

Reflection Paper

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Studio Introduction

My graduation project takes part within the graduation studio New Heritage of the Architecture master. The studio aims to develop renovation plans for relatively young buildings that are not yet regarded as heritage. Two case studies were selected: Bijlmerplein Clusters 2&3 in Amsterdam, designed by Atelier Pro, built in 1986 and Goedewerf in Almere-Haven, designed by Inbo Architecten, built in 1978. The Bijlmerplein drew me almost immediately, as the multifunction aspect and the now lost social aspects of the initial design seemed very interesting and rich with possibilities.



Figure 13: Bijlmerplein (left) Google Street view & Goedewerf (right) Funda.nl

Research process

As stated in the studio manual, the studio concerns itself with relatively young buildings whose heritage status is as of yet not formally established. These buildings are often harshly critiqued and dismissively called ‘Nieuwe Truttigheid’ or New Frumpishness (Popma, 1989), causing renovation plans to favour demolishing and rebuilding, a worrying trend. I believe all buildings embody a lot of energy, both literal and cultural. Not only was a lot of energy expended to construct these buildings, typically with stony materials, the image of these buildings is the backdrop in many memories. The first objective of research in this studio should therefore be to explore which elements of a case study building are valued and find what the building means to everyone who interacts with it. The group research we did into this subject was a very helpful tool in making explicit the potential heritage values of the case studies. These directly informed my design decisions, in particular in conservation of the existing façade.

Additionally, the model as defined by Kamari *et al.* (2017), was handed to make explicit the aspects of a buildings that determine its performance. These quality of these aspects were investigated as a group by performing research into the three main themes of each case study building: architectural, technical and historical. This resulted in both a grading on Kamari's

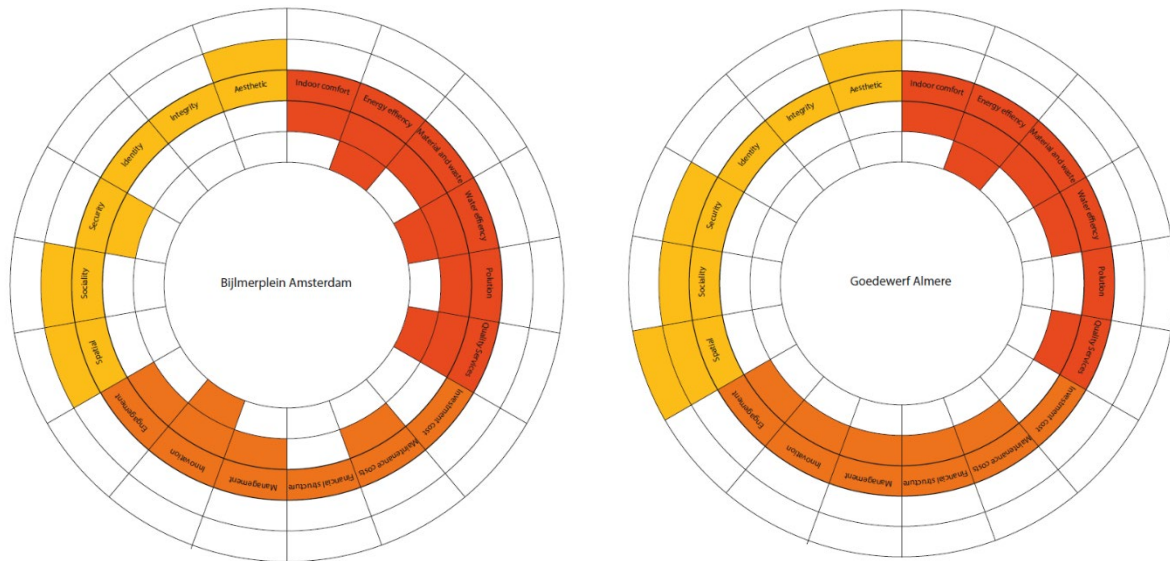


Figure 14: Kamari Wheel evaluations

wheel diagram as seen below and thorough SWOT-analyses of the building within each theme. I plan to use the Kamari model before and after finalizing my design to verify its feasibility and to make informed statements regarding the improvement I hope to realize. Same as with the research into heritage values, the findings of the group research directly informed design decisions in my project, as the SWOT-analyses provide a clear overview of possibilities.

The project

My graduation project is a feasibility study into historical examples of efficient dwelling concepts that are recontextualized by utilizing a sustainable economic model. The first

inspiration for this were the HAT-units that are present in the Bijlmerplein case study building. Research into these dwellings resulted in falling down a rabbit hole of different examples of minimal dwellings, especially from the early 20th century. While these concepts could very well solve the current housing crisis in the Netherlands by creating enough supply to satisfy the demand, they were created with a different demand for living quality. Additionally, The *Existenzminimum* movement in architecture was not yet aware of humanity's impact on the global climate. My project aimed to recontextualize three examples of historical efficient housing concepts into the context of the Bijlmerplein

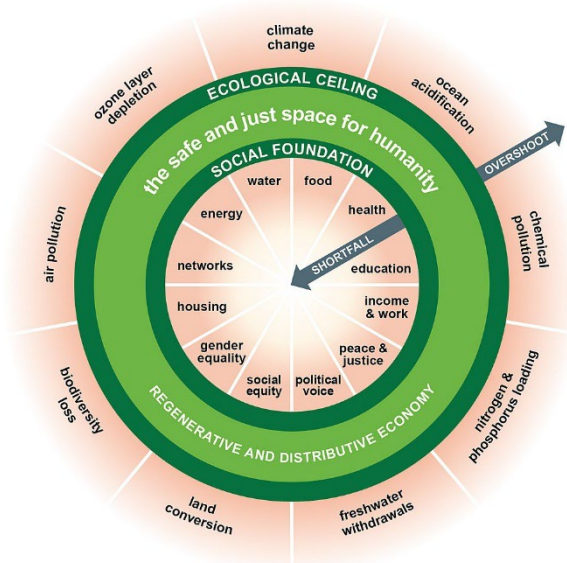


Figure 15: Kate Raworth's Doughnut Economic model, Wikipedia

case study while taking into account their ecological impact using Kate Raworth’s Doughnut Economic model (see figure 15).

Anytime efficiency is a goal in architecture, the internal conflict of optimizing space rears its head. How much space and comfort can be sacrificed in the name of efficiency (or profit)? How does ecological efficiency way into this? Borrowing the three P’s of sustainable development as defined by the European Commission, I visualized my vision on this issue and how I used it to develop the housing concepts in figure 16.

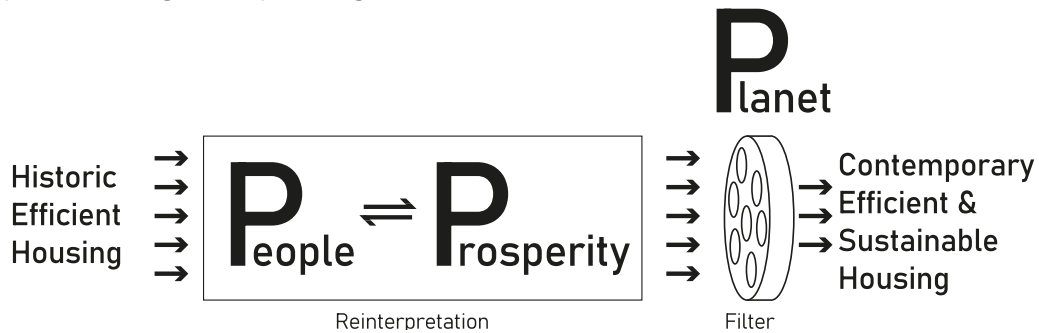


Figure 16: Diagram of the development of housing concepts in the project.

The Doughnut model can be summarized as a model in which the ultimate goal is not endless growth but operate within a window between the socially just floor of society and the ecologically safe ceiling of the planet. This model was applied to a communal living concept, a shared amenities concept and a flexible plan dwelling concept. As combining the economic model with the housing concepts did not translate into fully defined design requirements, the base requirements ‘ecologically safe’ and ‘socially just’ were redefined into design requirements to adhere to in the design. These are visible in figure 4, among others that represent either the housing concepts, the doughnut model or the heritage aspect of the project.

- H** Full compliance with housing quality standard
- H** Maximal efficiency in space usage
- E** Maximal efficiency in material usage
- E** Full CO2 compensation & self-sufficient energy generation
- E** Maximal exploitation of biodiversity improvement opportunities
- S** Maximal engagement with public spaces
- S** Maximal exploitation of opportunities for shared functions & spaces
- S** Maximal opportunity to remain on location
- HA** Maximal strengthening of values & identities

Figure 17: Design requirements

Reconciling the moniker of “minimum dwellings” and the negative connotations that come with that name was a constant factor in every design decision in the project. One quickly pictures a recluse living in a tiny space lacking any quality when a “minimum dwelling” is mentioned. To avoid this race to the bottom, the idea of “minimal” was turned around into “maximum efficiency”. An example of this in the project is that the plans were developed to maximize functionality in a defined floorspace, as opposed to designing the smallest dwelling possible

and fitting that to the Bijlmerplein case study. This is also visible in previous figure 4, as all design requirements formulate a goal to strive to maximize the projects performances.

A successful result of the feasibility study would mean that implementation of historical housing concepts could be a viable solution to the current housing crisis in the Netherlands, even in renovation projects. Especially the communal living concept is something I personally strongly believe in as a part of the solution, as their potential as place makers and facilitators of social cohesion is a very valuable asset to have in a project. The Doughnut Economic model as a means of informing a design project has turned out to result in very ambitious design goals. Mainly because the concept of a safe and just space for humanity is inherently discordant with the concept of minimizing (or maximizing).

During the project I used a bubble diagram to visualize the design process from societal and scientific relevance to design requirements to be fulfilled in a renovation project. This diagram can be seen in figure 5 below. The process starts in the middle, with the three pillars of Heritage, Housing and Climate. From the three pillars design tools and solutions radiate into design principles and finally into design requirements. In this process I strived to find design solutions to connect these pillars to each other to find a cohesive and integral design solution for the renovation of the Bijlmerplein case study project. In this way, most broad gestures in the design serve multiple purposes and an overall more satisfying end result.



Figure 18: Design Process

Transferability

The final design is highly integral: the implement design interventions work together to strengthen and support each other. This means the recontextualized concepts as they were used in the project are highly specific to the case study and envisioned inhabitants and therefore hard to directly transfer. However, there are similar existing buildings to the Bijlmerplein case study, especially in regards to its concept of commercial space on the ground floor with housing on top and its location near high-quality public transport. Additionally, the abundance of examples of efficient housing concepts from history means that there is always a fitting concept for the target demographic for the dwellings in a project. So even if the exact

concepts utilized in this project might not fit, other examples can be found and recontextualized.

Ethics

The architects' position in regards to heritage is something I envision can lead to ethical dilemmas. Mainly in the way that the architect can take a subjective position in the implementation of objectively found heritage values. While the image of the architect as the all-knowing figure that shows people how to live has faded in recent years, this potential rejection of public opinion still implies that the opinion of an architect weighs heavier than that of anyone else. Additionally, in this project for example, imposing a certain way of living so that inhabitants require less floorspace can be patronizing, especially in a market where there are little to no alternatives.

Conclusion

In the process of completing my graduation project I attempted to combine most of my personal fascinations into a single project. This made it highly enjoyable but also highly frustrating at times, especially when these fascinations clash with each other. The resulting renovation design is one that has a highly social character, despite having established significant ecological ambitions. It is also in the social aspect that the project is most vulnerable. The efficient housing concepts require a certain degree of dedication to achieve its full potential, something that can not be taken for granted. However the potential of the project when anything close to full dedication is reached is very high and could provide inspiration for renovation projects in the future, especially those in a similar well-connected urban setting.

My personal experience during the project was quite mixed. Although I am someone that can perform under pressure, the level of stress and anxiety I encountered during this project was something above and beyond anything I experienced before. This even affected my physical wellbeing a number of times, causing some absences that then further increased my anxiety. However, at the P4 marker, I expect to have completed the project to my own satisfaction and look forward to fully realizing my vision for the renovation of Bijlmerplein Clusters 2&3 to present at the P5.

SOURCES

Kamari, A., Corrao, R., & Kirkegaard, P. H. (2017). Sustainability focused decision-making in building renovation. *International Journal of Sustainable Built Environment*, 6(2), 330-350.

Popma, M. (1989). Belangstelling voor architectuur stijgt op alle fronten: Wordt nieuwe truttigheid vervangen door kwaliteit?. *AGORA Magazine*, 5(1).