

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	Iga Potok
Student number	5627877

Studio		
Name / Theme	Dwelling Graduation Studio: Designing for Care in an Inclusive Environment	
Main mentor	Elke Miedema	Architecture
Second mentor	Jos Lafeber	Building Technology
Third mentor	Frederique van Andel	Research
Argumentation of choice of the studio	<p>I chose the Health and Care studio because I believe that architecture significantly impacts our health and well-being. I was intrigued by the concept of 'healing environments' and wanted to find out how architecture can prevent the development of cognitive impairments. The emphasis on research through anthropological methods and social sensitivity made the research particularly valuable and out of the box.</p> <p>My family situation inspired my fascination with the prevention of cognitive impairments. Because of my Grandma, I have personal experience with Alzheimer's and know what struggles come with this disease.</p> <p>Therefore, this project is significant to me.</p>	

Graduation project	
Title of the graduation project	Prevention of Cognitive Impairments Through Architectural Design
Goal	
Location:	The Hague, Laakhaven-West Lulofsstraat
The posed problem,	The absence of inter-generational contact and a deficit of care-taking in communities leads to societal exclusion of the elderly and increases the development of cognitive impairments.
Research questions Main research question:	What inclusive design strategy can encourage daily inter-generational contact, strengthen communities and prevent cognitive impairments?

<p>Sub-questions:</p>	<p>What are the specific needs and wants of different generations in terms of neighbourhood and housing design and how do they overlap?</p> <p>How can the design of public and collective spaces in housing and the neighbourhood foster regular contact between generations?</p> <p>How can architectural design provide stimuli to prevent cognitive impairments?</p>
<p>design assignment in which these results.</p>	<p>Neighbourhood cluster that helps prevent cognitive impairments by encouraging social contact and physical activity and providing inclusive and future-proof housing.</p>
<p>Due to the changes in demographics and a shift to an aging society, the healthcare system is no longer able to provide care for people in nursing facilities. Studies show that the number of people living with dementia will triple by 2050. There is currently no available cure for dementia, but modifying certain risk factors can reduce the probability of developing dementia by around a third. The most prominent risk factors according to the NHS are: untreated depression, loneliness, social isolation and lack of regular exercise. Therefore, we should focus on prevention and develop a new model of neighbourhoods and housing that inspires physical movement and social interactions. For my design proposal, I will primarily focus on a neighbourhood cluster (3-4 buildings and communal and public spaces, as well as the areas between them), but I will also consider the wider context of the surrounding environment within 15 and 5 minutes from the site, and propose a master plan for the 5-minute neighbourhood. In my design I will tackle both public spaces that encourage social contact and physical activity as well as inclusive and future proofed housing.</p>	
<p>Process</p>	
<p>Method description</p>	
<p>This research will be carried out through a selection of research methods. It will include an in-depth literature study, observations and findings of the fieldwork and an analysis of case studies. An in-depth literature study will provide answers to how architecture can prevent the development of cognitive impairments and how it can foster regular contact between generations. It will explain how the neighbourhood design can promote physical activity and inspire social connection. During the fieldwork, I will meet with the target group and investigate their needs and wants regarding their home and neighbourhood environment. I will also get to know their social needs and investigate which places foster the most social contact. To gather additional data about specific design ideas I will conduct questionnaires among the Elderly at The University of Third age in Poznan. Lastly, in-depth case studies and reference projects analysis will provide concrete answers to how the design of public and collective places in a housing block can foster physical activity and social contact. I will analyse a series of successful co-housing and housing cooperative projects that provide the ultimate ground for social interactions. Since the residents themselves have started these housing initiatives, they will provide excellent answers regarding the needs and wants of the inhabitants regarding public, shared and private spaces in the housing block. I will carefully analyse the collaborative building process and gain insight into residents' opinions. Then I will dive into the design of public, collective and half-private spaces in the building that establish connections with the district, inspire interactions and help to form a sense of community. Lastly, I will analyse the types of apartments offered in the housing block. I will look at how future-proof and flexible they are and whether one successfully and actively can age in place in them.</p>	

Literature and general practical preference

- “Architecture for Encounter - Building Social Ecology.” *Building Social Ecology*, August 19, 2022. <https://www.buildingsocialecology.org/patterns/architecture-for-encounter/>.
- Bayer, Katharina. “Wohnprojekt Wien: Potentials of Building and Living Together.” *YouTube*. Lecture presented at the Housing cooperatives, 2023. https://www.youtube.com/watch?v=TeXIUaBiDZA&t=321s&ab_channel=ZadrugaZadrugator.
- Biggs, Simon, and Ashley Carr. “Age- and Child-Friendly Cities and the Promise of Intergenerational Space.” *Journal of Social Work Practice* 29, no. 1 (2015): 99–112. <https://doi.org/10.1080/02650533.2014.993942>.
- Bont, Ad de, Anouk Distelbrink, and Wendy van Kessel. *The Active City*. Amsterdam: Urhahn | design & strategy, 2017.
- Bouma, Jantine. “Supporting Social Contact Design Principles in Common Areas of Cohousing Communities.” *Academia.edu*, May 28, 2010. https://www.academia.edu/4722409/Supporting_social_contact_design_principles_in_common_areas_of_cohousing_communities.
- Buffel, Tine, Sophie Handler, and Chris Phillipson. “Fourteen - Age-Friendly Cities and Communities: a Manifesto for Change.” Essay. In *Age-Friendly Cities and Communities: A Global Perspective*, edited by Tine Buffel, Sophie Handler, and Chris Phillipson, 273–88. Bristol: Policy Press, 2019.
- Cattell, Vicky, Nick Dines, Wil Gesler, and Sarah Curtis. “Mingling, Observing, and Lingering: Everyday Public Spaces and Their Implications for Well-Being and Social Relations.” *Health & Place* 14, no. 3 (2008): 544–61. <https://doi.org/10.1016/j.healthplace.2007.10.007>.
- Feddersen, Eckhard, and Lütke Insa. *Lost in Space: Architecture and Dementia*. Basel: Birkhäuser, 2014.
- Handler, Sophie. *An Alternative Age-Friendly Handbook*. Manchester: University of Manchester, 2015.
- Jacobs, Jane. *The Death and Life of Great American Cities*. New York: Random House, 1961.
- Moreno, Carlos, Zaheer Allam, Didier Chabaud, Catherine Gall, and Florent Pratlong. “Introducing the ‘15-Minute City’: Sustainability, Resilience and Place Identity in Future Post-Pandemic Cities.” *Smart Cities* 4, no. 1 (2021): 93–111. <https://doi.org/10.3390/smartcities4010006>.
- Oldenburg, Ray. *The Great Good Place: Cafes, Coffee Shops, Bookstores, Bars, Hair Salons, and Other Hangouts at the Heart of a Community*. New York: Marlowe and Company, 1999.
- Podgórska, Joanna. “O Chorobie Alzheimera i Ucieczce Przed Neurodegeneracją (About Alzheimer's Disease and Escaping Neurodegeneration).” Broadcast. *Calkiem Fajna Audycja by Podgórska Ogólnie [Joanna Podgórska]*. Accessed October 13, 2022. <https://open.spotify.com/show/53a4kWGvbq5x9VkrFL815x>.
- Thomas, Laura, Karlou Westerbeek, Gintare Norkunaite, Maria Kibera, Ruth Höppner, Maria Kluijtenaar, and Annette Bombeke. *Making Space for Collective Living an Urban Design Guide*. Den Haag: POSADMAXWAN, 2022.
- Troć, Aleksandra. “Healthy Aging Design as a Tool Supporting Prevention of Modern Diseases among Middle-Aged People,” 2021. <https://repository.tudelft.nl/islandora/search/subject%3A%22Healthy%255C%2BAgeing%22>.
- van Oppen, Auguste, Evert Klinkenberg, and Eldrich Piqué. *Active Design in Buildings BETA Office for Architecture and the City*. Amsterdam: Pantheon Drukkers, 2016.
- Williams, Jo. “Designing Neighbourhoods for Social Interaction: The Case of Cohousing.” *Journal of Urban Design* 10, no. 2 (2005): 195–227. <https://doi.org/10.1080/13574800500086998>.

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)?

The topic of my graduation studio focuses on health and care in architecture. It does not only look for answers on how we should build health and care facilities but also looks for answers beyond sole treatment. The topic of prevention of cognitive impairments connects well with the health and care focus of the studio. Additionally, it goes beyond the traditional healthcare

settings and focuses on incorporating a healthy environment in our neighbourhoods and living space. Architectural design is a powerful tool to foster social interactions and physical activity. If we can prevent the development of cognitive impairments through the design of our housing blocks and neighbourhoods, we can drastically improve the well-being of the elderly and other age groups. A proper design can include the elderly in the daily urban traffic, making them more self-dependent and lowering their need to receive care and help. It is incredibly vital because, in this way, the elderly can 'age in place' and preserve their social network. The topic also complements the character of the architectural track because it focuses on solving a pressing problem in our society through architectural design. I believe the results of my research can shine more light on the issue of active and social ageing and ageing in place and inspire other architects to be more conscious of these problems in their designs.

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

The number of people living with Alzheimer's will triple by 2050. Such predictions, together with the lack of physical and social activity amongst the elderly, are among the biggest threats to healthy ageing. Research shows that reducing risk factors (such as untreated depression, loneliness, social isolation and lack of regular exercise) can help reduce the probability of developing dementia by around a third. Since there is currently no cure for dementia, we should focus on prevention. Architects concentrate on developing the right living conditions for people with Alzheimer's. Projects like Alzheimer's villages or specialised elderly housing have emerged worldwide. Yet what is still not developed is: how we can prevent these cognitive impairments through the architectural design of housing and neighbourhoods. Therefore, inspired by the phrase "prevention is better than cure" in my research, I wish to minimise the risk of developing cognitive impairments, encourage daily inter-generational contact and strengthen communities by creating an inclusive design strategy.

The elderly tend to spend more time in their homes and closest surroundings. Therefore, the architecture of their neighbourhoods and living spaces becomes crucial in fostering social contact and physical activity. It should offer public and collective spaces that catalyse social interactions. Additionally, proximity and comprehensibility of functions are the most critical factors that increase social contact.

The design of the housing block can immensely increase the quality of life of the elders. A building with a wide variety of communal spaces along frequent routes can significantly increase the contact between residents. Additionally, the facilities and shared spaces within and around the housing blocks can become daily destinations for the elderly and make them more active.