



SMALL CHANGE

Incremental pattern of inhabitation in Midden-Delfland

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ABSTRACT

The report for Master Thesis in Graduation Studio Advanced Housing Design 2023/24 builds on research that was conducted in Honours Programme Master 2022/23 under guidance of Nelson Mota. I intend to include the gained knowledge as a part of theoretical framework, the integration of Honours Programme Master Research is explained in chapter “Theoretical Framework” as well as “Research Design”.

Keywords: Participation, self-help, affordable housing, incremental development

BACKGROUND

Housing Crisis and Environmental Impact of Urbanization

In many parts of the world, urbanization is occurring at an unprecedented rate.¹ This process often puts pressure on local governments and infrastructure to keep pace with the growing population. Nabeel Hamdi, Professor of Housing and Urban Development at Oxford Brookes University, known for his work in the field of participatory urban development and planning, claims that development is a chance for a positive change and yet it is inevitable. As a result, housing development does not keep up with the rate of population growth, exacerbating the housing crisis.¹ Environmental impact of urbanization, such as increased pollution and reduced green spaces, affects the livability of urban areas which results in limited housing choices and availability. Dutch cities not only have to deal with social pressure to deliver more housing, but also hard environmental conditions such as location below the sea level, flood risk, and land subsidence. Any built intervention must take these factors into consideration to provide future-proof, long-term solutions that can be obtained through means of proper collaboration, leading to a proper change. Hamdi underlines in his book, that big as well as small change is rooted in connections of agents that are dependent on each other.²

*"We have learnt that development is ongoing, a process in which occasionally and from outside, some form of intervention is useful to open up opportunities, to facilitate access to resources, to act as a catalyst for change."*²

To emphasize the importance of this thought, he refers to a photo by Peter Liversidge. (1)

Ever since 1960 and "First Memorandum for the Spatial Development of the Netherlands", Delfland is known for its intricate system of water management, including dikes, canals, and polders. Its history is closely tied to the Dutch struggle against water and the development of innovative techniques to reclaim land from the sea and rivers. However, it also is located in between expanding cities, Rotterdam, Den Haag and Delft which places it in the danger of urbanization. To address it, the policy memorandums of the past ten years build on the ambitions of the *National Buffer Zone and the Reconstruction*³ and propose updating and supplementing parts. They comment on water management in connection with agriculture and nature however, little do they connect the need for developing housing with the sustainable plans, which has left Delfland in a paradox position for the past 60 years.



Figure 1 Photo by Peter Liversidge, 2012, Yorkshire Sculpture Park.

GLOBAL PROBLEM

Affordable Housing and Social Housing

Following a surge in house prices during the pandemic, Dutch real estate prices have experienced a decline in 2023, marking the first such occurrence in several years. However, the situation in June 2023 presents a nuanced narrative. As reported by CBS, house prices increased by 0.2 percent compared to May and raised by 1.5 percent compared to April. When contrasted with the market's lowest point in June 2013, prices in the last month were significantly elevated, surpassing 87 percent. This clearly indicates a growing challenge to afford or rent housing.⁴ Meanwhile, there are about three million rented homes provided by the social housing sector and the private or non-subsidized sector in the Netherlands. About 75% of them are owned by housing associations, and about 3.3 million of them are in Rotterdam.⁵

“Affordable housing” encompasses various housing systems designed for individuals with limited financial resources, “social housing” (2) being one of these systems. However, does being “affordable” truly equate to being “social”? If the idea of social housing was created to prioritize the welfare of the people, then the existing social housing may warrant a different label as it frequently falls short of meeting residents’ needs.

In theory, housing associations are responsible for the quality of life in social housing. They prevent crime, help organize street parties and other activities and provide money for play areas and sports facilities. The quality of life in a neighborhood is also strengthened by the construction of schools and community centers.⁶

In practice, people living in the poorest neighborhoods are three times as likely to face difficulties with their neighbors as the average person. One in five worry they will be robbed or hassled. That is to show that, the concentration of people who need help and support is even greater than expected.⁷ The number of vulnerable groups is increasing sharply. More and more people with different social problems live together in the same neighborhood, which requires an integrated approach. “Individual interventions no longer have any effect. The band-aid phase is over”. As better-off households leave problem areas, they are replaced by people on very low incomes, further exacerbating the problems.⁸ The policy of care in the community has also increased the number of people with psychological issues living in social housing. As follows, local authorities should ensure that their housing policies create mixed neighborhoods.⁹

So here come the questions of how, when and who do we include?

There are two ways to approach it, first is to improve the current top-down system or second, create an alternative to it. I take the stand that even if the current system improves it still won't be future-proof due to growing housing prices and environmental impact of urbanization.

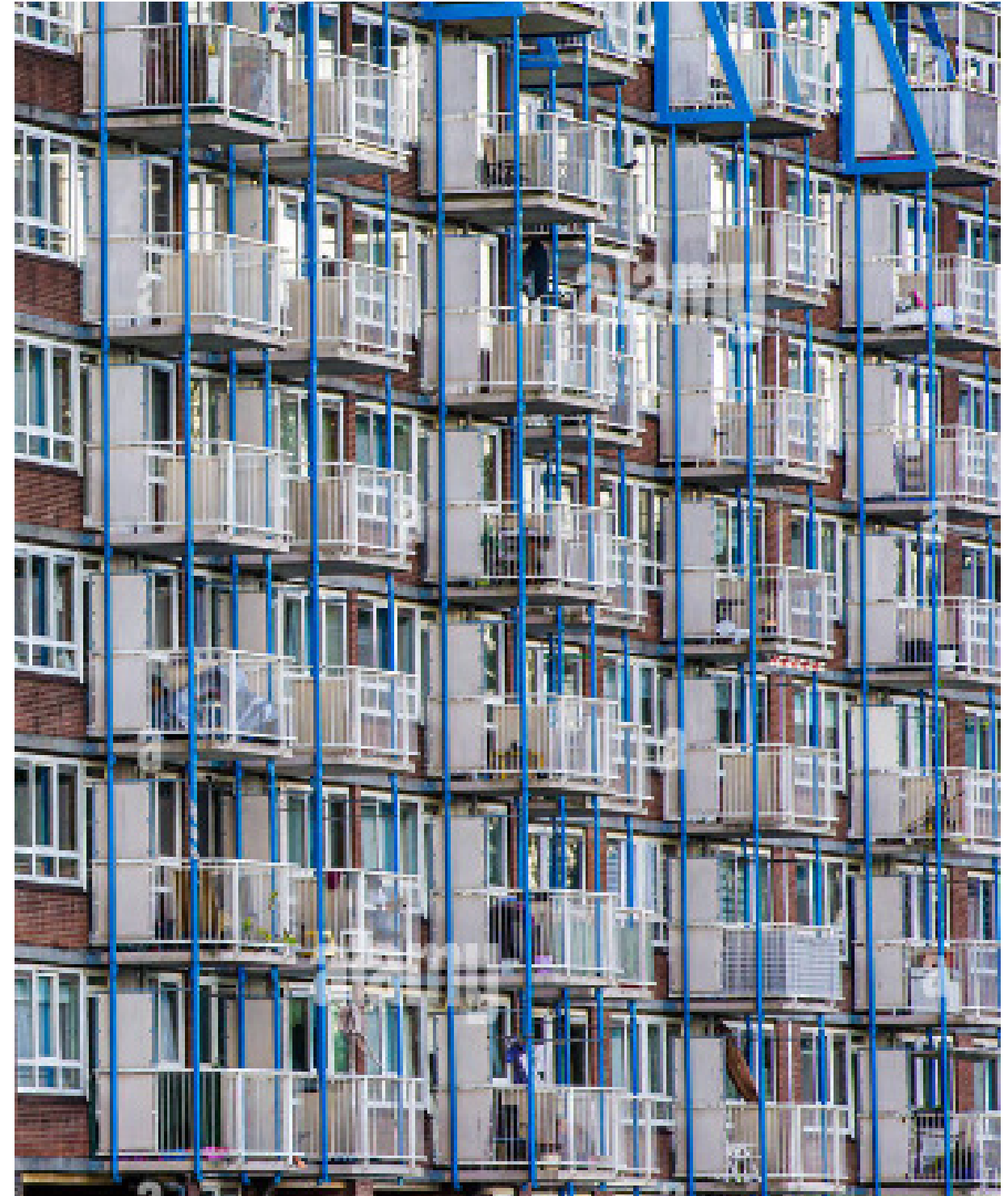


Figure 2 Social housing, Rotterdam.

SPECIFIC PROBLEM

Ownership

Ownership analysis shows that 90% of housing in the area of Delfland is rented and target audience does not include people of low income.¹⁰ These people are offered social housing instead; a model where predefined design is delivered to people who are most in need for accommodation. As follows, there is a big overlap between what is assumed that the user needs and what is actually needed. In the book *Production of Houses* Christopher Alexander, a pioneer of self-help housing, explains that these needs differ per household in the greatest detail and therefore, cannot be assembled systematically by site workers, but rather emerge through a process. Following the trilogy of the author, completed in 1977 and *The First Participatory Design Conference* in 1990, many theorists acknowledged that collaboration with users can improve the quality of housing opposing the ignorant processes that wouldn't include user intake such as the early sites and services proposals that were so criticized by Charles Correa and Balkrishna Vithaldas Doshi.¹² Many concluded that the collaboration of users, architects, and authorities leads to a timeless way of design that is "a public policy concern, since it can provide significant benefits for low-income families and the community as a whole, such as improvements in the safety and health of the beneficiary households" (Greene & Rojas, 2008, p. 94).

*"Standard components, attached by standard connections are assembled by workers and crane operators, who know nothing about the houses, have no feeling about what is going to happen in them, and cannot possibly adapt the details of construction to fit the needs of the inhabitants."*¹¹

The connection between the inhabitant and architect must enable remote collaboration with essential advice that guides each step of the incremental process long after the architect is gone from the building site. Henry Sanoff continues this thought, by pointing out that radical planning methods such as master or development plans take too long to cultivate, demand substantial resources to implement, and are of no benefit to the poor majority of urban populations. Therefore, the author highlights the need for smaller-scale participation and advocates for various participatory methods by saying "Good practice hinges on effective communication. A large part of that involves listening, and, importantly, being understood as one who wants to listen" (Sanoff H., 2018, p.8.).

Parallel to that debate appears the question: How can participatory design contribute to the future-proof development of Delfland?

After all, participatory projects are more likely erected in the Global South where people are far way more economically disadvantaged. Building a house with their own hands is a necessity, not a possibility, and climate conditions are more challenging. All that considered, participatory design may collapse rather quickly in the area of Delfland where the needs of inhabitants are rather different from what is needed in the Global South.

RENT MODELS

COST RENT MODEL

Rent is based on the cost of building maintenance and land use therefor, the rent does not depend on the market prices and cannot be increased.

RENT TO BUY

Tenants pay rent each month and a portion of those payments can count toward down payment to buy the property. This option is for buyers who do not have good credit score and cannot afford paying the mortgage.

INTERMEDIATE RENT

Future inhabitants built the houses and the complete mortgage will be split on every inhabitant to build more efficient. To avoid speculation fixed prices can be included, with only rising house prices for inflation and a set percentage of profit (for example: 5%).

OWNERSHIP MODELS

MOST COMMON IN THE NETHERLANDS

FREEHOLD

In a freehold ownership model, individuals or entities own the land and the property on it outright. They have full control over the property and can make decisions about it without many restrictions.

LEASEHOLD

In a leasehold ownership model, the property owner owns the land, and the homeowner (leaseholder) owns the building on it. The homeowner pays an annual lease fee to the landowner, and this arrangement can extend for a long period, often up to 99 years.

NON-PROFIT HOUSING

The building is owned by a non-profit organization which leases the land for plot for the municipality. Municipality still is the land owner of the plot.

SOCIAL HOUSING

The building is owned by a housing association. Tenants can rent under condition their common income is less than € 44.035 (one-person household) or € 48.625 (multi-person household). A tenant can also buy a flat or house from the housing sector.

SELF-HELP

Residents have direct involvement in the physical aspects of housing, often during construction, renovation, or maintenance. The design is prepared together with the inhabitants however, they do not have the governance power like in the case of self-development.

COHOUSING

While residents maintain private ownership of their dwelling, they share common spaces and collectively decide about community rules, maintenance, and shared resources.

COOPERATIVE

Members of a housing cooperative collectively own the entire property through shares in the cooperative corporation. The cooperative entity owns the building(s) and land.

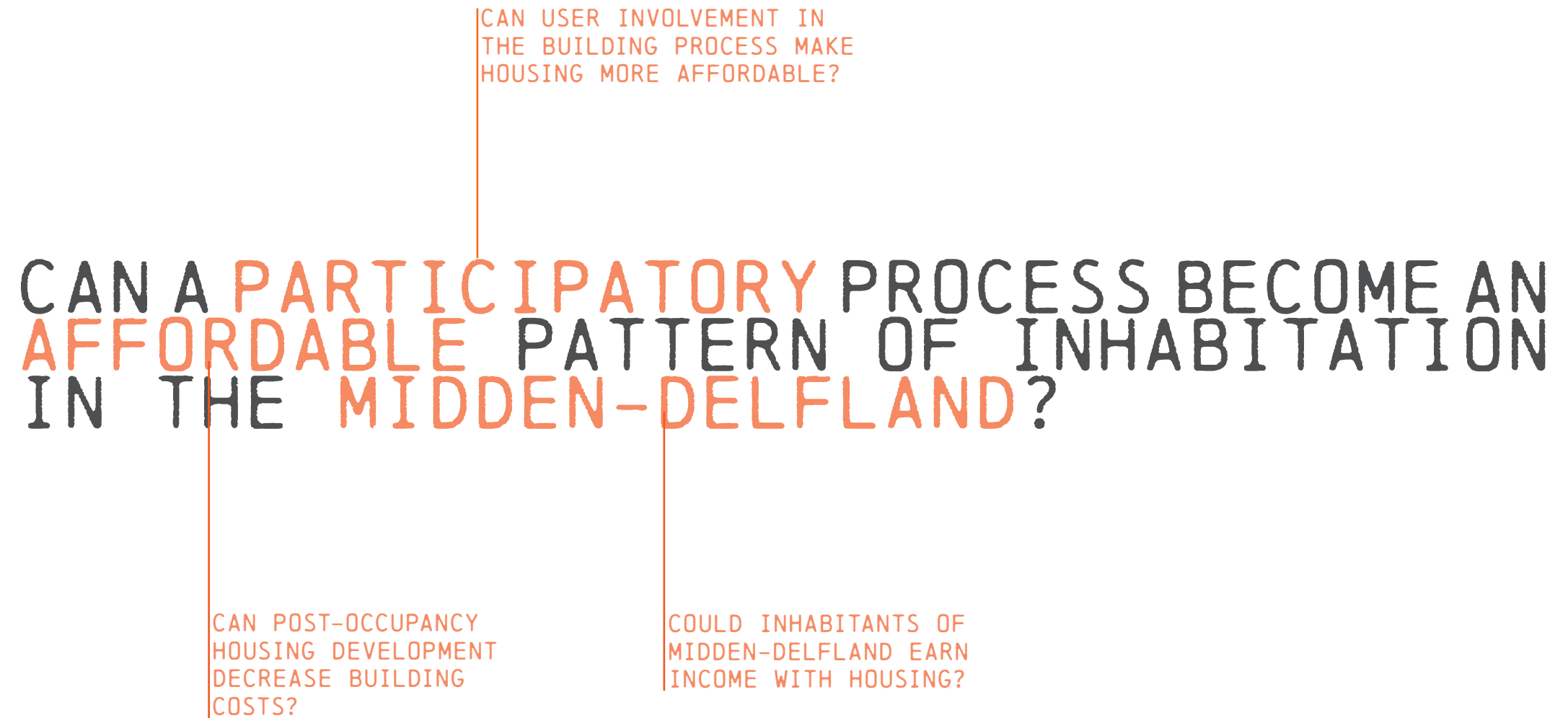
SELF-DEVELOPMENT

Residents participate in decision-making, governance, policy development, and community well-being, beyond building with their own hands. It is an elaborated version of self-help housing.

Figure 3 Rent models and collective housing models in Europe.

RESEARCH QUESTION

The research question intends to investigate how certain participatory methods in post-occupancy development could decrease building costs as well as potentially become source of income.



THEORETICAL FRAMEWORK

Honours Programme Master Research

Participation in Honours Programme Master 2022/2023 allowed me to expand my knowledge on participatory methods through creation of research paper "Toolkit Models". The paper that was formulated under supervision of Nelson Mota presents 4 toolkit types (4) and 8 tools for post-occupancy development that sees housing as a process, an alternative to "cookie-cutter" approach in the current social housing. In the research paper I will introduce relevant participatory approaches that allow post-occupancy development: self-help, aided self-help, self-development and support and infill. These approaches involve user participation during various stages of the process, resulting in different tools. As follows decision-making power of user fluctuates therefor, it is important to understand what tasks and how much freedom a user holds in each of the 4 approaches. I will explain this matter below.

(Aided) Self-help

Aided self-help approach allows the most freedom to the user in the design and building phases. Architects prepare tools for the participation. The tools vary based on user's needs. They can be spatial features of the design, manuals, interviews, semi-structured interviews, workshops, and serious games. Such approach is best exemplified by Christopher Alexander, who created a Pattern Language, a 7 step manual for self-help development.¹³ In his method, Inhabitants not only design, but also expand their homes by adding increments. It also can be that they the space; Nils Ole Lund emphasized this thought in personalization handbook, which was a proposal for the residential district in Skjetten, Oslo.¹⁴

Support and infill

Contrastingly, support and infill approach places the architect in the proactive role. Users are invited to design within predefined frame, which gives them less agency. Most of the changes in the design can be added in the inside, so users have a say post-design phases. Dutch architects, like Frans van der Werf, Gramersbacher, and Schneider manifest ideas similar to support and infill, they put focus on heterogeneous typologies that involve different scales of association varying from drawing together with the user¹⁵, to Open Building approach.^{16 17} John Habraken expands the concept by adding "infill", to the necessary space that is the "support". British architects, build upon this idea - in 1967, Nick Wilkinson and Nabeel Hamdi as a part of GLC project unveil PSSHAK (Primary Support System and Housing Assembly Kits), a manual for system of prefabricated version of support-infill approach developed by Habraken.

Self-development

Self-development approach focuses on ownership laws that emancipate user's right to rent or buy property affordably. It is done on a "big", as well as, "small scale". While "small scale" solutions represent a version of support-infill approach which focuses on space diversification of a unit, "big scale" solutions resolve the issue on a community management level resulting in, for instance, cooperative cohousing projects where residents share ownership of the entire property.^{18 19} As follows, self-development approach gives the managerial power to the user mostly after the design process.

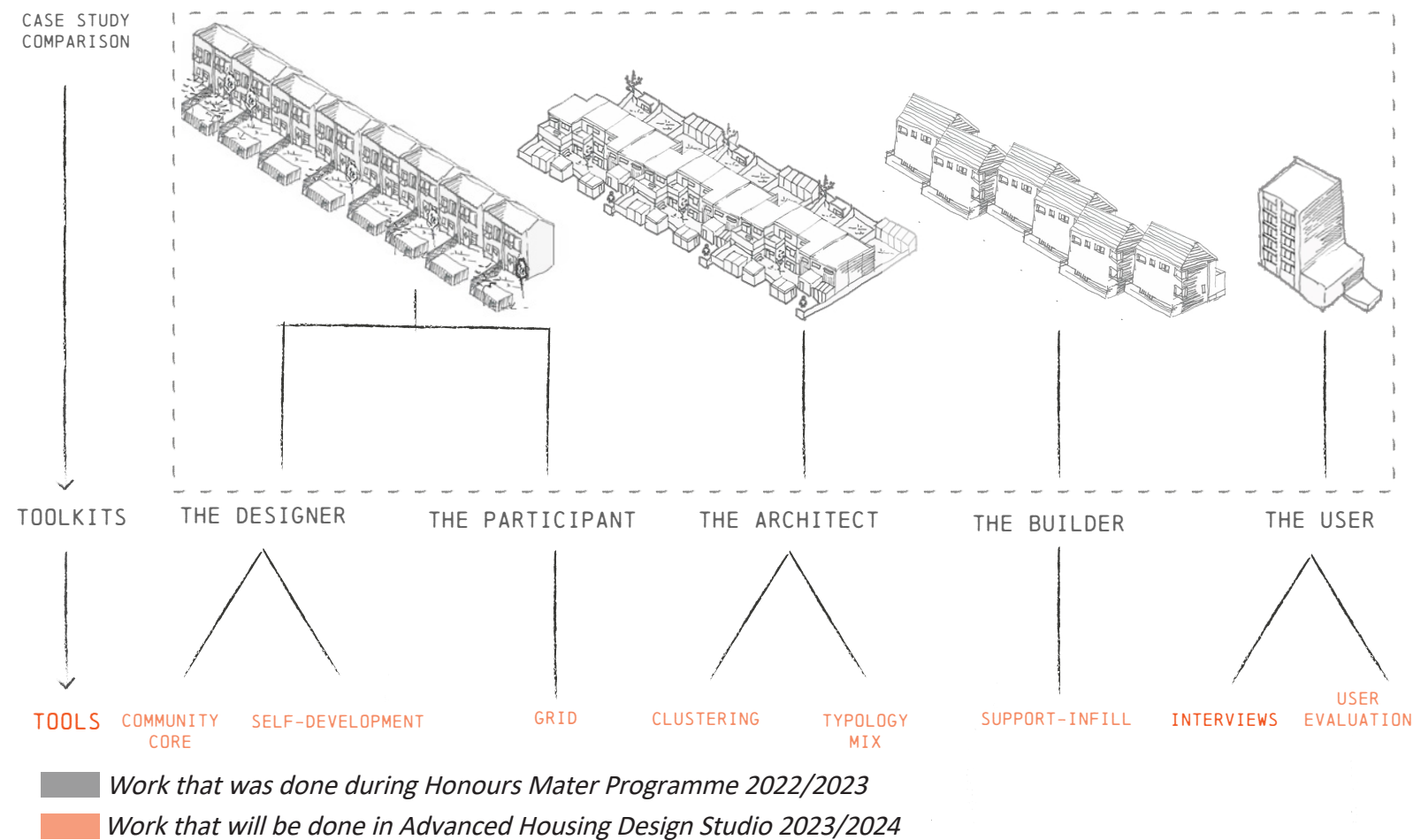


Figure 4 Honours Programme Master 2022/23. Toolkit Models.

DEFINITIONS:

1. TOOLKIT - A SET OF SPATIAL AND LEGAL RULES TO GUIDE USERS IN POST-OCCUPANCY BUILDING PROCESS. THIS APPROACH WAS INSPIRED BY NIELS OLE LUND WHO, TOGETHER WITH A TEAM OF FELLOW ARCHITECTS, FORMULATED A HANDBOOK FOR SKJETTEN HOUSING DEVELOPMENT IN OSLO. THE HANDBOOK WAS 200 PAGES MANUAL ON HOW TO ERECT AND EXPAND A HOUSE.
2. TOOLS - PARTICIPATORY METHODS, AS WELL AS SPATIAL FEATURES OF BUILDINGS THAT ALLOW DIFFERENT SCOPES OF INVOLVEMENT OF USER IN THE DECISION-MAKING AND BUILDING PROCESS.

METHODOLOGY

a) Case study analysis

The preliminary research method is a comparative analysis of case studies (4) to find out key participatory methods in the context of affordability. A study that focuses on participation enabling tools that allow post-occupancy development, a change. Such a process allows the extraction of general tools to create a specific methodology for participatory design in the Delfland context. This approach was inspired by manuals for self-help housing that emerged in the 80s. While, most influential was Self-Help Manual by United Nations that taught me how to read and create participation driven toolkits, Skjettenbyen's Handbook made by Niels Ole Lund for Skjetten Town in Oslo, was great inspiration of scope of information that should be included in the post-occupancy development process. Skjetten's toolkit is 200 pages long self-help manual that educates inhabitants on building methods, laws and design principles. Although the process is case specific, the general concept could be implemented globally.

Research methods:

- Comparative analysis by difference
- Qualitative typology research
- Structured interviews

b) Site analysis

Maps are the prime tool to understand spatial, environmental and social features of the site location. Through map comparison, I will grasp the understanding of following topics in the Dutch context with the focus on Midden-Delfland:

- Ecology^{1*}
- Target audience^{2*}
- Dwelling types
- Utilities types
- Ownership

These topics were chosen in studio together with tutors. Based on the anyalysis ambitions, project principles and spatial strategies will be formulated as it is studio's goal for P1.

c) Field work

The field work is supposed to collate case study analysis with the practical knowledge. Therefor, on the top of the research that I conducted during Honours Programme Master, I intend to have interviews with architects who work on social housing projects in the Netherlands (Jeroen Wassing and Thomas Latjes, HP Architecten). To be able to formulate possible scenarios of post-occupancy development, I want to create profiles of participants, for that I will interview current residents of Midden-Delfland, as well as social housing residents in Rotterdam. The profiles are "fictional" characters that emerged from the information collected in the interviews. To understand the spatial features of participatory housing, such as common space and scale of increments, I will visit participatory social housing estate La Medi in Rotterdam as well as cohousing dwelling Kalkbreite in Zürich.

1* - in the context of this research "Ecology" refers Félix Guattari's definition: a study of complex phenomena, including human subjectivity, the environment, and social relations, all of which are intimately interconnected. I relate these interconnections to the economical background of the plot location to ensure siffcent income sources to the future inhabitants.

2* - in this context, "Target audience" are people who become inhabitants of Midden-Delfland. It shall be a fair mix of people who need housing but cannot obtain it due to various reasons such as financial situation.

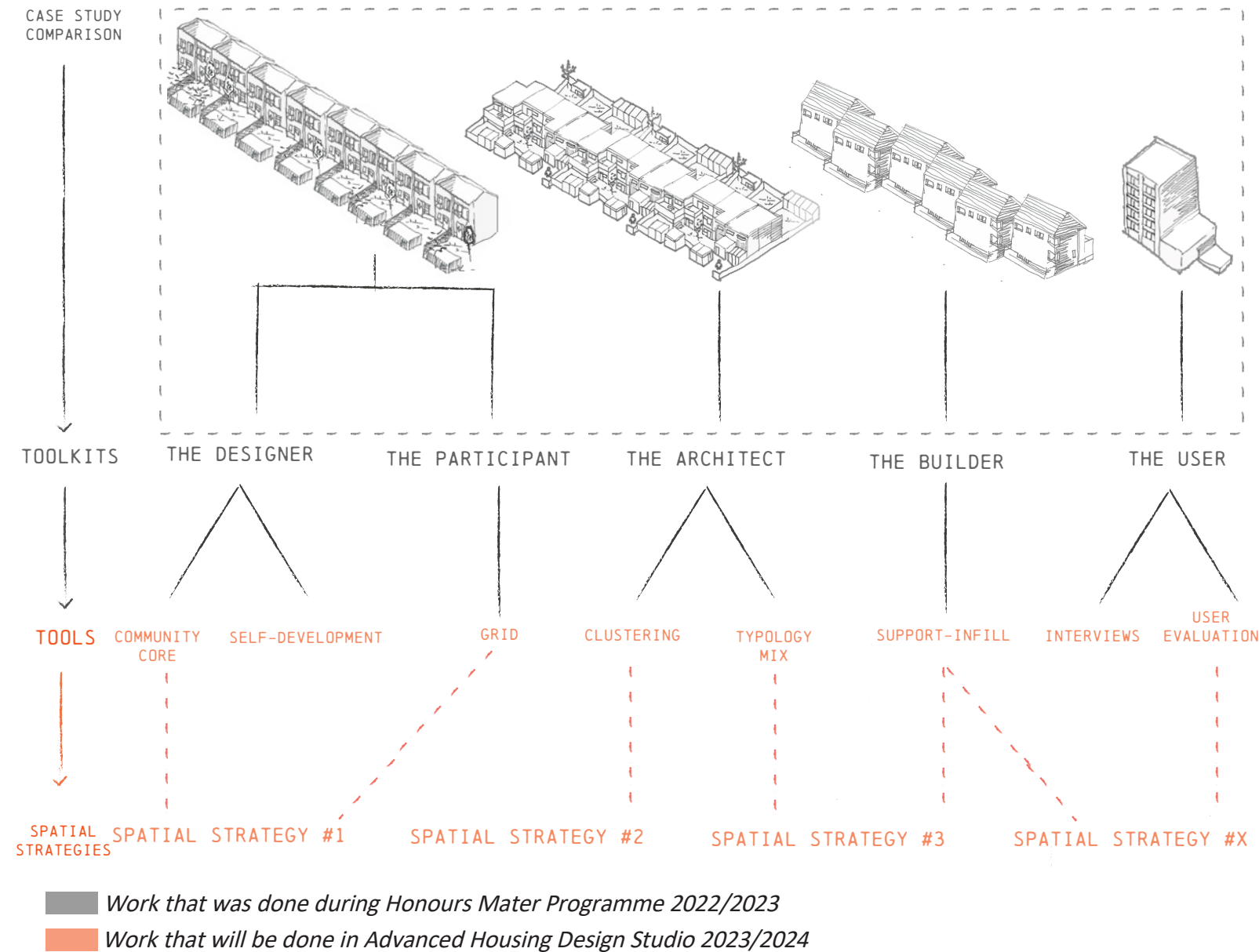
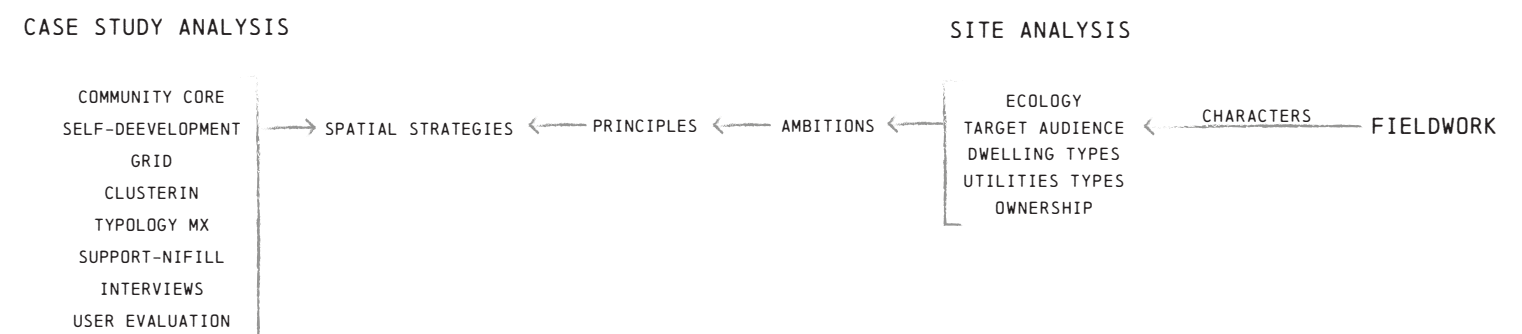


Figure 5 Application of tools as spatial strategies.



RESEARCH AIM AND RELEVANCE

Why bother with a self-help participatory toolkit?

Aim

The aim is to formulate a possible participatory process in Delfland that decreases current dwelling prices. Adaptive design, an alternative to current social housing which does not meet residents' needs. The proposal should be a part of the ecology bridging the necessity of affordable dwelling with sustainable solutions that protect and embrace the current natural habitat of Delfland on the basis of incremental growth.

The terms of the loans are designed to be flexible and supportive of cooperative initiatives. Lastly, Community Land Trusts are organizations that acquire and hold land in trust to provide affordable and sustainable housing options. They often collaborate with cooperatives to develop and manage housing projects. That is to show that self-help approach receives strong support from the government.

Relevance

1. Legal support

In recent years, the Dutch government has shown interest in supporting self-help housing initiatives through various policies and subsidies. These subsidies not only create legal foundation for self-help projects, but also show the necessity for them. As for this current moment there are 3 main laws which support self-help projects: Cooperative Housing Stimulus (Woningbouwimpuls), Stimulating Cooperative Housing Development (Stimuleringsfonds Volkshuisvesting Nederlandse Gemeenten), and Community Land Trusts (CLT). While, Woningbouwimpuls supports the development of cooperative housing initiatives by funding, SVn does not only that but also provides loans to cooperatives and other community housing initiatives. These loans are often used to facilitate the acquisition of land, construction, and development of housing projects.

ACTIVE SELF-HELP ORGANIZATIONS IN THE NETHERLANDS



BINDING INCENTIVES THAT SUPPORT SELF-HELP INITIATIVES

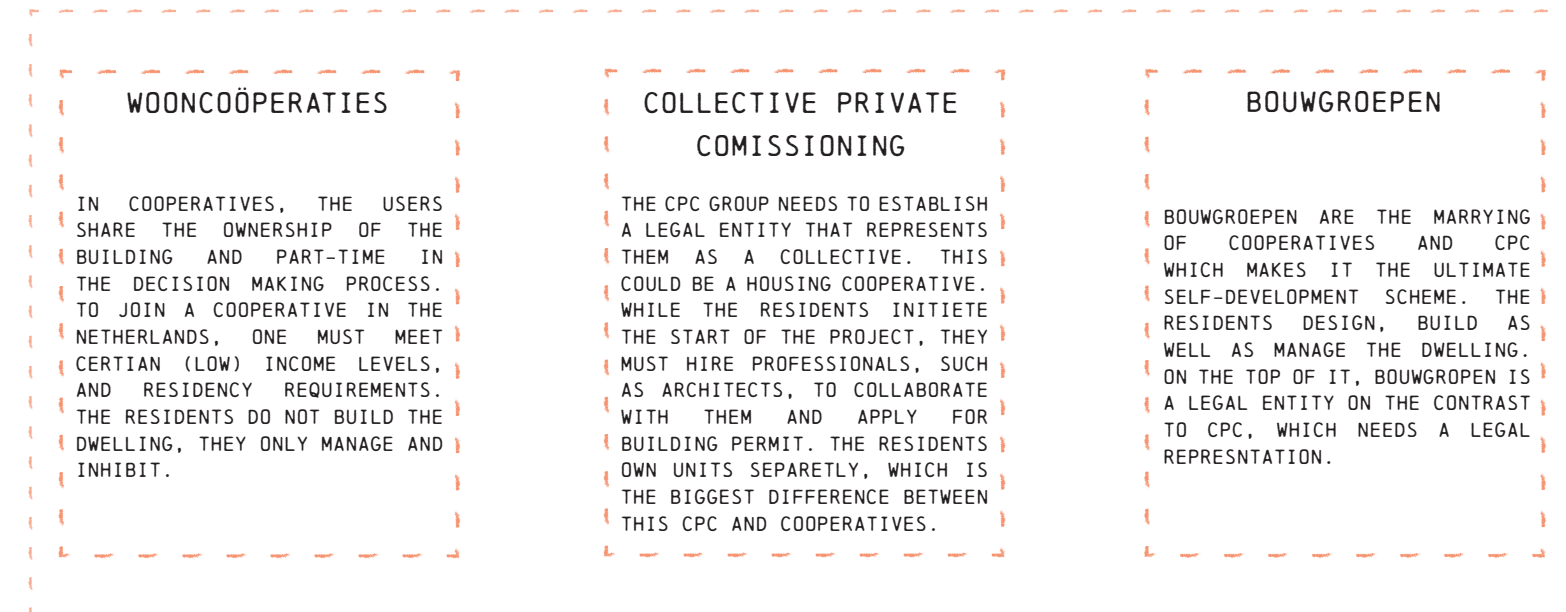


Figure 6 Non profit housing organizations in the Netherlands.

2. Community Support

Moreover, there are communities who actively participate in self-help housing. Having such communities provides support from the people and an opportunity to involve them in the building process. Wooncoöperaties (Housing Cooperatives) collectively own and manage their housing. Members often participate in decision-making processes regarding the design, maintenance, and policies of the housing complex. This model easily allows participatory approach. It is done similarly in the case of Collective Private Commissioning (CPO), which is a form of self-development where groups of people come together to commission their own homes. This emancipates users to have a say in the design, cost, and features of their housing. It's a way for residents to be actively involved in the development of their living spaces. Next group represents aided self-help approach - Bouwgroepen are formed by individuals who collaborate to design, develop, and construct their own housing. The "aid" is typically provided by professionals who guide them through the process, while the residents have a significant say in the design and layout of the development. Upper cases represent self-help scheme which flips the question of participation, "Indeed, it is us [architects] who must participate"²⁰ says John Habraken, in *Towards a new Professional role*, describing the essence of his envisioned new role, the architect advocates for endorsing, directing, and fostering an ongoing human settlement process that has largely evolved organically, without substantial professional intervention throughout history.

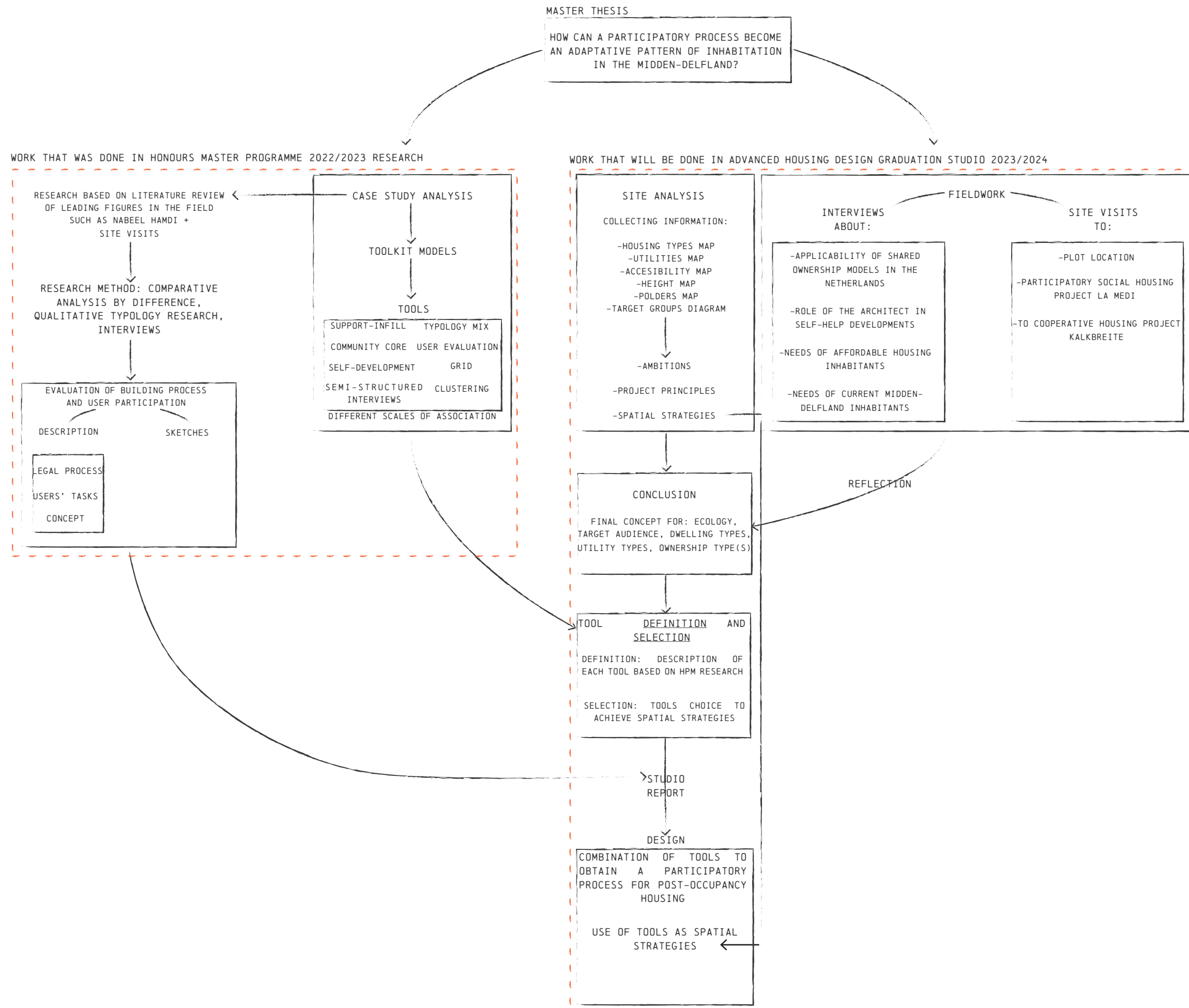
Now, considering the broad scope of participatory communities, this could serve as a base for an organized network of local organizations. This network could resemble Hassan Fathy's envisioned "national team of architects," working collaboratively to cultivate a national architectural tradition focused on housing.

This initial investigation into the established social systems within the Netherlands and the potential they offer for participatory housing begins to unravel the intricate and disorderly interconnections present for the future development of Delfland. These connections are presently overlooked by strictly top-down housing approaches. The more relationships we extract from these established systems, the higher the potential of the ensuing participatory process.



Figure 7 Protesters taking part in the 'March Against Vacancy' protest in Amsterdam.

RESEARCH DESIGN



NOTES

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Figure 1 Peter Liversidge (2012).

Figure 2 Gong, A. *Duration Hunt Drives BNG to 15 years point*, Global Capital, (2023), <https://www.globalcapital.com/article/2c7scurgx7mqffkrjcao0/ssa/supras-and-agencies/duration-hunt-drives-bng-to-15-year-point>.

Figure 3 Author.

Figure 4 Author.

Figure 5 Author.

Figure 6 Author.

Figure 7 Boztas, S. 'How will I buy?': housing crisis grips the Netherlands as Dutch go to polls, *The Guardian*, (2023), <https://www.theguardian.com/world/2023/mar/15/netherlands-housing-crisis-dutch-elections>.