

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	Jasper Patrick Leon Holtus
Student number	4681186

Studio		
Name / Theme	AR3AD110 – Dwelling Graduation Studio: Designing for Care in an Inclusive Environment	
Main mentor	Birgit Jürgehake	Architecture and the Built Environment, Housing and Public Building Design
Second mentor	Annemarie Eijkelenboom	Environmental & Climate Design
Third Mentor	Birgitte Hanse	Architecture and the Built Environment, Teachers of Practice
Argumentation of choice of the studio	With the growing number of elderly people and the shortage of healthcare staff in the Netherlands, the pressure on healthcare continues to increase, making the demand for innovative healthcare facilities highly relevant. This influenced my decision to choose this field of study.	

Graduation project	
Title of the graduation project	Bridging the Gap between Young and Old; a Research to an Intergenerational Build Environment in the Tarwewijk, Rotterdam
Goal	
Location:	Tarwewijk, Rotterdam
The posed problem,	The Tarwewijk, an urban neighborhood in Rotterdam, faces several challenges that strain its livability and social cohesion. The neighborhood struggles with a growing divide among its residents, including elderly individuals increasingly facing isolation, youth lacking sufficient educational opportunities, and inhabitants who not comfortable in their surroundings. The three core issues emerging in this neighborhood are the social, physical and mental aspects (shown in the figure below)

	<table> <tr> <th>Children</th><th>Elderly</th></tr> <tr> <td>Social No place for social interaction</td><td>No place for this growing population</td></tr> <tr> <td>Physical Unsafe Environment</td><td>No suitable and accessible houses</td></tr> <tr> <td>Mental Feeling Unwelcome</td><td>High level of loneliness</td></tr> </table>	Children	Elderly	Social No place for social interaction	No place for this growing population	Physical Unsafe Environment	No suitable and accessible houses	Mental Feeling Unwelcome	High level of loneliness
Children	Elderly								
Social No place for social interaction	No place for this growing population								
Physical Unsafe Environment	No suitable and accessible houses								
Mental Feeling Unwelcome	High level of loneliness								
research questions and	This research aims to address the main question: <i>"How can an intergenerational environment in the Tarwewijk be designed to promote planned activities and spontaneous meetings between very young and old people to improve their physical, mental, and social well-being?"</i> To provide a comprehensive answer, three subquestions were formulated, each contributing to a deeper understanding of the design of an intergenerational environment: <i>1. "How can the built environment be designed to promote the types of spontaneous meetings in an intergenerational setting to enhance physical, mental, and social well-being?"</i> <i>2. "In what ways do elderly and children prefer to have planned activities in an intergenerational environment to enhance physical, mental, and social well-being in the Tarwewijk?"</i> <i>3. "What can be learned from a case study to promote activities between very young and old people to enhance their physical, mental, and social well-being?"</i>								
design assignment in which these result.	The design of an intergenerational living environment in the Tarwewijk aims to foster social cohesion within the neighborhood while addressing the specific needs of its residents. This environment should be physically accessible to both children and elderly individuals, ensuring that spaces are designed to accommodate the mobility and physical capabilities of both age groups. Additionally, the design prioritizes creating a safe and welcoming atmosphere for children who may feel mentally uncomfortable or out of								

	place in their current surroundings. By integrating features that promote inclusivity, safety, and emotional well-being, the intergenerational living environment seeks to bridge generational gaps, enhance community bonds, and provide a supportive and nurturing space for all residents.
[This should be formulated in such a way that the graduation project can answer these questions. The definition of the problem has to be significant to a clearly defined area of research and design.]	
Process	
Method description	
Methodology This research methodology outlines the main research question and its subcomponents. Each sub-question focuses on a specific aspect of the study, necessitating distinct research methods tailored to the target groups and the built environment. A combination different approaches will be applied. The following sections will elaborate on the methodology used for each sub-question, providing a detailed description of how the data will be collected, analyzed, and interpreted to generate meaningful conclusions. 3.1 Sub-question 1: Literature Research The first sub-question involves a literature review to address the following question: <i>"How can the build environment in the Tarwewijk be designed to promote the types of spontaneous meetings in an intergenerational setting to enhance physical, mental, and social well-being?"</i> To address this question, a <i>literature research</i> will be conducted. This provides insights from various perspectives. Each spatial scale will be examined to understand how the physical, mental, and social well-being of individuals can be improved through the (re)design of the urban environment. This analysis will help identify key elements and design principles that can foster better interactions and enhance the quality of life for different age groups within the community. 3.2 Sub-question 2: Qualitative Research and Mapping The second sub-question focuses on understanding the target groups. The aim is to answer the following question: <i>"In what ways do elderly and children prefer to have planned activities in an intergenerational environment to enhance physical, mental, and social well-being in the Tarwewijk?"</i>. Literature from gerontologists and designers provides valuable insights that can be utilized for activities involving elderly and children. Literature from a sociologist provides insights into the needs of young people in the Tarwewijk. Additionally, <i>qualitative research</i> will be conducted through visits to a primary school in Nijmegen (de Verbinding) and an elderly center in Hilversum (Liv Inn). At both locations, <i>interviews</i> will be conducted, and a <i>workshop</i> will be held to identify the activities participants envision for collaboration with the other target group, aiming to uncover overlapping preferences. The target groups will also be <i>observed</i> to understand their daily activities and habits, which will be <i>mapped</i> out,	

illustrating their daily routes through the building and the time schedules of the day. All these outcomes can be compared and analyzed to assess whether they can potentially be integrated with the other target group.

4.3 Sub-question 3: Case Study

There is a interesting case study that can help address the question: "*What can be learned from a case study to promote activities between very young and old people to enhance their physical, mental, and social well-being?*" This case study from LIAG Architects will incorporate two research methods. Initially, *qualitative research* will be conducted to explore the thought processes and design philosophy of the architects. Following this, the focus will shift to the *case study* itself, examining how the design of this integrated child and elderly center has been established.

Literature and general practical references

Age UK (2018), 'How Care Homes and Nurseries Are Coming Together for Good', Age UK, 26 April. Available online: <https://www.ageukmobility.co.uk/mobilitynews/article/intergenerational-care>

AlleCijfers (2024). Buurt Tarwewijk (gemeente Rotterdam) in cijfers en grafieken (bijgewerkt 2024!) | AlleCijfers.nl. AlleCijfers.nl. <https://allecijfers.nl/buurt/tarwewijk-rotterdam/>

Australian Government Department of Health. (n.d.). Intergenerational programs and their benefits. Retrieved from <https://www.health.gov.au/resources/publications/intergenerational-programs-and-their-benefits>

BETA-office. (2023). Issuu. https://issuu.com/beta_office/docs/mgw_-_boek_webversie_-_230426?fr=sOGUzODYxNzMyNjg

Bradley, L., Steinig, S., Wimberly, L., & Gilchrist, C. (2013). Because we're Stronger Together. Generations United. Retrieved from <http://www.gu.org/LinkClick.aspx?fileticket=AlM3gFX9NGU%3d&tabid=157&mid=606>

CBS. (2024). Bevolking in de toekomst. Centraal Bureau Voor de Statistiek. <https://www.cbs.nl/nl-nl/visualisaties/dashboard-bevolking/bevolkingsgroei/toekomst>

Davis, L., Larkin, E., & Graves, S. B. (2002). "Intergenerational Learning through Play." *International Journal of Early Childhood* 34(2): 42–49.

Doff, W., Vos, S., Van Den Brandt, O., Straver, L., Geddi, S., & Labyrinth Onderzoek & Advies Rotterdam. (2024). Rapportage Behoeftes jongeren Tarwewijk. In Rapportage Behoeftes Jongeren Tarwewijk [Report]. Labyrinth Onderzoek & Advies Rotterdam.

Galbraith B., Larkin H., Moorhouse A., Oomen T. (2015). Intergenerational programs for persons with dementia: A scoping review. *Journal of Gerontological Social Work*, 58(4), 357–378. <https://doi-org.tudelft.idm.oclc.org/10.1080/01634372.2015.1008166>

Gehl, J. (2010). *Cities for People* (2nd None ed.). Island Press.

Gehl, J. (1987). *Life between Buildings-Using Public Spaces*, New York: Van Nostrand Reinhold Company Inc.

Gemeente Rotterdam (2024). Wijkprofiel Rotterdam. <https://wijkprofiel.rotterdam.nl/nl/2024/rotterdam/charlois/tarwewijk?toon=alles#contextindicatoren>

Gemeente Rotterdam. (2022). Feitenkaart Eenzaamheid Rotterdamse ouderen. <https://onderzoek010.nl/news/Feitenkaart-Eenzaamheid-Rotterdamse-ouderen/313>

Generations United (2018). All in together: Creating places where young and old thrive. Retrieved May 2, 2022, from <https://www.gu.org/app/uploads/2018/06/SignatureReport-Eisner-All-In-Together.pdf>

Heydon R. (2013). Learning at the Ends of life: Children, Elders, and Literacies in Intergenerational Curricula. University of Toronto Press; Toronto, ON, Canada.

Jacobs, J. (1961). The death and life of great American cities. [New York], Random House.

Jarrott E.S., Bruno K. (2007). Shared site intergenerational program: A case study. *J. Appl. Gerontol.* 2007;26:239–257. doi: 10.1177/0733464807300225.

KadastraleKaart (2023). <https://kadastralekaart.com/buurten/tarwewijk-BU05991571>

Lee K., Jarrott S. E., Juckett L. A. (2020). Documented outcomes for older adults in intergenerational programming: A scoping review. *Journal of Intergenerational Relationships*, 18(2), 113–138. <https://doi-org.tudelft.idm.oclc.org/10.1080/15350770.2019.1673276>

Newman, S. (1997). *Intergenerational Programs: Past, Present and Future*. Taylor & Francis. <https://doi.org/10.4324/9781315783451>

NL Architects. (2007). <http://www.nlarchitects.nl/slideshow/100>

Norouzi N., Swenson A., Harvey S. (2023). Designing for success: Integrating theories of human development into architectural design for intergenerational programming. *Journal of Intergenerational Relationships*, 1–16. <https://www-tandfonline-com.tudelft.idm.oclc.org/doi/full/10.1080/26892618.2022.2125476?src=>

Norouzi N., Jarrott S. E., Chaudhury H. (2019). Designing intergenerational space through a human development lens. *Journal of Architectural and Planning Research*, 36(1), 35–51.

Norouzi N. (2016). *Intergenerational facilities: Designing intergenerational space through a human development lens* [Doctoral dissertation]. Virginia Tech. <https://vtechworks.lib.vt.edu/handle/10919/79848>

Norouzi N., Chen J., Jarrott S. (2015) Intergenerational explorations: Where everyone has a purpose. *J. Intergenerational Relatsh.* 13:260–265. doi: 10.1080/15350770.2015.1058282.

O'Hanlon, J. Thomas, E. (2017). The Role of Senior Centers in promoting Intergenerational Play. University of Delaware.

Platform31 (2021). Ontwerp voor Ontmoeten.
<https://www.platform31.nl/artikelen/ontwerp-voor-ontmoeten/>

Roe, J., & McCay, L. (2021). Restorative Cities. In Bloomsbury Publishing Plc eBooks. <https://doi.org/10.5040/9781350112919>

Sim, D. (2019). Soft City: Building Density for Everyday Life. IslandPress.

United for All Ages (2019), The Next Generation: How Intergenerational Interaction Improves Life Chances of Children and Young People , Norfolk: United for All Ages.

Rotterdam Vakmanstad. (2022). De Ecosociale Rotterdam Vakmanstad.
<https://vakmanstad.nl/de-ecosociale-cirkel/>

Van Der Mooren, F. & De Vries, R. (2022). Steeds meer hoogopgeleiden in Nederland: wat voor beroep hebben ze? Centraal Bureau Voor de Statistiek.
<https://www.cbs.nl/nl-nl/longread/statistische-trends/2022/steeds-meer-hoogopgeleiden-in-nederland-wat-voor-beroep-hebben-ze-?onpage=true#:~:text=Was%20in%201981%20nog%2011,tot%2075%2Djari gen%20in%202021.>

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)?

In my research, I explore how the built environment can be designed to enhance the well-being of both young and elderly residents in the Tarwewijk. This aligns closely with my Master's track in Architecture, as it emphasizes the role of the built environment, and it also complements my studio work, where my focus lies in keeping the elderly active through engagement with children. Which lies within the field of a caring and healthy environment.

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

A build environment that stimulates interaction between children and the elderly has significant mutual benefits. Children can learn a great deal from the knowledge and life experience of older adults, develop skills for expressing emotions and building a positive self-image, and improve their ability to communicate and better understand older generations. Conversely, children can provide elderly individuals with a renewed sense of purpose, a feeling of being valued in society, and opportunities to combat loneliness. These

interactions also help the elderly remain cognitively and physically active, contributing to their overall sense of well-being.

By designing environments that facilitate these meaningful intergenerational interactions, my research aims to create spaces that benefit both groups, fostering community connections and enhancing quality of life.