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	Ryan Daun
Student number	5709164

Studio		
Name / Theme	Advanced Housing Design, Densifying Amsterdam	
Main mentor	Harald Mooij	Architectural advisor
Second mentor	Robbert Guis	Research advisor
Argumentation of choice of the studio	A very relevant topic in combination with a lack of interest in the other available studios and being able to explore my fascination with the project of this course.	

Graduation project	
Title of the graduation project	**Social Quality of Life**
Goal	
Location:	Amsterdam, Baaibuurt
The posed problem,	The Netherlands is currently struggling with a massive housing shortage, according to the Ministry of the Interior and Kingdom Relations there is a shortage of 390.000 houses (Ministry of the Interior and Kingdom Relations, 2023). This problem can be seen extremely well in the Randstad and particularly in Amsterdam, which alone has an estimated housing shortage of 175.000 houses (Kruyswijk, 2022). Currently, the Netherlands ranks as the 25th most densely populated country on earth (StatisticsTimes, 2024). Healthy

	housing, which can be defined as a place which supports the physical, mental, and social well-being of its occupants, must meet basic needs. There is increasing evidence to show that lack of space can have an impact on overall well-being where basic lifestyle needs are not met (Lee, 2021). According to Cheng (2010) the term density is familiar at a glance but upon closer examination, a complex concept appears. Cheng states that the term density can be untangled and split into two perspectives. Firstly, physical density which is a numerical measure of the concentration of individuals or physical structures within a given geographical unit (Cheng, 2010). This can be measured with different factors such as regional density, residential density, occupancy density, plot ratio, density gradient and building density & urban morphology Secondly, perceived density emphasizes the interaction between the individual and the environment; therefore, it is not the actual physical density, but the perception of density through this man–environment interaction that matters (Cheng, 2010).

	According to the Department of Economic and Social Affairs, it is expected that 66 per cent of the world's population will live in urban areas by 2050 (United Nations Department of Economic and Social Affairs, 2014). Therefore, within a high-density urban environment characterised by towering skyscrapers and densely packed residential buildings, the issue of social interaction and loneliness among residents presents a significant challenge. Among the Dutch population, already almost half of the Dutch adults feel lonely (48.6%) & 1 in 7 Dutch adults feels very lonely. Among young people aged 16 to 25, even 1 in 4 feels very lonely (Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer, 2024). This is exacerbated by the fact that the number of single households within the Netherlands keeps on growing. Since the 1950s the amount of people living by themselves has increased fourteenfold. A few reasons for this are emancipation, ideals of self-realization, increased prosperity and an ageing population (Leclaire, 2023). This number will keep growing, CBS expects there to be 3.5 million single households by 2030 (Centraal Bureau voor de Statistiek, 2018).

research questions and	Main research question: “Which design strategies impact the 'social' quality of life for different target groups within a high density context?“ Sub questions: “How can the 'social' quality of life be measured within an architectural context & what are the primary factors contributing to loneliness in high-density urban environments?“ “What factors contribute to a strong sense of community among residents ?“ “How do social spaces within high-rise buildings contribute to resident's well-being and sense of community?“
design assignment in which these result.	A densely populated building which is designed using a human-centred design approach. In which social spaces, multiple types of routing (ontsluiting), private & public functions, and co-living are designed to increase the social quality of life of the residents and its context.

This research aims to explore the social dimensions of community, focusing on social cohesion and its impact on the well-being of residents using ‘social’ quality of life. It investigates the dynamics of community creation and sustainability, examining how residents navigate through communal and social spaces. By examining the social aspects at both individual and societal levels, the study delves into the influence of shared spaces on residents. The integration of personal social aspects, a collective sense of community, and architectural implications seeks to optimize the use of common spaces to enhance social well-being.

Process

Method description

The research consists of a literature review of Human-centred design, private & public spaces in combination with transitional spaces. Additionally, characters are created to represent the desired target groups. The final element of research is a case study analysis in which five case studies are studied in detail to be able to understand the relationship between the public and private spaces within the building. Combined this research gives an overview of the design practices of human-centred design, the needs of the target groups and in which case studies these needs are met, and how the space between the street and the front door is designed in the existing case studies.

For the first sub-question literature research will be conducted in which the definition of a 'social' quality of life will be further defined. To be able to measure this aspect the translation from qualities of life to architectural factors will need to take place after which the analysis of these factors within a high-density context is defined. The created framework will assist in assessing these qualities.

The second sub-question will add to the research of the first sub-question and start with identifying these qualities for the different target groups. Due to the differences in these groups, the perception or use of the same qualities can have a different outcome. Therefore, understanding how these groups move through space is crucial. Finally, the third sub-question doesn't look at the target groups but at existing case studies. In which the design strategy will be assessed using the findings and definitions from the first sub-question.

Literature and general practical references

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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 graduation topic, the densification of Amsterdam, relates to the studio by addressing the need for more housing within not just Amsterdam but the Netherlands and that new innovative solutions need to be found. By delving into the routing, how people perceive space, and how they arrive at home and the research aims to gain a better understanding of the needs of these residents. The graduation topic itself relates to the master track of Architecture by delving into the social consequences on the inhabitants and how this can be used to further strengthen their connection and bond with their environment.

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

Due to the housing crisis in the Netherlands, of 390.000 houses (Ministry of the Interior and Kingdom Relations, 2023), which is exacerbated by the fact that the number of single households within the Netherlands keeps on growing. Since the 1950s the amount of people living by themselves has increased fourteenfold (Leclaire, 2023). This number will keep growing, to 3.5 million single households by 2030 (Centraal Bureau voor de Statistiek, 2018).

Therefore, in increasingly more densely populated areas not only does the need for more housing become more prevalent but also the need for more quality housing. Designing within a densely populated context whilst creating a socially sustainable environment becomes even more challenging. Especially in a time when more people are moving and living in cities, there is a need for high-density housing, & more and more people are living alone designing for the social quality of life becomes crucial in the resident's well-being.