Reflection

Relation between project, design studio and master

This project focuses mainly on adaptability in relation to values. It proposes a method of adding more adaptability to a building while maintaining existing values. The method was applied to Hoptille, an apartment building built in the 1980's, which is currently being considered for demolishment.

The project is part of the New Heritage design studio. The studio focusses on buildings built in the 1970's and 1980', which are not widely considered as heritage yet, and the values these buildings might already have. The topic of adaptability is especially interesting in relation to potential heritage, since adaptability creates the opportunity to easily make changes to a building while the overall identity and the building's values remain intact.

However, in order to create this adaptability, a big intervention is needed, which would more likely be prohibited in buildings which are recognized as heritage. Furthermore, added adaptability might not be necessary in established heritage, as there will be more efforts to maintain the building's values over time. Other buildings, which values are not widely recognized, are more likely to be demolished instead of transformed, resulting in a loss of values and embodied energy.

While adding adaptability, mainly three aspects are taken into account, being the spatial, functional, and social-cultural aspects of the building. The former two are mainly considered in the creation of more adaptability. All three aspects are considered in identifying and preserving the values associated to the building, while the focus lays on the last. The focus on these three aspects is in line with the main aspects considered in the architecture master track.

However, the project also relates to other aspects associated to the master Architecture, Urbanism and Building Sciences as a whole. For instance, the design connects the building to its urban context and takes the influence of the context on the building into account. Among other things the amount of public- or privateness in certain areas in the building influenced the certain functions that were added as well as the position of these functions in the building.

Furthermore, the project also relates to technical aspects and the detail scale, mainly in regard to the flexible elements in the design. This was necessary as a way to discover how adaptability can be added and to test the extent of the possibilities it creates.

Design process

As mentioned, the project focusses on adaptability and values, the main research question being: 'How can a 1980's apartment building be transformed to become adaptable while maintaining the associated values?'. In order to answer this question, two topics had to be researched.

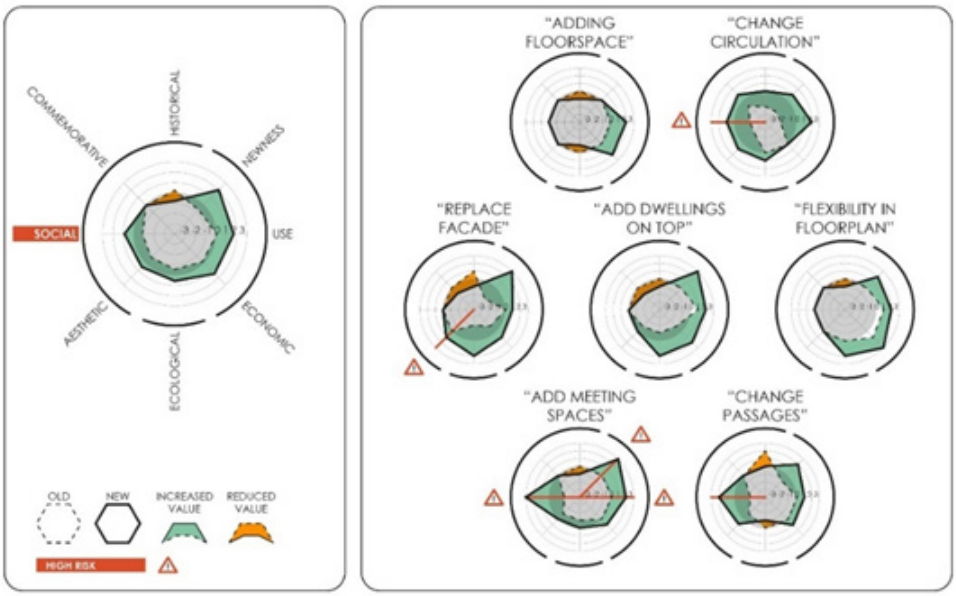
First, which specific values and challenges are associated to the building at the moment, in order to determine what can and what has to be altered. The following two sub-questions relate to this topic: 'What values are associated to the building?' and 'What building elements need to be adapted to suit the needs of the current users?'.

Secondly, strategies to increase the amount of adaptability, and how these can be applied to a specific design, in particular to the transformation of a building. This topic is considered in the sub-question: 'How can the building become more adaptable to future changes?'.

Splitting the research in two topics creates more clarity about the criteria for the design, as these differ per topic and can even conflict with each other. This way the criteria can be considered separately, and an assessment can be made whether a positive outcome on certain criteria can outweigh a negative outcome on another criteria.

During the process, spider diagrams (figure 1) were used to visualize the impact of a design intervention on multiple aspects. Therefore, the design can be easily tested with the established criteria. The figure also clearly shows the limitations of the design, as not every value is increased by the design, and some interventions lead to a high risk. However, overall the design leads to a positive outcome in relation to the considered values.

The tests are used as part of an iterative design process. Based on the criteria and opportunities that arose from the initial research, multiple experiments were done, and the results of these experiments tested and compared. Van Dooren (2013) describes experimenting as being crucial as one of five generic elements in any design project. These experiments and tests lead to new questions for further research, which lead to new research, new possibilities, and new experiments. Thus, the criteria and other research forms the base of the design, as well as being part of the design process. Feedback from tutors also aids in the design process, by providing more questions, as well as providing information to aid in the testing.



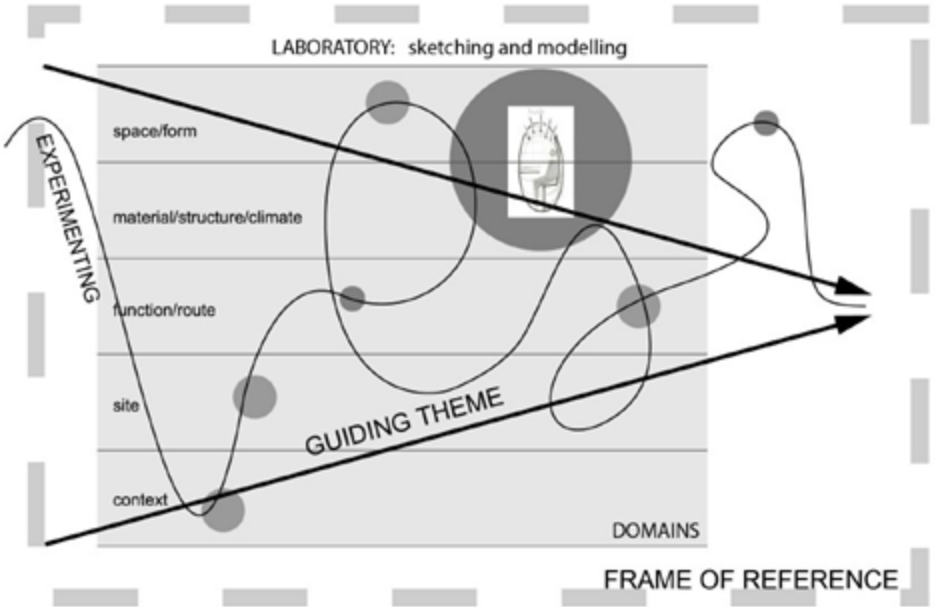


Figure 2: The five generic elements in the design process: experimenting, guiding theme, domains, frame of reference and laboratory (Van Dooren et al, 2013, p. 5).

While the separation into two topics does create more clarity, it is still easy to lose sight of the topics, as new and more questions arise. Even though it is not necessary to keep the criteria in mind at any given moment, as this would limit the experiments, it is crucial to regularly test the design and be aware of the criteria that are being tested. This was particularly hard at the start of the design process, but became more integrated in the process over time, especially after receiving feedback regarding which criteria were set. Nevertheless, the spider diagrams could have been used more regularly throughout the entire process.

Another issue arose during the design process, as sometimes it was difficult to deviate from a specific design idea and experiment more on certain aspects. At these moments, the process of experimenting and testing, was replaced by an approach of altering. Instead of creating multiple experiments at one moment to compare the outcomes, only one alteration to the design is created and reflected upon. This approach limits the number of possibilities that are researched. Moreover, it becomes easier to lose track of the set criteria, as there are multiple small reflection moments, instead of one assessment.

Relevance

The project proposes an approach of first analysing the building and its values, in order to understand what changes should and should not be made to the building. This approach can be applied to any other existing building in need of transformation, as this project made clear that a building does not have to be widely considered as heritage to have values.

The approach is currently especially relevant for buildings built in the 1970's and 1980's since many of these buildings are now met with technical issues and face the possibility of being demolished. Demolition of these buildings would result in a loss of values, but an ill-researched transformation design could also lead to a loss of values. Furthermore, because 1970's and 1980's architecture is not widely considered as heritage, not a lot of research has been done into the values associated to these buildings. This project illustrates a method for identifying these values.

Moreover, it is important to research what values residents attach to the built environment since the values of experts generally differ from the values of the community (Meurs, 2016). As a result, these values could be overlooked, as other values are prioritized. This project offers insights in how to research which values separate stakeholders attribute to the building, through different methods of interviews. As well as how these values can be integrated into a design.

The value analyses form the basis of the design and determine what attributes of the building are important in preserving the value, and what attributes could possibly be altered in order to create more adaptability.

More adaptability is needed in general, as this allows for buildings to be changed to the needs of its users. Therefore, when the needs change over time, the building can easily change to accommodate the new needs. As a result, the loss of values and loss of embodied energy will be kept to a minimum. Furthermore, the buildings will have longer lifespans, which in turn allows the building to age and gain more value.

At the moment, more and more research is being done on ways to create adaptable buildings as well as on buildings which have proven to be adaptable over time. However, not a lot of research exists yet on methods to add adaptability to an already existing building. Even though this creates an opportunity to increase the adaptability of the overall building stock.

This project could also be used as a reference for the exact strategies and interventions used in the final design. However, the applicability off these strategies will be limited, as the contexts of no other building will completely match the context of this building. Therefore, the criteria for other projects will differ, as well as the possibilities within the project.

Ethics

During the initial research phase, interviews were conducted as one of the research methods. This could lead to ethical dilemmas, as the privacy of the interviewees should not be violated. Therefore, it was essential that the data gathered from the interviewees remained anonymous. Information about the interviewees however could also provide a better understanding of the perspective of the interviewees. As a result, some information was gathered, such as age group, while making sure that this information could not be used to trace back to the interviewee.

If the project were to be applied in practice, this would result in further ethical dilemmas. Some of the questions that arise, related to the current users, are: Would the building still be aimed at the same household types? If not, would the current residents still be able to live in the building or would they be forced to move? If the current residents are able to live in the building after renovations, are they able to remain in their house during the renovation or will they have to be relocated temporarily?

Other dilemmas occur on a broader level: Could the design impact the surrounding area in a negative way? Does the design resolve the occurring social problems, or does it worsen them?

The former type of questions can be answered within the design, as they relate directly to the building and its use. The latter type of questions can not be answered as easily, as the definite answer would only become clear sometime after completion of the transformation. However, diagrams, such as the mentioned spider diagram, can be used to analyse the possible outcomes of the design interventions, as well as the likeliness and risk of these outcomes. It can then be considered whether the positive outcomes outweigh the possible negative outcomes.

Sources:

Meurs, P. (2016). Heritage-based design. Delft, Netherlands: TU Delft.

Van Dooren, E., Asselbergs, T., Van Dorst, M., Boshuizen, E. and Merriënboer, J. (2013) Making explicit in design education: generic elements in the design process. International Journal of Technologie and Design Education, 24(1), 53-70