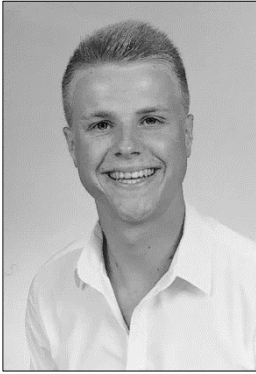


New and innovative concepts for realizing middle segment rental housing



| Colophon



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| Preface

This master thesis is my end product for the master track Management in the Built Environment at the faculty of Architecture & the Built Environment. At this TU Delft faculty I have learned a lot of complex, diverse, dynamic, persistent, tough, but above all, valuable lessons. It feels like an opportunity and my duty to incorporate these lessons into this master thesis.

My motivation for choosing this subject mainly arises out of the curiosity into the major housing crisis in the Netherlands. There are too many difficulties for younger people to enter the housing market currently. How are students like me supposed to find an affordable home? I see a lot of building projects appearing, but isn't that too late? Why only now? Who are these homes for? I still seem to have so many unanswered questions about the housing management field, that I decided to make my thesis out of it. By conducting this research I would like to enlarge my understanding on the dynamics of the Dutch housing market.

As a final note, I would like to thank a number of people who have directly or indirectly contributed to the completion of this thesis. First of all, my two mentors, their efforts have raised this thesis to a higher quality level, thank you Joris Hoekstra and Peter Boelhouwer for your input, flexible guidance, contacts and critical feedback. Thanks to all interviewees for their willingness to participate and sincere input. In addition, I would like to thank my family, girlfriend and friends for all their interest and support. Finally, I would like to give a special thanks to my supportive, interested and proud grandmother, she unfortunately passed away during my masters, this one is for you.

I hope this thesis informs you well.

Lars Bonouvrié

8th December 2022

Readers note:

A tip for getting the best online reading experience is to click on 'View' from the toolbar in Adobe Acrobat Reader, then click on the 'Page view' option and select in this menu 'Browse on two pages' and 'Show cover page on two pages'.

| Abstract

The Netherlands is dealing with a severe housing crisis, in which there is a major shortage of affordable housing. The government has introduced many new regulations, trying to curb this affordability problem. Many of these measures seem to center around tempering market parties on the Dutch housing market. However, quite contradictory is that the same government is also dependent on these market parties to construct new housing. The relationship between government and market parties need to become less hardened, as there is a tremendous urge for affordable housing. Many lower and middle-income groups are excluded from social housing and owner-occupied housing, therefore dependent on the middle rental segment. Within the new coalition agreement is laid down that there will be a rent regulation for middle segment rental housing, which has to conclude in affordable housing for middle-income groups and profitable investment opportunities for institutional real estate investors. This utopian way of thinking will be further explored within this research, as there seems to be a more complicated field of tension between the subjects of affordability and financial feasibility. New and innovative concepts could help to bridge this gap, however the effectivity of these concepts for realizing middle segment rental housing still seems underexplored in literature. The main research question is therefore: *To what extent are new and innovative concepts effective in realizing middle segment rental housing, which remain affordable for tenants and financially feasible for project initiators?*

The research involves two types of studies. Starting off with a literature study, to shape the theoretical context of the problem. The literature study is followed up by empirical case studies on new and innovative concepts, in which data is acquired through document analyzes and the conduction of qualitative interviews with involved stakeholders.

The goal of the research is to provide recommendations to market parties and governmental parties on how to effectively realize middle segment rental housing. The recommendations are based on the concluding answers to the main research question and the corresponding research sub-questions.

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01 | INTRODUCTION

01 | Introduction

This first chapter will start off with giving a brief problem statement. The research relevance will be discussed, after which the research questions will be stated. The chapter will end with an elaboration on the research methodology.

1.1 | Problem statement

The Netherlands is facing a housing crisis, in which there is a major shortage of affordable housing. There is much speculation about local and national measures which aim to solve the housing shortage, and first implementations of these measures are starting to appear in several municipalities. Remarkably, many of these measures are centered around tempering the real estate investors on the housing market. These measures include amongst others the change in the real estate transfer tax, the buyout protection and a rent regulation in the middle rental segment. It is important to take note of the nature of these measures, as some are centered around the existing built environment and some are meant for new construction. However, one might argue how justified and effective these limitations towards market parties actually are, as their role still seems quite underexplored in literature.

Hochstenbach (2022) describes in his book 'Uitgewoond' many problems and myths about the Dutch housing market. In his chapter about investors he addresses how the government in the Netherlands has become dependent on the market to construct new housing. So on the one hand the government is trying to improve affordable housing by discouraging real estate investors in buying up properties within the current stock, and on the other hand, after years of conscious policy making, it has become dependent on real estate investors to finance new construction. This has among other things hardened the relationship between the government and market parties. Van Gijzel (2018) argues that a trustful and transparent relationship between municipalities and market parties is key. This relationship has traditionally been present with housing associations, however it seems municipalities have not yet invested enough in those with market parties.

Are municipalities solely responsible for these hardened relationships? That does not seem to be the case, as real estate investors have a mediocre reputation in the Netherlands. Van Gijzel (2018) describes how the high demand and limited supply have led to high rents in the market. In larger cities, small houses are sometimes offered at very high rents by investors. This causes municipalities to be cautious: after all, they want affordable and high-quality rental housing for the long term. In order for market parties to increase their market

share, they will have to be mindful of the public interest and be a reliable partner for municipalities.

The ambition of the national government is a home for everyone (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022a). For people with a low income, the government therefore provides support for housing costs through rent allowance and regulation of prices in the social housing sector. However, due to the shortage of social rental housing, lower-income households do not always have sufficient access to this regulated rental sector. As a result, they end up in the free rental sector. Middle-income groups also experience difficulties in finding affordable housing, as they fall between two stools. They are not eligible for social housing and owner-occupied housing is also far out of reach. This reflects the importance of the affordable middle rental segment, the urgency being high, as the total deficit in 2019 was already estimated at 45.000 homes, which equates to 11% of the total stock (ABF Research, 2019).

In order to see what the government is currently planning regarding the middle rental segment, a piece out of the new coalition agreement is cited below:

"Middle-segment rental homes will be given a form of rent protection, such that housing for middle incomes becomes affordable whilst remaining profitable for institutional investors to invest into this type of housing. In order to encourage housing associations to build mid-range rental homes, the market test will be suspended during the entire cabinet term. We are simplifying the home valuation system and the process to get to the Rent Assessment Committee. Fixed renting agreements remain the norm" (Coalition Agreement, 2021).

Mainly the first sentence draws the attention here, as the government wants to tackle the problem by implementing a rent protection on middle-segment rental housing, which will conclude in affordable homes for middle income households and profitable business cases for institutional investors. However, can this be considered a realistic solution, or is this just some kind of utopia? It seems like there is a larger tension between the affordability for middle incomes and the profitability for institutional real estate investors. The new regulations make it more difficult for market parties to achieve their goals. In order to still effectively realize middle segment rental housing, new and innovative concepts are developed. Within this thesis I therefore would like to explore these new and innovative concepts, so I could provide recommendations to market parties and municipalities. The main research question of this thesis is: *To what extent are new and innovative concepts effective in realizing middle segment rental housing, which remain affordable for tenants and financially feasible for project initiators?*

1.2 | Research relevance

This section will discuss the societal and the scientific relevance of the research.

1.2.1 Societal relevance

The relevance for society is of major importance, as many people in the Netherlands, and other parts of the world for that matter, are experiencing difficulties in entering the housing market. This research would like to address and offer a solution to the urban inequality that is caused by these housing shortages. Adequate housing is a human right (United Nations, 1948) that momentarily cannot be realized, affordable middle segment rental housing could help to bridge the gap (van Gijzel, 2018). However, there needs to be a change, new and innovative developments or concepts are required in order to solve this complicated puzzle. These concepts could help to increase the effectivity in which middle segment rental housing is developed, while still ensuring housing affordability and financial feasibility.

I certainly hope that I can contribute to solving a small piece of the total puzzle with this research. The government and market parties should together look for the bigger picture, creating a better functioning housing market, in which there is no longer room for homelessness and housing becomes openly available again. As housing should not just be something for the lucky and rich few.

1.2.2 Scientific relevance

The relevance in the scientific field will be something that is difficult to achieve, as there is already so much research conducted on the topic at hand. Nevertheless, due to the introduction of new regulations, new insights within the housing management field may arise. In this case, a new and innovative concept might lead to a breakthrough, which is desperately needed in the field of affordable rental housing. This research aims to contribute to an increased understanding on new and innovative concepts for realizing middle segment rental housing within the scientific domain. These new insights will, ideally, manifest themselves among national and international municipalities and developers, and lead to more (successful) middle segment rental housing projects. Moreover, outcomes might be interesting for academic readership in order to enlarge the understanding of new and innovative concepts in the middle rental segment, which might lead to new applications in other segments as well.

1.3 | Research questions

This third section will discuss the main research question, which is supported by several research sub-questions. The conceptual model behind it is discussed at the end.

1.3.1 Main research question

To what extent are new and innovative concepts effective in realizing middle segment rental housing, which remain affordable for tenants and financially feasible for project initiators?

1.3.2 Research sub-questions

Theoretical - Literature study

1. Middle segment rental housing

- 1.1 What is the function of middle segment rental housing? (See section 2.2)
- 1.2 Who are the main target groups for middle segment rental housing? (See section 2.3)
- 1.3 What does the demand for middle segment rental housing look like in the Netherlands? (See section 2.4)
- 1.4 What does the supply for middle segment rental housing look like in the Netherlands? (See section 2.5)
- 1.5 What are critical factors for the successful development of middle segment rental housing? (See section 2.6)
- 1.6 What (new) regulations have to be taken into account when developing middle segment rental housing? (See section 2.7)

2. New and innovative concepts

- 2.1 How could local municipalities support new and innovative concepts for realizing middle segment rental housing? (See section 2.8)
- 2.2 What new and innovative concepts are currently utilized by project initiators to realize middle segment rental housing? (See section 2.9)

Empirical - Case studies

3. Effectivity of new and innovative concepts

- 3.1 What development process is utilized within new and innovative concepts for realizing middle segment rental housing?
- 3.2 What is the financial feasibility of new and innovative concepts for realizing middle segment rental housing?
- 3.3 How affordable is middle segment rental housing realized through new and innovative concepts for tenants?
- 3.4 What are the qualitative and quantitative aspects of middle segment rental housing realized through new and innovative concepts?
- 3.5 How effective are new and innovative concepts in realizing middle segment rental housing? (Conclusion of research sub-questions 3.1 to 3.4)

4. Governmental role

- 4.1 What role does the government have within new and innovative concepts for realizing middle segment rental housing?

5. Recommendations

- 5.1 What are the recommendations for market parties to effectively realize middle segment rental housing through new and innovative concepts?
- 5.2 What are the recommendations for governmental parties to effectively realize middle segment rental housing through new and innovative concepts?

1.3.3 Conceptual model

The research is based on the conceptual model showed in figure 1.1. The model shows how the new and innovative concepts for realizing middle segment rental housing are centralized. Attached to the concept are two of the most important parties within the research; the government and the market. The market is in direct contact with the concept, as it is always responsible for the realization of construction. The government however, is not always connected to the concept, as their role seems to differ per project. A line with arrows on both ends represents the mutual relationship between the two actors, in which the role of the government is unsure.

On the other side, two important topics for this research are included; affordability and financial feasibility. The affordable housing topic is placed on the side of the government, as it is something it strives for. The financial feasibility, on the other side, is of more importance to the market. Mostly based on these two topics, the effectivity of a concept will be assessed. Other concept specific subjects that might influence the effectivity are the development process, quality and quantity.

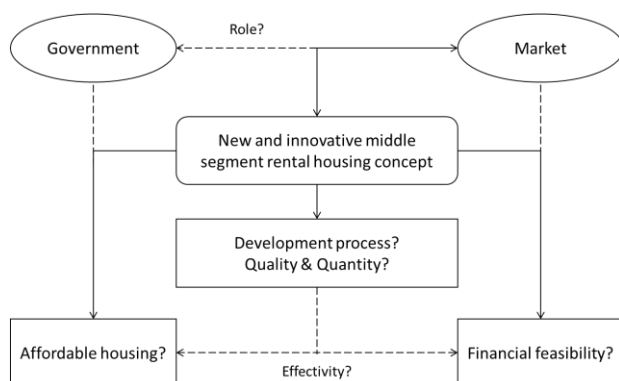


Figure 1.1: Conceptual model (Own illustration)

1.4 | Methodology

In the research two types of studies are performed. In this section the methodology that is used for the first part will be discussed briefly. The first part is theoretical and consist out of an explorative literature review, in which literature is used to shape the contextual outlines of the research. The exploratory approach helps to identify the main topics of attention, providing a solid foundation of knowledge for the subsequent part of the research. Moreover, the literature review aims to answer research sub-questions 1 and 2.

In the second part a qualitative study is conducted. Empirical data is collected by carrying out case studies on new and innovative projects for realizing middle segment rental housing. More details on the methodology of this empirical part will be discussed in chapter 3.

02 | LITERATURE REVIEW

02 | Literature review

There is a lot of literature available on the active and dynamic subject of the Dutch housing market, the middle rental segment is also part of this. This chapter aims therefore to summarize the main theoretical outlines of the problem, in the process answering theoretical research sub-questions 1 and 2.

2.1 | Definitions

In order to give a clear direction to the research, it is necessary to define certain ambiguous concepts, as they could be interpreted quite broadly. The first concept that needs a further explanation is the middle rental segment. Within literature the middle rental segment is indicated as everything just above the social rent, the liberalization threshold in 2022 is €763,47 (Rijksoverheid, 2022a), to a maximum of approximately €1000,- per month (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2021a; van Gijzel, 2018). Within this research the middle rental segment will be regarded as such as well, with the additional condition that it has to be new construction. The middle rental segment is intended for middle income groups, which could be defined as households with an income of 38.000 to 62.000 euros annually. Around a quarter of the Dutch households could be located within this group (Boelhouwer, 2020).

The second distinction that should be pointed out, is the difference between social housing and affordable rental housing. Czischke and van Bortel (2018) did research into this, they state that the affordable rental housing term is interchangeable with the term of middle segment rental housing. Moreover, their study confirmed that social housing is increasingly becoming a residual tenure. In other words, social housing is mostly accommodating people on very low-incomes and those with special needs. Confirming the general trend, across Europe, towards the progressive residualization of this sector (Borg, 2014). An increasing group of people does not qualify for social housing and is designated to 'affordable' middle segment rental housing. The affordability will be assessed based on the value tenants get for their money.

The third concept is the term effectivity, which will be used to describe the effectiveness of new and innovative concepts in realizing middle segment rental housing. Research by Zidane and Olsson (2017) shows that effectiveness is a concept that is hard to measure and is often alternately used with concepts like efficiency and efficacy. Their research investigated the differences between these terms on a project level and are therefore only used as a guideline for defining concept effectiveness. As mentioned before, financial feasibility and affordability are two of the main drivers for this research, these are therefore weighted more heavily to

describe the effectivity of a certain concept. The financial feasibility being described along the lines of financial structure, risks and profitability. Affordability will be measured by the operating periods, target groups and rent prices. Three other assessment criteria that will support to describe concept effectiveness are; the development process, housing quantity and housing quality. The development process mainly looking into the time management, capacity and innovation regarding the concept. The housing quality will be measured by investigating sustainability, social cohesion and the value for money. The last criteria is the housing quantity, which assesses amongst others the scalability, reproducibility and number of realized homes. During the research it is important to keep an eye out for how the concept effectiveness is generating positive impacts in the middle and long term (Zidane & Olsson, 2017), as effectiveness is not a destination, but a journey (Drucker, 2006).

The fourth concept that needs further refinement is the term real estate investors, as there are many types of real estate investors. The research mainly refers to the institutional real estate investors, as the government regards them as most valuable for financing the supply of new construction in the middle rent segment, as stated in the National Housing and Construction Agenda (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022a). Within this research the most important institutional real estate investors are represented by investment funds, pension funds, banks and insurance companies. It is important to note that institutional investors are often only responsible for financing new construction, meaning that the financial feasibility is of most importance for them. The focus of this research, however, is mainly on effectively realizing new construction, therefore it becomes more interesting to take a developers approach. A shift to the developers approach seems logical, as developers are responsible for the financial feasibility analysis and the execution. By still including the financial feasibility, the research is indirectly still covering the conditions for the institutional investors, the only difference being that the institutional real estate investors will be addressed less during the research.

2.2 | Function

The middle rental segment contributes to a balanced housing market, in which the importance of an appropriate stock is a priority (van Gijzel, 2018). Transitional flows and accessibility are important themes within the current housing market. The mid-segment rental housing helps to get this flow going, from social rent to private sector rent, but also between renting and buying, thereby offering a place to people who want to move on from the social sector, as well as to people who want to sell their house to free up wealth. Through the transitional flow, homes become available in the social rent sector and the owner occupied sector. Therefore, the mid-rental segment has the function of a turntable on the housing market; households can use it to move up, move on and move back, allowing them to always find a suitable home again (van Gijzel, 2018).

Moreover, mid-term rental housing contributes to a balanced population structure (van Gijzel, 2018). For example, by allowing younger people to continue to live in the city after their studies, or to support them to find a house near their future work location. Helping to ensure a lively, active and pleasant environment.

The national government also acknowledges the importance of adding more middle rental segment housing, in order for the social housing to function properly. As in many big cities it is increasingly difficult to find affordable rental housing. Resulting in people losing a larger part of their income on rent than they would have if they had bought the same home (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022b).

Within other countries a similar functionality of the middle rent segment can be seen. Findings of four countries show that there is indeed an emerging affordable housing sector, which is generally characterized by policies (at different scales) aimed at helping middle-income households rent housing at below-market price (Czischke & van Bortel, 2018). Nevertheless, the definition of 'middle-income' and 'below-market' price seems to vary across countries, regions and cities.

2.3 | Target groups

According to van Gijzel (2018) the target groups for the mid-rental segment are defined by seven characteristics, they are:

1. People who do not want to buy a house and who would like to remain flexible, for example because of their profession, contract or stage in life;
2. People who consciously choose a rental home, because they do not want to run a risk in terms of assets or do not want to be responsible for the maintenance of the home;
3. Households that are not (any longer) eligible for social housing, but are not (yet) able to buy because of the purchase price or mortgage requirements;
4. Starters on the housing market;
5. Knowledge workers who are temporarily looking for a home in the Netherlands;
6. Older people who want to sell their owner-occupied home in order to free up capital;
7. Households that currently still live in social housing, but would like to move on to a housing that better suits their housing needs.

However, the types of target groups seem to vary per country. From a study of four countries three general key groups were identified: households with temporary and/or precarious income (including families and single people) and mobile workers. While the main type of area affected tends to be cities, there also was evidence found of worsening affordability in smaller towns, such as in Italy (Czischke & van Bortel, 2018).

2.4 | Housing demand

The shortage on the Dutch housing market finds its origin in the rapidly growing demand and the limited supply. The growing demand can be linked to three demographic developments: the increase of population, the increase in migration to the city and the increase in the number of single-person households (van Gijzel, 2018). The fact that demographic developments are subject to uncertainties has been shown to an extreme extent in 2020 due to the COVID pandemic. Natural growth was negative for the first time in decades and immigration was significantly lower than in 2019. This limited population growth and the addition of more than 75.000 new homes every year have therefore somewhat tempered the rising trend of the statistical housing shortage, however the CBS expects the population to grow further in the upcoming periods (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2021b).

The total housing shortage is estimated at 279.000 dwellings in 2021, that is 3,5% of the total stock (Capital Value, 2022). The government wants to bring this back to 2% before 2035, as history proves that there seems to be some degree of balance when the housing shortage is around 2 percent (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2021b). However, the expectations are that the shortage will expand even further, to 316.000 dwellings in 2024, which is 3,9% of the total stock (Capital Value, 2022).

The biggest portion of the demand is for affordable housing. On an annual basis the demand for social housing surpasses the supply by 64.000 dwellings, in the private rental sector this is 16.000 annually. The total demand for owner occupied housing surpasses the supply by 137.000 homes annually, of which 60% can be assigned to affordable owner-occupied housing. It should be noted that it will be difficult in the coming years to meet the demand for affordable rental and owner-occupied housing due to rising construction costs and high land costs (Capital Value, 2022).

The last calculations from ABF Research (2019) showed that in 2019 the total deficit for middle segment rental housing was already estimated at 45.000 homes, a number which could currently be assumed even higher. ABF Research (2021c) calculated that for the period of 2021 to 2034 almost 83.000 homes are required per year. According to the middle scenario, the optimal new-build program for middle segment rental housing consists of adding 5.400 homes annually, see figure 2.1.

	Social/Cheap	Middle	High
Rent	23.700	5.400	1.900
Owner-occupied	27.700	15.000	9.000

Figure 2.1: Optimal new-build program middle scenario, annual average for the period 2021 to 2034 (Adaptation from ABF Research, 2021c)

2.5 | Housing supply

Due to the nitrogen problem and the corona crisis, some of the housing projects have been delayed. It is therefore expected that the housing supply in 2021 and 2022 will be slightly lower than in previous years. From 2023, the housing production is expected to increase strongly again (ABF Research, 2021c). This is partly a catching-up effect, and partly an expectation that is based on the measured increase in planning capacity and changes in governmental policies (ABF Research, 2021a). Central government and provinces have made resources available to accelerate housing construction. Residential deals have been concluded and new construction is given a financial boost through the housing incentive and the abolition of the landlord levy. Moreover, there are schemes which allow municipalities to receive support in the preparation of the plan. Administrative agreements are made between the central government and the provinces about the construction task and increasing the planning capacity. On the long term, provinces and municipalities are looking for more planning capacity and within several regions there will be worked on urbanization strategies together with the central government (ABF Research, 2021c).

However, it will take some years before the extra efforts of the central government, provinces, municipalities and market parties result in the supply of more homes. The Primos-prognosis made in 2021 expects the housing stock to increase on balance by more than 80 thousand homes after 2025 (ABF Research, 2021b). The peak is expected around 2026/2027 with a net growth of between 85 and 90 thousand homes. Thereafter, according to current insights, output will fall under the influence of declining household growth and a declining housing shortage (figure 2.2). In total, it is expected that in the period of 2021 to 2034, 1.16 million homes will be added to the stock (new construction, transformation and home division) and 168 thousand homes will be withdrawn from the stock (demolition, zoning change and merger). On balance, the stock will increase by almost 990 thousand homes, an increase of 12.4%. The housing shortage is expected to decline from its peak of 3.9% in 2024, to 2.0% in 2035 (ABF Research, 2021c), see figure 2.3.

The ambition of the national government is a home for everyone (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022a). The aim is to grow towards the realization of 100.000 homes per year (including flex homes, transformation homes and splitting homes). The long-term goal is to realize 900.000 homes by 2030. With regard to flexible housing, the aim is to deliver 15.000 homes annually. In addition to the new construction, 15.000 homes are each year delivered by transforming shopping areas and offices. This assignment will be viewed in conjunction with other objectives in the field of climate adaptation, business activity, accessibility, nature,

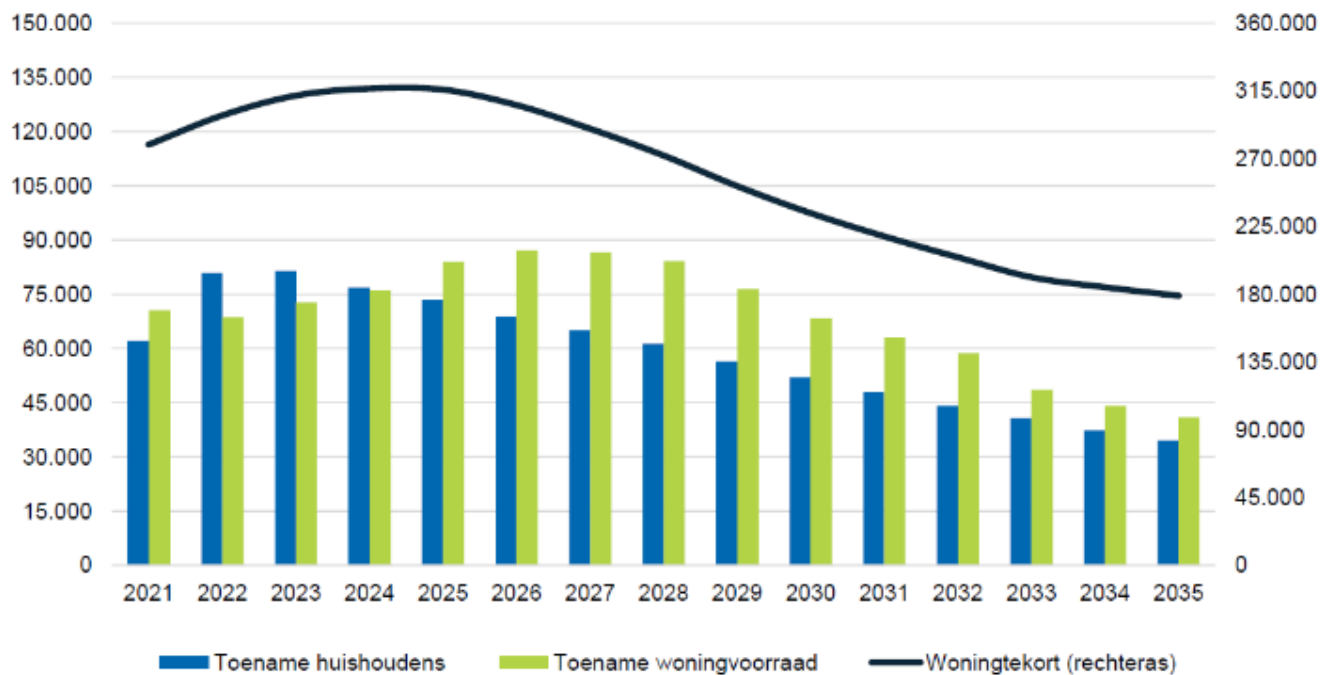


Figure 2.2: Expected annual increase in households and housing stock, and expected housing shortage development, 2021-2035 (ABF Research, 2021b).

etc. To achieve the intended number of homes, the period from construction plan to completion of the home must be shortened.

Additionally, the national government wants everyone to have an affordable home (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022a). They aim for two-thirds of the new rental and owner-occupied homes to be affordable, half of which will be built by housing associations. In order not to delay ongoing housing projects due to new affordability requirements, this target will apply only to new projects. Of the 600.000 affordable homes, 350.000 are mid-range rent and affordable owner occupied homes, given the great need for homes for starters and people with a middle income. By 2030, 250.000 new social rental homes need to be built by housing associations, with an eye for the need for suitable housing for people with a low income. Lastly, the government is working towards a more balanced distribution of social housing across all municipalities. Figure 2.4 provides an insightful overview of the given numbers.

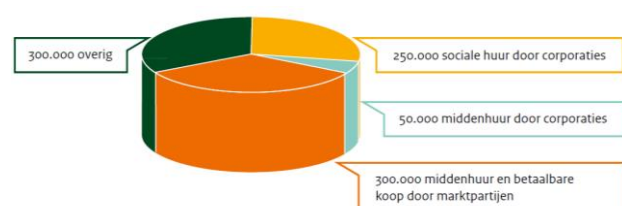


Figure 2.4: Division of 900.000 homes amongst segments (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022a).

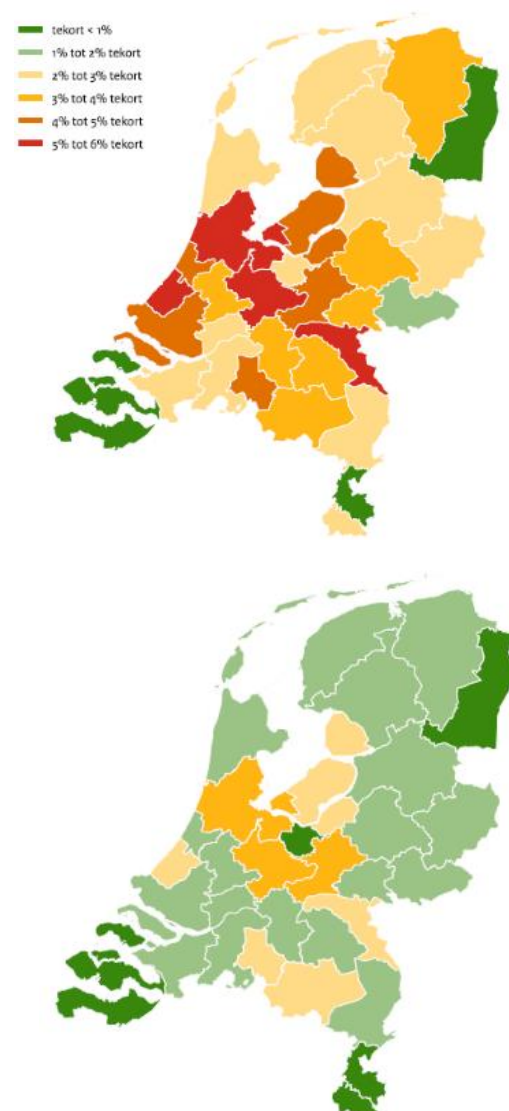


Figure 2.3: Statistical housing shortage as a percentage of the housing stock in 2024 (above) and 2035 (below) (ABF Research, 2021b).

Based on the provided information, the national government stated 3 main objectives in their Housing Program (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022c):

1. Realization of 900,000 homes until 2030
2. Growing to 100,000 new homes per year
3. Two thirds of the homes are affordable

To achieve these objectives the government is planning to work along 4 lines of action, these are:

1. Strengthening our direction

We will ensure that all municipalities, provinces and central government take their share of the task and responsibility for sufficient affordable housing, the growth to 100,000 new homes per year during this cabinet term and the construction of 900,000 homes until 2030 (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022c).

2. Accelerating the process from initiative to realization

We ensure that the process of realizing a home is more efficient and shortened. Both generically and at location level, we limit the effect of bottlenecks in the construction process with an eye on quality and future-proofing of housing and living environment. We will look at the short and medium term (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022c).

3. Encouraging rapid housing development

We make housing construction possible by supporting municipalities, financially and with help with specific solutions, such as flex homes, transformation homes and affordable housing. In this way unfeasible projects can become feasible (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022c).

4. Building on large-scale locations

Large-scale housing is needed in a number of areas. The housing shortage in those areas have become too large of a problem, that medium-sized locations do not provide enough good affordable housing to contribute sufficiently to the realization of 900.000 homes up to and including 2030 and to grow to the realization of 100.000 homes per year. The large-scale of new housing also provides long-term security and continuity of construction in the medium and long term (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022c).

2.6 | Success factors

Sustay (2021) is a development company that mainly focusses on affordable housing. Within their paper 'De sleutel tot...' they address several key benefits to housing associations for building middle segment rental housing in collaboration with market parties. The following beneficial factors are addressed:

1. Knowledge and innovation of the market;
2. Housing association can broaden their target audience by operating in the middle rental segment;
3. Market parties are able to create more exposure for the project;
4. Obtaining more land positions;
5. Dividing the workload between the two parties.

The same paper also addresses some of the disadvantages that may arise when housing associations collaborate with market parties, these are:

1. Lack of knowledge of market parties regarding local procedures and politics;
2. Delays during the processes due to additional coordination with market parties;
3. Discussions on the program due to prioritization of financial feasibility by market parties;
4. Less control on product and price by the housing association.

Karekar (2021) conducted research into how the development process of mid-segment rental housing could be improved. He concluded that the five following factors were critical for successfully improving the development process of mid-segment rental housing:

1. Establish a well determined process;
2. Seeking alternative land development approaches;
3. Allowing flexibility during negotiations and regulations;
4. Improving actor relationships;
5. Developing policies that would not only regulate this segment but also stimulate market actors to develop mid-segment homes.

Later on in the research Karekar (2021) makes three recommendations for municipalities and market parties. Common recommendations for both parties are to shift focus towards developing mid-segment homes in Randstad areas and regional municipalities. The recommendation is made for the following reasons: scarcity of land within metropolitan areas and big cities, higher political influences that could have a negative impact on development, easing the pressure on cities could have a positive impact on rising house prices, availability of land in these supporting areas, and finally lower land prices in comparison to metropolitan areas. The second recommendation is to take the initiative to develop within the middle rental segment, as it was determined that the involved actors currently appear to be waiting on each other to take the initiative. This would

imply that market actors actively seek opportunities to acquire land with the intention of developing mid-segment homes. It could be argued that acquiring private land may be difficult in terms of land price because private landowners expect market-level prices. This could be overcome if developers and investors collaborate to create viable business cases that are also appealing to landowners. The third recommendation is to look for redevelopment opportunities within metropolitan areas and big cities. Rather than looking for vacant land in these areas, municipalities and market parties should actively seek redevelopment opportunities. Municipalities with land-use planning authority could assist in making the necessary changes to the use of the redeveloped sites. This would take a while because changing the land-use plan takes time, but there are options for providing temporary permits that allow development because the land-use would align with the development in the near future.

Karekar (2021) also created five recommendations only intended for municipalities. The first is to support each other in terms of building capacity within themselves, as smaller municipalities face a lack of capacity to process policies and implement them. Smaller municipalities that are in close range of the metropolitan areas and big cities should collaborate with larger municipalities to develop policies that can be implemented. Adding to the goal to develop better connectivity and infrastructure, in turn directing market actors towards the smaller supporting municipalities. Second, municipalities should allow for some wiggle room in terms of increased sustainability and building requirements. This would imply transparency between the involved parties in terms of cost calculations and collaborations to achieve shared or common goals. Third, municipalities are looking for alternative land development approaches because land is currently scarce in municipalities. This could be accomplished through collaborations between municipalities and investors, in which municipalities identify potential locations and acquire land positions with the assistance of investors interested in developing mid-segment homes. Reducing the financial risks associated with land acquisitions for municipalities and easing the difficulties that some market actors face in terms of ownership titles. Fourth, municipalities should implement policies that ensure that these homes remain in the mid-segment at the end of their operating period, in accordance with the rent cap of 20 to 25 years. The policy could state that at the end of the 25-year period, these homes will be sold on the condition that they remain in the mid-segment. Evaluating them at that point in time, because the range of mid-segment rental prices could change in the future. On the policy front, it is also suggested that policies be made at the national level. The final recommendation for municipalities is to implement fast track options for permits where the land-use and zoning plan are

consistent with the intended development. This would be a good way to increase the rate of supply because it is obvious that a significant amount of time is lost in obtaining the necessary permits. Municipalities could already identify potential development sites and derive specifications that must be met in order to obtain a fast-track permit. If developers comply with the requirements, they will be able to obtain permits sooner, and if they do not, they will be able to negotiate, implying they will forfeit the possibility of a fast-tracked permit.

The three recommendations made for market parties by Karekar (2021) exist out of actively seeking opportunities rather than waiting on public tenders, as developing within the middle segment is a feasible and viable option, even through private lands. Request municipal assistance with acquisition and setting goals for the area. The next recommendation is to improve investor involvement earlier in the process, making them more open to forward funding projects, instead of only coming in at a later phase of the development. The last recommendation for market actors is to consider the development of rent-to-buy options for middle segment homes, as doing so would reduce the burden on investors later on when they want to sell the homes. Also, by allowing tenants to pay certain amounts of down payments, this approach could help in recovering costs faster. In some ways, this would imply the creation of affordable owner-occupied homes, which would reduce the rising demand for rental homes because people would see this as an appealing option. Given the other target groups, such as flex workers, there is no doubt that demand for mid-segment homes will continue.

The research of Karekar (2021) ends with three recommendations at a project level scale. The first is to deliver more feasible business cases; using innovative design solutions could result in more efficient use of space, increasing the return on investment. This can be accomplished by providing a platform for municipalities and market actors to invest in developing and researching innovative solutions. Alternative construction methods and materials could also be used to reduce costs and construction time. Prefabricated construction methods, for example, could compensate for the time lost during the negotiation phase. As the research clearly demonstrated that the planning phase of such projects consumes a significant amount of time, and it can be argued that reducing this negotiation period is subjective in comparison to utilizing alternative construction methods that are more objective in terms of reducing construction duration. Second, forming consortiums for the duration of the intended development could aid in risk sharing among the involved parties, reducing the burden currently seen on developers. Municipalities sharing the risks of land development would indeed shorten the time spent negotiating land prices. As a consortium, the goals and visions of the involved actors are determined and

aligned with greater certainty, because changing them later would result in a loss to the consortium. To some extent, doing so would allow for a smoother flow of the process because the actors involved share the risks, and sharing the risks also allows for more room to arrive at feasible business cases because the risk factor is shared. Third, instead of using traditional methods, use early contractor involvement and look for alternative contracting options. Contractors can better estimate construction costs when they are involved earlier in the process. According to Barros's (2020) research, even investors should get involved earlier in the process and develop specific lists of requirements for mid-segment homes. As of now, they tend to adhere to a predetermined standard set of requirements for housing projects. Due to a lack of available land, municipalities may allow for higher density developments in inner city areas, allowing for greater flexibility in building regulations.

The aim of another research, carried out by Barros (2020), was to see how market parties (institutional investors) could increase the delivery of the middle rental segment. She ended up with a conclusionary advice for institutional real estate investors and municipalities, which consisted out of several recommendations shown in figure 2.5.

2.7 | New regulations

The fair question arises if the success factors discussed in the previous section will remain the same after the implementation of new regulations introduced by the national government. As said at the start of the problem statement, it is important to point out the nature of the regulations. Some measures are focused on improving the existing stock and some are focused on improving new construction. Within this research regulations regarding new construction are of the most interest. However, a change in regulations within one sector might lead to indirect changes within the other sector. This section will elaborate on some of the new regulations and their consequences.

2.7.1 New regulations for existing built environment

Real estate transfer tax: Active since January 1st 2021; first-time buyers are exempt from transfer tax once and investors pay 8 percent, in 2023 this rate will be further increased to 9 percent (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022a). This measure makes it less attractive for investors to buy existing properties for the short term, which already expressed itself in less homes bought by investors in 2021 (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022b). This regulation might therefore lead to more investment opportunities towards the development of new construction.

Recommendations for institutional investors	
Shaping instruments	1. Institutional investors should have their own program of requirements
	2. Institutional investors should tailor a public statement of intentions
	3. Institutional investors should sell dwellings after the holding period of the investment to an actor that will keep it in the middle rental segment
Diversifying instruments	1. Institutional investors should diversify their investments and invest in different cities
Recommendations for municipalities	
Stimulus instruments	1. Tax break for investments in the G4 cities
	2. Allowance for a portfolio that is kept in the segment for more than 15 years
	3. Ground lease
	4. Tender focusing on quality
	5. Tax break for developers
Shaping instrument	1. Development framework to guide investors
Capacity-building instrument	1. Increasing skills and capability

Figure 2.5: Recommendations for institutional investors and municipalities (Barros, 2020).

Buyout protection: Active since January 1st 2022; municipalities can introduce a buyout protection in desirable areas, so that homes up to a certain price limit can no longer be bought for rental purposes (buy-to-let). The buyout protection will remain in effect for a limited period of five years for the time being. The measure may then lapse, if there is no longer a shortage on the housing market (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2022a). This measure makes it impossible for investors to buy existing and less expensive properties for rental purposes. This regulation might therefore lead to more investment opportunities towards the development of new construction.

Self-occupancy obligation: Active since January 1st 2022; this measure is part of the buyout protection and makes it possible for municipalities to introduce a self-occupancy obligation of a maximum of 4 years. The measure may be introduced after the municipality has established and substantiated that there are unbalanced and unjust effects due to the scarcity of low and medium-priced housing. Implementation is also possible to ensure the preservation of the livability of a neighborhood. This is a temporary measure of 3 years, after which the necessity and relevance will be evaluated (Kok, 2022). This measure makes it also more complicated for investors to buy existing properties for rental purposes. This regulation might therefore lead to more investment opportunities towards the development of new construction.

2.7.2 New regulations for new construction

Self-occupancy obligation: Active since July 8th 2020; a buyer of a home must occupy it himself for a certain period of time. The self-occupancy obligation is regulated at a local level, in practice a period of three to five years is the most common. The self-occupancy obligation can be introduced by municipalities in two ways, if they are the land owner through the issuance agreement or long lease, or if they are not the land owner through a land development plan (Wind-Middel, 2021).

Regulating middle segment: Not yet enacted (planned for January 1st 2024); Minister of Housing De Jonge recently introduced the measures for regulating the middle segment. The regulation is still being tested within 3 municipalities, aiming to make rental housing more affordable by implementing a home valuation system. This point system has to ensure that tenants pay a fair price that fits the quality of the home. The exact upper limit of the regulation has yet to be determined, but will be between 1.000 and 1.250 euros (Rijksoverheid, 2022b).

Didam Arrest: Active since November 26th 2021; The Supreme Court has ruled that a government body that wants to sell immovable property must offer (potential) buyers the opportunity to compete for this immovable

property. This means that after a tender, the government body must select the buyer on the basis of objective, verifiable and reasonable criteria. This obligation arises from the principle of equality, which in this context aims to provide equal opportunities to market parties (Volkshuisvesting Nederland, 2022). This measure is therefore important to take into account, as it implies that there will be more governmental tender projects in the future.

2.7.3 Discussion on new regulations

These new regulations were not taken into account for establishing the success factors in the previous researches, leaving room for new findings. The regulations for the existing stock already show that there is less space to work with for investors, which might lead to more interest in investment opportunities for new construction. New and innovative concepts could therefore help to reallocate this equity of investors. Meanwhile, the announced regulation of the middle segment seems to counteract this, by making it less attractive to invest in new construction. However, project initiators who are already assuring value for money regarding their middle segment rental housing will probably see not much effect of this regulation.

2.8 | Municipalities

As elaborated in section 2.7, there seems to be a movement of legislative power to the local level, in which municipalities decide what regulations apply to certain projects. This section aims to show what kind of tools municipalities can already utilize to support new and innovative concepts for middle segment rental housing.

Buiting (2021) addresses several measures municipalities can already take to improve housing affordability. These measures include:

2.8.1 Housing and environmental vision

Draw up a clear housing and environmental vision with framework-setting area objectives for housing and, if necessary, elaborate this in a housing program. This could be translated into planning rules in the environmental plan and possible local housing fund formations. An important additional advantage is that clear goals and frameworks contribute to the predictability of policy, so that the expectations and efforts of housing partners, management and politics can be quickly brought together. This affects, for instance, the bids on land and calculations in land exploitations (Buiting 2021).

2.8.2 Target group regulation

Draw up a target group regulation: a public law framework that can help to enforce the desired housing program under private law. Target groups for the categories of social rent, medium rent and social purchase can be included in the regulation. In this way, affordability can be steered on the supply side, instead of on the demand side, for instance through a starter loan (Buiting, 2021).

2.8.3 Housing Ordinance

Make maximum use of the Housing Ordinance to manage the availability and distribution of affordable owner-occupied homes (Buiting, 2021):

- Setting conditions for house divisions: affordable owner-occupied homes can be excluded from a division permit because of the public housing interest;
- The introduction of a buyout protection, see section 2.7.1;
- Give priority to those who move up from social housing to affordable owner-occupied homes, so that owner-occupied homes end up within the right target group and social rental homes are freed up.

2.8.4 Self-occupancy obligation

In the case of municipal new-build projects, apply a self-occupancy obligation, which may be linked to an anti-speculation clause (Buiting, 2021), also see section 2.7.2.

2.8.5 Demolition and sale

Be cautious with the demolition or sale of the most affordable rental housing. Apart from the fact that the total stock shrinks as a result of insufficient new construction, newly built homes in social housing are often close to the liberalization limit (€736,47), leading to a continuous shrinking affordable stock, which results in less suitable homes for the lowest incomes (Buiting, 2021).

2.8.6 Tenders and contracting

Be sharp in tenders and contracting. Formulate goals and ambitions with regard to affordable housing as clearly as possible. Be open to new market parties and be strict when parties fail to meet obligations (Buiting, 2021).

2.8.7 Local partnerships

As a municipality, cooperate as much as possible with local housing associations and (market) parties that are involved in the implementation of housing policy. Conduct joint needs assessments and involve each other at an early stage in policy making, so that you are aware of each other's interests and preconditions during implementation. This makes it easier to make performance agreements or city agreements (Buiting, 2021).

2.8.8 Housing associations

Support housing associations with first bid rights on construction sites and real estate, fund formations or knowledge. From 2023, they will no longer be hindered by the landlord levy (Coalition Agreement, 2021) and will therefore be able to realize affordable rental housing, which will remain affordable in the longer term. Housing associations can thus offer an alternative for middle incomes, who are not eligible for social housing (Buiting, 2021).

2.8.9 Municipal land policy

Make the municipal land policy primarily at the service of affordable housing instead of striving for maximum land yield, in favor of other municipal objectives (Buiting, 2021).

2.8.10 Planning capacity

Finally, a lot of valuable time and energy is currently being invested in looking for new locations to realize new homes. However, the reality is that the planning capacity in most regions is more than sufficient for housing needs until 2030 and beyond. Fully commit to realize existing housing plans and, if possible, make use of capacity offered by other parties. Time costs money, which can also be invested in affordable housing (Buiting, 2021).

2.9 | New and innovative concepts

This section will explore current new and innovative concepts of different types of organizations to realize middle segment rental housing projects, and will function as the foundation for determining potential case studies.

2.9.1 Rabo SmartBuilds

Rabo SmartBuilds offers with temporary housing a solution for the urgent housing needs. They often do this on municipal land, where regular housing construction is not possible or allowed for a longer period of time. 90-95% of Rabo SmartBuilds homes are built in the factory with sustainable high-quality materials, are CO₂ and nitrogen friendly and are free of gas. The temporary homes function the same as full-fledged houses and can be compared to 'regular' houses. Their credo is; permanent homes, but with a flexible foundation. In this way they aim to contribute directly to the quality of life of many Dutch people and in the longer term to a healthy housing market and a sustainable society (Rabo SmartBuilds, n.d.-b).

2.9.2 OnsHuys

OnsHuys is a platform that aims to connect tenants, investors and government. Tenants are able to invest in their own rental bungalow through a bond loan, making it an attractive option for older people who just sold their house to free up wealth. The middle segment rental homes are realized in between owner-occupied housing projects and are of equivalent quality and appearance. As the tenant is also an investor, it allows the tenant to have a say about the finishing of the house during the development (OnsHuys, n.d.).

2.9.3 Wonam

The housing organization Wonam responds to the great need of the (young) middle segment for affordable rental housing. They do this by developing and managing their own housing projects in Amsterdam and Utrecht. "We

operate on the basis of social commitment and invest for the long term. After completion, we remain closely involved and organize the management of our homes ourselves. This preserves the quality of the building and its surroundings". (Wonam, n.d.) Some of the key aspects in this concept are their social commitment, long-term investments, in-house property management and their sense for area development.

2.9.4 Sustay

Sustay is a driver of the mid-market rent, which has led to a permanent place in the top 20 developers in the Netherlands. They often focus on specific target groups such as starters and elderly, in order to be of great significance in regional transitional flows. The many projects, which almost always start from a housing vision/need, prove that they are good partners for investors, municipalities and housing associations. With their 'Sustay-method' they set up a business case with social impact, that offers land and building owners the highest achievable value, a powerful combination. Sometimes they add owner-occupied homes to projects, in order to make medium rent (and social rent) feasible (Sustay, n.d.).

2.9.5 Buurblok

Bouwgroep Dijkstra Draisma and Wocozon offer energy-producing homes in a lease concept, called Buurblok. The aim is to help housing associations realize their housing ambitions in an affordable way. Buurblok is a complete service with the slogan: 'living as a service'. Buurblok saves housing associations time, energy and money. Included in the service are the homes, the energy concept, mobility and full maintenance. The tenant pays rental costs, costs for heating and costs for the use of the electric shared car. However, housing costs are often lower because the homes are producing energy, so that the tenant receives money back from the energy supplier every month (Buurblok, n.d.). See for an overview of all costs figure 2.6.

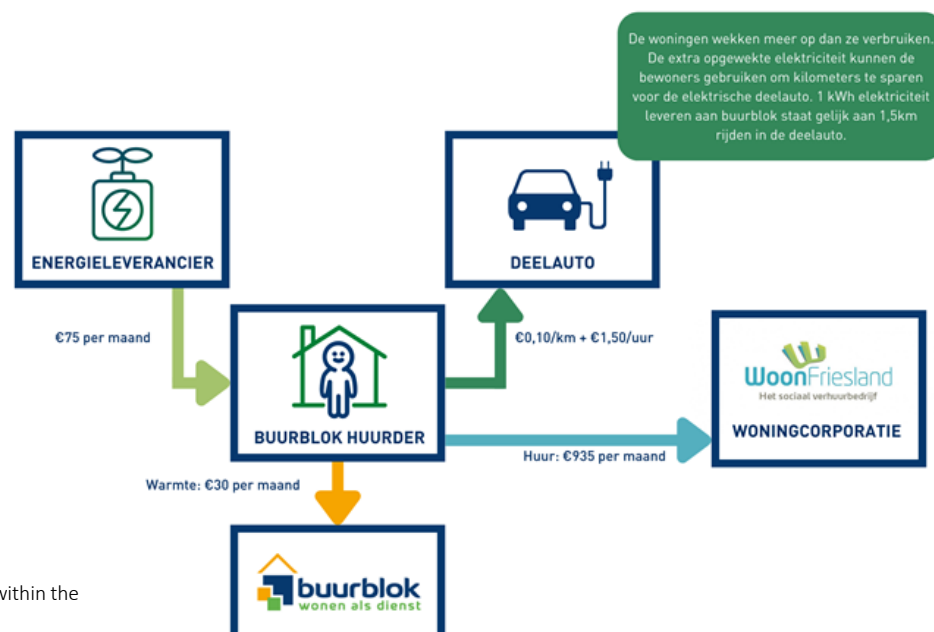


Figure 2.6: Overview of tenant costs within the Buurblok concept (Buurblok, n.d.)

2.9.6 BPD Woningfonds

With the fund, BPD is expanding its proposition in the housing market. Usually a developer buys a piece of land, develops housing and then leaves. As an integral area developer, BPD did already look further, but with this housing fund they try to do even more, by becoming owner of rental properties. BPD Woningfonds thus binds itself to an area for a longer period of time. This is a plus for current and future tenants, but also for municipalities and developing contractors, as it provides additional security (BPD, 2020).

2.9.7 AMST

AMST is a sustainable and socially responsible new-build development by MRP and responds to the high demand for rental properties in the middle segment in Amsterdam. AMST is centrally located in an expensive location opposite the Amstel station. Of the 252 homes, 80% is intended for middle incomes and 20% for the private rental sector. Some of the mid-range rental homes are suitable for larger families with a house size above 100 m² (AMST, n.d.). This is unique in Amsterdam, where there are few affordable rental homes available for the middle income group. AMST shows that mid-rental housing is financially feasible, even on the most expensive locations.

2.9.8 Woonfonds Rijswijk

The municipality of Rijswijk has taken the initiative to build rental homes in the middle segment by establishing and participating in the Rijswijk Housing Fund (Municipality of Rijswijk, n.d.). The municipality started an investigation into the possibilities of setting up a housing fund in which the municipality itself could participate, a new concept that has not been explored before. In order to build these

homes, it was necessary to formulate a strategy that meets all applicable financial and legal preconditions. This has led to a construction in which the municipality, as a participant, takes an interest in the housing fund. In this construction, new homes in the mid-rental segment become available for the intended target group and rents are moderated for the longer term. At the same time, the flow from the social rental segment is also promoted.

An overview of the financial construction within this construction is displayed in figure 2.7. The numbers within the figure correlate to the following actions:

1. The municipality sells land that is ready for construction to a market party from the RijswijkBuiten land development.
2. The market party builds the homes in Parkrijk: 62 apartments and 38 single-family homes.
3. The housing fund buys the homes and finances the purchase using own equity and loan capital (bank). This own equity was invested by participants, including €2.9 million by the municipality itself (25%).
4. The tenants move into the houses and pay rent to the housing fund.
5. The housing fund pays out returns over a period of 15 years, this amounts to €2.2 million for the municipality.

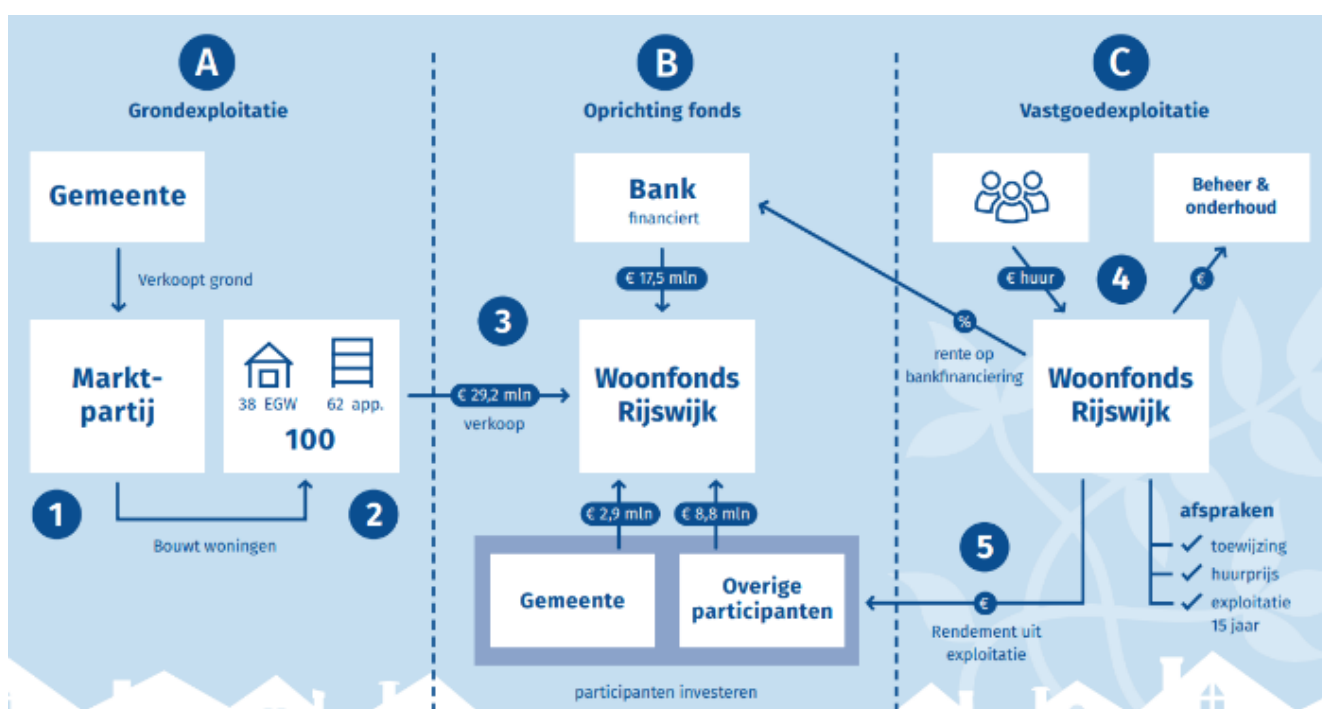


Figure 2.7: Financial construction Rijswijk Woonfonds (Municipality of Rijswijk, 2021)

03 | METHODOLOGY

03 | Methodology

The third chapter covers the methodology of the empirical research. It elaborates on the type of study, data collection methods, data analysis, data management plan and the ethical considerations of the research.

3.1 | Type of study

In the research two types of studies are performed, a theoretical and empirical study. The theoretical part in which an explorative literature review is conducted answers research sub-questions 1 and 2, this part has been completed with chapter 2. In the empirical part a qualitative study is conducted. By investigating several cases of new and innovative concepts for realizing middle segment rental housing, the study aims to answer research sub-questions 3, 4 and 5.

3.2 | Data collection

During the empirical part of the research, qualitative data is acquired through conducting semi-structured in-depth interviews with concept developers and governmental parties. The various chosen organizations are approached and asked for an interviewee who can provide information about the concept. The research opts for a semi-structured interview approach as it provides space for new findings and insights. The semi-structured interviews are guided by an interview protocol, so that comparable questions are asked for each case, which should make the analysis process more manageable. The interviews can take place physically or online based on preference of the interviewee, the interview audio will be recorded for the elaboration of a transcript. At the end of each interview, the interviewee is given the option to provide additional documents, which will be included in the analysis.

3.3 | Data analysis

The data from the interview transcripts and organizational documents will be analyzed, after which research sub-questions 3 and 4 will be answered for each case. Both research sub-questions are further operationalized by subdividing them into 3 key performance indicators (KPI's), see figure 3.1 and 3.2. These KPI's mainly derive from the theoretical literature review and focus on describing the effectiveness of the new and innovative concepts for realizing middle segment rental housing. These strict subdivisions of research sub-questions and its KPI's creates a framework that helps to make the analysis process manageable. Moreover, it makes it easier to compare the empirical findings in the end, supporting to find meaningful conclusions. The conclusion subsequently helps to abductively answer research sub-question 5, in which recommendations are made for market and governmental parties.

3.4 | Data management plan

A data management plan is a document that describes how the data will be generated or used in the research. Furthermore, it describes how the data will be collected, managed, stored and made available during the study, and how they will be shared upon completion of the research project. The data will be managed by the corresponding researcher. All data is securely stored on the project storage drive of the TU Delft. During the study data is only available to the corresponding researcher, responsible researchers and corresponding interviewees. The corresponding researcher anonymizes the interviewees in the interview transcripts and provides a moment before publication to each interviewee to check the correctness of the data. After completion of the research project the anonymized data will be uploaded to the publicly accessible 4TU.ResearchData website.

The data management plan helps to determine how the data can be managed efficiently, effectively and securely. In addition, planning for good data management from the start reduces the risk of data loss, data breach, or other threats that could render the data illegible or unusable (TU Delft, n.d.). All TU Delft researchers working with personal research data are required to develop a data management plan.

Development process		
Time management	Capacity	Innovation
Financial feasibility		
Financial structure	Risk management	Gross initial yield
Affordability		
Operating period	Target group	Rent
Quality		
Sustainability	Social cohesion	Value for money
Quantity		
Scalability	Reproducibility	Realized homes

Figure 3.1: Key performance indicators for research sub-question 3

Governmental role		
Agreements	Legislation / Regulation	Stimulation

Figure 3.2: Key performance indicators for research sub-question 4

3.5 | Ethical considerations

All master students conducting research for a thesis need to submit an application for any research involving data obtained from Human Research Subjects. This includes research involving human participants directly, data collected from the internet and social media, and third party datasets collected from human participants. This thesis involves human participants directly (the interviewees) and uses data from the corresponding websites of the cases. This research makes therefore use of the Human Research Ethics Checklist (HREC) provided by the TU Delft in order to safeguard the interest of the interviewees. Furthermore, all interviewees are requested to sign an informed consent letter prior to the interview. The informed consent letter establishes an agreement between participant and researcher on the aspects of:

- A. Research goals, participant tasks and voluntary participation;
- B. Possible risks when participating;
- C. Research publication, distribution and application
- D. Data storage, access and reuse;
- E. Covid-19 measures and risks.

04 | EMPIRICAL FINDINGS

04 | Empirical findings

This fourth chapter elaborates on the empirical findings, which are based on several interviews. During each interview, the interviewee was provided with the option to hand in any additional documents. These documents, together with the corresponding website of the organization, are used to support the analysis process. The findings are structured per case, each subjected to the criteria of research sub-questions 3 and 4 of section 1.3.2, also see below. Chapter 6 aims to conclude the findings of all cases and answer the main research question.

Repetition of empirical research sub-questions 3 and 4:

3. Effectivity of new and innovative concepts

- 3.1 What development process is utilized within new and innovative concepts for realizing middle segment rental housing?
- 3.2 What is the financial feasibility of new and innovative concepts for realizing middle segment rental housing?
- 3.3 How affordable is middle segment rental housing realized through new and innovative concepts for tenants?
- 3.4 What are the qualitative and quantitative aspects of middle segment rental housing realized through new and innovative concepts?
- 3.5 How effective are new and innovative concepts in realizing middle segment rental housing?
(Conclusion of research sub-questions 3.1 to 3.4)

4. Governmental role

- 4.1 What role does the government have within new and innovative concepts for realizing middle segment rental housing?

Case study content

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C	Buurblok	41
D	AMST	48
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4.1 | Case A: Rabo SmartBuilds

The first explored case is Rabo SmartBuilds, this initiative of the Rabobank enables temporary homes to be constructed on land where permanent housing is not possible. As a result, additional rental homes can be made available on temporary areas, often up to 20 years. The temporary nature of the homes does not come at the expense of quality (figure 4.1), as they are sustainably responsible, modular and fully circular. The manager of Rabo SmartBuilds was interviewed (referred to as Interviewee A1), providing more detailed data and a presentation. Unfortunately, Rabo SmartBuilds is still in their pilot phase and could for that reason not share names of municipalities they are currently collaborating with. The concept is therefore evaluated from a theoretical perspective, as no practical projects have been realized yet.

4.1.1 Development process

Rabo SmartBuilds is a subsidiary of the Rabobank. The Rabobank has organized 14 regional dialogues with a total of more than 5.000 members of the cooperative. They contributed ideas about what should be on the agenda in their region, more than 30.000 initiatives, assignments and dream images were discussed. Figure 4.2 provides an overview of the topics that were discussed most often. Based on an analysis of all these conversations, Rabobank wrote the Cooperative Covenant, in which a strong plea is made for less generic and more area-specific government policy and extra attention to the human dimension. Housing turned out to be an important theme in this regard. This was a dominant topic in several regions, dealing with the accessibility of the housing market, the task of making the housing market more sustainable and the shortages in an absolute and qualitative sense (RaboResearch, 2021). Interviewee A1 finds it striking that



Figure 4.1: Rabo SmartBuilds' temporary middle segment rental homes (Rabo SmartBuilds, n.d.-a)

the housing problem was mentioned the most, in a time when Covid-19 still had the upper hand and public health was an important theme.

The Rabo SmartBuilds proposition is driven by the Cooperative Covenant and has greatly strengthened Rabobank's idea of what they could do to be meaningful in contributing to a solution. By talking and listening to various people active in the housing market, Rabobank came to the conclusion that the average area development takes (too) long, making it difficult to meet current and spontaneous housing needs. If a difference and effect want to be made in the short term, things will have to be done in a structurally different way than usual. The Rabo SmartBuilds concept was set up from that point of view, with their solution being temporary middle segment rental housing.

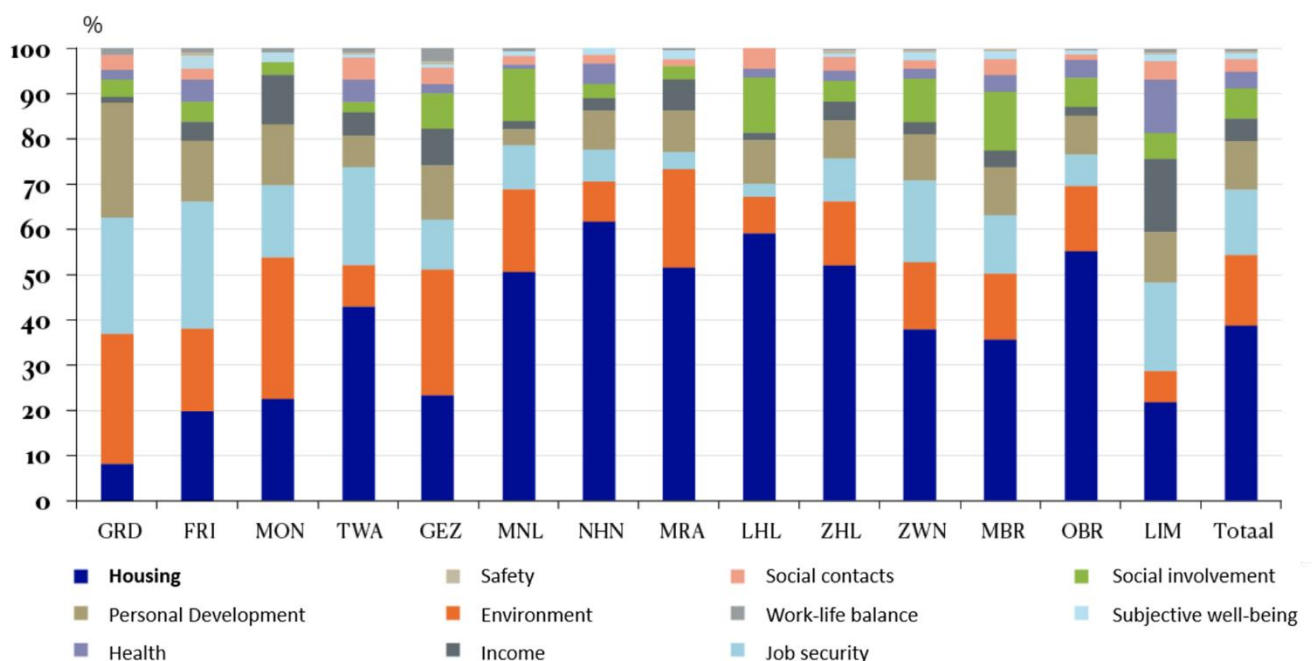


Figure 4.2: Themes of broad prosperity that are often mentioned and valued, per region (RaboResearch, 2021)



Figure 4.3: Interconnected dials which determine the final rent price (Own illustration and interpretation)

Interviewee A1 tells that the role that Rabo SmartBuilds takes is unique.

“What is the difference between Rabo SmartBuilds and other builders or developers involved in temporary housing? The difference is that we manage the entire process, we are responsible from start to finish. We fulfill the role of developer, financier, landlord, operator and manager.”

Interviewee A1 also expresses explicitly that they are not builders or contractors, this is outsourced to market parties who already have a lot of expertise in this field.

Another Rabobank subsidiary is BPD Housing Fund, which focuses more on permanent area development in the middle segment. Interviewee A1 addresses the importance to focus on both temporary and permanent area development, as both tools contribute to solving the Dutch housing shortage. However, it is important that temporary area developments do not get in the way of permanent area developments. Temporary area developments must therefore take place on land positions where permanent construction is not possible in the coming years. Rabo SmartBuilds shares knowledge and collaborates with BPD on many fronts, Rabo SmartBuilds aiming to add 12.000 homes over the next 10 years and the BPD Housing Fund aiming to add 15.000 homes within the same period.

Rabo SmartBuilds sees municipalities as a very important partner, therefore the business case is completely transparent. Once it is clear that there is no profit maximization and a number of dials are shown, which can be turned up or down (figure 4.3), it enables to have a conversation on another level with municipalities, which is something that works really well according to Interviewee A1.

The development process that Rabo SmartBuilds goes through is shortened. The permit procedure for temporary developments can be shortened by means of the ‘Kruimelregeling’ and the Crisis and Recovery Act. Since the amendment of the law in November 2014, the

scope of the Kruimelregeling has been expanded. If a deviation from the zoning plan is necessary for a construction or user activity, it is possible to deviate from the zoning plan pursuant to Article 2.12, section 1, Wabo. Eleven different scenarios have been included for this in Article 4, Annex II of the Environmental Law Decree, including one for temporary housing. Enabling temporary housing to be realized relatively quickly, as the regular preparation procedure for a ‘Kruimel’-application still takes 8 weeks (Omgevingsweb, n.d.). The Crisis and Recovery Act on the other hand, encourages the implementation of innovative and sustainable projects by ensuring that construction projects can start faster, for example through shorter (application) procedures. It allows municipalities or provinces to take decisions more quickly about spatial plans, so that a decision is made within 12 months. The Crisis and Recovery Act is in line with plans to simplify environmental law. The national government is in the process of drawing up a single Environmental Act for this simplification purpose, the Crisis and Recovery Act will eventually be incorporated into this (Rijksoverheid, n.d.).

After all permits have been granted, the construction process will take another 8 to 15 months (Hoff, 2021), which is quite a long time given the modular character. Interviewee A1 says that this period is broad, as they do not want to make false promises towards municipalities. The length of the building process is also dependent on third party suppliers, currently 6 suppliers have been selected. The suppliers are chosen on the basis of capacity and quality. Furthermore, it is important that the produced homes are modular and meet the standards of permanent housing. In theory the houses could be completed within 2 months, however there are also many other aspects that remain the same as with permanent construction, such as preparing land for construction and housing, but also the construction of infrastructure and cabling. For now Interviewee A1 describes the 3 main challenges as; the facilities for a temporary and circular connection to the energy network, preparing the land for housing and the various preferences in appearance of the homes. Work is currently underway with major energy

suppliers on solutions for the temporary connection to the energy network. Interviewee A1 could not tell too much about this yet, but the solution turns out to be batteries, with which a 'flex village' could be set up completely off-grid, including water and sewage system. This flex village might be an attractive option for temporary developments in remote locations, with a lack of utility services. This solution is also applicable for the preparation of land for housing, where it is necessary to think in a circular way about what is temporarily put in the ground, and what will happen with it after the residential period. The final challenge is that municipalities often have different preferences for the appearance of the homes, making it more difficult to gain time with the prefabrication of home elements.

4.1.2 Financial feasibility

The real estate objects are financed by equity and loan capital, something Rabobank has both in-house. So for the time being, the full funding comes from Rabobank, however Interviewee A1 does not rule out the possibility that institutional investors will join in the future. An important point to note here is that it must always remain clear for tenants that the homes are attached to the Rabobank, which should probably instill more trust.

Rabo SmartBuilds rents land positions, so ownership of the land remains with municipalities or third parties. Despite the social initiative, a market-based rent has to be paid for the land. Interviewee A1 tells that there is no fixed rule regarding the gross initial yield and cannot reveal much about it at the moment. In time, this data will be shared, for now it is only shared with collaborating municipalities. As a guideline, it can be assumed that Rabo SmartBuilds has a gross initial yield that is just above housing associations, as they have no profit maximization, this percentage is therefore estimated at approximately 4%.

When financing real estate and projects, everything depends on risk and return. The higher the risk, the higher the return should be. Rabobank's mission and vision is 'Grow a better world together', which means that they are prepared to settle for less return in this case. That does not mean that Rabobank perceives fewer risks, but by accepting less return, the rent can ultimately be moderated. Rabo SmartBuilds was therefore set up from a social and societal point of view.

4.1.3 Affordability

Rabo SmartBuilds is fully active in the middle rental segment, where rents start at the liberalization limit and go up to €1000, the aim is to be as low as possible. The rent is coordinated with the municipality on the basis of the aforementioned dials, see figure 4.3. Interestingly enough, Interviewee A1 points out that middle segment housing with a rent above €1000 are also a viable option,

simply because the middle rental segment seems to differ geographically.

"In cities, where it is more expensive to develop, it sometimes happens that there are outliers above €1000. The middle segment in the heart of Amsterdam is simply different from the middle segment in a small village."

Interviewee A1 clearly indicates that Rabo SmartBuilds does not want to get in the way of the social segment, in fact, discussions are currently being held with various housing associations to carry out a social housing project together. Three advantages are achieved with these types of collaborations. First, it contributes to more mixed neighborhoods. Second, it enables purchasing advantages with suppliers. Third, there is one project team, in which the capacities of the municipality, housing association and Rabo SmartBuilds are efficiently and effectively bundled. Unfortunately, no further statements could be made about these collaborations.

Exploitation periods at Rabo SmartBuilds are often only between 10 and 20 years, the modular and circular nature of the homes responds well to this, allowing for reuse of housing elements after the exploitation period. During the entire operating period, Rabo SmartBuilds guarantees that the homes will remain in the middle segment, this is contractually agreed with municipalities. Through the Crisis and Recovery Act, it becomes possible for municipalities to further extend the regular 10-year deviation from the zoning plan.

Interviewee A1 is not afraid of a possible regulation of the middle rental segment, in fact it is even welcomed, because more and more excesses are occurring on the Dutch housing market. In addition, Rabo SmartBuilds expects to fall completely within a home valuation system for the middle rental segment. Though, they also see challenges, especially in the technical and assessment field. This mainly concerns how the difference between temporary and permanent housing is assessed in the points system, as this may cause problems with regard to the WOZ-value. The WOZ-value is based on location, surface area and characteristics inside and outside the home. The appreciation of the home location and the environmental quality might be difficult to assess because of its temporary nature.

4.1.4 Qualitative aspects

The temporary homes have a comparable quality to permanent homes, they comply with the Building Decree, the BENG standards and have a lifespan of at least 50 years. The houses are manufactured for 90% to 95% in the factory and are therefore optimized in sustainability, meaning that they are nitrogen and CO2 friendly. The homes are standard off gas and equipped with solar panels and a heat pump. The difficult thing here is that



Figure 4.4: Rabo SmartBuilds' homes are very well scalable and reproducible (Rabo SmartBuilds, n.d.-a)

many of these installations only pay for themselves over a longer period of time, but due to the temporary operating periods it is often difficult to justify the more sustainable, but more expensive installations. Furthermore, the houses have a flexible outer layer, which means that they can be easily adapted to the environment.

The quality of the environment is very important, but temporary land positions cannot always guarantee this. In addition, regular preconditions such as soil and air pollution procedures are not always a mandatory requirement for the accelerated procedure for temporary housing. Interviewee A1 says that they carry out these kinds of procedures on their own initiative, as Rabobank attaches its name to the project, it is important that they create a healthy living environment.

Interviewee A1 says that there is room in the business case for investing in communal spaces within the housing complex, provided that the need has been indicated by future tenants. It is also important to make room to listen carefully to local residents, in order to avoid objections. Interviewee A1 does indicate that objections must be dealt with in a balanced way.

"Sometimes it seems that local residents have a stronger voice than those who ultimately do not have a home. I think that is a worrying development."

The temporary nature of the homes does not seem to matter here according to Interviewee A1, as a period of 10 years is almost regarded the same as a permanent development by local residents.

4.1.5 Quantitative aspects

Interviewee A1 has discussed the application of Rabo SmartBuilds with more than 120 municipalities in the Netherlands, many municipalities struggled with capacity, land positions and operating periods. At present, the discussion is still being actively conducted with about thirty municipalities. Rabo SmartBuilds aims to start with projects with a minimum scope of 100 homes. In the coming year, 600 to 700 homes are expected to be built through several pilot projects. A small contribution to the ultimate goal; the realization of 12.000 mid-rental homes in the next 10 years.

The apartments or ground-level homes have a surface area of 50 to 85 m² and are as scalable as the capacity of the suppliers. The reproducibility of the homes is very good, as the façade is adaptable and the elements are modular and circular. In other words, an apartment building of 10 stories high and 10 houses wide, can be rebuilt into 2 apartment blocks of 5 stories high and 10 houses wide (figure 4.4).

4.1.6 Conclusion Rabo SmartBuilds

Effectivity of the concept

What development process is utilized within Rabo SmartBuilds for realizing middle segment rental housing?	
Time management	The development process of Rabo SmartBuilds has been shortened by clever use of legislation, such as the Kruimelregeling and the Crisis and Recovery Act. However, even these procedures do take a very long time, up to 8 weeks and 12 months respectively. Once the necessary permits have been obtained, the construction process will take anywhere from 2 to 15 months. That is a broad period for modular housing, the final duration remains to be seen in practice. For now, a lot of time is still lost in providing the temporary homes with utility connections and preparing the ground for construction. Due to its temporariness, circularity also plays an important role, which also requires extra time in the process.
Capacity	The reach and capacity of Rabo SmartBuilds is very large, the subsidiary can use all the knowledge, resources and contacts of Rabobank. Rabo SmartBuilds therefore wants to make a major impact in the middle rental segment by adding 12.000 homes over the next 10 years. It also collaborates with the BPD Housing Fund, another major Rabobank subsidiary. Rabo SmartBuilds is keen on sharing and combining capacities in collaborations with municipalities and housing associations. Rabo SmartBuilds has already conducted discussions with about 120 municipalities, they themselves indicate that they are struggling with limited capacity, land positions and operating periods.
Innovation	In addition to the innovative modular and circular construction form, Rabo SmartBuilds also wants to make a difference in the process by taking on all roles, except for the contractor. Rabo SmartBuilds is the developer, financier, landlord, operator and manager. It is unique that one party is able to do this, the entire development process could be optimized as a result, at the same time all responsibility now lies with one party.
What is the financial feasibility of Rabo SmartBuilds for realizing middle segment rental housing?	
Financial structure	The temporary homes are fully financed with equity and loan capital from Rabobank. The possibility that institutional investors could join in the future is not ruled out. Rabo SmartBuilds will not become the owner of the land positions. Due to the public interest, Rabobank is satisfied with a lower return, which means that the rent can remain moderate.
Risk management	Rabo SmartBuilds bears virtually all risks by managing the entire development process, implying that they are not dependent on other external factors. The greatest risk seems to be in the temporary operating period, because it is uncertain for both Rabo SmartBuilds and the tenant what will happen to the rental properties at the end or near the end of this period.
GIY	The specific gross initial yield could not yet be shared. As an indicator it could be assumed that the percentage is slightly higher than that of housing associations, which would be around 4%.
How affordable is middle segment rental housing realized through Rabo SmartBuilds for tenants?	
Operating period	The operating period for temporary housing is often between 10 and 20 years. Municipalities can further extend this period by 10 years through the Crisis and Recovery Act.
Target group	No specific target group has been mentioned. However, Rabo SmartBuilds does not want to disrupt permanent area developments and social rental housing with its temporary homes.
Rent	The monthly rent is between the liberalization limit and €1000, with living areas between 50m ² and 85m ² , which brings the average square meter price to approximately €13/m ² . The final rental price in the middle segment will depend on the location.
What are the qualitative aspects of middle segment rental housing realized through Rabo SmartBuilds?	
Sustainability	The prefab home elements are very sustainable. The temporary homes are nitrogen and CO ₂ friendly, off gas, equipped with solar panels and a heat pump.
Social cohesion	There is room in the business case for communal areas, if the need for this has been indicated by local residents.
Value for money	Tenants do get value for their money, as the temporary homes have a comparable quality to permanent housing. The new built homes comply with the Building Decree, the BENG standards and have a lifespan of at least 50 years. Environmental quality is more difficult to guarantee at temporary locations, however Rabo SmartBuilds assures to deliver sufficient value on all aspects.
What are the quantitative aspects of middle segment rental housing realized through Rabo SmartBuilds?	
Scalability	The scalability of the temporary homes is very good, as fast as they can be manufactured within the 6 chosen factories. For the time being, there is still a minimum size of 100 homes for the pilot projects.
Reproducibility	Due to their adaptive and modular facade, the houses are of course also very well reproducible at other locations. However, the different preferences that each municipality has regarding the appearance make it difficult more to prefabricate and reuse homes.
Realized homes	Currently, discussions are still ongoing with 30 of the 120 municipalities. A number of them have already signed letters of intent, the first 600-700 middle segment rental homes can be expected next year through various pilot projects.

Position of the government

What role does the government have within Rabo SmartBuilds for realizing middle segment rental housing?	
Agreements	The municipality is actively involved in the transparent decision-making process, this process is supported by various dials that provide insight into how the business case works. As a result, the municipality itself has more say in the development. For example, agreements are made about the leasehold period, exploitation period and target group.
Legislation / Regulation	Rabo SmartBuilds makes particularly smart use of two accelerating regulations; the Kruimelregeling and the Crisis and Recovery Act. The Kruimelregeling makes it possible to deviate from the zoning plan more quickly, with a Kruimel-application taking 8 weeks. The Crisis and Recovery Act encourages faster implementation of innovative and sustainable concepts by shortening (application) procedures. This Act allows municipalities to change spatial plans within at least 12 months and to extend the standard 10-year deviation from the zoning plan. Especially the Crisis and Recovery Act process takes still a really long time and is too complicated. The national government is therefore working on establishing a simplified Environmental Act, this would be a welcome change, as current bureaucratic procedures are not helping to solve the housing shortages. The main focus of the Environmental Act should therefore be to focus on further simplifying and accelerating the development process. Another request to the national government would be to take temporary housing into account when developing a home valuation system for the middle rental segment, as environmental aspects should be assessed differently due to the temporary nature of the location.
Stimulation	The national government tries to stimulate innovative construction projects through shortened procedures. The government is trying to empower local municipalities through various regulations. Rabo SmartBuilds responds well to this and enters into transparent partnerships with municipalities. This seems to result in more locally desirable developments.

Conclusion

How effective is Rabo SmartBuilds in realizing middle segment rental housing?
<p>In conclusion, Rabo SmartBuilds is a very good theoretical concept that makes smart use of Rabobank's capacity. It responds to the findings of the Cooperative Covenant, obtained from their own users, in which housing emerged as an important theme. Rabo SmartBuilds also notes that the average area development takes too long and that municipalities are struggling with capacity, land positions and operating terms. Rabo SmartBuilds believes that many of these problems can be prevented with temporary area developments, as it can be realized more quickly due to new regulations and municipalities do not have to allocate land for permanent housing. Rabo SmartBuilds states explicitly that they do not want to get in the way of permanent area developments and social housing, so the temporary homes must therefore be seen as an addition and be placed in locations where development would otherwise not take place. The concept for temporary homes must therefore be very flexible in that respect, which has been responded to by the implementation of modular and circular homes. Nevertheless, the temporary housing still seems to be slow to come about, a zoning plan change through the Crisis and Recovery Act can take a year and the construction process can also take longer than a year. More resources will have to be deployed to accelerate this type of temporary and modular housing construction, especially since land positions are often only available to a limited extent. The concept is also flexible within collaborations, because it is transparently shareable and clear for municipalities. In addition, Rabo SmartBuilds is open to collaborations with housing associations, which creates advantages in the field of mixed residential areas, construction procurement and the effective bundling of different capacities. Rents in the middle segment appear to differ due to land prices per municipality, which means that the mid-rental segment appears to differ geographically. The temporary nature of the houses also entails some problems, the largest challenge being the temporary construction and reuse of utility services. All in all, Rabo SmartBuilds is a very interesting and social initiative that wants to make a big difference in the middle rental segment in an innovative and effective way. However, there is still a lot to be seen about how things will ultimately work out in practice, if all goes according to plan, Rabo SmartBuilds will have a quantitative impact with its 12.000 temporary homes.</p>

4.2 | Case B: OnsHuys

The next case is OnsHuys, this concept is selected for its pioneering on a new way of renting. It provides tenants with the option to participate within the development process. As the home is an investment object and only has a ground floor, it makes older people more inclined to move, starting a transitional flow. Data for this case was gathered by interviewing 2 founders of OnsHuys (referred to as Interviewee B1 and Interviewee B2). Both interviewees are involved in collective private commissioning (CPC) in their day-to-day business. At CPC, the project development is actually turned around, normally a developer starts a project, after which he looks for interested buyers and/or tenants. At CPC projects, you first look for people who would like to have something built, after which they are helped to realize their housing wish. In many of their projects there was a demand from the 55+ target group for rental bungalows in the form of CPC, which is where OnsHuys originated.

4.2.1 Development process

The reason for the OnsHuys concept stems from 2 needs. As one gets older, there is sometimes a need to spend money differently, for example by supplementing the pension, helping children on the housing market, traveling or investing. The only problem here is that the capital is still trapped in the owner-occupied home. The other need arises from people who suddenly find themselves alone, as a result of which the maintenance of an owner-occupied home sometimes becomes too much. These needs make people more inclined to sell their home and become a tenant. OnsHuys is responding to this demand by realizing attractive and affordable rental homes for the elderly.

Various consumers were asked what they would like to spend on rent for a bungalow, which resulted in a maximum rent of €1000. After doing some calculations, Interviewee B1 and B2 concluded that this was not possible. Both were provoked and challenged by this, after a few days of puzzling they came up with a solution, so Interviewee B1 explains:

“In the end we arrived at a joint financing concept, which created a different interest. In concrete terms, this means that the bank knows that the tenant is investing in the home through a bond loan, which means that the tenant will probably take better care of the home, as this increases the chance that their investment will return.”

This is important data for a bank, because the value retention of the property improves and less maintenance seems to be required. This reduces the risk and less risk equals to less interest at a bank. The same reasoning applies to a private investor and the owner of the properties; WauW Projecten B.V.. By creating this common interest, the rental costs can be reduced.

The organization behind the OnsHuys concept is quite complex, see figure 4.5 for an overview. Vastgoedregisseur B.V. provides the turn-key development of the rental properties and the guidance for tenants. After the homes have been completed, WauW Projecten B.V. becomes the owner, landlord, administrator and manager of the rental properties. WauW Projecten is also the party with which tenants, investors and the bank take out loans. The founders of WauW Projecten are also the shareholders of Vastgoedregisseur. The tenant enters into a bond loan and rental agreement with WauW Projecten, the private investor only enters into the bond loan. It is good to mention that there is a distinction between the OnsHuys concept and the OnsHuys Foundation. WauW Projecten presents this concept under the name OnsHuys. The OnsHuys Foundation looks after the interests of the tenants and investors within the described construction. Moreover, the independent OnsHuys foundation checks WauW Projecten administratively and ensures that tenant and private investor both receive the second right of mortgage.

The core business of Vastgoedregisseur B.V. is guiding collective private commissioning (CPC) projects. They use two risk-averse development models called the co-creation and the co-financing concept. The rental properties realized with the OnsHuys concept are placed within these CPC projects, implying that it only involves new construction.

Interviewee B2 says that the initial idea for OnsHuys was not very complicated. However, certain matters were made unnecessarily difficult, as they ran into a lot of legislation, regulations of banks and the AFM. These hurdles have complicated the concept. Furthermore, the regular financing procedure can be followed, with 3 exceptions; a valuation report, mortgage right and financing application must be organized, these are all included in the process diagram of OnsHuys.

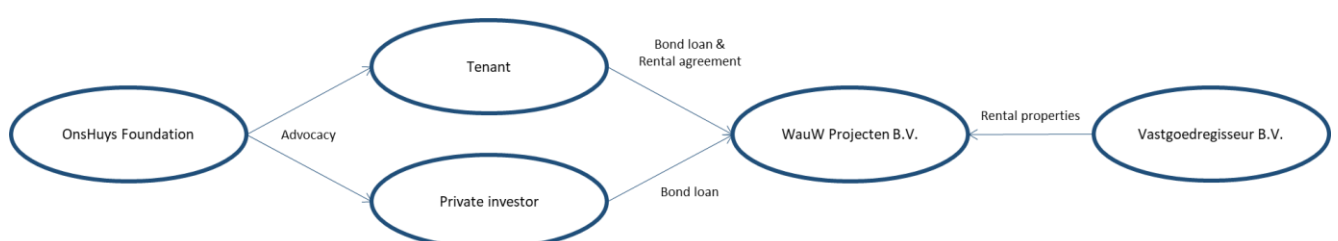


Figure 4.5: Organizational structure of the OnsHuys concept (Own illustration, based on (OnsHuys, n.d.-b))

4.2.2 Financial feasibility

Four different parties ensure the funding of the rental properties, these are the bank, tenant, private investor and WauW Projecten (figure 4.6). The role of the bank is fulfilled by the Rabobank, they finance a maximum of 50% of the home and receive the first right of mortgage. Interviewee B2 explains how Rabobank's role has a positive and negative side. The positive aspect is Rabobank's position in the southeast Brabant area, where OnsHuys is mainly active.

"Rabobank used to have a market share of 95% in many villages here. Our intended target group has all grown up with the Rabobank booklet. Rabobank has had a very strong and dominant position from the past, which radiates a lot of trust to the target group."

Rabobank's participation gave the concept a boost at the start. For the phase we are in now, we would prefer to organize it without a bank.

The negatives of the Rabobank are rising interest rates and the duty of care, Interviewee B2 cites these two factors as the biggest risk to the concept, as it is completely out of their hands. Rising interest rates will equate to higher rents. Rabobank tries to strengthen the interest of the tenant within the concept, which means that if WauW Projecten were to go bankrupt, the tenant will still get his investment from the bond loan back. They do this by pointing out OnsHuys' duty of care, because they believe that the tenant should receive more security. Interviewee B1 says that the original idea was to give everyone the first right of mortgage, but it was the Rabobank itself who did not agree to this.

The tenant takes out a bond loan with WauW Projecten of at least €35.000. In practice, Interviewee B1 and B2 experience that tenants usually invest around €50.000. This is especially attractive for tenants who have been able to sell their old owner-occupied home under favorable conditions. In exchange for the bond loan, the tenant gets a say in the filling and finishing of the house and a fixed interest rate on the amount invested. This interest rate is currently (2022) set at 2.5% per annum and is paid quarterly. The bond loan runs for 5 years and must be extended at the end of the period, otherwise the rental

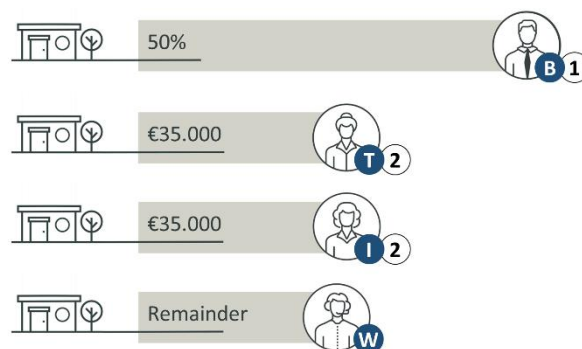


Figure 4.6: Financial structure OnsHuys (Adaptation from (OnsHuys, 2019))

agreement will end and the tenant will get the invested money back. In other words, the investment gets stuck, as it only comes back when the resident moves or dies. Together with the investor, the tenant receives the second right of mortgage.

The private investor also takes out a bond loan with WauW Projecten under the same conditions as the tenant. However, the difference is that the investor does not have a say in the filling and finishing of the rental property and can decide to withdraw after 5 years, after which a new private investor will have to be found. Good to mention is that the tenant is also able to fulfill the role of the private investor, meaning that the tenant will have to invest at least €70.000 (2x €35.000) through a bond loan. Nevertheless, the private investors are often recruited from the villages where the projects take place, making use of the 'village dynamics', in which word of mouth plays an important role. If the investor knows the tenant or the nearby location well, this could provide extra trust. In addition, it is also attractive for private investors, because the bond loans have a low risk profile (figure 4.7) and provide a higher return than if the money is in the bank. Interviewee B1 tells that there is a waiting list of private investors who would like to join again in the next project.

WauW Projecten finances the remainder and becomes the owner of the rental properties, however they have no further mortgage rights. WauW Projecten does not have a sales policy, which in principle means that the homes in

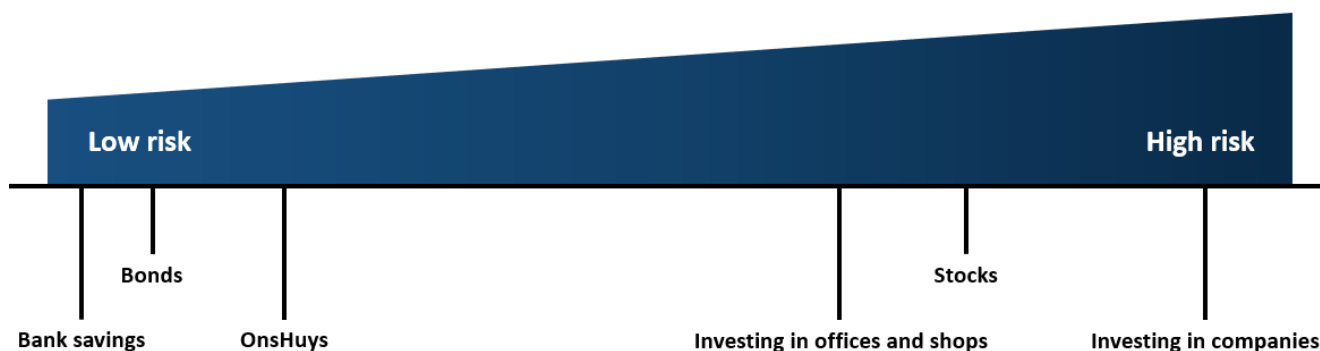


Figure 4.7: Low risk profile of OnsHuys (Own illustration, based on (OnsHuys, 2019))



Figure 4.8: Latest project of OnsHuys in Heusden (OnsHuys, 2021)

the middle segment remain available for the long term. Rent follows inflation using the price indices. In recent years, however, OnsHuys has never applied full price indexation to the rent. Interviewee B2 says that OnsHuys wants to express its appreciation to the tenants with this, as long as the operating costs are not too bad, they think it is logical and fair to not increase the rent as much as possible.

OnsHuys aims to achieve a gross initial yield of 5%, which is necessary to ultimately be able to bear the interest costs for the bond loans, repayment to the bank, mortgage interest, insurance, regular maintenance, major maintenance and administration costs. Interviewee B2 indicates that they always intended to stay under a monthly rent of €1000, but that this is no longer possible due to rising land and construction costs. The construction costs are twofold, on the one hand it is the market forces of recent years, on the other hand it is the increased sustainability requirements of the government. The current energy crisis is also not doing much good, according to Interviewee B2. As a result, OnsHuys had to increase the maximum rent limit to €1250.

At the top of the OnsHuys website it is stated in large letters: "Note! You are investing outside AFM supervision. No prospectus requirement for this activity." AFM stands for Authority Financial Markets. Interviewee B1 says that the AFM has regulations for issuing bond loans, if you receive more than 5 million per year, you will be subject to the prospectus obligation (AFM, n.d.). Given the limited size of OnsHuys' projects, they have been exempted from the prospectus requirement. The only thing is that the

consumer must be made aware of this, hence the prominent presence on the website. Interviewee B2 adds by saying that OnsHuys does have a prospectus, but they just do not have the obligation. OnsHuys does not have the ambition to fall under AFM supervision, because that would mean that they would have to set up an entire administrative office for this. The risk of an exempt investment for an investor is that the AFM does not check in advance whether the information about the investment is correct, non-misleading and complete (AFM, n.d.). The AFM can still take action afterwards in the event of misconduct, however it is advisable to do good research yourself beforehand. Interviewee B2 does not rule out the fact that the lack of AFM supervision will deter potential consumers, even though it appears to be difficult to gain insight into this. OnsHuys instead tries to win the trust of consumers through a personal approach.

Interviewee B2 expects that a possible regulation of the middle segment will lead to the withdrawal of many parties, many of which are already waiting for the final measures. Furthermore, there will be an important role for housing associations on the large scale supply of middle segment rental housing. OnsHuys has no ambition to withdraw for now, nor are any problems expected within the points system, given the high quality of the bungalows. OnsHuys wants to continue to meet the demand in the community, as long as they can facilitate this.

4.2.3 Affordability

As mentioned earlier, OnsHuys had to increase the rent limit from €1000 to €1250. In the latest realized project of OnsHuys in Heusden (figure 4.8) it was still possible to stay below €1000. However, with the rising land and construction costs this will no longer be the case. The fair question arises whether OnsHuys still operates in the middle segment, since in section 2.1 the middle rental segment is described as renting up to €1000. In view of the higher quality of the bungalows and the enormous increase in inflation, it could be argued that the homes still meet high side of the middle rental segment.

The OnsHuys concept is mainly aimed at elderly people with an owner-occupied home, the previously mentioned 55 plus category. In practice, however, it appears that the average age is around 70 years according to Interviewee B1. That is an interesting fact, because this seems to confirm a statement made by Interviewee B2:

“The tenants get a lot of say in their future rental home, the result of which is a committed tenant during the occupancy phase. In general, these people make a very clear trade-off: am I going to buy again or am I going to rent? You should actually consider it a bit as a last living step, so the moment you give those people a house to their liking, there is a very good chance that they will continue to live there for as long as possible.”

This seems to show that people over 70 are more ready for this last living step and dare to make the switch to rental housing. Apparently people over 55 are not ready for this step yet and are still more likely to opt for owner-occupied housing. The rental properties, on the other hand, are considered less suitable for young people, as they often do not have access to a seed capital to help finance the bond loan.

4.2.4 Qualitative aspects

Interviewee B2 claims that the quality level is slightly higher than average, the houses are delivered with sanitary, tiling, kitchen, wall finishing, floor finishing and paving. It is taken into account that all materials are low-maintenance. In itself that is not really above average for new construction, the quality may subjectively be higher for the tenant, due to the control over the finishing.

The plots often have a small front garden with a more spacious backyard. The new-build bungalows have a surface area of approximately 95 square meters, meet the requirements of the Building Decree and are standard equipped with solar panels. Adding additional sustainable or circular features is often not feasible, as it is currently already very expensive to develop and it seems like nobody really wants to pay for it.

The advantage of CPC projects is that people already know each other before the first brick has been placed. The

buyers and tenants of the homes go through the entire development process with each other, which ultimately benefits social cohesion in the neighborhood. The scope of the projects is often still too small to realize a communal space. Interviewee B2 does see an increase in popularity in the demand for courtyard housing, in which the public space also functions as a meeting place. OnsHuys always conducts an environmental dialogue, in order to avoid objections from local residents as much as possible. Interviewee B2 is convinced that this approach gives them fewer objections than a regular project developer.

4.2.5 Quantitative aspects

The middle segment rental housing of OnsHuys is now being realized between owner-occupied homes in a CPC setting. The average CPC project comprises 10 to 15 homes, of which on average 1 to 3 are in the rental segment. Partly due to the bungalow style, it is difficult to set up projects of a substantial scale. Moreover, consumer demand mainly comes from smaller villages. These factors mean that only a dozen rental homes have been realized by OnsHuys in 5 years' time. Both interviewees agree that too little use is actually made of the concept, the current company is not ready to roll it out further, so they are open to a collaboration with a larger company for this.

OnsHuys is convinced that the concept is repeatable and scalable on locations in the city, making it interesting to replace the bungalows with apartments and perhaps replacing the bank for an institutional investor. However, if more than 5 million in bond loans are issued per year, other regulations of the AFM will have to be taken into account.

4.2.6 Conclusion OnsHuys

Effectivity of the concept

What development process is utilized within OnsHuys for realizing middle segment rental housing?	
Time management	Not much data has been obtained regarding the time process. The process starts with a small group of people with a wish for a specific owner-occupied or rental home. Once a project location has been found, the tenant and a private investor take out a bond loan with property manager (WauW Projecten B.V.). The developer (Vastgoedregisseur B.V.) builds the homes and the OnsHuys foundation represents the interests of the tenants during the development process.
Capacity	OnsHuys indicates that it has too little time and capacity to roll out the concept on a larger scale. As a result, the concept continues to be applied on a limited scale, incorporated between owner-occupied homes in collective private commissioning projects. For further upscaling, they are open to collaborating with a company with more capacity.
Innovation	The innovation lies in the unique financial structure, whereby a tenant invests in his own rental home. In return, the tenant gets a say in the home and receives a fixed interest rate. This creates a joint interest, as a result of which the bank perceives less risk, which ultimately allows the rent to be moderated. The OnsHuys concept responds with this structure to the demand for rental housing of elderly.
What is the financial feasibility of OnsHuys for realizing middle segment rental housing?	
Financial structure	The bank invests a maximum of 50% and has the first mortgage right. The tenant and private investor invest a minimum of €35.000, get 2,5% interest per year on the amount invested and both receive the second right of mortgage. WauW Projecten B.V. finances the remaining amount and becomes the owner of the rental properties.
Risk management	The financial structure was initially quite simple and later became more complicated due to the Rabobank and the AFM. The bank is seen as one of the greatest risk in this concept, because they are responsible for interest rate rises and interfere with the duty of care of OnsHuys. The lack of AFM supervision does deter some investors, but OnsHuys hopes to gain sufficient trust through a local and personal presence. The risk for private investors and tenants is low because OnsHuys' bond loans have a low risk profile. Furthermore, a common interest is created by the tenant's bond loan, as a result of which the bank perceives less risk and charges less interest. The collective private commissioning structure also reduces the risk, as final tenants are known in advance
GIY	OnsHuys aims to achieve a gross initial yield of 5%.
How affordable is middle segment rental housing realized through OnsHuys for tenants?	
Operating period	WauW Projecten does not have a sales policy, which means that the homes will stay in the middle rental segment for the long term.
Target group	This concept focuses very specifically on the older target group. Those who want to sell their current owner-occupied home in order to free up capital or to have less maintenance. It is made attractive for this target group by offering spacious, ground-floor and high quality bungalows. In practice, the average age of tenants is older than 70, so the switch to rent seems to be the last step in housing in that sense.
Rent	OnsHuys always intended to stay below a monthly rent of €1000. Due to rising construction costs and land prices, however, this has been increased to €1250. OnsHuys indicates that it will deal with rent increases in solidarity, if it is financially feasible, full indexation will not be applied. The average square meter price has increased from €10.53/m ² to €13.16/m ² , an increase of 25%. However, if the 2,5% interest income per year on a bond loan of €35.000 is included, it will lower the monthly rent of €1250 to €1177, meaning a square meter price of €12,39/m ² .
What are the qualitative aspects of middle segment rental housing realized through OnsHuys?	
Sustainability	The bungalows meet all new construction sustainability standards of the Building Decree and are equipped with solar panels. Adding additional sustainability and circularity features is often not financially feasible.
Social cohesion	Social cohesion is ingrained in the OnsHuys concept, as the buyers and tenants go through the entire development process together. As a result, personal connections are built before the neighborhood is even there. However, the project scale is often still too small to realize a communal space.
Value for money	The tenant gets a sustainable new-build bungalow for his money, with own participation in the finishing, making the subjective quality even higher.
What are the quantitative aspects of middle segment rental housing realized through OnsHuys?	
Scalability	In its current form, the concept is well scalable, but must be implemented in a different way, as bungalows are not an easily scalable building type. When developing apartments, it becomes interesting to replace the bank with an institutional investor, preventing interference and dependence on the bank.
Reproducibility	The concept is well adaptable, meaning it can be used in other municipalities as well.
Realized homes	Only a dozen of middle segment rental housing have been developed, as OnsHuys mainly operates within smaller villages.

Position of the government

What role does the government have within OnsHuys for realizing middle segment rental housing?	
Agreements	The government does not seem to have an active role in this concept and facilitates by executing its general tasks, such as selling land positions and giving out the required permits.
Legislation / Regulation	OnsHuys is not subject to AFM supervision due to its small scale. If the concept is scaled up further, it will have to deal with AFM regulation.
Stimulation	The government does not seem to be deploying resources to encourage this concept.

Conclusion

How effective is OnsHuys in realizing middle segment rental housing?
<p>OnsHuys responds to the demand for middle segment rental bungalows in an innovative and effective way. In practice, the actual transition to renting seems to lie with the over-70s, rather than the often mentioned over-55s. From this age, people are apparently looking for a last housing step, OnsHuys could focus even more on this specific target group. The concept thereby contributes to the transitional flow, in which elderly who have been left alone in a large family home make way for a new generation. OnsHuys currently seems to experience problems with the rent prices and the role of the bank, both seem to be the consequences of the limited scope of the projects. OnsHuys itself indicates that it lacks upscaling capacity. However, the concept seems to need upscaling, as renting costs can be reduced by realizing apartments and the bank can be exchanged for an institutional investor, who are also interested in doing these kind of larger projects. It is then also advisable to obtain approval from the AFM, as this is probably required anyway and will ensure more trust and interest among tenants and private investors. From an objective point of view, it currently seems rather remarkable that within the concept WauW Projecten B.V. is checked by the self-founded OnsHuys Foundation. There could also be more experimentation with the minimum investment amount by the bond loan. The tenant invested in order to create a common interest, which reduced the risk for the bank. If the bank no longer participates, this common interest might still be of interest to institutional investors. This could make the concept also interesting for tenants with a smaller starting capital. For example, starters who are still saving for an owner-occupied home, they have often already saved a small amount of money. They receive almost no interest on their savings account at the bank, so this amount would be better invested in the bond loan. The concept could also respond to the abolition of the 'jubelton', whereby parents instead make an investment in their child's rental home. In addition, more support could be sought from local authorities. In other words, this innovative concept still seems to have a lot of options and untapped potential.</p> <p>After the interview it was clarified during an inspection from the interviewees that WauW Projecten B.V. indeed helped to set up the OnsHuys Foundation, but that it is managed independently to ensure objectivity. Furthermore, due to new AFM regulations and the expected increase in the mid-market rental limit, there are also plans to set up a new B.V. called OnsHuys, which will take over the tasks of WauW Projecten B.V..</p>

4.3 | Case C: Buurblok

The third case is Buurblok, this initiative of Bouwgroep Dijkstra Draisma (BGDD) and the Wocozon foundation is selected for its commitment to support housing associations in meeting their housing ambitions in the middle rental segment in an affordable and sustainable way. Buurblok is a lease concept, in which housing associations lease the following services: the homes, the energy concept, mobility and full maintenance. The houses are sustainable, circular and provide energy, which tenants experience the benefits of. It goes a step further by providing sustainable mobility for tenants. For this case a product developer from Bouwgroep Dijkstra Draisma was interviewed (referred to as Interviewee C1). Interviewee C1 was able to provide many details about the first project Buurblok realized in collaboration with housing association WoonFriesland in Techum (figure 4.9). In addition, a pitch presentation was shared after the interview, which is also used for the analysis process. During the interview it became clear that WoonFriesland was already collaborating with Wocozon to make their housing stock more sustainable. WoonFriesland ended up bringing BGDD and Wocozon together, together initiating concept Buurblok. In order to gain more insight into the governmental conditions and collaboration of the project in Techum, an additional interview was conducted with a consultant responsible for location development and sales within the municipality of Leeuwarden (referred to as Interviewee C2).

4.3.1 Development process

The energy transition and the circular economy are a very important thread running through BGDD, they are looking for new innovations in these fields that can be applied in practice. In Buurblok a lot of these innovations come together. Buurblok is a collaboration between BGDD and

Wocozon, together they want to realize their vision of living as a service. Wocozon is a non-profit foundation, with the aim to generate solar power for residents of social housing. Wocozon thus helps tenants to save on energy costs and housing associations to make their portfolio more sustainable (Wocozon, n.d.). Both BGDD and Wocozon already had existing collaborations with housing association WoonFriesland. WoonFriesland actually brought the two parties together, leading to the origin of a new and innovative concept. Interviewee C2 describes Buurblok as a "theoretical B.V." because it does not have its own staff, Buurblok is a vehicle of BGDD and Wocozon, which has to ensure a tax-attractive construction and cost efficiency. Buurblok operationally leases homes, energy concept, mobility and full maintenance to housing associations. Buurblok is originally approached from a new-build proposition, in which possible demolition-new-build assignments are now also being explored.

Interviewee C1 describes that many people fall between two stools and how that distance seems to be increasing.

"If you do not qualify for social rent, you have to go to private rent. That's a gap of about €750 to €1200, where there's little to no supply."

In addition, housing associations are also increasingly facing greater challenges, as the national government expects them to take a significant role in the supply of middle segment rental housing. For housing associations, mid-rental housing falls into the non-SGEI (Service of General Economic Interest) category, which means that they are not guaranteed financing, as is the case with social housing. Housing associations are therefore not able to finance loans that are backed by the social housing guarantee fund. Since the new Housing Act of 2015,



Figure 4.9: Buurblok's first middle segment rental project in Techum (Bouwgroep Dijkstra Draisma, n.d.)

housing associations must separate their commercial (non-SGEI) activities from their social (SGEI) activities in order to prevent market disruption. From a legal point of view this means that a housing association needs a separate administrative entity if it wants to operate within the middle rental segment (Ministerie van Infrastructuur en Waterstaat, 2021). Buurblok aims to fill that gap, making it easier for housing associations to serve a new category of middle income households, as the housing association gets no non-SGEI homes on its balance sheet and has no additional maintenance work.

As mentioned before, housing association WoonFriesland has made a major contribution to the creation of Buurblok. WoonFriesland eventually won a project in Techum for Buurblok through intense lobbying at the municipality of Leeuwarden, they became therefore the launching customer. The project did not need to be tendered, as the land sale took place before the Didam Arrest according to Interviewee C2. In the Didam Arrest of November 2021, the Supreme Court ruled that government bodies must observe the general principles of good governance, including the principle of equality, when entering into and executing private law agreements (Moolhuizen, 2022). Due to the Didam Arrest, land development positions must now be tendered by municipalities. Interviewee C2 tells that the municipality actually had 7 social rental homes in mind for the location in Techum, but that Buurblok wanted to build 10 straightforward and cheap homes there, which did not fit into the urban development plan. After some negotiations, an agreement was reached; Buurblok builds 10 social rental homes. These homes were later placed in the middle segment due to unexpected regulations from the Acantus Arrest, more about this later.

Techum is a pilot case in which 10 middle segment rental homes have been realized, a project with the intention to learn as much as possible. All 10 homes run of one heat pump, making the homes extremely heat efficient. Technically seen, the heat efficiency could be even further optimized, as the heat pump is theoretically able to provide enough heat for 20 Buurblok homes. Within their launching project in Techum two electric shared cars are installed, the usage of the cars is organized with a reservation system app. Interviewee C1 tells how the cars are used a lot, as they cover a distance of 3500 to 4000 kilometers per month. The electric cars are also part of the energy system, as the batteries within the cars are used to store the generated power from the solar panels.

As a pioneer in the home leasing field, you are confronted with a lot of legislations, including the Housing Act, Electricity Act and the Heat Act. Interviewee C1 says they are able to supply the homes with electricity through one collective connection, but that was not allowed due to the Electricity Act. This meant that the system had to be

adapted to a separate connection for each home, which caused some delays. The new regular system now also works fine, but according to Buurblok the energy supply system could be more efficient. Their system would also make it easier to re-use cabling, making the homes and energy system more circular. Buurblok's call to the government in The Hague is therefore to experiment more in these kind of areas. The Electricity Act is a vehicle that has been in the pipeline for years, it would be beneficial to experiment in the run-up phase, to see what works and what does not. Buurblok also got stuck on the Heat Act, the Supreme Court decided in the Acantus Arrest that energy installations are classified as immovable appurtenances, as a result of which the home lessor is not allowed to charge the capital and maintenance costs of the installation through service costs (Rijpstra & Blum, 2022). Only direct costs for the heat supply may be charged, this incurred a number of unexpected costs for Buurblok, as a result of which the homes had to be moved from the social segment to the mid-rental segment. Interviewee C1 says this ultimately worked out very favorably for tenants, but less so for Buurblok. However, interviewee C2 has his doubts about this, because tenants are no longer eligible for a rent subsidy in the middle segment. Both parties are therefore not actually benefiting from the Acantus Arrest. Due to the many legislations, the development process took much longer than with regular projects. As mentioned before, the pilot project in Techum is still to learn from, on repeating the project many mistakes could be avoided, shortening the overall development process.

4.3.2 Financial feasibility

Buurblok is a joint venture, in which the ratio is fifty-fifty between BGDD and Wocozon. Interviewee C1 indicates that there is still little profit to be shared from this first project. Everything that has to do with innovation, will cost money in the initial phase. Losses are often incurred due to new investments that have to be made, these costs are also evenly divided between both parties. Ultimately, the business case should aim for a gross initial yield of about 5%. However, it will take a few more years before Buurblok will be able to achieve those margins. Interesting to note is that Wocozon is a non-profit foundation, reinvesting any profits made into new concepts, to even further accelerate the energy transition. Interviewee C1 says that BGDD actually does the same, despite being a company. Currently, the Rabobank has been found as a partner for financing the developments. The ownership of the homes stays with Buurblok.

The operational lease contract only runs for 10 years, because housing associations are not allowed to enter into contracts that last longer. Housing associations are also not allowed to record any further intentions or efforts for contract renewals. A housing association may only decide to renew the contract near the end of the current

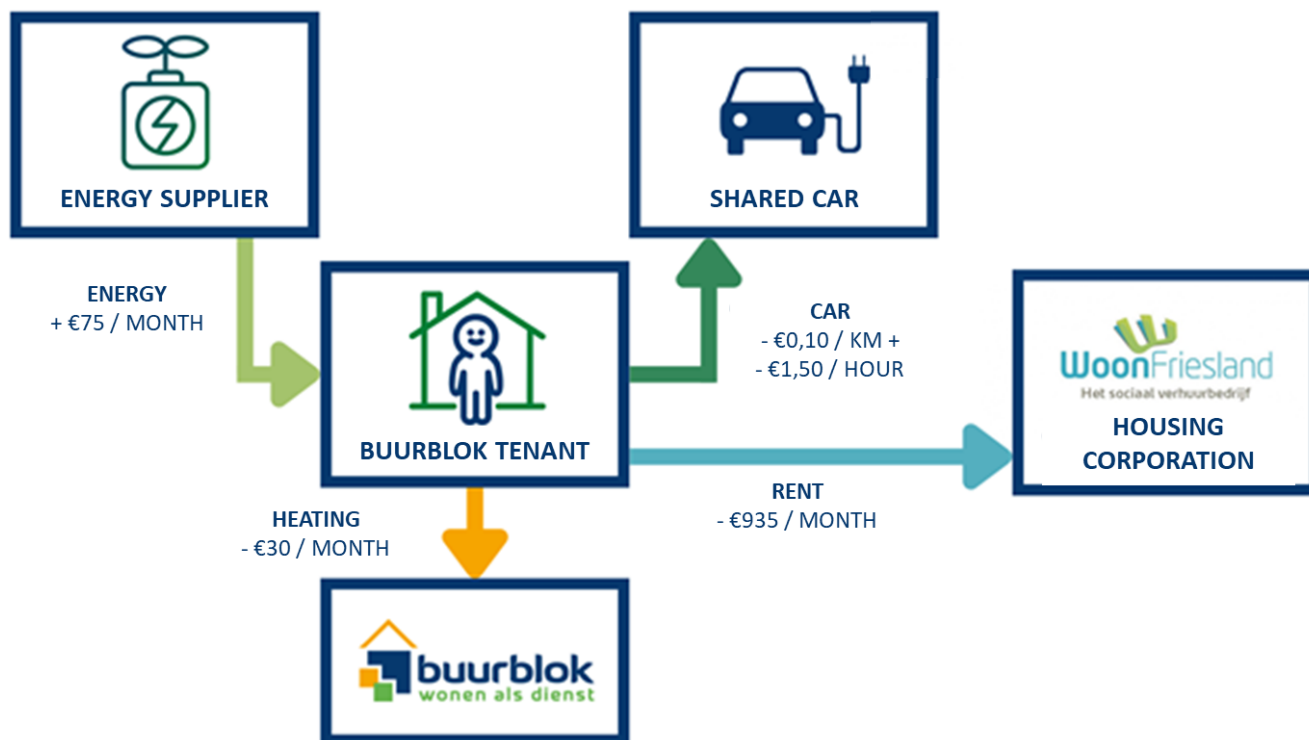


Figure 4.10: Overview tenant expenses (Buurblok, n.d.)

contracting period. These two aspects create more financial uncertainty for Buurblok according to interviewee C1.

“That is of course the risk behind the project, because a business case for real estate cannot be explained for a period of 10 years. So you basically know a gap behind it of 20 years. However, we dare to bear this risk in the current market.”

Interviewee C1 was unable to say much about the rate that Buurblok charges WoonFriesland for the delivery of their services. However, it is openly known that the rent in the first project amounts €935. Interviewee C1 indicates that Buurblok charges less than that, enabling housing associations to take a margin for the execution of its general tasks. This did however raise the question of why WoonFriesland is still needed in this regard, as the tenant would be able to rent cheaper without the margin of the housing association. Interviewee C1 explains that Buurblok consciously wants to use a housing association as a vehicle for this, since WoonFriesland is already the socially established letting agency, which engages well with its tenants. Moreover, housing associations are the first point of contact for tenants for housing related questions. That is why it was decided to join forces. Other risks that were formulated at the start of Buurblok are the value retention of real estate, rising interest rates at banks and falling energy rates, the latter already unimaginable due to the current rise in energy prices.

Interviewee C1 notes that there is not yet a policy for mid-rental land prices at many municipalities, where there is often one for social rent. Buurblok now often has to rely on its innovative character, hoping that the municipality is

willing to negotiate about the land price. Interviewee C2 indicates that this was certainly not the case in Techum, the municipality of Leeuwarden has had a land price policy for middle segment rental housing for over 4 years now, and this is not really negotiable. Moreover, Buurblok was not really chosen for its innovative character, but through good lobbying by WoonFriesland. The land in Techum was sold under social housing conditions, due to the relocation of homes to the middle rental segment, an after payment will have to be made by Buurblok to the municipality of Leeuwarden. Interviewee C1 says that is important that land pricing is in line with the market, but still produces a feasible case. Buurblok hopes that many municipalities will develop a policy for mid-market rent in the future, in which the price of land will be slightly higher than it is for social rent, creating better incentives for market parties to develop middle segment rental housing.

The announcement of a possible regulation of the middle rental segment is widely criticized, but Buurblok considers it as a favorable development, as it might become possible for tenants to receive subsidy for their rent. Interviewee C1 is certainly not afraid that the homes will not comply with a new Housing Valuation System, since the homes are of high quality. Stating that the completed homes could probably be made more expensive through a points system. Fortunately, Buurblok does not have that ambition according to Interviewee C1. The municipality of Leeuwarden, on the other hand, is less positive and believes that insufficient thought has been given to the consequences of a statement about the regulation of the middle rental segment. Interviewee C2 tells that many mid-rental projects came to an abrupt halt because investors no longer dare to invest.

4.3.3 Affordability

Rent prices are currently mostly based on location and construction costs. Within the pilot case tenants pay €935 per month, tenants law applies to this, limiting annual rent increases. For the period 2021 to 2024, the national government has set the annual maximum rent increase for private sector homes at the inflation rate + 1% (Rijksoverheid, 2022c). The completed terraced houses have a surface area of approximately 100 square meters, which brings the square meter price to €9,35/m². As mentioned earlier, all 10 rental properties are connected to one heat pump, the heat pump is driven by Buurblok's neighborhood heating system, this system is equipped with innovative solar panels that generate electricity and heat. Tenants pay €30 a month for this heating service. However, as the homes produce more energy than they use, tenants are able to get back €75 on average from the energy supplier. This prognosis even remains with the current energy rates, also because of the netting. Tenants therefore suddenly pay less net, including heating and electricity, they pay €890. Buurblok calculated that tenants also save €60 per month by using the shared electric car. Tenants pay €0,10 per kilometer driven plus €1,50 per hour and each kWh of additional solar panel generated electricity is equivalent to driving 1,5 kilometers. So the final rent, including energy and car is even lower, around €830 per month. Interviewee C1 states that tenants are and should be really happy with Buurblok as is. An overview of all these costs can be seen in figure 4.10.

As discussed before, due to the Acantus Arrest tenants only need to pay direct costs for heat supply. In the future, Buurblok wants to distribute this more fairly. To give an example, tenants in Buurblok now pay about €16 per gigajoule and do not pay a standing fee. The standing fees are independent supply costs of electricity, gas and water,

which must be covered by the landlord. Heat rates are legally determined according to the ACM, these are this year at €54 per gigajoule and €500 standing fee. That has still been established with the rates of last year. Due to the war in Ukraine, the prognosis for next year is €150 per gigajoule and an even higher standing fee. These conditions and the fact that the houses are energy-producing make it very beneficial for the tenants. Interviewee C1 prefers to distribute the standing fees more fairly in the future, resulting in rent increases, for the time being the Acantus Arrest is still in the way.

Buurblok assures that the mid-rental homes will stay within the segment, due to agreements made on the land price with the municipality. Interviewee C1 indicates that agreements have indeed been made about the land price, but these are based on social housing for a period of 15 years. Due to the Acantus Arrest, the rental properties have been removed from the agreed segment, as a result of which a contractually agreed after payment will have to take place by Buurblok.

4.3.4 Qualitative aspects

BGDD uses a so-called Dry Stacking System (DSS), in which housing elements are manufactured in the factory (see figure 4.11). A requirement is that these prefab homes must last at least as long as traditional housing, if not longer. BGDD has tested the DSS homes for this in climate chambers in which a period of 70 years is simulated. Quality in construction can easily be measured on the basis of airtightness, the more airtight, the better. The value used for the degree of airtightness is the Qv;10 value, this unit indicates how many liters of air per second, per m², at a pressure difference of 10 Pa, flows through the building envelope. Interviewee C1 says that BGDD has had an enormous development curve in this, the DSS homes now fluctuate around a Qv;10 of 0.08, while the

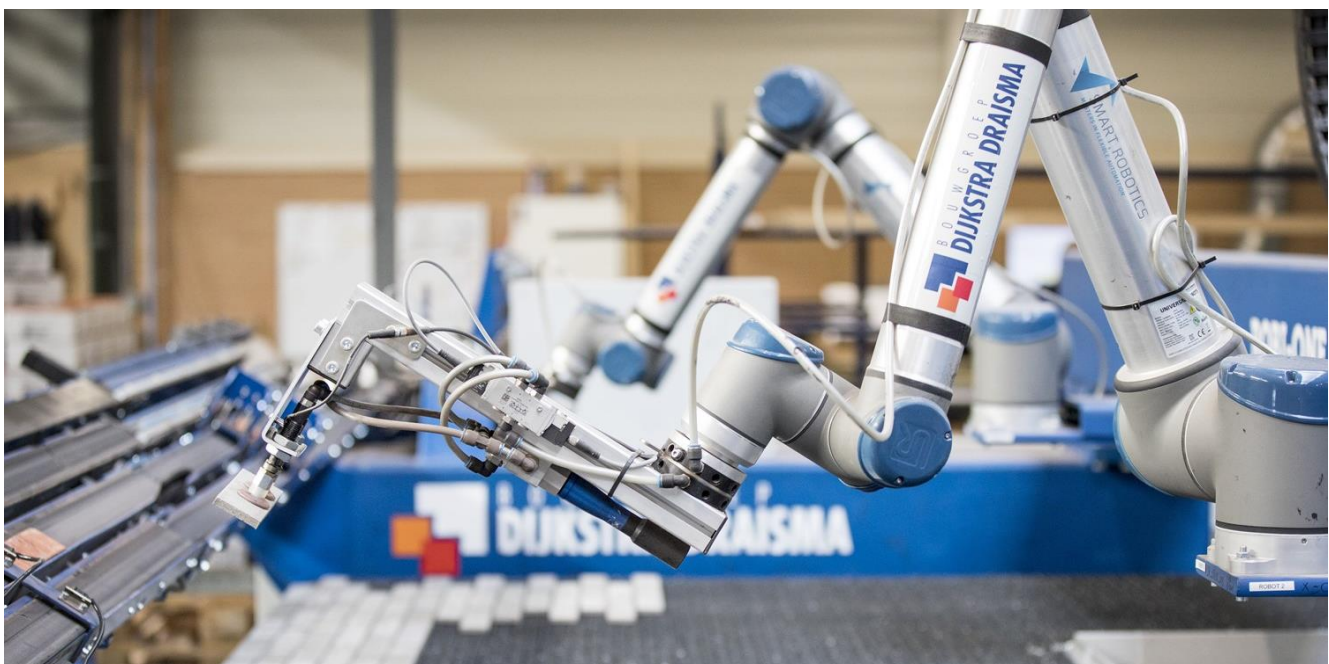


Figure 4.11: Robotic arm manufacturing housing elements through the Dry Stacking System (Bouwgroep Dijkstra Draisma, n.d.)

Building Decree only prescribes 0.6. Another benefit of the Dry Stacking System is that homes are easily detachable, making them sustainable and circular. For the time being, it is quite a challenge to use circular cabling. As mentioned before, this could be made easier by implementing collective power connections on district level, but this is not possible due to current Electricity Act.

Buurblok utilizes the power of word of mouth to get tenants excited and participating. Interviewee C1 argues that partly because of this the shared electric cars are used more often, as neighbors are talking about it and see each other using it. The former also increasing the social cohesion in Buurblok projects, because the car usage is coordinated through a neighborhood app. Interviewee C2 finds shared mobility an interesting and good development and hopes that it will have positive consequences for the parking standard, as it makes tenants less likely to purchase a (second) car. Buurblok also organizes a drink every quarter, to evaluate how things are going, this further stimulates involvement from the neighborhood. Interviewee C1 suspects that the homes are less suitable for really old people, since it can be too much for them on a technological level, such as dealing with the car and electricity app. Buurblok aims to allow people from the social segment to move on to the realized middle segment rental homes.

4.3.5 Quantitative aspects

So far, Buurblok has only realized the 10 lease homes through the pilot project in Techum. For the time being, there does not seem to be a maximum to the scale of Buurblok projects, so far there are research projects that reach up to 450 homes. The production capacity is determined by the speed at which the houses can be manufactured. The scalability takes place in steps of 10 homes, in which 10 is really the heavy lower limit, as projects with more homes are more feasible. However, Buurblok does not indicate a hard line towards clients in this regard, as they want to avoid missing out on assignments for now. Interviewee C1 expresses how Buurblok is looking for new land positions and housing associations, in order to gain more exposure for the concept. As the homes are set up parametrically, BGDD is able to realize over 850 variations in their factory, also enabling to construct apartment buildings. For example, there is an apartment building in Dokkum, which is now partially occupied by refugee Ukrainians.

4.3.6 Conclusion Buurblok

Effectivity of the concept

What development process is utilized within Buurblok for realizing middle segment rental housing?	
Time management	Buurblok is a concept that has been hampered a lot by obstructive legislation during the development process, leading to much overall delay. However, many valuable lessons have been learned during the first pilot project, hopefully resulting in a faster development process for future projects.
Capacity	Buurblok recognizes the pressure placed on the shoulders of housing associations by the national government, expecting them to play a key role in the supply of middle segment rental housing. A housing association has financially and administratively limited capacity to realize in the non-SGEI sector. Buurblok aims to solve this problem, as it has the capacity to supply affordable, sustainable and circular housing. Buurblok leases the homes to a housing association, using the capacity and experience they have as a letting agency. Meanwhile, helping housing associations achieve their goals in the middle rental segment.
Innovation	A company that pursues innovation seems to spend a lot of time and money on its development, sufficient investments in the initial phase are therefore very important. It is therefore beneficial to collaborate with a non-profit foundation such as Wocozon, because they will certainly reinvest any profits made. However, the same also seems to apply to market parties, in order to achieve the desired level of innovation more quickly.
What is the financial feasibility of Buurblok for realizing middle segment rental housing?	
Financial structure	An interesting insight that has been obtained is that the Buurblok concept was primarily intended for the realization of social rental housing. Due to the Acanthus Arrest, the costs for energy installations were not allowed to be passed on in the service costs, resulting in a financial deficiency. The homes were moved from the social segment to the middle rental segment. Buurblok operationally leases the homes to a housing association, charging less than the income they will receive from their tenants. This also means that Buurblok remains the owner of the rental properties.
Risk management	Buurblok is a joint venture, in which risks and profits are shared based on a fifty-fifty ratio between BGDD and Wocozon. The biggest risk they share is that a housing association does not want to extend the operational lease contract after 10 years.
GIY	The Buurblok concept ultimately aims for a gross initial yield of 5%, something that is not yet achievable.
How affordable is middle segment rental housing realized through Buurblok for tenants?	
Operating period	It was agreed with the municipality that the homes will stay at least within the segment for a period of 15 years. The operational lease contract only runs for 10 years, this has to do with the fact that housing associations are legally not allowed to enter into contracts for a longer period. Which is questionable on itself as it has administratively nothing to do with their SGEI activities. However, the contract may be renewed near the end of the operating period.
Target group	Within the Buurblok concept, there does not seem to be a focus on a particular type of tenant. This is because the allocation criteria can be determined by the leasing housing association. The concept seems to be a good tool for housing associations to improve the transitional flow of their social tenants.
Rent	Tenants pay €935, however the real monthly rent could be set at €830, as tenants are able to save on energy and mobility costs. This brings the square meter price either to €9,35/m ² or €8,30/m ² .
What are the qualitative aspects of middle segment rental housing realized through Buurblok?	
Sustainability	The homes are manufactured in a factory through a so called Dry Stacking System. As the home elements are prefabricated they can be optimized in their material usage, sustainability and circularity. Moreover, the concept thinks about sustainable mobility by implementing shared electric cars.
Social cohesion	Social cohesion is stimulated by the shared cars and by organizing a quarterly evaluation, which helps to get feedback and stimulate neighborhood participation.
Value for money	Even though, the same homes moved from the social segment to the middle rental segment, tenants still seem to get value for their money, as Buurblok provides tenants with housing, an efficient energy concept and sustainable mobility.
What are the quantitative aspects of middle segment rental housing realized through Buurblok?	
Scalability	The concept is very well scalable, the minimum project size being 10 homes. The only limiting factor is the manufacturing speed of the housing elements.
Reproducibility	Because the housing elements are set up parametrically, they can meet many location-specific conditions. With more than 850 options the concept is very well reproducible in many municipalities.
Realized homes	So far Buurblok has only realized the 10 middle segment rental homes through the pilot project in Techum. Buurblok is looking for new land positions and housing associations to collaborate with.

Position of the government

What role does the government have within Buurblok for realizing middle segment rental housing?	
Agreements	The municipality of Leeuwarden chose Buurblok because of good lobbying by the local housing association. The municipality made a contractual agreement with Buurblok to sell the land at a discount if the homes would remain in the social segment for a minimum period of 15 years. If Buurblok did not comply with this agreement, a supplementary payment would have to be made. Given that the homes have been moved to the mid-rental segment, this supplementary payment will still have to be made.
Legislation / Regulation	Buurblok has experienced many challenges with certain legislations during their first pilot project. Buurblok should have done more research in advance, as problems with the Electricity Act and Heat Act could have been prevented. Especially since the entire financial feasibility was at stake due to the Acantus Arrest, the result is an unfavorable financial situation for both tenant and Buurblok. The housing associations are also affected by limiting legislations. They are obliged to have a separate administrative entity for their SGEI and non-SGEI services, which makes it more difficult for them to operate in the middle rental segment. Furthermore, housing associations are not able to enter into contracts that last longer than 10 years.
Stimulation	Is Buurblok's ignorance of legislation all their fault? That certainly does not seem to be the case, given the illogical interactions of some legislation. Legislation should be centered around having a desirable and stimulating effect in providing affordable and sustainable housing. However, the Acantus Arrest has led to the rental properties being moved to a higher segment, thus having a counterproductive effect on the provision of affordable housing. In addition, the Electricity Act limits circular developments in construction, something that seems to be increasingly important. Buurblok's request to the national government is therefore to review these legislations, to further stimulate innovations from the market. The request to local municipalities is to develop a stimulating land price policy for middle segment rental housing.

Conclusion

How effective is Buurblok in realizing middle segment rental housing?
<p>Concluding, the first pilot project was not effectively realized, as Buurblok, housing association, municipality and tenant were unable to achieve their goals. The concept has experienced a lot of problems with obstructive legislations and regulations. Due to the financial setback of the Acantus Arrest, the homes have been transferred from the social segment to the mid-rental segment, leading to the next financial setback, the additional payment for the land to the municipality. Nevertheless, the pilot project is not unsuccessful, as the intention was to learn as much as possible. Buurblok certainly learned many valuable lessons during the pilot project.</p> <p>To improve effectiveness, it is advisable to better examine existing legislation in order to face less unexpected challenges. In addition, the lease construction makes it easier and more attractive for housing associations to be active in the mid-rental segment, allowing them to continue to focus on their social task. More research should be done into the legal contract terms of the non-SGEI entity within a housing association, enabling to establish longer and more certain operating periods with Buurblok. Moreover, Buurblok should not exclude its initial purpose, with some adjustments the concept should be made suitable again for leasing social housing as well. In order to increase cost efficiency, the lost income from the service costs due to the Acantus Arrest must be achieved elsewhere. Look for possibilities to include these costs in the rent, without increasing the rent too much. In other words, compensate on other aspects, such as the size of the homes. In addition, it is recommended to explore larger scale pilot projects, as it will also improve the financial feasibility and will make a bigger impact overall.</p>

4.4 | Case D: AMST

The fourth case is AMST, this is a tender winning project by MRP Development. AMST is selected for its decisiveness in realizing large mid-rental homes in a very difficult location; the middle of Amsterdam. The project contains a total of 252 apartments, of which 80% is made available to middle segment rental housing, the other 20% is intended for the private rental sector. AMST gives an answer to the high demand for affordable rental housing in Amsterdam, offering a spacious place to key workers and their families. Data for this case was gathered by interviewing a developer of MRP (referred to as Interviewee D1). He guided the project after MRP had won the tender. Interviewee D1 provided the selection brochure of the tender and an architectural document about the AMST project, both containing additional information. The municipality was often mentioned in the first interview, which is why it was decided to conduct a follow-up interview with the municipality of Amsterdam, in order to shed a light on the project from both sides. A project leader (referred to as Interviewee D2) and project manager (referred to as Interviewee D3) from the municipality of Amsterdam were interviewed for this.

4.4.1 Development process

AMST was a tender project from the municipality of Amsterdam. The tender started on 6 December 2017. The municipality was looking for a party that could develop, finance, realize, exploit and/or sell 2 blocks near the Amstelstation. Interviewee D1 describes how many requirements were already established by the municipality, making the program already largely fixed. Interviewee D2 notes that this strictness is there for a reason, if no preconditions or incentives are built into the tender, almost every developer will realize the smallest possible middle segment rental homes. The program to be realized within the assignment had to fit within the margins shown in figure 4.12.

The program for the middle rental segment is as follows (Municipality of Amsterdam, 2017):

- 80% of the gross floor area is intended for middle segment rental housing
 - Maximum rent of €971
 - Average rent should be €850
 - The rents follow inflation after the end of the first year of the first lease based on the Consumer Price Index.
 - Minimum usable surface area of 40m²
 - More than half is suitable for families (minimum of 70m² and average of 80m²)
 - Selling is not allowed for the first 25 years
 - The Housing Ordinance applies, giving priority to households with an income lower than 1,5x modal and social tenants.

	Living (in m ² gfa)	Retail (in m ² gfa)	Other amenities (in m ² gfa)	Total (min-max) (in m ² gfa)
Block B	7.000-8.000	3.500-4.500	0-1000	10.500-11.500
Block C	12.500-13.500	0-500	0-1.500	12.500-14.000
Total				23.000-25.500
Parking	Maximum of 250 parking spaces located under block C			

Figure 4.12: Program of requirements AMST (Municipality of Amsterdam, 2017)

Award criteria	Maximum score to be achieved
Sustainability	
Water storage	20 points
EPC	10 points
Program	
Average home size of larger medium-priced rental homes for families	40 points
Suitability for residential program target groups	10 points
Plinth filling	10 points
Offered option fee	10 points
Total maximum score to be achieved	100 points

Figure 4.13: Final selection assessment criteria (Municipality of Amsterdam, 2017)

Interviewee D1 argues that because of this strict program and urban planning program, they were not able to think of a whole new or innovative concept. Later on also adding:

“The development process is always a bit of copy paste.”

The tender procedure, contract procedure and design procedure are allocated to this process. These are standard procedures you have to go through for each project, until you get the required permits. A statement by Interviewee D2 contradicts this, stating that tendering is a good way to challenge innovation from the market.

MRP managed to win the tender by approaching the program in a substantially different way from an architectural and users perspective. Interviewee D1 explained that the average home size within the middle rental segment should be around 80m². MRP opted for many small apartments of 40m², enabling a few big apartments of 150m² to be realized. Their philosophy behind it; middle segment rental housing should be for key workers in the city and their families. Of course, the rent for the larger family apartments will be higher, but it will not exceed the maximum mid-rent prescribed in the tender. This decision making process is what probably gave them the edge, because the average home size of larger medium-priced rental homes for families was a heavily weighted award criteria during the final selection assessment (figure 4.13).

Despite the fact that there is a new or innovative concept lacking, interviewee D1 does describe a number of useful strategies that were used to make the project financially viable. Furthermore, describing how the key of project



Figure 4.14: The commercial plinth as the main financial carrier of AMST (VenhoevenCS, n.d.)

development is in interpreting the tender criteria properly, once the goal is clear, there are several ways to achieve it, allowing you to come up with innovative solutions. Even though, not all strategies could be publicly shared, a few examples were still mentioned, these will be discussed in the next sub-section.

4.4.2 Financial feasibility

On the financial feasibility a lot was mentioned, as it was the hardest thing to get right in this project. Interviewee D1 explains how municipalities play the “game”. There is a land affairs department, which is private law, just like a company. There is also a spatial planning department, which are not governed by private law. All talks and negotiations are with the spatial planning department, for the design, the program, etc. As soon as there is an agreement, the land affairs department is asked about the land price. The land price may not be negotiated, as it is policy. That makes sense, because it should be the same for every developer. However, that means that developers have to look for their margins in the design, which does not always benefit the design. Even when Interviewee D1 offered to play open card, in which the municipality indicates what it intends to charge for the land price, so the developer can hold the design next to it, to show what it will cost. This allows the municipality to know what the developer's profit is, paving the way for collaborations and negotiations. However, there still seems to be a mistrust within municipalities that developers make too much profit, therefore keeping the cards closed, according to Interviewee D1. This seems to confirm the statement of van Gijzel (2018) from the opening section 1.1, in which he states that municipalities often have an untrustful relationship with market parties.

Interviewees D2 and D3 both indicate that playing cards openly is not an option, with a tender the municipality must guarantee and maintain a level playing field, equaling the chances for all developers. Interviewee D2 tells that this actually automatically creates a formal and business relationship with market parties, which is mainly bound by contracts. Interviewee D1 says he partially understands the attitude of the municipality, as every euro of discount they provide on the land price, is going straight to the developer or the contractor. However, an underexplored solution was mentioned for this problem, for example; the municipality gives a discount on land price for every 10 trees the developer plants, this way the profit does not go to the developer or contractor, but directly to the quality of the project.

Three factors contributed to many investors and developers dropping out early in the tender. The first factor is really high land prices, €2700 per square meter for the middle segment rental housing. The second factor is the rent maximalization of €971. The third factor is that many investors only have models that calculate their investments up to 15 years, however this project cannot be sold for the first 25 years. Interviewee D2 sees this differently, because the municipality was very pleased with the interest and the number of registrations for the tender. Interviewee D2 also disagrees with the statement that land prices are too high, especially because AMST was one of the first projects with a separate land price policy for the function of the middle rental segment. Furthermore, the municipality is transparent in advance by communicating the exact tender criteria, based on which market parties can decide to enter the tender or not. Interviewee D2 tells from experience that in general

developers or leaseholders always find land prices high, making it almost seem like a standard part of project development. Nevertheless, MRP decided to continue, but had some difficulty in calculating certain matters. Interviewee D1 tells that there is no return on the dwellings, they are loss making. This can mainly be attributed to the high land costs. Construction costs are the other share, which still continue to rise. However, later on in the interview it was mentioned that the gross initial yield for housing was somewhere in between the 3,5% to 4%, full details could not be provided. That seems quite contradictory, as these margins are not loss making, but are not as high as the commercial plinth, which fluctuates around a gross initial yield of 5%. The commercial plinth becomes therefore the main carrier of the project, so the supermarket and catering industry (figure 4.14). Fortunately, MRP was able to sell these under reasonably favorable circumstances to an investor in 2020, as banks had a negative interest at that time and COVID-19 was not yet widely spread. AMST itself is financed by a bank and will be purchased by Union, a large German investor, on completion. Union purchased everything; the homes, the commercial plinth and the parking.

Several strategies were needed to calculate the project financially feasible. For example, there is a narrow street between the two residential blocks, where a truck must be able to drive down for loading and unloading at the supermarket on the -2 floor. The requirement from the municipality and from the tender was that the truck had to turn internally. Many parties dropped out as a result, because it would cost too many valuable square meters. Interviewee D1 then started talking with the municipality, about what the definition of turning around means, as that was the main problem. In the end they made a narrow street, which fits one truck, the only difference is that it has to drive reverse inwards, in order to reduce the internal turning circle. That saved a lot of square meters, which have now been added to the supermarket. As a result, those square meters can now be rented out and therefore yield 5 to 10 million extra. That can be the difference between making a project feasible or not, tells Interviewee D1.

Another strategy to make the project more feasible was the ratio of gross floor area to user area. The gross floor area is everything that is build, but only the user area is rentable or sellable. Often of 100% of what you build, around 75% can be rented or sold. By putting the design in a computer model, this ratio has been made more efficient. The ratio at AMST is 81%, which simply means that there are more rentable square meters within the same block.

After the application of all those strategies, the project came in the plus again. However, because the

construction costs kept rising, AMST is now a break-even for MRP and is therefore more seen as a prestige project in their portfolio.

4.4.3 Affordability

As stated in the tender requirements, the average rent of the middle rental segment housing may not exceed €850, with the maximum rent for an apartment being capped at €971 (Municipality of Amsterdam, 2017). However, Interviewee D1 tells that the average rent is around €1000, which exceeds both the average rent and the maximum rent threshold from the tender requirements. Interviewee D3 confirms that this is the case because of the indexation that took place between 2017 and 2023, from start to finish. The municipality also wants to assure that the affordable middle segment rental homes are rented out to the right residents, by implementing a Housing Ordinance.

Interviewee D1 was asked to give an opinion on the announced regulation of the middle rental segment. The regulation is correct from the point of view of the objective, because renting is becoming increasingly difficult, especially for single-person households. However, there are also some serious negative consequences. The first is that many large investors wanted to withdraw after Hugo de Jonge only had made a statement about a possible regulation, resulting in a chaos on the housing market in terms of investors. The second is that current calculations are based on the Housing Valuation System of the social rent, but this system is incorrect, as the points system for the middle segment will be different. The third drawback would be if the regulation also applies to the existing stock, which would lead to an extreme depreciation of all real estate within the private rental sector. Interviewee D1 does not believe that the regulation will be implemented for the existing stock, as the government can then levy much less WOZ tax.

All in all, the statement of the Minister of Housing has created a lot of fear and uncertainty among investors, leading to the postponement and cancellation of projects. In addition, many projects are now being converted from rental to sale, because the regulation will not affect the owner-occupied segment. In this way, the regulation of the middle rental segment seems to have an adverse effect on availability of rental housing, as it will lower the supply. The unintended upside is that it increases the supply of owner-occupied housing, which will lower house prices in that segment.

4.4.4 Qualitative aspects

Despite the fact that AMST is a very expensive project, MRP has stuck to delivering quality. The homes in the private sector have a slightly better finish and are located on the top floor with the best view. The high quality

should also assure that all homes will comply with a possible points system for the middle rental segment. The two buildings are also very sustainable, having solar panels, heat-cold storage and an energy performance coefficient (EPC) of 0,15. Furthermore, both buildings are equipped with a water neutral system, which means that the roofs, courtyards and gardens function as a rainwater storage and reuse system.

AMST has many shared spaces, incentivizing the social cohesion within the blocks. There is a shared living room located on the top floor, functioning as a flexible space, which can be reserved when needed. The rooftop gardens provide tenants with a place to meet and relax (figure 4.15). The underground parking garage and indoor bicycle storage are in view of the parking shortage in Amsterdam of major added value. Both are equipped with generous voids and filtered light in the facade sections, ensuring social safety.

As elaborated before, MRP sees AMST more as a prestige project, as it is not the most profitable. However, they are the first developer to show that high quality middle segment rental housing can be realized in the city center of Amsterdam. With AMST, MRP hopes to gain more trust from the municipality of Amsterdam, which Interview D1 describes as highly important in the development world. Interviewee D3 states that it is not so much about trust, but rather about reliability, where both the developer and the municipality keep their word. However, the fact that

MRP has lived up to its promises so far, does ensure that trust is built up within the municipality of Amsterdam. The only question remains what the point is of this trust, as the municipality has to start with a clean slate for the next tender, in order to guarantee a level playing field again.

4.4.5 Quantitative aspects

AMST contains 252 rental apartments, 198 in the middle segment and 54 in the higher segment. These numbers also do not seem to comply with the tender criteria, as 80% is intended for middle rental segment, which should conclude in 202 apartments when rounded up. The whole project is about 33.000m². There seem to be no limits to the scalability and reproducibility of these types of projects. However, Interviewee D1 goes on to say that a minimum scope applies, in order to make the project feasible. Also adding that a project succeeds or fails based on the land prices, if it is too expensive, every dwelling added makes the project harder to realize.



Figure 4.15: The rooftop gardens of project AMST (VenhoevenCS, n.d.)

4.4.6 Conclusion AMST

Effectivity of the concept

What development process is utilized within AMST for realizing middle segment rental housing?	
Time management	The area development period lasted approximately 6 years, from the start of the tender in 2017 to completion in 2023. The entire development process consists of standard procedures that are followed for the necessary permits. It can be concluded from this that the current standard procedures in the development process still take too long.
Capacity	By means of a tender, a municipality can make use of external capacities in the market, which leads to mutual competition and hopefully the best plan. It also strongly seems that the municipality could not act differently than it did, despite the amount of criticism from the market. All criteria in the tender were strictly defined, to prevent a (cheap) interpretation from the market, which is then used to complete the business case. The municipality of Amsterdam is also not able to lower land prices, as they make use of a transparent land price policy, which was already adapted to the function of the middle segment.
Innovation	In the field of innovation, government and market contradict each other on the effect of tendering. The municipality of Amsterdam claims that it challenges innovation from the market. The developer, on the other hand, claims that the strictness of tender requirements leads to less innovation from the market. Objectively viewed, the developer is right, AMST does not use an innovative concept. However, tendering does lead to market parties looking for new and unique strategies, mainly in the design, in order to complete the business case.
What is the financial feasibility of AMST for realizing middle segment rental housing?	
Financial structure	The municipality contracts the winning market party by means of a standard tender procedure. The market party buys the land with a loan from a bank. After completion, the homes and land will be purchased by an institutional investor, the tender criteria remain active. The innovative aspect of this financial structure lies in the more profitable commercial plinth, compensating for better affordability of the rental properties.
Risk management	Separate from a few location specific risks, none were specified. However, as with all tenders, there is a risk that you lose a project, resulting in lost time, efforts and thus money. The future rent regulation can also be regarded as a potential risk.
GIY	The gross initial yield for housing is somewhere in between 3,5% and 4%. The gross initial yield for the commercial plinth is approximately 5%.
How affordable is middle segment rental housing realized through AMST for tenants?	
Operating period	The tender program stipulates that the homes may not be sold for the first 25 years, which means that the rental homes will remain in the middle segment for at least the next 25 years.
Target group	The municipality has also established a so-called Housing Ordinance in the program, stating the allocation criteria for the middle segment rental housing. It gives priority to households with an income lower than 1.5x modal and social tenants. Because a number of apartments are very spacious by Amsterdam standards, it finally offers a place for families in the city center again.
Rent	It is questionable that rent of a home is able to rise before anyone has ever lived there. However, it appears to work that way, the average rent in the tender criteria was set at a maximum of €850, due to inflation it is an average rent of €1000 upon completion. The mid-rental homes have an average living area of 80m ² , bringing the square meter price to €12,50 / m ² .
What are the qualitative aspects of middle segment rental housing realized through AMST?	
Sustainability	The mid-segment rental homes meet all sustainability standards, the apartment complexes are equipped with solar panels, heat-cold storage and a water-neutral system.
Social cohesion	In apartment complexes there often seem to be more options and needs for communal areas. AMST opted for no separate balconies, but instead for a large communal roof terrace. Adding a communal living room is also something that is often not possible in other projects.
Value for money	Tenants certainly get their money's worth, may it not only be due to the excellent location in the center of Amsterdam. It offers spacious and high-quality new-build rental homes for an affordable price, something that is much needed in many large cities.
What are the quantitative aspects of middle segment rental housing realized through AMST?	
Scalability	The scalability of these types of projects is good, however projects stand or fall with the land prices. There also seems to be a minimum scale to the number of rental properties required to make the business case feasible.
Reproducibility	Reproducibility in other municipalities is possible, as almost every location in the Netherlands is easier than Amsterdam. However, a good sale of the commercial plinth will not succeed at every location. If the commercial plinth is not financially required, it could be left out as well.
Realized homes	Of the 252 realized rental apartments in AMST, 198 end up in the middle segment. AMST is a project, not a concept, so there are no additional future plans for this case.

Position of the government

What role does the government have within AMST for realizing middle segment rental housing?	
Agreements	The winning tender market party gets the contract with the municipality. A formal and business relationship will be maintained with the winner, which is bound by the contract. Where the developer indicates trust as an important factor, it is the municipality that is more focused on the reliability of an agreement.
Legislation / Regulation	The municipality of Amsterdam has laid down many regulations in the tender criteria, setting up clear boundaries from the start and providing market parties with insight regarding the assignment. In tenders, it is important that a municipality maintains a level playing field, implying that negotiations cannot take place, leading to the chagrin of many developers. The announcement of the regulation of the middle rental segment has led to postponement and cancellation of projects.
Stimulation	A tender encourages market parties to use their resources efficiently. The municipality of Amsterdam has tried to stimulate the project further by pursuing a separate land price policy, aimed specifically at middle segment rental homes.

Conclusion

How effective is AMST in realizing middle segment rental housing?
<p>It can be concluded that no groundbreaking new or innovative concept has been applied at AMST. That may be a bit short-sighted, as AMST is not a concept on itself, it is a successful middle segment rental housing project on a very difficult location. AMST shows that it is these types of projects are feasible. AMST was perhaps not the best chosen case for this research, something that should have been examined and identified earlier in the process. However, it would be a shame to lose many of the still valuable conclusions and lessons learned. AMST is still a prime example in showing the classic playing field between an opposite market and government. The market always seems to say that land prices are too high and the government thinks that the market should not complain that much. This is of course one of the reasons why this research is conducted in the first place, as there should be more effective ways to come to the same results.</p> <p>The development process was long and tedious, the municipality should really try to improve and accelerate the standard procedures it takes to get the required permits, 6 years is just too long. By firmly fixing the program in the tender, the municipality determines a certain quality of the homes. This turns out to be necessary, as developers always seem to be looking for cost optimization. The disadvantage of this is that the market is now looking for the maximum financial stretchability of the tender criteria, the developer who manages this best now seems to win. As a result, better quality plans may end up losing the tender. The "unique" financial strategies of floorplan optimizations in AMST should not be the innovation the municipality of Amsterdam should be looking for. The middle segment rental homes are also not experienced as profitable, so everything had to be compensated with the commercial plinth. Market parties should challenge themselves to make these type of mid-rental homes feasible through new and innovative concepts, as that seems to be the only long-term solution. This seems to be confirmed by the fact that AMST is only seen as a prestige project by the developer, which means that they will not soon tackle a similar project again. The municipality on the other hand still seems to achieve its goals quite effectively through the tender, as AMST has affordable and large homes for a period of at least 25 years for the intended target group.</p>

4.5 | Case E: Woonfonds Rijswijk

The final explored case is Woonfonds Rijswijk, this initiative of the municipality of Rijswijk is selected because of the innovative and active role the local municipality takes by setting up a housing fund. For this case a developer (referred to as Interviewee E1), alderman (referred to as Interviewee E2) and spokeswoman were interviewed. The spokeswoman had no active role during the interview and is therefore not further highlighted. The concept started with the observation of the municipality of Rijswijk that there is a great demand for all kinds of housing, including middle segment rental housing. The municipality noticed that market parties were not able to facilitate the demand for this type of housing. In 2019, a Motion was therefore tabled to investigate what the municipality itself could do to develop affordable rental housing. The investigation looked into the financial feasibility, possible collaborations with other parties and, most importantly, the support from the national and regional government. This ultimately led to a Council Proposal in 2021, in which the municipality participates in a housing fund, the proposal was adopted with a clear majority.

4.5.1 Development process

Based on the area development experience of Interviewee E1, three observations were mentioned that occur when regular institutional investors want to develop middle segment rental housing. The first aspect is that the municipality often has to sell the land at high discounts in order to guarantee some return on the homes for the investors. The second is that the value stability of real estate in these types of locations are not

guaranteed for the long term, making it difficult to meet investors' standard return expectations. The last aspect is the admission criteria for tenants used by investors, the income test is often very high, therefore completely missing the intended target group. As a result of these aspects, the municipality started to look for a different approach for realizing these middle segment rental homes.

A major contractor Dura Vermeer was already a cooperating development partner from the municipality of Rijswijk. Interviewee E1 consulted this partner about the question from the city council. Dura Vermeer tells that it is currently working together with Vastgoed Syndicerend Nederland on a similar project in Nieuwekerk aan den IJssel, the only exception is that the municipality does not have an active role there. Vastgoed Syndicerend Nederland (VSN) is a party which initiates and manages housing funds for private investors. By collaborating with Dura Vermeer and VSN and by taking Nieuwekerk aan den IJssel as an example case, the municipality of Rijswijk was able to make use of this knowledge and thus avoid many start-up errors. The municipality therefore dared to apply the housing fund concept to an existing plan in RijswijkBuiten (figure 4.16). In this construction, the municipality takes as a participant an interest in the fund that buys and operates middle segment rental housing. Furthermore, the rental properties end up with the intended target group and the rents are moderated for the longer term. The municipality called this new concept Woonfonds Rijswijk.



Figure 4.16: The location for the development of middle segment rental housing in RijswijkBuiten (Bol, 2021)

For many years, the realization of homes was not seen as a core social task of the municipality, as it is legally difficult for a government agency to intervene in a market situation. Interviewee E1 has noticed a turnaround in this point of view, since the national government also supports the Woonfonds Rijswijk initiative. The market is not actively tackling affordable housing currently, which gives the local government legitimacy to take more control. The state aid aspect was also an important factor that had to be justified, because a municipality interferes with land values and rental values. The main question was whether the municipality is not abusing government instruments that disrupt the market. Research by three different agencies showed that governmental interference is possible, but only under certain conditions. The first condition is that a market-based land price must be paid, from which a municipality may not deviate more than approximately 10%. The second is that the municipality is not allowed to determine to whom the homes are allocated. However, this seems quite contradictory with one of the main goals of the municipality of Rijswijk to allocate the middle segment rental homes to the matching target group. Interviewee E1 explains that the municipality has no active involvement in this and therefore leaves the allocation criteria to VSN.

Taking these conditions into account, the municipality of Rijswijk has sold the land positions in RijswijkBuiten under reasonably favorable conditions (no more than 10% less than the market value) to developer Dura Vermeer. The responsibility for permit applications lies with Dura Vermeer, because a municipality is also not allowed to grant itself permits. Dura Vermeer sells the land, including the rental homes to be realized, to VSN. The municipality of Rijswijk has a 25% stake in this fund managed by VSN,

the other 75% belongs to other private investors. This construction theoretically enables the municipality to gain long term insight and partial influence into how the housing fund deals with the rental properties and admission criteria. Woonfonds Rijswijk has an operating period of 10 years, with a 5-year extension option. A small side step, but worth mentioning, is that in theory it would also be possible for the municipality to issue the land on a long lease and thus retain ownership. This option could not be further explored by the municipality of Rijswijk due to a missing leasehold policy, but might be interesting for other municipalities that do have one.

Woonfonds Rijswijk received a lot of publicity in 2021, with a lot of interest from other municipalities as well. Interviewee E1 says that the concept could be of particular interest to small and medium-sized municipalities that are struggling to finance the business case. For now, the municipality of Rijswijk is focusing on improving and adapting the concept, based on the lessons learned in the RijswijkBuiten pilot case. The ultimate intention is to share this knowledge with other municipalities tells Interviewee E2.

4.5.2 Financial feasibility

Given the financial complexity of the construction, figure 4.17 aims to visually support the text.

Financial feasibility and integrity play an important role within the concept. The municipality of Rijswijk could not financially afford to sell the land at a high discount, which is usually the case for the development of affordable rental homes. Participant E1 emphasizes that setting up a housing fund was not an end goal in itself, it is an instrument for a municipality to realize mid-rental properties for the longer term, without having to

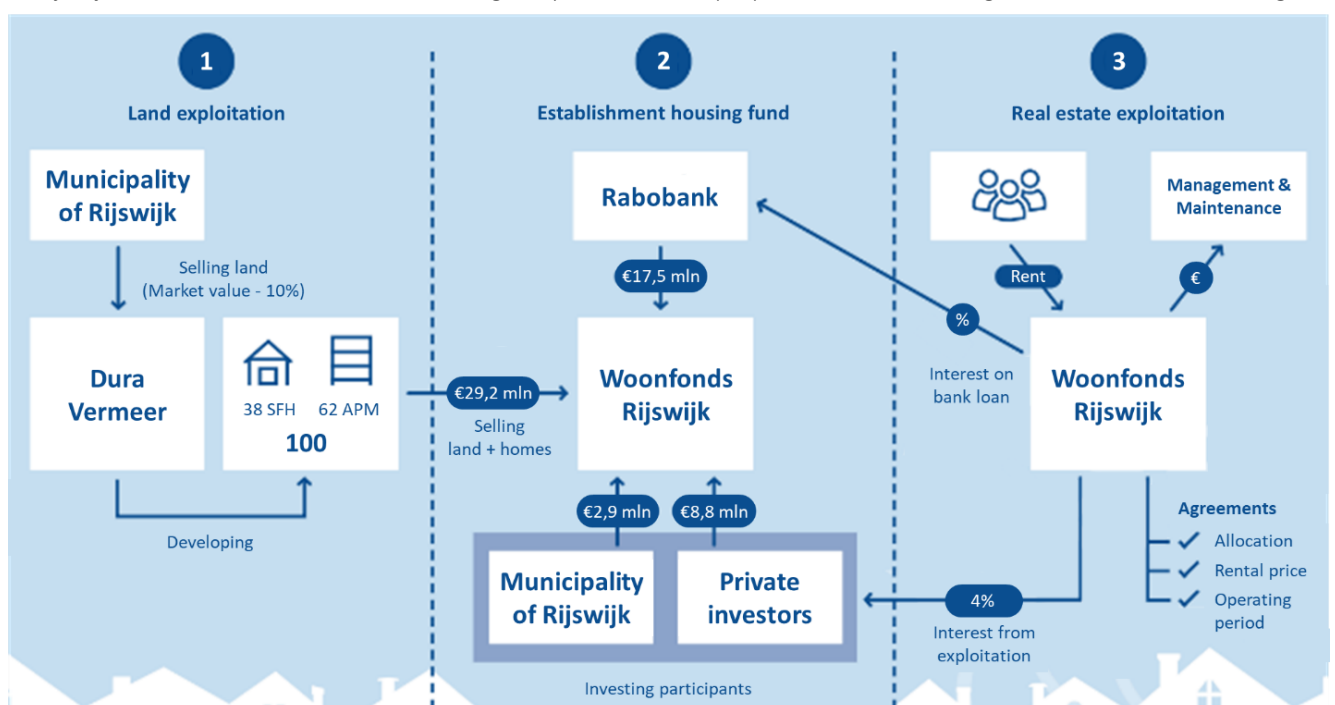


Figure 4.17: Overview of the financial construction behind Woonfonds Rijswijk (Adaptation from (Municipality of Rijswijk, 2021))

compensate too much financially. Nevertheless, the land was sold to Dura Vermeer for a somewhat lower price. Interviewee E1 indicates that this was about 10% below the market value. The municipality could financially allow this because of the return it receives in the longer term from the housing fund. Dura Vermeer realizes 38 single-family homes and 62 apartments on the plots in RijswijkBuiten, in total 100 middle segment rental homes.

The land and the houses will be purchased from Dura Vermeer for €29,2 million. Woonfonds Rijswijk finances this with a loan of €17,5 million from the Rabobank and €11,7 million from private investors. The municipality of Rijswijk invests 25% of the private investor amount, a total of €2,9 million. Because Woonfonds Rijswijk is a private fund, the investors determine the intended return percentage. VSN had a certain number from experience for this and has set the return on investment at slightly above 4%. That is quite minimal for these types of investments according to Interviewee E1, a deliberate choice, as it makes a huge difference in lowering the final rental values. Also, at this percentage of about 4%, there still seems to be enough interest among private investors to invest their money. With the share of 25%, the municipality of Rijswijk expects a return of €2,2 million over an operating period of 15 years. The municipality was advised not to take more than a 25% share, as experience showed that a dominant government share could repel private investors. In addition, the government's share is relatively limited in order to manage the risk, as risky investments are generally avoided by municipalities, according to Interviewee E2. The legal, fiscal and governance risks are also minimal, as the municipality wants to maintain its integrity in this respect and therefore had this properly investigated beforehand.

Other trends, such as rising construction costs, have so far not proved to be a problem for the project in RijswijkBuiten. That problem now mainly lies with developer Dura Vermeer, they signed a contract one year ago with the housing fund about how the rental properties should be delivered. Dura Vermeer will have to adhere to this. Also a possible regulation of the middle rental segment seems to be no big deal, as it will most likely have little effect on the already moderated rents. Interviewee E2 emphasizes that there is still little to conclude about the rumored regulation, however if it leads to private investors wanting to withdraw from the housing fund, they will first need to sell their shares.

4.5.3 Affordability

About a year and a half ago, the municipality of Rijswijk determined that the middle rental segment is somewhere between €700 and €1000 in monthly rent. From that point of view, the aim is to keep the monthly rent for the single-family homes in RijswijkBuiten below €1000 and for the apartments below €900. A commercially appraised

value for these homes resulted in a monthly rent of €1200 and €1000 respectively, so both types of homes are rented below market value. Interviewee E1 states that the homes are very sustainable and that tenants therefore have few additional energy costs. The single-family homes have an average surface area of just over 110 m², which brings the square meter price to approximately €9/m². The apartments have a surface area of just under 70 m², which brings the square meter price to approximately €13/m². As a result, tenants in the larger homes seem to be getting more value for their money.

As mentioned before, the homes are guaranteed to stay within the middle rental segment for the upcoming 10 years, with an optional extension period of 5 years afterwards. This implies that rent and rent increases are moderated during the active lifespan of the fund. After the first 10 years, the city council will evaluate its participation in Woonfonds Rijswijk. The housing fund mainly wants to stimulate the transitional flow from the social segment. Interviewee E2 tells that it is still unclear whether the concept will reach the right target group in practice. If the fund no longer achieves the desired effect, namely serving the middle income group, the municipality of Rijswijk could decide to sell its shares. The opposite is also possible, the housing fund turns out to be a success and the municipality wants to maintain or expand its share as a result. In this case the extension period of 5 years will start. Interviewee E2 indicates two reasons to start the evaluation of Woonfonds Rijswijk on time:

“First, to avoid an extension decision at the last minute. And secondly, if Woonfonds Rijswijk turns out to be a success, something we certainly hope so, we would like to apply it in other parts of Rijswijk as well.”

What happens after the extension period is unknown by both Interviewee E1 and E2. Project leader Bol (2022) from the municipality of Rijswijk states that after 15 years, all shareholders may vote to extend the fund with 3 or 5 years, in which the majority is decisive.

4.5.4 Qualitative aspects

As indicated earlier, the rental properties are rented out below market value. Nevertheless, Interviewee E1 states that the municipality prefers to build new middle rental segment housing on inexpensive locations, like RijswijkBuiten. However, the municipality of Rijswijk also considers the diversity of composition of a neighborhood to be of great importance. It was also recognized that homes in this segment were initially still lacking in the development of RijswijkBuiten. Woonfonds Rijswijk has changed that. The middle-income group is therefore now seen as a "qualitative asset" to the composition of the neighborhood by Interviewee E1.

All homes in RijswijkBuiten have been developed with sustainability in mind. All mid-rental homes are gasless,



Figure 4.18: Render of the 62 middle segment rental apartments in RijswijkBuiten (Bol, 2021)

well insulated, well ventilated and use geothermal heat. In addition, homes are equipped with a heat pump and solar panels. The municipality of Rijswijk also sees shared mobility as an important factor in this regard and is currently testing implementations. Green and recreational facilities are nearby in the Wilhelminapark.

The municipality considers social cohesion important, especially at RijswijkBuiten level. Interviewee E1 mentions that the municipality will soon initiate something in this area, good to note that this is something separate from Woonfonds Rijswijk.

“We are working hard on that. After all, there is no neighborhood without good cohesion. From an area development perspective, a neighborhood has not been realized if the key is delivered, it does not work that way. I think within a month or two we as a municipality can announce what type of approach we are taking for this.”

4.5.5 Quantitative aspects

To date, no middle segment rental homes have been delivered by Woonfonds Rijswijk. The delivery of the first 100 homes is scheduled for the second quarter of 2023. This concerns 38 single-family homes and 62 apartments (figure 4.18). These 100 homes will be realized through a pilot project in RijswijkBuiten, as discussed before. The total project in RijswijkBuiten has a size of a 1000 homes, so the middle rental segment takes up 10% of this.

Interviewee E1 states that other municipalities are jealous of such a number, however that does not alter the fact that 10% still does not comply with the national guidelines for meeting the demand for middle segment rental housing.

In theory, there seems to be no maximum scale for the size of the projects according to Interviewee E1. On the other hand, there seems to be a minimal scope, as setting up a housing fund only becomes interesting after the realization of approximately 40 homes. Interviewee E2 adds that with much larger projects it will become more difficult to guarantee social cohesion and mixed neighborhoods. However, Woonfonds Rijswijk does not rule out future collaborations with housing associations for further upscaling.

The reproducibility of the concept in other municipalities could be of great importance in meeting the demand for mid-market rental housing. A physical criterion is that a municipality must be in possession of a land position that is suitable for housing. If a municipality does not want or is not able to compensate too much financially for the sale of the land, the housing fund concept is an instrument that could be utilized to achieve this. Further lessons and criteria will still need to be learned through the pilot project.

4.5.6 Conclusion Woonfonds Rijswijk

Effectivity of the concept

What development process is utilized within Woonfonds Rijswijk for realizing middle segment rental housing?	
Time management	Between the submission of the Motion and the delivery of the mid-segment rental homes is a period of 4 years. This is rather quick, the municipality of Rijswijk has shown guts to apply the new concept directly to ongoing developments in RijswijkBuiten. Another advantage is that the municipality could start similar upcoming projects sooner, as many steps early in the process will not have to be repeated. However, that is all under the condition that the pilot project in RijswijkBuiten becomes a success.
Capacity	The municipality of Rijswijk has made good use of external capacities, for example they have avoided many risks by having a thorough investigation carried out into all legal and financial preconditions. In addition, they made use of existing, and therefore somewhat reliable, partners in the market and their external capabilities. On the other hand, more research could be done into how land positions are issued, due to a missing leasehold policy this now seems underexplored.
Innovation	Woonfonds Rijswijk is very innovative, given the active position of the municipality in realizing middle segment rental homes. Nevertheless, credit must also be given to the innovation of market parties, because the housing fund concept actually already existed. The municipality of Rijswijk has carefully responded to this concept and is now using it as an instrument to achieve their own goals.
What is the financial feasibility of Woonfonds Rijswijk for realizing middle segment rental housing?	
Financial structure	The financial structure is carefully set up. The municipality could not financially afford to sell the land at a high discount. In the end, they were able to give a small discount on the land price, because they achieve their return over the longer term on the 25% share in the fund. In addition, they have also been able to impose criteria on the allocation, rental price and operating period.
Risk management	The municipality of Rijswijk has minimized its legal, fiscal and governance risks by having sufficient research carried out. The biggest risk on paper seems to be that the municipality has only limited influence on the housing fund, with a share of 25% a majority can be reached fairly quickly, but it is not insured. Which may mean that the fund will not be extended after 10 years, resulting in the rental properties disappearing from the middle segment. The authority to determine the allocation criteria also lies with the fund, which is something that the municipality of Rijswijk no longer wanted to be determined by market parties. For the first 10 years, the municipality seems to achieve its goals, in the long term there remains a lot to be seen.
GIY	A gross initial yield of just over 4% allows for lower rents and still enough interest from private investors.
How affordable is middle segment rental housing realized through Woonfonds Rijswijk for tenants?	
Operating period	The rental homes will stay at least 10 years within the middle rental segment. After this period, it can be extended by another 5 years, after that by 3 or 5 years, depending on what the majority of the private investors within the fund want. Implying that the future of Woonfonds Rijswijk is quite insecure.
Target group	Woonfonds Rijswijk has the authority to determine the allocation criteria for the tenants, for the first 10 years this has been determined. The municipality of Rijswijk wants to make sure that the homes are allocated to the right target group, giving priority to social tenants. People who earn too much are not eligible for the rental homes.
Rent	With rents of less than €1000, the homes can be called affordable for the middle income groups. Single-family homes: €9/m ² & Apartments: €13/m ²
What are the qualitative aspects of middle segment rental housing realized through Woonfonds Rijswijk?	
Sustainability	The mid-segment rental properties meet current sustainability standards. In addition, solar panels and shared mobility are being implemented.
Social cohesion	Within the concept itself, no attention seems to be paid to social cohesion. It is the task of the relevant municipality where the project is being realized to provide stimulating incentives and facilities for this.
Value for money	Tenants certainly get value for their money, as Woonfonds Rijswijk enables them to rent a newbuild rental property of high quality below market value.
What are the quantitative aspects of middle segment rental housing realized through Woonfonds Rijswijk?	
Scalability	The concept does not seem to have a maximum scale, but a minimum one. Setting up a housing fund becomes interesting after the realization of approximately 40 homes. Further upscaling through partnerships with housing associations are not out of the question.
Reproducibility	The reproducibility is still difficult to determine, as there is no proof of concept yet in practice. It goes without saying that a municipality must be in possession of suitable land for housing. It also seems important that all financial and legal criteria are analyzed at least once. The final criteria is that a municipality needs a reliable and experienced developer and private fund manager.
Realized homes	Currently zero, the first 100 mid-rental homes are planned to be delivered in the second quarter of 2023. It would have been a nice statement if more mid-rental properties had been added to the 1000 homes containing project in RijswijkBuiten.

Position of the government

What role does the government have within Woonfonds Rijswijk for realizing middle segment rental housing?	
Agreements	The municipality of Rijswijk contracted a contractor for the sale of the land and the development of the middle segment rental homes. The municipality of Rijswijk made clear agreements with the private housing fund manager about the allocation criteria, maximum rent (increases) and operating periods.
Legislation / Regulation	The concept became more complicated as there is a lot of legislation about the fact that a government agency intervenes in a market situation. As a result, a market-based land value must be paid and the municipality is not allowed to directly determine the allocation criteria for the rental properties. The latter has now been taken over by the established housing fund. A regulation of the middle rental segment seems to have low impact overall.
Stimulation	The municipality is taking an active role and hopes to stimulate market parties by showing that realizing middle segment rental housing is feasible. It is also good to see that the concept is supported by the regional and national government.

Conclusion

How effective is Woonfonds Rijswijk in realizing middle segment rental housing?
<p>In conclusion, on paper the Woonfonds Rijswijk concept seems very attractive and effective for many municipalities. However, a government agency must have a clear and substantiated legitimacy to intervene in a market situation. In other words, if no problems are experienced in a municipality with regard to the supply of middle segment rental housing, this concept does not appear to be legally applicable. On the other hand, based on previously researched theory, it can be stated that the housing shortage in the Netherlands is so significant that the concept is and will remain applicable almost everywhere (see figure 2.2). The housing fund concept thus becomes an effective tool within the development process for increasing the financial feasibility of middle segment rental housing projects, as it allows municipalities to achieve returns from the housing fund in the long term. The municipality itself is responsible for finding a reliable developer and private fund manager to collaborate with, it is recommended to look for experienced and already existing partners. Furthermore, the municipality bears the responsibility for determining and laying down allocation criteria, maximum rent (increases) and operating periods. It is advisable to make a well-considered decision about the operating period, because after this period the majority of the fund determines how the rental properties are handled. The municipality of Rijswijk hopes to be able to determine the majority with its share of 25%. The future will show whether this is enough for the municipality to maintain control, buying or selling shares after the initial operating period of 10 years should therefore not be out of the question. On the other hand, the role of the non-initiating municipality should not be underestimated, as the municipality also has its core tasks beyond the concept. A municipality should ensure that the project is well organized from an urban planning point of view, ensuring the environmental and social qualities in neighborhoods. The qualitative and quantitative aspects of the middle segment rental housing are also not incorporated into the concept, meaning that these aspects are able to differ and should be made project specific. However, a thing to keep in mind is that a minimum scope seems to apply for initiating a housing fund. All in all, the concept will effectively provide affordable middle segment rental housing for the right target group in the first 10 year period, goal achieved for now.</p>

05 | DISCUSSION

05 | Discussion

Before going to the conclusion, it is important to critically discuss the significance of the findings. This discussion appears to be more relevant than ever, given that a letter to the House of Representatives from the Minister for Housing and Spatial Planning was published on 9 December, officially announcing the regulation of the Dutch middle rental segment (de Jonge, 2022). This chapter therefore aims explain how the findings of the study relate to this letter and how they have moved the understanding towards the problem as described within the introduction. Moreover, it aims to compare and connect findings with previous research from the literature review.

05.1 | Findings

The introduction already outlined the importance of the middle rental segment, which led to an announcement of a rent regulation in this segment in the Coalition Agreement. In this announcement, however, little attention has been paid to the tension between affordability and profitability when developing middle segment rental housing. This tension is later acknowledged in the letter to the House of Representatives, but is described as *"a balance between improving housing costs for tenants on the one hand and ensuring that the supply of mid-market rent remains up to standard on the other"* (de Jonge, 2022). The minister uses four pillars to find the right balance:

1. Protection of the tenant; The regulation must ensure more reasonable rental prices, which must match the quality of the home.
2. Sufficient affordable rental housing; The size of the middle segment must be in proportion to the demand.
3. Landlords' willingness to invest; The supply of mid-rental homes must be increased through new construction. In order to offer sufficient space to investors, the free rental segment will continue to exist, so that a balanced mix of homes can be put on the market.
4. Stimulating sustainability; The regulation aims to stimulate sustainability, contributing to the energy transition and affordability for tenants.

The assumption of this research was that new and innovative concepts could help to deal with the tension/balance more effectively. The assumption appears to hold true, this will be further explained by discussing some of the expected and unexpected findings of the study and how they relate to the four described pillars.

First, the expected findings are briefly discussed, as they could logically be determined in advance. For example,

the uniqueness of new and innovative concepts often lies in the financial structure, which enables the affordability for tenants and the financial feasibility for investors. This finding is directly in line with pillars 1 and 3, as it increases affordability and willingness to invest. Because new and innovative concepts make the middle segment a more attractive investment opportunity, a balance between supply and demand will also be achieved more quickly, so it is also indirectly in line with pillar 2. This research also has shown that affordability is an ambiguous term, as it can vary geographically, qualitatively and from person to person. The government sees this ambiguity as a problem, because it creates difficulties in determining the rent level and the allocation of tenants. De Jonge (2022) therefore indicates that he wants to establish a legal definition for "middle rent" and "middle incomes", but the critical question remains whether it is possible and sensible to define these terms on a national level.

Then the unexpected findings, which provide new underlying insights into the problem. For example, it was not anticipated that temporary middle segment rental housing could be part of the solution. Temporary homes with a modular and circular nature could help to respond to urgent demands, connecting with pillars 2 and 4. Also unexpected was the important role that private investors could play in the willingness to invest (pillar 3) in middle segment rental housing projects, as they often have lower return requirements than institutional investors. In that respect, there are also good opportunities for an investing tenant, however possibilities in this field are still underexplored and some policy should be developed in order to protect pillar 1; safeguarding tenant rights and benefits. Regarding pillar 4, the stimulation of sustainability seems to focus mainly on the existing stock, given that the studied new and innovative concepts all fully comply with the sustainability standards, or even add more.

Remarkably enough, the letter to the House of Representatives still fails to name a number of things regarding the rent regulation. For example, municipalities will be held partly responsible for the implementation, but it has been established that many municipalities are already struggling with capacity shortages. In addition, it is important that the introduction of the regulation does not become a time-consuming process for landlords, as current procedures are already bureaucratic and take a long time. Also little is suggested about the required new construction production, a good option according to this research is to stimulate new and innovative concepts in which market parties, housing associations and municipalities work together. Before starting a project it becomes increasingly important to take legal preconditions into account, as it might hamper or accelerate the development process.

05.2 | Previous research

The literature review from chapter 2 has shown that there is already a lot of previous research conducted. This section will discuss the comparability from some of the main findings of this study with the findings from the literature review.

Section 2.1 describes how the national government sees institutional investors as the most valuable link in the financing of new housing construction. However, this assumption is partly disproved in this study, by showing that there is also an important role for private investors.

This research is in line with the literature of section 2.2, in which van Gijzel (2018) describes middle segment rental housing as the turntable in the housing market with transitional flows and accessibility as important additional themes. Czischke and van Bortel (2018) also show that the definition of middle income differs geographically.

This study is consistent with four of the seven target groups mentioned in section 2.3, namely: the elderly (65+) who do not want to take care of maintenance; households that are not eligible for social housing, but are not able to buy; older people who want to sell their owner-occupied home in order to free up capital; households that currently still live in social housing, but would like to move on to a housing that better suits their housing needs.

The case of Rabo SmartBuilds stated that collaborations between market parties and housing corporations create benefits in the field of mixed residential areas, construction procurement and the effective bundling of different capacities. This is somewhat in line with the benefits mentioned by Sustay (2021) in section 2.6, they described mixed residential areas as "broadening the target audience". The benefits of "obtaining more land positions" indirectly lead to cheaper construction procurement and bundling capacities is described as using "knowledge and innovation of the market".

This study, like the studies by Karekar (2021) and Barros (2020), shows that there is a shortage of capacity in many municipalities. Karekar assumes that municipalities should collaborate more with each other in order to increase capacity and Barros argues that municipalities should internally increase their skills and capability. This research agrees with both, but has the addition to make use of external capacities as well, through transparent collaborations with market parties.

06 | CONCLUSION

06 | Conclusion

The aim of this concluding chapter is to compare and asses the findings of all cases. The findings are established by conducting interviews with a total of 11 participants from 4 market parties and 3 municipalities. Similarities and differences are sought between the empirical findings and the existing literature collected by answering research sub-question 1 and 2 in the theoretical part. Conclusions will be drawn for research sub-questions 3 and 4, in order to answer the main research question: *To what extent are new and innovative concepts effective in realizing middle segment rental housing, which remain affordable for tenants and financially feasible for project initiators?*

6.1 | Development process

What development process is utilized within new and innovative concepts for realizing middle segment rental housing?

The answer to this first research sub-question seems to be ambiguous, as not one correct development process can be distinguished. The cases of Buurblok and AMST seem to make more use of the regular development process. The cases of Rabo SmartBuilds, OnsHuys and Woonfonds Rijswijk on the other hand, were looking for changes within this process.

In the field of time management, the various cases differ, where Rabo SmartBuilds makes smart use of accelerating regulations, Buurblok encounters many delaying regulations. Also, simply following the regular development process seems to be counterproductive in terms of time, as both AMST and Buurblok had the longest realization time. The area development of AMST took approximately 6 years, confirming the observation of Rabo SmartBuilds that the average area development process takes too long. Accelerating the process from initiative to realization is an important theme on the agenda of the national government, as discussed in section 2.5. Rabo SmartBuilds can theoretically have temporary rental homes available within 2 years through the Kruimelregeling and the Crisis and Recovery Act. OnsHuys changed the development process through their collective private commissioning approach, allowing them to accelerate the process by already allocating the rental properties in advance. Woonfonds Rijswijk also dared to apply the residential fund concept to an existing project, enabling rental properties to be realized relatively quickly.

The capacity seems to determine a lot on the quantitative impact a concept is able to make. For example, OnsHuys has difficulty dedicating sufficient capacity to its concept, which means that they are only able to apply it on a small scale. Rabo SmartBuilds noticed that many municipalities

are also struggling with their limited capacity. This seems to align with the recommendation of Barros (2020) in section 2.6, stating that municipalities should aim to increase their skills and capability. It also aligns with a statement of Buiting (2021) in section 2.8.10, which also provided a solution on how municipalities could increase their capacity; attracting capability offered by other market parties. Again this seems confirmable, as the municipality of Rijswijk requested external capacity from Dura Vermeer and VSN, meanwhile Rabo SmartBuilds does this from the supplier’s side, offering its capacity to municipalities and housing associations. Three advantages can be achieved when a market party collaborates with a housing association; mixed residential areas, less expensive construction procurement and effectively bundling the different capacities. This type of win-win partnerships should be pursued more often, as housing associations are expected to take up a larger role in the middle rental segment after the abolition of the landlord levy. Buurblok already dedicates its capabilities to this type of collaborations by realizing homes for housing associations through a lease construction. Figure 6.1 provides an overview of the capacity assessment for each case, outcomes being assessed as good, average or bad.

Three different areas can be distinguished with regard to innovation in middle segment rental housing concepts; the construction method, financial structure and positioning. Innovative construction methods have been applied at Rabo SmartBuilds and Buurblok. Both use prefabricated homes, which are modular, circular and very sustainable. The financial structure is unique for all concepts, they all do something to make the rent affordable. An overarching tool is to settle for less return, as Rabo SmartBuilds and Woonfonds Rijswijk do. Innovative solutions come in the form of bond loans from OnsHuys, operational lease contracts from Buurblok and a commercial plinth at AMST. The positioning of Rabo SmartBuilds is unique, as they take on all roles in the development process, except for the role of the contractor. The active and initiating positioning of the municipality at Woonfonds Rijswijk is also something new.

In general it can be said that it does not necessarily matter what kind of development process is utilized for realizing middle segment rental housing, but that it is important that it is realized in a sufficiently fast and feasible way.

Concept	Capacity
Rabo SmartBuilds	Good
OnsHuys	Average
Buurblok	Good
AMST	Good
Woonfonds Rijswijk	Good

Figure 6.1: Assessment of capacity for each concept

6.2 | Financial feasibility

What is the financial feasibility of new and innovative concepts for realizing middle segment rental housing?

Each concept has carefully considered the financial feasibility, as this is the most difficult aspect in a business case for realizing middle segment rental homes. Before this research sub-question can be answered, a number of salient points will be discussed.

First of all, it is noticeable that a bank is involved in financing all concepts. That in itself is not surprising, but it is striking that Rabobank is involved in all concepts. Rabobank is therefore a very important party in pursuing innovation in the construction industry. The dominant role of Rabobank was already established earlier in the OnsHuys case. However, this case also illustrated well what the disadvantages of an interfering bank can be. The question is therefore whether it is desirable for one party to have this dominant position. For now, it is advisable to approach Rabobank for the support of innovative concepts in the middle rental segment. However, other banks should be encouraged to do more in this area as well, so that there is more competition in the field of financing these kind of concepts.

Second, OnsHuys and Woonfonds Rijswijk use private investors in addition to financing from Rabobank. Private investors are an interesting financing method, as they often look for low-risk investments, that offer a higher return than their bank. Private investors are therefore interesting partners in order to feasibly finance mid-rental projects. At OnsHuys, the tenant is also a private investor through a bond loan, which has an interesting interaction, because a common interest now arises in the rental property. In other words, the tenant takes better care of the home, resulting in less risk for the bank, enabling to provide a loan with a lower interest rate. Several concepts could make use of this reasoning, as tenants often have a small starting capital available for buying a future owner-occupied home. Woonfonds Rijswijk allows private investors to participate for 75% in the fund by selling shares. The disadvantage of this is that the municipality has lost a lot of control due to this construction, as the majority decides what happens to the middle segment rental homes after the initial operating period of 10 years.

The third aspect is land prices, almost every market party has stated that these are getting higher and higher. Nevertheless, municipalities often cannot financially afford to negotiate about land prices, or are not allowed to do so because of a fixed land price policy. This creates a tendency to realize middle segment rental housing outside of urbanized areas, which seems to correspond with the recommendations of Karekar (2021). Four of the five concepts are active in more rural areas, with only AMST being a huge outlier. It is therefore becoming

increasingly important that municipalities also develop a land price policy for the mid-rental segment, in order to provide a financial incentive to market parties, just like the municipality of Leeuwarden and Amsterdam. If a municipality really cannot afford it financially, the housing fund structure of Woonfonds Rijswijk seems to be a good tool to achieve the same objectives in the middle rental segment, as the municipality still gets a comparable income over the long term from the housing fund.

Fourth, most of the risks of the concepts lie in legislations and regulations. It is therefore advisable to conduct sufficient research into all legal and fiscal risks in advance. If the concept involves a municipality or housing association, research will also have to be done into governance risks. To ensure that a government agency does not cause market disruption through the use of government resources, applicable at Woonfonds Rijswijk about the role of the municipality and at Buurblok concerning the SGEI and non-SGEI activities of housing association WoonFriesland.

Finally, to determine the financial success of the various concepts, the gross initial yield can be compared with each other, see figure 6.2. All concept percentages seem to fluctuate between 4% and 5%.

Concept	Gross initial yield
Rabo SmartBuilds	4%
OnsHuys	5 %
Buurblok	5 %
AMST	4 %
Woonfonds Rijswijk	4 %

Figure 6.2: Overview of gross initial yield of each concept

All in all, it can be stated that new and innovative concepts for the realization of middle segment rental housing are certainly financially feasible. However, due to rising land costs and construction costs, it is becoming more important to look at the business case in a different way, look at (partial) financing by private investors and negotiate with municipalities for a reduced land price for the development of middle segment rental housing.

6.3 | Affordability

How affordable is middle segment rental housing realized through new and innovative concepts for tenants?

The answer to this research sub-question is very important, as it will show if new and innovative concepts are able to provide affordable middle segment rental housing. As determined in section 2.1 the middle segment in this research is regarded as rents between the liberalization limit up to €1000.

The operating periods for all concepts are between 10 and 25 years. The longer, the better, of course, because the rental properties are thus guaranteed to remain available in the middle segment in the long term. Rabo SmartBuilds mainly looks for temporary locations and realizes homes from a period of approximately 10 years. OnsHuys has no sales policy, which means that the homes in principle remain permanently available in the middle segment. Buurblok has not been able to realize the promised social rental homes for a period of 15 years, due to the switch to middle segment homes, a supplementary payment must be made to the municipality. It is remarkable that housing associations are not allowed to enter into contractual agreements for periods longer than 10 years, which means that Buurblok has a gap of 5 years after the expiry of the operational lease contract. This could perhaps be solved by approaching the concept in a more traditional way, in which the housing association is the owner and commissions the development of the middle segment rental homes to Buurblok. AMST has an operating period of 25 years set by the municipality of Amsterdam. Woonfonds Rijswijk has secured the homes for 10 years in the middle rental segment, with an extension option of 5 years.

Except for the OnsHuys concept, all concepts target people who are not eligible for social rent, either because of the long waiting periods, or because their income is slightly too high. This seems to be the right target group, as social housing is increasingly becoming a residual tenure (Czischke and van Bortel, 2018). These concepts also offer room for a transitional flow from the social segment, which is very important, as discussed by van Gijzel (2018) in section 2.2. It is important that the middle rent concepts do not get in the way of social renting, but rather complement it by offering more quality, counteracting skewed housing and enhancing the transitional flows on the housing market. OnsHuys, on the other hand, focuses on the older target group. By offering attractive rental bungalows as an investment object, OnsHuys wants to stimulate older empty nesters to sell their large owner-occupied home, which no longer meets their requirements. This concept creates a transitional flow from the owner-occupied segment to the rental segment and counteracts further blockages in the housing market due to aging. All of the discussed target groups

match with the literature of van Gijzel (2018) from section 2.3.

An overview of the affordability of each concept can be seen in figure 6.3. It's good to see that four concepts are still in the middle rental segment, below a rent of €1000. However, it is remarkable that OnsHuys exceeds the limit of €1000 and decided to increase it by 25%. The concept therefore seems to place itself outside the mid-rental segment. Nevertheless, the square meter price is not higher than at Rabo SmartBuilds and AMST. In addition, tenants receive interest on their invested amount of the bond loan, which further reduces the monthly costs. It could be argued that the middle rental segment cannot simply be defined as homes with a monthly rent of €1000, as this may give a distorted view. The same applies to the "winner" Buurblok, since tenants within this concept still save more on energy and mobility costs.

Concept	± Rent	± m ²	± €/m ²
Rabo SmartBuilds	≤ €1000,-	50-85m ²	€13/m ²
OnsHuys	≤ €1250	95m ²	€13/m ²
Buurblok	€935	100m ²	€9/m ²
AMST	€1000	80m ²	€13/m ²
Woonfonds Rijswijk	≤ €1000	70-110m ²	€11/m ²

Figure 6.3: Overview of average rent, square meters, square meter price

Furthermore, the middle rental segment seems to be related to geographical characteristics, the middle segment in the countryside is different from the middle segment in the city. A more relevant question, however, is whether affordability also differs geographically, which does not necessarily seem to be the case.

To sum up, new and innovative concepts are certainly capable of realizing affordable mid-segment rental housing. It is important that operating periods are extended as far as possible in order to guarantee long-term affordability. Affordable middle segment rental homes also play an important role in complementing the housing market. Affordability is an ambiguous term, the final rent per square meter seems to be a better means than a fixed monthly rent of €1000.

6.4 | Qualitative aspects

What are the qualitative aspects of middle segment rental housing realized through new and innovative concepts?

This research sub-question is of importance as it determines if new and innovative concepts are still able to provide good quality middle segment rental housing. The quality will be subjected to the criteria of sustainability, social cohesion and delivered value.

In general, it was noted that many concepts ensured that the middle segment rental homes just comply with the Building Decree, in order to get the required permits. This is due to the fact that current sustainability standards in the construction industry are already very high, as a result of which no financial resources are deployed to increase sustainability further. The only standardized addition seems to be the implementation of solar panels. Rabo SmartBuilds is making good progress in the field of modularity and circularity, which can also be seen as sustainable aspects. However, the only concept that seems to go all the way is Buurblok. This concept is clearly the most future-proof, offering a complete package of circular homes, sustainable energy and shared mobility. By including the innovative energy system and shared electric cars, Buurblok contributes to solutions for social problems such as the energy transition and the current energy crisis. This further reduces energy costs for tenants. Buurblok's assertion that the tenants are financially very happy with the concept is therefore true, also in view of figure 6.3. The approach that Buurblok has chosen for this is the collaboration of a contractor with non-profit foundation Wocozon, a party that wants to accelerate the social energy transition. This appears to be an effective construction, which deserves more attention.

In the field of social cohesion, it often still seems financially complicated to realize communal spaces. Tenants sometimes do have this need, but as soon as it appears that these costs are settled in the rent, their opinion seems to change. Furthermore, social cohesion does not seem to be an aspect that is encapsulated in the concept as standard. Partly as a result of these developments, society seems to be becoming more individualized and anonymized. At Rabo SmartBuilds, there is room for communal areas in the business case, provided there is support for this from tenants. Buurblok stimulates indirect interaction within the neighborhood, by implementing shared cars and organizing an evaluation

every quarter. This evaluation also provides valuable feedback from the tenants. Furthermore, apartment complexes such as AMST often seem to have more need and possibilities for the realization of communal areas and roof gardens. Woonfonds Rijswijk focuses more on social cohesion at area level, for which the organization is attributed to the local municipality. The municipality of Rijswijk is pleased with the arrival of the middle segment rental homes, as these were still missing in the district. Middle incomes are seen as an asset to the neighborhood, because they ensure a better balance in the population structure, as also indicated by van Gijzel (2018) in section 2.2. The only concept in which social cohesion is integrated into the concept is OnsHuys. Because the development process is reversed in collective private commissioning, all your neighbors are known from the very start. By going through the entire process together, a bond is formed even before the first stone has been laid.

The delivered value is difficult to assess, because values are often subjective concepts. However, it can be stated objectively that each concept provides sufficient value, all rental properties are affordable, spacious and new construction, which guarantees a certain quality. In addition, it is often difficult for a tenant to influence the final rental property anyway. This makes OnsHuys more unique, by taking out a bond loan, the tenant gets a say in his own rental home, which means that the subjective value will be higher.

In short, all new and innovative concepts manage to achieve a sufficient quality in the middle segment rental homes in their own way, see for an overview of the qualitative aspects figure 6.4. Integrating sustainability and energy systems seems to be playing a more important future role. It is also important that many of the cases still work on the processing of social cohesion within the concept, as the individualization and anonymization of society seems to be increasing. In terms of the delivered values, subjective gains could be achieved by giving tenants more say in the rental property, whether or not in exchange for an investment.

Concept	Sustainability	Social cohesion	Value for money
Rabo SmartBuilds	Good	Average	Good
OnsHuys	Average	Good	Good
Buurblok	Good	Good	Good
AMST	Average	Good	Good
Woonfonds Rijswijk	Average	Average	Good

Figure 6.4: Overview of qualitative aspects for each concept

6.5 | Quantitative aspects

What are the quantitative aspects of middle segment rental housing realized through new and innovative concepts?

This last concept related research sub-question aims to show the impact a concept is able to make in terms of its quantity. Scalability and reproducibility of the concepts are important criteria here. In addition, statistics are examined about the impact the concept has already achieved or wants to achieve in terms of rental properties realized.

The scalability of Rabo SmartBuilds and Buurblok are both good due to the use of prefabricated circular housing elements, which means that homes are reusable and movable. However, Rabo SmartBuilds is less flexible, because it is looking for a minimum size of 100 homes for its pilot projects. In a later phase, they could also operate on a smaller scale. Buurblok is more flexible and can start realizing from as many as 10 homes, but preference is given to larger projects, as these are more financially and technically feasible. Projects like AMST also require a minimum scale for financial viability, the minimal size was not specified. The minimum scale at Woonfonds Rijswijk was estimated at 40 homes, from this limit it is feasible to set up a housing fund. It is good to note that no concept has a maximum scale (figure 6.5), so every concept has the opportunity to make an impact. There also seems to be no connection between quantity and the delivered quality, rather there seems to be a connection between quantity and capacity. The capacity of a party determines the impact it can make on a larger scale. For example, due to its extensive capacity, Rabo SmartBuilds is able to realize more homes than the smaller OnsHuys. OnsHuys would need more capacity to make a more quantitative impact on the housing market, as the concept seems to be upscalable.

The reproducibility of the concepts is important to determine as it shows the applicability of a concept to another location, so a greater impact can be achieved. The reproducibility of the concepts is expressed by good, average or bad, see figure 6.5. Rabo SmartBuilds and Buurblok are again similar in this regard, because they use a comparable prefabricated building form, which is very flexible, making the homes easily reproducible. OnsHuys has an average reproducibility due to the more complex financial structure and lack of proof of concept on a larger

scale. AMST seems to be easily reproducible, given that almost every other location is simpler than Amsterdam, but the commercial plinth as a financial carrier will probably have to be handled differently. The reproducibility of Woonfonds Rijswijk is also more difficult, because it requires a lot of preliminary research. A municipality has to deal very carefully with legal and fiscal responsibilities and can afford little risk, it is key that municipalities inform each other as much as possible in these areas in order to avoid unnecessary and comparable investigations. In addition, reliable market partners are required to help realize the middle segment rental homes and for the creation and management of the housing fund.

For the time being, AMST is still in first place with the number of realized homes. OnsHuys ends up in second place with far fewer homes, see figure 6.5. However, it is to be expected that OnsHuys will lag far behind in the long term, if no additional capacity is created. AMST will also lag behind in the long term, as this project is finished after its completion. The biggest long-term contender is clearly Rabo SmartBuilds, with 600 to 700 homes on the agenda for next year. Over a period of 10 years, the objective is even to build 12.000 middle segment rental homes. The 100 mid-segment rental homes from Woonfonds Rijswijk can also be expected next year. After a thorough evaluation by the municipality, it will be decided whether there will be more future projects for the housing fund. Buurblok also wants to make more impact and is currently looking for new land positions and partnerships with housing associations.

The advantage of a concept in general is that it seems to have no scale, so all new and innovative concepts can be scaled up. However, there is often also a minimum scale required for the financial feasibility of a project. A party's capacity determines the quantitative impact a concept is able to make on the housing market. Furthermore, modular circularity not only seems to have the advantage of sustainability, but it also benefits reproducibility of homes in different environments due to its flexibility. In conclusion, all new and innovative concepts have sufficient quantitative aspects for the realization of middle segment rental housing.

Concept	Maximum scale	Minimum scale	Reproducibility	Homes realized	Homes planned
Rabo SmartBuilds	No	100	Good	0	600-700
OnsHuys	No	No	Average	± 21	Unknown
Buurblok	No	10	Good	10	Unknown
AMST	No	Yes	Good	198	0
Woonfonds Rijswijk	No	± 40	Average	0	100

Figure 6.5: Overview of quantitative aspects for each concept

6.6 | Government

What role does the government have within new and innovative concepts for realizing middle segment rental housing?

This governmental research sub-question was implemented to determine the government's position in relation to the effectivity of the new and innovative concept for realizing middle segment rental housing. As established in section 2.7 there seems to be a movement of legislative power to the local level. In that regard, mainly the role of a local municipality is important to identify, in order to determine the effectivity of the concept in other municipalities.

At Rabo SmartBuilds, AMST and Woonfonds Rijswijk the municipality is actively involved in the development process of the middle segment rental homes. The municipality is seen as a partner in the Rabo SmartBuilds concept, as a result of which it is involved in the decision-making process. The business case is made transparent on the basis of various dials (figure 4.3) and agreements are made about the leasehold period and target groups. At AMST, the municipality of Amsterdam initiates a project by issuing a tender. Because a municipality must maintain a level playing field in tenders and is bound to their land policy, it is not possible to negotiate with market parties. This leaves the municipality of Amsterdam therefore stuck in a neutral position, so the critical success factor of Karekar (2021), discussed in section 2.6, for allowing flexibility during negotiations and regulations does not seem to hold in tenders. This is an important finding given the increased prominence of governmental tenders due to the Didam Arrest from 2021. The municipality enters into a contractual relationship with the winner of the tender, in which reliability regarding the agreements made plays an important role. The municipality of Rijswijk itself took an active role with Woonfonds Rijswijk by setting up a housing fund. It has made agreements with a contractor about the sale of the land and the construction of mid-segment rental homes. In addition, it has made agreements with the housing fund for a period of 10 years about the allocation criteria and the maximum rent.

In the OnsHuys en Buurblok concept, the government has a less active role and facilitates by carrying out its core tasks, such as providing land positions and issuing permits. The municipality of Leeuwarden chose Buurblok because of good lobbying by a cooperating housing association. That seems to shortchange Buurblok, since there are better reasons to opt for this concept. The municipality had agreed with Buurblok to realize social rental homes for a period of 15 years, which ultimately failed due to legislation, so a supplementary payment for the land had to take place.

The government can use legislation and regulations to direct the actions of market parties in the housing market. Some legislations and regulations have a restrictive effect, some have a stimulating effect. It is important that an initiating market party has insight into which legislations and regulations are applicable to the concept, in order to make smart use of incentivizing government instruments and to avoid unpleasant surprises. Rabo SmartBuilds and Woonfonds Rijswijk are two concepts that approach this correctly. Rabo SmartBuilds makes clever use of accelerating legislation, such as the Kruimelregeling and the Crisis and Recovery Act. The Crisis and Recovery Act in particular is still a long bureaucratic process, so the request to the national government is to focus on acceleration and simplification when establishing the Environmental Act. Woonfonds Rijswijk also did their homework and had research carried out by three different agencies regarding the legal and fiscal preconditions of a governmental agency intervening in a market situation. The municipality of Rijswijk was ultimately able to legitimize the concept because the market itself did not actively tackle affordable housing. The municipality also noticed a turnaround at the national and regional government, where they would have previously rejected the concept, they now also support the concept.

On the other hand, OnsHuys, Buurblok and AMST seem to be more troubled by legislations and regulations. OnsHuys mainly had to deal with the Authority Financial Markets (AFM). AMST especially had difficulty with the regulations laid down in the tender criteria by the municipality of Amsterdam. However, Buurblok has experienced the most problems regarding obstructive legislations and regulations, which have led to delays and financial difficulties. The involved housing association WoonFriesland is also experiencing problems with legislations because, like municipalities, they are not allowed to use governmental resources in market situations. This is allowed for their social SGEI housing, but this is not allowed for their commercial non-SGEI middle segment rental properties, they must therefore have a separate administrative entity.

During the research, a small side step was taken by asking interviewees what the effect would be of a regulation in the middle rental segment on their concept, as also discussed in section 2.7. In general it can be concluded that the new and innovative concepts are not concerned about a rent regulation, as all of them seem to offer sufficient quality and do not strive for maximum returns. Most would therefore even welcome it, as it offers opportunities in the field of rent subsidy. However, it appears that Minister de Jonge should have thought more carefully about making this somewhat vague statement, without thinking about the consequences. It has resulted in an abrupt stop at many rental projects, some shifting

the focus to the development of owner-occupied housing, the initial statement has therefore had a somewhat counterproductive effect, as indicated in the cases of OnsHuys, Buurblok and AMST.

The national government in particular has an important role in creating incentivizing legislation for the realization of housing projects. At a local level, municipalities are able to make use of these legislations. The Kruimelregeling and the Crisis and Recovery Act are designed to provide accelerated procedures, stimulating projects to start faster. Rabo SmartBuilds makes clever use of this, as time counts a lot with the development of temporary rental housing. The Housing Ordinance, on the other hand, enables municipalities to give priority to the rental homes for certain target groups. The municipality of Amsterdam implemented a Housing Ordinance at AMST, giving priority to the lower income groups. The AMST tender appears to stimulate resource efficiency among market parties. Tendering seems to enforce financial strategies that make the business case the most feasible. It is therefore important that a municipality assesses the quality of a submission in relation to final rent prices. This seems to be an addition to the conclusion of Baros (2020), in which municipalities are advised to focus solely on quality in tenders. In addition, market parties would like to see municipalities make a reduced land price policy for middle segment rental housing, as it also exists for social rental housing. This policy will have a stimulating effect on the development of mid-segment rental housing. If a market party wants to make use of this separate land price policy, it is important that the municipality sets conditions for this. Agree to clear and long operating terms and use a Housing Ordinance to enforce the right target group. Next, Woonfonds Rijkswijk aims to stimulate market parties by showing that developing middle segment rental housing is financially feasible. The municipality, in turn, is stimulated in this by the national and regional government. Which connects with Karekar's (2021) concluding recommendation to municipalities, that governments should support one another in terms of building capacity. Ending with a request from Buurblok to the national government to regularly evaluate existing housing legislations on their effectiveness, as some do not seem to stimulate new innovations in the construction industry.

All in all, it can be concluded that the government plays an important role in regulating and stimulating middle segment rental housing concepts. Municipalities ensure that operating periods, maximum rents and target groups are agreed. Through legislation and regulations, the national government ensures that municipalities have the authority to make these agreements and are able to stimulate and further accelerate local developments.

6.7 | Effectivity of new and innovative concepts

To what extent are new and innovative concepts effective in realizing middle segment rental housing, which remain affordable for tenants and financially feasible for project initiators?

The main research question cannot be answered unequivocally, because effectiveness is difficult to measure, affordability is ambiguous and the financial feasibility is hard to compare. Nevertheless, an attempt has been made to measure the level of effectiveness of five new and innovative concepts along the lines of the development process, financial feasibility, affordability, qualitative and quantitative aspects.

The research has shown that new and innovative concepts with a specified development process are more effective in terms of their time management. In addition, all concepts offer a certain financial feasibility, with Rabobank having a dominant presence and more experimentations are carried out with alternative financing methods, such as private investors. Because the financial feasibility is increased by the new and innovative concepts, the middle segment rental housing remains affordable. Finally, the new and innovative concepts can effectively guarantee good qualitative and quantitative aspects in the development of middle segment rental housing, however more attention should be paid to social cohesion and having sufficient capacity.

As all the previous answers to every research sub-question confirm, new and innovative are to a very high extent effective in realizing middle segment rental housing. Each concept has a unique financial structure, which allows it to guarantee the affordability for tenants and the financial feasibility for project initiators. This way new and innovative concepts are able to lower the tension between affordability and profitability, making the rent regulation in the middle segment a realistic solution instead of an utopia, referring back to the discussion about the citation from Coalition Agreement in the introduction. Moreover, some concepts offer additional solutions for other larger social challenges, such as the energy transition, skewed housing and an aging population. In addition to the concept itself, the important role of the government must also be acknowledged, which influences all developments in the housing management field by means of steering legislations and regulations.

Of course, there is room for improvement in many concepts, both for market parties and governmental parties. The following chapter therefore makes a number of general recommendations based on the lessons learned, aiming to promote the further realization of middle segment rental housing through new and innovative concepts.

07 | RECOMMENDATIONS

07 | Recommendations

The aim of this sixth chapter is to answer the research sub-questions 5.1 and 5.2, by providing recommendations for market parties and governmental parties on how to improve the effective realization of middle segment rental housing. Recommendations are based on the conclusion of the empirical findings, aiming to establish generalized success factors and key performance indicators. The chapter ends with recommendations for further research.

7.1 | Recommendations for market

What are the recommendations for market parties to effectively realize middle segment rental housing through new and innovative concepts?

The recommendations for market parties to effectively realize middle segment rental housing are:

7.1.1 Development process

1. Consider carefully which development process best suits the concept. Try to avoid simply following the standard permit procedures, as this bureaucratic process takes too long. Spend enough time in advance to explore stimulating legislations and regulations, which can often speed up the development process and sometimes offer financial support.
2. When looking for new and innovative concepts for the realization of middle segment rental housing, look mainly for unique changes in the construction method, financial structure and/or positioning. Innovativeness often takes place within one of these fields, especially the financial structure is often unique, as it has to enable the affordable rent.

7.1.2 Financial feasibility

3. When financing a new and innovative concept, it is advisable to approach Rabobank, as it has a dominant position in financing progressive concepts. A request to other banks is to compete with Rabobank more in this area.
4. Discover whether there is a role for private investors in the concept regarding (partial) financing. Private investors are often satisfied with a lower return than institutional investors, making it easier to achieve a lower rent. In addition, it is interesting to investigate whether the tenant can make an investment, leading to a tenant who will take better care of the rental property, resulting in benefits on the bank loan in terms of interest. When working with private investors take the AFM into account.
5. Aim for a gross initial yield between 4% and 5% in the business case for middle segment rental housing.

7.1.3 Affordability

6. Focus on complementing the social segment. Make the quality of middle segment rental housing more attractive than social housing, in order to initiate transitional flows and combat skewed housing.
7. Focus on creating qualitatively and financially attractive middle segment rental homes for the 65+ target group. As a result, they are often more inclined to sell their (too large) owner-occupied home. This will lead to a different transitional flow, which will have to counteract further congestion in the housing market due to the aging population.
8. Develop middle segment homes with a monthly rent of less than €1000, with a price of approximately €12 per square meter as a guideline. It is possible to deviate slightly from this guideline by offering other financial benefits to tenants, for example in the form of energy and mobility concepts.

7.1.4 Qualitative aspects

9. When realizing middle segment rental housing, look for cooperation with parties that organize energy concepts, in order to achieve more value in the field of sustainability.
10. The social cohesion within concepts for the realization of middle segment rental housing can be promoted in a number of ways. The best way to build social cohesion into the concept is to reverse the development process, in the form of collective private commissioning. The second is the creation of communal areas, but this often only seems financially feasible for the development of apartment buildings. The third is the implementation of shared cars. The last is doing an evaluation with the neighborhood, from which also important feedback can be received to improve the concept.

7.1.5 Quantitative aspects

11. As capacity has a direct link with the quantitative impact of the concept, try to share and bundle capacity by collaborating with external parties. Housing associations are expected to play a greater role in the middle rental segment, as they have more financial resources at their disposal due to the abolition of the landlord levy. Look for more partnerships with housing associations to achieve benefits in the field of mixed neighborhoods and less expensive construction procurement.
12. Pursue modular circularity in the construction of the middle segment rental homes, in addition to sustainability, this is accompanied by flexibility and thus easier reproducibility at other locations.

7.2 | Recommendations for government

What are the recommendations for governmental parties to effectively realize middle segment rental housing through new and innovative concepts?

The recommendations for governmental parties to effectively realize middle segment rental housing are:

7.2.1 Agreements

1. Make clear agreements with market parties about the operating period, aim for a term of at least 10 years, but aim for as long as possible in order to secure the rental properties in the middle segment in the long term.
2. Make clear agreements with market parties about the maximum monthly rent price and annual rent increases.
3. Make clear agreements with market parties about the intended target group and allocation criteria, which could also be enforced through the Housing Ordinance.
4. In case of a tender, record all of the above in the tender criteria.

7.2.2 Legislation and regulation

5. Municipalities must also be aware of legislations and regulations that support the realization of middle segment rental homes, so that they are familiar with the procedures and can better inform market parties, which encourages further collaboration.
6. If a municipality or housing association wants to take an initiating and active role in the development of middle segment rental housing, it is important to have sufficient research carried out with regard to the legislations that exist regarding the effect of government resources and market disruption. The initiating and active role can be legitimized and substantiated by demonstrating that the market does not take an active attitude towards the development of middle segment rental housing. If the financial feasibility is insufficient, a municipality could use a housing fund as a tool to guarantee their income on the long term.
7. The advice to the national government is to focus primarily on accelerated and simplified procedures when setting up the Environmental Act.
8. The implementation of a rent regulation in the middle rental segment does not appear to be a problem for new and innovative concepts for realizing middle segment rental housing. The concepts could even be regarded as precursors to the regulation, as they already achieve a sufficient price-quality ratio. Moreover, the regulation could further improve affordability of concepts through rent subsidy and implementation of a home valuation system.

7.2.3 Stimulation

9. Make active use of legislations and regulations that stimulate acceleration in the development process, like the Kruimelregeling and the Crisis and Recovery Act.
10. Tenders are a good way to stimulate financial efficiency among market parties, however keep an eye on the rent price-quality ratio during tenders.
11. Develop a separate land price policy for middle segment rental housing in order to offer more financial incentives to market parties.
12. Do not request too many additional sustainability requirements for housing, as the current sustainability standards for new construction are already very high and expensive.
13. Dare to apply new and innovative concepts for middle segment rental housing to existing projects, as it saves a lot of time and provides a quick proof of concept.

7.3 | Recommendations for further research

For further research it would be useful to investigate even more new and innovative concept cases, in order to increase the reliability of the research results. An interesting addition could be interviewing tenants, in order to gain more insight into tenant satisfaction with regard to the concept. Furthermore, some concepts were still at the start of their pilot phase, which means that little to no middle segment rental homes have yet been realized in practice. Rabo SmartBuilds and Woonfonds Rijswijk are therefore certainly interesting to evaluate again. Moreover, the upscaling of the Buurblok concept could also be further investigated, because this concept seems to be the most future-proof.

The concept of an investing tenant also seems very interesting to investigate further, as it is a new and underexplored way of renting. OnsHuys has already set a good example by concluding bond loans with tenants. What other possibilities are there in this area, is there a demand for this, for which target groups is this interesting and what effect would it have? These are all underexplored questions that could make the development of middle segment rental housing more financially feasible and thus more attractive.

08 | REFLECTION

08 | Reflection

This final chapter reflects on the research by discussing the used research method. By elaborating on the validity of the research approach, more can be said about the credibility of the research results. Furthermore, reflecting on the research process is a suitable means for the researcher to self-reflect, by critically looking at strengths and areas for improvement.

The initial purpose of the research is still fully legitimized after conducting the research. Everyone seems to agree that the growing problems and shortages on the Dutch housing market are leading to a large middle income group falling between two stools. Both the literature study and the empirical research acknowledge the importance and shortage of middle segment rental housing.

After conducting the literature study, with good advice from the mentors, the research method of case studies was chosen. In retrospect, this still seems to be the correct method, because mainly qualitative data was required to assess the effectiveness of new and innovative concepts for realizing middle segment rental housing. Qualitative data was collected by conducting semi-structured interviews with initiating actors and, if possible, another involved party. The role of this other party, outside of the concept, should not be underestimated. Even though, an external party is not able to provide as much details about the concept as the initiating party, they are able to provide contextual details and, most importantly, a more objective perspective on the concept, which is important for the validity of the empirical findings.

One could argue how effective the semi-structured interview method was for obtaining the data, as some challenges were encountered during the case studies. It started with scheduling the interviews, which turned out to be more difficult than expected. Planning was especially difficult with municipalities, they were often difficult to reach and had full agendas. Here too, the lack of capacity of municipalities seems to be demonstrated again. Moreover, by choosing in-depth interviews, which last about 60 minutes and cover many topics, it takes a lot of time per interview to conduct and elaborate. The elaboration of the transcripts required by far the most time, so it may be advisable to outsource this to a third party, so it leaves more time for the researcher to conduct and analyze more interviews. However, having said that, elaborating transcripts also has an advantage in the analysis process, as the researcher becomes word for word aware of everything that has been said, which can be an important guideline for understanding the material and gaining new insights.

However, there is still satisfaction with regard to the chosen qualitative method, as it has led to interesting empirical findings. In addition, other methods do not seem to offer many solutions for the perceived challenges. Nevertheless, a focus group could have been an interesting addition, allowing the various interviewees to have an evaluative conversation, leading to more input and new insights. Due to the confidentiality of some of the new concepts and the limited time span of the research, some cases, actors and/or methods could unfortunately not be investigated further. From a critical point of view, ideally multiple perspectives are considered to increase the validity of the case studies. It should therefore be highlighted that data from the Rabo SmartBuilds and OnsHuys cases are collected only from an initiating supplier perspective, lowering the overall validity, as the interviewees have a positive bias towards the concept. The validity of the acquired interview data has been tried to maximize by having the case information checked by the interviewees. In addition, the cases of Rabo SmartBuilds and Woonfonds Rijswijk are solely approached from a theoretical perspective, as no middle segment rental homes have yet been realized in practice with the concepts.

To increase the comparability of the empirical findings, an iterative process was used, in which questions were ordered in an interview protocol. Similar questions were included in each interview protocol on the subjects that should indicate the effectiveness of the concept; the development process, financial feasibility, affordability, qualitative and quantitative aspects. Nonetheless, it is important that the researcher tries to preserve the semi-structured nature of the interview, so the interviewee is able to give input freely. At the same time, the researcher must also ensure that all questions are posed and actually answered within the scheduled time slot of the interview.

Despite the iterative interview process, it was still complicated to directly compare the cases in the conclusion. Apart from the “hard” numbers of financial feasibility (figure 6.2) and affordability (figure 6.3), it is difficult to compare the more “soft” elements of the development process, qualitative and quantitative aspects. Furthermore, it was difficult to connect with existing literary conclusions, given the limited amount of available literature on new and innovative concepts in the middle rental segment. An attempt has been made to look for differences and similarities between the conclusion and the success factors described in section 2.6. However, it is difficult to validate conclusions and recommendations of this specific research into the effectiveness of new and innovative concepts, with non-specific research that for example investigated the improvement of the development process (Karekar, 2021) and delivery (Barros, 2020) of middle segment rental housing.

The aforementioned confidentiality, time and literature, were the main limitations encountered during the conduct of the research. The confidentiality of some concepts made it difficult to get data on certain financial specifics and names from collaborators. Time also remains a difficult aspect for two reasons, one the research is limited to half an academic year, two the housing market is constantly changing, which means that data can quickly become outdated. Other limitations occurred during the case selection, as it was not easy to find new and innovative concepts that operate in the middle rental segment. An attempt was made to determine the novelty and innovativeness of various concepts through a quick scan of cases in section 2.9. However, more in-depth research seems to be required in order to determine these properties sufficiently. An important guideline during this process were the Sustay Award nominations, as they were selected for their success in the middle rental segment and judged by established people in the housing field. This may have excluded other new and innovative concepts, as all five selected cases were on the nomination list. There also seems to be a positive bias towards these established nominated cases, which has led to the selection of AMST, the winner of 2022. This bias has led to less critical scrutiny, because AMST later turns out to contain no new and innovative concept.

AMST might therefore not be the best selected case, however these type of occasions learn researchers an important lesson. In this particular case it shows the importance of a researcher proceeding in an objective manner and rely on own substantiated findings. The same lesson applies to the case of Buurblok, which was initially thought to be rather “gimmicky”. However, Buurblok has also made a great impression as a concept due to its innovative lease construction and its eye for sustainability. Moreover, some pre-assumed effects discussed in the theoretical part turn out to have little to no influence in hindsight, like many of the success factors (section 2.6) and the regulations for the existing built environment (section 2.7). All these events demonstrate the importance of an objective researcher who safeguards his neutral position and is thus not guided by preferences for cases, individuals, government or market parties.

Lastly, the research provided much additional knowledge, the researcher never knows everything, so it is important to always keep an open mind and to gather new knowledge to further extend the research. The guidance by two mentors was therefore indispensable, based on regular meetings, helpful feedback and their experience the research was steered in the right direction. The preface was written prior to the research, it ended with the goal to enlarge the understanding on the dynamics of the Dutch housing market. After writing this thesis, it can be confirmed that this has been achieved, many valuable

lessons have been learned from theory and practice. By conducting the empirical research, the literature gained more value, becoming more meaningful through the acquired practical knowledge.

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