

# 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](mailto: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	Hanne Bosma
Student number	5896304

Studio		
Name / Theme	Architecture and Dwelling: Advanced Housing Design	
Main mentor	Harald Mooij	Architecture (design mentor)
Second mentor	Robbert Guis	Architecture (research mentor)
Third mentor	Elina Karanastasi	Architecture
Argumentation of choice of the studio	I chose the Advanced Housing Design studio because I am interested in innovative forms of housing that can grow with the changing needs of residents and society. With adaptability in particular. In a time of constant change, I see it as a challenge and necessity to allow housing to move along. This studio gives me the opportunity to experiment with both spatial and technical aspects that make that adaptability possible.	

Graduation project	
Title of the graduation project	Room for change: Designing for adaptability in the dynamic city
Goal	
Location:	Amsterdam, The Netherlands
The posed problem,	Due to increasing globalization and urbanization, more people with diverse backgrounds, lifestyles, and housing needs are living together in cities, as seen in the rapidly growing and culturally diverse city of Amsterdam. At the same time, many homes fail to accommodate this diversity and evolving living patterns, highlighting the urgent need for design principles that enable long-term adaptability of living environments at multiple scales.
research questions and	<i>Main research question:</i>

	<p>In what ways can design principles promote the adaptability of a living environment at different scales (immediate surroundings, city block, and individual dwelling), so that it can respond to societal developments over the long term?</p> <p><i>Sub-questions:</i></p> <ol style="list-style-type: none"> <li>1. How is adaptability defined in the context of the living environment?</li> <li>2. Which societal developments influence the need for adaptable living environments?</li> <li>3. Which design principles contribute to the adaptability of the immediate surroundings?</li> <li>4. Which design principles contribute to the adaptability of the city block?</li> <li>5. Which design principles contribute to the adaptability of the individual dwelling?</li> </ol>
<p>design assignment in which these result.</p>	<p>This research results in design guidelines that provide a flexible framework to support the design of adaptable living environments at the scale of the surroundings, city block, and individual dwelling. These guidelines offer guidance in creating inclusive and future-proof housing that responds to the diverse and changing needs of a varied population, without relying on fixed assumptions about lifestyles or family structures.</p>
<p><b>Process</b></p>	
<p><b>Method description</b></p>	
<ul style="list-style-type: none"> <li>• <b>Literature Review:</b> A thorough review of academic sources (e.g. peer-reviewed articles, books, university publications) will establish a theoretical foundation. Key search terms include <i>adaptability</i>, <i>flexibility</i>, <i>resilience</i>, <i>polyvalent</i>, and <i>spatial composition</i>, with sources accessed via platforms such as Google Scholar and JSTOR.</li> <li>• <b>Mapping:</b> The Amsterdam project site will be mapped in detail to understand spatial layout, accessibility, existing buildings and functions, social context, and future plans. This contextual analysis helps identify opportunities and constraints for adaptable design within the urban fabric.</li> </ul>	

- **Case Studies:** Built projects that demonstrate architectural adaptability will be analyzed. Case studies are selected based on relevance, scale, typology, and the availability of documented evaluations. These will provide comparative insights and inform the development of design strategies.
- **Fieldwork:** Site visits to adaptable housing projects will allow for direct observation of how flexibility is implemented. Additionally, interviews with architects will uncover practical strategies, challenges, and insights related to designing for adaptability.
- **Research by Design:** Designing is used as a method of inquiry. Concepts from theory and case studies are translated into design proposals, which are then tested, evaluated, and refined in an iterative process. This continuous cycle deepens understanding and informs final design decisions.

## 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)?

My graduation project on *adaptability* aligns closely with the theme of the studio *Advanced Housing Design*, as both focus on creating housing that can change over time. People live in increasingly diverse ways, and these patterns continue to evolve. That's why it's important to design homes that are flexible and can adapt to the varying and changing needs of residents. By exploring design strategies for adaptability at multiple scales, from the individual dwelling to the city block and surrounding context, the project contributes to innovative and inclusive housing solutions, which is a core ambition of the studio. The topic also fits well within the *Architecture* master track, as it shows how architecture can respond to social change. Instead of designing fixed, static layouts, I explore spatial systems that can grow and change with the people who live in them. In this way, the project contributes to livable, sustainable, and future-oriented living environments.

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

The relevance of my graduation project lies in the way it addresses key issues within contemporary housing design. Socially, it responds to the increasing diversity in cities and the changing nature of family structures, lifestyles, and life phases. In a time of urbanization, migration, and individualization, adaptable housing is essential for long-term livability and inclusivity. Professionally, the project contributes by identifying design strategies that go beyond standardized models. It offers concrete tools for designing adaptable living environments that can evolve with residents, a growing

need in practice, but one that is still rarely fully addressed. Scientifically, the research adds to the field of adaptable architecture. By combining theory, case studies, and research by design, it presents a framework that is both academically grounded and practically applicable, showing how adaptability can be translated into spatial design across multiple scales.