

Graduation process

— how is your graduation topic positioned in the studio

My graduation is done within the areas of climate and façade. For climate, I'm doing research into the current state of innovative, zero-energy, installations concepts. Based on this research I will do a design proposal on how the installations can be integrated into the façade.

— how did the research approach work out (and why or why not)? And did it lead to the results you aimed for? (SWOT of the method)

For my research on current zero-energy solutions I approach different companies for information. I did this early on in the process in case it would take multiple times or a long time to get a response. This turned out not to be the case, most of them responded within 3 work days, only one didn't respond at all. But my research approach has purposely left room for this to happen. This was a one strength of the approach. One of the threats to the research approach where the properties where the research would be based on. Some people strongly advised to look at certain properties that other people would later dismiss. Also, the changing regulations around sustainable installations did not help. In order to solve this problem, I looked at: what my research asked and what was important within that out of a social and scientific point of view. For the regulations I added in research on what is important right now and what is known about regulations in the near future.

— if applicable: what is the relationship between the methodical line of approach of the graduation studio (related research program of the department) and your chosen method. My research comes forth out of the current state and questions of the research program of 2ndskin. For the next version of 2ndskin they are looking for an improved approach for the integration of the building services into the building. My research is looking at what is on the market right now and how these systems can improve the 2ndskin design.

— how are research and design related

My research focuses on what is already done and in this particular area and what can be learned from those projects. The findings of the research will determine what system will be presented in the design. Since the project is about the integration of the installations within the façade, the chosen installations will determine what is possible within the design. The choice of installations will come forward out of the research. So only out of the conclusion of the research the design can be made.

— did you encounter moral/ethical issues or dilemmas during the process? How did you deal with these?

No.

■ Societal impact

— too what extent are the results applicable in practice?

The design proposal takes the current state of innovation and takes it a step further. The results of this thesis can directly be used in the further innovation of not only the 2ndskin approach but also the innovations like 2ndskin. Multiple companies have already expressed interest in the results and the conclusion of the research into the different installations will be presented for the companies involved by the 2ndskin project.

— too what extent has the projected innovation been achieved?

The research show that the projected innovation of smaller and lighter system is indeed possible. The percentage of improvement can not be stated yet at this point within the project.

— does the project contribute to sustainable development?

The aim of the project is to develop a design proposal for the integration of zero-energy installation into a porch house renovation. This design is based on the current state of sustainable innovation and uses this to develop a new design.

— what is the impact of your project on sustainability (people, planet, profit/prosperity)?

Planet: the project focusses on zero-energy installations

People: The project focusses specifically on the renovation of porch houses that are used for social housing.

Profit/Prosperity: the final design will take into an account the global material, labor and maintenance cost of the design. No fancy materials or design solutions can be used since it concerns a social housing project.

— what is the socio-cultural and ethical impact?

The design gives zero energy to social housing.

— what is the relation between the project and the wider social context?

There are very view sustainable solutions on the market right now for low-rise social housing. Even though they make a significant portion of the current housing sector.

— how does the project affects architecture / the built environment

The solutions that are on the market right now are quite big in size and affects the outside architecture of the building quite tremendously. Having a smaller and more integrated installation system gives more architectural opportunities. Since porch houses are so small the design is upgradable to other low rise houses, like terraced houses and (semi)detached houses.