

REFLECTION PAPER

VERSATILE AND AFFORDABLE HOUSING THROUGH OPEN BUILDING AND COOPERATIVE COMMISSIONING

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Reflecting on my graduation process within the Architectural Engineering studio 2023/2024

Connection between graduation topic and the Architectural Engineering Studio

My personal fascination of combining the dilemma of housing shortage with the increasing relevance of transformation and reuse perfectly matches the topic “Stock/ Second-life” embedded in the Architectural Engineering studio. By graduating at the Architecture track the focus accordingly lies on the building design even though suggestions on an urban scale and even on the level of management and development are part of the process since social sustainability, diversity and affordability cannot be addressed in an architectural vacuum and inherently ask for an holistic approach.

I aspire to partake in the lively discourse at our faculty on resilient housing concerning the ever changing multiplicity of society and its demands towards a home, by addressing the principles of versatility and affordability as crucial elements of this overarching ambition of socially sustainable housing.

By implementing these principles into a post-war transformation task this graduation project provides a variation or even alternative to the open building approach of adaptable grid-structures, which has been elaborated comprehensively at the TU Delft faculty of architecture and more specifically at the architectural engineering studio.

Reflecting on the reciprocal impact of design and research methods

The research serves as a starting point to assess various contemporary methods for achieving socially sustainable housing through versatility and affordability. However, it lacks quantitative data to support its conclusions lacking objective recommendations based on comparable statistics.

While aiming to provide a framework for addressing evolving housing demands, incorporating current data, such as surveys within Boerhavewijk, could have informed more refined floorplan designs matching the aspiration to better accommodate the (local) versatility of housing demands.

The case studies covered by the research paper also highlighted the importance of a reliable and inventive business model for realizing architectural objectives of versatility and affordability. Projects achieving affordability through independence from speculative housing markets were typically led by housing cooperatives, a model less common in the Netherlands.

My own experience in a project with cooperative ambitions underscored the necessity of municipal support and collaboration with local banks. Unlike in Zurich, where municipal experience and policies support non-profit housing, such foundations are lacking in the Netherlands.

This early insight resulted in a slightly distracting design approach of looking at options of a feasible yet innovative business model as framework for the architectural design proposal. To regain focus on the spatial translation of these conclusions in my task as architect instead of as developer, the design process again informed a narrowed down research scope of analysing new case studies that fitted the transformation context more accurately. Yet, an initial clearer summary of the research conclusions and what they mean for architectural design choices could have helped as a guide to fall back on during the design process. Now the start to translate the conclusions of the research paper towards tangible architectural interventions has been rather difficult and abstract.

Though the research offers new perspectives, achieving synergy between business models and architecture remains a work in progress. Recent developments in subsequent case studies reaffirm the relevance of this research. Highlighting weak spots as well as remarkable design interventions in other projects has also prompted reflection on my personal design process, further pushing me to realize certain ambitions of spatial and social qualities.

Application of design and research at different scale levels

Dealing with transformation of a prominent high rise building within an existing urban fabric inherently raises questions on all scales from the position towards the urban context up to the detailed challenges of reusing post-war concrete structures. The more qualitative than quantitative nature of the research paper already provides a useful backbone to interpret and implement the conclusions on several scales rather than a comparative analysis strictly limited to a specific construction element could have done. The success of involving specific collective, public and commercial functions has been discussed just as much as for example the keen engineering of adaptable installations.

The multiplicity of architectural challenges in dealing with a high-rise transformation on a roughly 10.000 square metres plot can be overwhelming and distracting from the initial design ambition. However, trying to re-focus to implement the design ambition and research conclusions does not simply imply to pick out one specific aspect of the building design which appears to be most relevant to this issue. Through many feedback sessions the challenging yet exiting task became apparent to instead prove the effect of the implementation of valuable conclusions, such as layered social interaction, versatile yet guided and carefully framed flexibility or affordability through spatial efficiency and smart detailing, on all scales. To keep this task feasible faced with the entirety of this complex and large project, an exemplary cluster of dwellings situated in the transformed part of the building has been chosen to develop properly. Thereby the design task has still been narrowed down to a smaller aspect of the project but without compromising the relevant effect of the interventions on all scales.

Relevance for society and the architectural discourse

The general challenge of housing shortages paired simultaneously with the transition towards a sustainable built environment establishes the backdrop of this graduation project. The inevitable transformation task in densified urban regions and research into unconventional housing are two concepts further framing the relevance within the broader context of European society facing similar challenges. The project's particular significance lies in its focus on revitalizing post-war neighborhoods facing similar challenges and potentials as Boerhavewijk in Haarlem. By exploring the potential of repurposing the current care facility "Schalkweide", valuable insights can be gained into the future prospects of Boerhavewijk.

Of specific interest is the Dutch phenomenon of "Extramuralisering," which creates a void in the function and use of care facilities nation-wide similar to "Schalkweide" in Boerhavewijk due to changing demands in elderly care. Yet, there remains a lack of vision for the future role of this site. This project aims to establish a pivotal role for this prominent location within the neighborhood.

To prevent an approach of mere damage-control of before-mentioned dilemmas, this graduation project suggests an architectural intervention that not only avoids destruction through transformation in the first step but also prevents future obsolescence of the building stock through durable and socially sustainable design. Therefore the research associated with this graduation project will delve into the issue of mismatched housing demands and the abundance of uniform Dutch post-war housing types. It will draw upon the current architectural discourse concerning approaches from other European countries and unconventional exceptions within the Dutch context to address this disparity.

Ultimately, the project seeks to evaluate the feasibility of achieving versatility and affordability through two contrasting design approaches, informing a nuanced stance on similar projects. By doing so, it aims to broaden the scope of sustainable housing design beyond conventional measures such as material use and energy efficiency.

Impact of reflection on the process towards the final presentation

Looking back at the implementation of the core ambition and fascination into the actual design process, a new-found urgency arises to focus on the central message during the last stage of finalizing the design towards a clear and to-the-point presentation.

In concrete terms the conclusions from the research about the potential of guided flexibility and an upfront provided versatility of space and programme has led to formulating the underlaying design ambitions. Reflecting the design interventions to those ambitions during the final process also opens up further questions on how to implement similar tactics much more drastically and more distinctive. For example the floorplan layout has much more potential to explore spatial-efficiency. The scenes covering amongst others the chances of affordable flexibility and encounters on layered levels of public, collective and private outdoor space became an unexpected yet crucial tool to communicate the realization of intangible design ambitions.