

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	Yiling Yang
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Studio		
Name / Theme	Planning Complex Cities	
Main mentor	Caroline Newton	Spatial Planning and Strategy
Second mentor	Ana Petrović	Urban studies
Argumentation of choice of the studio	<p>Social issues are the trigger for all design, and I never believe that design alone can solve these issues. It requires policy support, the involvement of stakeholders and residents, market adjustments, and so on. This is exactly where my interest lies. I am passionate about exploring the logic and relationships behind social issues to find gaps for improvement, ultimately grounding these solutions in spatial design to test the practice of planning. This is also what kind of urbanist I want to be in a year after graduation. Through my graduation project this year, I aspire to develop a more agile and critical design thinking that can address spatial problems at multi-scales. I believe this is what I could get from the Planning Complex Cities studio.</p>	

Graduation project	
Title of the graduation project	<p>Beyond the Street Transitional housing as a bridge for the roofless to reintegrate into local society, Brussels-Capital Region as the case</p>
Goal	
Location:	Brussels-Capital Region
The posed problem,	<p>Homelessness has long been a social issue around the world. Housing as a basic human right entitles anyone to adequate housing (UN-Habitat, 1976). However, there is a continuous increasing number of homeless people in the vast majority of European cities (Horvat and Coupechoux, 2023), exacerbating the problem of</p>

	<p>homelessness. Basic right are not guaranteed.</p> <p>As the political center of Europe, the Brussels-Capital Region has implemented various policies and pioneering initiatives to support the homelessness. Despite these efforts, the limited growth in the number of temporary shelters and reception centers over the past decade has been outpaced by the significant increase in the homeless population, particularly the rise in the number of the roofless (classified according to FEANTSA in 2005). In 2024, Bruss'Help develop a masterplan to eliminate rooflessness by 2029. Addressing an urgent need for more qualitative affordable housing (Romainville, 2015). While transitional housing programs and the four existing "Housing First" projects (Housing First Europe Hub, 2024) currently provide transitional or permanent housing assistance and services to the homeless aiming to enter the regular housing market, housing resources remain scarce, and the selection and regulation of beneficiaries are highly stringent.</p> <p>Against the limited public social housing and a private rental market shaped by the homeownership-led housing market in the BCR (Costa & De Valk, 2018), looking for more transitional housing opportunities for belgian street roofless people has become an urgent task, according to The Masterplan of Eliminate Rooflessness by 2029. This effort is essential to enabling them to re-enter the formal housing market within a shorter timeframe and to avoid endless socio-economic marginalization.</p>
<p>research questions and</p>	<p>Main research question: How can the transitional housing stage mitigate the housing shortage issue</p>

among the Belgian nationality roofless in the Brussels-Capital Region?

Sub-questions:

- 1.1 What factors cause the homeless people current housing situation in the BCR?
- 1.2 What is the housing policy and Plan for Homelessness?
- 2.1 What is the role of governments and NGOs in helping the homeless to transfer into formal affordable housing market?
- 2.2 What are the spatial needs that can be used as variables to evaluate the neighborhood's friendliness to homeless inclusion?
- 3.1 What transitional strategy can be introduced to the transitional housing stage?
- 3.2 In neighborhood scale, how to implement the strategy?
- 4.1 How can NGOs, residents and new roofless people moving in, local governments function to better achieve solidarity collaboration at the neighborhood level?

design assignment in which these result.

3 Methodology

3.4 Methods used and expected outcomes

Expose

1.1 What factors cause the homeless people current housing situation in the BCR?

•Method

- a. Literature review
- b. Multi-media review

•Expected outcome

a. Through media analysis and media material collecting, visualizing relevant statistics into mappings and diagrams from the scale of the EU and the Brussels Capital Region.

a. & b. Give an overview picture addressing opportunities and challenges of the current social housing and private rental market in BCR by analyzing the literature to expose the unfriendly housing market for marginalized group and the long term vicious cycle faced by the homeless.

a. & b. By using diagrams to showcase the current procedure of the homelessness getting into regular housing market, and demonstrate the project focus.

•corresponding content

- 2.1 Problem field
- 2.1.1 What is homelessness?
- 2.1.2 Picture of homelessness in the European context
- 2.1.3 Demographic background of homelessness in the Brussels-Capital Region
- 2.1.4 Affordable housing issue in Flanders
- 2.1.5 The procedure of getting an accommodation for homelessness

1.2 What is the housing policy and Plan for Rooflessness?

•Method

- a. Literature review

•Expected outcome

a. A multiple timeline will show the changes in the most relevant housing policies about placement of roof less people and the development of plans introduced by NGOs and Social Rental Agencies in BCR.

•corresponding content

- 5 Stakeholder analysis
- 5.1 Timeline of changing policy and plans

Analyze

2.1 What is the role of governments and NGOs in helping the roofless to transfer into formal affordable housing market?

•Method

- a. Stakeholder analysis

•Expected outcome

a. Different diagrams showing the involvement of stakeholders at the scale of BCR by private, public and civic sectors, and illustrate how they collaborate currently.

a. Flow diagrams showing the structure of the ministry of Social Action and Health, and housing administrative units.

a. Based on the structured stakeholder diagram, summarize the challenge and opportunity stakeholders are facing and ways to improve by text and images.

•corresponding content

- 5 Stakeholder analysis
- 5.2 Mapping stakeholders
- 5.3 Distribution of NGOs
- 5.4 Structure of ministry and housing administrative units
- 5.5 Conflicts and opportunities among stakeholders

2.2 What are the spatial needs that can be used as variables to evaluate the neighborhood's friendliness to the roofless?

•Method

- a. Literature review
- b. Interview
- c. Observation
- d. Geospatial mapping
- e. Multi criteria analysis

•Expected outcome

a. & d. & e. Through a literature review, the needs of the roofless will be identified. These needs will then be translated into variables, which will be used to collect corresponding geodata, forming a dataset that will serve as part of the spatial analysis.

b. & c. & e. These variables will be designed as a Likert Scale and further refined through interviews with experts. The experts, from their perspectives, will assign importance levels to the variables and may also add or remove variables to ensure the results are more objective and comprehensive. Observations during fieldwork will also serve as a source for identifying variables. Ultimately, this process will result in a Basic Needs Table for the Roofless with an index. This index will serve as a benchmark for assessing the difficulty of integration for the roofless in different neighborhoods and will guide the following strategy design phase.

•corresponding content

- 6 Quantify Reintegration Friendliness
- 6.1 Analytical framework
- 6.2 Needs of homelessness
- 6.3 Interview transformation
- 6.3.1 Interview summary
- 6.3.2 Quantify the importance of variables
- 6.4 Index of Reintegration Friendliness

3 Methodology

3.4 Methods used and expected outcomes

Propose

3.1 What transitional strategy can be introduced to the transitional housing stage?

•Method

a. Strategy making

•Expected outcome

a. Detailed diagrams and drawings showing the housing transitional strategy. This strategy is developed based on the analysis of variables. For each variable, corresponding improvement strategies are proposed. These strategies collectively form the project's toolkit, which can be applied to different neighborhoods and situations. Based on the design principles and methods from the toolkit, appropriate implementation can be introduced.

•corresponding content

7 Strategy and toolkit

3.2 In neighborhood scale, how to implement the transitional strategy?

•Method

a. Geo-spatial mapping b. Scenario planning

•Expected outcome

b. Different scenarios will be made to showcase how do roofless people living in the transitional housing integrate with local environment, and how do stakeholders work with them.

a. Some community-scale mapping analyses, such as vacant housing, public land, and waiting spaces, need to be conducted to identify more spaces that can be converted into transitional housing.

•corresponding content

8 Strategy implementation

Politicize

4.1 How can NGOs, residents and new roofless people moving in, local governments function to better achieve solidarity collaboration at the neighborhood level?

•Method

a. Stakeholder analysis b. Scenario planning

•Expected outcome

a. New diagrams corresponding to Chapter 5 on Stakeholder Analysis and new Stakeholder Collaboration Map will be created, illustrating a before-and-after comparison to highlight the aspects of the strategy that enhance stakeholder collaboration.

•corresponding content

7 Strategy and toolkit

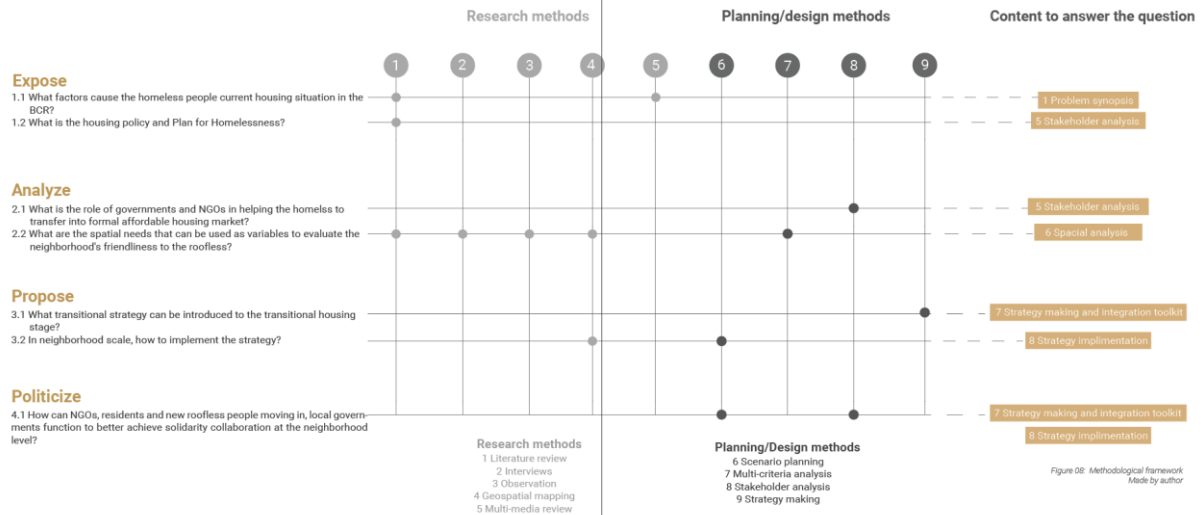
8 Strategy implementation

Process

Method description

3 Methodology

3.3 Methodological framework



This thesis uses nine methods, which can be broadly categorized into Research Methods and Planning/Design Methods, used respectively to guide the theoretical and conceptual research and the strategy design part.

For Research Methods, I use literature review, interviews, observation, geospatial mapping, and multi-media review. For Planning/Design Methods, I use Scenario planning, Multi-criteria analysis, Stakeholder analysis and Strategy making.

- In the Expose phase, Sub-questions 1.1 and 1.2 will involve literature review and multi-media research to develop Chapter 1: Problem Synopsis and Chapter 5: Stakeholder Analysis.

- In the Analyze phase, Sub-questions 2.1 and 2.2 will involve interviews, observation, geospatial mapping, multi-criteria analysis, and stakeholder analysis to

develop Chapter 5: Stakeholder Analysis and Chapter 6: Quantify Reintegration Friendliness. This part of the method bridges theory and spatial elements, translating all concepts and theories into spatial expressions to guide the subsequent design phase.

–In the Propose phase, Sub-questions 3.1 and 3.2 will involve geospatial mapping, scenario planning, and strategy making to develop Chapter 7: Strategy Making and Integration Toolkit and Chapter 8: Strategy Implementation. This section focuses on specific spatial strategies and the implementation of strategies at the neighborhood level.

–In the final Politicize phase, Sub-question 4.1 will utilize scenario planning and stakeholder analysis. This phase will be interwoven throughout the Strategy and Design process rather than being presented as a stand-alone section.

Literature and general practical references

Problem synopsis

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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 relation between graduation (project) topic and PCC Graduation Studio**

Homelessness has always been a complex social issue in the European context. The core of the PCC Studio lies in uncovering the contradictions within urban development processes and encouraging institutional change and governance innovations, demonstrating how these can lead to new spatial development patterns through design. This aligns with the ultimate goal I aim to achieve through my thesis: by strengthening cooperation and connections between the government, NGOs, and homeless people, and developing a transitional strategy to cope with the continuously growing number of homeless people and the pressure on social housing, and enable roofless people to transition more quickly and stably into the regular housing market. Without the involvement of governance arrangements, it would be difficult to achieve.

➤ **the relation between graduation (project) topic and the track of Urbanism**

Urbanism emphasizes the interplay between people, space, and governance, and my project applies these principles by exploring how transitional housing and reintegration strategies can tackle one of the most pressing social challenges in cities. By integrating theoretical frameworks, and employing methods like geospatial mapping, and stakeholder analysis, the project bridges theory and practice—one of the core aspects from my understanding of Urbanism. Through these approaches, my project will reflect the Urbanism track's focus on creating inclusive, resilient, and just urban environments while addressing systemic challenges in my case is housing and social reintegration. This ensures that the project not only contributes to academic discourse but also has practical implications for transforming urban spaces.

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

➤ **Scientific relevance of the graduation project**

This project uses parts of data-based analysis to address the complex issue of homelessness. The project responds to evidence of systemic displacement

and marginalization, by using literature and demographic analysis to map the flow of homelessness and identify key areas of need in the Brussels Capital Region. The research incorporates quantitative analysis of creating an Index of Reintegration Supportiveness, and urban policy impacts to understand how the existing housing market, characterized by a bias towards homeownership and a shortage of social housing, exacerbates housing instability for homeless people. The proposed transitional housing strategy will be based on empirical evidence, combining temporary accommodation with support services to foster social reintegration and address the specific needs of the homeless population.

➤ **Societal relevance of the graduation project**

The societal relevance of my graduation project lies in its focus on addressing homelessness, a critical and persistent social issue in urban environments. By exploring transitional housing strategies and their potential to facilitate reintegration into society, the project directly contributes to improving the quality of life for marginalized and vulnerable populations. Homelessness is not only a social and housing issue but also deeply interconnected with systemic inequalities, social exclusion, and governance inefficiencies. This project seeks to bridge these gaps by proposing spatial strategies informed by human needs, and stakeholder collaboration. Ultimately, it highlights the role of urban planners and designers in creating cities that prioritize dignity, equity, and the well-being of all citizens, particularly those at the margins of society.