

Reflection paper
On the graduation project

Re-structured.

Transformation strategy for mass-housing blocks on the example
of ERA buildings in Buitenhof, Delft.

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The aim of this paper is to reflect upon my graduation process, focusing on main aspects such as relevance of the topic, motivation behind the project, the research methodology and its connection to the design process.

This is done by first describing the specific aspect, analyzing it and finally reflecting upon it. Conclusion summarizes experience that I have gained during the graduation and highlight aspects of the design that I would like to take into account in my future work in the field of architecture.

Motivation behind the project involving transformation of existing buildings started with my fascination with works of French practice Lacaton&Vassal, namely strategy of never-demolishing, explained in their publication “Plus”¹. Situation, where architect instead of creating from scratch, uses the (overlooked) quality of neglected housing block as a starting point of the design has been compelling to me. Therefore by understanding the building and its context architects managed to turn a previous obstacle into advantage and beyond solving existing problems provided additional architectural quality to the building and its dwellers.

Parallel fascination with the built environment in the Netherlands, where one can trace influence of careful and interlacing design on multiple layers, with distinguishable influence of architecture theory upon the practice (quality which is in my opinion largely missing in Poland, where I come from) led me to idea to study further the history behind mass-housing in the Netherlands and envision transformation strategy for a selected site in the Netherlands for the purpose of this academic project. In this case the project should not be perceived as a criticism towards mass-housing blocks in the Netherlands but rather as an exploration of opportunities presented by the local context from which I can learn and gain experience to become a conscious architect.

² F. Druot, A. Lacaton, J.-P. Vassal. (2007). “Plus” Large-scale housing developments

Relationship between the graduation project and the wider social, professional and scientific framework

The omnipresence of the aging mass-housing estates in Europe starts to create a new frontier for innovative approaches in architecture, particularly in the architecture of renovation. This new movement has the capacity to address two major aspects of contemporary architecture: the role of architects in catering for sustainable development (namely ecological, economic, and social development) and, more importantly, addressing the needs of changing society (e.g. from monologue to digital). A close look at mass-housing projects in the Netherlands reveals the enduring impact of the doctrines in practice at the time of their construction. These principles, predominantly influenced by structuralism, present compelling opportunities for the transformation of selected buildings in the areas commonly considered as problematic and lacking quality. Importance of research-based

intervention in the domain of housing transformation is highlighted in the research by the selected case studies where architects introduce specific solutions based on their understanding of both quality of the building and needs of the dwellers. Through this, research conclusions are presented as comparable study in 4 zones: individual dwelling unit, semi-private-space of private balcony, collective space (circulation) within the housing block and local urban settlement (i.e. within 3-4 adjacent blocks).

Proposed design of transformation strategy for a neighbourhood of 4 mass-housing blocks in Delft, Netherlands, aims to bring back attention to the original quality of apartments by redefining the neglected space in between housing blocks and introduce function of public building into the space dominated by housing. Approach like this has a potential

for application in the other mass-housing estates built across Europe after Second World War, where context-related research followed by architectural intervention can change public perception regarding these buildings, create resilient neighborhoods and help meet goals of sustainable development.

Methodology and relationship with ongoing research

To understand the potential of existing mass-housing stock, initial information for the research were provided from the Heritage&Architecture studio where author studied history of mass-housing in the Netherlands and execution of the building system “ERA” in Ommoord, Rotterdam. This part of research included site visits and brief survey among inhabitants. In the graduation studio, to complete the inquiry regarding blocks in Ommoord and its potential for transformation project, further literature studies were concluded.

To define guidelines for housing transformation project, qualitative research on selected case studies has been conducted. Overview of current transformation examples shows new trends in the residential architecture, emerging from 3 factors of sustainability:
Ecology: Transformations aim to improve thermal performance of

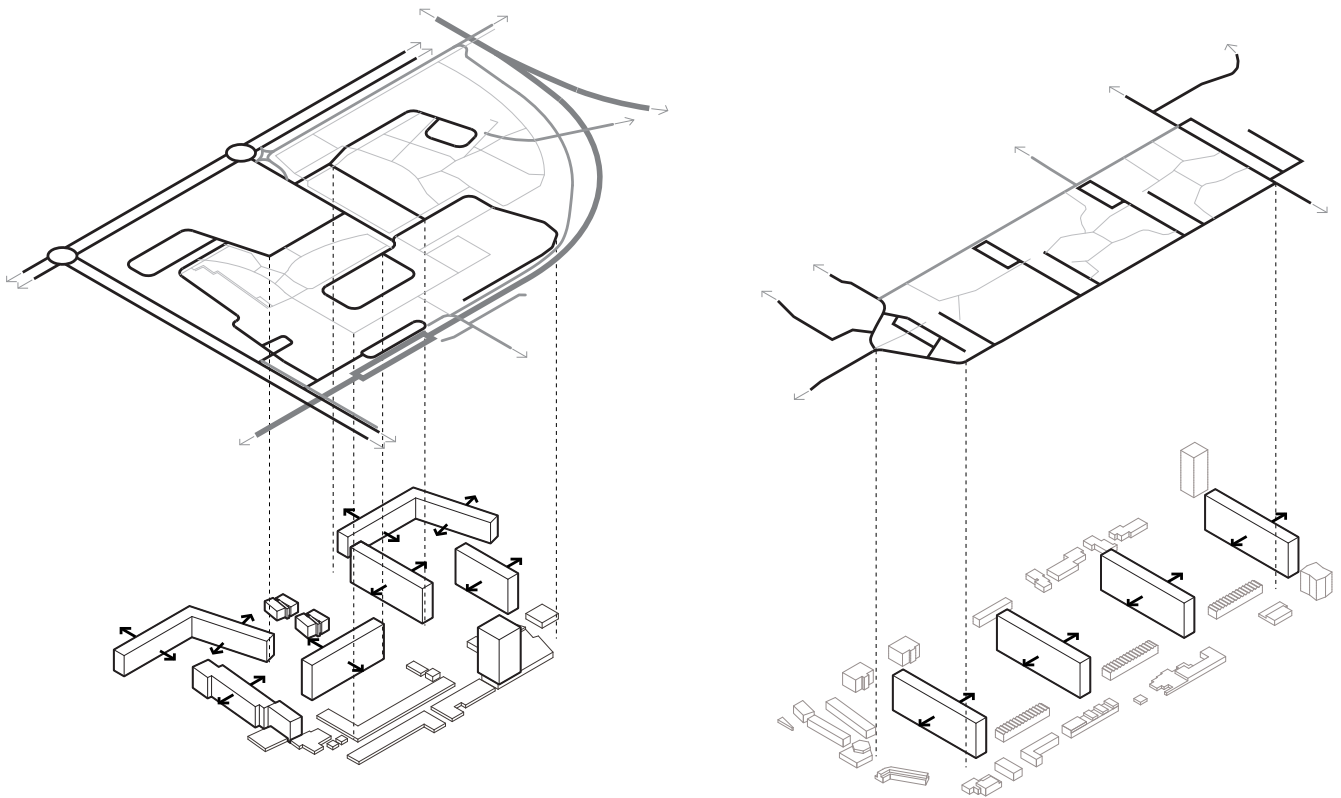
the buildings. Re-use of buildings’ structure and other elements surpass newly created buildings in terms of using energy already embodied in existing structures.

Sociology: interventions lead to positive change within the community of dwellers.
Economy: new development models are more resilient, de-centralized and buyer-oriented.

Narration through the study cases show the emergence of new methodology (Dutch: “klushuis”, meaning “DIY house”), which is present in small interventions in early 2010’s like Wallisblok in Rotterdam or Klusflat Klarenstraat in Amsterdam. Klushuis methodology can be seen applied on a larger scale in transformation of Kleiburg, massive urban block in Bijlmermeer, Amsterdam.

Being still an experimental project among Dutch housing design, transformation design by NL Architects became internationally

recognizable, winning 2017 Mies van de Rohe Award. At the same time, decreasing performance of aging mass-housing estates in western Europe has created a new opportunity for innovative renovation: architecture of transformation, visible in analyzed realization of Bois-Le-Prêtre Tower Block, Paris (by Druot, Lacaton&Vassal). Each of the projects has been analyzed through the deconstructive analysis, creating comparison table explaining architects’ interventions in 4 zones of the selected buildings: public, community space and circulation, semi-private balcony space and private domain of customized dwelling. Overview in this form prompted first conclusions and led to the third part of the research - reflection and discussion.



Comparison between part of Ommoord (left) and Buitenhof (right). Difference in original quality of urban planning is represented by spatial composition of gallery blocks and visual connection between them. Development of Ommoord over the years is reflected in interlacing network of metro lines, streets, bike and pedestrian paths, quality which is missing in the neighbourhood of 4 ERA blocks in Buitenhof.

Third part of the research emerged after comparing site analysis of Ommoord and conclusions from the case studies. At this point it can be observed that effects of gradual improvement of the Ommoord area in the nearly 60 years after completion created resilient neighbourhood, already equipped with qualities which radical transformation could bring. Even more, quality of “customizable dwelling” in the gallery flat with load-bearing walls created by tunnel-system structure become a key finding of Kleiburg renovation. Dwellings in the ERA blocks, sharing the same principle, could be accordingly improved by applying the same strategy, however in case of Kleiburg real value of the

strategy has been confirmed by its commercial success, while already inhabited dwellings in Ommoord did not seem to be suitable for such a major intervention. Following conclusion stays in contrary to the initial hypothesis of Ommoord as a site for large-scale housing transformation. Therefore, to proceed with the graduation project revolving around relevant housing transformation, project needed to change the location and re-focus from private domain of dwelling to a larger scale, on a site where quality of ERA-blocks did not meet the exceptional quality of urban planning presented by the Ommoord housing complex. Accordingly to the research, in the 1960’s, after successfully completing

the Ommoord project, van Eesteren building company continued to execute the design of industrial-scale housing projects and created 4, 15-story height housing blocks in Delft as a part of “textbook example of sweeping modernist urban planning”.² With its (lack of) quality in the public domain, site of ERA blocks in Delft stand out in comparison to Ommoord. After site analysis revealing social problems emerging in the area and negligence in terms of maintenance of public space in between the blocks, site of Buitenhof provided ground to design a transformation project of this graduation.

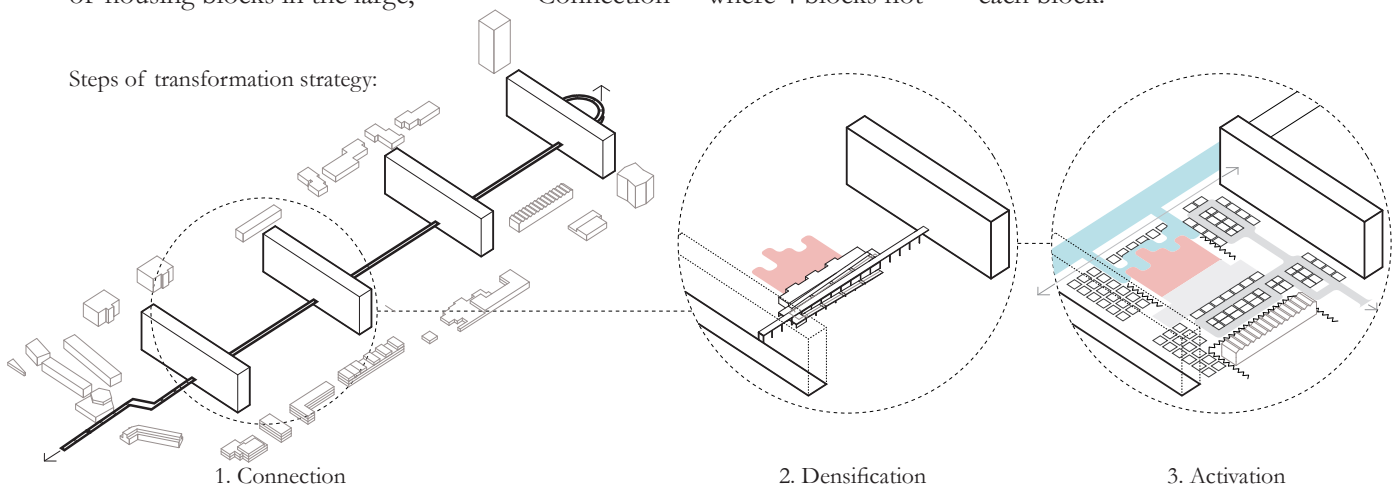
² Reinout Rutte, *History of Architecture and Urban Planning* (2016). *History of Delft. 17th IPHS Conference, Delft 2016.*

The relationship between research and design.

Conclusions from the research created the perspective how to approach the topic and created a broader understanding behind the initial fascination about the topic. In the design phase, after site analysis, studies revolved around observed in the case studies strategy, where major design intervention is usually responsible for change of identity and becomes a driving force for the project. While relevance discovered in the early stage of the research remained unchanged, later conclusions led to shift the center point of design intervention's from the housing unit to the connectivity of housing blocks in the large,

neighbourhood scale and further on, to the shared space in between the blocks. Aim for the project became to envision a multi-level transformation strategy, inspired by the case studies, where specially targeted design interventions step by step change the overall image of the neighbourhood. Idea to redefine the identity of the neighbourhood with its multiple social problems is reflected in the design by introduction of a new quality, something that dwellers "can be proud of". Due to alienated character of the neighbourhood this intervention can be called "Connection" - where 4 blocks not

only become visually connected to each other but open up to the previously inaccessible area of the polder on the west side and commercial area on the east side. Architectural intervention of "Densification" introduces (connected to the first intervention) public buildings in the space between the blocks, taking out part of neglected space and bringing public interest back to the area. "Activation" phase reflects contrasting quality of gallery and balcony (found during the research regarding ERA-flats) into the design of communal space surrounding each block.



Relation between the master programme, master track: Architecture and the subject.

During the process of developing this project a constant notion has been a goal of an author: “[to] use design as a means to deal with the technical, social and spatial challenges encountered in the built environment.”

I firmly believe that architecture revolving around evaluation and re-interpretation of existing built environment, can be innovative and creative, therefore being in line with the other projects realized in my architectural education.

Specific to the “Explore Lab” studio freedom of formulating a topic accordingly to personal fascination then evaluating it by research and finally, design, had a major impact on the project. Looking back at the various phases of the project, I can state that this work contributed the most to my architectural education. Situations like first 6 weeks where I have been discussing my fascination theme with the teachers of the

Faculty of Architecture looking for possible collaboration or the moment when research conclusions changed my perception of initial fascination were valuable lessons for me, ones that I have not experienced during my architectural education before.

³ “Track: Architecture” from <https://www.tudelft.nl/en/education/programmes/masters/architecture-urbanism-and-building-sciences/msc-architecture-urbanism-and-building-sciences/master-tracks/architecture/>

Final reflections

Following a fascination with new, emerging methodology of “radical transformation of large-scale housing”, visible in the recent publications and architectural awards, with the aim to apply it to previously selected site has been a problematic aspect in the early phase of this project. In this situation, further analysis of the case studies helped to understand importance of research and context-awareness of architects that led to the result visible in “final image” of selected influential project. In this project, difficulty emerging from working with existing situation put more emphasis to create a socially-sensible project, where architect’s vision should not replace ongoing social problems with another, i.e. gentrification.

In the following situation, guidance from the mentor team played crucial role in establishing connection between the research and design. Introduction of “Discussion”

chapter in the research report helped to project conclusions from the research into the site of the project. Expertise provided by Robert Nottrot (former inhabitant of the Buitenhof’s block) supplemented with site visits (and discussions with students currently living in one of the buildings) provided a local insight, very much needed in a project and not possible for author to establish while working on its own.

Design decisions aiming to add new quality by re-programming and implementing new buildings to the neighbourhood at a cost of losing part of neglected “no-one’s” space in between the blocks has been influenced by the research on general characteristics of ERA gallery-flats, specific site analysis and strategy of multi-stage design interventions observed in the selected case studies. Although leaving the private domain of apartments in the hands of the dwellers, proposed strategy

for activation of collective space adjacent to the housing blocks comes back to the researched notion of customizable space, encouraging inhabitants to take responsibility and partially create their surroundings. Creating a framework where top-down design decisions, i.e. necessity to provide access with a paved road can be completed with bottom-up approach (changeable function for a module selected by the community) serves as an example of general intention behind the project: bringing back quality of living to the inhabitants of the mass-housing blocks.