Resourceful Affordability

Research Report

Jemma Scheijde

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5690242

Delft University of Technology
MSc Architecture

AR3AD100
Dwelling
Advanced Housing Design

Olv Klijn (Design)
Ruurd Kuijlenburg (Building Technology)
Alejandro Campos Uribe (Research)

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— Reflection —

My research takes place in the Advanced Housing Design master's studio. The studio concerns itself with redesigning the Dutch Deltas in a way that integrates water in its planning and design. Additionally, I was assigned to focus on resource usage as the main focus of a group masterplan. My individual research concerns itself with identifying if there is a resource utilisation principle that is most successful in achieving affordable housing, which is a principle I focused on in the design of my project.

My way of working is a very logical one; I always aim to quantify my research as I find working with numbers is easier to manage. To achieve this, my research was conducted by selecting case studies to represent a resource principle. Thereafter, the case study was evaluated with specific criteria to determine which principle is the most affordable. This approach was useful in determining a most affordable principle in that it provided a method to quantify affordability using more factors than the price per square metre. It also provided a method to architecturally evaluate a dwelling in comparison to the affordability.

While this approach was useful in many ways, it has drawbacks. Firstly, great stress is placed on the case study to represent the resource principle. Certain resource principles are very theoretical, so they have very few case studies to represent them. The evaluation criteria can also be misleading in that each criteria is assigned the same importance when in reality, this would not be the case. Despite these drawbacks, I found that this method of working makes complex scenarios easy to understand and conclusions were easy to draw from the data I had.

The outcome of this research influenced my design in that it provided a resource strategy that I could focus on while designing. I aimed to incorporate this strategy in all scales of my design. I also aimed to incorporate other resource prin-

ciples in a similar method to the ones used in the case studies to make typically unaffordable materials, more affordable. My project also changed my research constantly in that I initially intended on researching ways to make affordable rental housing. However, the design of my masterplan raised a new way of constructing, and with this, I had to adapt my research to finding different resource principles that would make building housing more affordable.

The main feedback I received for the design of my project was based on creating a storyline that ran through all scales of my project. I had a clear idea of events that would lead to the design, however the implications of these events kept changing until a succinct story emerged. My design is centred around a new kind of farming emerging from a new water climate in the future. However, the implications of this changed constantly, where different concepts of modularity were explored and different masterplan implications emerged. Overall, the clarity of this helped in the further designing on a small scale as I had a clear set of ideas and constraints to follow in the design.

In this way, my project relates to

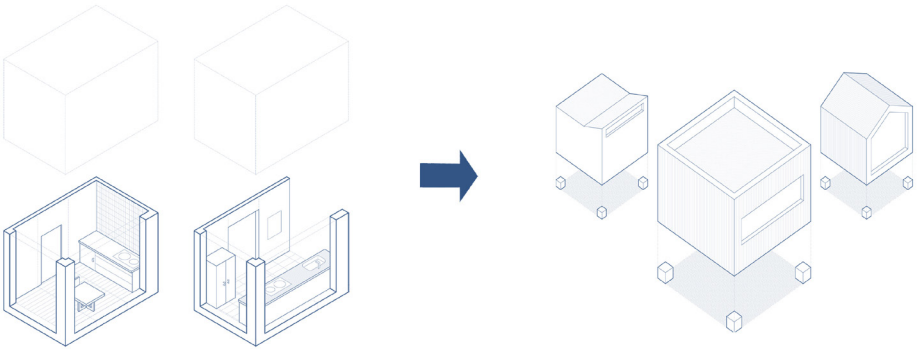

Fig. 58. Adaptation of Modularity Concept After Feedback

the studio in that it uses water as a guiding principle in many aspects. The masterplan is designed around altering the ZUS plan where our design is to be located. The ZUS plan requires new water systems, which we have removed because of a wasteful use of resources. Because of this, the masterplan is centred around a lock used for transporting resources on the waterways. Additionally, my own project is located on a sand bank so as not to get flooded. In an overarching way it also relates to the study of Architecture in that it focuses on issues that may be prevalent for future Dutch architects. It provides a solution for the way we deal with water and designing in areas that are deemed unworthy to develop on, such as swampy peatlands.

I find that my work is transferable because of these links. In the future, the Netherlands will have a very different waterscape than it does today. Within my project, I tried to find opportunities from the adaptations that would have to occur. The flooding of the polders to prevent excessive carbon outputs means that a new kind of farming would have to emerge. Within my project, I found an opportunity that involves creating affordable housing from these new farmers. I find that this line of thinking in a constantly evolving world creates new opportunities and the evolution of housing that could be applied in reality.

To move forward and continue the development of this project, I would like to further improve the representation of building technology products of my design by representing them in a physical model as I find the method of making models further helps the understanding of the construction. I would also like to further integrate my design into my research within my thesis report. I find that writing the entire thesis as a single story including the design will help me gain more insights into any links or discrepancies that I can then adjust.

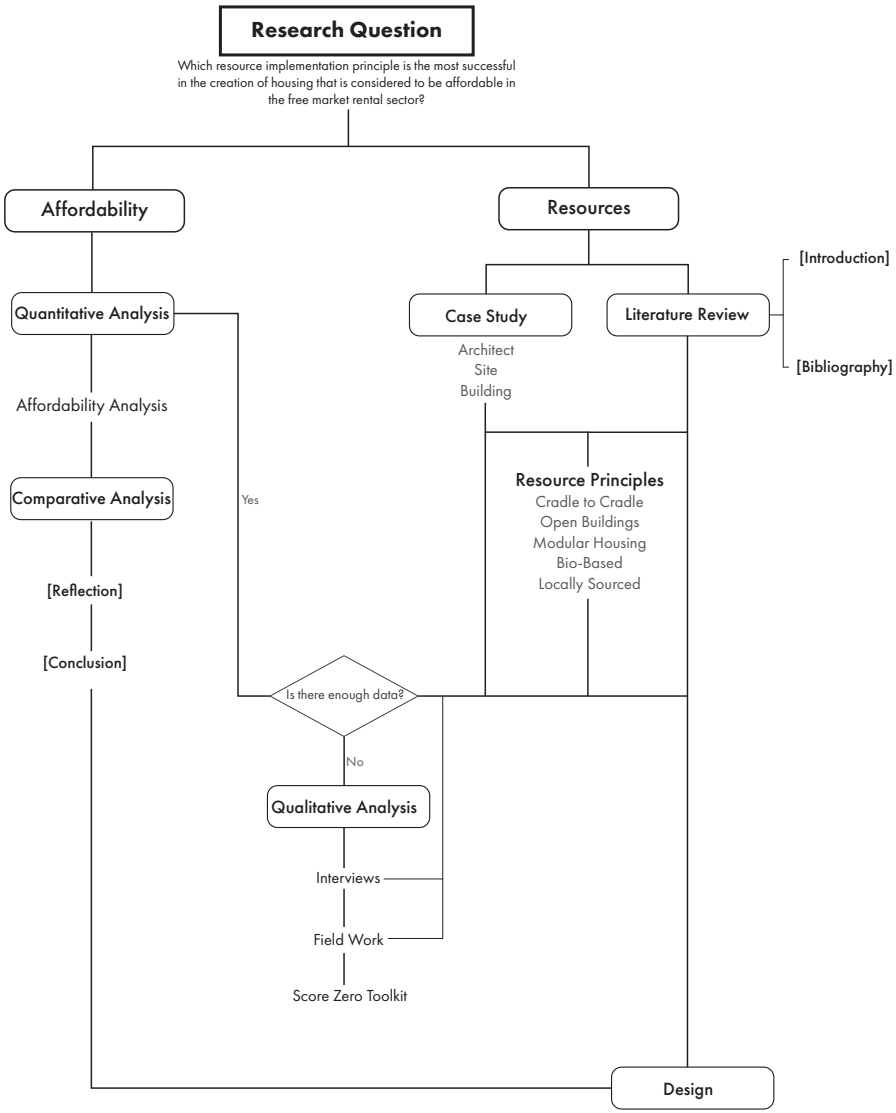

Fig. 59. Research Method