

# Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences



## Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners ([Examencommissie-BK@tudelft.nl](mailto:Examencommissie-BK@tudelft.nl)), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information	
Name	Anne Koesen
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Studio		
Name / Theme	Management in the Built Environment	
Main mentor	Harry van der Heijden	Housing systems
Second mentor	Marietta Haffner	Housing institutions & Governance
Argumentation of choice of the studio	<p>Firstly, the housing shortage in the Netherlands is a current and enormous problem. I always have an interest in topics related to people and society. I think that it is meaningful to research a topic that is a current problem that should be solved. Therefore, it gives me motivation to really understand the problem and find a possible solution concerning the problem.</p> <p>Secondly, housing is a topic that all of us come across in live. A house is a basic need, and therefore every human needs to fulfill this need. Otherwise, people will not feel safe or get ill because of the lack of it. I like to work on a problem that has more meaning to human life as gaining profit does.</p> <p>Thirdly, in the internship I did last year I was working on a problem regarding office concepts. Therefore, I wanted to gain more knowledge of in housing as well. Thereby, I get a better understanding of where my interests lay for after graduation.</p>	

Graduation project	
Title of the graduation project	A place for all households in urban areas; The relation between housing preferences and housing affordability of middle-income households
Goal	
Location:	Randstad, the Netherlands
The posed problem,	Due to changed policies by the Dutch government and the government of the European Union (EU), it has become increasingly harder for middle-income households to access the housing market. These households do not qualify for social housing since their income is too high. At the same time, it is hard for them to access homeownership as a result of the flexibilisation of the labour market and the stricter regulations regarding gaining a mortgage. Therefore, middle-income households are depending on private renting (Francke, Harleman & Kosterman, 2016, p. 5; Vlak, van Middelkoop, Schilder & Eskinasi, 2017, P12.; Blok, 2018, p. 89; Gemeente Den Haag, 2019).

	<p>One can divide the Dutch rental housing market into two categories, namely housing owned by housing associations and housing owned by private investors or institutional investors. In the Netherlands, most rental housing is owned by housing associations (Kullberg &amp; Ras, 2018, p.9). Moreover, rental housing can be divided into two other categories, namely housing with monthly rent under and above the liberalisation limit. In 2018 the liberalisation limit was €710,68 per month (Rijksoverheid, n.d. b). In the Netherlands, most social housing is in ownership of housing associations (Kullberg &amp; Ras, 2018, p.9). Housing under the liberalisation limit owned by housing associations is not accessible for middle-income households.</p> <p>Due to the shortage of private rental housing in Randstad, rental prices have increased in the past years and is still rising (NVM, 2020 a). Because of rising rents (NVM, 2020 a; Pararius, 2020 a), while households' incomes are not rising to the same extent (CBS, 2018 a), middle-income households are effectively locked out of a large part of private rental housing in Randstad (Gemeente Den Haag, 2019 a; Nul20, 2020 a). Therefore, it becomes almost impossible for middle-income households to find suitable housing (Gemeente Den Haag, 2019; Haffner &amp; Elsinga, 2019; Van der Vegt, 2018).</p> <p>There are big differences between the housing markets in different regions of the Netherlands. Some markets are under high pressure while in other markets have a shrinking housing demand. In Randstad the tension is the highest on the housing market compared to other housing markets in the Netherlands; foremost in the four biggest cities: Amsterdam, Rotterdam, Utrecht and The Hague. Therefore, this research will be focussing on Randstad.</p> <p>Key workers are employees, such as doctors, teachers and police officers. These key workers are vital for society. Nowadays, more and more cities have a shortage of key workers (van der Vegt, 2018). Most key workers in urban areas depend on private renting when they earn a middle-income. In urban areas in the Netherlands, there are several initiatives to create housing for key workers. Meanwhile, households, including households with keyworkers, move from aforementioned cities towards other regions because of a lack of appropriate housing (CBS, 2019 a). Therefore, it is vital to maintain housing for all household types in these cities. To secure housing for all households in Randstad, the housing supply has to increase tremendously. Personal preferences of households and the availability of housing are guiding the mobility choices of households (Boumeester, 2004, p. 8). Therefore, new housing supply must be affordable for middle-income households and must match the housing preferences of middle-income households.</p>
<p>research questions and</p>	<p>Main question: How can the housing supply in urban areas in the Netherlands, which is affordable for middle-income households, be increased following their preferences?</p> <p>Sub-questions:</p> <p><b>Defining concepts</b></p> <ol style="list-style-type: none"> <li>1. How can housing preferences be defined?</li> <li>2. How can middle-income be defined?</li> <li>3. How can housing affordability be defined?</li> </ol> <p><b>The type of households and their preferences</b></p> <ol style="list-style-type: none"> <li>4. Which types of middle-income households can be distinguished?</li> <li>5. What housing preferences do the different subgroups have?</li> </ol> <p><b>The housing stock in Randstad</b></p>

	<p>6. What is the supply of private rental housing for middle-income households in urban areas in the Netherlands?</p> <p>7. What housing preferences, of middle-income households, are not sufficiently present in Randstad?</p> <p><b>Possible solutions</b></p> <p>8. What are the possibilities of different actors for the implementation of reasonable housing preferences of middle-income households concerning affordability in urban areas?</p>
<p>design assignment in which this result.</p>	<p><b>Goals and objectives</b></p> <p>The main objective of this research is to get an insight what housing preferences of middle-income households are affordable in the current housing market and what housing preferences of middle-income households could be realized in urban areas. Therefore, this research first needs to give an insight into the relation between housing preferences of middle-income households and housing affordability.</p> <p>Another objective of this research is to get an insight on what trade-offs are made during the trade-off process of middle-income households, who would like to live in a very strong urban area. The reason for this objective is that if one can understand what trade-offs middle-income households make, one can understand why they make certain decisions within the moving process.</p> <p>The goal of this research is to translate the outcomes of this research into usable insights for municipalities and organisations working in housing, regarding housing preferences of middle-income households given their ability to afford the preferred dwelling. Therefore, these parties become knowledgeable on how they can attract middle-income households to urban areas.</p> <p><b>Main deliverables</b></p> <p>The aim of this research is to understand how the supply of housing in urban areas in the Netherlands, for households with a middle-income can be increased, in accordance with the preferences of these households. To understand how this supply can be increased, it is important to get an understanding of the trade-off process of households, regarding housing preferences in relation to housing affordability.</p> <p>One of the main deliverables that is derived from the analysis of the dataset of WoON 2018. From is an overview of types of households with their main preferences and maximum payable rent per month. Furthermore, from this dataset a conclusion can be made on why people choose for certain housing and what trade-offs they make. The analysis that leads to that conclusion is the crosstab analysis between stated housing preferences and housing affordability and between revealed housing preferences and housing affordability.</p> <p>Another main delivery is a simplified overview of the supply of private rental housing in Randstad, within the possibilities of WoON 2018. The overview should contain frequencies of different housing types, monthly rental prices, characteristics of housing and the surroundings.</p> <p>A comparison between the supply and the preferences of the subgroups will be made. From the comparison an overview will be delivered on what is housing preferences of households with a middle-income are missing in Randstad. Thereafter, an overview will be made with the missing housing preferences.</p>

At last, a transcript will be made of the semi-structured interview. From these transcripts an overview can be made of possible municipal policies to cope with the housing preferences. Also, an overview on what housing preferences will be made on which housing preferences are applicable in the current housing market, which are not and why.

### Conceptual model

Housing affordability of a household is a result of the household income, non-housing expenses and the situation of the current housing market. The housing preferences of the household, together with the situation of the current housing market, determine the rental price of housing. Since the development of new construction and the subsequent development in the housing market is a time-consuming process, both policies on new construction and concepts on lowering costs of services in housing that are part of non-housing expenses need to be researched. Changing policies and concepts can result in affordability gain of housing until a certain level for middle-income households without changing their housing preferences.

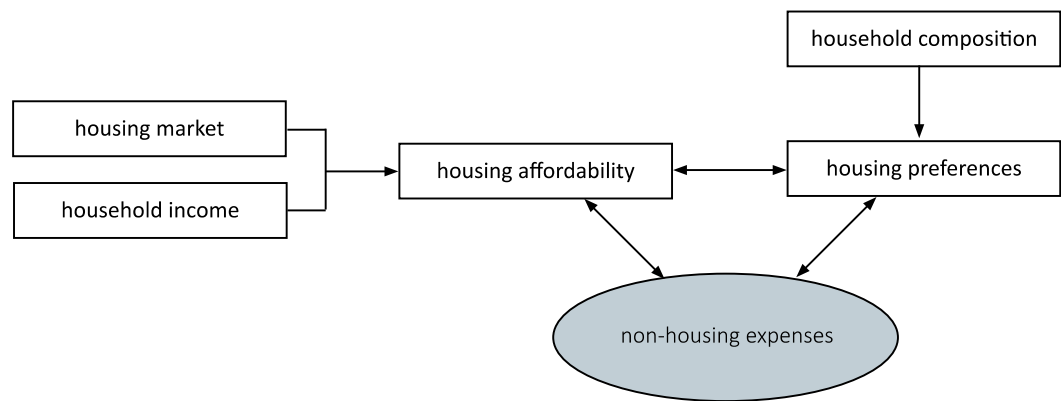


Figure 1: Conceptual model: the trade-off between non-housing expenses to gain housing affordability (own illustration)

## Process

### Method description

#### Type of study

This research will apply mixed methods. A mixed method research consists of quantitative and qualitative research (Bryman, 2016, p. 635). By using quantitative research, the social reality can be quantified. The qualitative research is useful to emphasis on how individuals interpret their social world (Bryman, 2016, p.32-33). For this research the dataset of WoON 2018 will be used, the data of this dataset is abstracted from a survey from people from the age of 18 and on in the Netherlands (Het Ministerie van Binnenlandse Zaken en Koninkrijkrelaties, 2019, p.19). Approximately 70.000 people joined this research.

For this research the embedded design of the mixed method research will be used. The quantitative data will be the main source of data for this research. Quantitative data will be used to understand the phenomenon discussed in this research better (Bryman, 2016, p.640). However, the quantitative data will be insufficient to answer the research question. Some subsidiary research questions will be addressed best by qualitative data. This regards sub-questions 9 and 10. The reason for this for question 9 is that the question searches for an explanation behind the given answers in the WoON 2018. For question 10 applies that the data that is needed for this question cannot be found in reports or datasets. Qualitative data is needed to understand why certain housing preferences can or cannot not be implemented in areas with a very strong degree of urbanity.

#### Methods and techniques

This research will have a cross-sectional design. The data in this research is collected through surveys. Cambridge Dictionary (2020) defines a survey as: "an examination of opinions, behaviour, etc., made by asking people questions". Through a survey, quantitative data can be collected, which can be used for a cross-sectional analysis (Bryman, 2016, p.53).

The quantitative data will be analysed to detect patterns of association between different variables (Bryman, 2016, p.53). The cross-sectional design will be used to find out what naturally goes in the world without manipulating it (Field, 2018, p.54), for a specific point in time. In this research, the stated (before moving) housing preferences and revealed (after moving) housing preferences will be examined. This cross-sectional design aims to find out if there is a relation between stated housing preferences and housing affordability and revealed housing preferences and housing affordability. If there is a relation between stated preferences and affordability, it would mean that the affordability has sufficiently been taking into account by households forming housing preferences. Furthermore, if there is a relation between revealed housing preferences and affordability, it would mean, for the variables where there is a relation between housing preferences and affordability, that the constraints of housing affordability form household's preferences. Now, this research takes the trade-off between housing and residential environment given the housing affordability regarding the household income into account.

Furthermore, for this research semi-structured interview method will be used. With this interview technique, the researcher can keep an open mind about what should be known, so that theories can emerge from the data (Bryman, 2016, p. 10). Semi-structured interviews are designed to encourage a conversation with the participants to give their frame of mind about the topic. The semi-structured interviews will be used for in-depth research on the given solutions for the in this researched mentioned problem.

### Literature and general practical preference

#### Housing preferences

Preference can be defined as "a greater liking for one alternative over another or others" (lexico.com, 2020). Each person has their preferences, and these preferences give direction to the behaviour of people

(Boumeester, 2004, p.8). The preferences of the household are translated into a subjective ideal image of housing (Boumeester, 2004, p.24). The ideal image of housing is the ideal housing situation for a specific condition of the household, regardless of the costs of housing. Most people have a long-term vision established for themselves; the preferences of these people are derived from this long-term vision (Boumeester, 2004, p.9). Society influences the preferences and behaviour of people. Long-term, personal preferences and behaviour of people will re-influence society (Boumeester, 2004, p.9). Therefore, the ideal image will be translated into an aspiration image. The aspiration image contains the ideal housing situation for the household, taking income and other constraints into account, within a long-term perspective (Boumeester, 2004, p.26). By going from the ideal image to the aspiration image, trade-offs are made.

Moving to other housing will bring the household a step closer towards the aspiration image (Boumeester, 2004, p.26). Beer and Faulkner (2011, p. 19) suggest that there is a strong correlation between lifecycle and type of housing. Life cycle can be defined as: "The series of changes in the life of an organism including reproduction" (Iecixo.com, 2020). In the past, there has been a strong relation between housing career and life cycle (Beer & Faulkner, 2011, p.20; Boumeester, 2004, p.11). Rossi (1955) states that: "The process by which families adjust their housing to the housing needs that are generated by shifts in the family composition that accompany lifecycle changes" (p.9). The research of De Groot, Mulder and Manting (2011, p.21) proves that the households who intended to move moved more often after a household composition change compared to households who did not have a composition change.

In the past decades, housing careers were not standard for all households. The housing career assumes a traditional path of growth. However, not all households have an upwards housing path. The shift of social perspectives changed the relation between the housing career and the life cycle (Beer & Faulkner, 2011, p.4). Some households have a housing path that goes up and down (Beer & Faulkner, 2011, p.21; Badcock & Beer, 2000, p.90). Therefore, one should talk about housing pathways, as for the movement through the housing market, instead of housing career. Housing pathways can be defined as "patterns of interactions (practices) concerning house and home over time and space" (Clapham, 2002, p.63).

Housing is a basic need in the first place, but for many households, it is also a reflection of social, economic and other aspirations (Beer & Faulkner, 2011, p.2). Furthermore, housing is important for the search for a lifestyle. Housing is more a means for self-fulfilment rather than the end of a housing career (Beer & Faulkner, 2011, p.27-28). Housing can be seen more as a luxury consumption; this is one of the reasons that the relation between housing and life cycle has changed as well (Beer & Faulkner, 2011, p.17). However, households are limited in the freedom of choice for housing. The main constraint that limits the freedom of choice in housing is the income of the household (Boumeester, 2004, p.23). Another constraint is the limited diversity of types of housing in urban areas, causing a lack of supply in urban areas for all middle-income households (Van Middelkoop & Schilder, 2004, p.12). According to Haffner and Elsinga (2019), there is no freedom of choice for middle-income households in urban areas in the Netherlands. It is not certain if households have a say over the fulfilment of their life wishes concerning the lack of a say in fulfilment of their housing needs and wishes (Schilder et al., 2020, p.4,15). Meanwhile, pleasant living is one of the most important things for people in their life. Therefore, to comply with the preferences for the housing of a household within the certain housing market, trade-offs are necessary to gain housing affordability.

These constraints of the housing market cause a difference between stated and revealed housing preferences of middle-income households. The stated housing preferences are the housing preferences when there is an existing intention to move, and the revealed housing preferences are the preferences of actual moving (De Groot et al., 2011, p.2).

#### **Household income of middle-income households**

For households with an income until one-and-a-half or two times the median income (in Dutch: modaal inkomen) it is the most difficult to find housing in the Netherlands (Julen, 2020; Ten Teije, 2019).

Households with an income above two times the median income do have reasonable access to homeownership. For urban areas, the accessibility to homeownership is more difficult, but still possible for households with an income above two times the median income (Ten Teije, 2019). Therefore, the group with an income beneath two times the median income depends on private rental housing. However, because of the housing shortage, these households have difficulties in getting private rental housing as well (Gemeente Den Haag, 2019 a; Nul20, 2020 a). Middle-income households are essential for a balanced population in the city (Van Gijzel, 2018, p.5). The variation of households ensures support for different amenities in the city. Furthermore, a variety of households in the city offers possible candidates for vacancies.

A statistical definition of middle-income cannot be found in the statistical literature. Van Gijzel (2018, p.9) defined the middle-income as an income between €34.000 and €52.500. These numbers are subtracted from that year's limit for social housing and one-and-a-half times the median income.

This research will make use of the numbers of 2018<sup>1</sup>. Middle-income households cannot be eligible for social housing. The income limit for social housing in 2018 was below €36.798 per year with an expansion to €41.056 per year (Schram, 2017). Housing associations are allowed to rent ten per cent of the housing stock to households with an income between €36.789 and €41.056 (Rijksoverheid, n.d. a). Therefore, the middle-income starts at €36.789 for the year 2018.

The median income can define the upper limit of the middle-income. According to Centraal Planbureau (2019a), the median income is defined as seventy-nine per cent of the average income of a working year. The median income is the most common in a country. The middle-income should be around the median income. The median income of the Netherlands was €34.500 in 2018 (Centraal Planbureau, 2019b). As already mentioned, for households with an income until one-and-a-half times the median income, it is the most difficult to find housing. Therefore one-and-a-half times the median income will be used to define the upper limit of the middle-income. Thereby, the upper limit of the middle-income for the year 2018 will be €51.750.

To conclude, middle-income households are defined as households with an income between approximately €36.789 and €51.750 for the year 2018.

### **Housing affordability**

According to Stone (2006, p.151), housing affordability is the challenge of balancing the cost of housing and other expenditures within the constraints of the income of a household. If the costs for housing are higher to rent a dwelling following the household's preferences, than the rent that a household can afford in a housing market area, then the household has an affordability problem (Stone, 2006, p.154). A lack of affordability in a housing market causes households to move to a not-preferred housing market that is affordable (Haffner & Hulse, 2019, p.11-13).

In the Netherlands, the rent-to-income ratio (in Dutch: huurquote) is used to determine the affordability of rental housing (Haffner & Heylen, 2010, p.48). According to the rule of thumb, housing is considered not affordable, if the rent-to-income ratio is above thirty per cent of the income before taxes, costs on energy not included (Haffer & Heylen, 2010, p.48). There is a side-note to the rent-to-income ratio; the norm is not based on research and is set over a century ago. Also, the rent-to-income ratio does not take housing composition and consumption into account. Therefore, the rent-to-income ratio can be misleading when looking at individual households (Stone, 2006, p.157). Thus, the rent-to-income ratio is not a preferred method for research.

Since affordability has a relation to the household's preferences, it cannot be set separate from personal housing standards (Stone, 2006, p.155). Therefore, the affordability problem of housing should not be based on actual housing cost in relation to income, but what it would cost to obtain housing of a basic



standard within a housing market with the household's income (Lerman & Reeder, 1987; Thalman, 1999; 2003; Stone, 2006, p.155). The basic standard can be used as a minimum standard that should be affordable for households. This basic standard can be compared with the housing preferences to get an insight into how this standard relates to the housing preferences.

A basic standard of housing in the Netherlands cannot be found. Although a basic standard of housing cannot be found, Eurostat (2014) has set an overcrowding rate from which a basic standard can be derived. The overcrowding rate defines the household to be overcrowded if the household does not have a minimum number of rooms as the following:

- One living room;
- One (couples) bedroom;
- One room for every single person above 18 years;
- One room for a pair of single persons with the same gender with age between 12 and 17 years old;
- One room for every single person from the other gender with age between 12 and 17 years old;
- One room per pair of children under 12 years old.

The overcrowding rate can be translated to a future proof basic standard for households. Future proof means that the household can grow to a state where the children in the household are above 18 years old. Therefore, the basic standard norm for rooms in a household can be set to  $n + 1$  for the number of rooms. In this case,  $n$  is the number of members of the household. Besides that, different cities in Randstad (Rotterdam, The Hague and Amsterdam) have set a minimum use surface per person for a dwelling. The minimum surface in these cities is 12 square meters per person (Boer, 2014; Gemeente Den Haag, n.d.). The minimum surface of 12 square meters per person is following the building decree (in Dutch: Bouwbesluit) for newly constructed and renovated housing. With this norm for minimum use surface, a maximum number of people for housing with a specific surface can be set. The norm for a maximum amount of people living in a dwelling, regarding the number of rooms and the surface of a dwelling is shown in table 1.1.

Maximum amount of people	Number of rooms	Surface
1	2	24
2	3	36
3	4	48
4	5	60
5	6	72
Etc.	..	..

Table 1.1: minimal number of rooms and minimum use surface of housing per person

A method that takes the housing composition and consumption into account is the residual income method (Stone, 2006, p.164; Haffner & Heylen, 2010, p.49). The residual income is defined as the income that remains for a basic level of non-housing expenses after the housing expenses of the total household composition is subtracted from the income. For the income of a household, income tax needs to be taken into account. If tax is not taken into account, this will lead to a misidentification of households with an affordability problem (Stone, 2006, p.171). For the affordability of housing counts that if the residual income is lower than the necessary level of non-housing expenses, then housing is not affordable. Hence, a basic standard of non-housing needs and costs for each household should be set. Since one basic standard of non-housing for all households is not possible, the households should be divided into groups of different household compositions. In some cases, the affordability issue may not be a housing problem, but a problem with acquiring income. The residual income is the preferred method for this research compared to the rent-to-income ratio.

## Urbanity

An urban area is defined as a region with a density of human structures such as houses, commercial building, roads, bridges, railways and so on (National Geographic, n.d.). The name urban area can refer to towns, cities and suburbs. Urban areas can differ in the degree of urbanity. Degree of urbanity is defined as a concentration of human activities based on average environmental address density (in Dutch: omgevingsadressendichtheid) (CBS, n.d. b). The average environmental address density is used to scale the level of urbanity in the Netherlands; the degree of urbanity scale is presented in table 1.2.

Degree of urbanity	Average environmental address density (km <sup>2</sup> )
Very strong	Over 2500
Strong	1500 until 2500
Moderate	1000 until 1500
Little	500 until 1000
No	Until 500

Table 1.2: Degree of urbanity (CBS, n.d. b) (own illustration)

In the Netherlands, Randstad is the area with highest degree of urbanity (Nijmeijer, 2000, p.22). Randstad counts approximately fifty per cent of the inhabitants of the Netherlands. The area Randstad is defined by a minimum of 1000 inhabitants per square kilometre (Langenberg & Verkooijen, 2018, p.4). Randstad covers the following corop areas: Agglomeratie 's-Gravenhage, Agglomeratie Haarlem, Groot- Rijnmond, Agglomeratie Leiden en Bollenstreek, Zaanstreek, Delft en Westland, Utrecht, Het Gooi en Vechtstreek, IJmond and Groot-Amsterdam. The corop areas are shown in figure 2.

Also, the four biggest cities of the Netherlands are located in Randstad. These cities are Amsterdam, Rotterdam, Utrecht and The Hague. All these cities have more than 250.000 inhabitants (CBS, n.d. a). The four biggest cities are located in Randstad, and these cities have the highest degree of urbanity. Also, in these cities, the largest population growth takes place (De Beer, Ekamper and Gaag, 2018). Besides the four biggest cities, Randstad counts more cities, only twenty-five per cent of Randstad is not urban. The four biggest cities of Randstad have a very strong degree of urbanity, next to these cities there are more cities in Randstad which have a very strong degree of urbanity (CBS, 2020). Most municipalities in Randstad have a very strong until a moderate degree of urbanity. Almost no municipalities have a little degree of urbanity. To understand Randstad's cities degree of urbanity better, an overview of their degree of urbanity can be found in Appendix I.

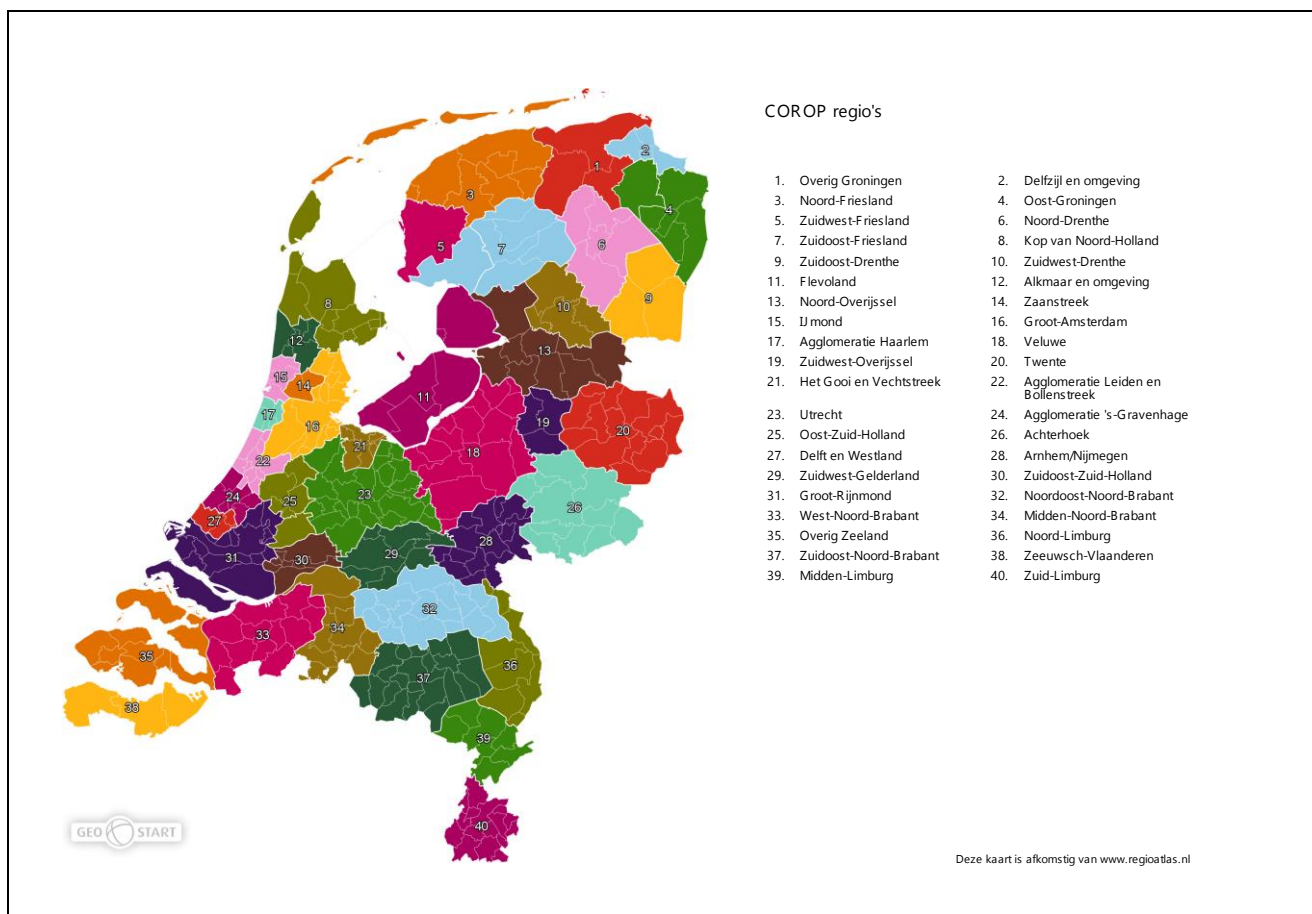


Figure 2: Overview of corop areas in the Netherlands (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, n.d.)

Mostly, young households with a preference for urbanity already live in a city they want to move to (van Dam & de Groot, 2017, p.4). The movement from students and young professionals to the city comes with a higher potential demand for housing for young households. Although the supply for, for example, single-family homes, has increased in the four big cities the past decades, this housing is only available for households with a high income (van Dam & de Groot, 2017, p.5). With the arrival of the potential young households, the demand for more housing and different types of housing will most certainly grow soon.

### Rental housing policies

As a result of the housing shortage, which causes the high housing prices in the homeownership market, most middle-income households depend on rental housing. Rental housing can be divided into four categories (Table 1.3). Regulated housing is all housing with monthly rent under the liberalisation limit, which is €710,68 per month for 2018 (Rijksoverheid, n.d. b). The private rental housing is all housing above the liberalisation limit. Both regulated and private rental housing can be owned by private parties as well as by housing associations (Table 1.3) (Vestia, n.d. a; Rijksoverheid, n.d. a).

	<b>Regulated</b>	<b>Liberalised</b>
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<b>Owned by housing associations</b>	Housing under the liberalisation limit	Housing above the liberalisation limit
<b>Owned by private parties</b>	Housing under the liberalisation limit	Housing above the liberalisation limit

Table 1.3: Division of the Dutch rental housing market (Vestia, n.d. a; Rijksoverheid, n.d. a) (own table)

For both regulated and private rental housing are certain regulations set by the central government apply. The difference between these regulations is shown in table 1.4. Table 1.4 is translated following Van Gijzel (2018, p.11).

<b>Aspect</b>	<b>Regulated housing contract</b>	<b>Liberalised housing contract</b>
<b>Maximum rent level</b>	On the base of property value system (in Dutch: woningwaarderingstelsel)	Freedom of contract
<b>Annual rent increase</b>	The maximum percentage of annual increment	Freedom of contract
<b>Dispute settlement</b>	By the use of the rental commission (in Dutch: huurcommissie)	<ul style="list-style-type: none"> <li>- By a judge</li> <li>- By the rental commission for the test of the initial rent, only if the quality of the dwelling justifies a regulated rental contract</li> <li>- The advice of rental commission if agreed</li> </ul>
<b>Housing allowance</b>	Accessible if the income is under the housing allowance limit	Not applicable
<b>Landlord levy</b>	By rent out of more than 50 dwellings	No

Table 1.4: The difference between a regulated housing contract and a liberalised housing contract (van Gijzel, 2018, p.11).

This research will elaborate on private rental housing. For liberalised rental housing counts that rents can be increased once a year. There is no maximum for increasing the rent unless it is determined in the contract. Also, the letter (in Dutch: verhuurder) is not obliged to inform the tenant in time before the letter

increases the rent. If the tenant does not agree on the increased rent, the letter can end the lease agreement (Rijksoverheid, n.d. c).

The different suppliers of private rental housing can be divided into three groups, namely: housing associations, private investors and institutional investors (Schilder et al., 2020, p.8). Housing associations do have private rental housing in their portfolio but are only in certain circumstances allowed to construct new private rental housing. Private investors are investors who invest with their own privately-owned money. Institutional investors are investors who invest with money of companies of, for example, pension funds and insurance companies.

Besides the government's regulations, cities created their regulations. They do this with the available means, these available means are, for example, permits or tender procedures (Gemeente Den Haag, 2019; Jessica Balla, personal communication, February 19, 2020). Municipal policies set the regulations of the municipalities concerning housing. Section 1.2.7 will elaborate upon the municipal policies of Amsterdam, Rotterdam, Utrecht and The Hague.

### **Central governments' policies**

In the past decades, real estate developers could have more interest in constructing owner-occupied housing in comparison to rental housing. Also, municipalities had a hire interest on land when housing was meant for owner-occupied housing (Schilder, Daalhuizen, Groot, Lennartz, Van der Staak, 2020, p.8). Besides that, homeownership was in a fiscal way stimulated by the central government by mortgage interest deduction (in Dutch: hypotheekrenteaftrek) and by the exemption of capital gains tax (in Dutch: vermogensrendementsheffing). Therefore, private investors had a higher interest by selling housing instead of renting it out, which has led to a decrease in private rental housing in the Netherlands.

Furthermore, regulations for housing associations have been changed. The housing associations aim to supply sufficient housing for households who are not able to provide suitable housing on the housing market themselves. With the new regulations, housing associations have to assign at least ninety per cent of the supply to households with a low-income or to a vulnerable group. In the Netherlands, there is a housing allowance limit, households with an income beneath this a particular level get housing allowance (Vlak et al., p.15). For the year 2020, the housing allowance is only applicable to housing with monthly rent level beneath €663,40 and an income beneath approximately €30.000 a year (Rijksoverheid, 2019).

The rental price of a social rental dwelling is set by the property value system (in Dutch: woningwaarderingstelsel) (Rijksoverheid, n.d. e). The property value system takes different aspects of the dwelling and its environment into account. For each element, one or several points are given. The points determine the level of the rent of a particular residence. If the rent level comes above the liberalisation limit, the dwelling becomes a private rental dwelling. The property value system includes the property value (in Dutch: WOZ-waarde) of the residence (Rijksoverheid, n.d. e). Therefore, more private owned social rental housing has become private rental housing. Because of the changed regulations concerning housing associations and the modified property value system, the historic low interests at the bank and the high demand for housing, investment in buy-to-let housing became more appealing. The interest in buy-to-let dwellings is so confident that investors can overbid others on the housing market (Schilder et al., 2020, p.9).

For renting with rent under the liberalisation, limit counts a landlord levy (in Dutch: verhuurderheffing). Letters with rent out over 50 dwellings have to pay a levy of approximately zero point 5 per cent each year (Rijksoverheid, n.d. f). The landlord levy is an incentive for private investors to rent out dwellings with monthly rent above the liberalisation limit (Vlak et al., 2017, p.30).

In the 90's it was for households easier to get a mortgage. It was possible to get a mortgage with a loan-to-value above the value of the dwelling. The financial crisis of 2008 has led to lots of mortgages higher than the value of their residence. Therefore, the Dutch government has set stricter norms for gaining a mortgage. The interest on the mortgage can only be deducted for the part that will be amortised (Schilder et al., 2020, p.11). Besides that, the mortgage interest deduction has been diminished. The result of this is that owner-occupied housing is not affordable for middle-income households (Schilder et al., 2020, p.13).

#### **Municipal policies of G4**

Since a short period, the responsibility for a spatial policy has been decentralised from the central government towards municipal governments (Van Gijzel, 2018, p.12). The reason for this is the different housing markets in regions. One central policy could give a solution in one region but give another problem in the other region (Schilder et al., 2020, p.23). Therefore, there is not just one policy concerning housing, but each municipality is forced to have a housing plan.

Three types of means can be used by a municipality, namely: rules and regulations, monetary instruments and communicative instruments. Besides that, the municipality can use an emergency instrument concerning private rental housing. By using this emergency measure, the municipality is allowed to regulate the liberalised rents of dwellings with a property value under the €300.000 for four years. The maximum yearly rent can only be six per cent of the property value by a new mutation of the dwelling (Schilder et al., 2020, p.26).

To understand what regulations and policies are implemented concerning private rental housing for middle-income households in Randstad, one should have an understanding of the municipal policies of these cities. This section will elaborate upon the G4, the four largest municipalities of the Netherlands, that are located in Randstad concerning private rental housing for middle-income households.

#### **Amsterdam**

In 2016 the municipality of Amsterdam counted 840.000 inhabitants (Gemeenteraad van Amsterdam, 2017, p.5). The prognosis of the number of inhabitants for Amsterdam is 900.000 for the year of 2025. In the years of 2015 until 2017, new construction has increased tremendously. Although there is a lot of new construction, the housing shortage still exists, and housing prices in Amsterdam have risen through the roof. Therefore, the municipality of Amsterdam is using different instruments to steer the market into increasing the total housing supply. The overarching municipal policy is to provide sufficient and affordable housing of good quality for now and for the future for all inhabitants of Amsterdam (Gemeenteraad van Amsterdam, 2017, p.6).

In 2015 the total amount of dwellings in Amsterdam was approximately 420.000. From this 420.000 dwellings, twelve per cent is private rental housing. From these twelve per cent, five-point six per cent is affordable for middle-income households (Gemeenteraad van Amsterdam, 2017, p.14). Approximately sixteen per cent of the households of Amsterdam has a middle-income, from the total amount of middle-income households, only ten per cent lives in private rental housing meant for middle-income households. Only twenty-three per cent of the middle-income households own housing intended for middle-income households, which means, most of the middle-income households do not live in housing that fits their income, according to figure 3.

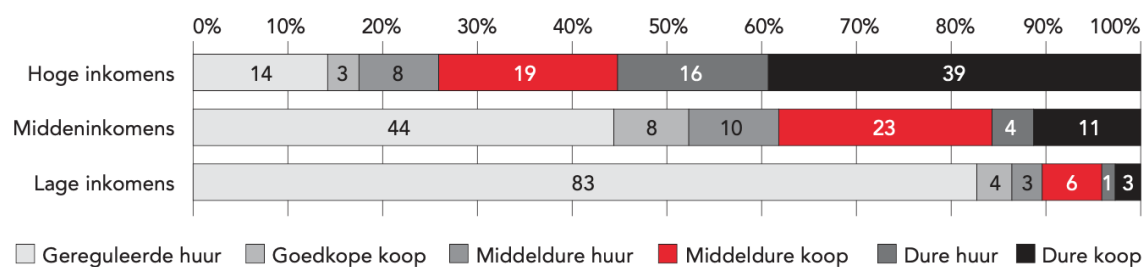


Figure 3: division income groups over the different housing segments in 2015 (Gemeenteraad van Amsterdam, 2017, p. 16).

The prognosis is that the total supply of private rental housing of middle-income households will grow until nine per cent of the total housing supply in 2025 (Gemeenteraad van Amsterdam, 2017, p.30). In 2019, seven per cent of the total housing supply existed in private rental housing for middle-income households (Gemeente Amsterdam, 2020, p.7). In 2019, the average rent level was approximately €1.286 a month of private rental housing. This rent level is low in comparison to the average monthly rent level after mutation, which is about €1.397 a month (Gemeente Amsterdam, 2020, p.1).

The municipality has the ambition to steer the market into new construction of 1500 dwellings per year in the category of private rental housing for middle-income households (Gemeenteraad van Amsterdam, 2017, p.35). This housing can only have a maximum rent of €971 a month. To prevent the monthly rent of new constructed private rental housing from rising, the municipality has set conditions for investors in the ground lease (in Dutch: erfpacht). The investors cannot raise the monthly rent for more than inflation for the first 25 years, and this is also the case if there is a mutation of the tenant (Gemeenteraad van Amsterdam, 2017, p.39). In return, investors get lower land prices. Also, the municipality stresses the importance of the new construction of private rental housing for families with a middle-income. The municipality aims that a significant part of the newly constructed housing for middle-income households to be larger than 70 m<sup>2</sup> (Gemeenteraad van Amsterdam, 2017, p.42).

Besides the measures for new construction, the municipality has some rules for the current housing supply. The municipality researches the possibility to use the zoning plan for keeping private rental housing accessible for middle-income households (Gemeenteraad van Amsterdam, 2017, p.40). Furthermore, the municipality researches the possibilities to use the housing permit (in Dutch: huisvestingsvergunning) to provide an appropriate assignment of the private rental housing to middle-income households (Gemeenteraad van Amsterdam, 2017, p. 52). Also, the housing permit should give key workers priority to private rental housing in Amsterdam.

Private rental housing has a vital role in the housing market in Amsterdam. Although this part of the market has an important role, in this sector, households have an above-average wish to move (Dignum, 2020, p.8). The number of households who want to move is forty-three per cent for households who live in private

rental housing in Amsterdam. There is only a small number of households in Amsterdam who is interested in private rental housing with rent above €1.000 a month (Dignum, 2020, p.19). Furthermore, eighty per cent of the total amount of households who want to move and live in Amsterdam, want to move to other housing in Amsterdam. Although eighty per cent of the households with a wish to move would like to stay in Amsterdam, households, mostly families with young children, who prefer ground bounded dwellings move more often to other municipalities (Dignum, 2020, p.20).

### **Rotterdam**

In 2016 the municipality of Rotterdam counted approximately 630.000 inhabitants (Gemeenteraad van Rotterdam, 2016, p.9). The prognosis for the coming years is that the population will grow with around 4300 inhabitants a year (Gemeenteraad van Rotterdam, 2016, p.50). Remarkable for the growth of the population is that foremost, the growth takes places in the young population (20-35 years). In 2015 the number of households in Rotterdam was 321.000. Of these households, an outstanding part of the households consists of one-person households. Yearly, 75.000 people move from or to Rotterdam, which means that six per cent of the population has changed within only one year. Most people who move from Rotterdam to other municipalities are foremost people above the age of 30 years (Gemeenteraad van Rotterdam, 2016, p.54). Within Rotterdam 24.000 people move in a year.

The municipality of Rotterdam aims that Rotterdam is a place for inhabitants of all layers of the population. Therefore, the city needs to provide housing in all different residential environments. The current situation in Rotterdam is that there is more housing for low-income households (fifty-six per cent of the housing stock) and not so much for other income groups. The municipality of Rotterdam aims towards a new balance with more housing for middle- and high-income groups in comparison with the current situation.

In Rotterdam, there is an enormous shortage of private rental housing (Gemeenteraad van Rotterdam, 2016, p.10). In 2014 the category private rental housing counted approximately 21.000 dwellings, which is seven per cent of the total amount of dwellings in Rotterdam (Gemeenteraad van Rotterdam, 2016, p. 62). Of these dwellings, fifty per cent has a surface above 100m<sup>2</sup>. Around thirty-five per cent of these dwellings are ground bounded dwellings, and twenty-six per cent are apartments. In Rotterdam, there is a need of 2.900 until 4.000 liberalised rental dwellings on the market (Gemeenteraad van Rotterdam, 2016, p.63).

The municipality of Rotterdam aims to an increase of 36.000 dwellings for middle- and high-income households before 2030 (Gemeenteraad van Rotterdam, 2016, p.14). For new construction, the municipality has a preference for dwellings above €180.000 for homeownership and dwellings with a monthly rent between €711 and €1000 for private rental housing. Also, the housing stock of private rental housing will increase by revaluing rents within the current housing stock. At this moment, the municipality of Rotterdam would have the focus on housing for young households who just have graduated from the university or of the university of applied sciences (Gemeenteraad van Rotterdam, 2016, p.34).

### **Utrecht**

In 2018 the municipality of Utrecht counted approximately 350.000 inhabitants and 180.000 households. The prognosis is that the number of inhabitants will grow until 450.000 in 2040 (Schuurmans & Krijnen, 2019, p.40). Of the households in Utrecht, approximately fifty per cent are one-person households, twenty-five per cent are families, and twenty-five per cent are two-person households. The young one- and two-



person households moving to Utrecht are the reason for a settlement surplus of 1500 households a year. Although there is a settlement surplus in Utrecht, the growth of inhabitants is more affected by the birth surplus.

The total amount of dwellings in Utrecht is 150.000 until 2040, and there are 60.000 extra dwellings needed (Schuurmans & Krijnen, 2019, p.40). Of this total housing supply, approximately nine until thirteen per cent is private rental housing, except for the private rental housing of housing associations. Also, for Utrecht counts that new construction is not sufficient to cope with the demand for private rental housing for middle-income households (Schuurmans & Krijnen, 2019, p.43). Therefore, the housing prices of this segment are rising, which has led to a gap between social housing and private rental housing. Also, in Utrecht, problems occur with the filling of vacancies in specific segments (Schuurmans & Krijnen, 2019, p.12). Utrecht aims for a healthy urban life for everyone (Schuurman & Krijnen, 2019, p.7). Therefore, Utrecht aims for a balance of housing prices in each neighbourhood. Utrecht should be a city for all households regardless of income and age (Schuurman & Krijnen, 2019, p.10).

The municipality aims for twenty-five per cent of the total housing stock is meant for middle-income households. Utrecht has a shortage of 500 until 1.500 dwellings a year for middle-income households. With the former housing policy, this has resulted in newly constructed dwellings which are becoming smaller and smaller in comparison to the rental price (Gemeente Utrecht, 2017, p.10). To keep owner-occupied housing affordable for middle-income households is hard to steer. Because of that, the municipality focusses on private rental housing for these households (Schuurmans & Krijnen, 2019, p.20). Therefore, the municipality of Utrecht sets in for new construction on rent between €710 and €950 a month with a yearly indexation with the CPI index plus one per cent for 20 years (Gemeente Utrecht, 2019, p.12). To overcome a one-sided growth of small dwellings in Utrecht, the municipality has set a minimum surface for each rental price. To define the minimum rental price of dwellings, the municipality has divided the city into two segments: the areas in the centre and other areas.

To ensure that the housing for middle-income households will be rent out to middle-income households, Utrecht has a precedence system (Schuurman & Krijnen, 2019, p.30). The precedence system is linked to a housing permit system. Also, this system is the checking system that is used to make sure that households are eligible for private rental housing for middle-income households. The new precedence system is in force since January 2020, the rules regarding precedence are as following; from most important to less important (Gemeente Utrecht, 2019, p.16):

1. Households that move from social housing toward private rental housing for middle-income households with an income €55.000 or less a year for one-person households and an income of €65.000 or less a year for two-person households;
2. Households with an income €55.000 or less a year for one-person households and an income of €65.000 or less a year for two-person households.

This precedence system applies to new construction and mutation. For new construction, the middle-income households get precedence of two months, and for mutation, they get precedence of one week (Gemeente Utrecht, 2019, p.48). The use of WoningNet will execute the precedence system.

**The Hague**

The municipality of The Hague counts approximately 540.000 inhabitants. Each year they suspect a growth of 4000 until 5000 inhabitants until 2023 (Gemeente Den Haag, 2019, p.5). Private rental housing covers twenty-two per cent of the total housing stock in The Hague, this amount to 54.000 dwellings. Institutional investors own thirty-seven per cent of the 54.000 dwellings. In the past year, the monthly rent of dwellings has increased because the demand for middle-income households has decreased (Gemeente Den Haag, 2019, p.6).

The essential issue of the municipal policy of The Hague is the increase of housing for low-income and middle-income households. This part will elaborate upon the policy to the rise of middle-income households. The municipality of The Hague aims for a production of a twenty per cent minimum of housing for middle-income households with rent between the liberalisation limit. Of this twenty per cent, fifty per cent should have a rent between €700 and €850 a month, and fifty per cent should have a rent between €850 and €950 a month (Gemeente Den Haag, 2019, p.11). For new construction, the investors can raise the rents with only the CPI index for the coming 20 years, and this also counts after mutation. Furthermore, the municipality is looking for easing the regulations for housing associations so that they can condense on their ground with housing for middle-income households.

The increase of the housing supply takes the importance of sustainability, appearance, amenities in the surroundings and the opinions of residents into account (Gemeente Den Haag, 2019, p.9). Therefore, there is a limit to the pace of increasing the supply in The Hague. Therefore, the municipality takes other measures besides the measures for increasing the supply. One of the measures is keeping the private rental housing available for middle-income households. Therefore, the municipality has raised the limit for a housing permit (in Dutch: huisvestingsvergunning) to €950 for the coming four years. The housing permit has an income limit of €55.000 a year for one-person households and of €65.000 for more-person households. Because of the housing permit, it is not possible for households with an income above €55.000 for one-person households and an income of €65.000 for more-person households to rent a dwelling with monthly rent under €950. Also, to make new construction future proof, the municipality has set a break on the construction of small housing. New construction of small housing is only acceptable for certain target groups (Gemeente Den Haag, 2019, p.21). Besides that, it will not be possible to architectural split (in Dutch: bouwkundig splitsen) housing in most areas of The Hague.

## **Reflection**

### **Societal relevance**

As already mentioned, in Randstad there is a shortage of housing (Ten Teije, 2019; Van der Vegt, 2018). This housing shortage has resulted into rising housing prices and no diversity in the housing supply (van Dam & de Groot, 2017, p.5; van Middelkoop & Schilder, 2017, p.12). For households with a middle-income it is very hard to find housing in the cities of Randstad. Their income is too high for social housing and too low for private renting and homeownership (van der Vegt, 2018). The housing shortage in Randstad results into issues for companies that are depending on these households. They have vacancies that cannot be filled in a reasonable time (Van der Vegt, 2018). For the city this becomes a problem, if the vacancies are for key workers, and cannot be filled. A starting high school teacher for example, has an income of €38.040 a year, in accordance with the collective labour agreement (in Dutch: CAO) of 2019 (Rijksoverheid, n.d. e). To compare, the social housing limit of that year was €38.035 (Ginsberg & Hamers, 2018), which means that these key workers have a middle-income. Therefore, they are depending on private rental housing for households with a middle-income a well.

This research elaborates on preferences for the income group, middle-income households, which is severely affected by the housing shortage. Therefore, this research is relevant for cities and regions that deal with this housing shortage. This research gives an insight on the understanding on what housing preferences of households, are missing in the housing supply of urban areas. With the aim of providing housing for all different household types with a middle-income.

Since the second quarter of 2020 the Netherlands has to deal with a pandemic. This pandemic has consequences for the Dutch housing market. The homeownership market is still in balance at the moment. The market changed since there is less supply, but also less demand (De Voogt, 2020). The rental market has to deal with some changes at the moment as well. There are less people at viewings and most viewings take place digitally. Moreover, new constructions concede. Bokeloh (2020) states that housing prices will decline, because investors will hold back on the housing market. This could mean that the housing shortage in private renting will increase. Experts cannot estimate what the corona crisis will do with to the housing market. Therefore, one could say that the future of the housing market is very uncertain at the moment.

### **Scientific relevance**

Households make decisions for housing on their preferences and the availability in the housing market (Boumeester, 2004, p.8-25). When understanding how to cope with the housing shortage of housing for middle-income households, it is necessary to understand what housing is needed. From a scientific perspective, it is necessary to understand the process of households when making trade-offs in housing preferences to gain housing affordability. Understanding this process will give an insight into why households choose a certain degree of urbanity, even if they prefer to live in Randstad. Furthermore, this research will provide an idea of what the influence of non-housing expenses related to housing is on the housing affordability.

### **Dissemination and audiences**

Next to contributing to the literature on households' preferences and affordability, this research aims to give valuable insights for private parties as well. This research will give an insight for municipalities, on what trade-offs are made by households with a middle-income, for private rental housing in their city. Therefore, this research could help municipalities to improve their strategy to make households with a middle-income stay in their city. Furthermore, this research will give an insight for real estate developers and investors, on what the demand is on housing for private rental housing.

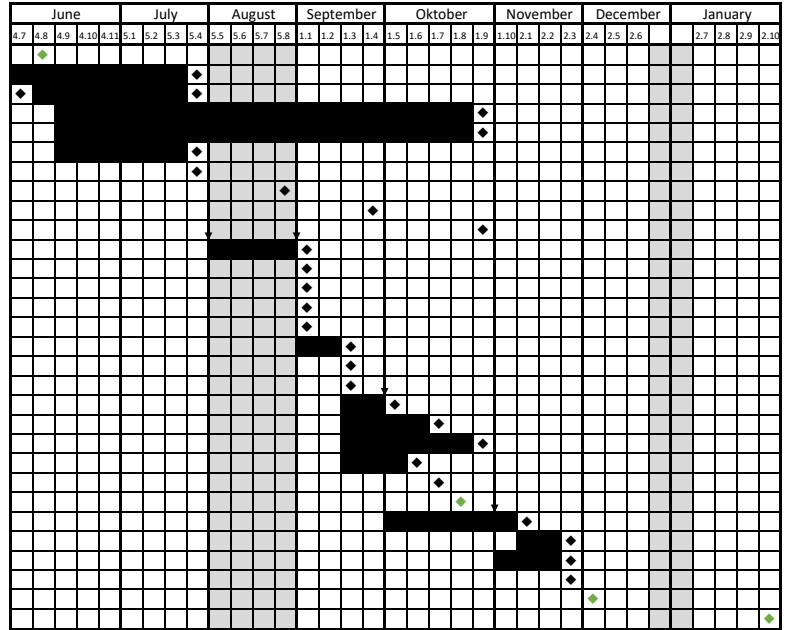
### **Time planning**

This research consists of several stages. In the first stage (P1), the problem statement has been defined; this was the starting point of the literature research. In the second stage (P2), most of the literature study has been finished. In the third stage (P3), data will be collected and analysed; this stage will give a first overview of the findings after analysis. The fourth stage (P4), consists of final analysis and will conclude with a conclusion and discussion.

In figure 4, contains the main tasks of this research, including set deadlines, milestones and interdependencies. The first SPSS analysis, including the calculations by the use of WoON 2018, has to be done before the semi-structured interviews can be prepared. Before the fourth stage, the main analysis needs to be done. The fourth stage consists of finishing the study and translate the findings into a conclusion and recommendation.

**Research planning**

- P2
- Orientation WoON 2018
- Preparing SPSS WoON analysis
- Analysis WoON 2018 and calculations
- Evaluation results analysis
- Exploration of possible shared services
- Results on analysing the types of households and their preferences
- Results on the housing stock in Randstad
- Results on possible solutions
- Final results WoON analysis
- Preparing semi-structured interviews
- Interview 1: municipality 1
- Interview 2: municipality 2
- Interview 3: Wonam (real estate developer/investor)
- Interview 4: Institutional investor
- Summarize Interviews 1 until 4
- Interview 5: Housing association
- Interview 6: Private investor
- Summarize Interviews 5 and 6
- Write reflection
- Interview analysis
- Add results in P3 rapport
- Deadline P3 report
- P3
- Add results in P4 rapport
- Write conclusion and discussion
- Spelling check and reference check
- Deliver P4 report
- P4
- P5



- ◆ Deadlines
- ◆ Milestones
- Work in progress
- Holiday period
- ↓ Important link between tasks

Figure 4: Research plan (own illustration)