

Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences



Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners (Examencommissie-BK@tudelft.nl), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information	
Name	Tom Stuiver
Student number	4479580

Studio		
Name / Theme	AR3AD110 Dwelling Graduation Studio: Designing for Care in an Inclusive Environment	
Main mentor	Elke Miedema	Architecture
Second mentor	Jos Lafeber	Building Technology
Third mentor	Leo Oorschot	Research
Argumentation of choice of the studio	<p>The Studio 'Designing for Care in an Inclusive Environment' focuses on the daily life around people who are in need of help. One of those people was my grandma, who suffered from early stage Alzheimer's and lived the last years of her life in a residential care complex. She always dreamt of living the rest of her life within the house she lived in for 60+ years. However, due to her decrease in medical conditions this wasn't possible anymore. The care complex she lived in felt outdated and limited in possibilities and activities, causing her to feel increasingly lonely in a world she was slowly losing grip on. This studio provides an opportunity to research ways to improve this situation, something which already was on my mind for a longer duration. How can I improve the wellbeing for people who suffer from dementia and how can I make sure they don't feel lonely and socially isolated in the later parts of their life? Alongside, has this topic a lot of societal relevance of the topic as well. Where due to an aging population, the steep increase of people suffering from dementia is becoming an oppressive national problem for the near future.</p>	

Graduation project	
Title of the graduation project	Standing Strong Together: Designing a community orientated dementia residential care neighbourhood
Goal	
Location:	Lelystad, Warande

The posed problem, research questions and design assignment in which these result.

Loneliness and social isolation amongst elderly is becoming an even more oppressing problem and could even cause dementia over time. A worrying omen, especially when the growing dementia figures in the Netherlands based on the aging population are taken into consideration. Even more so with the current- and future shortage of financial funding, healthcare staff, and housing. A relatively new typology which tries to create a partial solution for this problem is the Dementia Village, where healthcare, social functions, and nature are combined with a community based living on a larger urban scale than usual. However, this typology only focuses on patients with advanced dementia and thus only covers a small part of the main problem. Furthermore, when the dire lack of financial funding and healthcare staff is taken into consideration; already making it an outdated and unrealistic approach for the future. Alongside, are governmental policies aimed at ensuring that dementia patients continue to live in their own living environment. Even though that the typology on itself is unrealistic for the future, are certain features within its design still very valuable. Can some of the Dementia Village architecture be implemented within the current and future built environment to support people with early stage dementia to remain living in their own familiar living environment?

The main research question: How can the Dementia Village architecture provide residential care for early stage dementia patients on a larger community orientated neighbourhood scale?

1. What architectural features are of importance when designing for dementia patients?
2. How can the architectural design stimulate a community orientated neighbourhood for early stage dementia patients and elderly?
3. What can we learn from the current Dementia Village design?

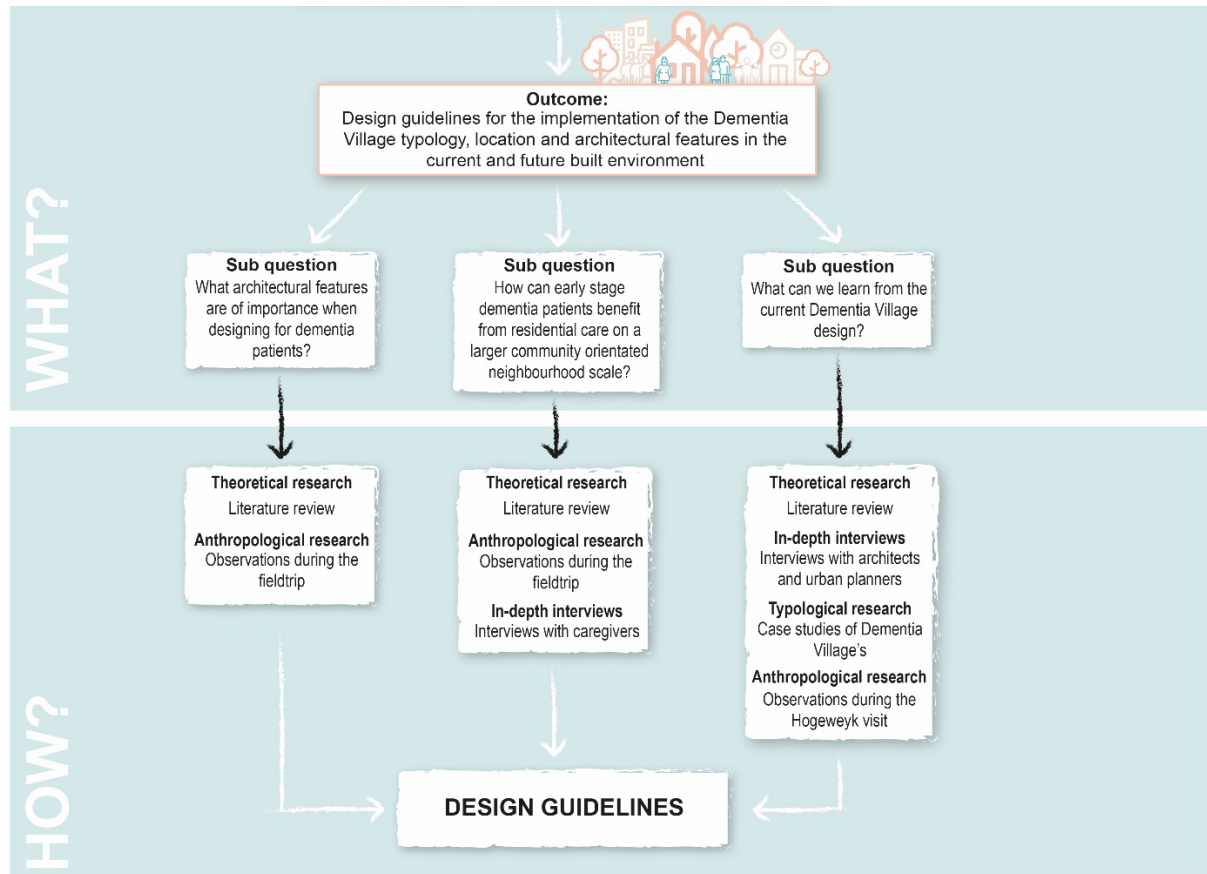
This research aims to provide design guidelines for the implementation of features of the current Dementia Village typology, location and architectural elements. My goal is to support people who suffer from dementia to remain living within their own familiar home environment for the rest of their lives. By providing suitable residential care within a community orientated neighbourhood it hopefully tackles loneliness and social isolation amongst this age- and patient group. Most importantly to improve their well-being, social inclusion, and overall quality within the way of living.

Process

Method description

Multiple research methods will be utilized during this research, predominantly: the use of literature reviews, case studies of current Dementia Villages, (when possible) interviews with architects, urban planners, and healthcare staff, observations of dementia patients within the current healthcare environment. A constant switch between the theoretical side, as provided

within the literature review, and the practical side will be made in order to compare theories with the current existing. For the practical side, the use of in-depth interviews with (in)formal caregivers, observations, and case studies will take a central role. The combination of both sides should provide the correct foundation to form design guide lines within the respective topics. Later on these design guidelines will form the basis for the requirements for the design location. Within the image below is a general overview which methods will be utilized within the defined sub questions.



Literature and general practical preference

Within the literature there are three central topics which will be the main focus points during my research: residential care for dementia patients, dementia village architecture, and a community orientated neighbourhood. In specific, overlapping themes within these central topics e.g. like dementia friendly design. There have been an extensive research of the ways in which architecture impacts dementia patients (e.g., Hou et al., 2019; Kleibusch, 2018; Marquardt, 2014; McAdam & Williams, 2017; Niedderer et al., 2019; van Buuren & Mohammadi, 2022). The majority of the research focusses, for instance, on topics like; wayfinding, lighting, the implementation of social activities, views on nature, use of colours and materials, creating , etc. This is a relative new field of research which gained momentum in the last decades; predominantly by the switch from institutionalized care to a more person-centered care approach. The impact and importance of architecture and the built environment

on the overall wellbeing of dementia patients is rightfully becoming even more relevant. However, within this extensive research on this topic is the vast majority of it fixated around its implementation within care facilities. Creating a dire lack of knowledge and research on its impact and successful implementation, of its design features, within a home environment. A critical translation is requested of the existing knowledge and research, in order to find what design guidelines are also applicable within a smaller scale and environment than intended.

Furthermore, have there already been wide-ranging research about loneliness and social isolation amongst people with dementia. In particular on the importance of the built environment and community (Kuliga, 2021; Lievens et al., 2019) and ways to improve age-friendly cities/neighbourhoods (Di Bona et al., 2019). In addition, is there already some research present about the Dementia Village architecture in general (Høj, 2019; Mitchell et al., 2004; Niedderer et al., 2019). Most of the research is often combined with a central case study, for example the 'Hogeweyk' (e.g., Chrysikou et al., 2018; Anderzhon et al., 2012). Providing valuable ways of knowledge about how the typology currently functions and which flaws are already present.

However, despite all the current research is there an prominent research gap showing. Possibilities on how the current Dementia Village architecture could be implemented within the existing and newly built environment is a research field that yet still has to be explored. This should create more possibilities in order to provide ways for dementia patients to remain living in their familiar home surroundings, a problem which is becoming even more relevant and problematic in the upcoming years.

Reflection

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

Within this studio 'Designing for Care in an Inclusive Environment', a human centered approach takes a central role during the research but also in a later part during the design. Within my graduation topic I tried to really enhance this approach, really trying to scope in the view of people who were unfortunate enough to suffer from this horrible illness. Focusing on how life could be improved by maintaining wellbeing and the social inclusion for people who are in their most vulnerable state. While the disease on itself might cause a decrease in health, should the dwelling and surrounding built environment in my opinion provide ways to live life to its fullest potential. A situation completely different than the last years of the life of my grandma, only sitting inside her room locked off from all that was still to be done. Fueled by experiences during the fieldtrip, where people were joyful and full of life despite the visible- and invisible limitations. An experience which showed me that it could be different and made me wanted to pursue to make that a standard rather than the current exception. Due to this do I think that my graduation links to the architecture MSc in general, using design as a means to deal with, social and spatial challenges encountered in the built environment.

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

Due to the increasing rate of people being diagnosed with dementia within the Netherlands and the decrease in financial funding and medical staff, a prominent problem arises for the future. This is even further abbreviated by the current- and future political policies, aimed at keeping people with dementia to remain living within their home environment. In essence not a wrong or right standpoint; which is also often the wish of people affected by dementia. However, if the current- and future built environment isn't altered and modified to provide the right living environment for these people it will create big problems on both ends of the spectrum. People with dementia will experience increasing feelings of anxiety and confusion that will affect their wellbeing. While informal caregivers will (unnecessary) have to carry a huge burden to apply all the care that is needed, having a huge impact on their quality of life and wellbeing as well.

Alongside, is there still a gap for architects and architectural research in general regarding the correct implementation of healing architectural features. Especially now that the shift is initiated from healthcare facilities to providing care at home. Further effort is needed to help one of the most prominent problems due to an ageing society; providing wellbeing and a good living environment for one of the most vulnerable target groups. In specific for people who suffer from early stage dementia, which is an usually forgotten and neglected age- and patient group currently. A group that is often physically and/or mentally too well for a nursing home, but on the other hand not well enough to keep on living in their own homes without receiving additional care and attention. While architecture on itself is not capable of creating solutions to all current healthcare problems. It can however enable and facilitate a faster transition to an improved situation, thus will this graduation work focus in providing tools to achieve that.