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Amsterdam's Post-war Buildings Transformations in Bottom-up Processes. The Role of Municipal Housing Policy, Architects and Collaborative Groups of Future Residents in DIY (Klushuis) Affordable Housing Idea

Abstract: Due to the shortage of houses and the rise of housing market prices in Amsterdam, there is a high demand for diversification means of getting a place to live. From the municipal policy and bottom-up engagement, the idea of DIY emerged – the process of involving future residents in existing housing transformation process, which would allow for low-cost apartment sale in return for self-managed renovation. The aim of the study is to investigate the process of the investments and evaluate the results in terms of the quality of architecture, socio-economic implications and goals of the sustainable development policy as well as defining the role of all actors taking part in the process. The objective is to research the examples of successful cooperation between bottom-up movements and municipal policy in order to broaden the view on options for efficient use of post-war housing heritage. The research is based on the case study of 3 DIY processes realized between 2016 and 2022 in Amsterdam and it shows that a well conducted process leads to high quality apartments as well as promising social effects. Nevertheless its affordability can be questioned, therefore it should rather be treated as an alternative for active middle-class citizens, not as social housing solution.

Keywords: Bottom-up, Transformations, DIY housing, Community-led housing.

Introduction

There were two waves of large-scale demolitions in the Dutch cities. The first is the cleansing related to the post-war transformations, and the second – from the end of the 90s the demolition of those transformations. Fifty years old, modernist buildings and urban planning were not seen as a valuable heritage. In 2001 In Amsterdam 'Richting Parkstad 2015' plan was presented. It assumed the demolition of 10,000 houses in Nieuw West and the construction of 17,000 new ones. A quarter of houses in the cities-gardens would be razed to the ground. The Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer (VROM: The Ministry of Housing, Spatial Planning and the Environment) council called to slow down the decision-making process on demolitions. A similar voice could be heard from the residents. So-called renewal plans were verified by the crisis of 2008. Financial shortage forced the creativity and carefulness on investors. One of the biggest housing associations in Amsterdam – *Stadgenoot* changed its strategy to renovations instead of demolitions in order to save money and at the same time to keep the promise of delivering housing in Van Tijenbuurt, Eendrachtsparkbuurt and Goeman Borgesiusbuurt neighborhoods. In exchange for low prices of apartments, housing associations would allow future residents to finish their houses by themselves.

The research investigates the path for Collectief Particulier Opdrachtgeverschap (CPO; Collective Private Commissioning), Mede Opdrachtgeverschap (MO; Co-Commissioning) or other participative investment model, to conduct building transformations in Amsterdam. This city notices the highest demand for new housing in the Netherlands as well as the fastest price growth since 2008 (Hekwolter et al. 2017). The prices of housing ownership in December 2021 were over 20% higher than in December 2020¹. The characteristics of Amsterdam's housing market and its socio-cultural background, create a prominent incubator for experimental building processes. Do-it-yourself housing as an idea addresses the problems of neglected neighborhoods revitalization, post-war architectural heritage and participative models in housing investments. Case studies of those models should be taken into account while shaping revitalization alternatives for top-down investment plans. The first part of this article outlines the socio-economic background of Dutch housing practices from the second half

¹ Centraal Bureau voor de Statistiek/CBS; Statistics Netherlands, online <https://www.cbs.nl/en-gb/news/2022/04/house-price-increase-20-4-percent-in-december> (access: 12.05.2022).

of twentieth century and outlines conditions for self-organization in the housing market in the Netherlands and Amsterdam. It briefly explains the path to participation for bottom-up organizations and the non-standard approach to housing design. Results and Discussion section describes three successful realizations which took place between 2012 and 2019 and tries to measure their success from the *sustainable values* point of view in the qualitative case study. Finally, it evaluates the projects as a vehicle for neighborhood regeneration practices and tries to define the role of parties in the design process.

Background for the self-organization of construction processes in revitalization

Since the beginning of the 2000s, there has been a gradual increase in recognition of the architecture of post-war housing estates (Blom et al. 2004), which were a response to the rapid increase in the population in cities and an attempt to improve the conditions of residents of inner-city districts struggling with sanitary and social problems. The end of the 1950s and the beginning of the 1960s were a period of debates on managing big scale revitalization, including the problem of slums in cities². In 1956, the Amsterdam Society for Urban Revitalization³ declared its readiness to revitalize the areas of exclusion.

A year later, the Ministry of Public Housing and Construction⁴ published a book intended to oppose the massive demolition of problematic neighborhoods. Inhabitants, fearing above all higher rental prices, began to create tenant organizations and neighborhood committees so that municipalities would refrain from large-scale demolitions. The inhabitants were supported by left-wing parties and youth. In 1966, Amsterdam's Provos⁵ called for the doors of empty houses to be painted white, thus inviting them to occupy them and counteract the demolition. This was a spark to ignite the squat movement in Amsterdam. The face of the rebellion against the mass demolitions was Jan Scjaeffers, who also opposed the city policy and the planned liquidation of the housing estate at the Rustenburgerstraat where he lived. Despite the fact that the demolitions were stopped, Amsterdam lost thousands of houses from the seventeenth and eighteenth centuries. The Dapperbuurt housing estate (Figure 1) and the Klinkerbuurt housing estate were severely affected. The presence of land for new buildings provoked a heated discussion on multi-family architecture in cities and its scale.



Figure 1 Left: Foeliestraat demolitions, 1971 (Cityarchive Amsterdam) Right: Amsterdam Nieuw West demolitions, 2015
Source: Rufus de Vries.

The technology allowed for the construction of taller buildings, including prefabricated structures, accelerating the replenishment of the deficit of 260 thousand apartments⁶. Opponents of typological changes feared that medium and high-rise buildings would be built solely to solve a quantitative problem, ignoring social and qualitative issues. Although the choice of skyscrapers was not always made out of conviction, higher and higher residential buildings were built throughout the Netherlands in the second half of the 1960s. In 1965, a new Housing Act entered into force *Woningwet*. It further strengthened the position of housing associations by giving them the right to the same financial support as private entities, both in the sector of social housing and construction

² Krotopruiming en sanering. In the publication, the Ministry does not provide an exact definition of slums and describes them as 'a subjective concept of a residential area uninhabitable and unsuitable for reconstruction'.

³ Amsterdamse Maatschappij tot stadsherstel.

⁴ Minister van Volkshuisvesting en Bouwnijverheid.

⁵ Counterculture movement, active in the Netherlands in 1965-1967. Provos are considered to be the European progenitors of hippies. The social order they proposed was to be built on respect for the individual and cooperation, which was to replace the omnipresent competition.

⁶ Data for 1956 according to the Economic Construction Institute.

of a higher standard. Adri Duivesteijn⁷ points out that it was in the post-war period in the Netherlands that the process of creating housing was disconnected from the social needs of residents and the role of architects in designing buildings was limited. The process was contributed by the growth of housing cooperatives towards large-scale organizations, managed top-down and chaotically. Residents demanded participation in the policy of housing associations, but democratization in the management of communal resources often ran counter to public interests. In the sixth decade of the twentieth century, the post-war baby boom generation took the lead by creating a society focused on the development, consumption and empowerment of individuals. The conflict escalated and various groups of dissatisfied residents spoke up at poorly attended cooperative member assemblies, trying to force the fulfillment of demands. One of the first 'administrative upheavals' took place in the Amsterdam Patrimony of the cooperative with almost 7,000 homes. As Wouter Pieter Beekers writes about this time:

Everywhere the committees of residents sprang up like mushrooms after the rain. They also organized themselves at the national level. In 1972, the Dutch Tenants' Association (Nederlands Verbond van Huurdersverenigingen) was founded. A year later, the National Advocacy for Urban Renewal (Landelijk Ombudsteam Stadsvernieuwing) was established. The government recognized these interest groups as spokespersons for residents, awarded them a seat on the Housing Council (Raad voor de Volkshuisvesting⁸) and subsidized their work (Beekers 2012:220).

In 1976, the Secretary issued the announced regulations on the participation of residents. He obliged housing co-operatives to work on 'external democratization' and to allow tenants to express their views on issues that are important to them, such as rent increases and building maintenance costs. It was a form of compromise previously criticized by some circles. A critical voice announcing grassroots activity was a young architect and Ph.D. student at the University of Delft, Hugo Priemus. At the annual meeting of the National Housing Council in October 1973, where the position of the corporation was discussed, Priemus criticized the fact that institutions offer almost no space for people to express themselves in their living environment. He was in favor of introducing housing cooperatives as an alternative to social housing (Priemus 1973).

His speech did not go unnoticed and a few weeks later, the Secretary of State Schaeffer presented a bill on urban revitalization, which was to enable the cooperation of private developers, cooperatives and residents in the so-called *stadsvernieuwingcorporatie* (urban renewal corporation)⁹. Soon after, at the NCIV (Het Nederlands Christelijk Instituut voor Volkshuisvesting: The Dutch Christian Institute for Public Housing) congress, the cooperative introduced the term housing corporation – *woningcorporatie*. On the wave of urban and settlement renewal, grassroots neighborhood movements began to take their place, reviving housing centers. There were ideas for self-organization and participation like Hebrakens'.

In 1971, more than one hundred and fifty people in Purmerend founded the *Kasko* group to develop a housing estate. The houses were delivered unfinished – only the 'outer shell' was built – walls and structures, so that future residents could shape the interiors according to their preferences. The initiative met with great interest and in 1974 resulted in the creation of *Landelijke Bouwvereniging Kasko*. In the same year, in connection with the trend of owning real estate, the House Owners Association was established¹⁰. At that time, a discussion about the statutory possibility of purchasing cooperative flats was stirred up. Lawmakers tried to find a golden mean between the Scandinavian model of perceiving tenants as potential owners and the complete lack of the possibility of privatizing apartments. An alternative model called 'security of ownership' has been proposed¹¹.

Co-operatives sold flats cheaply to their tenants, but remained responsible for a large part of the maintenance and administration of buildings for which they were paid by buyers. The buyers and the cooperative were also supposed to share the profits in order to counteract speculation. In the 1980s, the burden on the state with financing from public funds for numerous cooperative investments began to be felt. Unemployment was rising, contributing to an increase in public debt. Prime Minister Dries van Agt tried to respond to the crisis by reducing public spending and thus hitting housing co-operatives. Gerrit Brokx, who replaced van Dam as the secretary of state, focused on further liberalization of the housing market, including allowing rent increases which sparked numerous protests. Some tenants resorted to a rent strike¹². The government's relationship with the squatters' movements worsened. In the early 1980s, at Vondelstraat 72 in Amsterdam, the police tried to evict the squatters. There were riots during the intervention. The police lost control over the situation and as a result 53 policemen were injured.

⁷ Politician, Director of the Dutch Institute of Architecture (NAI) and councilor of Almereresponsible for spatial planning and housing. Co-author of city development plans in accordance with the principles of sustainable development and implementation of grassroots movements at the stage of spatial planning.

⁸ Here: about the council of the Christian Housing Institute Nederlands Christelijk Instituut voor Volkshuisvesting- NCIV which, along with NWR, was the largest organization supporting housing cooperatives. The institution was established in 1970.

⁹ This idea turned out to be too difficult to implement in practice and this cooperation never came to fruition.

¹⁰ Dutch: *Vereniging Eigen Huis*.

¹¹ Dutch: *beschut eigenwoningbezit*.

¹² In a rent strike tenants do not collectively pay their rent until the landlord complies with their demands.

The conflict escalated and turned into a skirmish involving tanks and armored vehicles breaking through the barricades set up around the city¹³. Participants of the protests under the slogan ‘*Geen woning, geen kroning*’ (No housing, no coronation) they manifested their opposition to the queen's coronation in the face of a conflict over places to live.

The serious clashes lasted for years, but the bottom-up voice on ‘the right to housing’ was heard by the authorities. In 1981, under the ‘Free Real Estate Act’ *Leegstandwet* squats acquired legal status (Premius 2011). The law provided that a building could be legally squared if it had been empty for at least one year¹⁴ and the owner will not provide a usage plan in a few months. From 1980 to 1985, the number of squatters grew to around 20,000, which illustrates the movement as increasingly structured and noisy. It was during these years that the organ was established *kraakspreekuren* in each district that advises people interested in renting a squat. An additional aspect influencing housing at that time was a large migration, especially to big cities.

When the quantitative housing shortage ended, the original city dwellers were looking for a luxury that they could not find in post-war housing estates. Over 400,000 people moved to Amsterdam from 1960 to 1985. Metropolitan settlements with cheap cooperative housing have been inhabited by migrant families, especially from the territories of the former Dutch colonies: Suriname and the Netherlands Antilles. In extreme cases, at the end of the 1980s, migrants accounted for 90% of the population. In politics, the discussion on the participation of residents was commissioned to two committees. Brokx Secretary of State commissioned a group of experts, led by NWR director Van Velzen, to develop ideas to stimulate innovative practices in social housing, including in the area of participation (Beekers 2008:319–321).

The report resulted in the creation in 1982 of the Committee on Stuurgroep Experimenten Volkshuisvesting (SEV, Public Housing and Experimentstweny)¹⁵. The Committee was entrusted with the task of stimulating innovation in terms of quality improvement, cost savings and ‘increasing citizen involvement’ through social experiments. The government appointed its members, but otherwise the committee was independent. SEV initiated a series of experimental cooperative projects. In the abandoned hospital in Groningen, it tried to create a legal form of self-government for the inhabitants. In Amsterdam, he assisted a group of residents, who wanted to save one hundred council houses from demolition, handing them over to collective management.

The former squats formed the first *Zelfbeheer* (housing groups) occurring in large numbers and most often in large cities. Tenants were allowed to manage the property, although they did not own it. *Zelfbeheer* has collaborated in partnership with *Woningbouwvereniging Gelderland*¹⁶. Thanks to SEV grants in 1985, WBVG was able to start projects in Arnhem, Nijmegen, Twello, Wageningen and Zutphen. Groups began to form *Centraal wonen*, also in cooperation with housing associations. These groups have been part of larger corporate investments. *Centraal wonen* assumed the sharing of many spaces, such as a kitchen or a living room and sometimes took the form of communes. Self-organized multifamily housing marked its presence in Dutch neighborhoods.

Current situation

The last decade of the twentieth century became a period of privatization of the housing sector with simultaneous attempts to stimulate affordable housing. In the cities, attempts were made to counteract ghettoization which became a growing problem. In 1995, a quarter of the metropolitan districts had over eighty percent of the population of non-Dutch origin (Vogel 2005:134; van Voss 2011:289; Beekers 2011:284). Social cohesion was under the pressure of linguistic problems. Moreover, the overrepresentation of migrant groups has also resulted in a concentration of low-skilled and financially disadvantaged families in the cities. Municipalities implemented a strategy for *Mens en Milieuvriendelijk wonen en werken*, the premise of which poorer and richer residents live and work in a mixed community.

The ambition of these projects was to create sustainable living environments, usually consisting of individual buildings around a common garden space. In cities, MMWW was also created in the process of building adaptation, such as Plantage Doklaan¹⁷, formerly functioning as a church, printing house and school, or Het WG-terrein which was originally a hospital complex¹⁸. Between 1995 and 2005, the Vinex housing program was implemented, aimed to increase the availability of housing in the face of the growing population of the Netherlands. The memorandum defined the rules for the occupation of new areas by housing and emphasized the need to limit expansion in the suburbs by concentrating urbanization around the existing small town centers. It

¹³ Amsterdam – Verzamelde Historische Filmbeelden 1980: Ernstige rellen bij ontruiming 'De Vondel' in de Vondelstraat, Amsterdam – oude filmbeelden, online https://www.youtube.com/watch?v=P_m3DsvlewM (access: 13.05.2022).

¹⁴ The first entry was for six months, then it was extended to a year.

¹⁵ Stuurgroep Experimenten Volkshuisvesting, online <https://actorenregister.nationaalarchief.nl/actororganisatie/stuurgroep-experimenten-volkshuisvesting-vrom> (access: 12.05.2022).

¹⁶ WBVG is a housing corporation established in response to the poor housing situation of young people in the first half of the 1980s.

¹⁷ The Dokhuis Community, online <https://plantagedok.nl/> (access: 15.05.2022).

¹⁸ WG Terrein Woon/Werk Vereniging, online <https://wg-terrein.nl/> (access: 15.05.2022).

was also a start for second wave of mass demolitions (Figure 2). Developers took the lead in land purchase rights and few locations were open to *zelfbouw* (Dammers et al. 2007:6). The conditions for new investments were additionally defined by the top-down guideline assuming 30% for affordable housing (Tummers 2017). In 2000, another memorandum, *People, Wishes, Living (Mensen, Wensen, Wonen)* confirmed that the state intends to accelerate the expansion of the owner-occupied housing market, to reach 65 percent by 2010.

Politicians adopted a strategy of shifting considerable responsibility for newly constructed flats onto private hands, setting a target of 30% of newly constructed buildings in the process of *zelfbouw*. This legal act is also a formal beginning of *Collective Private Commisioning* – construction groups, cooperatives in Dutch law. The Act of 2000 introduced the concept of CPO (Collectief Particulier Opdrachtgeverschap), shaping the contract between actors in the construction process for private clients in the group. The memorandum also mentions the need to build flats dedicated to specific users, while paying attention to the ecology of construction processes.

In 2003 the Dutch economy stepped into recession and the government has worked to reduce expenses. It was also necessary to limit municipal investments by tens of millions of dollars. Housing associations often made mergers, saving smaller co-operatives and pooling resources, with the result that individual organizations owned more than 10,000 homes. Corruption flourished inside many corporations. Scandals have severely damaged the trust in housing associations, both of the government and the public. The authorities started to use solutions to diversify the housing market.

In the middle of the first decade of the 21st century, the implementation of solutions for *zelfbouw* in urban planning has been provided in several municipalities. In line with the use of the centers' absorptive capacity, buildings for renovation began to be sold off at relatively low prices. The low purchase costs were conditional on the owners' obligation to renovate the property themselves. This idea was the basis for the creation of *klushuis* – do-it-yourself housing. In 2006, the target of 30% of housing as *zelfbouw* has been lowered. In 2010, housing became the responsibility of the Ministry of the Interior, which initiated the 'zelfbouw expert team' (Tummers 2017:156). Nevertheless current support for cooperative housing in the Netherlands is formulated at municipal level thus it is justified to analyze projects per municipality.

Methodology

The DIY project's analysis is a part of the author's research on the typology of collective housing initiatives built after 2010 in Amsterdam. Three projects were selected for this case study in order to indicate those investments that refer to post-war architectural heritage. The framework was to select projects based on following criteria:

1. The project was developed together with future residents in CPO, MO process, or other non-standard models which included future resident's participation;
2. Investment was a transformation of the existing building which could be considered as post-war modernist heritage;
3. The main goal of the investment was to create long-term affordable housing;
4. The project was started after 2010 and finished before 2022, so it can be considered a new approach to housing.

The projects were analysed in qualitative case study, in two stages. The first one is a description of the process and characteristics of the existing architecture and the second evaluates the results of the process. Process in this paper is understood as a set of activities that occur at the time between the idea to invest as DIY group and the finalization of the collaborative part of the project. This likewise includes the parties of the process and outlining their role in it. In order to compare affordability, the budget summary was analysed and compared with the average prices of houses in the same location and time. In this publication architecture is considered through the transformation process in a participative model, so the most researched parameter of the buildings was their adaptability- their predisposition to adapt to modern housing requirements.

This implied the necessity to analyse building parameters, existing structure, and its relationship to the environment urban-wise and social-wise. In order to embed the projects in a broader context of bottom-up housing initiatives and refer to the result of the building process the existing evaluation system was used. The characteristic of bottom-up housing initiatives are aptly listed and conducted on 51 projects from Berlin in the publication called *Self-made City*. The authors referred to 10 qualities that can be found among cooperative projects and could be considered as added value in comparison to traditional architecture:

1. *Neighbourhoods and Urban Interaction* – understood as positive social (non-gated community) and spatial integration with the close environment;
2. *Shared Space, Community and Social Focus* – considered within the collective group itself;
3. *Long-term Affordability* – answering the question of who was a target group for the specific project and how diversified were the members of the community in terms of social and budget circumstances;
4. *Open and Green spaces* – taking into account shared open or green spaces created by the group or kept because of their intervention;

5. *Re-use and Re-activation* – understood as a well conducted process of building adaptations;
6. *Hybrid Concepts (mixed use)* – explained as a multipurpose space use (excluding housing);
7. *Quality (re-)densification* – does not apply to existing buildings transformation projects unless there were an extra, new volume provided;
8. *Custom-fit solutions for every generation* – considered as solutions fitted to specific needs of the individuals which formed a collective group;
9. *Investment in Ecological Building*;
10. *Future-oriented Solutions and Experimental Models* – applies to all Klushuis CPO projects. The participative process is considered as an experimental model.

The above mentioned qualities are referred to the analyzed examples, as they fulfill the requirements of well-processed neighborhood regeneration. Data for the analysis was collected through project visits and interviews and through documents published by the Municipality of Amsterdam, CPO groups and architects. Klarenstraat case is sufficiently studied in the book *DIY Klarenstraat* 'A new perspective on the post-war social housing block' published in 2017, as it refers to the legal and design process as well as financial and social aspects of it.

Results and Discussions

In the early 2000's many neighbourhoods around the vibrant Amsterdam city centre were facing socio-economic problems. Nieuw-West district divided between three housing associations, was planned to be re-developed. The municipal designers at the *Bureau Parkstad* planned the procedure. In fact hundreds of rental dwellings perished and were replaced by higher-density owner-occupied housing units. The initial plan was seen as a promotion of homeownership at a cost of social housing (Aalbers 2004; Uitermark 2009; Hochstenbach 2016). The crisis of 2008 caused the housing delivery failure.

Many investments could not be finished on time or be realised as promised. Far West – the fusion of De Key, Stadgenoot and Rochdale housing associations which was started for the purpose Nieuw-West urban development, decided to end its activity in 2010. A former director Jacques Thielen said in response:

A large-scale approach to entire neighborhoods no longer seems appropriate. Due to postponement and waiting for better times, management and maintenance will become more important than project development in the coming years ¹⁹ (Thielen 2010).

It came at a time when municipality of Amsterdam started seeing the potential for *zelfbouw* and its neighbourhood regeneration possibilities. In 2012 two post-war, modernistic buildings were considered as candidates for CPO process regeneration: the housing block at Klarenstraat, and Kleiburg big scale housing block in Bijlmer. Post-war areas where the cheapest to buy an apartment and the prices per square meter stated around 1900 € and still remain as most affordable ones within the city. Price, together with an urgent need for neighbourhood regeneration, made a good field for DIY housing investments.

DIY Klarenstraat – Case 1

Klarenstraat house transformation is one of the first DIY processes which fulfilled the ambitions of many disciplines around the topic of neighbourhood regeneration. The building was owned by Alliantie housing association which was ready to sell it for a relatively low price and decided to treat it as Staalmanplein neighborhood's renewal experiment. The institution asked for the advice of Urbannerdam – a consultancy organ experienced in leading experimental processes in Spangen (Rotterdam) on post-war housing blocks between 2004 and 2009. The advisors came up with an idea to divide the building by means of horizontal and vertical openings, not necessarily following the original sectioning. They cooperated with Van Schagen architects on spatial qualities and diversifications.

It was architects who started a website where potential buyers could find information about the process and costs of apartments. The site informed about parts that had to be done by a professional contractor and parts to be built by residents alone as well as the sum of all necessary materials. The website stated the purchase price of a common building parts (shell) of the 100 m² apartment and what amount was still needed to turn it into a liveable space. This information determined the ultimate financing requirement of the whole investment. Architect Arjan Gooijer reported more expectations from the clients in comparison to traditional processes like precise instructions to the homebuilders and so-called soft skills like encouragement and motivation, yet still his design knowledge was crucial. The architecture transformation process was likewise different, as future residents had freedom in

¹⁹ Dutch: *Een grootschalige aanpak van complete wijken lijkt niet meer van deze tijd. Door uitstel en het wachten op betere tijden worden beheer en onderhoud de komende jaren belangrijker dan projectontwikkeling*, Echt Amsterdams Nieuws, Corporatie Far West stopt ermee, online <https://www.at5.nl/artikelen/50621/corporatie-far-west-stopt-ermee> (access: 15.07.2022).

determining the layout of their apartments. The Architect decided to provide direct meetings with all the residents in concept design phase and definitive design phase. He proposed live sketching to put together individual wishes and explain technical possibilities. Gooijer mentioned that dialogue and live design were fruitful and he emphasized the importance of spontaneous suggestions, even though it required more time and involvement which needed to be included in the budget.



Figure 2. Klarenstraat building. **Left:** Before the process, **Right:** After the process

Source: Left: Dash, *Van woning naar woning*, online

<https://journals.open.tudelft.nl/dash/article/download/5081/4633/14469> (access: 05.082022)

Right: author's own work.

The Klarenstraat building was built in 1956 as a four storey housing block. It originally consisted of forty identical 75 m² flats with loggias. The structure was made in MUWI system²⁰ which was stable enough to allow for volume extensions of up to two meters balconies as well as small rooftop units. In terms of inner space Urbannerdam with an architecture office proposed a solution that would take into account the original rhythm provided by modular structure but simultaneously create different spatial relationships within the existing grid. To research the potential of the building Van Schagen collected a number of global sample plans with different dimensions that were placed randomly in the building. In the early stage the preconditions were defined together with the urban planning supervisor and *Welstand*.

Clear frameworks were needed to indicate what residents were and were not allowed to do with their apartments. The architect was aware of the framework's importance, as when strictly constructed, it could have blocked the creativity. The process of division between future residents was made in the Excell sheet, as this program was accessible for every resident. The clients were colouring cells to mark their units and by this means representing desired section. This resulted in a *Tetris-like* composition (Figure 3). There was no ambition in restoration of the original design from the 1950s. Designers were researching on façade options which would express new interior divisions, but eventually the original grid character was kept.

Windows in this building were taking up 80% of the façade and due to their poor insulation properties, they were influencing energy label significantly. To maintain appropriate sustainability values, yet still refer to affordability of the building, Alliance decided on replacing PVC windows and renovating wooden ones. Still, in the end all the windows were replaced. Insulation of the units was made in a way that would not diminish the appearance of the façade. The decision was to insulate the building from the inside using floating floors including underfloor heating, sheeted walls and insulated ceilings. The decision to dispose of the loggias was dictated by thermal reasons, as CPO had high sustainability ambitions to receive energy label A for all the apartments.

Those aspects improved architectural quality, making the project more expensive compared to standard Alliantie social housing investment. Sander Gelinck (Buissink 2017:142) point out that it was approx. 100.000€ more per apartment. Therefore the project cannot be considered a financially focused development. The earnings are located elsewhere, in neighbourhood empowerment. The building was and remains part of the same urban tissue, and so does the community living in the building. People that got into the *Klushuis* investments were young or middle-aged couples and families among which vast majority had have lived in Amsterdam's housing neighbourhoods before the process. They wanted to stay in Amsterdam, thus improving their living space quality within reasonable economic boundaries. The necessity for high level of involvement in the project guaranteed that people who would take part in it had resources for further social interactions. Alliantie HA evaluates the project as 'very successful socially', although it does not precise the demonstrable effects. What Patricia van Ulzen (Buissink 2017:185–186)

²⁰ System developed by Muijs and de Winter in 1952. Slabs were made of light reinforced concrete beams and airbricks, walls of light concrete airbricks and columns of cast concrete in the façade. The system was very popular in the Netherlands between 1952 and 1968 when almost 30 000 homes were built this way.

sees as the promising effects are deliberate integration between other buildings facing communal garden which is a mix of social renters and owners expressed in football plays and picking up litter or so-called *burendag* – neighbors' day in shared green space.

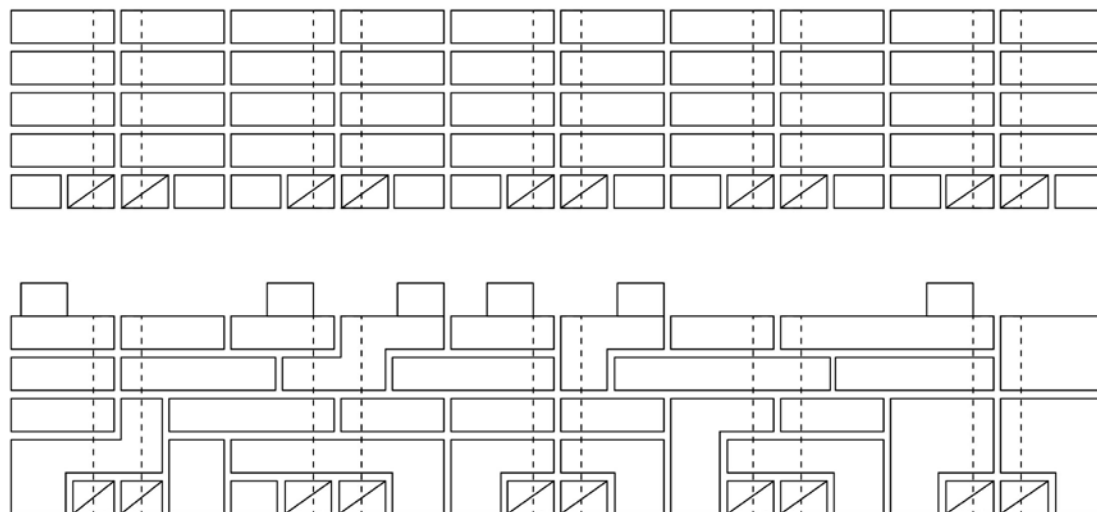


Figure 3. Klarenstraat units division. Top: original one, Bottom: new division
Source: unknown.

Broekmanhuis – Case 2

3,5 km distance from Klarenstraat in Osdorp district stands Broekmanhuis building, which was transformed in the balanced, socially sensitive process. It was far less loud and media-oriented than Klarenstraat, therefore deserves attention even more. This neighbourhood, which is now a part of Nieuw-West, used to be one of the most disadvantaged areas in Amsterdam. It was urbanised after 1950's as a part of city's expansion plan based on the garden city concept, developed mostly as social housing buildings. Osdorp, as we read on the official municipality website, 'since the end of the 1990s, part of Osdorp has been re-developed through a process of demolition and new construction'²¹. The line of the big-scale demolition by Far West stopped two streets away from Broekmanhuis – former elderly home and later school, which was put to sell to CPO group or MO professional by the Municipality of Amsterdam in 2015.

It was municipality's requirement that the development would happen collectively with the future residents. In 2012 architect's studio Ponc de Winter together with DiD Vastgoed- ontwikkeling developer decided to form an investment model that would financially help the group in DIY process. With help of social designers from The Beach for Creative Innovation they managed to form a group of people from close surroundings and people who lived in the area before and wanted to come back. Because Broekmanhuis is a professional-led process it qualifies as MO, which is reflected in the roles and financial responsibilities of the parties. The municipality tendered the building for fixed price and organized selection for development plans. The founders were required to prepare the framework for the idea including motivation, quality check, and risk estimation, which was then validated by the municipal jury. The difficulty that occurs in almost all CPO projects is that as an investor you can be qualified to take a mortgage only after receiving a building permit.

This creates a potential risk of investing big resources in bureaucratically extended procedure that does not guarantee reaching the goal and can last 1,5–2 years. The burden of investment and financing risk in the first stage was taken by the developer. The project was eventually accepted by the municipality and started as a promising, socially-oriented process. As Katja de Winter said in my interview: 'It started with an enthusiastic group, but most of the people, because they do it for the first time, have no idea about the process and its length'. Only one couple was participating in the process from the beginning until the end, as the rest of the participants were gradually exchanging. During the difficult moment of the ongoing process which was a collision of dreams and real possibilities, the group hired a process manager, who pushed forward the decision-making. The leading team was arranging group meetings as well as individual ones. Together they managed to divide the building according to the group requirements. It resulted in a wide variety of different apartments, similar to Klarenstraat Tetris-like idea. The rigid, gridal structure of the building made it relatively uncomplicated to achieve seven

²¹ Gemeente Amsterdam/ City of Amsterdam, online <https://www.amsterdam.nl/en/districts/nieuw-west/osdorp/> (access: 13.07.2022).

different typologies of the apartments including two and three-storey houses and L-shape flats from 55 to 130 m² big (Figure 4).

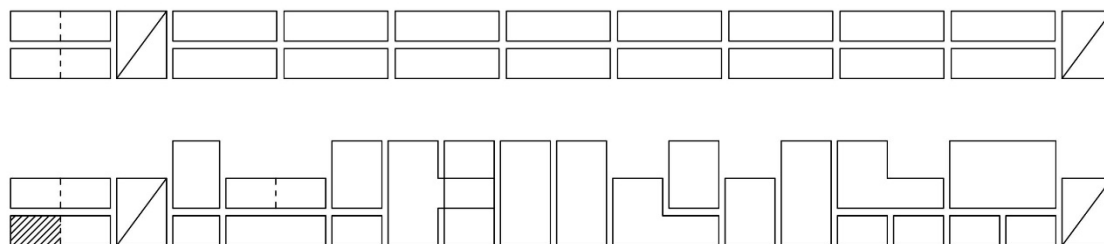


Figure 4. Units division. Top: original grid, Bottom: new division
Source: unknown.

The building was insulated from the inside to keep the original brick façade. Each apartment is an insulated box. The windows and were replaced with double glazing. One of the apartments is supported with photovoltaics installation, but there was no further ambition for sustainable solutions due to the costs. Building structure, as well as municipal rules, allowed for having one extra floor which eventually was built locally for 10 of the houses. Apartments on the first floor have an access to the gallery which remained from the original project and is now a second level, private traffic space and shared balcony.

The further goal was to achieve the direct connection of the apartments on the ground floor with the street. This decision opened the building toward public space raising its quality. Together with the building, the group bought the terrain behind the building which was turned into the garden consisting of 2 parts: 4 m deep private part and collective part. The shared part is closed to the public and it is being used by the group or occasionally by other neighbours for meetings and events.



Figure 5. Broekmanhuis. Left: Before the process, Right: After the process

*Source: D. Ponec, K. de Winter, Broekmanhuis, online
https://ponecdewinter.nl/portfolio_page/broekmanhuis-amsterdam/ (access: 05.07.2022).*

What distinguishes Broekmanhuis from most of the CPOs is a focus on social process sensitive to the location. The group managed to finish the project which is a natural part of the neighbourhood, not only because of the affordable old building regeneration, but above all thanks to the people strongly related with a place and creating opportunities for others who live outside of Broekmanhuis.

The creative space of The Garage Notweg, where there is Ponec de Winter's office, Wildeman Station and the communal room Broekmanhuiskamer forms a vibrant environment for local activities. Homework guidance, crafts, and games afternoons are organized annually. Katja de Winter pointed out that the level of complexity for this project was not much higher than the other investment models, but its greater transparency should be provided by the designers, especially on the topic of clear distinction between what is individual and what is collective.

Kleiburg – Case 3

Kleiburg Project is different from the other analysed projects because of its architectural typology and scale. Collaborative processes tend to provoke the question about the possibilities of scaling up models based on participation. This project is a positive response to the fear of large investments in community-led renovation models and became known worldwide after winning Mies van den Rohe award in 2017. The Bijlmer neighbourhood was urbanised in the 1960s according to modernist urban planning and architectural trend. In this worldwide known new housing estate, the CIAM segregation of functions principles were taken very far. The planning consisted of twenty-four 11-floor housing blocks situated in honeycomb- shape compositions with over 13000 apartments. They were an attractive alternative for citizens moving from impoverished Amsterdam city centre at the time.

From the 1970s, the middle class was gradually losing interest in the area often searching for housing in low-rise neighbourhoods. In mid-70s Amsterdam was facing an immigration wave from Surinam. Certain places in the Bijlmermeer were marked by unemployment, crime and drug nuisance. In the 1990s a large-scale renovation operation was started. High-rise buildings were being demolished to be replaced with smaller-scale homes, including many housing in the owner-occupied sector. During the demolition process, the decision to keep a number of characteristic buildings in Bijlmer Museum, was made. In spite of the earlier assumptions and protests, 'Koningshoef' and 'Grunder' blocks within the Bijlmer Museum had been demolished. As an answer to bottom-up support for keeping the rest of museum intact, architect Greg Lynn proposed a renovation project. It involved inner divisions in the building for 500 families, to create smaller neighbourhoods. The spatial relationship change would be supported by vertical communication system consisting of elevators, escalators, ramps and stairs installed on the façade. The idea was not treated seriously and Rochdale asked Henk van Schagen Architecten for a renovation plan, which again appeared to be ineffective.

The estimated cost of a thorough renovation would be 70 mln euros. In 2010 Rochdale Housing Association announced the demolition of the Kleiburgflat and removed the remained inhabitants from the building. The decision was loudly protested within the city, so Housing Association, with no other solutions, came up with the idea to sell the building for 1€ and choose the most interesting development plan for the building from the submitted proposals. In February 2011, eighteen parties submitted plans after which four parties remained, which were allowed to elaborate their plans from June 2011. The consortium 'De Flat' was selected as a candidate with their revolutionary proposal to turn Kleiburg into a DIY flat. De Flat consortium consisted of Hollands Licht (concept architect Martijn Blom), Kondor Wessels Vastgoed (developer Willem Gaymans), Vireo Vastgoed (financial advisor Frank Zwetsloot) and Hendriks CPO (concept developer Hella Hendriks). De Flat invited NL Architects, Rappange en Partners, and XVW architecture to collaborate on the projects. Together they invented the process for Kleiburg transformation.



Figure 6. Kleiburg. Before and after renovation
Source: Top Left picture, Top right picture Jean-Pierre Jan.

This project had a very clear division between what is decided on behalf of future residents and when the self-construction started. Contrary to all the other analysed projects in this article, Klushuis's general building interventions did not happen in participative design model. Firstly the apartments were stripped from the leftovers of previous inhabitants. Secondly the façades and communal spaces were renovated. Finally, the apartments were rebuilt by the residents according to their needs. The process of renovation was divided into 4 phases to coop with the scale of over 500 apartments. In phase 1: 109 homes; were prepared in, phase 2: 119 homes, in phase 3: 131 homes and in phase 4: 152 homes.

The phases were planned to be started in 2013 and finished in 2016. In every phase, certain construction interventions were proceeded. The architects uncovered the original concrete structure, as well as brought back the original wooden railings of the galleries. They organized vertical traffic spaces inside the building to free the façade from brutalist cylinders with elevators. The most prominent interventions were made on the ground floor, which use to be a traffic and storage space, separating the building from the street level. De Flat decided to turn the plinth into small commercial spaces and double-floor studios. The goal was to minimize the spaces that would potentially encourage criminal behaviours. That is why the underpass at ground level was enlarged and directly connected with living spaces.

Information and selling campaign began in 2012 and thanks to its efficiency, 70% of the apartments were sold in pre-sale. In two years all of the spaces were sold. 20% were rented houses and 80% were sold with house ownership. 9 types of flats and studio houses on the ground floor were offered to potential buyers. The rules for future residents were transparent and they were published online in a seven-page document. Among others, the requirement was that dismantling and finishing of the DIY house should not take longer than 1 year which could be challenging if the number of necessary interventions were taken into account. The apartments put on sell were radically stripped. The installations were only in the meter box next to the entrance, meaning all the electricity, water piping and gas were the responsibility of future residents. There was an obvious opportunity on buying several housing units and connecting them both horizontally and vertically, so the demolition and construction work had to be taken into account. For instance 9 apartments were connected together in a T-letter shape combination vertically. The freedom of choice gave an opportunity for self-organizing and resulted in the emergence of four owners associations.

The scale of the project resulted in participation that was not supervised by the idea providers. This caused certain disconnection and allowance for individualistic focus. Due to price rise some owners took advantage of the 2020s market and sold their apartments with significant returns or decided to rent out the spaces. The actual value of the process in long term should be therefore investigated in further research.

Evaluation through sustainability values

Klushuis projects analysed in this paper reflect values of sustainable development starting from lowering ecological footprint and ending with building conscious, local societies. The cases of Klarenstraat and especially Broekmanhuis exemplify urban interaction (1) in a non-forced way, which happens naturally not only by original architecture re-use but most of all the participation in decision making which allows for a deeper understanding of local, spatial and social context. Case 2 was realised with local organisations having their offices in the next-door building. Their idea focused on 'local search' for participants and the interest was high throughout the whole process, even though their marketing strategy was not as developed as in other analysed cases. The social results are visible through active involvement in local undertakings. The group of Broekmanhuis decided to invest in shared spaces within the building, which are now used for schooling (2; 6). Investing in spaces other than housing is not a common practise for CPO's in the Netherlands. For Kleiburg building community part of process seemed to be given away to the buyers. They could invest as a smaller group in some shared space and there is at least one case known as 'Monastery' that happened spontaneously. Besides that restoring the usable function to the ground floor gave an opportunity to integrate better with the environment.

All analysed projects had the ambition to become affordable houses (3), nevertheless one cannot overcome the specifics of the market. The affordability of the analysed projects was lying mostly in the hands of the future inhabitants. The initial price for the 'shell' of the buildings in all the cases was below the market price (see Table 1). Together with finishings in the Klarenstraat project, the inhabitants could have saved up to 68 000 € on a 100 m² apartment, while Kleiburg clients could have overpaid up to 35 000 € for 100 m² if they had not done the finishings with their own hands. That is widespread, especially when the architectural qualities in all the cases are taken into account.

The initial price for Bijmermeer block may be considered overestimated, also in light of the lower price increase of this neighbourhood throughout the last years. The intention of all the projects was to create chances for starters and people with lower income, to have own house in Amsterdam. This chance seemed to be well used in Klarenstraat and Broekmanhuis project.

Kleiburg on the other hand does not seem to be well protected from the wealthier buyers, as since 2017 there have been suspicions about possibilities of the speculative character of investments done in the building. *De Telegraaf* reported dozens of flats had been sold to investors, who are renting them out for high prices²². That is an alarming signal which requires further research.

Green space (4) was a significant discussion for Broekmanhuis project in terms of ownership and collectiveness. Along with the collective part, the 'garden group' was founded by the residents. This space became a field for social activity inclusive food production and bicycle storage. It was municipality's requirement to keep the garden open as a neighbourhood integration point. Less privacy but even more chances for integration were given to Klarenstraat inhabitants, as the garden is shared by four residential buildings.

The houses on the ground floor have stripes to private garden part, as was planned for Staalmanplein neighbourhood in 2009 (van Ulzen [in:] Buissink 2017:178). There was an ambition in the projects to integrate the houses with green to the maximum extend. This ambition is a part of long-term municipal strategy. In Broekmanhuis the group requested for *gevel tuin*: façade garden which is installed by the city for free²³. Besides tiny gardens founded by the city, residents themselves find it important to keep potted plants in front of the building. In Kleiburg all the ground floor sides of the building are publicly accessible, although it is clear which side is the quiet garden (Figure 7).

Table 1. Basic Parameters of the DIY projects

Field	Klarenstraat	Broekmanhuis	Kleiburg
Years of process	2012–2015	2015–2019	2011–2015
Amount of houses	30	24	511
Flat sizes	74–175m ²	55–130m ²	59–142m ²
Land ownership	Ownership	Land lease per year	Land lease til.2054
Building ownership before	Alliantie HA	Municipality of Amsterdam	Rochdale HA
Price for the building	2 260 200 €	1 600 000 €	1 000 000 €
Price per m ² for the old house	661 €	615 €	1019–1419 €
Price per m ² with finishing	2220 €	ca.2600 €	1700–2919 €
Average price per m ² in the starting year, in same region of Amsterdam (in euros, not adjusted to inflation)	2400–2900*	1860–2480*	Ap. 1830–2440*
House ownership after	Ownership	Ownership	20% rental 80% ownership
Process Manager /facilitator/ CPO specialist	Urbannerdam	The Beach for Creative Innovation	Hendriks CPO
Developer	–	DiD Vastgoed-ontwikkeling	Kondor Wessels Vastgoed
Architect	Van Schagen	Ponec de Winter	NL Architects, XVW architectuur
10 qualities evaluation	1,4,5,8,9,10	1,2,3,4,5,6,8,10	1,5,6,8,10

Source: unknown.

All 3 cases present the investment model which prevented demolition from happening in the spirit of the maxim, attributed to Frédéric Druot, Anne Lacaton, and JeanPhilippe Vassal, 'never demolish, never remove or replace, always add, transform, and reuse!' It is especially valuable for the discussion about lowering footprint while facing the problem of housing shortage in the cities like Amsterdam. The collaborative process allowed to see the value in the buildings which were not interesting from a single investment point of view. Post-war modernistic architecture in all analysed cases proves its ease for adaptation, thanks to the modularity and structural simplicity. It creates options for intuitive divisions and both egalitarian and varied interior solutions. Besides the thermal

²² M. Muller, Hoge huurprijzen in klusflat, *De Telegraaf*, online <https://www.telegraaf.nl/nieuws/1328082/hoge-huurprijzen-in-klusflat> (access: 28.07.2022).

²³ Gemeente Amsterdam/ City of Amsterdam (<https://www.amsterdam.nl/wonen-leefomgeving/groene-stad/geveltuin-aanvragen/> accessed: 28 July 2022).

* Data from: <https://maps.amsterdam.nl/woningwaarde/?LANG=en>.

** Data from DIY Klarenstraat: 141.

necessity for windows and doors replacement, façade and construction materials were perfectly possible for re-using in all 3 cases (5). In Broekmanhuis as well as in the DIY Klarenstraat building, original bricks were kept. As the buildings were insulated from the inside, none of them lost its original façade rhythm of the 'form-follows-function' idea. If the extra volume was added to the form, as in case 2, the additional elements followed the modular language of the existing building. Grid structures allowed for the implementation of Tetris-like compositions which gave an opportunity to create verified types of housing: multistorey houses with gardens, small, one-storey apartments, houses with double height spaces and access to the roof terraces. These circumstances allow thinking about the transformation fitting the precise requirements of each client (8). What is moreover interesting is that none of this creativity is visible at first glance.



Figure 7. Public space green. From the left: Klarenstraat, Broekmanhuis, Kleiburg paved side, Kleiburg green side
Source: unknown.

Conclusions

Over the last 100 years Amsterdam remained an incubator for experimental housing, although the role of Klushuis in shaping this image is marginal. Since 2019 there was no initiatives for DIY houses, despite the success of this kind of investment. This success cannot be measured with money though. Some may see DIYs were appreciated and worth the risk during the crisis and that they were treated as a sheet anchor for hopeless cases. If not for social intervention both Kleiburg and Broekmanhuis would have been razed to the ground, and they potential frustrated. Klushuizen as incidental interventions can be used as sparks to burn the fire of the local interaction. These processes have a lower risk for gentrification of the area and if they invite local organizations and partners, they have more chances of succeeding.

In the report Interventions for Integration, the Social Cultural Planning Office mentions *Klushuizen* as one of the working projects to positively break through the one-sided, socio-economic composition of deprived neighbourhoods. Nevertheless the municipality of Amsterdam does not seem to be as interested in multiplying DIY ideas further on. Inconveniences of the municipality as the active party can lay in financial risks of this models. In case of Broekmanhuis investment, the city sold the building for 1.6mln € unlike to first dutch attempts to realize the 1€ policy. This shifted more financial risk to the clients and forced support from other parties who believed in the project and were ready to invest.

The role of the investor or developer was necessary nonetheless, because of the time gap between project preparation investment and possibility for getting mortgage at the moment when the group was still forming. The project has to have an opportunity to continue separately from the group membership stability which cannot be guaranteed by municipal support. Beitske Boonstra and Willemijn Lofvers (2017) mention three other inconveniences for local governments in supporting DIY projects which they come down to the question 'Who owns the city?': the first is inconsistency of the goals of all parties participating in projects, including the takeover of the role of the manager of public spaces by residents; the second is how the process raises the question of who eventually should lead city renewals and transformation of architectural heritage. In the case of Broekmanhuis, the municipality conducted a procedure exactly as in all cases of CPO projects: from the competition for the project and process, to issuing a building permit, having control over the social renewal plan.

In the other cases, the parties selected by the owners of the buildings performed supervision over the idea, so municipality controlled general renovation part of the project, without insight to the process of its implementation. Third inconvenience was defined as seeing the role of municipality as one actor', while it plays the role of initiator, facilitator and inspector with the necessity of understanding multiple background for interests: private, collective and financial. The same soft competence is required from the side of the architect, who needs to accommodate diverse dreams and desires in uniform object. DIY requires managing complexity and creating framework for spontaneous future development and it has been noticed by the industry.

All the projects analyzed in this paper were awarded with architecture prices, even though they were realized with explicit reserve. The aesthetic pragmatism was the contextual requirement of modernistic heritage, which was understood by the designers. Besides DIY houses' architectural and social qualities the idea is seen as a risky instrument for housing development. Klushuis idea, like presented in this article, is rarely multiplied. It seems to be taken over by private investors as more market focused, casco projects – newly build structures to be filled in by residents themselves like Casco_Lofts Houthaven or Superlofts by Marc Koehler. Another manifestation of DIYs' are individual apartments sold cheaper as klushuis, but in fact they are just unfinished flats with installations and equipment deficiencies. Even though architecturally the idea may seem to be similar, the collective participation process is taken out of the equation.

Without the collectivity in architecture transformation, there will be not much left of the promise for non-gentrified communities and neighborhood renewals. Presented cases show how differentiated the *Klushuis* processes can be and still have similar, promising trajectory, both in the field of architecture in transformation and on social level. Every project rises awareness that housing investments happening in participative models, can be beneficial financially, with no loss to the esthetics and spatial quality. Nevertheless DIY projects are time consuming which increases the risk of reducing motivation of the group and can result in dynamic changes and multiple crises. The process requires high level of transparency and collectivity from the participants and professionals which bodes for success to smaller groups of about 5 to 30 families.

All 3 cases were considered as a vehicle for sustainability, but not for affordability. Its time consumption narrows target groups of future residents to those, who can actively participate in the four-years process, but when spatial qualities like customization or diversity and social qualities are taken into account, the DIY projects are profitable solutions both for neglected neighborhoods and modernistic heritage. The success of Klarenstraat, Broekmanhuis and Kleiburg projects, encourages for multiplying the idea in other cities and countries, especially due to current qualitative and quantitative housing crisis and the necessity to create alternatives for highly competitive market dominated by developers.

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