

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	Rolien Wisse
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Studio	
Name / Theme	Sustainable Design Graduation Studio
Teachers / tutors	Philomena Bluysen Frank Schnater
Argumentation of choice of the studio	Building Technology student with special interest in sustainable healthy buildings.

Graduation project	
Title of the graduation project	Design procedure to design better usable operable façade elements for open-plan offices
Goal	
Location:	The Netherlands
The posed problem, research questions and design assignment in which these result.	<p>Operable façade elements in open-plan offices are often not operable in practice.</p> <p>Develop a design procedure to design operable façade elements for open-plan offices which are better usable and result in a higher degree of satisfaction in these indoor environments.</p> <ol style="list-style-type: none"> What Design Criteria help to design better usable operable façade elements for open-plan offices? What could operable façade elements that meet these Design Criteria look like? <p>Development of Design Criteria for operable façade elements for open-plan offices in the Netherlands, the design of operable façade element variants that meet the design criteria (see also</p>

method description) and the making of an operable façade element that will be tested.

Process

Method description

A literature survey, exploration of the BBA database, interviews with façade designers and indoor environment experts and an observation survey will be the input of the iterative process leading to the Design Criteria. Variants of operable façade elements that meet the Design Criteria will be designed. One element that seems to be feasible will be made 1:1 to test usability and a scale model will be made to explain the aspects of office layout. The element will be simulated to test the feasibility. Feedback from the tests will be taken into account in the latest version of the design criteria of this graduation. Lastly a designer's manual will be made to present the design approach in a way that it can easily be used by designers.

Literature and general practical preference

Literature about; operable windows, perceived control, satisfaction in open-plan offices, satisfaction in relation to ventilation and thermal comfort, environmental psychology and environmental physiology. Relevant articles in the journals; Building and Environment, Energy and Buildings, Indoor and Built Environment, Building Research and information and Architectural Science Review.

The Database of BBA with questionnaires containing questions i.e. the amount of people you share your room with and reasons why the window cannot always be opened when the person wants it to be open.

Observation in open-plan offices with operable windows located in the Netherlands.

Reflection

Relevance

This graduation project increases insight in criteria for better usable operable façade elements for a higher degree of satisfaction in open-plan offices, increases the ability to design operable façade elements which increase satisfaction in open-plan offices and gives more insight in the effects of operable façade element design in open-plan offices.

Time planning

The time planning on the next page is presented in a 31-week timeframe. I will continue graduation during 5 weeks of the summer holiday of 9 weeks to avoid delay in the end. Therefore there is some non-scheduled time left in December and the beginning of January, this is to be able to take some extra time where needed.

