The independent living facility chosen for the fieldwork is situated in a town in the Netherlands. A prominent company developed the complex in response to the challenges posed by the increasing Ageing population. The complex is described as a place where the elderly can live independently and receive care when needed.

Based on this description as well as information acquired from contacts, it seems that the facilities goals overlap with the research in terms of creating healthy places for elders to age and receive care when necessary. This makes it a suitable candidate for the conduction of interviews with the residents to understand their experience with their living environment, social connection and well-being as a whole. Furthermore, the complex also has residents who are young and therefore of a different demographic, making it effective in addressing sub-question number 3. More preparation documents can be found in the appendix.

#### **Sample Interview Questions**

- Do you interact with friends or family members regularly?
- Have you ever felt lonely or socially isolated?
- Are there social activities available in your neighborhood?
- Do you feel your living environment supports your social connections?
- Why have you decided to live alone rather than move in with family?
- Do you think design changes in your home would improve social interactions?
- Are there any community services you currently use for social engagement?
- Is being close to family important to you as you age?
- Do you have a support network of friends or neighbors?
- Have you experienced a positive impact from social connections on your well-being?

#### **Potential Fieldwork Activities**



Fig. 14: Day in the Life Studies in Cardiff, Wales, by Author



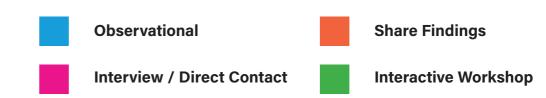
Fig. 15: Workshop with Children in Cardiff for their 'Dream House' by Author



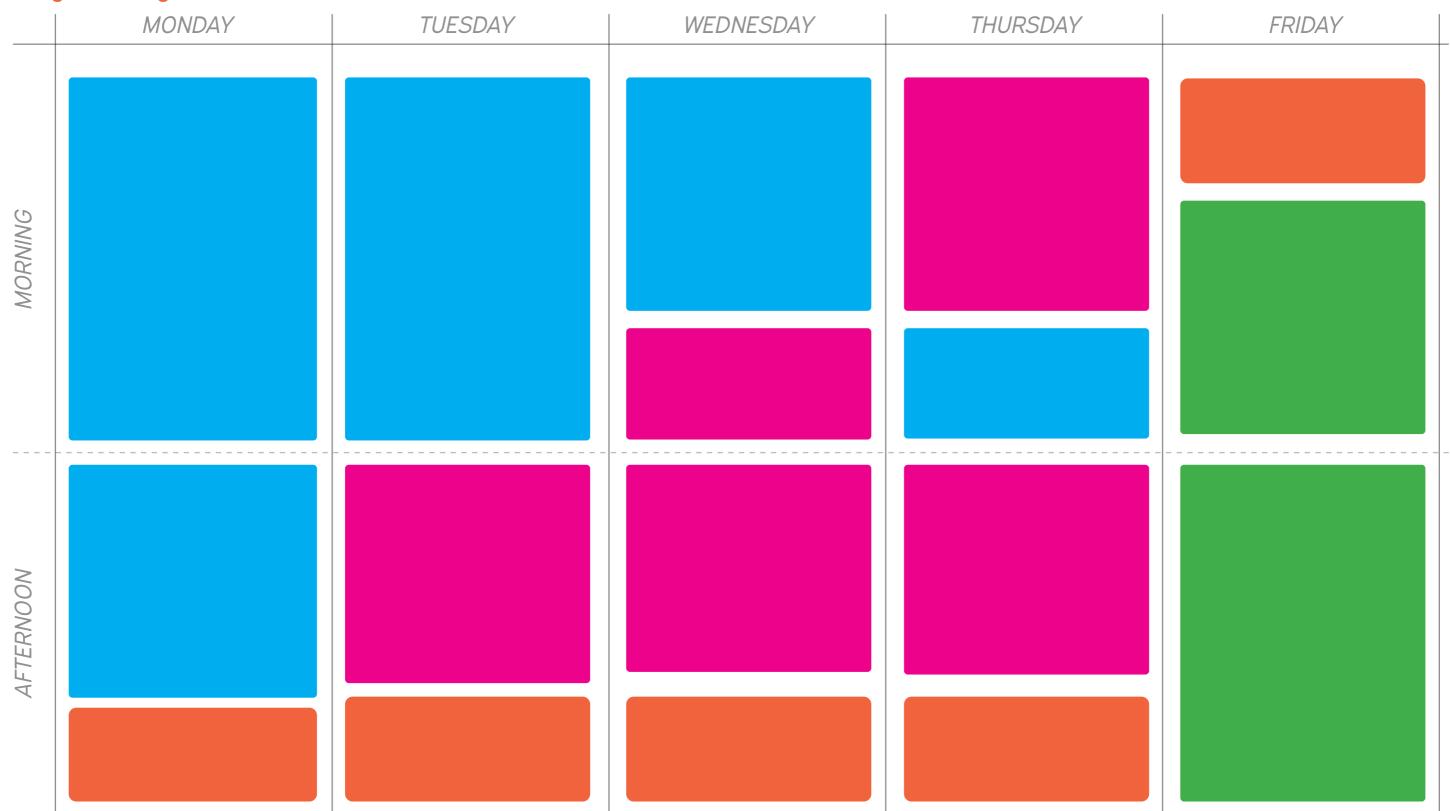


Fig. 16: Left - Benny Lam's Hong Kong photo series (Lam, n.d.), Right - Author's Attempt, by the Author

3,3 Fieldwork Schedule



**Rough Planning of the Week** 



5704391 **Arno Decorte** Section 3 - Research Question Research Plan - Better Together.

## **Site Selection Criteria**

#### Overview

A secondary objective as part of the research is to find an appropriate site in Delft for the development of a design prototype, where the research outcomes can be exemplified in an architectural project. The main driving factor stems from the recommendations derived from Battisto's 'Architecture and Health' book (Battisto & Wilhelm,

#### **Connection to Facilities**

Connection to facilities, specifically to health care facilities is an essential parameter that should be fulfilled when looking for a site that is appropriate for an elderly living facility. In selecting a site that has good connection to healthcare facilities, elderly people will have better access to receiving care of all types, from the smallest afflictions to more serious emergencies. The assessment of this parameter will be done in accordance to the concept of 'ubiquitous healthcare' described by Battisto, where multiple layers of healthcare facilities will be considered, as opposed to seeing the hospital as the 'center of the universe' (Battisto & Wilhelm, 2019).

#### **Connection to Public Transport**

Mobility is an important aspect in the upkeep of well-being. One of the most active methods of transportation is the usage of public transport, encouraging people to walk from place to place, rather than remaining seated in a vehicle (which is also much more inefficient as a method of transport).

#### **Connection to Nature**

A connection to nature and open-air environments have been known for a long time as being highly beneficial for health and well-being (Ulrich, 1984). Beyond this, these spaces also represent opportunities for physical activity and social connection (Battisto & Willhelm, 2019). Therefore, a connection to dedicated spaces with strong natural features such as parks, forests, lakes and/or canals will be a point of consideration in the venture for a suitable prototypical site.

#### **Connection to Existing Residential Communities**

Last but not least, a connection to existing residential communities will be sought after when it comes to the site. This is an important aspect for the research as a connection to existing communities provides a foundation wherein the research can seek ways to not only create new social networks, but also connect them to existing ones to buttress them even further. This is a vital component in ensuring that the design proposal is harmonious not only within its own boundaries but also with the wider social urban fabric.





**Connection to Facilities** 



Communities





Fig 17: Diagram detailing site conditions in Schieweg, Delft by Author

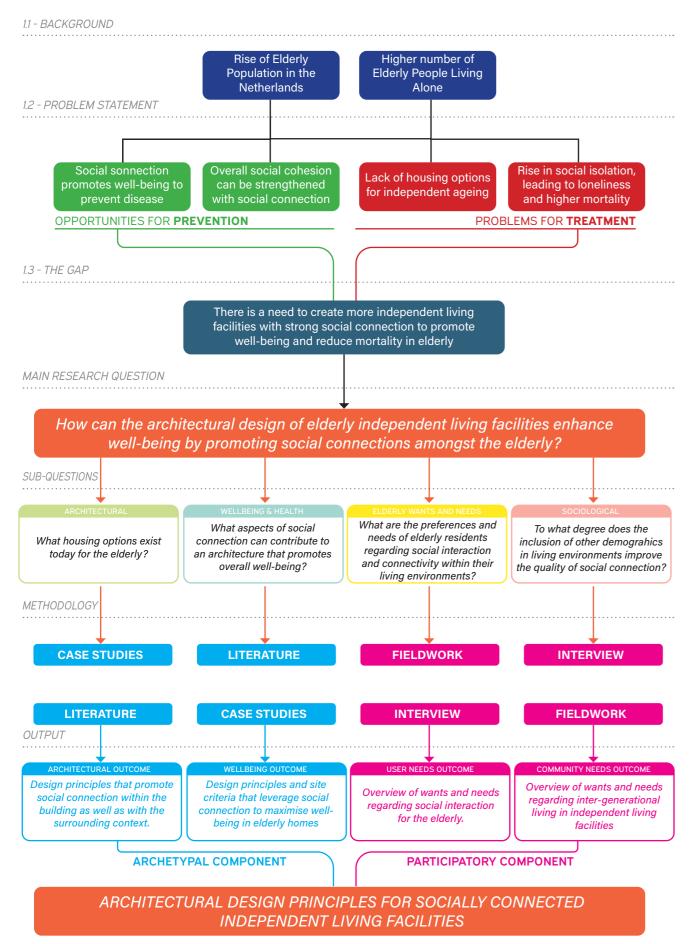


Fig. 18: Overall Research Framework by Author

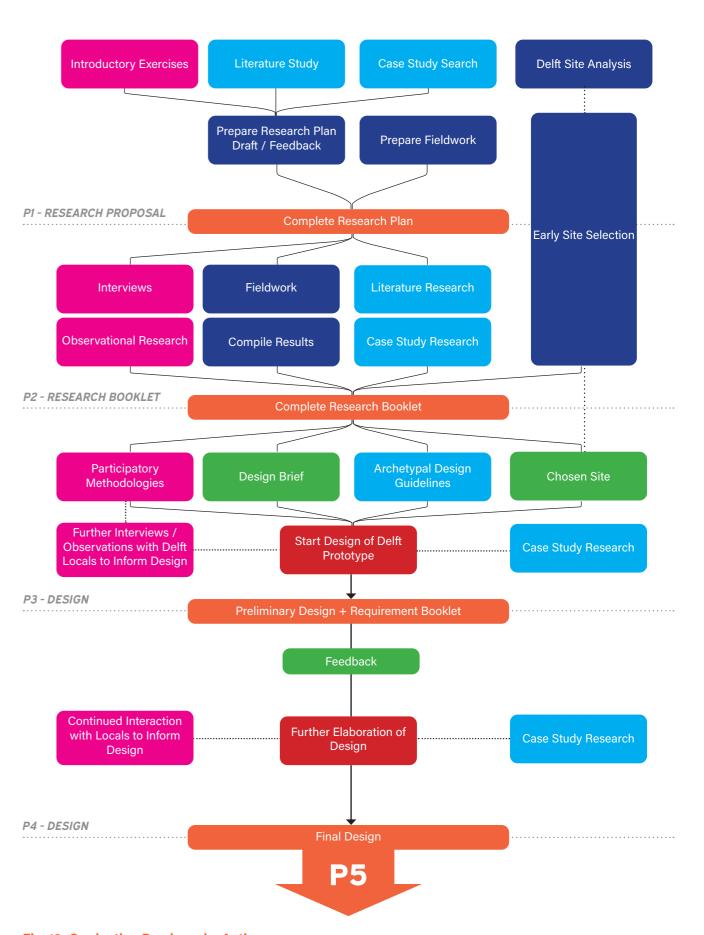


Fig. 19: Graduation Roadmap by Author

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## 4.3 **Reflection**

#### The Relevance of the Research

This research represents an oppurtunity to conduct research and create an overall design proposal that contributes to an incredibly meaningful and human focused architectural endeavour. It is undeniable that our demographic will experience a drastic change as the elderly population grows in size. This has massive implications on our society and it is of utmost importance that we consider how architecture can positively influence this in order to maintain well-being, social connection and overall happiness.

Today, architectural research is rightly dominated by the urgency of climate change, resource scarcity, and geopolitical implications. These challenges are pressing because they directly threaten our way of life. However, I would argue that the urgency to address societal challenges should be equally compelling. The Ageing demographic is not a far-off issue; it's a reality we're witnessing and will continue to face in the coming years.

Architecture wields an incredible power to shape our environment and, by extension, our lives. It can be the difference between an isolated and lonely existence for the elderly or a life filled with vibrant connections and well-being. We have a responsibility to recognize this potential and act with the same urgency we apply to environmental concerns.

Through this research, we have the chance to improve the lives of countless individuals, starting with those closest to us. We must not only recognize the importance of this endeavor but actively support and engage with it. In this rapidly Ageing world, it is vital that we ensure that our elderly population thrives in environments that nurture their well-being and foster social connection. By embracing this mission, the research not only addresses a significant societal challenge but also contribute to the shared goal of enhancing the quality of life for all generations, to be 'Better Together'.

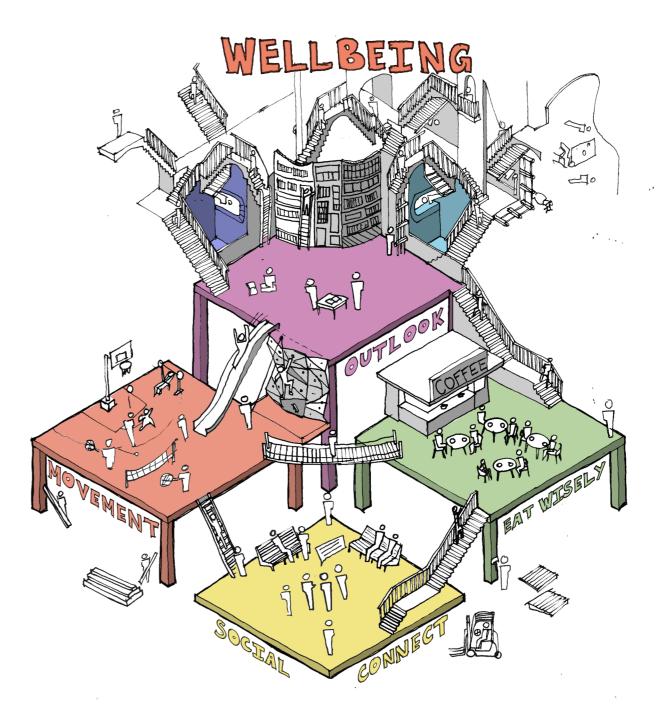


Fig. 19: Concept Drawing - 'Social Connection as a Catalyst Towards Well-being' by Author

## **Bibliography**

- Antonovsky, A. (1979). Health, Stress and Coping (First Edition). Jossey-Bass Inc Pub.
- 2. Baks, P. (n.d.). Verzorgingshuis nieuwe stijl. Skipr. Retrieved October 27, 2023, from https://www.skipr.nl/blog/verzorgingshuis-nieuwe-stijl/
- Battisto, D., & Wilhelm, J. J. (2019). Architecture and Health: Guiding Principles for Practice (Eerste editie). Routledge.
- Binette, J. (2021, November 18). 2021 AARP Home and Community Preferences Survey. AARP. https://doi. org/10.26419/res.00479.001
- 5. Brewer, M., & Gardner, W. (1996). Who Is This "We"? Levels of Collective Identity and Self Representations. Journal of Personality and Social Psychology, 71, 83–93. https://doi.org/10.1037/0022-3514.71.1.83
- 6. Buettner, D. (2023). The Blue Zones Secrets for Living Longer: Lessons From the Healthiest Places on Earth. National Geographic.
- 7. CBS. (n.d.). Elderly people [Webpagina]. Statistics Netherlands. Retrieved October 31, 2023, from https://www.cbs.nl/en-gb/visualisations/dashboard-population/age/elderly-people
- 8. Centraal Bureau voor de Statistiek. (2019, September 5). Ouderen wonen minder vaak alleen [Webpagina]. Centraal Bureau voor de Statistiek. https://www.cbs.nl/nl-nl/nieuws/2019/36/ouderen-wonen-minder-vaak-alleen
- 9. de Jong, P., Rouwendal, J., van Hattum, P., & Brouwer, A. (2012). Housing preferences of an ageing population: Investigation in the diversity among Dutch older adults.
- Dunbar, R. (2010). How Many Friends Does One Person Need?: Dunbar's Number and Other Evolutionary Quirks. Harvard University Press.
- 11. Evans, G. W. (2003). The built environment and mental health. Journal of Urban Health: Bulletin of the New York Academy of Medicine, 80(4), 536–555. https://doi.org/10.1093/jurban/jtg063

- 12. Feddersen, E., & Lüdtke, I. (2009). Living for the elderly: A design manual. Boston: Birkhäuser. http://site.ebrary.com/id/10728873
- 13. Fletcher, G. (Ed.). (2015). The Routledge Handbook of Philosophy of Well-Being. Routledge.
- 14. Griffith, E. J., Jepma, M., & Savini, F. (2022). Beyond collective property: A typology of collaborative housing in Europe. International Journal of Housing Policy, 0(0), 1–21. https://doi.org/10.1080/19491247.2022.2123272
- 15. Hammond, M., & Saunders, N. (2021). A Design For Life. https://sites.google.com/view/design-for-life
- 16. Heyn, P. (2022, June 29). What Is Independent Living? Benefits, Types And Costs. Forbes Health. https://www.forbes.com/health/senior-living/independent-living/
- 17. Holt-Lunstad, J., Smith, T. B., & Layton, J. B. (2010). Social Relationships and Mortality Risk: A Meta-analytic Review. PLOS Medicine, 7(7), e1000316. https://doi.org/10.1371/journal.pmed.1000316
- 18. Lam, B. (n.d.). Benny Lam. Prix Pictet. Retrieved October 27, 2023, from https://prix.pictet.com/cycles/space/benny-lam
- 19. Liotta, S.-J. A., Louyot, F., Kuma, K., Picon-Lefebvre, V., Liotta, S.-J. A., & Liotta, S.-J. A. (2020). What is co-dividuality? Post-individual architecture, shared houses, and other stories of openness in Japan = Qu'est-ce que la co-dividualité?: architecture post-individuelle, shared houses et autres expériences d'espaces ouverts au Japon. Jovis.
- 20. Live to 100: Secrets of the Blue Zones. (2023, August 30). [Documentary, Adventure]. Makemake.
- 21. Martino, J., Pegg, J., & Frates, E. P. (2015). The Connection Prescription: Using the Power of Social Interactions and the Deep Desire for Connectedness to Empower Health and Wellness. American Journal of Lifestyle Medicine, 11(6), 466–475. https://doi.org/10.1177/1559827615608788
- 22. Maslow, A. H. (1987). Motivation and Personality, 3rd Edition (R. Frager, J. Fadiman, C. McReynolds, & R. Cox, Eds.; 3rd edition). Longman.
- 23. Mitrasinovic, M. (2008). Universal Design. In M. Erlhoff & T. Marshall (Eds.), Design Dictionary: Perspectives on Design Terminology (pp. 419–422). Birkhäuser. https://doi.org/10.1007/978-3-7643-8140-0 290
- 24. Nickl-Weller, C. (2018). Healing architecture, 2004-2017: Forschung und Lehre = research and teaching (Eerste editie). Braun Publishing.

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- 25. Nijsten, J. M. H., Leontjevas, R., Pat-El, R., Smalbrugge, M., Koopmans, R. T. C. M., & Gerritsen, D. L. (2017). Apathy: Risk Factor for Mortality in Nursing Home Patients. Journal of the American Geriatrics Society, 65(10), 2182–2189. https://doi.org/10.1111/jgs.15007
- 26. Nog meer mensen straks alleen, vooral ouderen. (2018, December 18). https://nos.nl/artikel/2264038-nog-meer-mensen-straks-alleen-vooral-ouderen
- 27. O'Rourke, H. M., & Sidani, S. (2017). Definition, Determinants, and Outcomes of Social Connectedness for Older Adults: A Scoping Review. Journal of Gerontological Nursing, 43(7), 43–52. https://doi.org/10.3928/00989134-20170223-03
- 28. Palich, N., & Edmonds, A. (2013). Social sustainability: Creating places and participatory processes that perform well for people. Environment Design Guide, 1–13.
- 29. Patil, S. (2021, July 2). Things architects observe in their everyday life. RTF | Rethinking The Future. https://www.re-thinkingthefuture.com/narratives/a4438-things-architects-observe-in-their-everyday-life/
- 30. Perry, R. (n.d.). Social Connectedness 101: The Many Pathways to Social Connection. Social Creatures. Retrieved October 13, 2023, from https://www.thesocialcreatures.org/thecreaturetimes/many-pathways-to-social-connection
- 31. Poulain, M., Herm, A., & Pes, G. (2014). The Blue Zones: Areas of exceptional longevity around the world. Vienna Yearbook of Population Research, Volume 11, 87–108. https://doi.org/10.1553/populationyearbook2013s87
- 32. Ratnayake, M., Lukas, S., Brathwaite, S., Neave, J., & Henry, H. (2022). Ageing in Place: Delaware Journal of Public Health, 8(3), 28–31. https://doi.org/10.32481/djph.2022.08.007
- 33. Smits, C. H. M., van den Beld, H. K., Aartsen, M. J., & Schroots, J. J. F. (2014). Ageing in The Netherlands: State of the Art and Science. The Gerontologist, 54(3), 335–343. https://doi.org/10.1093/geront/gnt096
- 34. Social Isolation and Loneliness in Older Adults: Opportunities for the Health Care System. (2020). National Academies Press. https://doi.org/10.17226/25663
- 35. Statistics Netherlands. (2020, March 27). Nearly 1 in 10 Dutch people frequently lonely in 2019 [Webpagina]. Statistics Netherlands. https://www.cbs.nl/en-gb/news/2020/13/nearly-1-in-10-dutch-people-frequently-lonely-in-2019
- 36. Steptoe, A., Shankar, A., Demakakos, P., & Wardle, J. (2013). Social isolation, loneliness, and all-cause mortality in older men and women. Proceedings of the National Academy of Sciences, 110(15), 5797–5801. https://doi.org/10.1073/pnas.1219686110

- 37. Taylor & Francis. (n.d.). Journal of Housing For the Elderly. Taylor & Francis. Retrieved October 12, 2023, from https://www.tandfonline.com/journals/wjhe21
- 38. Torres, S. (2014, July 21). Why Don't Older People Want to Move in with Their Families? Council on Contemporary Families. https://thesocietypages.org/ccf/2014/07/21/why-dont-many-older-people-want-to-move-in-with-their-families/
- 39. Ulrich, R. S. (1984). View through a window may influence recovery from surgery. Science (New York, N.Y.), 224(4647), 420–421. https://doi.org/10.1126/science.6143402
- 40. Umberson, D., & Montez, J. K. (2010). Social Relationships and Health: A Flashpoint for Health Policy. Journal of Health and Social Behavior, 51(Suppl), S54–S66. https://doi.org/10.1177/0022146510383501
- 41. United Nations Department of Economic and Social Affairs. (2023). World Social Report 2023: Leaving No One Behind in an Ageing World. United Nations. https://doi.org/10.18356/9789210019682
- 42. Van Der Brug, W., & Rekker, R. (2021). Dealignment, realignment and generational differences in The Netherlands. West European Politics, 44(4), 776–801. https://doi.org/10.1080/01402382.2020.1774203
- 43. van Doorslaer, E., Bakx, P., Garcia Gomez, P., & Sara, R. (2020, March). Home care use after the Dutch long-term care reform in 2015. Netspar. https://www.netspar.nl/en/publication/home-care-use-after-the-dutch-long-term-care-reform-in-2015/
- 44. Webb, M. (2017). Building community: New apartment architecture. Thames & Hudson.
- 45. Weng, H. (2019). Design against loneliness: Service design toollkit for social connectivity among the elderly.
- 46. Wiles, J. L., Leibing, A., Guberman, N., Reeve, J., & Allen, R. E. S. (2012). The meaning of "Ageing in place" to older people. The Gerontologist, 52(3), 357–366. https://doi.org/10.1093/geront/gnr098
- 47. World Health Organization. (2023, April). National programmes for age-friendly cities and communities: A guide. https://www.who.int/publications-detail-redirect/9789240068698
- 48. Young, S. N. (2008). The neurobiology of human social behaviour: An important but neglected topic. Journal of Psychiatry & Neuroscience: JPN, 33(5), 391–392.
- 49. Zimm, M., & White Arkitekter (Eds.). (2019). Make sense: Architecture by white = Make sense: white arkitekter. Laurence King Publishing Ltd.

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## **Appendix A - Fieldwork Intro**

#### **Introduction Page**

As part of our fieldwork introduction, we produced a one page introduction brief to be posted in the elderly home a week before our arrival. This would not only give notice to the residents of our arrival, but also our intentions. This way, we create transparency, encourage interaction and provide a friendly introduction to who we are. All done in Dutch of course.

Also important to note that the document on the left has been modified to anonymize the participants.

## Wij komen logeren!

Wij zijn [redacted], [redacted] & [redacted]. Wij zijn momenteel bezig met ons afstudeerproject van de master Architectuur aan de Technische Universiteit in Delft. Als onderdeel van ons onderzoek zijn wij geïnteresseerd in [redacted] en de bewoners.

In de week van 13 t/m 17 November komen wij een week logeren! In die week komen wij graag zoveel mogelijk te weten bijvoorbeeld uw levensstijl, de gemeenschap, sociale interacties, gezondheid en de zorg hier in [redacted]. We verspreiden een korte vragenlijst, gaan graag in gesprek en organiseren een leuke workshop. Wij kijken er naar uit om elkaar te leren kennen tijdens de koffie, lunch of een spelletje. Aarzel niet om op ons af te stappen. Tot dan!



Naam: [redacted] Land: Thailand Talen: Engels, Thais en

Ik ben [redacted]. Oorspronkelijk uit Bangkok, Thailand, nu al een jaar in Nederland. Mijn passies zijn schaken en gitaarspelen. Ik ben altijd geïnteresseerd in nieuwe ervaringen, verhalen en activiteiten om mensen te leren kennen. Tot snel, en ik kijk ernaar uit om jullie te ontmoeten!



erg benieuwd naar

reden waarom u

komen wonen. Tot

de verhalen en de in [redacted] bent



Naam: [redacted] Land: Nederland Talen: Nederlands,

Ik ben [redacted] en ik kom uit het dorpje Balkbrug. In mijn vrije tijd ben ik graag met mijn handen bezig in de vorm van bakken en tuinieren. Ook hou ik van gezelligheid met familie en vrienden. Ik kijk uit naar mooie ontmoetingen en leuke activiteiten in [redacted]!



Naam: [redacted] Land: Duitsland Talen: Engels, Duits

My name is [redacted], coming from a small village northern Germany, my hobbies are Sport, especially football and fitness, as well arts and architecture. I'm excited to meeting you all and having interesting conversations!



Naam: [redacted]

Land: Nederland

Talen: Nederlands

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## **Appendix B - Fieldwork Survey**

R	este bewoner van
ט	este pewoner van
O	or ons afstudeerproject aan de TU Delft logeren we deze week in een goed beeld te krijgen van en de bewoners willen we u vragen n ons te helpen door deze korte vragenlijst in te vullen. Alvast bedankt!
in	ou u de ingevulde vragenlijst <b>vóór vrijdag 17 november</b> willen inleveren de doos in het Hart? Als u hulp nodig heeft bij het invullen of met ons wilt innismaken, wij zijn op dinsdag en woensdag in het Hart (en vast nog vaker).
	Algemene informatie
	1. Geslacht:  Man Zeg ik liever niet
	2. Geboortejaar:
	3. Woont u in het gebouw verbonden aan 'Het Hart'?  ☐ Ja  ☐ Nee
	Wonen
	4. Wat was uw woonsituatie voor  Appartement Vrijstaand huis
	<ul><li>Twee-onder-een kap / Rijtjeswoning</li><li>Anders, namelijk:</li></ul>
	5. Wat was de eigendomsverhouding met uw vorige woning?
	<ul><li>☐ Huurwoning</li><li>☐ Sociale huurwoning</li></ul>
	☐ Koopwoning
	6. Wat was de voornaamste reden dat u naar kwam?
	<ul><li>Omdat ik op dat moment zorg nodig had</li><li>Omdat ik in de toekomst zorg nodig zal hebben</li></ul>
	Omdat ik behoefte had aan sociale contacten
	<ul> <li>Omdat ik behoefte had aan sociale contacten</li> <li>Omdat mijn huis niet meer geschikt was</li> </ul>

7. Hoe bevalt het wonen in Zeer tevreden  Zeer tevreden  Tevreden  Neutraal Ontevreden Zeer ontevreden	
8. Waar spendeert u de meeste tijd gedurende de dag?  Appartement Gemeenschappelijke ruimte 'Het Hart' Andere gemeenschappelijke ruimte Buiten Ergens anders dan	
9. Wat is uw favoriete plek in de woonomgeving?	
10. Wat zou u willen toevoegen?	
In uw appartement:	
11. Wat bent u bereid om met anderen te delen?  (meerdere antwoorden mogelijk)  Keuken Badkamer Logeerkamer Tuin Grotere woonkamer Hobbyruimte Wasmachine Gereedschap Auto Fiets Scootmobiel Computer	
Boeken	Z.O.Z.

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Gezono	lheid
12. Hoe f	ysiek actief voelt u zich? Heel actief Gemiddeld actief Een beetje actief
13. Ontva	angt u ondersteundende hulp? (Thuis)zorg Mantelzorg Huishoudelijke hulp
14. Voelt	u zich eenzaam? Vaak Af en toe Bijna nooit
15. Voelt	u zich verveeld? Vaak Af en toe Bijna nooit
16. Hoe v	waak komt u in de buitenlucht? Meerdere keren per dag Elke dag Om de dag Wekelijks Minder dan bovenstaande
17. Welk	Wandelen in het gebouw Wandelen buiten (bijvoorbeeld naar de winkel) Fietsen De trap gebruiken Tuinieren Zwemmen Yoga / Pilates of iets dergelijks Fysiek inspannende sport, zoals: Fitness, Hardlopen, voer Anders, namelijk:  Z.O

	<b>u lid van de</b>   Ja [	Nee Nee	?		
19. Hoe	vaak doet u i Dagelijks Wekelijks Maandelijks Nauwelijks /		e gemeer	nschap?	
20. Kruis	s aan hoe vaa <i>D</i>				gebruikt ijks / Nauwel
	Het Hart				
	Gem. keuke	n 🗍			
	Fitnesszone				_ Ħ
	Familiekame	er 🗍		Ħ	
	Huistheater	一百			
	Café / de so	os			
	Kapper				
	Leeftuin, bui	iten			
	Werkplaats				
	sociale kring Voornamelij In en buiten Voornamelij is voor u het Privacy Gemeensch	k in k buiten belangrijk	st in een	gemeens	chap (kies 1)

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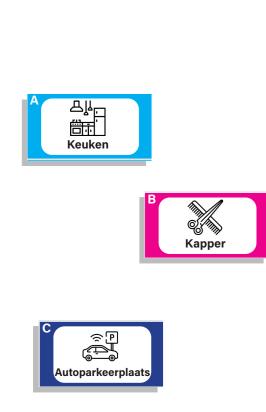
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**Better Together** 

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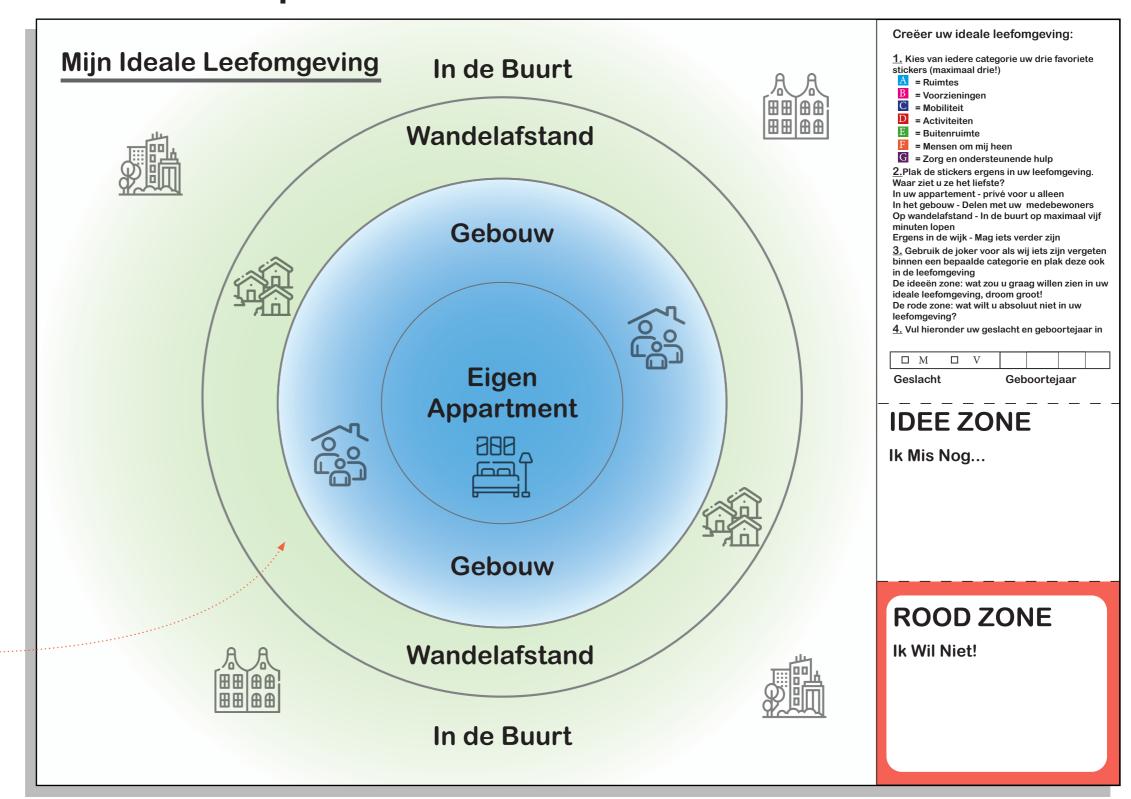
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### **Appendix C - Fieldwork Workshop**

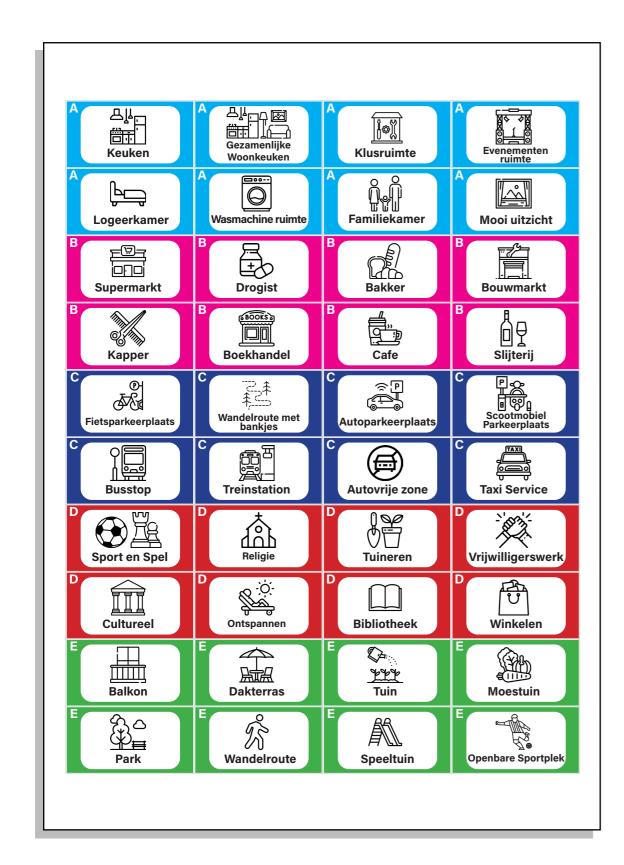


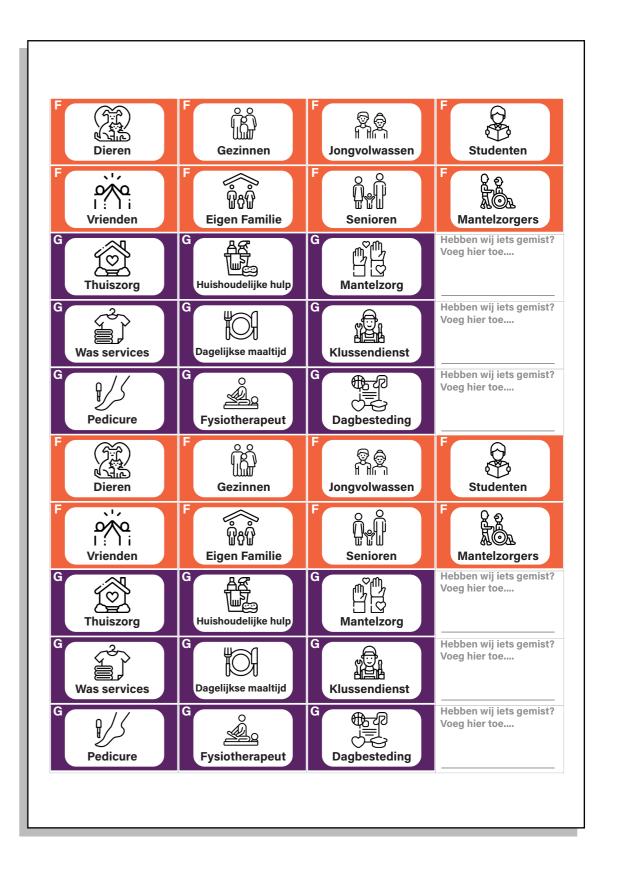






**Better Together** 





### The Inspiration.

This decision to choose the 'Designing for Health & Care' studio is deeply inspired by a former project, The Penarth Respite Center. This project was done as part of the undergraduate program at the Welsh School of Architecture and was formative in creating a philopshy that clearly placed the user at the heart of the design process.

A 'Respite Center' is a place that provides a well-deserved space to rest for caregivers of a child or adults dealing with a severe illness or condition. The project required a deep understanding of the caregiver as a user and their unique needs. This became the ethos of all architectural elements from the overall program, choice of material and the relationship the building has with the surrounding context.

The end result was not only a finalised building project, but a vital contribution to my personal philosophy as a student of architecture. A philosophy that aims to ensure that every building's ultimate goal is to have a net positive contribution to the lives of those that use it. A philosophy that I am excited to continue exploring as part of my graduation studio to cap off my Master's degree in Architecture.

I hope that the lessons extracted from the design of the Penarth Respite Center continue to be of utility in this research towards a better elderly living environment.

