

AIREFABRICATION

The refabrication of the Airey system for the second-generation to come,
focusing on the design case 'Airey-strip blocks' in the Amsterdam Nieuw-West.

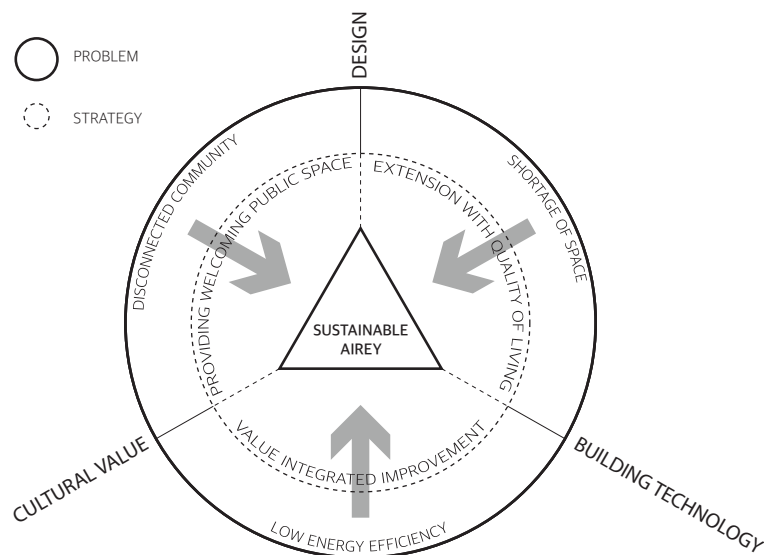
1. The relationship between research and design

In the 'Heritage & Architecture' course, we have a triangular symbol that is composed with Design, Cultural Value, and Building Technology. Those are the essence of the studio that shows the effort to find an appropriate balance between the old and new. In the graduation studio 'Rehousing', three post-war building systems suggested as a case study due to its large number and necessity of renovation. Three building systems are Airey, ERA and InterVAM, and I have chosen Airey strip in Amsterdam. The system and its site represent the AUP concept 'Light, Air, and Space' well. As a social sector, Van Eesteren Museum started to shed new light on the 'Amsterdam Nieuw-West' area and the 'Airey-strip blocks' after the demolition issue in 2009 after the financial crisis. As a group, we researched from the historical and morphological aspect to the characteristics of the Nemavo-Airey system that is adapted Airey system introduced to the Netherlands. The Building Technology and the Cultural Value part separately studied besides the research. In the Building Technology part in detail, the structural, morphological and systematic aspect of the system analyzed with the hand-drawn sketch. Also, Cultural Value studied in the matrix that has two axes; The Y-axis is composed of the 6-S system of Steward Brand and 'Story', and the Y-axis is filled with different heritage values, Age, Historical, Artistic, Commemorative, Use, Newness, Conflict, and Dilemma. This covers almost every aspect of the building so we could investigate the values of the building as much as we could. Consequently, the results of the study are deeply considered and selectively applied to the new intervention.

After the research, I have chosen the Airey strip as my individual design case. I valued two things the most in my value assessment; the tectonic structure and the skin that represents the main image of the Airey system. To achieve the goal of the studio, the envelope of the building studied in depth, and I tried to add a new meaning to it by finding the harmonious design between the new intervention and the existing.

2. The relationship between the theme of the graduation lab and the case study chosen by the student within this framework.

From the analysis and interview with the inhabitants, some issues have surfaced, and I reason the main problems out based on the Heritage Triangle. The strategies are formulated from the problem identifications in different sectors. First of all, one of the main strategies is to provide the welcoming transitional spaces from inside and outside of the site, and it covers cultural value and the design sector. Secondly, the evidence of the shortage of space is easily found around the site. Therefore, the extension of living space is an important issue. The 'quality of living', that we studied in the early stage of design approach, should be achieved through the design and the building technology sector. Last but not least, the energy efficiency has to be upgraded to meet the current energy requirement. The cultural value has to be integrated into the technological intervention since the new elements always go with the old stuff.



From these strategies, the research is aiming for an intimate network between the dwellers and the outdoor life to strengthen the community, so that the blocks become sustainable in the second-generation to come. The physical re-conditioning will enhance the aspect of contact. I proposed to improve the characteristics of the transitional space by redesigning the physical gesture over the existing value. Therefore, the research question is formulated as follows.

“What type of physical reconditioning can restore the severed community while solving the practical problems, the shortage of space and the energy efficiency? Also, how to make the best use of the value of the existing building in the renovation process. Is it also possible to apply this method to another renovation of the Airey system in general?”

3. The relationship between the methodological line of approach of the graduation lab and the method chosen by the student in this framework.

Basically, the Heritage & Architecture course deals with the design based on the heritage triangle mentioned above. The monumental aspect of Airey strip is rather lower than the other national heritage project. This is due to the fact that housing does not exist to commemorate but to serve people's life. However, this does not mean that we can neglect the cultural value part. In the case design, the cultural value part was discussed actively to give the hierarchy and select the highly valued aspect properly. This processed through the value matrix study and applied to the design. Also, the multiple viewpoints toward the housing renovation project were studied with the visiting professor Anne Lacaton. For example, the workshop 'heritage meets dwelling' gave a chance to study intensively about the possibilities of the plans in the dwelling renovation project. Also, we studied Lacaton's book 'Plus' to get an idea from her design approach, and developed personal approach considering the quality of living. This helps a lot to learn the essential condition of housing renovation, which in tune with the times.

Personally, I introduced 'collage study' as a design tool. The impression visualization, not as a final production but as a design tool, has some benefits. This image work enables the designer to think about the user's experience indirectly from the early stage of the design process. Also, this methodology challenges the designer to realize the designed impression in the real project supported by the technological interventions. This enables to keep the design approach strong that the design decisions do not depend upon the technological solutions but leads the project. The small procedural change can affect a lot to the design result.

Moreover, I studied option for the transitional spaces in the early stage of the design. Although many options are possible in the designated transition spaces, those need to be assessed to make it work in practice. The evaluation factors are the cultural value, spatial quality, communal life, context value, and economic feasibility. The highest-rated options are developed, also by adding the positive point of the other options.

4. The relationship between the project and the wider social context.

In the interviews with the inhabitants, I noticed that a lot of families are living with 4 to 8 members in the 60m² apartment. I concluded that the current population structure of the site is too densified. This not only causes the shortage of space but also have a bad influence on the community. Therefore, I suggest the renewal of the population structure to revive the early stage of Airey-strip blocks. Therefore, I designated two to four members of families as a target group who follows the contemporary family life stage cycle, Young Couple, Couple with Babies, Couple with Teenagers, and back to the Couple in their old age. There are demands of housing from 'young couple' who is finding a moderate size of the dwelling located some distance away from the densified central Amsterdam. 'Young couple' as a target group does not mean that the dwelling is suitable only for young couples but the dwelling is more flexible in responding to their life stage cycle. I expect this flexibility makes the residents stays longer in the Airey strip and contributes to the revitalization of the community by aging with the community.

Airey strip itself valued as an outdoor museum. When it continuously and effectively plays its role as a dwelling in the city, the meaning will never be faded. Also, the activated community that positively impacts the neighborhood is the best value of the rehousing project. Moreover, this design project can establish the renovation guideline for the other Airey stocks. The functional improvement is critical to reuse the old buildings. If we find the creative way of reusing it while keeping the existing value, the meaning of the heritage will be expanded.