



HOUSING CO-OP: A NEW SUSTAINABLE HOUSING FORM?

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ABSTRACT

Europe has witnessed the re-emergence of different self-organized forms of housing initiatives. One type of this self-organized form of housing, that is currently re-emerging in European cities, is the housing cooperative, e.g. housing co-op. Members of a housing co-op jointly own the building and are together responsible for the design, construction, and management of their own building. The housing co-op is the owner of the building and the leaseholder, and the members rent their homes from their own cooperative. Examples of housing co-ops from Sweden, Norway, Denmark, and Switzerland have shown a strong record of providing affordable, high-quality, and safe housing for middle and low-income groups. The recently developed and currently developing housing co-ops in Europe have been championing environmental sustainability and prioritizing sustainability in the design and management of their building. In Amsterdam, so far, even though many groups with active citizens have started a housing co-op, few housing co-ops have completed the whole process from idea to functioning organization and realized their own building.

Therefore, the purpose of this research was to investigate the potential of housing co-ops to contribute to sustainability in the housing sector, as well as what (additional) measures are needed to support housing co-ops. This is especially significant today in view of the dual challenge of providing adequate housing to all citizens while addressing urgent issues of urban sustainability, contributing to Europe's fair and inclusive transition to sustainability. To investigate this, this research studied several cases in the city of Amsterdam by conducting semi-structured interviews with housing co-op members, relevant actors of the surrounding institutional dimension, and analyzing policy documents from the Amsterdam municipality.

The findings of this study suggest that housing co-ops have high sustainability ambitions and a high potential to contribute to sustainability in the housing sector. Though housing co-ops are still in their experimental and pioneering stages and initiatives are having difficulty realizing their vision. There are still numerous hindrances to this development in the current housing sector, especially regarding financial and institutional aspects. Amsterdam has made significant efforts to support these initiatives and stimulate the development of the housing co-op sector, as they aim to facilitate this in their city. The results appear promising, but there is still much work to be done. Several measures could be implemented on a municipal and national level to encourage the development of housing co-ops in the Netherlands. Other policy measures, however, are proposed to further stimulate development to make this niche the new (sustainable) form of housing.

PREFACE

Since I was a teenager, I have had a strong interest in sustainability and the built environment. As a result, I have chosen to do the bachelor's degree in Utrecht focused specifically on sustainable development. During my bachelor's degree, I discovered that many of these sustainability transitions are actually about social and political factors rather than just technology.

During my master's degree, which is why I am writing this thesis, I became interested in housing and urban development, the challenges it faces in the metropolitan context, as well as the opportunities for sustainability within this sector.

As two of my friends, Jacob and Gerard, established one of the few housing co-ops in Amsterdam, I realized how this niche could provide such added value to not only Amsterdam, but also to other cities in the Netherlands. As a result, I decided to write my thesis on housing cooperatives and their efforts to build sustainably. I moved to Amsterdam during my master's degree and immediately fell in love with the city! Therefore, I would like to thank Amsterdam for being such a fruitful and inspiring city, where I've never felt more at home. But it is the citizens of Amsterdam, in particular, that I would like to thank for initiating these housing cooperatives with inspiring goals, that many project developers could learn from!

I would like to thank my supervisors, Roberto and Maartje, also gratefully for guiding me through this thesis and believing in me during the process. I would also like to thank my wonderful friends for always motivating me and providing emotional support when other things were more pressing. Finally, I would like to thank my parents for being my parents, for being an inspiration in general, and for believing in me.

I hope you enjoy your reading!

Madelief Ritt

Amsterdam, June 29, 2022

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1. INTRODUCTION



De Nieuwe Meent, source: www.timetoaccess.com

“Then we’ll just do it ourselves...” (Platform31, 2015)

1. Introduction

Europe has witnessed the re-emergence of different self-organized and participatory forms of housing initiatives (Tummers, 2015). This recent wave of housing initiatives entails new aspects and seeks to address urgent issues of today's society (Czischke et al., 2020). Concerns about social inclusion and cohesion, as well as affordability and higher environmental sustainability standards, are among the latter. (Czischke et al., 2020; de Gouw et al., 2021; van Geuns, 2022). One type of this self-organized form of housing, that is currently re-emerging in European cities, is the housing cooperative, e.g. housing co-op (Balmer & Gerber, 2018). Members of a housing co-op jointly own the building and are together responsible for the design, construction, and management of their own building (Aernouts & Ryckewaert, 2019). The housing co-op is the owner of the building and the leaseholder, and the members rent their homes from their own cooperative. The basic principle is that people who are part of the co-op do not opt for rental or private ownership but go for a non-profit, long-term way of joint ownership (Lang & Novy, 2014). In this way, the residents have a lot of control over their own living space. Examples of housing co-ops from Sweden (Bengtsson, 1992), Norway (Sørvoll, 2019), Denmark (Ahedo et al., 2021), and Switzerland (Balmer & Gerber, 2018) have shown a strong record of providing affordable, high-quality, and safe housing for middle and low-income groups. They can constitute a valuable form of housing ownership with the potential to improve the quality of life for the larger community, by significantly reducing the financial burden of ownership (Saegert & Benítez, 2005).

The sustainable potential of housing co-ops

Besides being a valuable solution to the housing crisis, housing co-ops can also contribute to more sustainable living environments (Voinea, 2021). The recently developed and currently developing housing co-ops in Europe have been championing environmental sustainability and prioritizing sustainability in the design and management of their building (LaPalme, 2020). They build with wood, install solar panels, phase out harmful chemicals and install insect hotels to enhance biodiversity. Noticeably, recently initiated housing co-ops from the Netherlands have taken the lead by pioneering green solutions to become energy positive (De Architect, 2021), meaning they produce more energy than they consume. Members of the housing co-op have shown that they are willing to experiment with new ways of sustainable living and implement innovative technologies related to energy, construction, and nature inclusiveness (de Gouw et al., 2021). Moreover, housing co-ops can play a role in the sustainable housing transition as they are more likely to invest in energy technologies given their non-profit and long-term business models (Ryszawska et al., 2020). Accordingly, the potential of co-ops to clean energy communities has been recognized by EU leaders in the “Clean Energy for All Europeans Package”.

Housing co-op development in Amsterdam

More and more housing co-ops have been initiated in Amsterdam. In this city, 17 per cent of the residents of social rental housing show an interest in forms of self-management and self-organization of their homes (James et al., 2017). A growing group of residents also want to realize a (newly built) residential complex as a collective, by the means of a housing co-op. Since the establishment of the Housing Act in 2015, when the housing co-op has been legally recognized, these residents have had a concrete instrument to start to organize themselves based on a shared housing vision (see Woningwet 2022, Artikel 18a). In the Netherlands, the municipality of Amsterdam has made efforts to support these housing co-ops, as they recognize that they have a high potential to contribute to sustainable communities (Kuenzli, 2022). In 2020, 13 new build locations have been designated in Amsterdam on which housing co-ops can be built (Gemeente Amsterdam, n.d.). Besides, Amsterdam has set up a new municipal loan fund that should make it easier for housing co-ops to finance their initiative.

An example of a housing co-op is “De Warren”, which is the first housing co-op in Amsterdam to win a tender (Oost-online, 2019). They developed and designed the entire building, and upon completion, they will

collectively own the property and manage it themselves. De Warren will be built in a strikingly sustainable and innovative way (Muis, 2020). Specifically, the building will be energy-positive, with almost 200 solar panels and its own heat and cold storage, using energy poles- Housing co-ops like De Warren in Amsterdam seem to be able to give a valuable contribution to the energy transition and sustainable housing, by focusing on zero energy design measures. Especially, due to their non-profit, long term financial approaches and high sustainability ambitions, housing co-ops can have a high potential to implement sustainability measures and technologies, compared to conventional urban development projects (Balmer & Gerber, 2018).

Development of housing co-ops

So far, few housing co-ops have completed the whole process from idea to functioning organization and realized their own building (van der Meer & Lopi, 2015), even though many groups with active citizens have started a housing co-op in Amsterdam (oost-online, 2019). Therefore, housing co-ops in Amsterdam can be considered a niche as they are still in the experimental and pioneering phase. Likewise, previous pilots in Amsterdam showed that it is not easy for a start-up housing co-op due to several disabling factors, for example, related to finding a location, finances, or governance-related issues (Gemeente Amsterdam, n.d.). Accordingly, for this niche to become a more common form of housing, it is important to gain more insight into which disabling or enabling factors were experienced and how these can be addressed.

Concurrently, the scientific community has been paying more attention to this reoccurring form of housing (Balmer & Gerber, 2018; Ganapati, 2010; Jones, 2016; Lang & Novy, 2014; Sørvoll, 2019). Previous research on housing co-ops revolves around their societal benefits, mostly focusing on their potential to contribute to solving the failing affordable housing provision (Ahedo et al., 2021; Saegert & Benítez, 2005). Especially in countries such as Sweden, Switzerland, and Denmark, where this housing form is already a larger share of the housing market, literature has been published about how to support these initiatives institutionally. However, not much attention has been paid to their environmental sustainability practices and the results of innovative solutions (Brzeska & Jędrzejewski, 2021). Moreover, it is still uncertain how housing policy may hinder housing co-ops in the Netherlands, and sustainable technology implementation or measures in the housing co-op sector, or, conversely, if policies or actors encourage, and nurture innovation related to sustainability in this sector. Anecdotal evidence and practical examples suggest this sector is ideal to foster experimentation in sustainable construction and energy efficiency.

Research aims and questions

Therefore, this research aims to find potential contributions of housing co-ops to the sustainability of housing provision. Besides, this research aims to identify what (policy) measures are needed to support housing co-ops in Amsterdam, creating niches of innovation in housing provision. Finally, this research aims to get an insight into whether this sector of housing provision has the potential to generate sustainable measures that can be scaled up into housing policy in The Netherlands.

Therefore, this research will thus answer the following question:

What is the potential of housing co-ops to contribute to sustainability in the housing provision in the Netherlands, and what (additional) measures are needed to support housing co-ops?

This research question will be answered by the following subquestions:

1. What are the values of the housing co-op members, how do they make decisions, and how does this relate to their sustainability ambitions?
2. Which influencing factors and policy measures are provided by various actors to stimulate or hamper the development of housing co-ops?
3. How far are the implemented sustainability measures from the co-ops' ambitions, and what influencing factors hamper or stimulate such measures?

4. What trade-offs can be observed between sustainability outcomes based on values and influencing factors?

Report structure

To answer the above research questions, this study investigated several cases in the city of Amsterdam, by conducting semi-structured interviews with housing co-op members and relevant actors of the surrounding institutional dimension, and analyzed policy documents of the municipality of Amsterdam.

The following chapter presents the theoretical framework of this research through housing co-ops and how they relate to the sustainable housing transition and values. Additionally, a conceptual framework is given. Chapter 3 clarifies the research methodology. Followed by Chapter 4, 5, 6 and 7, which describes the findings that are derived from the empirical data. Chapter 8 discusses these findings and elaborates on the limitations and scientific and social implications of the findings. Next to that, it discusses the study's limitations and suggestions for further research. Lastly, Chapter 9 provides a conclusion, including policy recommendations.

Research context

Before continuing with the rest of this study, it is important to understand what types of housing co-ops exist and what this research is focusing on. In some countries, for example, the UK, "cooperative housing" is a formally defined concept (Tummers, 2016). Though, many projects show renewed interest in these more traditional models, like the German "Genossenschaften", or Spanish, Italian, or Polish housing co-ops, the legal requirements for a housing co-op differ per country (Kuenzli, 2022). A housing co-op can be a small, close-knit community or a larger, dispersed group (Gemeente Amsterdam, 2020). Alternatively, a small loose group or a large close-knit community with a common identity. As well as everything in between. According to the Dutch Housing Act, this group must consist of at least 5 people (see Woningwet 2022, Artikel 18a). In Switzerland, a minimum of seven members are required to establish a residence, whereas, in Germany, three are required. Most of the time, this group is frequently already present in existing residential complexes in close-knit neighborhoods. The initiators have committed to forming a group that will shape the initiative further. However, there are also examples that there was already a close-knit community that forms a housing co-op from the start. Residents work together to shape self-management and self-government. Housing co-ops can have other meanings and forms in different countries, in the Netherlands, there are roughly three forms (Crooy & Lupi, 2017):

- 1) The housing co-op collectively buys the houses or has them built and rents them out to members who manage them together;
- 2) Members buy the homes individually, through a scheme linked to the housing co-op, and jointly manage the homes;
- 3) The homes are and will remain with the current owner – for example, a housing corporation – and the housing co-op collectively takes over the letting, management and maintenance.

In this thesis, the focus lies on the first form of a housing co-op, in which the members collectively buy or build houses that they manage together. This is the form in which housing co-ops have the most say in their design. A housing co-op makes its own decisions about who is admitted, but within clear boundaries (Gemeente Amsterdam, 2020):

- 1) There is democratic governance
- 2) Individual members cannot obtain invested capital from the cooperative.
- 3) A housing co-op is not a for-profit organization.

2. THEORY



De Nieuwe Meent, source: www.timetoaccess.com

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2.

This chapter expands on the theory surrounding the housing co-op and the sustainable housing transition and explores the literature concerning the research question. First, it describes the relationship between the housing co-op and the sustainable housing transition. Second, the key concepts that enable the analysis that helps answer the research question are elaborated on. Finally, it provides a conceptual framework.

Sustainable housing transition

Implementing sustainability in housing involves several transitions, including the energy transition, the transition to a circular economy, and the transition to more nature-inclusive housing. This is also referred to as the "Green housing transition", or "Sustainable housing transition" (Jiang & Payne, 2019). The three-pillar concept of (environmental, social, and economic) sustainability, which is typically represented by three intersecting circles with overall sustainability in the center, has become widely accepted (Purvis, Mao & Robinson, 2019). The environmental dimension of this three-pillar concept, focusing on decarbonization of the housing industry, is central to the "sustainable housing transition" (Seyfang, 2010).

Green housing development demands a complex socio-technical transition based not only on sustainable materials or technologies and most importantly, on behavioral changes among housing market actors (Jiang & Payne, 2019). This includes planning, designing, managing, and constructing the built environment (Hagbert & Malmqvist, 2019). According to existing research, sustainable housing development is a complex, transitional process with many factors (financial, market, policy, and technological) influencing development outcomes (Jiang & Payne, 2022). Furthermore, studies looking specifically at sustainability transitions in the building industry have highlighted the complexities of transition processes as well as the diversity of stakeholder perspectives (Gibbs & O'Neill, 2014; Fastenrath & Braun, 2018).

Sustainable housing can be classified as "socio-technical systems". This refers to the societal functions it fulfills (Kern & Smith, 2008). The sustainable housing transition has been defined as a social transformation in which such systems can change structurally over time. It requires rapid and far-reaching changes to the socio-technical system, shifting towards multi-level and multi-stakeholder, polycentric forms of governance (Määttä, 2021). The transition of today's housing sector to a state with significantly lower greenhouse gas emissions is one of today's most crucial environmental, social, and economic processes (Skea and Nishioka, 2008). Understanding how such socio-technical transitions may occur is a significant interdisciplinary research challenge. Geels (2010) has studied the mechanism in which such transitions come about. Moreover, Geels (2002) suggests that a multi-level perspective (MLP) can be helpful in understanding system innovations, which happen through developments on three levels: niches, regimes (incumbent system), which are locked in on several dimensions, and a socio-technical landscape, see Figure 1.

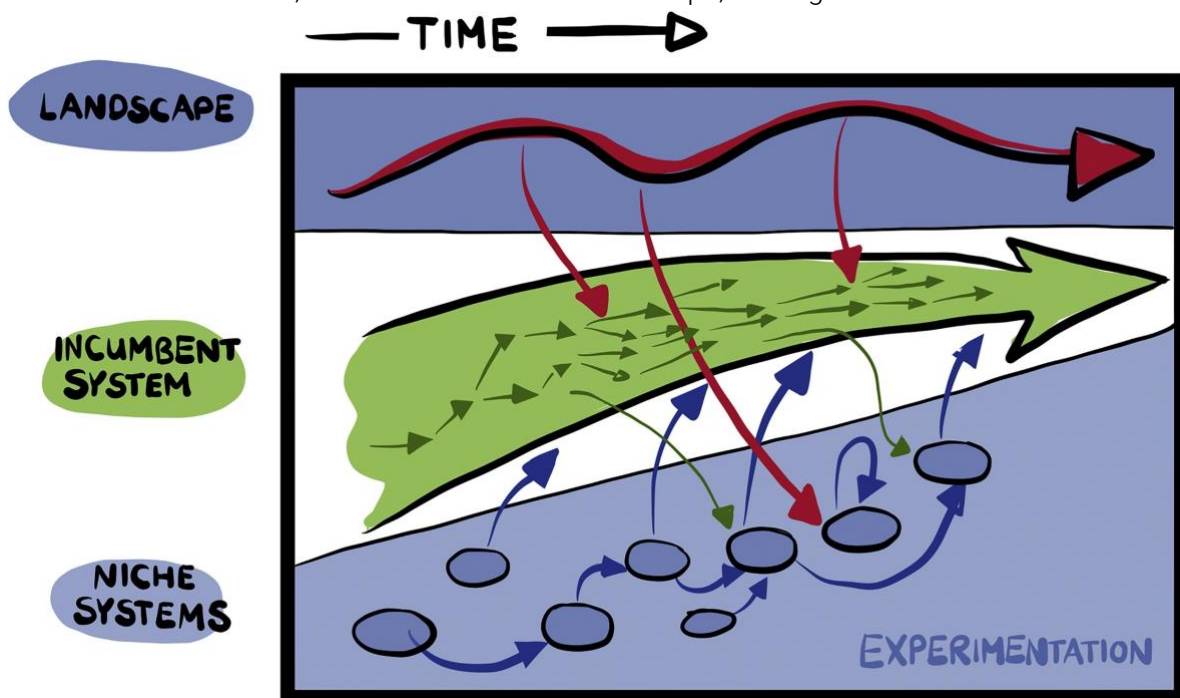


Figure 1. A visualization of the MLP and the dynamics between the incumbent system (socio technical regime) and emerging niche systems under the influence of the landscape developments (van Rijnsoever & Leendertse, 2020).

According to this MLP, niches can account for the development of radical innovations and, when successful, become robust enough to diverge and attract the broader interest of society. These niches are established by dedicated actors who “fight, negotiate, search, learn, and build coalitions as they navigate transitions” (Geels, 2010). Even if niches do not break through and become blueprints for the wider transformation, they continue to be vital sources for innovative ideas to resolve regime tensions.

The housing co-op as green niche

To transition to a sustainable society, uptake of radical innovations is essential within the building sector and housing provision, since a large part of the Dutch carbon emissions comes from this sector (Tambach et al., 2010). Moreover, the building sector plays an important role in urban climate change adaptation strategies (Gibbs & O'Neill, 2014). As stressed by Feitelson & Saloon (2004), innovation is not only about technical or economic feasibility, but social acceptance is also a large factor in the successful implementation of innovation. Examples of housing co-ops in Europe have shown that they are experimenting with greener ways of living and are open to new green innovations (Voinea, 2021; LaPalme, 2020). Therefore, housing co-ops that implement and experiment with energy efficiency, nature-inclusive design and sustainable construction materials can be considered as “green niches”. According to Smith (2007) green niches are spaces where “networks of actors experiment with, and mutually adapt greener organizational forms and eco-friendly technologies” (Smith, 2007, p.427). Within these green niches, actors are willing to invest in new technologies and accept teething problems which can come with specific functionalities (Smith, 2007). Thus, housing co-ops are important because they act as niches that can provide locations for learning processes, such as technical specifications, public policies, user preferences, and symbolic meanings (Geels, 2004).

Collaborative action

Furthermore, choosing sustainability measures and technology requires collective decisions and actions. According to Bauwens (2013), citizen collaboration and collaborative action can contribute to the transition to renewable energy technologies. Collaboration allows people to work together to achieve a common goal or purpose (Czischke, 2018). This frequently involves working across boundaries and in multi-sector and multi-actor relationships.

A housing co-op starts with a group (Kuenzli, 2022). Next to that, because housing co-ops are based on collaborative action amongst the members, they can be viewed as an vital actor in the innovative urban energy transition, with the potential to overcome existing barriers (Ryszawska et al., 2020; Hasselqvist & Bogdan, 2015). Thus, housing co-ops are a form of “collaborative housing,” which has been incorporated by many researchers over the last decades (Czischke et al., 2020). Collaborative housing, as defined by Fromm (2012) is “an umbrella term, wide enough to stretch across all international variations” (p. 364). Moreover, collaborative housing refers to the collaborative nature of residents' relationships in this type of housing, both amongst each other and with a variety of external actors (Czischke et al., 2020).

Values and shared vision

As housing co-ops are jointly responsible for the design, construction, and management of their own building, their choices are based on values and a shared vision amongst the housing co-op members (Czischke et al., 2020). Meaning, the members of the housing co-op share ideas on how to live together. Thus, if housing co-ops share a common vision for sustainability, they have the potential to implement measures and technology related to sustainable housing in many ways. The importance of values in the socio-technical transition was also stressed by Pesch (2022). Pesch (2022) built upon the socio-technical regime theory by creating a socio-technical value map (SVTM), a method to identify values and their incorporation into a socio-technical system. The STVM explicitly accounts for the societal values that are to be secured in the design of technologies or surrounding institutional context.

Moreover, according to the MLP, the prosperity of new technology is not only determined by practices and processes within the niche, but also by processes and changes within the level of the existing regime, and the

landscape (Geels, 2010). The tensions between niches and regimes occur on multiple dimensions, such as regulations, markets, and cultural meanings (Lovell, 2007).

Regime dynamics

An important point of the MLP is that the success of a new technology is not only determined by practices and processes within the niche, but also by developments and changes within the level of the existing regime, and the landscape. Smith et al. (2005) contribute to this debate by arguing that the notion that regime change begins in niches and progresses upwards underplays the significance of the relationship between landscape pressures and regimes. Specifically, they characterize regime change as being based on how changing pressures affect a regime and the degree of coordination of responses to these pressures, both from within and outside the regime. This can be linked to the dynamics between the members of the housing co-op (the users), the housing co-op (the niche) and the surrounding institutions housing co-ops (regime), which is relevant for the niche to breakthrough and become a more significant form of housing.

Sustainable transitions are better understood as changes mediated by institutionally embedded networks of actors' resources, interests, and expectations. (Smith et al. 2005). Thus, also as stressed by Li et al. (2015) individual actors' values, behavior, and strategies, as well as regulations, policies, and markets, all influence sustainable housing system transitions. According to Geels (2011), the MLP captures the dynamics of various sub-regimes, see Figure 2. Also in the current housing regime, there are several sub-regimes present, namely technological but also institutional dimensions. These sub-regimes have their own dynamics but can also interact and co-evolve with each other.

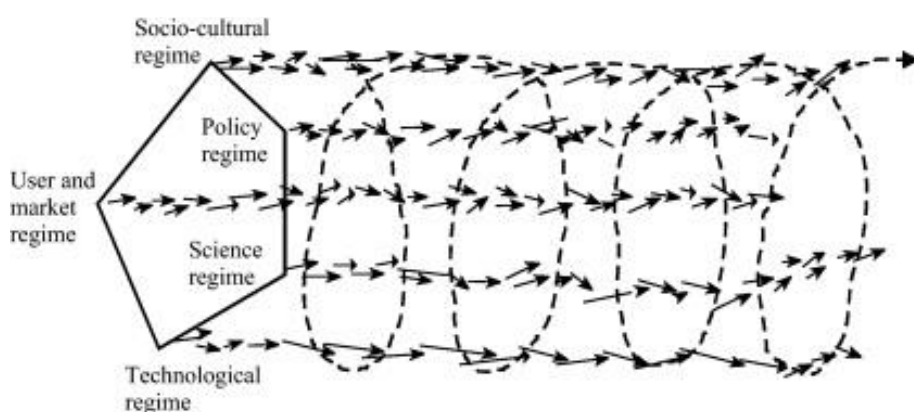


Figure 2. Continuous process alignment (sub-regimes) in a socio-technical regime (Geels, 2011).

Jian & Payne (2019) suggest that any shift toward normalizing sustainable housing practices will be driven and caused by changes in financial or technological regimes, as well as by changes in policy and market regimes, with implications for both policymakers and market actors. This opens the issue of the importance of governance processes in sustainable technology transitions in terms of agency and intervention in relation to both landscape and regime (Smith et al., 2005).

Conceptual framework

The conceptual framework illustrated in Figure 3 (on the next page) is related to the research concepts derived from the theoretical framework presented in this chapter, as well as the sub-questions presented in the introduction to this thesis. The research objective is in the center of the conceptual framework, which is to identify what is (additionally) required to stimulate the development of housing co-ops and to investigate the sustainability potential. This objective is surrounded by the main concepts central to this research and the overarching theory of socio-technical transitions (the MLP), which serves as the study's foundation.

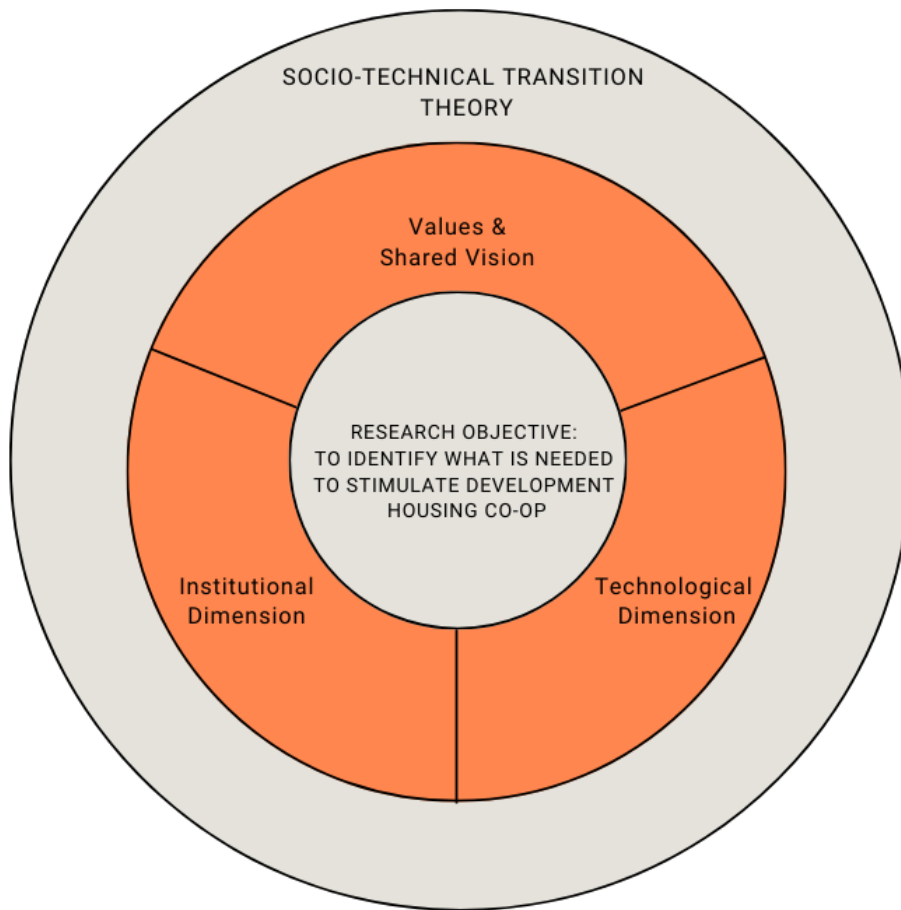


Figure 3. Conceptual Framework

3. METHODOLOGY



De Warren, source: [www. natrufied.nl](http://www.natrufied.nl)

3.

The methodology for answering the research question is provided in the following chapter. A description of the research questions, research approach, case selection, data collection and data analysis, are given, lastly ethical concerns, are addressed.

Research questions and corresponding methods

To achieve the study's aims of identifying whether the housing co-op sector has the potential to generate sustainable measures that can be scaled up into housing policy in the Netherlands, the following research question is addressed:

What is the potential of housing co-ops to contribute to sustainability in the housing provision in the Netherlands, and what (additional) measures are needed to support housing co-ops?

The following subquestions support the main research question and were based on concepts from the conceptual framework presented in the previous chapter. Answering these subquestions identifies (additional) measures necessary to stimulate the development of housing co-ops and therefore answer the main research question. Table 1. provides an overview of the methods that are used to answer each sub-question.

Table 1. Methods

Subquestion	Research method	Data collection source
1: What are the values of housing co-op members, how do they make decisions, and how does this relate to their sustainability ambitions?	<ul style="list-style-type: none">• Semi-structured interviews• Inductive/deductive coding approach	<ul style="list-style-type: none">• Housing co-op members• Additional information from housing co-op websites
2: Which influencing factors are provided by various actors to stimulate or hamper the development of housing co-ops?	<ul style="list-style-type: none">• Semi-structured interviews• Inductive/deductive coding• Policy analysis• Thematic coding	<ul style="list-style-type: none">• Housing co-op members• Relevant actors (e.g. Municipality or bank)• Policy documents from Municipality of Amsterdam• News articles
3. How far are the implemented sustainability measures from the co-ops' ambitions, and what elements hamper or stimulate such measures?	<ul style="list-style-type: none">• Semi-structured interviews• Inductive/deductive coding approach	<ul style="list-style-type: none">• Housing co-op members• Additional information from housing co-op websites• News articles
4. What trade-offs can be observed between sustainability outcomes based on values and influencing factors?	<ul style="list-style-type: none">• Semi-structured interviews• Additional information from housing co-op websites	<ul style="list-style-type: none">• Housing co-op members• News articles

Research approach

To answer the above research questions, an empirical and qualitative approach is essential. For this, several housing co-op cases in Amsterdam were selected for research. On top of that, a cross-sectional study approach was chosen to analyze the surrounding institutional dimension. Hence, interviews with members of housing co-op initiatives and stakeholders from surrounding institutions were conducted. This study is based on empirical data gathered through in-depth interviews. A qualitative method was chosen because it allows for a more in-depth understanding of social practices as well as the interviewees' opinions, views, and experiences (Byrne, 2004). The values and practices of the housing co-op members could thus be identified. The interview questions (see Appendix 1) were based on the concepts in the framework presented in the previous chapter. To ensure that the dialogue remains flexible and open, open-ended questions were used in this study. Furthermore, participants were not steered towards forming a certain opinion, which increases the validity of the results. Likewise, interviewees may provide responses that were outside of the existing framework. Furthermore, additional information was gathered from the initiatives' official websites, as well as online policy documents from the Municipality of Amsterdam. This was needed to analyze the regulations, subsidies

concerning (sustainable) housing. Finally, as shown in Appendix 2, a strict planning was followed during the writing of this thesis.

Case selection & data collection

To answer the research question, several housing co-op cases were selected.

In the Netherlands, two institutions have mapped the housing co-ops in Amsterdam, namely Stichting Cooplink (Cooplink Foundation) and Vereniging Gemeenschappelijk Wonen (Foundation Collaborative Housing). Figure 4 presents a map of the housing co-ops in the Amsterdam region. Housing co-ops go through different phases, from idea to actual building and implementation of sustainability measures (Zonneveld, Mees, 2020). Therefore, to give a complete picture of the phases housing co-ops go through and the corresponding experienced barriers, three cases in different phases (process, and implementation) were chosen for analysis. By this means, empirical evidence was collected on different phases of the housing co-op.

This research focuses on how housing co-ops and the implementation of sustainability in their design and property. Therefore, the following criteria were selected to choose suitable cases representing this research' scope.

Case selection criteria

1. The case should be a housing co-op in the city of Amsterdam.
2. The case should regard a developed or developing property.

Based on the selection criteria and the housing co-op's willingness and availability to participate with this research, three cases in total were chosen, of which one or two people from each initiative were interviewed. The selected cases are in different phases of realizing their building, varying from process and implementation/realization phases:

Case 1: De Warren (implementation/realization)

Case 2: De Nieuwe Meent (process)

Case 3: Akropolis-IJburg (process)

Cross-sectional study

Different actors are currently involved in the housing co-op sector. Actors such as NGO's, financial institutions or the municipality. As these different actors are not necessarily linked to all cases, a cross-sectional study was carried out to incorporate their information into the research. The following criteria were used to select interviewees for the cross-sectional study:

- One interviewee working for the municipality of Amsterdam that works closely with housing co-ops initiatives.

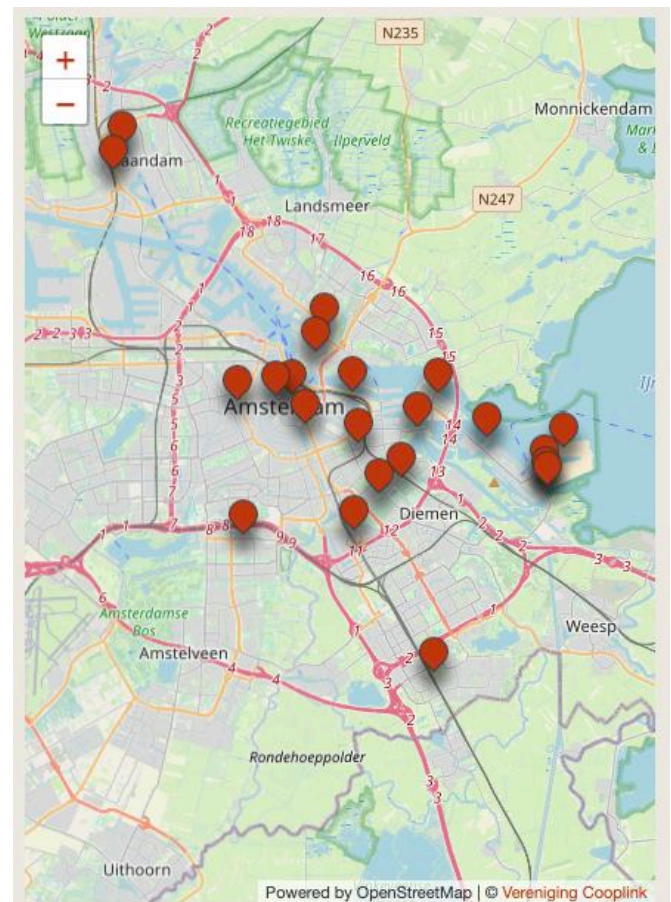


Figure 4. Housing cooperatives affiliated with Cooplink Foundation, source: www.cooplink.nl/initiatieven

- One interviewee that worked for an institution that advises housing co-ops initiatives, such as Cooplink, Platform 31 or foundation WOON!.
- One interviewee working for a bank that (aims) to help finance housing co-ops.
- One interviewee working for an architecture office or urban design office that has experience with cooperative housing groups.

This resulted in a list of about 20 relevant people in Amsterdam's housing co-op sector (Appendix 3). Due to the snowball effect, more potential interviewees were contacted through the network of housing co-op members. They could tell which key people in the field were necessary to incorporate in this study. Stakeholders were referring to each other during the interviews, confirming that the relevant stakeholders in the field were contacted for this research. Following that, two events were attended to obtain additional information on the topic and perspective from a specific actor who was underrepresented in the interviewees, namely the architect. More information about these events, the speakers, and the content can be found in Appendix 4.

Included documents and articles

Besides interviews, other relevant data was collected to give a complete picture of the field and fill in missing information:

- Policy documents from municipality of Amsterdam about housing co-op, land and leasehold pricing and self-build policy.
- National policy documents regarding sustainability in housing
- Articles regarding housing co-op developments from knowledge and network organization Platform 31.
- News articles about housing co-op developments in Amsterdam from Dutch newspapers such as the Volkskrant, het Parool or de Architect.

Data analysis

Several interviews with housing co-ops and other relevant actors were conducted. After that, the interviews were taped and transcribed. In addition, notes were taken to help organize the transcripts, and key responses from participants were highlighted. For the data analysis, the transcripts were coded using the coding program Atlas ti. A combination approach of deductive and inductive coding is executed: I deductively started with a set of codes, based on the concepts from the conceptual framework presented in 4.1., but then inductively came with new codes and iterated this on the codes as I went through the data. To ensure the reliability of the results, the transcripts were coded twice. To ensure credibility, the coding process was documented. The initial and final set of codes is presented in Appendix 5. Furthermore, policy documents from the municipality of Amsterdam were analyzed by a thematic coding approach to identify themes.

Ethical considerations

Since the data collection of this thesis involves human participants, it was necessary to follow ethical principles regarding the participants' privacy and potential harm. First, I informed all participants individually about the aim of the research topic. After that, participants were assigned a consent form. This form makes sure that participants know what the study is about and voluntarily agree to take part in the study. Additionally, the form asks participants if they prefer to be or not to be anonymous. This form also guarantees that participants can withdraw from the study at any time and are free to refuse any answer without any consequences. After the participants and researcher signed the consent form, the interviews took place. In the case of online interviews, the consent form was replaced by repeating the interviewee's consent at the start of the interview recording.

The audio records were stored on a personal google drive account, secured by 2-step password verification. All personal data from the drive will be removed one month after the study is completed to ensure data security.



4. CASE DESCRIPTIONS, VALUES & SUSTAINABILITY AMBITIONS



De Nieuwe Meent, source: www.timetoaccess.com

4.

What are the values of housing co-op members, how do they make decisions, and how does this relate to their sustainability ambitions?

Each case is introduced with some background information. Second, to address the subquestion, the values and shared vision of each case are presented. Values are subtracted from the shared visions obtained from interviews and the websites of initiatives. Following that, the decision-making of the housing co-op is described. Finally, it is explained how these sustainability ambitions relate to the shared vision and decision-making of the housing co-op. Chapter 7 delves deeper into how these values influence their long-term outcomes regarding sustainability. This gives a deeper understanding of which values are prioritized by housing co-ops.

CASE 1. DE WARREN

RESULTS



Amount of housing units: 36
Rental category: Social and mid-rental
Location: Centrum-eiland, Amsterdam
Started in: September 2017
Implementation/realization: October 2022

Background info

De Warren was the first in Amsterdam to win the pilot and tender for housing co-ops with the aim of insuring affordable rentals for the city (De Architect, 2021). As a result, they developed 36 homes on Centrum-eiland, of which 16 social and 20 mid-rentals, including small studios, starter homes, and family homes, combined with many common areas (De Warren, n.d.-b). Upon completion, they will collectively own the property and manage it themselves (De Architect, 2021). In addition, they arranged thirty percent of their building for communal areas (De Warren, 2019). This includes a co-working space, a yoga futsal room, communal living room, silence room, maker space, music studio, communal garden, greenhouse and roof terrace, and a communal kitchen on each floor. The property is currently being constructed.

Values & shared vision

The group of De Warren has been working together for years on cultural events through their collective "KONIJN (Rabbit)" and started this housing co-op with shared values. As this group was initially a group of friends, fostering social interaction, community, and social cohesion is part of their shared vision. They want to build "a small and open village, in the city" (De Warren, n.d.-b). Sharing is also one of their core values; sharing can improve community feeling, but it fosters the use of fewer resources.

Sustainability is another core value for De Warren. They believe their building must not only be a pleasant place to live for the community but also animals. Sustainability means for de Warren to apply the principles of circular design as much as possible, considering the "7 Pillars of the Circular Economy", see Figure 5.

Besides the environmental sustainability that is important within these pillars, also attention to society, culture, health, and well-being is considered (Metabolic, 2017). Moreover, they aim to share all lessons with the world to help other groups with similar ambitions. Thus, transparency is an important value for de Warren. This is also one core value within the 7 pillars of circular economy, next to equity and resilience (Metabolic, 2017).

Decision-making

Based on these values, their internal governance structure has been chosen. The design is a co-creation between the members of De Warren and the architects of Natruified Architecture (Natruified Architecture, n.d.). The design was created after four days of workshops with all the future residents. Each workshop had a different theme: the building's appearance, the relationship between private and collective spaces, sustainability, and the building's future.

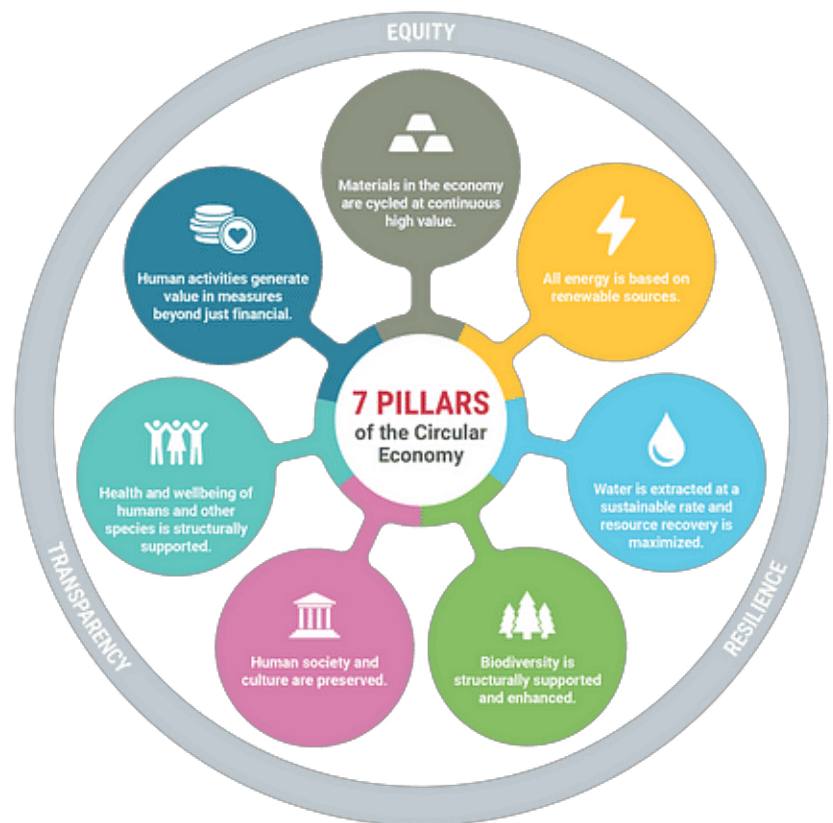


Figure 5. The 7 pillars of the Circular Economy from Metabolic (2017)

De Warren has opted for a consultation structure in which members have much say and jointly shape their design and living environment. This sense of ownership, involvement, and responsibility creates a sense of community that will generate positive social value (De Warren, n.d.-c). According to Jacob, treasurer of de Warren and economic advisor, their organization structure is not democratic, unlike the other interviewed housing co-ops. [REDACTED]

Sustainability ambitions

Realizing a sustainable building is top priority for De Warren. From the start, they had several ambitions. Starting from the initiation phase, De Warren strived to:

- be energy positive [REDACTED] "That was a harsh requirement of our co-op." (J. Koopmans, personal communication, April 13, 2022). This means they aim to use every square meter roof for solar panels, regardless of the EPC score, to become energy positive.
- be innovative by using "energiehijpalen (energy poles)" for their own heat-cold system.
- be completely build out of wood. Next to that, to use as much secondhand wood as possible.
- build nature inclusive.
- share services and appliances.
- be adaptable, so that the building can be changed for later generations that might have want to use the building in other lay-outs or for other purposes.
- to be rainproof by implementing several climate adaptive measures (this was also a harsh requirement of the municipality).

Their sustainability ambitions are high because sustainability is part of their shared vision and one of their core values. In addition, based on the ambitions, they cover various aspects of sustainability based on the principles of the circular economy. Furthermore, they believe that in addition to being a pleasant place for humans, the building should be a place for animals. Therefore, intend to build with nature inclusive. Chapter 7 delves into the trade-offs between sustainability measures based on these various values and how they relate to the final sustainability outcomes.



De Nieuwe Meent, source: www.timetoaccess.com

CASE 2.

DE NIEUWE MEENT

RESULTS

Amount of housing units: 40
Rental category: Social rent
Location: Watergraafsmeer, Amsterdam
Started in: March 2018
Implementation/realization: August 2022

De Nieuwe Meent, translated as "The New Common" is a housing co-op organized around the principles of communing. The building complex is made up of both independent social housing and shared apartments for residential groups. Residents share common facilities (such as laundry rooms and terraces), and several areas within the building are also open to the public. De Nieuwe Meent is one of Amsterdam's first housing co-op pilot projects (Jonkhout, 2021). It applies to partially self-employed and partially dependent occupancy that is less than the rent subsidy limit of the municipality (Platform 31, 2021). After a tender competition, they were awarded the Archimedesplantsoen plot in the Watergraafsmeer neighborhood. They are almost in the implementation phase and aim to start building before August 2022 (L. Schipper, personal communication, May 4, 2022).

Values & shared vision

The founding members of De Nieuwe Meent are a group of individuals who came together through the network of a "Woon groep (living group/collective) in Amsterdam East that they established based on a number of values and a common vision (Jonkhout, 2021). Figure 6 shows the four core values which the community and building are founded on. As prior mentioned, De Nieuwe Meent is fully organized around the concept of "communizing" (de Nieuwe Meent, 2022c), which has several principles around its concept concerning governing of commons within a community (Ostrom, 1990). The principles range from defining clear group boundaries to making sure people affected by rules are included in modifying the rules (Walljasper, 2011). Secondly, diversity is one De Nieuwe Meent's core values (de Nieuwe Meent, 2022c). This includes creating a spectrum of ethnicity, class, gender, religion, sexual orientation, and jointly disabled bodies. Moreover, it includes actively working together to create a safe space for people from structurally marginalized groups. Besides this, care is an important value, specifically, social care and solidarity (De Nieuwe Meent, 2022c). Lastly, sustainability is an important value. They recognize that the environmental impact of a building extends throughout its entire lifecycle, from construction and use to eventual repurposing.



Figure 6. Core values De Nieuwe Meent

Decision-making

Based on these values, the internal governance structure and decision-making practices are created, in which ultimately the design of the building is based upon. The housing co-op is built on an association and members, in which the organization consist of four elements (De Nieuwe Meent, 2022b): The "Meentvergadering (Common meeting) ", "Meentraad (Common council) ", "Meentbestuur (Common management)" and "Comité voor de Meent (committee for the Common) ". The Common meeting is the most important decision-making organ of the association, in which all renters (the members of the association, which is the council) and other

stakeholders come together. The common management is chosen by the council, which is decided by Dutch law. The committee consists of external advisors which are chosen by the meeting, including architects or experienced members of other housing co-ops.

All decisions are consensus-based, which comes from their vision based on communing (De Nieuwe Meent, 2022b). This means that everyone must agree with the decision, or as Lauri says, "must be able to live with it" (L. Schipper, personal communication, May 4, 2022). They believe this consensus-based decision-making generates a different type of conversation as they do not want meetings to take too long and as an individual you are more tended to compromise. Next to that, the building is designed through co-design processes, which allows homes to be customized to the different living groups. This gives future residents as much control over their living environment as possible and leads to innovative designs for communal areas and homes. There are currently five working groups doing all the work to further the project. Each group has its own responsibilities and focus, e.g., community or finance. Membership in the association also means active participation in one or more of these working groups.

Sustainability ambitions

As mentioned earlier, sustainability is an important value which their sustainability ambitions are based upon. They recognize that the environmental impact of a building extends throughout its entire lifecycle and goes beyond the construction to eventual repurposing. As a result, De Nieuwe Meent strives to be as circular, carbon and energy neutral, rainproof, and adaptable as possible (L. Schipper, personal communication, May 4, 2022).

More specifically, this means they strive to (De Nieuwe Meent, 2022a):

- be "energy positive", meaning that they produce more energy than they consume, with an EPC¹ of 0,00. This low EPC will be realized by a solar passive building design, high insulations and a heat/cold storage combined with a heat pump.
- share services and share common facilities such as washing machines, tools, toy collections, and children's clothing. Sharing services is done to use overall use less, and lower costs.
- incorporate high flexibility and adaptability goals throughout the building design. This allows them to remain resilient and durable, given the unpredictability of the future in general, as well as the likelihood that the residents will change over time.
- achieve an MPG² of 0,45. This will be achieved by building with wood as much as possible but also using as many secondhand building materials as possible. By building with wood, they not only have a low MPG, but also store carbon in their building.
- be rainproof by implementing several climate adaptive measures.
- build "nature inclusive". Not only will they plant and maintain the courtyard, but they will also maintain the green roofs and facades. Low-tech but innovative solutions will be used for a smart water management system that includes flora and fauna biodiversity.

Sustainability is part of the values and shared vision De Nieuwe Meent, but not a core value. Their sustainability ambitions, however, are high and comparable to De Warren's. The ambitions for energy, nature inclusion, and climate adaptation are comparable to those of De Warren. Moreover, they also want to build nature inclusive. In terms of material use (building with wood), the ambitions appear to be lower than those of De Warren. They

¹ The energy performance coefficient (EPC) is part of the energy performance standard (EPN). The EPC indicates how energy-efficient your home is. The more energy-efficient the building, the lower the standard. In plain language: the better you make a home with insulation, ventilation, and installation, the less energy you need to keep the home comfortably warm. (*Wat is Energie Prestatie Coëfficiënt (EPC)?*, 2019)

² The Environmental Performance of Buildings (MPG) expresses the environmental impact of the materials used in a building, including all materials that must be replaced during its lifetime (RVO, 2017). The total amount is divided by the lifespan and by the gross floor area of a building. The MPG is mandatory with every application for an environmental permit (Omgevingsvergunning), concerning new-build office buildings and homes. As of July 2021, the maximum limit value of 0.8 applies for the MPG. The aim is to gradually tighten the requirement and halve it by 2030 at the latest. The MPG is an important measure of the sustainability of a building. The lower the MPG, the more sustainable the use of materials.

want to use wood "as much as possible," whereas De Warren desired that the entire structure be made of wood. Chapter 7 delves into the trade-offs between sustainability measures, considering other values than sustainability and how they relate to the final sustainability outcomes of the building.

CASE 3.

AKROPOLIS-IJBURG

RESULTS



Akropolis-IJburg, source: <https://akropolis-ijburg.nl/>

Amount of housing units: 30

Rental category: Social and mid-rental

Location: Centrum-eiland, Amsterdam

Started in: September 2017

Implementation/realization: Summer 2023 (estimated)

Background info

Housing co-op Akropolis-IJburg is an initiative between Vereniging (association) Akropolis Amsterdam (VAA) and Wooncoöperatie (housing co-op) Centrum-eiland IJburg (Akropolis-IJburg, 2022). Together they want to realize 30 multi-generation homes on the newly constructed Center Island. This concerns a mix of 8 social rental homes and 22 medium-priced rental homes. The housing co-op is a residential community of younger and older residents who enjoy developing a residential building together and living there for a long time in an atmosphere of mutual respect, social cohesion, and with attention for each other. Akropolis-IJburg has a location, namely Center Island, and are currently finalizing their financial plan to start building (R. Schalk, personal communication, April 4, 2022). They are currently working on their preliminary design of the building. They aim to start building spring next year, but this could be postponed due to hindrances related to financing. VAA is an association that aims to realize residential complexes for people from 55 years old in the Amsterdam region. Prior to this housing co-op, the group realized the Akropolis Tower on Zeeburgereiland (Coöperatieve Vereniging Bewoners Akropolistoren, 2019).

Values and shared vision

According to Rene, one of the co-founders, the housing co-op values stemmed from the original "idealistic" association that initiated the housing co-op (R. Schalk, personal communication, April 4, 2022). The first value relates to the "living" aspect, which includes valuing intergenerational living with a 50/50 mix of young and old residents (old refers to those over 55), with the intention of building housing for life. Besides, the co-op also values "nabuurschap (neighborship)," which means that the residential community is part of and contributes to the neighborhood or district, where people from all walks of life, young and old, live together pleasantly (Akropolis- IJburg, 2022). Another value that is central in this co-op is diversity; not only is intergenerational diversity important for Akropolis- IJburg, but they also aim to be a reflection the diverse population of Amsterdam. Self-determination, equality, tolerance, freedom, and personal responsibility are also central values to this initiative (Akropolis- IJburg, 2022). This means anyone can do whatever they desire if it does not harm others. Next to these more social-related values, affordability is also an important value for Akropolis-IJburg. As quoted on their website "We see added value in the coexistence of a group of people varying in age, in which occupations, age and income are not the decisive factor for the place of residence." (Akropolis- IJburg, 2022). Therefore, realizing short- and long-term affordable housing is a priority. Lastly, according to Rene, sustainability is not necessarily a core value of their initiative but rather an obvious requirement. Therefore, they pay attention to sustainability and nature.

Decision-making

As mentioned earlier, Akropolis-IJburg is a housing co-op that originates from the VAA association. In total four board members organize and arrange mostly everything (R. Schalk, personal communication, April 4, 2022). Behind that are the members. The members, which are the future residents, are included in the design process (Heida, 2021). The members are divided into working groups, each focusing on a different aspect of the process, such as design, sustainability, and living. As a member of the Akropolis-IJburg housing co-op, you will design the residential building and your own home alongside your future neighbors. Members also consider how the communal areas and facilities, such as the parking lot and storage room, will be designed. The future residents also draw up a management and maintenance plan.

"Realizing a project like Centrum-eiland requires a very intensive and almost professional approach," according to their website (Akropolis- IJburg, 2022). "And there has been very little success in actively involving members",

is mentioned (VAA, 2022a). The group of members is too small and is difficult to engage. In fact, the "living working group" no longer exists because there are no longer volunteers who want to participate (VAA, 2022b). This means that the board must oversee all project-related activities. This severely limits one's ability to participate in projects. According to Rene, the members' lack of engagement is also due to the lengthy nature of the process. It takes many evenings in attics or community centers to get it done. And therefore, you can see people giving up (R. Schalk, personal communication, April 4, 2022).

Sustainability ambitions

As mentioned in the previous paragraph, building sustainable is rather obvious for housing co-op Akropolis-IJburg. Moreover, they strive to:

- be energy positive
- build circular and built primarily with wood. They do not communicate this because they've learned from De Warren that building entirely with wood very ambitious and expensive, and therefore not realistic concerning their priority to be affordable (R. Schalk, personal communication, April 4, 2022).
- not use cars; there will only be space for 2 cars for the entire building.
- build adaptable and multifunctional. They want the building to be constructed in a way that it can be used for other purposes than living in the future or changing the layout of apartments and shared spaces.

Lastly, according to Rene, sustainability is not necessarily a core value of their initiative but rather an obvious requirement. Therefore, they pay attention to sustainability and nature. Comparing their ambitions with those from De Nieuwe Meent and De Warren, it is noticed that they are less ambitious in terms of sustainability. Nature inclusiveness is not mentioned, and in terms of material use they are also less ambitious. In addition, they do not communicate their ambitions to the outside world, compared to De Warren and De Nieuwe Meent, which do communicate more with these ambitions. Chapter 7 delves into the trade-offs between sustainability measures, considering other values than sustainability and how they relate to the final sustainability outcomes of the building.



5. INFLUENCING FACTORS RELATING TO THE DEVELOPMENT OF HOUSING CO-OPS



P. 14

De Nieuwe Meent, source: www.timetoaccess.com

5.

Which influencing factors are provided by various actors to stimulate or hamper the development of housing co-ops?

This chapter describes the stimulating and hampering aspects mentioned during the interviews with housing co-op members and surrounding actors, as well as those derived from policy document analysis. The subchapters are divided in knowledge, social, legal, and financial related influencing factors. The coding process generated these four categories.

5.1 Knowledge-related influencing factors

According to the housing co-op members and surrounding actors, elements related to knowledge can play a role in realizing a housing co-op. The following subchapter presents the knowledge-related influencing factors that limit or enhance housing co-ops and the development of housing co-ops in Amsterdam.

Internal knowledge: presence of high educated or experienced people

By analyzing the different interviews with housing co-ops and other stakeholders, knowledge seems to be an important influencing factor for housing co-ops. Realizing a housing co-op is a long and intensive, and as Marije, who is working for the municipality's housing co-op program, stated "very complex and lengthy" process, which involves several different disciplines and requires specific knowledge or experience (M. Raap, personal communication, April 25, 2022). As a housing co-op is formed by the members, knowledge, and expertise differs between housing co-ops, and therefore, initiatives experience the process differently.

The Warren's members are "very professional," according to Aart, a Rabobank advisor who works closely with initiatives in Amsterdam (A. Cooman, personal communication, April 11, 2022). As Jacob from housing co-op De Warren said: "We are lucky to have experienced people within our association. There have two economists, including me; this is very helpful as financial planning is a big part of the process. Otherwise, you would have to hire someone to do this. In addition, we have many consultants and people who are used to project management" (J. Koopmans, personal communication, April 13, 2022). Similarly, for Akropolis, experience within the team provided useful knowledge during the process: "One of our board members is a former architect who, despite his retirement, brings a lot of professional knowledge with him. Especially with choosing advisors and contractors" (R. Schalk, personal communication, April 4, 2022).

In an interview published on the De Warren's website, one of the architects of De Warren emphasizes the importance of knowledge within your initiative: "What has struck me the most is the level of organization on De Warren's board. The board of De Warren has been my most professional client" (X). According to the architect, De Warren knows what to prioritize and has their own construction expertise. Moreover, they also know how to contact municipalities, do finances, and arrange workshops to arrive at a jointly decided design. The architect continues: "It's incredible how much knowledge they've appropriated for themselves; it really made a difference. Otherwise, I am not sure if we would have made it" (X).

External knowledge: saving costs by hiring experts

Thus, having this knowledge within your initiative mostly saves money and perhaps time since other initiatives that do not have this benefit need to hire more people to advise them on certain topics. For example, De Nieuwe Meent hires a small team of people who advise them on finances and legal aspects and a project manager that organizes all arrangements with the contractor/builder. Even though this is expensive, Lauri claims that these people frequently work "semi-voluntarily" for them. They do this because they believe in the societal relevance and importance of their project and thus work for a lower hourly rate (L. Schipper, personal communication, May 4, 2022). Besides, hiring these experts in your team can also limit the number of mistakes that would be made if a housing co-op would organize everything themselves. However, this is not guaranteed. Organizing and arranging a lot by yourself as an initiative can result in making mistakes during the process, for example, considering the design of the building, leading to high costs that require budget cuts, by having the architect need to make changes in the design. This also makes it very important whom you hire, especially contractors and installers who seem to make big mistakes in some cases, that can cost a lot of money which initiatives cannot suffer.

A major barrier, according to Jacob from De Warren, was related to estimating the construction costs during the design process: "If I had to do it all again, I would hire an architect as well as a cost estimator, someone that is aware of the design costs and can identify expensive items. Then you are aware of it as well as the architect, rather than that you find out very far along in the process" (J. Koopmans, personal communication,

April 13, 2022). This is also confirmed by the architect of De Warren; he suggests involving a contractor very early on in the design part of the process (Vermaat, 2022). This person can calculate during the process, which can reduce unforeseen financial setbacks.

Knowledge sharing: platforms & support

Though there are several knowledge-related factors that limit the development of housing co-ops, there is already a lot of effort done by various actors in terms of sharing knowledge and providing support to initiatives. As mentioned by Lauri from De Nieuwe Meent: “We receive support from !WOON, the support center for tenants and owner-occupiers in Amsterdam” (L. Schipper, personal communication, May 4, 2022). Foundation WOON! is a foundation that supports and guides housing co-op initiatives in the city of Amsterdam. According to Clemens, they accomplish this by providing information during the process of an initiative (C. Mol, personal communication, April 14, 2022). They offer courses and assistance in setting up the co-op and developing a financial plan. They provide courses and help with setting up the financial plan. They also assist the municipality in policymaking because they are experienced in the field and know what factors are impeding or could potentially help the development of co-ops.

Next to that, Amsterdam has a housing co-op platform, The Platform for Housing Cooperatives in the Amsterdam Region (PWA), which is created by housing co-ops to share knowledge and strive for further professionalization of the housing co-op sector (PWA, n.d.). The platform represents the interests of housing co-ops and is dedicated to publicizing the added value of housing co-op, next to being a discussion partner for the municipality of Amsterdam.

Thus, analyzing the different perspectives of housing co-op members and other actors shows us that knowledge is not necessary an influencing factor that limits the development of housing co-ops. However, having more knowledge and expertise at the initiating phase of a housing co-op can fasten the process and prevent making mistakes that undercut access to funds. This ultimately also influences the sustainability outcomes, which is further explained in Chapter 6. It varies per initiative what kind of knowledge is available and how easily they can gather more knowledge if required. Housing co-op platforms assist initiatives in avoiding such mistakes and paving the way for other initiatives. Next to that, they can enhance the development of housing co-ops because they are a discussion partner of the municipality to evaluate the current process and institutional contexts in Amsterdam.

5.2 Social-related influencing factors

According to the housing co-op members and surrounding actors, social elements can play a role in the development of housing co-ops. The following subchapter presents social-related influencing factors that limit or enhance housing co-ops and the development of housing co-ops in Amsterdam.

Building community

First, building community and bringing people and their values and ambitions together is complex. Moreover, according to Aart Cooiman from the Rabobank, cooperative collective living has one major disadvantage: it does not go fast (Cooiman, 2021). Making plans, making decisions, and arranging finances all require a lot of guidance and perseverance, which all takes time. If you look at the initiatives that have already been realized – or at the projects that are currently being built (such as de Warren)– you will see that they began building community years ago and were thus able to switch quickly as opportunities arose. As experienced by Aart, poorly socially based housing co-ops may disintegrate or have problems with the management and exploitation of their real estate (Cooiman, 2017). Moreover, a sense of community and a sense of shared responsibility is required for the survival of a housing co-op (Gemeente Amsterdam, 2020).

Jacob from de Warren also confirms this: “The community existed long before we started with De Warren” (J. Koopmans, personal communication, April 13, 2022). They started from a group of friends: Collectief Konijn (Collective Rabbit) that have been organizing other projects such as small festivals and cultural events. After some years, they initiated De Ceutel, a small working and catering village in Amsterdam North, and a permaculture farm on a mountain in southern Portugal (De Warren, n.d.-a). De Warren (English for “rabbit castle”) was founded because of the community's desire to establish an ongoing system of communal living in Amsterdam. The initiation process was relatively smooth compared to other initiatives because they had known each other and worked together for years. The efficiency of the group is also critical given the rising cost of construction and interest rates. Particularly in these challenging times for the housing sector, time is money.

Personal network

Having a relevant network also seem to be a significant factor for initiatives. Knowing whom to contact within institutions such as the municipality is also a benefit, according to Jacob: “We also have someone in our association that knows how to work and communicate with municipalities” (J. Koopmans, personal communication, April 13, 2022).

Familiarity of the concept

Finally, it is currently not part of Dutch housing sector culture to collaborate on the development of housing co-ops. Even though this is becoming a more popular topic among various sectors and actors, especially in Amsterdam. As Clemens Mol from WOON! foundation mentioned: “Though it is now starting to gain more attraction, there's a lot of unfamiliarity with the phenomenon, and it is not yet seen as a valuable solution to our affordable housing crisis. Moreover, the current culture indicates that we can solve the housing shortage with flexible living and container housing, but not with this collective form of living” (C. Mol, personal communication, April 14, 2022). He also stated that policymakers in other municipalities than Amsterdam often are unfamiliar with the concept of housing co-ops. Lastly, even though the housing co-op has been included in the coalition agreement, the concept is still insufficiently understood and recognized by the national government (Zonneveld & Lupi, 2018).

Thus, analyzing the different perspectives of housing co-op members and other actors shows us that social aspects are an influencing factor that limits the development of housing co-ops. The importance of having a strong group with a shared vision is stressed by several actors in the field. Moreover, having a relevant network can be a benefit. Lastly, there is still a lot to improve in terms of the familiarity with the housing co-op concept.

5.3 Finance-related influencing factors

According to the housing co-op members and surrounding actors, finance is still one of the major barriers for initiatives to succeed. Initiatives stagnate or even stumble over the latter of finance. Interviews with the housing co-op members and other actors show that making a solid business plan is one of the major challenges for initiatives to succeed. The following subchapter presents financial aspects that limit or enhance housing co-ops and the development of housing co-ops in Amsterdam.

Pre-financing

One of the major hindrances for initiatives regards the pre-financing of the housing co-op. Housing co-op de Warren, was the first initiative that functioned as a Pilot in Amsterdam and experienced several difficulties in setting up their business plan. They received several subsidies and loans to set up their plan. As stated by Jacob: "We received initial subsidies from the province of North Holland and the municipality of Amsterdam, allowing us to begin construction in the first place. The start-up costs are typically 4% of the total costs, including the costs of hiring an architect [REDACTED] and an installation consultant." These "start-up costs" are spend before you have a building permit or have signed a ground lease, this money cannot be borrowed from a bank. De Warren also received a short-term loan from the province of Noord-Holland in addition to a subsidy; without this loan, they would not have been able to begin. Likewise, for housing co-op Akropolis-IJburg, who also received a subsidy of 20.000 euros for the initiation phase. This was needed to see whether their plan was realistic and if they could continue (R. Schalk, personal communication, April 4, 2022).

Bank support for housing co-ops

The cases show that solving finance is not quite simple. Like one of the interviewees, Clemens, Advisor Housing cooperative at foundation WOON! noted, is that there are still a lot of bottlenecks surrounding the financial dimension (C. Mol, personal communication, April 14, 2022). More specifically, Dutch banks are not yet set up to lend money to cooperatives for rental housing; it is still highly unknown. Moreover, banks are extremely hesitant to finance housing co-ops, even when there is a strong business case for the project. According to Clemens, this is due to the unfamiliarity of the housing co-op in the Netherlands but also that the legal form is simply not yet recognized and clearly described in legislation. Looking at the case De Warren, the German bank GLS was more understanding of the plan to create a housing co-op from the start (Damen, 2018). The bank covers more than 75 percent of all costs to finance De Warren.

Thus, the initiatives that have now been realized went to a German bank, GLS. In Germany, housing co-ops are more well-known. However, having a German bank also has its downsides. Due to it being a foreign bank, transaction fees and administration costs are relatively high compared to a loan at a bank like Rabobank (L. Schipper, personal communication, May 4, 2022). [REDACTED]

Rabobank is currently the only Dutch bank that wants to provide financing and is looking for a solid business case with initiatives (A. Cooman, personal communication, April 11, 2022). With the Platform31 action program, Rabobank has agreed to serve as an ambassador for housing co-ops. Rabobank Director Roel van de Bilt, along with other ambassadors, aldermen, and corporation directors, is looking for ways to fully realize residents' residential dreams (Cooman, 2017). Rabobank arose from local cooperative initiatives in which the wealthy assisted the less wealthy in conducting business to benefit both parties. Based on this principle, Rabobank has set the goal of finding viable forms of financing for the housing co-op.

Municipal support for housing co-ops

However, currently banks finance up to about 70% of the total value of a project. As a response to this hindrance, the municipality proposes a municipal financing scheme in addition to the own investment and a bank loan (M. Raap, personal communication, April 25, 2022). The municipality proposed to establish a housing co-op fund with a borrowing capacity of 50 million euros to fund the scheme. This agreement is called the “Wooncoöperatiefonds (housing co-op fund)” (Gemeente Amsterdam, 2020). An initial investment of 50 million euros is expected to be available in the next four projects are co-financed for five years. Only after 15 years do housing co-ops have sufficient own built-up capital, allowing the municipal loan to be refinanced and the housing co-op to repay the municipal loan in full. Long term, the municipality hopes that a large portion of this capacity will be used for new housing co-ops. As a result, the sector can eventually provide its own financing, a “solidariteitsfonds (solidarity fund)” which is already the case in Germany and Switzerland. Housing co-ops that make use of this loan are obliged to participate with this solidarity fund. Initiatives can borrow a maximum of 50000 euros per home from this housing co-op fund, with a maximum term of 15 years (Project Together, 2021). This applies to social and medium-sized rental properties. An own contribution (of the collective) of 5 per cent is necessary. The loan can also be applied for the preliminary phases (the plan development of the co-op).

Though this incentive sounds good, initiatives express mixed opinions about this new policy. On the one hand, De Warren appreciates this support from the municipality, as this loan can also be used for the pre-financing of an initiative, competition in tenders, and making a solute plan, which is a challenge to begin with (J. Koopmans, personal communication, April 13, 2022). But on the other hand, De Nieuwe Meent, which made use of this fund, expresses several difficulties: “This fund has a low rent; however, it needs to be repaid within 15 years, so the annual repayment is way too high, which puts pressure on our finances” (L. Schipper, personal communication, May 4, 2022). Moreover, Lauri mentioned that due to this loan, they must borrow more money from the bank to repay it. Therefore, it does not help them as was indented to. Consequently, together with the municipality, De Nieuwe Meent is evaluating whether the requirements of the loan can be changed for future initiatives.

Complex finance schemes

Another limitation resulting from the fact that banks do not want to fund housing co-ops completely results in very complex business plans for initiatives to get their business plan straight. The remainder costs are often collected by other instruments, such as crowdfunding, other loans, or debentures (obligaties). According to Jacob, treasurer of De Warren, making the business case for the Warren was “one of the most complex things” he has ever done (J. Koopmans, personal communication, April 13, 2022). For example, the De Nieuwe Meent project will be funded using a variety of methods. The largest portion will be a loan from the German GLS Bank or Rabobank, followed by a loan from the municipality, a series of smaller loans, and subsidies (Platform 31, 2021; L. Schipper, personal communication, May 4, 2022). Approximately 8 per cent is raised through crowdfunding, in which the public can purchase debentures (obligaties). The land is leased from the municipality, and an annual rent is paid.

Contribution of tenants

Because banks do not want to fund all costs, housing co-op members need to contribute as well. For example, housing co-op Akropolis-IJburg expects to finance 70 per cent of its costs with a mortgage from Rabobank or the German GLS bank (R. Schalk, personal communication, April 4, 2022). A large portion of the remaining costs will be paid by the members, with a minimum of 2500 euros and a maximum of 6500 euros per member for social housing (Akropolis-IJburg, 2022). A medium-priced rental home can cost between 12500 euros and 26000 euros per month. You pay this amount when you first move in, and you will receive it from the new tenant when you leave. The remainder of the investment is borrowed from the municipality, accounting for approximately 10 to 16 percent of their loan terms.

Rising construction costs

One of the major challenges initiatives are currently struggling with is the rising construction costs. Due to several global developments, construction costs are rising. Construction costs consist of labor, tools, and building materials costs (Hoeve, 2022). Building materials such as wood have increased tremendously, and therefore, initiatives are struggling to close their business case. Housing co-op Akropolis and De Nieuwe Meent are currently struggling with these increases in construction costs as they are currently finalizing their business plans. However, because contractors cannot provide a fixed price for construction, they are unable to round out their business case and, as a result, are unable to obtain a mortgage from a bank and are thus trapped. "It is a very laborious process," Aart emphasizes, "especially as interest rates and construction costs rise. You will notice that developing a financing proposal is becoming increasingly difficult. The bank will not give you money if you do not have a business case. If construction costs rise and land prices do not fall, then things will become stuck because rents cannot be raised" (A. Cooiman, personal communication, April 11, 2022).

Even though rising building costs affect the entire building sector, housing co-ops suffer relatively more because they are unable to raise their rent prices due to fixed prices set by the municipality and their members. Because initiatives value affordable housing, they aim for low rent. This is also a problem for housing corporations, as they are also unable to raise rent prices. As a result, initiatives must revisit their business plans and look for ways to reduce or increase budget costs. For example, De Nieuwe Meent is currently reducing their budget by purchasing more secondhand building materials, as they do not want this to jeopardize their sustainability ambitions or affect affordability, as these are core values of their initiative (L. Schipper, personal communication, May 4, 2022). Furthermore, initiatives try a variety of approaches to address the issue of rising building costs, such as doing more themselves, more crowdfunding, other loans, or a higher loan from the municipality. "Even though this can work," Aart emphasized, "you often don't solve the problem, you just make it more complex" (A. Cooiman, personal communication, April 11, 2022).

Leasehold discount

Besides the municipal loan, there are also other stimuli provided by the municipality to help initiatives with their business case. In Amsterdam, the municipality still owns much of the land compared to other cities in the Netherlands. This means that housing co-ops can leasehold the land instead of buying it. Because housing co-ops are prohibited from splitting or trading the leasehold or increasing their rent (which creates everlasting affordable rental homes), the municipality created adjusted leasehold conditions, and therefore housing co-ops are subject to an adjusted land price (Gemeente Amsterdam, 2020). These prices are lower and fixed, comparable to the ones for housing corporations (M. Raap, personal communication, April 25, 2022). Alderman Laurens Ivens announced at the end of 2016 that the municipality intended to offer discounted land to housing co-ops which is part of Alderman's policy to foster self-build housing co-ops in the city (Het Parool, 2018). The municipality's discount for these medium-priced rental homes goes up to 32 per cent, depending on the neighborhood of the pilot location. The municipality provides this discounted land under strict conditions (Damen, 2016). This should prevent buying cooperatives or tenants from profiting from the cheaper land. Moreover, the municipality imposes statute requirements to ensure that (future) members of selected housing co-ops belong to the target group for which the housing co-op was established (Gemeente Amsterdam, 2020). The relevant articles can only be changed with the municipality's permission. For the first pilot locations, model statutes have been developed. It will be investigated whether these can be simplified further.

The Housing Cooperatives Financing Facility

Thus, banks are willing to finance housing co-ops for up to 70% of their total cost. Aart Cooiman also mentioned that there is currently a solution being created, and hopefully, on short notice will be made available (A. Cooiman, personal communication, April 11, 2022). That is the Housing Cooperatives Financing Facility. This works in much the same way as the well-known Starter Loan, through an SVn (Stimuleringsfonds Volkshuisvesting) current account. The SVn loan is intended to bridge the gap (roughly 30%) between the total foundation costs and bank financing (Project Together, 2021). This additional loan fills a significant portion of the current financial "gap," as banks only provide a mortgage for about 70% of a housing collective. Several final hurdles to the Financing Facility are currently being investigated so that it can be used by authorities other

than the Municipality of Amsterdam. The Financing Facility is expected and hoped to begin later this year. This is then made available to all municipalities (and provinces). In the future, housing co-ops will most likely (and hopefully) receive additional funding in the form of loans such as those with SVn, but as mentioned before, also possible through a revolving fund and/or solidarity fund between realized housing co-ops, which is proposed by the Municipality of Amsterdam.

Thus, though much effort has been done by several actors, so far, it has not been sufficient for current initiatives to get a conclusive business case and start building, and therefore, finance is still one of the major barriers and a complex matter for housing co-ops and the development of the housing co-op sector.

5.4 Legal related influencing factors

Based on the policy analysis and experiences from housing co-op members and surrounding actors, several legal factors that play a role in the development of housing co-ops came forward. The first part of this subchapter elaborates on the findings that result from the thematic coding of the policy documents, which goes in-depth about what is already done in terms of support by the municipality of Amsterdam. The second part elaborates on the legal barriers experienced by housing co-op members and surrounding actors.

By analyzing the policy documents surrounding the theme of housing co-ops in Amsterdam, several measures were found to be initiated by the municipality. According to the municipality of Amsterdam, in the coming years, there is a strong desire to do much more with housing co-ops. In 2020, a final report was published called "Get started with housing co-ops," where the ambitions, plans, and measures to support housing co-ops in Amsterdam were written (Gemeente Amsterdam, 2020). This plan was based on research that was performed by the municipality that investigated the barriers that housing co-ops phase when realizing their building, based on the pilot projects with housing co-ops De Warren and De Nieuwe Meent.

Goals & ambitions

Their research included conversations with various stakeholders and initiatives and concluded that things were moving slower than expected and, therefore, the ambitions were not realistic. As a result, the municipality decided to adjust its ambitions. New goals for housing co-ops were established for the short, medium, and long term. In the short term, the goal is to launch 15 to 20 projects over the next four years (used to be in two years). In the medium term, 7000 homes will be built between now and 2030, with half of them being new construction and half being existing construction (used to be 2025). This equates to 350 new homes being built each year for housing co-ops. Long-term, gradually increase to a 10 per cent share of the market over the next 25 years.

Supporting measures

To achieve these goals, the municipality aims to support and stimulate housing co-ops in four aspects: locations, regulations and preconditions, financing, and practice development. First, different plans were taken regarding the facilitation of building locations for initiatives. More specifically, 7 locations will be on the market in the next two years come, and 6 locations to be launched in three to four years. Moreover, 2 to 3 development projects where on a larger scale housing co-ops will be realized as part of administrative assignment 'new' development models.' Lastly, 2 concrete locations and 4 locations will be further investigated for the long-term (2025 and beyond).

According to Marije, who worked at the municipality of Amsterdam and was involved with the pilot housing co-ops, the municipality created an adjusted leasehold price for housing co-ops when they build social or middle-rent housing (M. Raap, personal communication, April 25, 2022). Because the leasehold price is relatively low and fixed by the municipality, housing co-ops must adhere to the agreed-upon rental prices. Because housing co-ops cannot afford regular-priced land, only locations with adjusted leasehold pricing are suitable for housing co-ops, and others are too expensive.

Furthermore, in terms of financing, the municipality also has taken several measures to support initiatives, which were explained in the previous subchapter about financial influencing factors. Specifically, the establishment of a municipal financing scheme supplementary to the own investment and bank loan that is necessary for financing a housing co-op. In the long term, a solidarity fund could make the financing of housing co-ops possible by the sector itself.

Regarding practice development, as mentioned in the subchapter on knowledge-related influencing factors, the municipality is investing in support and training schemes from interested parties and initiatives to share

knowledge within the sector. In addition, they are working with the platform Amsterdam Housing Cooperatives to create a quality mark for housing co-ops.

One program for housing co-ops

As stated in this report, several approaches must be taken to achieve this end. Therefore, the municipality proposes to do everything from one program with a program manager that is fully responsible. Half-yearly progress reports on the program are submitted to the Executive Board and the municipal council. In doing so, as much as possible is linked to regular reports, such as the Housing Plan report. This program will be assigned a program team and a program budget originating from the existing budget from the Living (Wonen) and Land & Development (Grond & Ontwikkeling) departments.

Strict rent pricing rules

Though the municipality is quite ambitious and took several measures to achieve its goals, the initiatives and surrounding actors still experience many legal hindrances during the process of becoming a housing co-op and implementing sustainability measures. This is, on the one hand, due to failing policy on the municipal level, but also due to failing or lacking policy on a national level. One of the encountered barriers is the municipality's fixed rent pricing policy. The fixed rent makes it difficult for initiatives to make a convincing business case while implementing their sustainability goals due to increases in construction costs and inflation.

Furthermore, there were difficulties with the fixed rent division in terms of social and middle rent. Clemens from the WOON! foundation, for example, stated that initiatives frequently seek a mix of social, middle, and higher rentals. Initiatives want this for a reason: it adds value to the initiative and makes it more inclusive. However, the municipality has strict rules for how much middle and social rent there should be. He adds "don't be surprised if initiatives fail for a reason." (C. Mol, personal communication, April 14, 2022). Because there is currently a shortage of middle rent in the city, housing co-ops are supported, but only if they can fill this gap and create more middle rentals (M. Raap, personal communication, April 25, 2022).

Bureaucracy

Other experienced barriers regard the slow processes within the municipality. According to Lauri from De Nieuwe Meent, they had to wait for a long time to get approval for their building design from the "welfarecommittee (Welstandscommissie)". During this turbulent time, where construction costs are increasing, time is money. Furthermore, obtaining the "Environmental permit (Omgevingsvergunning)" took much longer than anticipated. As Lauri states: "This department has a significant backlog. So, we've just been waiting for an environmental permit for a long time. That is why your financing may or may not be renewed. If we had that environmental permit six months ago, we could have made a deal with the bank six months ago, and the construction costs would have been much lower" (L. Schipper, personal communication, May 4, 2022).

Marije also expressed her concerns about the municipality's bureaucracy (M. Raap, personal communication, April 25, 2022). The municipality is actively participating in conversations with initiatives to adapt policy and provide more support; however, policy change is a slow process due to the numerous systems and rules that must be considered. As a result, changing policy can be difficult and a lengthy process at times.

No clear legal form

Besides barriers that were experienced on a municipal level, there are also legal barriers related to the national level. Currently, there is no clear legal form for housing co-ops, which results in hindrances during the process of realization. "The issue in the Netherlands is that even the Ministry of Housing does not understand what a housing co-op is," says Clemens (C. Mol, personal communication, April 14, 2022). In a recent letter, Minister Olongre stated, "Yes, a housing co-op can be anything." As a result, the concept becomes vague and difficult to grasp. And that is the major difference in countries, such as Germany and Switzerland, where it is widely used; there is simply a very legal clear form, it is well organized, and people are familiar with it. To further add to the confusion, the Housing Act (see Woningwet 2022, Artikel 18a) states that a housing co-op is a legal form

of an association, while the Civil Code (burgerlijk wetboek) defines the association and the cooperative differently. The Civil Code states that only the cooperative may call itself a cooperative; it is illegal for another legal form (such as a housing cooperative) to call itself a cooperative, and a cooperative can legally summon that other organization to stop using the term cooperative. So, according to Clemens: "if you go to a notary and say, housing cooperative so-and-so, the notary could respond, nice name, but you can't use the word housing cooperative" (C. Mol, personal communication, April 14, 2022).

National support

On January 20th, the book "Operation Housing co-op (Operatie Wooncoöperatie) was launched in Rotterdam (Wassenberg et al., 2022). During this event, ██████████ the new Dutch minister of for Housing and Spatial Planning expressed his strong support for housing co-ops within the Dutch housing system. He promised assistance and new regulations to make it easier to establish a housing co-op. According to Clemens, despite the promises, no action has been taken (C. Mol, personal communication, April 14, 2022). Housing co-ops have also been mentioned in the coalition agreement, already for the second time. However, this is still focused on conducting research on housing co-ops rather than providing concrete actions and policy measures to support housing co-ops. So far, the Ministry of Internal Affairs has funded an Action Program that is implemented by Platform31. Platform31 and Cooplink now provide resources to support individual initiatives, but municipalities working with housing co-ops can also apply for additional funding.

Thus, the municipality of Amsterdam set high ambitions and goals regarding the support of housing co-ops and the development of the sector. Although efforts have been made by the municipality, there are still obstacles encountered in several areas, mainly related to the availability of (affordable) locations and the rules regarding rental pricing. Furthermore, the lack of a legal framework and national strategy or program is a barrier to the development of housing co-ops.



6. SUSTAINABILITY OUTCOMES AND INFLUENCING FACTORS



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De Nieuwe Meent, source: www.timetoaccess.com

6.

How far are the implemented sustainability measures from the co-ops' ambitions, and what influencing factors hamper or stimulate such measures?

In addition to the findings of the previous chapter, which elaborates on the experienced hindrances and stimuli for the development of housing co-ops, provided by several actors in the sector, there are also influencing factors that stimulate or hamper the implementation of sustainability measures within the housing co-op sector.

Sustainable stimuli

The municipality of Amsterdam has multiple policy measures that enhance sustainability in the housing sector. The city of Amsterdam wants all new buildings to be built in a sustainable manner, including self-build homes. As a result, they established a "Sustainable Self-Build (Duurzaam zelfbouw)" policy, which is important for housing co-ops (Gemeente Amsterdam, 2021). In its policy, the municipality uses ambitions and preconditions regarding sustainability for self-build homes. All preconditions and goals established to apply to new construction. The municipality intends to stimulate the market to encourage the deployment of sustainable innovations and technological developments. They concentrate on the goal (water storage standard, BENG, etc.) rather than on specific measures.

These objectives are based in part on national objectives, such as BENG or the "Versnelling Energie Transitie (VET) (Energy Transition Acceleration) Act." However, in terms of other sustainability measures, such as climate adaptation, the municipality of Amsterdam is more ambitious than what is required nationally. These objectives are divided into four categories: energy, clean surface water, rainwater storage, and material use. Besides these general municipal policies that stimulate sustainable housing, the municipality also sets specific tender requirements that enhance sustainability, which differs per tender (M. Raap, personal communication, April 25, 2022).

Sustainability outcomes for De Warren

Looking at the sustainability ambitions of the housing co-ops, they often go beyond what is required by national and municipal policy. However, not all ambitions were realized. Looking at De Warren, they wanted to use triple glass for isolation, but by the end of the process, they had to cut back on sustainability measures due to financial setbacks caused by "bad advice from the installer" (J. Koopmans, personal communication, April 13, 2022). By choosing less environmentally friendly windows, [REDACTED] Moreover, the ambition to build entirely of wood was also not realized. Even though it is possible to build entirely out of wood, the architect and contractor did not believe it was possible, according to Jacob. "We could have done it on the same budget, but we would have needed to hire a different contractor and consult with more experts. Or perhaps we could have enforced it if we had more time. But you must take decisions quickly because everyone needs to be paid. Construction workers dislike building with wood; you're rowing against the tide." (J. Koopmans, personal communication, April 13, 2022). De Warren implemented a hybrid wooden construction, instead of a fully wooden construction.

Furthermore, in terms of adaptability, De Warren wanted to have floors where the installations were loose. Meaning that all pipes and threading or sewage could be removed or replaced in the future. However, you need to build a thicker floor than what you would need usually need if these pipes were not adaptable. As a result, the building would be taller than a typical five floor building. Because of the municipality's fixed tender requirements, the building could only have a maximum height of 17 meters for only 5 floors. Therefore, the higher adaptable floors were not permitted, even though the building would not have more floors than allowed. Besides that, according to Jacob, the strict tender requirements for water were hindering their initiative (J. Koopmans, personal communication, April 13, 2022). "Being rainproof was a stringent requirement imposed by the municipality; however, we believe that this is unnecessary at our building's location due to psychical considerations. As a result, instead of focusing on this one, we could have saved money [REDACTED] [REDACTED] (J. Koopmans, personal communication, April 13, 2022).

Sustainability outcomes for De Nieuwe Meent

Looking at the housing co-op De Nieuwe Meent and their sustainability ambitions, they were comparable to De Warren's. They were, however, less ambitious in terms of material use. Looking at the situation now, it appears that all their sustainability goals will be met. This is also because they chose solar panels over a roof terrace, and they were able to save costs by creatively using more second-hand materials and appliances. However, they have not yet reached the implementation phase, so it cannot be said with certainty that all sustainability ambitions will be realized.

Sustainability outcomes for Akropolis-IJburg

Looking at Akropolis' values, sustainability was seen as an obvious measure to incorporate into their building. However, in comparison to De Warren and De Nieuwe Meent, their ambitions were not as high. According to Akropolis, this is also due to the fact that they were aware of the difficulties in implementing some measures and did not want to communicate this to the larger community (such as building with wood). However, despite having high ambitions in terms of energy and circularity, this has not been fully realized. Rene claims that due to financial constraints, they will not be energy positive, but will be extremely energy efficient (R. Schalk, personal communication, April 4, 2022). Though this was also a stringent municipality requirement. Next to this setback, they will construct with a combination of wood and concrete rather than entirely of wood. Although they are not even in the implementation phase, they already know that these measures will not be possible according to currently experienced hindrances.

Thus, the findings suggest that lack of budget and space are influencing factors that limit their sustainability ambitions. There is also municipal legislation that stands in the way of sustainability goals, such as strict tender requirements.

7. SUSTAINABILITY TRADE-OFFS



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De Nieuwe Meent, source: www.timetoaccess.com

7.

What trade-offs can be observed between sustainability outcomes based on values and influencing factors?

Based on the findings of Chapter 4, it is possible to conclude that the cases have different values and differ in the level of sustainability in their ambitions. According to interviews with housing co-op members, the current situation makes it impossible to achieve all the goals and ambitions set at the outset. As a result, initiators must make trade-offs between their own values and decide which measures are more important for them to implement. The next short chapter gives insights into these trade-offs between sustainability measures, based on values and influencing factors.

Trade-offs De Warren

According to Jacob from De Warren, affordability and sustainability are often two opposing values. “We would have opted for even better insulation if we had more budget. However, because it yields so little in comparison to the cost, we have chosen to go for affordability” (J. Koopmans, personal communication, April 13, 2022). Also, sustainability and social values oppose each other. Some sustainable measures take up a lot of space, making this space unusable for living. Jacob uses the trade-off between solar panels and a roof terrace as an example. A roof terrace is a communal space where people can meet; however, therefore solar panels cannot be installed. In their case, they chose a roof terrace in combination with solar panels over a roof entirely covered with solar panels. Another example is the choice of large, open spaces in the building. Large open spaces demand a lot of energy for heating. Here is a conflict between living quality and sustainability.

Trade-offs De Nieuwe Meent

Lauri from De Nieuwe Meent mentioned that the choice not having a shared roof terrace was based on their value regarding inclusiveness and diversity: “Initially, we had the idea to make a roof terrace. However, it turned out that the elevator could not go there, and it was only accessible by stairs. Therefore, we decided that we don’t do a roof terrace because it would not be accessible for everyone” (L. Schipper, personal communication, May 4, 2022). On top of that, the decision of not having a roof terrace made room for solar panels.

Sustainability and affordability are both core values for De Nieuwe Meent. Being affordable and implementing sustainability measures can be challenging. De Nieuwe Meent has demonstrated creative solutions to be affordable and sustainable. To cut costs, they began looking for more used materials and goods, such as second-hand kitchens. By this means, they could continue to incorporate sustainability measures into their design. They could have raised the rent, but instead, they decided to keep it affordable, even below the municipality-set middle rent limit.

Trade-offs Akropolis-IJburg

Akropolis-IJburg had to make concessions on their building as well. The goal was to construct a mix of affordable and social housing. Due to the difficulties in obtaining a conclusive business case and the rise in construction costs, they were forced to remove certain aspects of their design. They could raise the rent of the current social rentals, but in this case, affordability is more important to them than sustainability. Though according to Rene, energy-related measures that make the building energy-neutral remain a priority. However, this is also stimulated by national and municipal law (R. Schalk, personal communication, April 4, 2022).

As stated in Chapter 4, while the values of the initiatives differ and sustainability is not always a core value or priority, the ambitions are similar. Though, looking at the sustainability outcomes, it can be concluded that these values do play a role in deciding on sustainability measures when trade-offs must be made due to a shortage of budgets or other unforeseen hindrances. In some cases, community and affordability seem to be more important than sustainability, regardless of sustainability being a core value for the initiative.

A photograph of a man walking in a park-like setting. The man is in the foreground, walking from left to right, wearing a dark jacket and light-colored pants. In the background, there are trees, a bench, and other people. The scene is outdoors and appears to be a public space.

8. DISCUSSION

De Nieuwe Meent, source: www.timetoaccess.com

As stated in the introduction, anecdotal evidence showed that housing co-ops have the potential to implement sustainability measures. However, few housing co-ops have completed the entire process from idea to implementation. The purpose of this research was to investigate the potential of housing co-ops to contribute to sustainability in the housing sector, as well as what (additional) measures are needed to support housing co-ops in achieving their sustainability goals while remaining economically viable. This is especially significant today in view of the dual challenge of providing adequate housing to all citizens while addressing urgent issues of urban sustainability, contributing to Europe's fair and inclusive transition to sustainability. To investigate this, this research studied several cases in the city of Amsterdam by conducting semi-structured interviews with housing co-op members, relevant actors of the surrounding institutional dimension, and analyzing policy documents from the Amsterdam municipality.

Influencing factors

A lot has been done in Amsterdam to support these initiatives. However, there are still many challenges that housing co-ops face to realize their initiative and achieve their sustainability goals. Much effort has been put by several actors into making this process financially viable, but so far, it has not been sufficient for many initiatives to get a conclusive business case and start building. Therefore, finance is still one of the major barriers and a complex matter for housing co-ops and the development of the housing co-op sector. In addition to municipal loans, the municipality created special adjusted leasehold conditions for the land, which allows initiatives to finance their plans and fill the gap that banks do not want to fill. This allows some initiatives to be funded. There are still many things to improve: the municipal loan has a 15-year repayment period, which makes it difficult for many new businesses. Rising construction costs and inflation make it even more difficult to finance initiatives, as most contractors are hesitant to provide fixed prices for construction, which is required to obtain a bank loan.

Looking at the policy context in Amsterdam, the municipality has set ambitious goals regarding the facilitation of housing co-ops in the city and has established a special program to achieve these objectives. As the cases show, the city of Amsterdam has done a lot to help, but there is still a lot that needs to be done on a national level. There is currently no clear legal form for housing co-ops, and the concept of housing co-op as a new form of housing is unfamiliar and unclear to policymakers and country leaders. Current laws that are referring housing co-ops are contradictory, creating obstacles for housing co-ops. On a municipal level, housing co-op members continue to face challenges, particularly regarding the municipality's strict rent pricing rules, bureaucracy and slow processes, and strict tender requirements.

Analyzing the various perspectives of housing co-op members and other actors demonstrates that knowledge is not always an influencing factor that limits the development of housing co-op's sustainability initiatives. However, having more knowledge and expertise at the start of a housing co-op can speed up the process and prevent mistakes that lead to mistakes that undercut access to funds. Housing co-op platforms assist initiatives in avoiding such mistakes and paving the way for other initiatives. Furthermore, because these platforms are discussion partners of the municipality to evaluate the current process and institutional contexts in Amsterdam, they can help to accelerate the development of housing co-ops.

When it comes to social aspects influencing the issue, the results show that having a relevant network or experience in the sector can help you realize your initiative. Furthermore, various actors in the sector are unfamiliar with the concept, which hinders the development of housing co-ops in the Netherlands.

Values and shared vision in relation to sustainability outcomes

According to the findings, housing co-ops have strong values and high sustainability ambitions. There are differences between initiatives, with some emphasizing social aspects and others emphasizing sustainability. The findings from the cases show that initiatives go to great lengths to achieve their goals and come up with innovative and creative solutions to stay within budget. This is challenging, especially given the current changes in construction costs and inflation. Next to their high ambitions, the creativity and motivation of

housing co-ops demonstrate that they have a high potential for implementing sustainability and that they are willing to go above and beyond the typical project developer. The reasons for this are that they act on their shared vision and prioritize values that include being sustainable over making a profit.

Nonetheless, lack of budget and space, in particular, are influencing factors that limit their sustainability ambitions. Lack of budget is linked to a variety of other influencing factors, such as a lack of knowledge about subsidies and regulations or experienced housing co-op members who can lead processes more clearly. There is also municipal legislation that stands in the way of sustainability goals, such as strict tender requirements. Initiatives must make trade-offs due to these constraints. For some initiatives, sustainability is prioritized higher than a decision that enhance community, and for other initiatives that stimulate social interaction (roof terraces, for instance) are more important than sustainability measures (e.g., solar panels). In some cases, even though sustainability is a core value of the initiative, social values and affordability appear to be more important in practice.

Multi-level framework

As mentioned in the theoretical framework of this research, according to the MLP, the success of a new technology is determined not just by niche practices and processes but also by changes and developments in the current regime and the landscape (Geels, 2010). Looking at the findings of this study, both internal and external factors influence the success of a co-op as well as the potential of the niche to implement sustainability measures. Internal factors related to knowledge or social aspects, such as having highly educated or experienced people in the group, can boost a niche's success and save money, which means there is more budget for implementing sustainability measures, if that is their ambition. Developments and changes in the existing regime also influence the potential of housing co-ops, primarily in terms of legal and financial stimuli and hindrances. These barriers and hindrances from various dimensions are also interconnected, referring to regime dynamics and governance (Smith et al., 2005; Lovell, 2007; Geels, 2010).

According to Jian and Payne (2019), any long-term shift toward a more sustainable housing sector will be driven by changes in financial or technological regimes, as well as policy and market regimes, with implications for both policymakers and market actors. This is also evident in the study's findings. These dimensions, particularly the institutional and financial regime, were dominant in the context of this study and currently pose the most hindrances to the development of the housing co-op. While at the same several actors have already made significant efforts within these regimes. Furthermore, many barriers must be overcome before this niche can break through and become a new form of (sustainable) housing in the Netherlands.

According to the MLP, the current housing regime contains several sub-regimes that interact and can co-evolve, as mentioned in the theoretical framework (Geels, 2004). The findings of this study also show that these various sub-regimes are interconnected but not yet aligned. Because alignment between these regimes could provide stability, meta-coordination is required (Geels, 2011), which opens the discussion about governance.

Fragmented and reflexive governance

As mentioned in the theoretical framework, the regime dynamics open the discussion about governance (Smith et al., 2005); insofar, sustainability transitions must be governed through many interconnected measures, guiding many stakeholders, which brings about the issue of coordination. Socio-technical transition theory offers a few answers about this governance. Similarly, based on the findings of this study, governance theory can be applied to a variety of aspects.

Thus, analyzing the various perspectives of housing co-op members and other actors reveals that the housing sector is currently based on a market or hierarchical style of governance. This implies that there is competition and exchange between stakeholders, particularly when it comes to tenders for finding locations, and that it is motivated by self-interest and profit (Pahl-Wostl, 2019). Though, there is also collaboration present amongst

stakeholders. Housing co-ops are working together with the municipality, foundations, and knowledge-sharing platforms. In the theory part of this study, it was mentioned that choosing sustainability measures and technology requires collective decisions and actions, which involve multi-sector and multi-actor relationships (Määttä, 2021). Though this multi-actor collaboration is present in the current housing co-op sector, this could be enhanced to further stimulate the development of co-ops.

Furthermore, even though this study was focused on Amsterdam, some information about other cities was also found. This suggested that Amsterdam is one of the few cities in the Netherlands that actively supports housing co-ops, whereas other cities are still behind and are unfamiliar with the concept. This indicates that the governance of housing co-op development in the Netherlands is still fragmented (Kim, 2020). There are several actors in the field that have similar goals. However, collaboration and coordination are still lacking. This is also due to the lack of a national strategy for the development of housing co-ops, despite the ministry's stated desire to support initiatives and develop new policies that make housing co-ops more feasible.

Reflectivity and reflexive learning are evident in interactions between various stakeholders, specifically the municipality and the pilot housing co-op projects. Reflexive governance approaches entail linking various types of actors, such as practitioners or policymakers, and bridging those actors as the new networks in society (Feindt & Weiland, 2018). Moreover, reflexive governance includes learning from failures. As a result, by reflecting on the planning and implementation processes, knowledge can be gained (Hendriks & Grin, 2007; Voß & Bornemann, 201). This broadens the scope of knowledge about how to promote the development of housing co-ops. According to Feindt and Weiland (2018), "reflexive governance" occurs when institutions include actors at different levels and from diverse backgrounds and enable the adaptation of policy. The city of Amsterdam has taken a reflective approach to stimulate and contribute to the development of housing co-ops; other municipalities that have similar ambitions could learn from this approach by actively having conversations with initiatives to learn from one another and adapt policy to reduce bottlenecks.

Limitations

This study presents many insights on the potential of housing co-ops to implement sustainability measures and how housing co-ops can be better supported. Several methodological limitations, however, could have reduced the validity of the findings reported in this study.

This study is based on a qualitative method, which comes with its limitations. Considering that personal experience and knowledge influence observations and conclusions, I could observe, however, that similar answers were given as different cases were assessed, indicating that the conclusions are likely to be consistent. Moreover, for practical reasons, this study was unable to interview initiatives that are in the early stages of realizing a housing co-op (initiation phase) or that had given up during the process. The disadvantage is that the research results are likely to be biased in favor of positivity. Further research would be necessary to explore the failed attempts. To add to this, all interviewees agreed to their full names being used in the study. As a result, interviewees may have answered questions about the municipality differently because the municipality could read the research findings, which could harm their relationship with the local authorities.

Aside from the qualitative method, there were other limitations related to the study design or other perspectives that could have provided a more complete picture of the field. This study only included actors who were well-known in the industry and knowledgeable about the subject. However, stakeholders who are unfamiliar with the subject and who could also potentially contribute to the development of housing co-ops were not interviewed. Stakeholders such as project developers or real estate owners. More actors could also have been included; however, during the interviews, participants kept referring to each other, which indicates that the sector is still quite small, and the most relevant actors were included in the study.

Including examples from other countries where housing co-ops are already a larger part of the housing sector could have provided a comparison as well as possibly more intervention suggestions. Similarly, doing a

comparative study with different Dutch cities could also give relevant insights. Looking at smaller municipalities and comparing their current state to a more front-runner city like Amsterdam could add to this. However, focusing solely on cases in Amsterdam allows for a more in-depth understanding of the situation there. Finally, additional research could operationalize "values" and study housing co-ops. Operationalization is the process by which researchers specify how a concept will be measured. It entails determining the specific research procedures that will be used to collect data on our concepts. This study did not operationalize the concept of values but rather extracted values from the shared visions expressed during interviews and found on the initiatives' websites. Investigating these values in this manner may provide a more comprehensive and in-depth understanding of why initiatives make certain decisions.

Social & scientific implications

Despite the limitations mentioned earlier, the discussion provides valuable insights for the literature on housing co-op development. It also provides recommendations on how to improve the development of co-ops in the future. Furthermore, it is verified that housing co-ops are more ambitious than traditional housing parties in terms of sustainability, and they set higher goals than what is required by Dutch national and municipal legislation. Therefore, this research suggests that the sustainable potential of co-ops is high. Moreover, bottlenecks and best practices from the municipality of Amsterdam are specifically identified so that other municipalities can learn from them. Furthermore, national interventions are identified.

Recommendations for further research

Further research could consider the study's limitations to strengthen the reliability of the theory. As previously stated, this study did not include the perspectives of project developers or real estate owners. Future research could explore the opportunities for these stakeholders to contribute to the development of sustainable housing co-ops. Furthermore, additional research should include research questions focusing on the possibilities for making future housing co-ops more inclusive. Housing co-ops, according to the theory, make affordable housing possible without relying on market speculation. Unfortunately, the findings show that it works differently in practice. Knowledge and a relevant network are factors that can increase the chances of an initiative succeeding. Fortunately, cases in Amsterdam, such as De Nieuwe Meent and De Warren – are showing that housing co-ops can be inclusive breeding grounds for affordable living in the city. Even though the initiatives included in this study aim to be inclusive and intergenerational, there is a risk that some co-ops will only be successful in providing affordable housing to a small group of like-minded individuals. In this way, they are becoming available for the fortunate few, where only the most educated urban pioneers can enjoy affordable living in Amsterdam. To prevent housing co-ops becoming an exclusive group, Amsterdam policy could provide substantive guidance to attract accessible housing co-ops. Therefore, future research could include how to make the sector more inclusive and just, and available for a wider group of people. Lastly, as sustainability transitions must be governed through a very large number of interconnected measures, guiding a very large number of stakeholders, future research could investigate what governance modes are suitable to coordinate the sustainable housing transition, including the role of housing co-ops. A more reflexive governance approach, as previously mentioned, could be investigated.

9. CONCLUSION & POLICY RECOMMENDATIONS



De Warren, source: [www. natrufied.nl](http://www.natrufied.nl)

As stated in the introduction, anecdotal evidence showed that housing co-ops have the potential to implement sustainability measures. However, few housing co-ops have completed the entire process from idea to implementation. The purpose of this research was to investigate the potential of housing co-ops to implement sustainability in their buildings, as well as what (additional) measures are required to support housing co-ops in realizing their initiative and achieving their sustainability goals while remaining economically viable. Therefore, this study investigated three cases in the city of Amsterdam by conducting semi-structured interviews with housing co-op members and relevant actors of the surrounding institutional dimension and analyzed policy documents of the municipality of Amsterdam.

To conclude, the findings of this study suggest that housing co-ops have a high potential to contribute to sustainability in the housing sector. Though housing co-ops in the Netherlands are still in their experimental and pioneering stages and initiatives are having difficulty realizing their vision. There are still numerous hindrances to this development in the current housing regime, especially regarding financial and institutional aspects. Amsterdam has made significant efforts to support these initiatives and stimulate the development of the housing co-op sector, as they aim to facilitate this in their city. The results appear promising, but there is still much work to be done. Thus, this niche requires nurturing and more institutional support.

Several measures could be implemented on a municipal and national level to encourage the development of housing co-ops in the Netherlands. We can take lessons from this study's use of Amsterdam as a case study, a city that aims to have 10 per cent of new housing plots consisting of housing co-ops and thus actively wants to support this niche. Other policy measures, however, are proposed to further stimulate development to make this niche the new (sustainable) form of housing.

Government contribution to national fund

Initiatives experience major hindrances in getting a conclusive business case and need to finance 25 per cent with other means than a bank loan. To fill this gap, Amsterdam is currently showing the example of a revolving fund established and managed by SVn. Though many other municipalities do not have the resources to contribute to this fund, and therefore I recommend that the national government facilitates a national solidarity fund. This could also give trust to banks to finance initiatives. In exchange, municipalities could contribute to the availability of suitable locations with a reduced land price.

Provide locations

Because the city of Amsterdam still has a lot of land in comparison to other municipalities, they can arrange adjusted tender requirements and leasehold pricing to support housing co-ops. Because the national government owns the land as well, I recommend that the national real estate company (Rijksvastgoedbedrijf) prioritizes housing co-ops in tenders that add value to the local community. As a result, they are more equal to project developers. This is also a legitimate recommendation as the land owned by the Central Government Real Estate Company is social ownership.

Reflexive attitude municipalities

Reflexive approaches are needed for sustainability transitions. Therefore, other municipalities should take a more reflexive approach, like the municipality of Amsterdam. This reflexive approach allows for mutual learning to reduce bottlenecks and contribute to the development of housing co-ops in specific municipalities.

Definition housing co-op in national law

There is currently still confusion in terms of legislation around the definition of housing co-ops. This results into hindrances in realizing a housing co-op and hindrance the familiarity of the concept of housing co-op as a new form of housing. Therefore, I recommend making the current legal form of housing clear and specific. This means that it should be defined in the Civil Code as well as the Housing Act.

Raise awareness and stimulate knowledge sharing

More awareness is needed to move the development process forward. This includes increasing the familiarity with the concept of housing co-op, as well as the possibilities for establishing one, as well as background information on the political and social context. National and local governments should invest in knowledge-sharing platforms to accomplish this. This could also lead to more collaboration between housing co-ops and other actors in the field.

Branding of the housing co-op concept

Lastly, as there is currently confusion around the concept of housing co-op, changing the name could potentially help with the familiarity of the concept and create more awareness and clarity about its definition and function. Currently, the Dutch name of the housing co-op, namely “wooncoöperatie,” is very similar to “woningcorporatie,” which means housing corporation.

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Appendix 1 - Semi structured interview guide

Introduction

- Thank interviewee for participating in interview
- Introduce myself
- Explain thesis topic and goal of the interview

Consent

- Ask for consent
- Ask whether name can be used or if participant wants to be anonymous
- Start recordings
- Repeat consent during recording

Example questions

Note that these questions are a guideline, and other questions might come naturally from answers given by the interviewee. Some questions are more appropriate for the housing co-op members, and some are more appropriate for external stakeholders, or both. Newcomer et al. (2015) and Bryman & Bell (2015) were used as a guide for the interview structure.

Warming up

- What is your role in the housing co-op?
- Since when are you active within this initiative?
- How is your housing co-op initiated?

Values

- How did you form a group?
- What values are central in your group?
- Do you have design principles?
- How do your values determine your choice of sustainability?

Internal governance

- How do you make decisions?
- How is your organization shaped?
- What roles are present within your initiative?

Sustainability

- What measures do you aim to implement in your building, and why?
- Did you need to make compromises on sustainability or other building aspects due to hindrances?

Decision-making

- Where are you now in the process of realizing the building?
- How did you experience the process so far?
- What kind of support did you make use of during the process?
- What kind of challenges or hindrances did you experience during the process?
- What is needed to make the process of becoming a housing co-op easier?

Wrap-up

- Would you like to receive the results of the study?
- Could I contact you for further questions?
- Summarize interview (by interviewer)
- Feedback on completeness
- Thank interviewee for participating and answering questions

After the interview

- Look over notes and complete them
- Write out thoughts
- Possibly immediately transcribe afterwards

Appendix 2. Thesis planning

The following table presents the activities that will be executed upon completion of the thesis.

	Activity	Date
Phase 1: Orientation	Start Date	February 1
	Hand in Thesis Agreement Form	February 24
	Swap proposal with fellow student: give and receive feedback	March 7
	Hand in Thesis Proposal	March 10
Phase 2: Data collection, handling & analysis	<ul style="list-style-type: none"> • Contact interviewees • Set appointments for interviews • Work on interview guide 	March 20
	Feedback received by supervisors via email	March 16
	Meeting with supervisors, ask questions about feedback on proposal	March 17*
	Thesis café @Wageningen University	March 24
	<ul style="list-style-type: none"> • Send interview guide to supervisors • Swap interview guides with fellow student 	March 25
	Feedback interview guide received by supervisors	March 30
	<ul style="list-style-type: none"> • Expert interviews • Interviews with housing co-ops • Transcribing • Data analysis: Coding with NVivo 	April 1 - April 30
Phase 3: Writing	Write Results chapter	May 1 – May 8
	Write Discussion chapter	May 9 – May 15
	Write conclusions/recommendations (bullet points)	May 16 – May 18
Phase 4: Finalizing	Hand in 80% Version	May 30
	Go/No go Meeting	May 31
	Work on thesis	May 26 - June 16
	Hand in last version before final	June 17
	Feedback received last version	June 22
	Finish and perfect thesis	June 24 – June 28
Phase 5: Delivery	Hand in Final Thesis	June 30

	<ul style="list-style-type: none"> • Prepare presentation • Prepare thesis defense questions • Practice with fellow student 	June 30 – July 6
	Thesis Defense	July 7

Appendix 3 – Contacted interviewees

Name	Organization	Function	Contacted on	Interview planned yes/no
Marije Raap	Municipality of Amsterdam	Programmamanager Woningbouw bij Grond en Ontwikkeling, Gemeente Amsterdam bij Grond en Ontwikkeling, Gemeente Amsterdam	04/04	Yes, on 25/04
Clemens Mol	Stichting WOON!	Adviseur Bewonersorganisaties/ Zelfbeheer/ Wooncoöperatie	04/04	Yes, on 14/04
Eva van Dijk	Housing co-op Stroom	Voorzitter Wooncoöperatie Stroom	29/03	No
Jacob-Jan Koopmans	Housing co-op De Warren	Treasurer of the housing cooperative De Warren and Economist	29/03	Yes, on 13/4
Tjeerd Haccou	Space & Matter	Co-founder Space & Matter	29/03	No
Inti Shacham	Housing co-op De Nieuwe Meent	Design, contact met architecten en adviseurs, onderzoek naar gebouwwortwerp en duurzaamheid, co-design, management ontwerpteam en bouwteam.	29/03	No
Andrea	Housing co-op De Nieuwe Meent	Accounting, grants & fund requests, contact investors, crowdfunding coordination, liquidity plan design and management and more.	29/03	No
Lauri Schipper	Housing co-op De Nieuwe Meent	Board: Accounting, grants & fund requests, contact investors, crowdfunding coordination, liquidity plan design and management and more.	29/03	Yes, 04/05
*contacted via general email	Cooplink		04/04	No
*contacted via general email	Housing co-op De Torteltuin		29/03	No
Aniek	Housing co-op Join Commons	Initiator	29/03	Yes, 14/04
Joris	Housing co-op Join Commons	Initiator	05/04	Yes, 14/04

*contacted via general email	Housing co-op Ons Nieuwe Hof		29/03	No
Rene Schalk	Housing co-op Akropolis-IJburg	Initiator	29/03	Yes, 04/04
Aart Coolman	Rabobank	Aart Coolman advises and supports relationship managers on issues of customers and prospects. Aart is also involved in housing developments, such as cooperative initiatives.	05/04	Yes, 11/04
Marije Spithoven	Municipality of Amsterdam	Project leader self-build program team at the Municipality of Amsterdam	05/04	No
Sandra Labree	Cooplink	Projectmanager cooplink	05/04	No
Bastiaan van Perlo	Nederlandse Woonbond	Beleidsmedewerker belangenbehartiging	05/04	No

Appendix 4 – Attended events

1. Work conference “Cooperatieven maken de stad (cooperatives make the city)” on January 16, 2022.

Speakers

- Arie Lengkeek is involved in the Rotterdam housing association and the Blijstroom energy cooperative. He is co-author of the book Operatie Wooncoöperatie, which will be launched on this day and presented in this session.
- Keijen van Eijk is a board member of the NDSM Energie cooperative. He also works for the municipality of Zaanstad, where he sets up energy pilots in a European context.
- Eva van Dijk contributed to the establishment of the Stroom housing cooperative and is now chairman. Stroom has several pillars, of which multigenerational living is the most important.
- Willem Draaisma is project leader at Westerlicht energy cooperative, a cooperative that supports energy neighborhood initiatives in Nieuw-West.

Content

The working conference Cooperatives make the city is realized by Pakhuis de Zwijger and is realized in collaboration with: Municipality of Amsterdam, WAAG, Tertium, Commons Network, Amsterdam University of Applied Sciences, De Warren, !WOON, 02025, De 99 van Amsterdam, De Nieuwe Meent, Herenboeren NL and Crowdbuilding/Space&Matter.

I attended two sessions: “The future of the housing co-op” and “Housing & Energy coöperatives”

Link to event

<https://dezwijger.nl/programma/cooperatieven-maken-de-stad>

2. Knowledge share session “De Woonrevolutie (The housing revolution)” on May 11, 2022.

Speakers

- Arie Lengkeek works as an independent program maker under the name “/commongrounds”.
- Clemens Mol is program leader for housing cooperatives at “!Woon”.
- Stephanie Zeulevoet is involved as an architect in various co-creation projects, including housing co-op “33Bovengronds” in Delft.
- Mira Nekova is founding partner of “Time to Access”. Time to Access is an Amsterdam-based platform dedicated to the development of radical architecture.

Content

During this knowledge-sharing session, Arie Lengkeek and Clemens Mol talked about what a housing cooperative entails, why it is so good for the housing market, and you will hear about opportunities in this revolution for us as architects. Stephanie Zeulenvoet and Mira Nekova shared their experiences as architects in cooperative housing projects.

Link to event

<https://bna.nl/agenda/de-woonrevolutie/broeinest-schaverijstraat-9e-3534-as-utrecht-11-05-2022>

Appendix 5 – Initial and final codes

Themes	Codes	Subcodes
Values	Values	Diversity Sustainability Affordability
Decision-making	Decision-making	Initiation Design process Board Members Working groups
Sustainability ambitions	Sustainability ambitions	Energy Climate adaptation Nature inclusive Sharing space Reduce car use
Hindrances & Stimuli	Financial	Pre-financing Municipal loan German bank Dutch bank Complex Personal contribution Rising construction costs Leasehold discount SVn
	Legal	Municipal goals & ambitions Financing Practice development National stimuli Strict rent pricing rules Bureaucracy No clear legal form
	Knowledge	Hiring experts High educated / experienced people Knowledge sharing platforms
	Social	Building community Personal network Familiarity of the concept
Trade-offs	Trade-offs	Affordability VS sustainability Social VS sustainability Inclusiveness VS social