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	Maaike Creusen
Student number	4874439

Studio		
Name / Theme	Theme 6: tackling housing inequality	
Main mentor	Harry Boumeester	Housing Systems
Second mentor	Marja Elsinga	Housing Institutions & Governance
Argumentation of choice of the studio	In preparation for the first week, I read up on the various graduation themes. In the reading list of theme 6 (tackling housing inequality) I came across an article about the earthquake problem in Groningen. This struck a chord with me. As I grew up in Groningen, I was immediately inspired to choose earthquakes as my thesis topic.	

Graduation project	
Title of the graduation project	Rebuilding Trust: Housing associations in Groningen's earthquake aftermath.
Goal	
Location:	Province of Groningen, the Netherlands
Problem statement,	The earthquake problem in Groningen has received significant attention within the current body of literature. While there has been extensive research on both material and immaterial damage, the predominant focus of prior research has been on mapping out the consequences. When it comes to mitigating these consequences, there has often been a singular focus on governmental responses, leaving a significant gap in our understanding of the role played by other relevant stakeholders such as housing associations in the area. Remarkably, despite being responsible for approximately 30% of the affected homes, the specific contributions of and challenges faced by housing associations in mitigating the extensive consequences of this crisis remain inadequately explored. **This thesis seeks to bridge this gap in knowledge by conducting an investigation into the role that housing associations play in addressing both material and immaterial damage caused by earthquakes and enhancing liveability.**
research questions and	The main question that this thesis wants to answer is: *'What **strategies** could **housing** **associations** employ to **manage***

	*both material and immaterial **damage** and **enhance liveability** in the **earthquake**-affected region of Groningen?'* The following sub-questions are explored to support the main research question: 1. *What is the current state of the earthquake problem in Groningen, including its key characteristics and impact?* 2. *How is the role of housing associations defined within the framework of the Dutch Housing Act, and how is it interpreted by the associations operating within the earthquake-affected region of Groningen?* 3. *How is liveability defined in existing literature, and what are the prevailing management strategies outlined to enhance it?* 4. *What earthquake-related liveability challenges do tenants and housing associations encounter in Groningen's earthquake-affected region?* 5. *In the development of the Woonactieplan by the KR8 associations, what strategies or monitoring tools are applied to enhance liveability?* 6. *How can the structure of collaboration among the KR8 associations be optimized to ensure the successful integration of the Woonactieplan?*
Relevance	This study is closely connected with recent developments. On one hand, it is framed within the context of the parliamentary inquiry into gas extraction in Groningen - the results of which were formally disclosed in early 2023 – and the closure of the gas tap in October 2023. On the other hand, it connects with the 2022 update to the Housing Act, which offers housing associations more space to consider the concept of 'liveability'. In particular, this research ties in with recent efforts of six housing associations in the earthquake-affected region. United under the KR8 partnership, the associations have initiated the development of a Woonactieplan in response to the parliamentary inquiry. This plan, that is currently being formulated, aims to provide the government with a comprehensive framework detailing the specific measures necessary to ensure a safe and pleasant future living environment for tenants in Groningen. **The purpose of this thesis is to analyse and comprehend the Woonactieplan, including its current composition, objectives, and projected means of attainment. The ultimate goal is to use insights from an extensive literature study into management strategies to formulate practical recommendations to the KR8 partnership that can refine or strengthen the Woonactieplan.**

Process

Method description

This research distinguishes itself from prior investigations into the Groningen earthquake problem through the integration of three distinct and pivotal elements, as visually represented in **Figure 1**.

Research elements

These elements establish the structural framework for this research. First and foremost, it entails the comprehensive gathering of sources that shed light on the impact of earthquakes in Groningen, the Netherlands (sphere 1). Secondly, it encompasses the exploration of sources offering insights into the role of housing associations in the Netherlands (sphere 2). The third sphere unites these initial two domains, focusing on management strategies for enhancing liveability. At the intersection of the three spheres lies the core of this research.

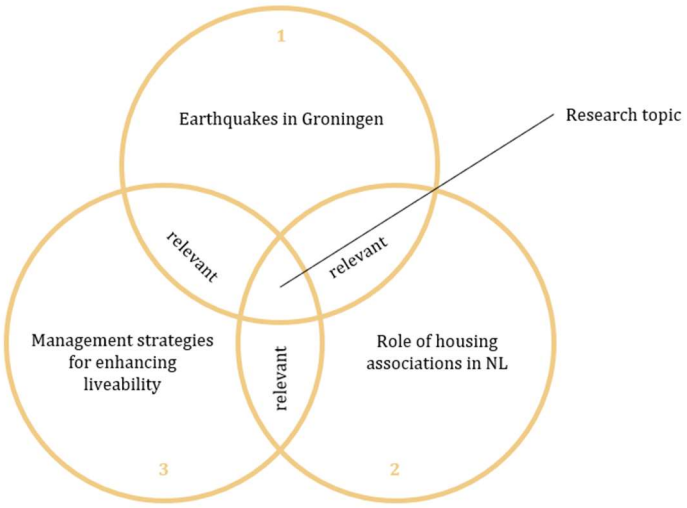

Figure 1: the three pivotal elements of this research (own work).

Conceptual framework

The conceptual framework of this research can be found in **figure 2**. The conceptual framework derives from the observed material and immaterial earthquake damages in Groningen, assuming a direct relationship between these damages and the decline in the area's liveability. At the heart of the framework lies the Woonactieplan, devised by six housing associations operating in the earthquake-affected region, with the primary goal of improving liveability. This plan is integral within a larger institutional context, forming part of performance agreements between the municipality, tenants organisations, and housing corporations. Further elaboration on each vector will be provided in other sections of this report.

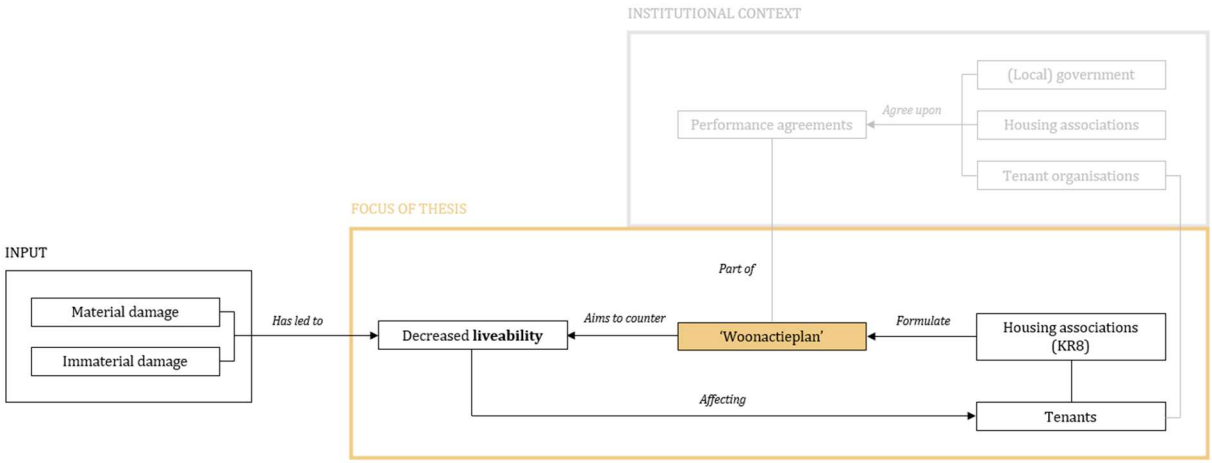

Figure 2: the conceptual framework (own work).

Research methods

To comprehensively investigate the role of housing associations in addressing both material and immaterial damage resulting from earthquakes in Groningen, a *mixed-methods approach* will be employed. First, a (preliminary) literature review is conducted to achieve a comprehensive grasp of all three spheres for the purpose of their integration. This process specifically addresses the first three sub-questions. Moreover, the literature review aids in the development of a theoretical and conceptual framework, positioning the research within the broader discourse. To address the remaining sub-questions, additional qualitative and quantitative methods will be employed.

Within the scope of sub-question 4, a *quantitative* approach will be employed to reveal what earthquake-related liveability challenges tenants and housing associations encounter in Groningen's earthquake-affected region. This is done through the analysis of a survey conducted with 271 tenants of the different KR8 associations in May 2023. Additionally, general portfolio management data may be referenced. It is important to note that no new statistical analyses will be introduced, and the quantitative approach remains limited in this respect.

Pertaining to sub-question 5 and 6, a *qualitative* approach will be employed to analyse and understand the Woonactieplan in greater depth, including its current composition, objectives, and projected means of attainment. This is done through a document analysis of the Woonactieplan and in-depth interviews with relevant stakeholders. The structure of collaboration among the KR8 associations is explored through explorative talks, and avenues for optimizing the collaboration are subsequently investigated via in-depth interviews.

In the final phase of the research, the aim is to share and validate the research findings with pertinent stakeholders via a focus group. This method promotes a targeted and interactive dialogue, fostering a comprehensive exchange of insights and perspectives among involved individuals. Such engagement is vital for well-informed decision-making and the nuanced refinement of the Woonactieplan.

A summary of the proposed methods and their purpose can be found in **figure 3.**

Approach	**Method**	**Purpose**
Quantitative	Data analysis	To assess what earthquake-related liveability challenges tenants and housing associations encounter in Groningen's earthquake-affected region.
Qualitative	Literature review	To achieve a comprehensive grasp of all three spheres, forming a robust theoretical framework, and placing the research in the broader discourse.
	Document analysis	To comprehend the Woonactieplan, including its current composition, objectives, and projected means of attainment.
	Explorative talks	To examine the interpretation of housing associations' roles in earthquake-affected region of Groningen, assess the impact of earthquake damage on their daily operations, and analyse the current structure of the KR8 collaboration.
	In-depth interview	To investigate individual perspectives on the Woonactieplan, identify potential conflicting interests, and explore necessary steps for successful implementation.
	Focus group	To share and validate the research findings with pertinent stakeholders

Figure 3: methods and their purpose explained (own work).

Figure 4 provides a visual summary of the proposed method(s) per sub-question.

Sub-question/method	Data analysis	Literature review	Document analysis	Explorative talks	In-depth interview
1. What is the current state of the earthquake problem in Groningen, including its key characteristics and impact?		X			
2. How is the role of housing associations defined within the framework of the Dutch Housing Act, and how is it interpreted by the associations operating within the earthquake-affected region of Groningen?		X		X	
3. How is liveability defined in existing literature, and what are the prevailing management strategies outlined to enhance it?		X			
4. What earthquake-related liveability challenges do tenants and housing associations encounter in Groningen's earthquake-affected region?	X			X	
5. In the development of the Woonactieplan by the KR8 associations, what strategies or monitoring tools are applied to enhance liveability?			X		X
6. How can the structure of collaboration among the KR8 associations be optimized to ensure the successful integration of the Woonactieplan?				X	X

Figure *4: the proposed method(s) per sub-question (own work).*

Internship

While it is theoretically possible to conduct the research without an internship, the belief is that an internship provides a valuable opportunity to apply research findings to real-world scenarios and effectively bridge the gap between academic theory and practical solutions. Therefore, this research is connected to a graduation internship at KR8. Given that KR8 is an overarching organization, Groninger Huis was designated as the host organization. Groninger Huis is a housing association responsible for approximately 5,000 homes in the earthquake-affected area.

Literature and general practical references

As of January 6, 2024, my bibliography has grown to encompass six A4 pages, presenting an extensive compilation of consulted literature. You can access this comprehensive reference list in the draft P2 report (too lengthy to include here).

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 chosen graduation topic explores what role housing associations play in mitigating the effects of both material and immaterial damages resulting from earthquakes in Groningen. This aligns with the wider social issues discussed in the studio, focusing on 'Tackling Housing Inequality'. The earthquakes have created significant disparities among homes, with some suffering damage while others remain unscathed. Moreover, there are noticeable differences in how repairs are addressed, particularly between tenants and homeowners. Notably, existing literature pays less attention to tenants, prompting this thesis to spotlight this specific group. Additionally, the Management in the Built Environment track provides a valuable strategic perspective to analyse and propose effective management strategies for housing associations. Consequently, this graduation topic not only connects with societal concerns emphasized in the studio but also merges with the strategic management principles integral to the master track. This convergence reflects the interdisciplinary nature of the AUBS program.

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

   The research aims to address a critical gap in understanding the role of housing associations in managing the consequences of earthquakes in Groningen, a topic of significant **social** relevance due to its impact on residents' lives. **Professionally**, this work could offer insights to housing associations, policymakers, and stakeholders involved in managing similar crises or addressing liveability challenges post-natural disasters. **Scientifically**, the research contributes by integrating multiple spheres (earthquake impact, housing associations' roles, and liveability strategies) and employing a mixed-methods approach, potentially establishing a framework for future studies in similar contexts.

   The relevance of this work extends to its alignment with recent developments, such as the parliamentary inquiry into gas extraction in Groningen and changes in the Housing Act, thereby making it timely and practically significant for addressing the challenges faced by the earthquake-affected community.