

The design brief with and within a cohousing group

Houses are more than containers for Humans

The design brief with and within a cohousing group

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Architecture tutor: Ir. R.R.J. van de Pas Research tutor: Dr. D.K. Czischke Ljubetic Building Technology tutor: Ir. P. Jennen 'If information is gathered about the people who will use a place and about their interests, needs, aspirations, behaviors, interactions, and tasks; and the necessary environmental requirements to support the expectations are developed and documented; and if information is wisely used in the planning and design process, the place can become a tool, one that can help us achieve our purpose' (Duerk, 1993)

Preface

There would be no architecture if there was no use for it by human beings. If spoken about architecture the use by humans is always mentioned. This use of architecture and how to design for optimal use by the inhabitants of the building has fascinated me for years. Together with my fascination for renovated and transformed buildings this has led to the start of my graduation research in the field of architecture.

This thesis has been written in the context of the Explore Lab graduation studio at the faculty of Architecture and the Built Environment, Delft University of Technology. This research explores a new way of living, cohousing and the formulation of a design brief within such a project.

I am very thankful to all the people who contributed to this research, both by supporting me personally as well as helping me in my research to fill in the booklet and providing me with personal housing information. Special thanks to my parents for their support patience and help.

Finally, I would like to thank Roel van der Pas for his enthusiasm and feedback on design but also my research perspective. And Darinka Czischke for providing me with all her knowledge on cohousing and the process that comes with it, bringing me along to such inspiring congresses and showing me the cohousing projects. And both of them for their patience during my long graduation process and following my own pace.

Abstract

Creating a design brief is often a neglected step when developing cohousing projects. We often find that future residents discuss their demands, wishes and ideas only amongst themselves during informal gatherings, even though it is identified that this is an important factor in the eventual design of their future home. In my master thesis, I want to develop a method to help future residents and other involved parties related to a cohousing group, to create a clear and complete design brief. By applying this methodology to develop the design brief, one will gain knowledge on the demands and wishes of future cohousing residents and thereby further knowledge on the spatial and social dimensions of cohousing. After this, I will implement the results of the research and methodology into a design project. With these results, I will commence the design of a fictional cohousing project.

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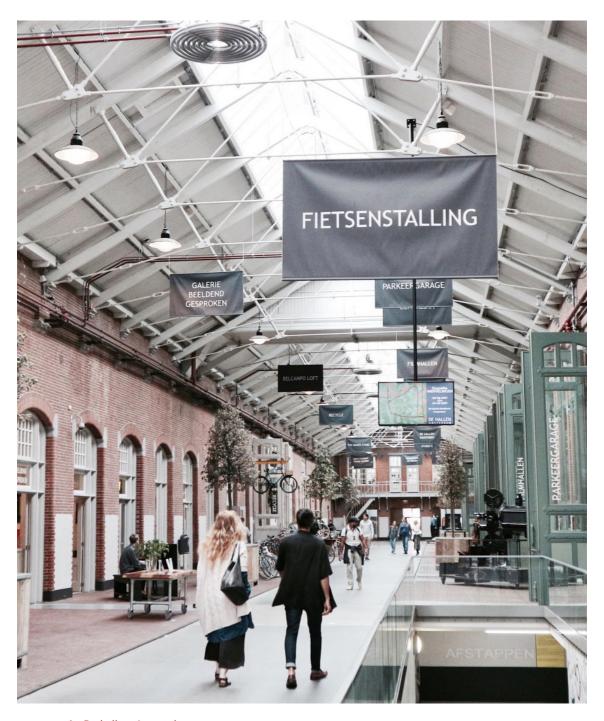
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Introduction

As a little girl my dad often took me for a ride by bike to the big and old city of Amsterdam. From then on, my love for these bike rides and especially the exploration of old and abundant places during these rides increased. Today, we still explore the city together and I am as amazed as long ago by areas like the "Westergasterrein", an old factory area completely transformed into a green and welcoming cultural area. Another example are "de Hallen", a former tram depot converted to a food market in combination with work areas, shops, and spaces for a variety of different cultural functions. Now that I live in Rotterdam I took this habit to a new city and also here I found old and transformed buildings, like the "Jobsveem" in Lloydkwartier. This building, a former warehouse and a state monument, is now a beautiful residential building with open offices on the first floor.

This was the start of my discovery into the world of architecture and one of the reasons to start studying at the faculty of architecture at the TUDelft. During my studies, especially during my bachelor's degree, I have felt a lack of knowledge on the user or consumer side of architecture, yet this was not a subject of the courses or projects. During my master's degree, I have tried to dig deeper into this user side. I did an internship at an architectural firm and a board year at SHS Delft, transforming former office and care facilities into student housing. Here, I redesigned an old psychiatric building into student housing and was able to follow the whole process of transformation while getting to know the user side of these others forms of living. This graduation project, of which you are about to read the final report, combines my love for old buildings and their transformation into spaces for contemporary ways of living, such as cohousing, which makes it the perfect project for me to proudly finish my studies at the TuDelft.

I hope you feel as inspired as I am by reading this research and looking at my design, and join the journey towards a more sociable and sustainable way of living.



1. De hallen, Amsterdam

Problem formulation and scope of the research

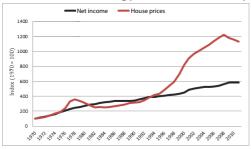
Headlines like 'House prices in Amsterdam return to 2008 highs' and 'Housing shortage in the Netherlands to rise by 2020' dominated the newspapers in 2017 and 2018. Indeed, there is a housing shortage in the Netherlands, especially in the bigger cities such as Amsterdam and Rotterdam, as affordable properties are scarce. This housing shortage is negatively affected by the increase of one-person households and the grow of urban population. See image 3 and 4. From 1995 to 2018 in The Netherlands there was an increase of almost 900.000 one person households (Centraal Bureau voor de Statestiek, 2018a). In Amsterdam the number of one person households was increased by 6000 households in 2017 (Centraal Bureau voor de Statestiek, 2018b).



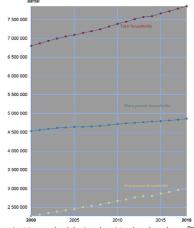
2. Smallest houuse in Amsterdam

Except the negative effects these developments also lead to creative new ways of living and creation of new forms of housing, for example cohousing. Cohousing is one model of collaborative housing in which residents live together and share certain facilities, spaces and activities, while still having their own private living space. These terms will be defined and explained in the first chapter. The minimalized use of space in cohousing leads to a spatial benefit, more people can live in a smaller building, so eventually more people can live in a smaller area of the city (Brouwer & Bektas, 2014; Gerards, De Ridder, & De Bleeckere, 2015; Marckmann, Gram-Hanssen, & Christensen, 2012; Williams, 2005a). Furthermore, these models have the benefit of another lifestyle that is more and more desired by residents and decreases the amount of loneliness, encourages more sharing and a more social life(Fromm, 2012; Tummers, 2015b; Tyvimaa, 2011, p. 198; Vestbro, 2010; Wennberg & Wikström, 2016). According to the research of Williams (2005b, p. 162) and Kala (2015, p. 53,66) sharing housing, and by this

decreasing the amount of one person households, will lead to a significant decrease, in between 23 and 77 percent, of the use of both domestic energy and land consumption.



3. Houseprices versus net income

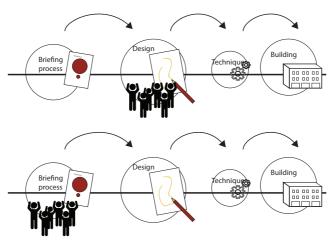


4. Households in the Netherlands

Research on collaborative housing and other forms of collective self-organized housing has intensified in 2017 and 2018 all over the world. Nevertheless, this way of living and organizing spatial dimensions of housing is still the exception to the rule, even though the number of projects and people interested in these projects is growing and the people want more decentralization, self-reliability, participation, and custom made solutions (Tummers, 2015a, 2016). While society and the current "zeitgeist" pushes for this kind of shared living, it is not yet clear if residents, but especially local governments, housing companies and other governmental institutions, are ready for this drastic change in the way we are looking at housing.

A lot of these cohousing ideas see the light at informal events among friends. They discuss how nice living together would be, sharing tasks, spaces and conversations in a familiar way, being part of each other's daily life. After making the decision, the group usually finds an architect and project planner and starts making plans.

Although there is a lot of research on this way of living and the process to form cohousing facilities, the first part of this process is often overshadowed by the design process. The user's knowledge, now mostly used in the design part, could have far greater input when also used in the briefing part of the process. Future residents do often discuss their demands, wishes, and ideas amongst themselves during informal gatherings, yet they are not always shared or taken into full account by the architect and the other involved parties.(Luck, 2007; McDonnell, 2009; Zwemmer & den Otter, 2008) It is of great importance that the future residents get involved early on in the process, at the formulation of a design brief, see image 5.



5. Simplified design process

Relevance of the research

According to Fromm (2012) the reasons why cohousing projects fail are mostly found within the process prior to moving in, the briefing and design process, because of the collectivity in the decisions. After the residents are moved in there are little problems.

In cohousing, the design brief is different from the design brief for conventional housing projects, as multiple families share the building. Unfortunately, literature on this difference is still largely lacking. The use and the content of the design brief is widely discussed in the literature, but not always put in practice by architectural firms and other involved institutions. This is not only true for collaborative projects, but for all projects. (Bogers, van Meel, & van der Voordt, 2008)

Literature about cohousing states how imported the involvement of the future residents is. In most cohousing projects architects therefore set up a participatory design process to involve the future residents. However, many important decisions are already taken at an earlier phase without their involvement. (Brouwer et al., 2014; Wankiewicz, 2015; Wennberg & Wikström, 2016; Williams, 2005a)

This research shows that there is inadequate communication between future residents, who want to live in a cohousing group, and the professionals needed to organize this. Communication between the future residents, without knowledge about architecture, and the architects, speaking in jargon, is difficult and a solution is needed to bring the two groups together. According to Bektas, Brouwer, Di Giulio, Bennicelli Pasqualis, & Quentin (2014) it is very important to develop a methodology that bridges the practice of the design professionals and the expectations of the future residents.

Goal of the research

The goal of this research is to provide a new method to help future residents and other involved parties of a cohousing group create a clear and complete design brief. This method is expected to incorporate the wishes of the users, who have no or limited knowledge of the architectural field, which then will be translated into architectural elements and decisions by the architects. I expect to gain knowledge on the demands and wishes of future cohousing residents and supply further knowledge on the spatial and social dimensions of cohousing.

This method will be set up by combining knowledge on cohousing, the content of a design brief and participatory design. This is expected to result in a workbook consisting of an individual part to fill in and a plan for a series of collective sessions. The information extracted from this workbook and the sessions will then be used to form the design brief of a fictive group of people. This list of demands will play a major part in redesigning a former school building into a future home for a cohousing group.

Research- and sub-questions

From my main research goal, the following question has been extracted: How can we develop a method that helps the future residents and other involved parties of a cohousing group forming a design brief? This question will be answered using the following sub-questions:

- What is a cohousing project?
- What participation method is applicable in a cohousing project?
- What is a design brief and what adaption of the conventional brief are needed for a cohousing project?

The last sub-question is based on the theory found around above subquestions.

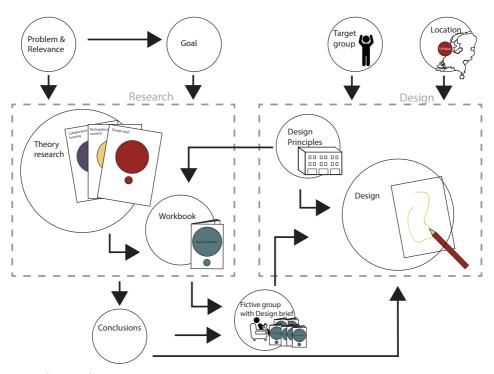
- What method can be developed to use participation in forming a design brief for a cohousing project?

Answering these questions will lead to better understanding of both the insides of cohousing as well as the design brief. By combining these two, I expect to fill the hiatus in current research and compile a workbook for future residents, architects and other parties involved in a cohousing project.

Methodology

This research will start with the review of the literature on cohousing, participation and the design brief. These theories will then be combined to form an opinion on the briefing process of a cohousing project. The literature review will be used to set up a workbook with exercises and 3 workshops. This workbook and the workshops are set up to help the architect to get to know the future users and their wishes and demands. The literature research will also be used to set up the base and facts of my design project.

To eventually translate these research outcomes into an architectural design a fictive user group will be formed. It will consist of the profiles of different households with its wishes and demands, which together will form the cohousing group. Some of these fictive households will be based on the applied method and its results, the rest will be set up without the method. These design briefs for the households and its profiles will then be used to start the design. See image 6.



6. Graduation plan





RESEARCH



Cohousing



At the beginning of the twenty first century the idea of sharing resources and space was rediscovered in Europe and is now a popular movement (Bresson & Denèfle, 2015; Brouwer & Bektas, 2014). Many projects are initiated where people build together, live together and/or share facilities, these projects vary dramatically across different countries and even among different projects. All these forms of collaborative housing have degrees of sharing and levels of self-management and creation.

Just as the content of the projects differs, several terms are used interchangeably. This chapter defines cohousing as one of the forms of collaborative housing.

It will shortly introduce cohousing reference its history and origin and elaborate on the use in different countries. Besides using research literature to explain cohousing, the writers view on the practice and characteristics of cohousing within the research and design project during this graduation will also be put together. This will be discussed in the design part of this thesis.

What is cohousing?

Cohousing, one of the terms that fall under collaborative housing, is commonly used and party of everyday discourse. Especially in the Netherlands it is the most used and common term to describe this new form of housing. Collaborative housing encourages a collaborative lifestyle, more socializing, a more interdependence between residents as well as more interaction with the neighborhood (Fromm, 2012; Williams, 2005a).

Cohousing is a term originating from Denmark, it comes from the term "Bofællesskab". Fromm (2012, p. 364,365) which defines the design of a cohousing project as a concept that 'encourages social contact, residents have a strong participation role in the development process, complete management of their community, and typically share dining on a weekly basis among other defining criteria' (Fromm, 1991, 2012; McCamant & Durrett, 1988).

According to Brouwer & Bektas (2014) cohousing projects are projects that preserve a high degree of privacy whilst creating a sense of community by mixing both private and common dwellings. It asks for and expects a certain commitment to community behavior from the residents, by providing shared dining, for example. According to Williams (2005a) cohousing projects encourage a more collaborative lifestyle and a larger dependence between the residents of the project. In these projects there is a non-hierarchal social structure, and a high level of participation from the residents in all design, construction, and management stages. (Williams, 2005a)

However, whereas cohousing is considered a more restrictive form of living, a lot of projects fit just outside this definition, and are discussed below. To describe these projects Czischke (2017) used the umbrella term 'collaborative housing', in her article. In a collaborative housing project '... a group of people co-produce their own housing in full or part in collaboration with established providers. The degree of user involvement in this process may vary from high level of participation in delivery and design within the context of a provider-led housing project, to a leading role of the user group in the different stages of the housing production process.' Collaborative housing is used here as an umbrella term, and covers a wide range of concepts, cohousing being one of them. The degree of project involvement and social contact differs between the different forms of collaborative housing.

McCamant & Durrett (2011) identify 6 common characteristics when comparing cohousing projects. These 6 characteristics can be used to distinguish the difference between cohousing projects.

Participatory process:

Future residents together are responsible for the decisions and together participate in the planning and design process. Mostly the future residents have a desire to live in such a project and therefore start it themselves. Typically a group of six to twelve residents hire the architect and other involved parties and start the project.

- Designs that facilitate community

The design of the project encourages residents to have social contact and a sense of community.

- Extensive common facilities

As an extra besides the fully equipped private houses are the communal buildings and areas.

- Complete resident management Residents do the management of the community and its buildings themselves.

- Non-hierarchal structure

All the adults together have the responsibility in the community, mostly divided into commissions dividing the responsibilities.

- Separate income sources

Residents mostly do not share incomes but have their own private incomes. They do pay a monthly fee to pay for the communal costs. (McCamant & Durrett, 2011)

According to (McCamant & Durrett, 2011) the participatory process of a cohousing project starts with the planning and design. Most of the projects start with of a core team of six to twelve families developing the building program, finding the site and hiring the architect. The design of the building or buildings will encourage a strong sense of community. The design will also; increase the social contact, be pedestrian friendly, have informal gathering places, a central common house and multiple play areas. In the projects there are multiple common areas for daily use. These common areas consist of at least a living room, a kitchen and a children's play room. The management of the project is completely managed by the residents themselves. This is done by common meetings and setting up work groups, and dividing tasks such as cooking and cleaning. The average size of a cohousing project range from forty to a hundred people and allows people to maintain their privacy and choose when and when not to participate. Most of the cohousing projects are built just outside the bigger cities. There are different types of financing and ownership; privately owned condominiums, limited equality cooperatives, rentals owned by non-profit organizations and combination of private ownership and non-profit owned rental units. (McCamant & Durrett, 1988)

The start of a new form of living

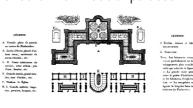
The term cohousing was introduced in 1988 by the American architects McCamant & Durett (1988) in the book 'Cohousing: a contemporary approach to housing ourselves.'. This term was used as an adapted American version of the Danish term "Bofællesskaber", inspired from the many northern European experiments in housing that already existed by then (Vestbro, 2010, 2017). Generally, looking back in history the most important goals of collaborative housing have been to share responsibilities and work between men and women, to promote collaboration and sharing between residents, to achieve a sense of community and to facilitate access to shared facilities(Vestbro, 2010).

Although forms of collaborative housing, as mentioned in previous paragraphs, vary a lot in different countries, cultures, languages and times, in this chapter the history of a type that has autonomous dwellings and has shared spaces is discussed. In this review of the history the term collaborative housing will consistently be used as a general term, because of the diversity the projects had in the history. Looking back on history, one can roughly distinguish 4 different movements, the utopian movement, the serviced movement, the social cohousing movement and the modern cohousing movement.

Utopian movement

The utopian movement is the first movement of collaborative housing and started as a utopian, feminist and communitarian movement (Williams, 2005a). In this utopian movement there was no intention of a more social way of living, just a work saving way of living. (Fromm, 2012; Killock, 2014; McCamant & Durrett, 2011; Vestbro, 2010; Williams, 2005a) Early European history states idealist housing situations. In 1506 Thomas More published "Utopia", which provided a name for such idealist housing situations. In a 'Utopia', people lived in groups with common dining rooms and other shared spaces. (Vestbro, 2010) In 1840 Robert Owen named his idealist society a Parallelogram, in these societies people would share the agricultural production, dining halls, schools, libraries and other facilities. In these societies working and living were collectively organized. (Vestbro, 2010) The most known example of these utopian living situation was the "Falanstère" of Charles Fourier. This theory of Charles Fourier is one of the drivers behind this utopian movement In this, the way of living was designed for the worker, with Fourier finding that they should live in 'social palaces'.

In his Falanstères everything was owned by the workers and there was a central kitchen a dining hall, schools and other shared facilities (Vestbro, 2010). See image 7. This utopian movement can be seen as one of the inspirations of the modern cohousing movement, although it was very different and not called cohousing.



7. "Falanstère" by Charles Fourier

The serviced movement

This second wave of collaborative housing, the serviced movement, started in northern Europe; Denmark, Sweden and the Netherlands, at the end of the nineteenth century. In Sweden, its purpose was specifically address with an aim to decrease the amount of housework for women and improve family life. When employment for women finally became accepted there was a need for a new way of living to be developed. In this new way of housing there was collective food preparation, laundry and child care. BiG, Bo I Gemenskap, was a group of women who defined and spread this model (Vestbro, 2010) In the 19th century it was considered the norm, for those with high incomes, to have housemaids to cook, clean and take care of the children. Because lower incomes were not able to afford this, the idea arose to share the services and thus share the costs. Designed was a central kitchen where the food was to be delivered and subsequently dispersed to the household apartments by food lifts. (Vestbro, 2010) Industrialization was also thought to be interesting to implement into daily life at the same time with household kitchens becoming unnecessary and taken over by large scale production kitchens. (Vestbro, 2010)

The most famous example of such a serviced cohousing project is John Ericsonsgatan 6 in Sweden, built in 1935, see image 8-10. It has 54 small apartments. It had food lifts coming from the central kitchen on the ground floor, a shop, a kindergarten and even a central laundry system. In this movement knowing one's neighbors and working with them was not a motive. There was just a need for a more rational way of living and simplifying the housekeeping so women could enter working society. (Vestbro, 2010)







8 . Food lifts in John Ericssongatan



9. The plan of John Ericssongatan



10. The common room of John Ericssongatan

The social collaborative housing movement

Cohousing was reborn in the sixties and seventies as a labor movement. The end of World War Two is one of the reasons for this reinvention. The big shortage of housing in most European cities made the States accept every form of housing contributing to the mineralization of the shortage, including initiatives taken by residents. In this time the low-income group was the one starting these kinds of projects. (Bresson & Denèfle, 2015) End of WWII, the dramatic housing situation on most countries led the authorities to authorize all sorts of initiatives, as well as cohousing (Bresson & Denèfle, 2015).

In the 70's a collaborative housing idea that people could share tasks and manage the projects themselves without hiring serviced staff was first adopted by the young people after the fundamental change of the "Hässelby Family Hotel". This Hotel was built in the 1950's by Olle Engkvist in Sweden, conforming the serviced collaborative housing model. In 1976 the central serviced kitchen was taken over by a group of the residents, as an emergency solution. This group noticed that they managed very well and they enjoyed working together. (Vestbro, 2010) This idea of working and managing together was then adopted by other people and so the social collaborative housing movement was born. Again these were people who sought new ways of living, by moving into shared houses and sharing the same political and social belief to support a collective housing project. This also led to Bodil Graae publishing an article called 'Children should have one hundred parents' Many projects followed after these first examples in a wide variety of form and people, with cohousing is now a common housing option in Denmark (Bresson & Denèfle, 2015; McCamant & Durrett, 1988) Besides interest in living together, the youth, in 1970's especially, were very disappointed in the policy of the government in most European countries and they were convinced the citizens needed to be involved in the cities policy makings (Bresson & Denèfle, 2015).

In 1964, the first attempt, of a collaborative project, Bofællesskaber in Denmark, was planned just outside of Copenhagen, the project of Gudmand-Høyer. He wanted to change the common way of living, to deliver a more social way of living where people would not be the "worker" but the "player". (Killock, 2014; McCamant & Durrett, 1988) There was a need for common spaces and the process needed to involve the future residents. Gudmand-Høyer gathered a group of interested people and even located a suitable site. Unfortunately the surrounding neighbors made sure the project was not realized. Later Gudmand-Høyer wrote an article about this way of living and discovered how many people actually would have liked to live in the collaborative project. (Killock, 2014; McCamant & Durrett, 2011)

Eventually, in 1968 this article led to two groups who started to build their own community; 'Skråplanet' and 'Seattedammen'. Hereafter, twenty-seven families moved into Seatterdammen in 1970 and thirty-three families moved into Skråplanet in 1973, see image 11–16. (McCamant & Durrett, 2011) These projects finally led to one of the most successful projects, Tinggården, still an often used example(Killock, 2014).

From the 1970's in Denmark there was a boom of 'Bofælleskab'. These were small flats linked to shared spaces such as collective cooking and eating facilities. These projects have been the inspiration for Mccamant & Durett who came to visit Denmakt in the 1980's. (Vestbro, 2010)



11. Common house and pool of 'Skråplanet'



14 . 'Seattedammen'



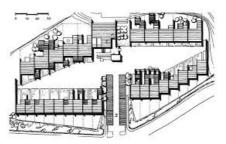
12. Communal garden of 'Skråplanet'



15. Communal kitchen of 'Seattedammen'



13 . Design of 'Skråplanet'



16 . Design of 'Seattedammen'

In the Netherlands the organization "Centraal Wonen", "central living", started in 1969 when an advertisement was written in the newspaper by the 36-year-old Lies van den Donk van Dooremaal;

"Wie ontwerpt een wooneenheid met een centrale keuken en een eetzaal, een centrale was- serij, een kinderkresj, studieruimte, gemeenschappelijk te gebruiken logeerkamers en daaromheen of daarboven eigen kleine wooneenheden voor elk gezin?"

- Who Designs a living unit with a central kitchen, a dining room, a central laundry, childcare, study, communal used guestrooms and around or on top of it own little living units for every family. - (Dooremaal, 1969)

Lies van den Donk Dooremaal was convinced this way of living would change the traditional housewife role of women and would allow them to have a career just like the men in those days (Killock, 2014). Although her article was addressed to architects, they did not respond, but many other people did. (McCamant & Durrett, 2011)

In this advertisement Dooremaal asked people who were interested to sign in for a weekend to discuss it. She eventually had to organize 9 weekends, because so many people were interested. (Killock, 2014) "Centraal Wonen" has the same characteristics as the Danish model, but differs in the placement of the common facilities. In the Netherlands clusters of four to six households usually share a central kitchen and living and next to it there is a small central communal building, instead of one shared communal house for the whole community in the Danish model. (McCamant & Durrett, 2011) In 1969 another article was published to attract groups interested in this kind of living, this resulted in the first three cohousing projects in the Netherlands; Centraal wonen Hilversum, Centraal wonen Delft and De Banier Rotterdam(Killock, 2014; McCamant & Durrett, 1988). See image 17.



17. Wandelmeent in Hilversum

The modern cohousing movement

At the beginning of the twenty-first century collaborative housing was reinvented again because of the economic crisis and the environment becoming more important (Bresson & Denèfle, 2015). In this century collaborative housing became more of a way of living, people craved a more social life. This movement of co-housing was led by the middle class. (Bresson & Denèfle, 2015) These days there is a larger amount of space offered to individuals to build on. Hereby the housing stock becomes more personal and satisfies the requirements of the residents (Brouwer & Bektas, 2014).

In 2000 the cohousing movement revived once again, mostly because of the economic crisis.

The economic crisis resulted in groups of people who no longer had all the possibilities and opportunities they had before and were looking for means to make housing possible in an affordable, sustainable and social way (Bresson & Denèfle, 2015; Czischke, 2017).

Out of previous paragraphs these are my preliminary conclusions and remarks

A collaborative housing project is a project that encourages social contact between the residents as well as between the residents and the neighbourhood and a more collaborative lifestyle. The degree of project involvement and social contact differs between the different forms of collaborative housing.

Cohousing is a more restrictive form of the broader term collaborative housing and in these projects residents have complete management over the project and share dining at least once a week. This sharing is not only functional but also has a social meaning. Cohousing is in this thesis the chosen form of collaborative housing because this form is more specific and extreme. People share even more, the meal, than in the other broader forms of collaborative housing. This more profound form of collaborative housing makes the process of the design brief more complex and makes forming a design brief more of a challenge.

Out of the described history one could conclude that cohousing is a very old principle implemented in different forms. These different forms arose because of different motives and causes in history. Currently cohousing is again coming back, mainly because of the economic crisis, attention for sustainability and the desire for a more social life.

In a cohousing project multiple clients or households have individual wishes but also collective wishes and demands, which are intertwined. The way cohousing is more restrictive form than other forms of collaborative housing, makes a higher significance of participation.



Participation in design

In this chapter participation is discussed. In the first paragraph the general term of participation is explained, what is it and why is it important? In the next paragraph the process of participation is discussed according to different researchers and different techniques. In the following paragraph one of many participation techniques is discussed; context mapping. Context mapping is a technique found in literature that is now mainly used in the field of product design. It seems a well-developed technique that could also be conducted in the field of architecture. In the last paragraph there is discussed why and how this technique is applicable to an architectural design process. This process will also be used in the design phase of this graduation project, which will be discussed further in the design part of this thesis.

What is participation?

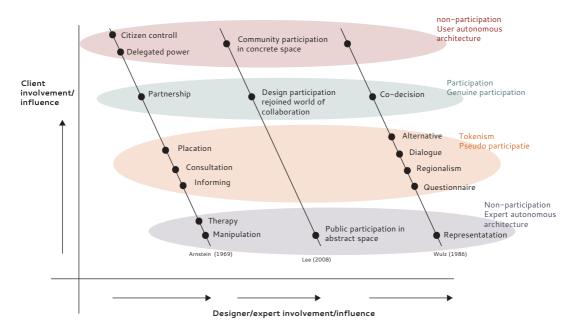
Since 1950, users, have been behaving themselves purely as consumers and costumers. But since the 1970s, people have become less of a client and more of a partner in the creative proces. According to Sanders (2006) the general process of design is going towards a co-design process from a user-centered design process. Participation in design started off in Scandinavia in the 1970's and 1980's as a partnership between academics and trade unions, to empower workers and make a workplace more of a democracy (Spinuzzi, 2005). The trade unions were involved in the design of computer technologies, the human computer interaction (Spinuzzi, 2005). According to Lee (2008) the term "Design Participation" was first introduced at the Design Research Society conference in 1971 in Manchester. There, Design Participation was defined as a specific field that brings the 'Everyman' into that field. (Lee, 2008) 'Participation may be seen as direct public involvement in decision making processes whereby people share in social decisions that determine the quality and direction of their lives' (Sanoff, 2000) According to Spinuzzi (2005) participation is research and involves the tacit and invisible aspects of human activity. In participatory design participants design artefacts, work-flows or work-environments together with researcher-designers. (Spinuzzi, 2005) Co-creation and co-design are the upcoming practices that come with participation. (Sanders & Stappers, 2008, 2012, pp. 15–35) Co-creation is creativity shared by two or more people, co-design specifies this to the design process. Sanders & Stappers (2008) define co-design as "the creativity of designers and people not trained in design working together in the design development process."

For a long time already there is an understanding that participation comes in different levels, Arnstein (1969) is one of the people who describes different levels of participation using the participation ladder. She splits participation up into eight rungs of a ladder, the higher up on the ladder the more power the citizens have. You could argue that not all of the rungs would fall under the term participation. See image 18.

Lee (2008) splits the worlds of participation into three levels; the 'abstract space' for experts, the 'concrete space' for people and the 're-joined world of collaboration'. In these worlds of participation different modes of participation will be executed, respectively 'Public Participation', 'Community Participation' and 'Design Participation'. See image 18.

Wulz (1986) defines seven different forms of participation between the expert and the user. He describes two sides of this division, the 'expert autonomous architecture', wherein the architect design and planning are made by the architect himself all alone, and the 'user autonomous architecture', wherein the user takes the design and planning into own hands. (Wulz, 1986) Deshler & Sock (1985) only identifies two types of participation. 'Pseudo participation' wherein the participation is limited to gathering information at the user's side but still making the decision solely on the expert side. The second type of participation is 'genuine participation', where the partnership is a cooperation between user and expert. See image 18

Among these different levels four types of participation could be distinguished; expert autonomous participation, pseudo-participation, genuine participation and user autonomous participation. In this thesis and this cohousing project the participation that will be applied is genuine participation, user and expert are equal. See image 18.



18. visualisation of different types of participation

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To understand and visualise this change of design and research towards a more participatory way Sanders (2006) developed a map, a collage, see image 19. In this map there are two separate axes, the vertical axe is the approach of the design research and the horizontal axe is the mind-set of those who practise the research. As seen in the map design can be from expert mindset to participatory mindset. In the expert mindset, designers see themselves as the expert and the people are their subjects or users. In the participatory mindset, the designers work with the people and not only for them, they see the people as the experts of their own experience. The right side of the map is the participatory design zone, this attempts to meet the needs of the future users and actively involve these people into the process. This way of designing started in Scandinavia and uses thinking tools during the process, it is the Scandinavian design bubble in the map. A newer way of design research is the generative tools bubble. (Sanders, 2006)



19. Visualisation of design research

Found in literature there are three reasons why users should participate in design. The first reason for the users is the wish for involvement, or for the designers to enhance the support of users. (Sanoff, 2007; Wulz, 1986). The second reason for participation is to get to know ones tacit knowledge (Sanoff, 2007). This tacit knowledge is mostly concerning the persons needs and wishes, but also about the why of these wishes and demands (Blyth & Worthington, 2001). The third reason for participation is the a form of collective intelligence, a group of people has more knowledge than an individual alone (Sanoff, 2007) According to (Fischer, Giaccardi, Eden, Sugimoto, & Ye, 2005) creativity and intelligence comes largely from the interaction and collaboration with other people. But he believes in the quote of Rudyard Kipling: "The strength of the wolf is in the pack, and the strength of the pack is in the wolf". Fischer et al. (2005) believe there is a need for an individual as well as a combined creativity. All of above reasons for participation need to be taken into account while developing the method to form a design brief.

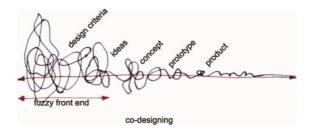
The process of participation

Similarly, according to Spinuzzi (2005) there are three stages in every participation process. The first stage is the 'initial exploration of work', The designers meet the users and get to know their way of working together, their used technologies, their work flow etc. This stage uses techniques such as observation and interviews. The second stage involves multiple techniques to discover the ultimate future workspace, it is a 'discovery process'. In this stage the goals and values are being formulated and a desired outcome is discussed. This stage has a high degree of involvement of the users and also a high degree of group interaction. Organisation games, toolkits, storyboarding, and workflow models are techniques being used in this stage. The third stage is the 'prototyping' stage. Artefacts are made to envision the desired workspace. These three stages will be repeated multiple times. In this stage techniques such as mock-ups and prototyping are being used to envision the outcome. (Spinuzzi, 2005)

Lee (2008) also developed a three step process of design participation. The first step is the Preference stage, in this stage participants will discover and express their preferences. Images and site visits are used to define these preferences, but also an analysis of their existing spaces. In this stage the participants will cut out design references from magazines or the internet and evaluate their current living situation. The second step is the planning stage; in this stage a brief is set up by a collective process. In this stage participants design their future floor plan by putting scaled furniture into a 2D schematic floorplan. In the last and third step, the processing stage the abstract design tools will be translated to a 3D hands on design. The participants are modeling a simple 'quick and dirty' model together with the designers. (Lee, 2008)

The technique, generative design, as described by Sanders (2006) is shown in the map, image 19. Generative design is characterized by the early start of the design research, in the fuzzy front end as Sanders (2006) calls it. The fuzzy front end, in co-design, is the action before the actual design, see image 20. According to Sanders and Stappers (2008) the fuzzy front end is a very critical phase, in an architectural design you could translate this phase into the formulation of the design brief, this states the importance of the design brief.

Generative tools are developed to be understood by both designers and other stakeholders. (Sanders & Stappers, 2012, pp. 15–35) With these generative tools this fuzzy front end is filled with dreams, ideas and wishes of the people who will be served, the future users. These generative tools, for example a disposal camera are send over to the future users and after the results are discussed in a participatory session. The results are used as a preparation for this session but also as an inspiration for the designers. (Sanders, 2006)



20. The process of co-design with the fuzzy front end

What is context mapping?

Most participation methods focus on evaluation; they are used to check to existing hypothesis or design. Context mapping is a generative research; it inspires as well as informs the design team (Visser, Stappers, van der Lugt, & Sanders, 2005).

Context mapping, see image 21, is a form of participatory design that involves its users in the creation and exploration of a products use. It is used in design to gain the knowledge of the users. It aims to get to know the tacit knowledge of the users, the deeper intentions of the future. It approaches the user as the expert of his or her experience and uses it in a research. (F. Sleeswijk Visser & Ernst, 2017; Froukje Sleeswijk Visser et al., 2005)



21. The process of context mapping

Context mapping uses these generative techniques and is based on the context of the design. By context Visser et al.(2005) mean all factors that "influence the experience of a products use". In this generative technique researchers help to remember user's memories of the past and also to elaborate on its future dreams and wishes. So this experience that is included in the context is based on the past, the present and the future. These future experiences, are also tacit knowledge, and latent needs, respectively knowledge that is hard to explain by words and needs that people are not yet aware of (Visser et al., 2005).

According to Visser et al. (2005) context mapping consists of two parts, as shown in figure 7. The first part is about collecting insights of the users, where in the second part these insights are communicated to the design team.

The first step, before collecting the insights is to prepare for the process. In this phase goals are formulated, planning is made and the participants are selected. Also in this phase is the research on the techniques and picking the techniques. The second step is the Sensitization. This is a way to prepare the participants for the group meeting, to let them get used to the subject. They are encouraged to think of their own experience and personal aspects regarding the subject at their own time and environment. Most of the time sensitizing is done with a workbook. This sensitizing package consists of multiple little exercises and is sent before the session. These exercises will bring up memories on a certain topic and the user already reflect on their knowledge on this certain topic. Next is the session. In this session participants will do generative exercises together. During these exercises people explain what and why they do or say things. They might also tell stories that further explain their input. To be able to use this for the design, the session needs to be analyzed. The sessions will always be recorded on tape and then transcribed. This transcription is not taking into account current hypothesis or rejecting them it is just to explore the context and give the design team some other directions. After analyzing the session, it will be communicated to the design team, they will be informed and inspired. Mostly this is not in the form of a written report, but by a creative interactive technique, such as collage, workshop etc. (Visser et al., 2005)

To approach these users, or in architecture the future residents as experts, they have to be handed the right tools. Only by using the right tools you will be able to get to the tacit knowledge. Sanders (2012, pp. 64–74) describes 3 sets of tools and techniques, Say, Do and the Make tools and techniques. A tool is a material being used to collect the user insights, the technique is the way this tool is used. Tools and techniques for 'say' are mostly questionnaires and interviews, tools and techniques for 'do' are (self)–observations. The tools that are used with it are camera's, note taking paper, tally sheets, voice recorders. In the make tools and techniques, you have people perform creatively. For example to users are asked to make a model. To be able to properly apply these tools and techniques, (Sanders & Stappers, 2012, pp. 64–74) use a toolkit to support these. These toolkits aim to help the participants express themselves.

How is context mapping applicable to architecture and cohousing?

There is a lot of research done on how to involve future residents in an architectural project, but most of them focus on the design phase. Because this involvement is needed earlier on, context mapping is a technique that was positively noticed. Context mapping is a technique developed with product development in mind, but is highly applicable in the field of architecture. The method of contextmapping sees the future user as the 'expert of his/her experience' (Sanders & Stappers, 2008).

In every architectural project it is important to involve the future residents early on in the process, thus already before the design, in the phase where the assignment is explored. As Sanders (2006) calls it, the fuzzy front end of the design. According to Peña the abstract thinking, getting to know the tacit knowledge is a very important factor of the briefing phase (Peña & Parshall, 2001).

In a cohousing project, the process differs from conventional process, mainly as there are a lot more parties involved. In cohousing projects there is an even a higher need for involvement of the future residents, because of the complexity of the design of collective spaces. Thus a participation and engagement of the future residents in the design process is a must. In a cohousing project it is very important to involve and engage the users early on in the briefing phase, thus the concept mapping process is highly applicable.

Out of previous paragraphs these are my preliminary conclusions and remarks.

Participation is a process that brings the 'everyman' into the field of design. Multiple researchers formulated different levels and forms of participation. Four forms of participation could be distinguished from this chapter; expert autonomous participation, pseudo-participation, genuine participation and user autonomous participation Only genuine participation, is the level desired for the developed method in this research.

Context mapping is one of many methods of participation and developed within product development. This method consist of five steps and focusses on the 'fuzzy front end' of the design. Translated into architecture this is the design brief. By applying the method of context mapping the researcher will discover the wishes and demands of the users. These are collected, analyzed and then communicated to the design team. This research into the user is done by different techniques and tools within a structured model. This method of context mapping with its tools and techniques is a very appropriate method that could be implemented into the process of forming a design brief within a cohousing project. This technique approaches the user as the expert of their own experience and consists of five steps.



Design brief



The method, context mapping, described in the previous chapter, is highly applicable to the programming process, the process of forming a design brief.

The involvement of the future residents early on in the process of the design brief is an important factor. The design brief is primarly created early on in the process, before the design itself, and explores the main issues and wishes of future users.

What is a design brief?

In a design brief the problem is described for which the design will be the answer. The design brief is a document in which the demands wishes, conditions, aspirations, priorities, cultural values, partnering and financial constraints and or the deadlines for a project are described. (Bogers et al., 2008; Commission for Architecture and the Built Environment, 2002, pp. 11–27; Oostveen, 2018; Zijlstra, 2013, pp. 17–18). Ryd (2004) calls it the construction brief, the meaning is the same; defining project terms, quality, cost and time of the project. The design brief contains a combination of quantitative and qualitative subjects. The designer then uses this document to make the first sketches. (Zijlstra, 2013, pp. 129–148).

The design brief is a document that has a meaning for multiple parties in the design. The future users can express their ambitions and requirements. The designer gets a framework wherein the design should be accomplished. It guides and inspires the other involved parties. It is a great tool as a checklist in the design phase or after the design is finished, but is also important as a formal agreement for the architect and the client. (Bogers et al., 2008; Jones & Askland, 2012; Zijlstra, 2013, pp. 129–148)

Clients often think the brief is not read by the architects, but the opposite resulted from the research done by Bogers et al. (2008). Although architects do think briefing documents can be too long, inconsistent, too common; not enough focus on a specific project, too detailed, not enough detail or incomplete, most architects support the development and see the need for the document. Most architects would like to be more involved in the process of forming a design brief. (Bogers et al., 2008)

The content of a design brief

According to Oostveen (2018) the design brief must be set up as a document which describes a space inside the building per chapter. It also needs to be set up as a list of demands, also formulated as demands so they can be tested in the process. The client needs to be able to use this document as a measuring instrument. (Toornend Partners, 2018)

Most of the time architects find the priorities and mix with requirements vague, because it is mixed with standards and norms that are standard. A design brief has to have a clear priorities and needs to show a difference between demands that are a must and a demands that are more flexible to design with. (Bogers et al., 2008; Zijlstra, 2013, pp. 129–148). It is also important to not only to include quantitative requirements but also qualitative requirements, such as culture attitude and feelings. (Bogers et al., 2008)

Bogers et al. (2008) also mention that there was a slight disagreement under different interviewed architects in their research, on whether architectural opinion and esthetical demands should be included in the design brief. Expressing this in words appeared to be challenging and the pictures of specific buildings as references seems to dominate the demands of the clients and makes it harder to design. (Bogers et al., 2008) Oostveen (2018) sees a 'Pinterest board' as an essential part of a modern design brief, it is used to show the demanded styles and emotional qualities.

According to Bogers et al., (2008) there should be a clear distinction between the strategic requirements, ambitions, functional briefing and the technical more detailed part of the brief. He advises on a separate strategic brief, project brief, a fit-out brief, and an operational brief. Oostveen (2018) seems to agree on the separation of design briefs and describes 4 different briefs. Firstly the emotional brief; the brief wherein the wanted perception of the client is described. In this brief the color, materials, shape, feeling of a space are discussed, and the management and sustainability of the project are described. In the functional brief, the what and how of the design is described, it mentions the activities that will take place in the building. The spatial design brief contains all the spaces with its facts combined with a relational schema and some spatial demands. The last part of the design brief is the technical design brief. This contains the specific architectural and technical demands, products or installations that are needed in the building. (Oostveen, 2018)

Peña & Parshal describe the design brief as a docement considering four major themes; function, form, economy and time. Function is about the people, the activities and the relationships between those, it's about what will happen inside the building. Form is all about the site, the environment and the quality, in other words what is the current situation and what will be there in the future. Economy is about the budget, the operating costs and the life cycle costs. Time is about the past present and the future. (Peña & Parshall, 2001)

The design brief within the building process

There is a disagreement in the literature and among architects on the approach of the briefing process. Some architects see a complete briefing document as a perfect start of the design process, others see the briefing process as an ongoing flexible process during design. Some question if clients know their demands without seeing sketches of the architects, others see the constant change of requirements as more work, because of the constant change of the design. (Blyth & Worthington, 2001; Bogers et al., 2008; Commission for Architecture and the Built Environment, 2002; Jones & Askland, 2012; Oostveen, 2018; Ryd, 2004)

The process of forming a design brief, briefing or also called programming, is identifying and formulating the requirements of a client in the process. (Bogers et al., 2008)

According to Duerk (1993), briefing is the phase wherein the problem definition is developed. This is done by a combination of an analysis of the context and the desired qualities. Prior to the planning of the project, there is a need for a clear set of objectives and guidelines, these will state what the projects need to do and be like. Duerk (1993) calls this 'pre-design programming'. A lot of times, in housing, the design brief is taken for granted. The research that the architect did in the past leads to a certain design of dwellings, there is no user influence. Some firms hand out a small checklist where clients can choose color of the brick, size windows etc., minor influence on the design.

According to Commission for Architecture and the Built Environment (2002, pp. 11–27) the design brief is a flexible document that is always evolving. In the early stages, it will just ask questions and set challenges for the designers, as in later stages the design brief will provide answers for all the other involved project team members. The design brief will start off as a document with simple statements and the objectives of the project. With this, the first agreements, feasibility and budget checks can be done. In the next stage a more detailed design brief is needed, but it is still mainly strategic. This is used to make a business plan and more detailed feasibility studies. In the final stage, the design brief is set up as a detailed reference document. This makes sure all the team member can consult this document and take everything that is needed into account. In this detailed version, the performance requirements, and space types and quantities are set. At all stages, the design brief is used as a communicative document. Writing the design brief is an ongoing process, leading to an increase of details. (Commission for Architecture and the Built Environment, 2002, pp. 11–27)

Because not all of the wishes or demands can be taken up into the design brief, it is expected from an architect to think along with the client so the design will succeed in fulfilling the need of the client. To check if the building meets the design brief there are many tests to check the design (Zijlstra, 2013, pp. 129–148)

Most of the time there is a lot of work spent, on the design brief, both on the clients' and architects side. The writers of the brief develop it with interviews with the end users, discussion with management but also with help of external actors. The readers, mostly architects, spend a lot of time studying this document, making summaries and analyzing the content of the document. (Bogers et al., 2008)

The process of programming consists of five steps, according to Peña & Parshall (2001). The first is validate the goals, what should be achieved with the project and why? The second step is to collect the facts and analyze them. The third step is to develop and test out the concepts, in what way does the client want to achieve these goals. The fourth step is to determine the needs of the project including money, space, time, quality etc. And the last step is to state the problem, what are the conditions of the design and in what direction should the design be taken? The first four steps can be addressed at the same time or in another sequence, as long as the fifth step is last and separate. In all these steps the tree major themes of function, form economy and time have to be researched. (Peña & Parshall, 2001) Duerk (1993) divides the programming task into two parts; analyzing the existing state and putting out the desired future state.

Opinions vary widely about who sets up the design brief. Peña & Parshall (2001) are convinced design is something different from analyzing and it needs two different individuals with different capabilities and attitudes. They doubt about one person being able to combine these two processes of problem analyzing and problem solving, and favor two separate persons to carry out these processes. (Peña & Parshall, 2001) Oostveen (2018) is convinced the most objective way to set up a design brief is for the client to do it, with or without the help of an external adviser. Other authors such as Jones & Askland (2012) are convinced designers are able to perform the programming as well as a separate researcher.

Design brief within a cohousing project

According to Peña & Parshall (2001), involving future residents in the programming process requires a different strategy, than not including the residents. However a design brief does benefit from user participation. In a cohousing development, the programming phase is a more complex than in a regular project (McCamant & Durrett, 1988).

Because of the involvement of both the end-user and the professional in a programming phase of a cohousing project, there is a strong collective decision-making process. There is a group of end-users with multiple residents. This means the program of requirements has to be treated more flexible according to Bektas et al. (2014). It is a constant change between defining the problems, coming up with solutions and select the right one within alternatives. In this process end-users experience a kind of freedom in the process, because they are able to formulate their own values and wishes that will be expressed within the project (Bektas et al., 2014).

An experienced designer or client can easily set up a list of their demands, but a non-professional client will be more vague in what they want (Brouwer et al., 2014). Especially within a group of end-users with multiple residents this is a difficult process. According to Brouwer et al. (2014) after a first discussion of the requirements, it helps the end-users to reformulate if there are simple possible solutions presented.

users the process is a non-linear process and needs to be a flexible ongoing process.

Out of previous paragraphs these are my preliminary conclusions and remarks.

The design brief is a document that states the wishes and demands of the future residents of a project. A lot of research is done on the design brief, but its content is still a discussion. Not only among researchers but also among architects this opinion highly differs. Researchers and architects do agree on the importance of priorities along the design brief and also qualitative requirements included in the design brief. Besides the content of the design brief another discussion going on about the use of the design brief. Some researchers and architects think the design brief is a linear process that must be finished before the design, while others think it is a circular process where the design brief influences the design and the design the design brief. In research there is not much to be found concerning the actual application of the design brief and the same applies for the practice as we can observe in real architectural 'life'. The significance of the design brief remains, especially in a cohousing project, and should in my opinion be developed earlier in the process with an important role of participation of the future residents. A cohousing makes a more complex process of the design brief because it involved different households that also share collective space. Also because of the involvement of more unexperienced users the process is a non-linear process and needs to be a flexible ongoing process.



Conclusions



This chapter contains the conclusions of the literature research. In this conclusion the three main theories will be discussed. This theory research led to the development of a method, explained in the next chapter.

Conclusion

Along different chapters of this research different sub questions are answered. These sub questions combined form a theory that led to the developed method, explained in next chapter.

The first chapter in this research discussed the concept of cohousing. Looking back on the research on this subject and the history, there are many manifestations developed as results of different motives and causes. As stated before cohousing is contemporary form of housing due to a number of factors, economical, social and sustainable.

A collaborative housing project is a project that encourages social contact between the residents as well as between the residents and the neighbourhood and encourages the residents to live a more collaborative lifestyle. The degree of project involvement and social contact differs between the different forms of collaborative housing.

Cohousing is a more restrictive form of the broader term collaborative housing and in these projects residents have complete management over the project and share dining at least once a week. Multiple future residents have, besides individual wishes and demands, collective desires and requirements and these can also be intertwined. All this makes the design briefing more complex and therefore forms a challenge to develop a method to create the design brief.

To develop a method it is important to know who will use this method and where it has to lead. Participation is therefore very important from the beginning of the process.

The second chapter concerns participation. Participation is a process that brings the 'everyman' into the field of design. Multiple researchers have described that participation and the actual participation level is divers. Among these different levels of participation four types can be distinguished; expert autonomous participation, pseudo-participation, genuine participation and user autonomous participation. Only genuine participation, is the level desired for the developed method in this research. One of the many participation methods is context mapping, this method is a generative research method that focuses on the 'fuzzy front end' of the design, commonly used in industrial design. Context Mapping contains different techniques and tools within a model and is useful to develop a design brief for a cohousing project. This technique approaches the user as the expert of their own experience and consists of five steps.

A design brief is a document that states the wishes and demands of the future users of a project. Its content is still a discussion among different architects and researchers, but there is a general understanding of the importance of the priorities and qualitative requirements found within the brief. The process of developing a design brief differs widely and is for some architects an ongoing process while for others it is a linear process that defines a great starting point for the design process. In research there is not much to be found concerning the actual application of the design brief and the same applies for the practice as we can observe in real architectural 'life'. The significance remains, especially in a cohousing project and should in my opinion be developed earlier in the process with an important role of participation of the future residents.

In a cohousing project a design brief is more complex process primarily because it involves more users, but also because of the involvement of more inexperienced users the process is a non-linear process and needs to be a flexible ongoing process.

From these theories and my analysis about cohousing, participation and the design brief a method is developed. The method is based on the context mapping methodology, a sensitizing booklet and a series of workshops. The booklet consists of seven exercises, one for each day of a week. After filling in the booklet and getting familiar with the subject the future residents will attend different workshops. The booklet and the workshops will be used to get to know the desires and wishes of a future cohousing tenant and tries to get the tacit knowledge of the user. By deploying this booklet in combination with multiple creative design sessions the design brief of a cohousing tenant group could be compiled.



Method to form a design brief

Out of the previous chapters, the review of the literature on cohousing, participation and the design brief an opinion about the briefing process of a cohousing project can be formed. Out of this analyzes a method is formed to guide this process. The exercise book, the first part of this process is based on the previously discussed context mapping methodology; a sensitizing package. The workbook is set up to formulate the wishes and demands of future users and the tacit knowledge. The workbook is the first part of the briefing process of a cohousing project, multiple workshops will follow. In this chapter the workbook and workshops are discussed and explained. In chapter 8 the results of the exercise book and workshops are discussed.

Preparing the method

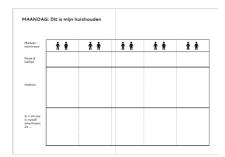
The process of context mapping, see image 22, started with the preparation phase. In this first part, the goals of the total process were formulated, the planning was set up and the participants and technique were chosen. Most importantly goals were identified and used to develop a design brief and to get to know the wishes and demands of the future users of a cohousing project. The sensitizing booklet will be handed out and filled in by the future users before the workshops, and will, together with the workshops, give a great input to the design. This booklet needs to be finished, and the first workshop needs to be held before starting the design. Normally this method will be used to help future users form a design brief, so the participants are already there and engaged. In this research because of the short time of the graduation there are no participants that are planning to live in a cohousing projects, but just people close to the researcher. The technique was based on the method of context mapping, literature and feeling.



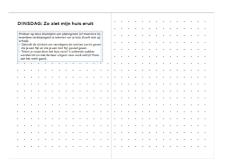
22. The process of concept mapping

Sensitizing, description of the exercises

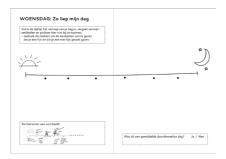
The exercise booklet is set up to let the future users get familiar with the subject of cohousing and getting to know their own wishes and tacit knowledge on this subject. Below the exercises that are in the booklet are discuses, why are they uses and what is the expected outcome? The exercises are showed on image 23 to 39 and also added in the fourth appendix.



Monday: This exercise will define the household and its conditions. It will not only define the number of persons within the family and their age and gender, but also their hobbies and way of life.



Tuesday: On this day people will draw their existing house and define the feeling they get when entering certain spaces. Also it will show their morning routine and the rooms they use in this routine.



Wednesday: Completing this exercise, the architect will get to know a regular workday of a participant. It will also define the moments during the day that give the participant a good feeling and the ones that are less attractive to the participant.

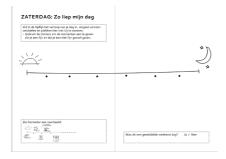
23. - 25. Monday - Wedsnesday of the booklet exercises



Thursday: This exercise will elaborate on the participant's private life and the life the participants wants to share with other future residents. It will define the definitions of privacy and sharing the participants hold to.



Friday: This exercise is more open and will probably result in some knowledge on the way the participants sees the street, the sharing within this street and even some architectural desires.



Saturday: This is the same exercise as the one on Wednesday, only focused on a weekend day.



Sunday: This is a similar exercise as the one on Friday, but it focuses on the garden.

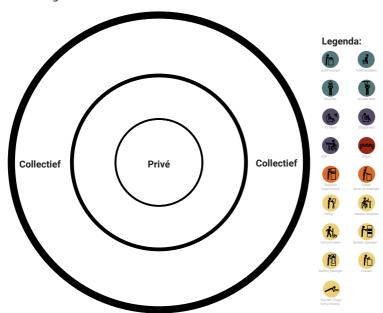
26. - 30. Thursday to Sunday of the booklet exercises

The workshops

The workshops are set up to further analyze the collective wishes and demands of the future users and define their collective demands around collective living. Three workshops are set up.

Workshop 1:

In the first workshop the contestants will get to know each other. The contestants are all asked to bring something from home that defines them and then briefly introduce themselves. After this introduction several discussions around different themes are held; What would your living situation be in a couple of years?, what is cohousing and what are the motives? And what is the ultimate balance between private and collective space? And what kind of location (and building) are fitted for this way of living? After this discussion two games are played. One contains a big poster with the word collective on the most outer circle and the word private on the most inner circle, see image 31. All the contestant get stickers of standard functions and have to stick them on the poster. The second game consists of wooden blocks with different functions on it and a board with a minimal house plan and two fields with sharing and none above it, see image 32. The contestants are asked to put the blocks in the apartment and chooses which functions they need to have in their private space and which one they would be willing to share.



31. The poster for workshop 1.

Workshop 2:

In the second workshop the vision of the contestants are most important. By conducting a collage images and experience are discusses. Every contestant produces a collage in the workshop by using the provided magazines paper and coloring pencils. After the collages are set up every contestant presents their collages. At the end of the workshop differences and agreements are discussed.

Workshop 3:

Before the start of this workshop the workshop leader chose a site and building to use as an option in the second workshop.

In the first part of this workshop contestants are asked, per household, to design with space. They are writing down different function and the percentage of space this function should take in down on pieces of paper. Papers are cut into squares the size of this function will take in. These pieces of papers will then be used to compile a relational schema, what functions should be connected to each other, or maybe be far off of each other. Every household then presents this scheme. And a discussion is again started.

After this first part the workshop leader gives a short introduction about the chosen building. First the building and its neighborhood is discussed, after this the plans of the building are used to apply the relational schemes to the building, once again these plans are presented to the rest of the group and discussed. In these schemes the orientation of the building, the relation the building has to the street and neighborhood are all taken into account.



32. The blocks for the exercise in workhoop 1.

Analyzing

The booklets will be collected and the workshops recorded on video. Together with the material that is made in the workshop this is analyzed. This analysis is used to conduct a design brief for the collective house of the whole group. This design brief will be set up along quantitative and qualitative themes. The quantitative themes will be the housesholds it is built for, the feeling the building has to give among other important features that need to be involved in the design. The qualitative themes of the design brief will consist of the location, the percentage of collective and private space, the description of the private dwellings and its demands, and the description of the collective spaces and its demands.

Capture and share

This design brief will be set up as a booklet and shared with the contestants, small adjustments will be made after discussing this with the contestants.

Conceptualizing

This design brief will lead to the fist designs of the building. This first conceptual design will be presented to the group of future dwellers and discussed. This will happen with a conceptual design and a preliminary design. After this the architect will discuss the dwellings with separate households.



Discussion and reccomendations



In this last chapter of part A the discussion and further recommendations of the research will follow. In the discussion the research results and methods will be discussed. In the last paragraph, some recommendations are made on how to develop this research.

Discussion and reccomendations

There are some points of discussion that will be mentioned here. In a cohousing project the designer and researcher will use a certain average of opinions to design with. One has to be aware that probably none of the participates actually resembles this average. This is why it is very important to listen to all the individuals and design with different degrees, and not only with the average. A design should offer space for variations for each individual, per situation and per activity. During the use of this method or doing research in these subjects it is import to realize that living, even in a group, is a very personal activity. The desired level of privacy, collectivity etc. varies per activity, per situation but also per person, and it might even change over time.

Important to understand is that in this research only one method developed and tested. One that is very applicable to cohousing projects. This is not the only way to do research in ones demands and wishes, multiple methods might exist. Important is to, beside the method, always listen to the future residents.

The design, which will follow in Part B, can be seen as a test case. The method is tested in this case, and the results translated into a cohousing project. However a test case with actual future residents and actual workshops would be more reliable.

Another point of discussion are the respondents in this test case. All of the respondents come from the researchers surrounding. Most of them are highly educated, living in the same area and of Dutch heritage. To be able to say more about the method, one should do the workshops with different groups outside this surrounding.

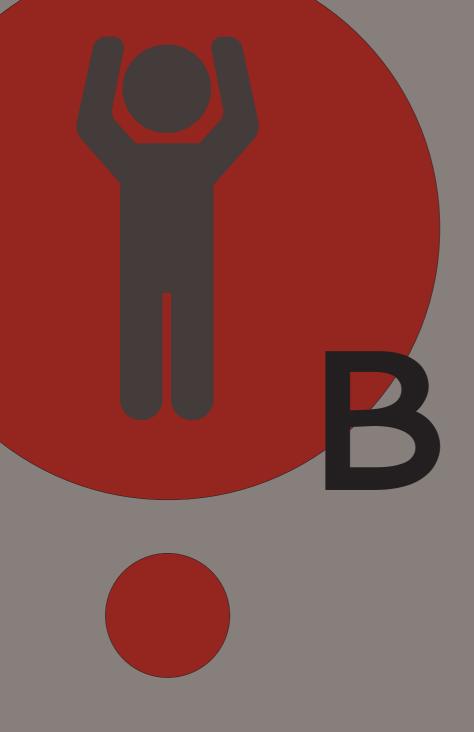
There are also some points that should be taken into account when doing further research into the design brief for a cohousing project.

The number of participants might be of great influence on the method. Thus multiple number of groups should be guided in this process with multiple number of people. And as sad before, the groups should exist of people from different background, education levels, beliefs and age. But, regarding this is a method for groups that are willing to living in a cohousing group, all the participants should actually have the intention to move in.

Also, some say cohousing works best with likeminded people, others say a mix is very desirable. Different case studies must be executed with different mixes of people, to make sure the method is applicable for all of them, or not.

Some further research into context mapping and its exercises would be good. Now, some are choses and tested, but more exercises need to be tested to pick the most suitable ones. One way to research this is to access the field of industrial design and analyze some of their executed workshops.





DESIGN



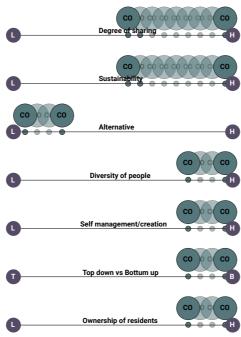
Design assignment

My cohousing project

In this graduation project, besides this research paper a design for a cohousing project will be made This research will be integrated into a design in the second part of my graduation, the architectural design. Because of my interest in renovations and re-use, this will be a redesign of an old building, a former school building. The re-design of this former school building will be based on the interests and demands of the fictive future residents. Before exploring these demands, some general characteristics for the project are cleared, by choosing a side on the next topics:

- The degree of self-creation/management (building together)
- The degree of solidarity/sharing (living together)
- The approach to ecology or sustainability
- The distance or countering towards society, alternative
- The diversity of people (age, background, believes)
- Top-down versus Bottom-up
- Ownership

These qualities are based on the differences between different projects combined with the most important literature on cohousing. In my opinion, these qualities are important factors to distinguish the different forms of Collaborative housing.



33. Characteristics Of my cohousing project

At first, the future residents will live in the former school with a medium to high degree of sharing the facilities. This high degree of sharing will lead to more interactions during the use of the building, and more importantly, to more discussions and maybe disagreements during to process of forming the design brief. The more people that have to share, the more they have to agree on certain demands and design decisions. If the project has a low degree of sharing, the question rises if this project can be called a cohousing project and whether the process of forming the design brief is the same. People who only share the building and design team can all design their own house within their own style and set of demands, without ever having to agree with their neighbors.

This process of discussing and forming a design brief leads to the second characteristic of the project. The project needs to be highly self-managed and created. In projects that are self-managed and created the future residents have a much high impact on the project and its values. In this case, the future residents, as well as the other involved parties, will have to set up a more thorough and detailed design brief and will have to come to an agreement on more topics compared to housing projects with less involvement of the future residents.

To take the design brief seriously, the project needs to be more bottom-up than top-down. Most regular projects are top-down, leading to residents having a choice of kitchen tiles and color and maybe brick color on the outside. However, the original set up of the apartment will never be discussed. By involving the future residents in setting up the design brief, they have to be involved from the beginning and be a major player in this project.

The group of fictive people that will live in the designed project will be a mixed group, as the totally different needs will require a more complicated setup of the design brief. The mixed group will differ in age, belief, way of living, gender and level of education.

Because in my opinion, this collaborative way of living is a good solution for the shortage of housing and a more sustainable solution for future projects, the group should be a cross-section of today's society. It should not be an exceptional group of people, as all sorts of people across society could be involved in such a project.

Concerning sustainability, there must be certain standards in the project. In the Netherlands, newly designed buildings must energy efficient by 2020, so this will be the case in this project as well. Moreover, because cohousing is also socially sustainable a medium to high degree of sustainability is wished for in this project.

As the final characteristic, the fictuous future residents will need to have a say on the project and will play a main role in setting up the design brief. Therefore, the future residents must have the biggest ownership of the project. In the Netherlands, when renting an apartment, you have no say in the design part and changes can rarely be made. Similar to the projects found in Sweden and Denmark the future residents must be owners of their apartment and their shared space or must be part of a cooperation which owns the building. In this way of owning, the residents pay a deposit to the cooperation when they move in and pay rent and service costs every month. This cooperation has a contract with the house owner and pays the total amount. In both these forms of contracts, the residents partly own the building and have a great say in what happens inside.

All of these characteristics and my view on them are also shown in image 33.

Households

Regards to an interesting research with lots of different opinions in a briefing process the researcher intended to include as many different household types as possible. Although because of the large differences and the complexity this also brings into the design process the researcher chose for a group of different people from the age of 30. Among these people a great diversity is chosen in interest, occupation and background.



The design brief

Three workshops, as described in chapter five in the previous part of this thesis, are set up to further analyze the collective wishes and demands of the future users and define their demands around community living. In this chapter the results of the workshops are discussed. Because of a time restriction during this research these workshop aren't actually conducted and the results are fictitious, but based on the answers in the booklets of the participants. However a workshop was conducted during the time of this research, but not completely according to the context mapping methodology, these results are also used to compile this chapter. Based on these results a design for cohousing will be set up.

Results of the workshops

Workshop 1:

In the first workshop the contestants got to know each other, there are a total of 13 people present. At first there was an introduction round where all the households introduced themselves and their household and also explained why they had brought the object they brought along. Most objects were very personal and living oriented. People brought books, toys, tools, plants, flowers, big pots etc. The introduction already showed that there were very different people in the room, with at least one thing in common, the desire to live in a cohousing project.

After the introduction different themes were discussed. The first theme was 'your living situation in a couple of years'. First we defined a couple of years into 8 years. Some of the households concluded that the number of people in their household would probably be different, people would move out or kids might be born. One of the households would be in their late 70's and might need some additional help in the house as a result of their expected health. Others would start their pension and would have a lot more time for hobbies and traveling. Some of the households will have teenagers living in their house by then, what probably would mean there is more space needed for everyone to have a place to be private.

The second theme discussed was 'cohousing', what is it and what are people's motives to start such a way of living. The first reaction of most participants was the social part of cohousing, more engagement with your neighbors, and sharing facilities. Other reasons that the group came up with were social inclusion, taking care of each other, kids have friends to play with and the household tasks taking less time in your life.

The third theme discussed was 'the balance between privacy and collectivity'. At first the discussion started off about privacy, all people wanted a cozy private home where they could exclude themselves from the others at any time. But also the importance of bigger communal spaces were discussed where residents could dine, talk and play together. An interesting topic that came up during this discussion are the semi-private spaces within the bigger communal spaces. Dividing the bigger shared spaces into smaller bits would allow more people to use them while for example reading a book and still be among others.

The last theme discussed was 'the location and building'. Opinions slightly differed during this discussion, probably because contestants came from different situations and surroundings. They all agreed having a city or village nearby where you can easily do your groceries and go out was desired. Also nature is an important topic in this discussion, they all desired a garden and a green neighborhood. Some people would love to live in an old renovated or transformed building, while others see more in a newly build building.

After this discussion two games are played, they are performed together with the whole group because arguments and a discussions are an important factor of the games. The first one is the poster, or dartboard. A big poster, see image ?? is hanging on the wall. Each household gets a paper with stickers, on these stickers facilities inside a house are displayed. Each sticker has to be placed on the poster, deciding if this activity needs to be in a private or common space, or in between. Jokes were made about people wanting to share their shower and toilet, deciding this is a general opinion of the whole group, toilets and showers are private.

The second game consists of wooden blocks with different functions on it and a board with a minimal floorplan of a house and two fields with sharing and not desired above it. Every household gets to divide the blocks on the three fields, private, collective and not desired. Most people start with choosing facilities they want in their private house. Most people choose storage of clothing, sleeping, showering, going to the toilet as their private functions to be in their own apartment. Most people also add a small amount of cooking, storage of food, reading a book, watching TV and eating. The last mentioned functions were mostly positioned in the in between field between collective and private in the first game. Discussed is that most people have certain functions that they would like to have in a minimal amount in their own apartment but also want to share between the residents in a more special communal way, such as a kitchen.

Workshop 2:

During the second workshop contestants produce a collage. Different magazines are provided, living, gardening, technology, lifestyle and design magazines. Every household develops one collage on an A3 sized paper. Writing and drawing is also encouraged. After 45 minutes the collages are presented to the rest of the group and at the end are compared and discussed. What stood out was that most of the collages consisted of a lot of greenery, old trees and colorful garden patches. Besides that among other things play areas, comfy chairs and big couches, big set tables with lots of people, a large luxury kitchen, a big workshop space and tools, an outdoor swimming pool, fitness equipment and books where presented. The discussion mostly consisted of people saying 'oh, I forgot that but that's really nice' instead of 'oh, no I don't want that'. So the collages inspired the others and made clear that there are a lot of similarities between the households.

Workshop 3:

Before the start of this workshop the workshop leader chose a site and building to use as an option in the second workshop. The chosen building and site is described in the next chapter.

In the first part of the workshop the contestants didn't know anything about the chosen building yet and design without a specific site. In the first assignment they drew out different facilities that are desired within the house. After this paper squares in different sizes are provide to give the facilities a desired square size. This differed among the different households. Some people wanted a very big garden while others wanted to have a large kitchen. This set of squares was laid out on a big piece of paper and was made into a relational scheme. First off all, most people made the obvious connections, such as a kitchen next to the dining room and the toilet and shower next to your bedroom. Again all the work was presented to de whole group and an interesting discussion was held about the spaces and their connections.

After this first part the workshop leader gives a short introduction about the chosen building. Subsequently these questions were asked and answered and the pros and cons of this building and it's neighborhood where discussed. Afterwards the plans of the building were used to apply the relational scheme to the building. Every household drew their desired layout of the building inside the existing outer walls. Once again these plans were presented to the rest of the group and discussed. After presenting them the orientation of the building, the relation the building has to the street and neighborhood were discussed and plans were changed because of those arguments.

After this the group was asked to come up with one layout for the whole house together, this was a tricky assignment and sacrifices had to be made.

Although these workshops were fictive one can say that this group values privacy in this collective ways of living and desires little private spots inside these collective areas. Also this group likes to be near the city but also has a desire for nature and a green area. In the group there are a lot of creative people, room for creativity must be taken into account when designing the cohousing project. Most people agreed on what activities would be shared and what would be private. Although some of the collective activities should be shared but can be used in a private way. Some of the shared activities should be held in big spaces, where the full group can be together at once.



34. Poster exercise (image of Feest der Leegstand)



35. Setting Up a house plan (image of Feest der Leegstand)





Location

The school is located in the big city of Rotterdam, in one of the fewer areas that are not bombarded in the Second World War.



36. Historical Photo of the south side of Rotterdam



37.Hillevliet 98

Building

Hillevliet 98 is located in the south of Rotterdam. It is a former school building and built in 1918. The school actually consisted of three schools, two for the GLO (primary education) and one for the MULO (higher education). It consisted of 3 levels, ground floor a first floor and a second floor. In 1921 the third floor or attic was transformed into another school floor. Some additions and changes have been made to the building until 1979.

Now the school is almost empty and under the care of Camelot.



38. Historical Photo of Hillevliet 98



39. Historical Photo of Hillevliet 98



Organization & Finance

Organization

Finance



Design concept



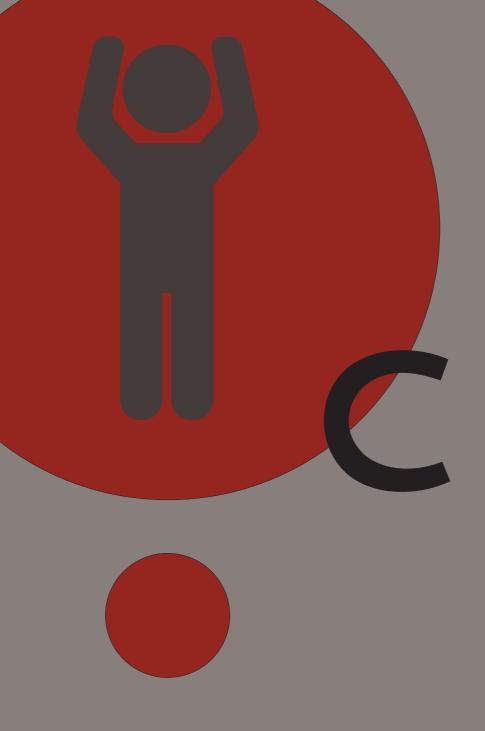
Design



Design

Future use of the design





REFLECTION



Reflection

Evaluation of the method

Reflection



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Photos, pictures and figures

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Part A: Research

Cohousing

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Method to form a design brief within a cohousing group

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- 23. Own image
- 24. Own image
- 25. Own image
- 26. Own image
- 27. Own image
- 28. Own image
- 29, Own image
- 30. Own image
- 31. Own image
- 32. Own image

Design assignment

33. Own image

The design brief

- 34. Own image
- 35. Own image

Location & building

- 36. Photographed at the Archive of Rotterdam
- 37. Retrieved from https://www.bing.com/maps
- 38. Photographed at the Archive of Rotterdam
- 39. Photographed at the Archive of Rotterdam

Appendices

- 45. Own picture
- 46. Own picture
- 47. Own picture
- 48. Own picture
- 49. Own picture
- 50. Own picture



Appendices



Glossary of terms

Term	Description	Resource				
Chapter 1						
Affordable housing	'Rental housing that is below-market rent and open to a broader range of household incomes than social housing.'	(Czischke & van Bortel, 2018)				
Cohousing	'In the classic co-housing developments originating in Denmark, the design encourages social contact, residents have a strong participation role in the development process, complete management of their community, and typically share dining on a weekly basis among other defining criteria.'	(Czischke, 2017; Fromm, 2012)				
Collaborative housing	'An arrangement where a group of people co-produce their own housing in full or part in collaboration with established providers. The degree of user involvement in this process may vary from high level of participation in delivery and design within the context of a provider-led housing project, to a leading role of the user group in the different stages of the housing production	(Czischke, 2017)				
	process.' An umbrella term for a variety of collective self-organized forms of housing, which is wide enough to encompass all international variations.'	(Fromm, 2012)				
Established provider	Organisations and individuals who act in a professional capacity as housing providers (e.g. housing association, private architecture firms etc.)	(Czischke, 2017)				
Chapter 2	,					
Context mapping	Context mapping is a form of participatory design that involves its users in the creation and exploration of a products use. It is used in design to gain the knowledge of the users. It aims to get to know the tacit knowledge of the users, the deeper intentions of the future. It approaches the user as the expert of his or her experience and uses it in a research.	(Sleeswijk Visser & Ernst, 2017; Visser et al., 2005)				

Users	The participants in the conext mapping process.	(Visser et al., 2005)
Tools	A tool is a material being used to collect the user insights, there are 3 sets of tools, Say, Do and the Make tools.	(Sanders & Stappers, 2012, pp. 64–74)
Techniques	The technique is the way in which the tool is used. There are three types of techniques, Say, Do and Make.	(Sanders & Stappers, 2012, pp. 64–74)
Chapter 3		
Design Brief	A design brief is a document in which the problem is described for which the design will be the answer. The demands wishes, conditions, aspirations, priorities, cultural values, partnering and financial constraints and or the deadlines for a project are described.	(Bogers et al., 2008; Commission for Architecture and the Built Environment, 2002, pp. 11–27; Oostveen, 2018; Zijlstra, 2013, pp. 17–18)

Description of the workshop, Feest der leegstand

At the fourteenth of November 2017 I executed a workshop during the "Feest der Leegstand" in Schiedam. I was offered this opportunity via Urbannerdam by Ruimdenkers and Jan Sluijter. I was offered a space in one of the empty buildings in Schiedam. I could execute some research during this event.

At this workshop about 40 people came by. Three exercises where put out and tested by the participants. The first exercise was to make a model of wooden blocks. The assignment was to imagine you would buy your first house in 2040 as a starter, what would this house contain. The second exercise was a model again, but now a model of your future house 20 years from now (+20, would mean an elderly age for most visitors). The third exercise was to put stickers on a poster with the different activities, would you prefer this activity to be exercised in private semi private or collective space inside a building.

A lot of different opinions were giving and people were enthusiastic to do the exercises. One couple (about 40+) has house in Spain, they told me about how they live here in The Netherlands, in a treehouse. They do the laundry at their parents' house. They are ok with sharing all the 'bathroom' activities, even going to the toilet. Most people try to get these activities as the first inside private, they didn't.

This one of the most striking examples, because most people actually provided me with similar plans. Most people put the bathroom activities inside the house first, then a double bed. Most people added a small kitchenette, and say they would be ok with sharing a larger kitchen. A small desk and storage is also often added to the floor plan.

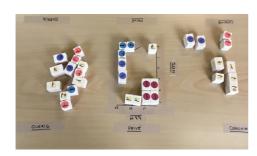
This workshop was executed before the research into context mapping. Although this method was not applied to this workshop some of the results are taken into account in this research.



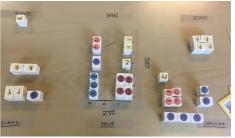
40. Participants Sticking the activities on the poster



41. Participants Sticking the activities on the poster



42. A participant designed a house layout



43. A house layout designed by a participant



44. Participants working on a house layout

Description of the visit at "Sjofarten", Stockholm

In may 2018 I went to Stockholm and visited a cohousing project in the city. Sjofaten is a project that is set up by a tenancy association (KHR) and located in Hammersby Sjöstad in Stockholm. The house consists of 47 apartments and a number of common areas, such as a a shared kitchen, dining room, library, tv room, guest room, sauna, a hobby room, a laundry room and certain rooms for leisure activities. The cohousing project is based on individual freedom and collective responsibility. The residents want to promote sustainable living, on an economic, democratic social and ecological perspective. In this project all residents have a private living unit and share certain facilities all together. The residents are all participating in the management of the project, the cooking and are all participating in one of the groups that takes care of a certain part of the building.

Visiting this project gave me a better understanding of cohousing. Especially because I was invited to come over for dinner. I got a tour in the house and was showed some of the units. I also got the change to ask some question about the house and the experience of the residents while sharing dinner.



45. Sjofarten buildingblock



46. The living area in one unit



47. The kitchen in one unit



48. Bedroom in one unit



44. Hobby room in Sjofarten



44. Dining room in Sjofarten



49. Library in Sjofarten



50. Dinner held in Sjofarten

Exercise booklet



Op weg naar je persoonlijke woning!

Dit boekje gaat over jouw huidige woonsituatie en wensen voor je toekomstige woonsituatie.

Met behulp van dit boekje wil ik graag meer te weten komen over wie jij bent en hoe je woont en zou willen wonen. Op de volgende pagina's staan 7 opdrachten, voor 7 dagen van de week. Mocht het op een specifieke dag niet lukken of niet uitkomen kunnen er twee op dezelfde dag worden gedaan. De oefeningen zullen allemaal in 5 tot 10 minuten uitgevoerd kunnen worden.

Er zijn geen goede of slechte antwoorden, je mag antwoorden op de manier die voor jou het beste voelt. Ook zijn de opdrachten niet maar op 1 manier uit te voeren, tekenen, schrijven, knippen plakken, alles mag.

Als je op dit moment samen woont met iemand of van plan dat in dit project te gaan doen, vul dit dan zoveel mogelijk samen in. Interpreteer de ik, dan als een wij. Het zou fijn zijn dat eventuele conflicten of meningsverschillen er bij de opdracht bijgeschreven worden.

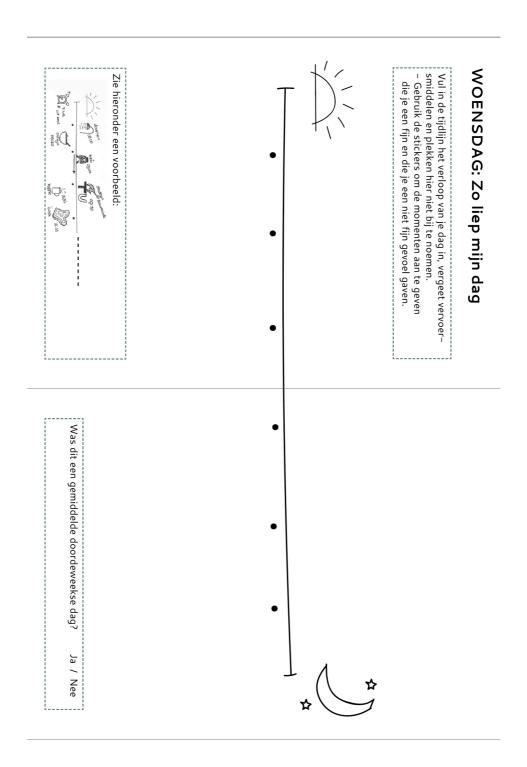
Dit opdrachtenboekje zal ik graag persoonlijk met je nabespreken.

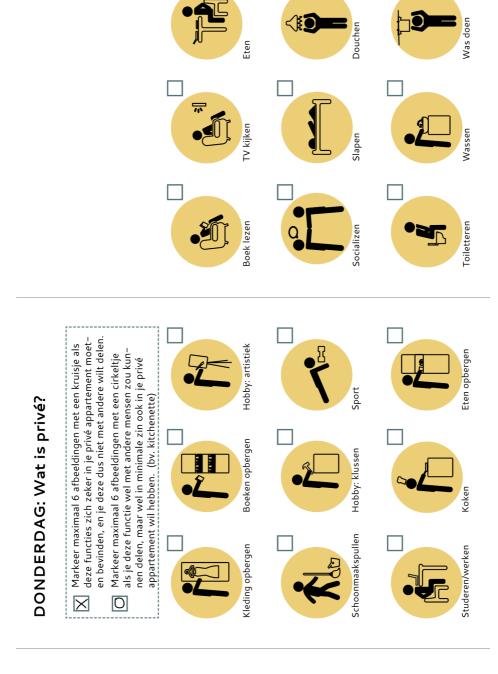
Als je vragen hebt mag je altijd appen of bellen naar 0651469365.

MAANDAG: Dit is mijn huishouden In 1 zin zou ik mezelf omschrijven als ... Markeer: man/vrouw Hobbies Naam & leeftijd

DINSDAG: Zo ziet mijn huis eruit

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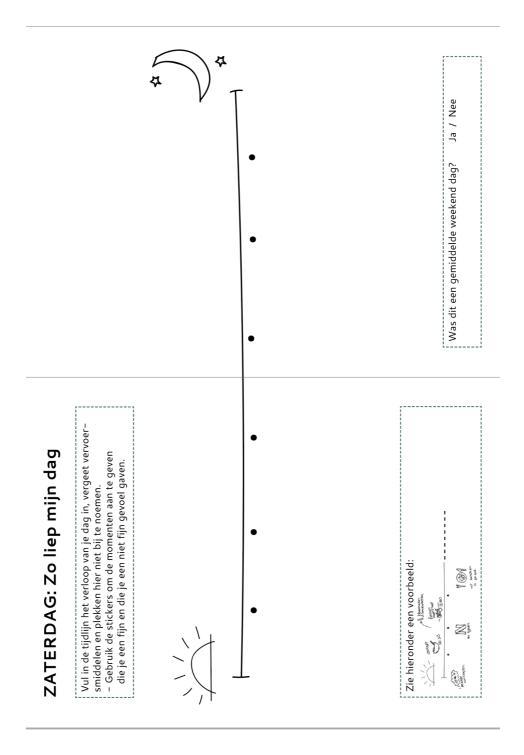




VRIJDAG: Zo zie ik mijn ideale huis

Probeer op deze bladzijdes duidelijk te maken wat jij belangrijk vindt aan de ideale straat dit kan geschreven, getekend, een collage, etc.

Straat



ZONDAG: Zo zie ik mijn ideale tuin

Probeer op deze bladzijdes duidelijk te maken wat jij belangrijk vindt aan de ideale tuin, dit kan geschreven, getekend, een collage, etc.

Tuin

Dankjewel voor het invullen!

Dankjewel voor het invullen van dit boekje, we zijn een stap dichter bij je nieuwe woning!

Zijn er nog vragen of opmerkingen?

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