

Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences



Graduation Plan: All tracks

The graduation plan consists of at least the following data/segments:

Personal information	
Name	Arda Basak
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Studio	
Name / Theme	Adaptive re-use lab
Teachers / tutors	Ing. Peter de Jong & Dr. Ir. Hilde Remøy
Argumentation of choice of the studio	<p>Passion for redevelopment: I see redevelopment as the most important task of now and the near future, because:</p> <ul style="list-style-type: none"> • Population growth is stagnating • Less need for new buildings • Continuous movement/migration • Sustainable solution <p>With this research I would like to stimulate the amount of transformations and maximize the transformation potential.</p>

Graduation project	
Title of the graduation project	<p>Kostenafwijkingen bij transformatieprojecten: inzicht in de nauwkeurigheid van de ingeschatte kosten en opbrengsten in de initiatieffase</p> <p>Cost inaccuracies of transformation projects: insight in the accuracy of the estimated costs and revenues in the initial phase</p>
Goal	
Location:	Netherlands
The posed problem,	[Problem Statement]
research questions and	[Research Question]
design assignment in which these result.	[Design Assignment]
<p>Problem statement</p> <p>Estimating construction costs and revenues in the initial phase is inaccurate in transformation projects due to the complexity of these projects. The actual costs and revenues deviate more from the estimated costs and revenues than in new-built projects. Higher accuracy in estimating the costs and revenues ultimately can ensure a higher price offered for existing property. This could give an extra boost to transformations.</p> <p>Research question</p> <p>How do developers deal with the complexity and risks of transformation projects in the initial phase and to which extent do the complexity and risks of transformation</p>	

projects lead to a difference between the estimated costs and revenues and the realized costs and revenues?

Design assignment

The expected results in this study are presented below:

- An overall analysis of how developers translate the complexity and risks inherent in transformation projects into the financial feasibility;
- Understanding of the accuracy of the expected costs and revenues in the initial phase;
- Declaration of the cost differences of transformation projects;
- Understanding the impact of building features, location characteristics and organizational factors on cost differences;
- New knowledge about how cost estimates can be improved in the initial phase of transformation projects and recommendations herewith for developers;
- Recommendations for future research regarding the accuracy of estimating construction costs and revenues in the initial phase of transformation projects.

The purpose of this research is to gain insight into the accuracy of the estimated costs and revenues in the initial phase of transformation projects and the reasons for any deviations between the estimated costs and revenues and actual costs and revenues. The research will therefore consist of three components:

1. Literature review
2. Case studies: Quantifying the problem by investigating the number of cost variations in transformation projects and the size of the deviation,
3. Semi structured interviews: Providing insight into the underlying reasons and causes of the problem.

Process

Method description

The research will consist of three components:

The first part will be literature review. In this part, the (expected) answers on the sub questions will be explored. This will provide further input for the second part.

The second part will be quantitative research, where data will be collected of (estimated and actual) construction costs and revenues on three predefined moments. This part of the research will provide insight into the accuracy of the expected costs and revenues in the initial phase, but also provide insight into the impact of building characteristics, location characteristics and organizational factors on cost differences.

The third part will be qualitative research, in which semi-structured interviews with developers will be conducted. In this part of the research the differences in cost estimations of transformation projects will be explained and new knowledge will be developed about how cost estimates can be improved in the initial phase in

transformation projects.

Literature and general practical preference

The needed data are construction costs and revenues (or only LFA/GFA ratio) of transformation projects (office into housing). This data is hard to get. Therefore I already sent e-mails to 261 project developers. The response rate until now is sufficient in order to continue the research.

Second scenario: if the amount of needed data for the quantitative part is insufficient, the main focus will be on the qualitative part (the reasons for cost inaccuracies).

Reflection

Relevance

Scientific relevance

This research will bridge the gap between the practice and the science with regard to the accuracy of cost estimates in transformation projects and the reasons for any discrepancies. Currently, there is not much known about the accuracy of the cost estimates of transformation projects carried out by private parties, because of the non-transparent features of the property market.

Societal relevance

35% of the 8.7 million square meters of vacant offices in the Netherlands can be converted into housing. This potential is not yet fully exploited. However, there is a need to transform: on the one hand to address vacancy rates, partly to alleviate the shortfalls in the housing market. The office vacancy rate has risen in 2014 to over 8.7 million square meters, or 16 per cent of the total Dutch supply of 49.6 million square meters. At the same time there will be a shortage in the housing market arise from four to five per cent of the total housing stock. Transforming existing, vacant offices can offer partial solutions for both the vacancy problem, as the housing shortage.

The risks inherent in transforming offices into housing often have a direct impact on the financial feasibility of a project. By examining how the risks can be estimated in a better way, the price that can be offered for existing offices can be higher. Thus the problem of high book values could be partially solved.

Time planning

3.2 PLANNING

