A housing concept for elderly in Rotterdam that prevents loneliness

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Factory of Things is a large network of people that believes in the creation of a better world with an entrepreneurial approach. Ithaka is an educational side-track for young people to find their way inside this company.

“Anyone who stops learning is old”

- Henry Ford -
I would like to dedicate this project to Alewijn van Os. Someone who should not have suffered so much from loneliness.

This graduation project aims to decrease loneliness among elderly in Rotterdam with help of the method Design for Happiness.

The analysis phase existed of five different studies. Context mapping with elderly, literature research, interviews with experts, interviews with the target group and home visits with Rotterdam citizens aged 75 and older. Goal of this research was to understand how to effectively design against loneliness.

One of the main insights from this research is that loneliness is a subjective feeling that causes a downward spiral of mental and physical implications, which is hard to breach. Despite loneliness being subjective, certain people have a higher risk of becoming lonely. Elderly aged over 75 years old are included in this group, due to multiple reasons: the taboo on loneliness, the higher chance of losing their social network and the societal perception that elderly are vulnerable and incapable.

To overcome these risk factors, it is important that the design intervention gives elderly a meaningful place in society in which they become aware that they can do more than they might think. This gives them a feeling of pride and helps them achieve their personal significance. To be able to reach these elderly, they must be addressed positively and personally maintaining a low threshold. Giving them the possibility to enter a new phase of life, rather than entering their last.

Solely bringing people together cannot solve loneliness in itself. Especially not if someone has fallen into a downward spiral. However, by facilitating the creation of emotional contacts, the social network can be enhanced which can be used as a safety net that prevents falling into said spiral. These connections can be made with use of a superordinate goal in combination with leisure activities.

The target group of baby boomers is not ready to start retirement at the age of 67. They want to stay active, follow their passion, have control over their lives, want to contribute to society and work at flexible hours. Collaborating with the Y-generation can help them fulfill these needs.

In contrast to what senior institutions are doing at the moment, it is important to address a specific target group as possible.

It is chosen to design a new residential form. Communal living can be effective against emotional loneliness as long as it avoids caring for, includes something for the residents to discuss together and respects everyone’s privacy.

Besides, this should answer to the need for a fitting house for elderly, in which they can grow old independently. Furthermore it decreases the risk of an unsafe living area, is experienced as entering a new phase in life and people meet each other on a regular basis as a starting point.

The design intervention ‘Thuis &’ is an alternative residential form for elderly based on a collaborative entrepreneurial activity with youngsters which brings the neighbourhood closer in an accessible way. Since there are different variants, it is likely to fit someone’s passion and narrows down the target group.

To lower the threshold there are different layers of participation. The higher the level of participation, the more loneliness is prevented effectively.

The concept has been evaluated and validated with help of nine elderly, one youngster and two stakeholders. By means of interviews.

Finally a last iteration has been made based on the results of the evaluation interviews, concluding with recommendations for further development and implementation of the design.
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This chapter introduces the topic of loneliness. It defines the scope and approach of this graduation assignment.

This project focuses on loneliness among elderly in Rotterdam. Here, as indicated by the municipality of Rotterdam, 49% of people over 65 feels lonely of whom 10% feels extremely lonely during their daily life. (Erdem, 2014)

After the incident of an elderly lady who was found dead ten years after the event, the municipality started to address loneliness as a serious topic. (De Vries, 2016). What are the risks of loneliness, what are the causes and what can be done to overcome it?

The degree of loneliness is more or less constant up to the age of 75. Focusing on elderly is important since this group is rapidly increasing due to an ageing population and the effects that loneliness has on people is larger and harder to overcome by the elderly themselves. (Erdem, 2014)

The first part of this report discusses the complexity of this topic, including factors that cause current solutions to fail or succeed. This is based on literature research and field research and forms the foundation for the design phase.

The second part of this graduation report combines these insights into a concept that effectively decreases loneliness.

The topic received a lot of attention and an array of citizen initiatives arose to overcome this problem. Despite the many attempts, the overall effect of these solutions seems to be quite marginal. (Findlay, 2003; Fokkema & Van Tilburg, 2006; Machielse, 2003, 2006a).
Design assignment

All parties involved agreed on the following design assignment:

“Design a solution that helps to decrease the feeling of loneliness among elderly in Rotterdam significantly.”

As a requirement, the outcome should be implementable by a new start-up of Factory of Things. This requires the outcome to have low investment costs and to be viable; by means of funding or by being profitable.

Design challenge

The main challenge is to deal with the differences in loneliness in combination with the different characteristics of elderly. Despite an overall broad understanding of loneliness, a detailed comprehension of loneliness is not that easy to grasp. With such a complex phenomenon it is dangerous to treat all lonely elderly the same. Naturally, elderly are as diverse as any other age group.

Besides the differences between people, it is a challenge to reach those with severe issues since loneliness is often seen as something to be ashamed of and is not uncommonly linked to social isolation and fear of leaving the home. Many activities meant for lonely elderly reach only those who are actively seeking for activities. (Fokkema & Tilburg, 2005)

1.2 Approach

The method of Design for Happiness by Desmet & Pohlmeyer (2013) serves as a guideline throughout the design process. Happiness is pursued by many to live a meaningful life. For this project there is chosen to use the following definition of happiness by Lyubomirsky (2007, p.32):

“Happy people do not only have lower risk of mental and physical issues (Seligman, 2008), but also seem to be more ‘other-centered’ and have richer social interactions in daily life. (e.g., Isen, 1970; Kasser & Ryan, 1996; Williams & Shiaw, 1999).

Desmet & Pohlmeyer (2013) argue that it is possible to design for subjective well-being of an individual and even make them flourish. This means someone can live to their full potential (Ryan & Deci, 2001 as cited in Desmet, et al, 2013). The intervention does not focus on the removal or a ‘solution’ for loneliness, but considers the full spectrum of human experience. (Gable & Haid, 2005 as cited in Desmet, et al, 2013).

Desmet & Pohlmeyer (2013) argue that there are three pillars that stimulate flourishing (see Figure 1). If one of these pillars is addressed and the others are not contradicted, the design can be seen as positive design. To flourish, all three pillars should be addressed. The first pillar talks about pleasurable experiences, which focuses on living in the moment. The presence of positive affect and absence of negative affect. The second pillar focuses on personal significance, which stretches the importance of short and long-term goals and aspirations in ones life. A design can then contribute in achieving these goals. The last pillar aims at virtuous behaviour, in which the user is stimulated to do good. Examples are gratitude, temperance, order, humility, et cetera.

For the topic of loneliness among elderly, this method is a good fit. Not only can it help elderly to have richer social interactions, it can also address the taboo surrounding loneliness. Not addressing the taboo, but happiness can stimulate elderly to be more open to the solution.

More specific to the analysis phase, methods as context mapping and interviews lay the foundation with as end result an interaction vision based on the method taught at the master track Design for Interaction at the TU Delft. The reasons behind these methods can be found in Appendix A, B and C.

Next chapter

This chapter gave an overview of the scope of this project, including its main challenges and the chosen approach. The following chapter describes the context more specifically, which clarifies the topic and forms the foundation of the design phase.
Recap

- For this graduation, the following assignment is leading:
  “Design a solution that helps to effectively decrease the feeling of loneliness among elderly in Rotterdam.”
- The main challenge is to get a good understanding of the topic of loneliness, the different effects it can have on different people and reaching the right target group.
- The Design for Happiness method of Desmet and Pohlmeyer is used as main approach.
Chapter 2

The insights for this chapter are gathered by a combination of literature research and field research. Aim of this research is to answer the following question:

“What is needed to decrease the loneliness of elderly in Rotterdam by letting them flourish?”

This research question is answered by means of four subquestions:

- Who are the lonely elderly in Rotterdam?
- What does it mean to be lonely?
- What are theories about the effectiveness of existing solutions?
- What are opportunities to make lonely elderly in Rotterdam flourish?

Figure 6 explains the structure of this research. Complete analyses of these studies can be found in appendix A.

To conclude this chapter, a design direction and a design vision are formulated which serve as a more detailed design brief for the design phase.
2.2 Understanding loneliness

This part consists of several topics directly or indirectly addressing the research subquestions set on the previous page.

**Definition of loneliness**

As the design challenge of page 10 suggests, it is crucial to have a clear understanding of the definition of loneliness to be able to design against loneliness.

The most common and for this graduation assignment leading definition of loneliness is:

"Loneliness is an unpleasant and impermissible discrepancy between the realised and wanted relationships."

This means loneliness is a subjective feeling, which is not the same as solely being alone. The often heard social isolation on the other hand can be defined as the objective absence of contacts and relationships with a social network. (Townsend 1957; Weiss 1982 as cited in Cattan, et al. (2005)) Someone can perfectly fine being socially isolated, as long as he experiences it as pleasurable. (Peplau & Perlman, 1982 as cited in Cattan, et al. (2005))

As someone indicated during a home visit:

“I have always been alone, but that is a choice. I don’t like to chat about the weather with everyone.”

Loneliness has mainly to do with the quality of the relationships a person has and not directly with the quantity of people he is in contact with in daily life. To make it more clear, the phenomenon is often divided into social loneliness and emotional loneliness. (Fokkema, T., & Tilburg, T. V. (2005))

Since it is needed to bring people together and have them interact on a social level to reach an emotional connection, the assumption is that this will reduce the social loneliness simultaneously. If the higher aim of making friends is not reached, people are still more likely to accept each other in their social network.

To ensure that the future intervention will have the desired effect, it is important to determine the factors that cause an intervention to fail or succeed.

Since often experienced emotions during a lonely period are silent, vulnerable, out of tune, desperate, sad and insecure [context mapping session], it is not strange loneliness is often seen as a taboo in society. To illustrate this taboo, a respondent of the context mapping session indicated repeatedly that she is not lonely at all, but it would be nice if she could pick up the phone herself, because no one called her.

It is not only that people are afraid of talking about the topic. People don’t seem to recognise loneliness among themselves or others.

Symptoms are seen as isolated diseases. [Context mapping] Only people who have a reason to be lonely, such as the recent loss of a partner, are allowed to be lonely. The feelings of loneliness are otherwise appointed as niggling. [Context mapping session and interview elderly] This suggests that there is no point in addressing people as lonely, since it will only drive them further away. Hardly anyone will openly admit that they are lonely.

Since loneliness is mostly of an emotional rather than a rational nature, it is important to empathize with loneliness to be able to design against it. Besides reflecting on personal experiences, Figure 8 gives a general impression of the experience of loneliness.

In conclusion, loneliness needs to be addressed as a complex emotional phenomenon that takes on different forms, but has also different effects on different people. To address the topic as complete as possible, it is chosen to focus on emotional loneliness without addressing the target group as lonely.

**Figure 6: Research structure**
Implications of loneliness

Knowledge of the implications of loneliness does not only give insight into the relevance of this topic. It also enables someone to distinguish which symptoms are caused by loneliness and which are for example a result of personality traits. Lastly, it enables to validate the future intervention.

Loneliness can be a threat to someone’s happiness and can even make someone physically or mentally ill. Figure 9 shows the most common implications.

The implications in this scheme are not always straightforward. Most of these implications manifest as a combination, have a causal effect on each other or are indirectly linked to loneliness. Lonely people often enter a downward spiral which is hard to breach.

As an example: it is not uncommon that lonely people over time have difficulties taking care of themselves. This can manifest itself in excessive alcohol use, increased use of medicines such as sleeping pills, debts and pollution of their personal environment. In turn this can cause depression, stress, stomach ache, etcetera. (Hawley, et al.; 2003 as cited in Linders, L. (2004))

Since breaching the downward spiral with such serious implications hardly possible, the more viable route of prevention is chosen.

Fortunately not all implications are seen together and there are multiple degrees of loneliness. Everybody is lonely sometimes, which might not always be problematic. The seriousness of loneliness increases at the moment someone does not see possibilities of overcoming it in the near future. (Fokkema, et al. 2005). For that reason it is important for the future intervention to offer an ever-existing perspective on reaching an emotional relationship with someone else.

With the focus on prevention of loneliness, the serious implications of Figure 9 can be overcome by preventing the downward spiral from happening. This effect can be enlarged by offering people an ever-existing perspective on better times.

**Figure 9: Most common implications of loneliness**
Recap

• To ensure the effectiveness of the future intervention, it is important to find the elements that cause an intervention to fail or succeed.

• The focus lies on emotional loneliness with social loneliness as a side-benefit.

• Because of the existing taboo on loneliness and the lack of recognition, it is important that people are not approached as lonely to make them feel addressed.

• Since the downward spiral lonely tend to fall into is hard to breach, it is more promising to prevent loneliness from happening.

Facts and figures

To determine the relevance of this assignment and get a better understanding of the target group, facts and figures of the current situation are discussed below.

Loneliness exists among all age groups (see Figure 12). Above the age of 75 there is a strong increase in emotional loneliness, due to increased possibility of loss of a life partner and friends. Besides giving more reason to focus on the emotional loneliness, these rates also illustrate that it is important that the future intervention addresses people before the age of 75. After this, the chances are higher that someone already came into the downward spiral caused by loneliness.

In general men are more likely to be slightly lonely, while women deal more with emotional loneliness. (Erdem, Ö., 2014, July) Above 75 years, there are slightly more people that suffer from social loneliness than emotional loneliness. (See Figure 11). Since the differences between men and women are relatively small and the way of approaching them is not very different, there is chosen to make no distinction in the intervention.

Rotterdam scores highest of the four biggest provinces in Holland on the relative amount of loneliness. The areas where loneliness is the highest will be the demographical focus.
Risk factors
To be able to address loneliness at its source and to get insight in the target group, it is important to know about the risks that increase the chance on loneliness and the causes that make someone fall into the downward spiral. Figure 13 and Figure 16 give an overview of such risks and causes. Keep in mind that this is not rectilinear and there is a certain overlap in risk and causes.

Most risks will be addressed to increase the chance of success. Some direct and some indirect. Some of the most striking risks that are viable to design for and the ones that give insight in the target group are discussed below.

Viable risks
Live in a city
Main reason is because urban citizens have less contacts in the neighbourhood, a smaller and less solid social and care network. (Linders, L., 2004) This can be addressed by stimulating an enhancement of neighbourhood contacts. This can also overcome the feeling of fear for the neighbourhood. Especially elderly that are living independently often experience this emotion, something that can prevent them from going out of their house. [Home visits]

Boredom
About a month after the day of retirement, a large chance of boredom arises among the target group. They would like to follow their passion, but don’t know how. The future intervention can help by facilitating an activity.

Poor physical health
Logically seen, there is a higher risk if someone is bound to the home because of decreased mobility or if someone has hearing problems which makes it difficult to communicate. This is less of a problem when someone is already embedded into a strong social network with people that can look after them. Taken together with the risk of poor experienced health, this makes it important that the intervention focuses on prevention and making people feel capable of staying active despite these limitations.

Target group
Some of the risks are personal characteristics, which might be harder to change. It is however possible to make sure people that have these traits feel more acknowledged by the future intervention. This part discusses how this approach can be adjusted to the target group.

Self-deprecation and the negative attitude towards themselves can be partly addressed by giving the target group the confidence that they can do more than they originally thought. This can be done by making them feel wanted or even needed.

The low empathic attitude and negative attitude towards others is harder to address. Elderly seem to be focused on the benefit they can get out of relationships. Something they want to be clear about before they invest their time. This, in combination with a decrease in flexibility in changing routines makes it more difficult to build emotional contacts. [Context mapping and home visits]. One way of doing this is by giving them a superordinate goal in which they need each other. When dependent on someone else, someone will see the positive traits that person has, including the benefit this can have for them. This effect is enhanced when someone is stimulated to keep active. [Interview Bontekoning] It is important to combine this superordinate goal with free time activities, since people tend to keep a certain distance to solely colleagues. [Interview elderly]

The behaviour characteristics as low willingness to take risks and introvert behaviour can also be addressed by making someone feel wanted or needed. However it should be added that a low threshold is very important.
Causes

Besides risk factors it is important to look into the various causes of loneliness. A broad categorisation of these causes is discussed, to determine relevant entry points for design.

Inter-individual

Inter-individual causes are based on the contacts with others, which make it harder to keep the quality and quantity of the relationships at the same level. As said before, the direct loss of someone close can have a strong effect on the risk to become emotionally lonely. Especially the increase of divorces seems to have a large negative effect on the loneliness rates. People that are divorced or single appear to have less diverse social contacts and are less often joining in social activities than people that are remarried. (Terhell, 2014 as cited in Linders, 2014) Obviously, it is impossible to prevent these causes from happening. It is however possible to enhance someone’s social network in such a way, that there is a social safety net for if it does happen.

Intra-individual

Intra-individual causes are more difficult to overcome, because they have to do with the people themselves. Besides a decrease of resources or social capabilities as discussed in the risk paragraph, there could be an increase in standards of a person causing a feeling of discrepancy. The expectation or need to be married in an unmarried situation, can make life unpleasant especially if there is no sight on improvement in the near future. (De Jong Gierveld, et al. as cited in Fokkema et al, 2005)

Societal causes

Societal causes can increase the difficulty of keeping or maintaining relationships. They are difficult to address completely, because they are deeply embedded in culture. However, it is possible to make a positive contribution.

Elderly are often seen as vulnerable and even incapable, which makes it hard for them to participate. (Linders, L., 2004) The opportunities for elderly to be meaningful for society are scarce. In their retirement years however, elderly look for this meaningful place in society. If the future intervention focuses on prevention, the elderly are still in the middle of their lives. This means that it is not time yet to hide them away by labeling them as old, but the intervention could facilitate an activity that gives them this place. This means there is no place for pity in that concept.

The beliefs about getting old also include perspective for one’s future. People are afraid to become as vulnerable as they perceive elderly today. (Context mapping with youngsters) Loneliness is a big part of this fear of being old, which has partly created the ‘loneliness-taboo’ in society. For people who are actually lonely, the taboo makes it harder to acknowledge the feeling and to take action. (Machielse, A., 2011) This fear in combination with the taboo, makes that people do not take precautions for the later stages of life as they don’t want to acknowledge that this time is coming. Since it is easier to go along with someone’s positive beliefs, it is important that these long time intentions are glossed over by giving them the idea that they will enter a new phase of life rather than the last.

Another societal cause over time, is the change in solidarity between different generations. While in the past children were taking care of parents when they became vulnerable, nowadays elderly are expected to take care of themselves with a visit once in a blue moon. (Linders, 2004). From the children’s point of view, the elderly are not as interesting as they used to be. “They always tell the same stories over and over again”, is an often heard complaint. The assumption is that this phenomenon will change, the moment elderly experience a feeling of entering a new phase and take part in an activity that has societal value.

Figure 16: Possible causes of loneliness. (Linders, 2004; J. Gierveld, 1987; Kramer et al., 2002; Peplau et al., 1982; Barelds, J., Dr., Lissenberg, M., Msc., & Luijkx, K., Dr., 2010 as cited in Fokkema, T., & Tilburg, T. V., 2005).
Recap

- Focus is on the prevention of loneliness, starting before the age of 75.
- Demographically seen, the solution should reach the ones living in city areas with low social cohesion.
- The intervention focuses on multiple causes and risks.
- The intervention should stimulate emotional contacts with neighbours.
- This can be done with an activity including a superordinate goal that gives a valuable place in society.
- The intervention should have as low a threshold as possible.
- The target group should be approached based on their personal positive traits.
- The intervention should be experienced as entering a new phase and offer a positive perspective on becoming older.
2.3 Existing solutions

Addressing loneliness has been done for years. Existing interventions have been analysed to get an idea of what has already been done and what is effective and what is not.

Structuring
To get a better understanding of what kind of solutions are on the market, Fokkema and Tilburg (2005) structured the solutions into the earlier mentioned categorisation of causes: inter-individual, intra-individual and societal. See Figure 14. Inter-individual solutions seem to work best, but have the danger of creating something that only brings people together. Mostly since those interventions lack the focus on emotional loneliness, prevention and how to overcome the loneliness taboo. For this reason there is decided to enhance the intervention with a partly societal approach as discussed in the paragraph Causes.

Analysis
Multiple existing initiatives have been analysed to make a list of criteria for the design of an effective loneliness intervention. This part discusses one example of each used structure method, the relation of the effectiveness of a loneliness intervention with positive psychology and concludes with a list of design principles for further reference.

In the inter-individual section there are countless examples available. To get the best insights two initiatives that are close to the subject, but have a totally different outcome in terms of success have been analysed. Both aim to decrease loneliness among elderly by bringing them together with the social activity of knitting. The main difference between those two initiatives is that ‘The Best of West’ is clear about her intentions and works with people that accept their vulnerability and are willing to do something against this. ‘Granny’s Finest’ on the other hand communicates as main goal that they make qualitatively good products by people who are best at knitting.

Both initiatives have pros and cons. ‘Granny’s Finest’ seems to do pretty well. They grew quickly and there are always ‘grannies’ willing to help out and knit together. By approaching people on their qualities instead of their vulnerabilities, people are more likely to participate. However, it is not clear if the right target group is addressed. Because they do not specifically target people with risk factors, it could be that they reach people who are already active, which is in line with the design challenge described on page 12.

‘The Best of West’ on the other hand reaches the vulnerable directly, by literally knocking on their door and enrolling them to join. This has as a consequence that this initiative remains small, since the target group is minimal. They have to acknowledge that they are vulnerable. Something that few people will do as discussed earlier.

Societal
The municipality of Rotterdam organised a flash-mob to change the societal view on loneliness. Positive points are that they created awareness for the topic. Less effective was that they also placed more attention on elderly and loneliness, which makes the perception of elderly increasingly vulnerable. In other words, both focus on the pleasure of elderly, but ‘Granny’s Finest’ better succeeds in creating a feeling of personal significance, stimulates their feeling of pride and gives them a valuable place in society.

In relation to positive psychology
Figure 15 shows that there is a clear relation between the use of positive psychology or negative psychology with the success of the project in terms of decreasing the loneliness of the participants. Positive psychology is hereby defined as interventions that contribute to human flourishing of the lonely. This means that the intervention does not focus on the denial or a “solution” for the loneliness, but looks at the full spectrum of human experience. (Gable & Haid, 2005 as cited in Pohlmeyer et al. 2013) The examples shown in Figure 15 are those that have been scientifically evaluated in terms of effectiveness. (Fokkema, T., et al. 2005) Description and further elaboration of this re-structuring can be found in appendix F.

Design principles
From the extensive analysis of existing interventions completed by the outcomes described in literature, design principles have been formulated which are used in the design phase and serve as a validation tool.

- Use the principles of positive psychology;
- Make use of the pride of elderly;
- Offer a valuable place in society;
- Approach elderly in their strength rather than their vulnerability;
- Approach the target group personally by giving them the feeling that they are wanted. (Barelko, J., et al. 2010);
- Be aware of possible negative side-effects;
- Stimulate elderly to go outside their comfort-zone to achieve personal significance. (M. Catan, et al., 2005);
- Give the participant some degree of control over the intervention. (M. Catan, et al., 2005);
- Make sure there is a low threshold for participation. (Fokkema, T., et al. 2005);
- Make the target group as specific as possible;
- Use the principles of positive psychology;
- Make use of the pride of elderly;
- Offer a valuable place in society;
- Approach elderly in their strength rather than their vulnerability;
- Approach the target group personally by giving them the feeling that they are wanted. (Barelko, J., et al. 2010);
- Be aware of possible negative side-effects;
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- Give the participant some degree of control over the intervention. (M. Catan, et al., 2005);
- Make sure there is a low threshold for participation. (Fokkema, T., et al. 2005);
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- Approach elderly in their strength rather than their vulnerability;
- Approach the target group personally by giving them the feeling that they are wanted. (Barelko, J., et al. 2010);
- Be aware of possible negative side-effects;
- Stimulate elderly to go outside their comfort-zone to achieve personal significance. (M. Catan, et al., 2005);
- Give the participant some degree of control over the intervention. (M. Catan, et al., 2005);
- Make sure there is a low threshold for participation. (Fokkema, T., et al. 2005);
- Make the target group as specific as possible;
2.4 Target group

Besides increasing the chance of effectiveness of the design, a specific target group is also important since it can influence the perception, seriousness and duration of loneliness. With help of previously described knowledge on the risk factors and information about generations this part gives an overview of common characteristics of the chosen target group. Since the focus lays on prevention of loneliness, the protest generation (1941-1955) are the target group.

Common characteristics

Experiencing control over their life is one of the most important characteristics of the babyboom generation. Even if mobility has a large influence on their self-reliance, there is a need for control over small aspects of life as what’s for dinner. A quote as: “The moment I don’t have control over my own life, I will make an end to it” is not uncommonly heard. [Own communication, A. Bontekoning, 2016] There is a willingness to be active, they try to keep control and have the desire to contribute to society. It is not uncommon that elderly change their habits in such a way that they don’t need any help from outside. They try not to identify themselves with vulnerable and very old people by keeping distance. This is often the reason that they try to hide their own health restrictions by postponing the use of devices. (K. L., Prof. Dr., 2014; Context mapping session, 2016; Home visits, 2016) If they do need help, they tend to ask different people not to feel too much dependent and to keep the control for as long as possible. For this reason, elderly are generally more content with their lives if they can help others, rather than the other way around. (K. L., Prof. Dr., 2014)

As this research concludes, the need for control stems from the fear to look to the future. The moment people reach the retirement age a fear of getting old comes over them, while they are not ready for that yet. They want to stop working, but want to keep active to slow down the process of getting older. They would rather follow their passion and work whenever they want, independent from what a boss wants them to do. Aart Bontekoning, expert on generations acknowledges this and adds that this is interestingly the same as the Y-generation is telling the world right now.

If those generations work together and the Babyboomers are open to their knowledge and work ethics, they become more energetic, vital and active in life. In companies there is a good collaboration between those generations, because elderly like to transfer their knowledge to a younger generation; they have the largest life experience and they would like to share this and the Y-generation is curious for the knowledge they have. Making them aware that they have the same values, makes it easier for them to collaborate. [A. Bontekoning, 2016; Context mapping session, 2016] Own research adds to this that elderly show a glow of pride when they are appreciated for their abilities.

It is also important for most elderly to be seen as a unique person. Their experiences and habits from the past are important for this, since it makes them who they are. Most people highly value social relationships. Mainly because of the people they contact themselves, but it also gives a feeling of belonging. A visit can be experienced as the highlight of the day. (K. L., Prof. Dr., 2014)
2.5 Design for happiness

To use the method Design for Happiness, a part of the research is directed to finding opportunities that can stimulate elderly to flourish. Each of the previous discussed pillars are addressed below shortly. A broader analysis of the results can be found in Appendix A.

Pleasure
For elderly in a nursing home and in community centers, there are a lot of activities based on increasing their pleasurable experiences. Examples are Bingo, trips to the beach or playing bridge. Since this is widely available and does not seem to help against loneliness directly, this will not be the main focus of the intervention.

Personal significance
This is something that seems to be missing in most activities in nursing homes and community centers. Own research showed that this is mostly because elderly are seen as vulnerable. (Appendix A.C) The moment they start believing that, they do not take on any challenge.

During the home visits and context mapping session, the elderly that put effort in their personal significance were significantly healthier.

All of them found it important that others noticed this as well. Since personal significance seems to be missing, this will be a large part of the focus. The feeling of pride can in this case be used as continuous motivation.

Seeing the alternatives of personal significance with other elderly, can inspire them to find their own again. It is important that this inspiration comes from people they can relate to. [Context mapping]. The activity they find their personal significance in, should be of direct use.

Virtue
The context mapping session showed that virtues can change over time. For example, perseverance and bravery disappear and prudence and gratitude become more important.

The elderly try to be grateful for what they still can do. However, in practice they are more focused on what they cannot do anymore.

Virtues mentioned during the session were virtues as kindness, honesty and love. As an example, one of the visited remarked that she liked to take care of her brother, so she could mean something in someone else’s life.

Since having the same values increases the chance of origination of friendships [Esther Steehouwer], virtues are used as a foundation of this emotional process of making contact.

Kindness seems to be the most suitable virtue in this context. Besides the mentioned, the virtue social intelligence has a large potential, since this eases the friend-making process. It should be noted that people with a high level of social intelligence have a lower risk of getting lonely in the first place. Which might put them out of the main target group.

Recap
The chosen target group consists of people who:
• Are over 65 years of age
• Feel powerless
• Are retired
• Live in an area with low social cohesion
• Want to feel unique
• Are afraid of getting old
• Have a small social network
• Experience uncertainties about how to stay active, follow their passion, contribute to society and keep control over their life.
• Have low self-confidence
• Are lower educated

To respond to as many traits of the target group as possible, the intervention should address a focused group of people and answer to the uncertainties. A combination with the Y-generation could help in this case.

• To stimulate elderly to flourish it is important to challenge them and stimulate them to do good. The virtues to focus on are kindness and social intelligence.
2.6 Future scenario

To be able to design a relevant intervention for the future, a future scenario (2025-2030) is illustrated on the next page and in Figure 25 based on an interview with Aart Bontekoning (expert on generation differences), Marijke de Vries from the municipality of Rotterdam and literature research.

To solve the societal problem of ageing, the government decided to make elderly more independent. They are stimulated to live longer at home and pay more healthcare themselves. This is based on the trend that Babyboomers are calling for more independence and expect less from their government.

However, since the target group barely has a social network to rely on and has difficulties to make ends meet, they are likely to avoid care and become housebound. (Doekhie, K. D., et al. 2014; See page 24 for risks of loneliness)

Taking this into account, the future shows a high risk of increased loneliness.

The Babyboom generation wants to keep living in their current housing as long as possible with the assumption they can always move when it is really needed. They consider moving around the retirement age, but only move when it is really necessary or if there is a place that fits better to their current needs. However, moving to a space where they can become old, is often something that is not mentally or physically possible anymore when it is actually necessary.

As a 92 year old man said during a house visit: “My housing does not suit me anymore. Because of the stairs, I cannot get out anymore. Now it’s too late to move, it’s such a hassle, I can’t handle that anymore.”

This again increases the risk of becoming housebound.

Opportunities that can prevent this generation from falling into the spiral, is by keeping them active, letting them work together with the Y-generation and giving them the opportunity to work on their passion. [Interview Aart Bontekoning] Since staying active to be healthy receives more attention these days among this generation, this is an opportunity waiting to be used.

The future intervention can in that case not only decrease the chance of loneliness and increase the chance of happiness. It can also increase someone’s independence.

Figure 24: Aart Bontekoning. Foto Ton Poortvliet / HH

Figure 25: Scenario presenting a future scenario without intervention.
2.7 Design context

The gathered design opportunities and principles were used to choose a relevant context. One can imagine that stimulating contact between the elderly has a total different starting point and outcome if people see each other on a regular basis or if people are socially isolated. Therefore the potential contexts are based on the residential form, since this makes a crucial difference in the design phase. With a residential form is meant the place someone is living.

Most of the earlier mentioned design principles can be implemented in all three contexts. The differences are discussed below.

Connecting home to home

Of Dutch elderly 63% thinks of moving to a senior home, yet only 14% of this group actually does move. (Woonmonitor, 2015) This corresponds with the fact that most elderly are very keen on their independence, do not want to face the fact that they are getting older and are satisfied with their current housing. This context also fits with the current governmental plans of making elderly more independent.

A design intervention in this context can bring people together by using their own surroundings. This can decrease risk factors of loneliness such as participation in the neighbourhood or moving. Examples of how to overcome these risks are stimulation to participate in their neighbourhood or stimulating contact between neighbours.

Challenges of this direction are that staying in the current context makes it harder to change habits, people still have a large risk of becoming housebound, the risk of living in an unsafe living area is hard to overcome and people don’t see each other on a regular basis yet.

Friends in nursing homes

The amount of loneliness is high in nursing homes. Despite the fact that the elderly meet each other on a regular basis, people miss emotional contact. Some have lived in a nursing home for over 20 years, know everyone, but indicate that they miss a ‘real friend’. They miss an arm around them when they need it, or want to give one. [Context mapping and interview]. Since people meet on a regular basis, this direction is a viable option. The target group however, has decreased significantly over the past years, due to the closing of nursing homes.

A trend that will continue over the coming years. It is expected that nursing homes become for the rich and very vulnerable (for example dementia patients), which is not the main target group.

The starting point of this context makes it difficult to make a solution feel like starting a new phase in life and to approach the residents on their independence.

New residential form

The high threshold to move is also an argument for this direction. Apparently there is a need for a residential form that is not answered yet. Here lies the opportunity to create a context where people meet each other on a regular basis in which the contact making process can be guided. Besides this, it can stimulate a behavioural change by a change of context, it can decrease the risk of an unsafe living area since this can be designed to feel like a village, people can be easily addressed as entering a new phase and people are offered a home where they can become old.

A challenge is to convince people to move. Furthermore, designing a residential form does not fit the scope of this project. Therefore the focus of this direction is mainly on the interaction between people in such a residential form.

Choice of context

Based on these arguments it is chosen to design a new residential home. Besides decreasing loneliness, it can also prevent people from becoming housebound due to decreased mobility, without the ability to pay for the help they need.

Context specific vision

A context specific vision based on the information gathered in this chapter including the reasoning behind it, can be found on the next page. Since this vision creates a context in which loneliness among elderly is prevented by facilitating emotional contacts with help of a superordinate goal instead of solely bringing people together, the outcome of the design phase should decrease loneliness. The use of positive psychology should enroll them to participate.

Next chapter

This chapter gave an overview of the main insights gathered from the research and literature on this topic. Describing characteristics of lonely elderly, what it means to be lonely, theories about the effectiveness of existing solutions and ideas on how to make elderly flourish.

The aim of the following chapter is to find a concept that can decrease loneliness among elderly significantly and fits the need of the future elderly right now based on the gathered knowledge and the context specific design vision of this chapter.
Of the elderly in the Netherlands, 31% starts thinking about moving to a more appropriate home when it is really necessary and for that too late. They move mostly around the age of their retirement.

Elderly are uncertain about what their added value to society is, which can cause a low self-esteem. Addressing elderly as potentially lonely or lonely can lead to a self-fulfilling prophecy. Elderly are seen as weak, ill and dismissed, which can make them believe this is true.

I want to give people around the retirement age who have a higher risk on becoming lonely, the possibility to move to a residential form that gives them the feeling of starting a new phase in life, feeling valuable and in which they are stimulated to make new emotional contacts while keeping their privacy.

Of the elderly in the Netherlands, 63% thinks of moving to a seniors home. Only 14% does move. Which means there is need for senior homes that fit the needs of the elderly.

Most people would rather move than adapt their homes to fit their needs.

Nursing homes in Holland need to be paid by the client, which causes vacancy.

Elderly don not want to move due to fear of losing control over their life. Elderly are afraid to look to the future, since they only see the coming deterioration.

Everyone wants to get old, but no one wants to be old.

It works best to go along with the idea that they are not old yet, since this is a short time belief.

Elderly are looking for someone that associates with them because of who they are and are curious how they are doing.

There is a need for emotional, 'real' contact with others.

Elderly in a nursing home have difficulties making emotional contacts with other residents. So solely bringing people together is not effective.

People are asked to fall back on their emotional contacts when in need of help. There is less professional help available.

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Chapter 3

The previous chapter discussed the current and future context factors, concluding with a design direction and vision. This chapter elaborates on this vision, working towards the design of a residential home that prevents loneliness that future elderly want to go to.

**Design outcome**

As can be seen in Figure 28 there are four main layers in the design of a residential form. The architectural layer concerns the physical form of the home. The conceptual layer describes the overall idea of the housing. Questions that rise in this level are: Do people live in a commune? Is there a guiding activity? Etcetera. The interaction layer describes how people interact on a daily basis. Design interventions in this layer could be for example a shared garden or how to facilitate emotional contact. The promotional layer describes how people are reached, what attracts them, but also how the concept is sustained over time.

The detailing of the architectural layer does not fit the scope of this project. The conceptual layer is mostly discussed in this chapter.

Figure 28: Design layers in this project

Figure 29: Source: letthesunshine 2012

Residential form
3.1 Relevant factors

To gain insight into the challenges and opportunities of designing residential forms, existing residential forms have been analysed. The next page gives an overview of the most important factors.

To learn from existing initiatives, the popularity of existing residential forms is analysed. Explanation and a full analysis of these forms can be found in Appendix C. Since this is not directly related to the target group, this is only used as an impression.

Everybody agrees that the current alternatives do not satisfy the need of future elderly. People think of moving around retirement age, but most of them decide not to do so. Especially the lower educated powerless elderly consider future healthcare reasons, but even for them this is hardly the determining factor. If they do decide to move, close care facilities are taken into account. For this reason it is important to communicate clearly to the target group that the residential form offers a certainty that they took the right precautions. This should be done well, since the familiarity with the form has effect on the willingness of people to consider moving there.

To lower the threshold the residence could best be located in the neighbourhood of the target group. To have the largest effect, this should be in Feijenoord or Charlois. See Figure 12. Besides this, it should be close to public transportation, GP, shops and care facilities to increase the chance people will consider the residence as an option. (Woonmonitor 2015)

Explanation and a full analysis of these forms can be found in Appendix C. Since this is not directly related to the target group, this is only used as an impression.

Also in case of residential forms, some form of vulnerability decreases the willingness to live there. This is also the case for a Thuisshuis, a residential form that is proofed to work against loneliness. Appendix C gives a more detailed description. A good way to resolve the pity in a residential form is by combining people of different ages.

Private housing initiatives are still not very popular, especially among the target group due to the high moving threshold. The threshold can be lowered by giving them the opportunity to step into the facility without the need of a lot of time and effort.

Communal living
A logical solution for stimulating emotional contacts between residents, is communal living. To gain insight into the effectiveness, daily interactions and the preconceptions of communal housing, two founders of communal living; Jan Ruyten and Ewout van Oosten have been interviewed. The main findings are discussed below.

Besides the fact that communal living is gaining in popularity among 50+, there are still a lot of doubts about losing control and privacy, causing reluctance. [Home visits and interview van Oosten] For that reason it is important to give the residents the ability to stay in control of their own routines and make them feel in control of their own life. This means they do not have to eat together and have their own front door including living area and appliances. This also means that there is no care included, unless someone asks for it. The possibility to shift responsibility of someone’s physical or mental health from one’s own, decreases the chance of making emotional contacts. [Context mapping] If serious care is needed, this is best found outside the residential form or family unless there is an opportunity of reciprocity to maintain the feeling of independence.

Despite that privacy is important for the level of success, it is as important for the stimulation of emotional contacts, to have something shared to discuss. This allows people to participate in some way.

Since there are still a lot of prejudices about communal living it is all the more important that people are personally addressed.

To conclude, the residential form should be communicated personally to the target group. Furthermore, it should launch in Feijenoord or Charlois close to public transportation, a GP, shops and care facilities. The focus on vulnerability should be avoided and the threshold should be kept low. Communal living can be effective against emotional loneliness as long as it avoids caring for and includes something to discuss together.

Lower educated people find it more important to live close to care facilities than higher educated.

More than half of the elderly above 75 years lives alone. According to CBS, this will be approximately 1 million in 2020.

Of Dutch elderly thinks about moving
84% of them decides not to
66% of them is between 50-64 years old
64%

16% of people who recently moved did this because of the potential need for care in the future.

Over 3/4 of the elderly that are interested in communal living

Reasons to stay are mostly
shops, public transportation and GP. Renters value safety and shops the most.

Elderly like to live in a
neighbourhood with people of diverse ages and facilities.

Thuisshuizen have proved
to decrease loneliness significantly.

People with low experience of control over their lives have a higher need for care.

Elderly with a rental home or lower income are more willing to move.

The powerlessness lives in a rental home but is less likely to move than the expecting elderly.

For those people who actually move, living smaller is the most important reason.

Citizen initiatives are still uncommon in the residential elderly sector.

Of the elderly are happy with their home.

There is a shortage of suitable residential forms for elderly.

People who consider moving in the future, consider this for healthcare reasons of themselves or their partners. This can even be out of precaution.
3.2 Design direction

Based on the context specific vision described in the previous chapter and the design principles that support this, the relevance of the conceptual layer ideas are evaluated. This resulted in three different design directions, presented on page 47. Each visualisation includes a small description of that specific direction. A scale shows how much is done together and how much is done individually, since this is one of the main differences.

To evaluate the viability of each design direction, Figure 32 gives an overview of the criteria based on the context vision and design challenge. The more to the right in this scheme, the better the solution scores on this principle. If a design principle is not answered yet, no score is given. Besides this, it should be taken into account that some design principles can still be integrated after the decision, which makes this overview only a guideline. The main topics of the design vision are shortly addressed for all design directions.

All directions facilitate the grow of a larger emotional network by bringing people with the same interests together and giving them a topic of discussion. Besides this, it gives the perspective that there is always a way to get out of loneliness. Something that should decrease falling into the downward spiral. Each of these directions can still be include youngsters in a later stage.

**Construction kit**

- **Essence**: Facilitates a way to build a suitable senior house together with friends in an easy and less time consuming way.
- **Description**: There is a communal area where people physically meet and there are shared appliances. How much time is spent together is self-determined.

**Flex privacy**

- **Essence**: Living completely independent with the stimulation to combine private spaces.
- **Description**: All residents live seperately and have an empty space at the front door that asks to be 'completed', to enable someone's passion. By combining these spaces and decreasing their privacy a bit, more contact can be stimulated.

**Choice menu**

- **Essence**: Multiple variants of residential forms with a common activity someone can choose from. This results in a residential form that attracts people with the same intentions and values.
- **Description**: All residents have their own living space seperated from the others, but people meet each other at the place of activity.
Construction kit
In the current situation it is possible to build such a house, but it takes around five to nine years to realise. This idea should decrease that time by giving a ready made ‘construction kit’. It is meant for people who are already thinking of moving to take precautions for the future, which decreases the size of the target group. After all 90% of the people is happy with their current home. See page 43.

The idea is built on the principle that it is easier to hold on to your older friends than make new contacts. Besides this it has as main benefit that it stimulates people to work together, stimulates a feeling of entering a new phase (since to build they should anticipate on their future) and it gives a clear feeling of control over their life.

Flex privacy
This direction is based on the idea that elderly have a need for privacy. Answering to this, lowers the threshold significantly. Besides this, the feeling of control is relatively high. The assumption is that if people are not obligated to do activities together, but are stimulated to do so increases the chance that this will actually happen than if it is obligated.

Choice menu
The choice menu is meant for people that want to follow their passion, but don’t know how. The clear superordinate goal should give them a valuable place in society, stimulate the emerge of emotional contacts and feel like something completely new.

Higher risk on loneliness
Since the construction kit and the choice menu are based on a superordinate goal, there is expected that this will increase the empathic attitude of the elderly. Since the construction kit only has a superordinate goal in the starting phase of the residential form, this direction scores a bit lower. The starting point of the construction kit, however, has as a benefit that it starts with friends which are more likely to be empathic to each other because of their already existing emotional bond. The superordinate goal in these directions also stimulates self-confidence, by giving the pride that people are able to do more than they might have thought in the beginning.

New phase of life
Each direction gives a feeling of a new phase in life by asking the elderly to move and furnish their home. Besides this, the construction kit and choice menu asks the future resident to make choices for a future in which they didn’t reach their older day yet. Do we want a spare room for our grandchildren?

Feeling valuable
The common activity of the choice menu asks everybody to participate. Which stimulates people to develop their skills and talents and gives a feeling of pride when tasks are accomplished.

New emotional contacts
Just as last aspect, the choice menu scores clearly highest here. Despite that all directions are likely to attract people with the same interests and includes a topic of discussion, the choice menu has the possibility to guide the creation of emotional contacts by giving guidance on how to run a business.

Privacy
Since residents are in complete control over their privacy with the direction flex privacy, this directions scores highest here. Regarding privacy, the construction kit resembles the Thuishuis the most. They have a common space, including appliances. The choice menu has full privacy, but need to work together.

Figure 32: Choice criteria based on context specific visions.
Approaching target group
Part of the design challenge is to reach the real critical. Especially the low willingness of taking risk is key for choosing on a conceptual layer, since other aspects can easier be included in a later phase of the design process. Since flex privacy is closest to what people are familiar with and has the least obligations, it scores highest on this aspect. On the contrary is the choice menu, which feels more like a concept which one rolls into. There should be noted though, that all directions have a high threshold since it requires one to move.

Design for happiness
As discussed on page 32, it is important that the concept includes besides a joyful experience also personal significance and a certain stimulation of virtues behaviour. At this level of detailing, the choice menu seems to stimulate a larger feeling of personal significance with help of pride since it has a continues challenge. The construction kit and flex privacy on the other hand have still more freedom to answer their personal significance. The virtues of kindness and social intelligence can still be integrated in all directions, so will not be used as a choice criteria in this stage.

Choice
In some sense all aspects of the vision are represented in the directions. However, the choice menu scores generally higher than the others. Since the choice menu seems to have the highest chance to decrease loneliness, there is chosen for this conceptual layer. There should be noted though that it is important to pay extra attention to reaching the target group. One of the main design challenges as pointed out in the introduction.

Recap
- A new residential form can answer to the current need for suitable housing for elderly.
- Communal living can be effective against emotional loneliness as long as it avoids care and includes something to discuss together.
- There are three different concepts presented inside the chosen context of a new residential form.
- The choice menu fits best to the context specific design vision and will be used as the foundation of the future intervention.
3.3 Essence

The choice menu of Figure 31 is with help of the design principles for the conceptual layer evolved to the conceptual layer of Thuis &:

An alternative residential form for elderly based on a collaborative entrepreneurial activity with youngsters which brings the neighbourhood closer in a low threshold way.

To deal with the differences among elderly (design challenge), there is chosen for different types of Thuis & with all a different main activity. Figure 36 gives some examples of Thuis & possibilities. Each concept draws people with different hobby’s and passions, which should make the first step to approaching the target group in a personal way.

Alternative residential form for elderly

Elderly live in this residential form independent from each other. Everybody is able to form their own routines, have their own appliances and living area. As discussed earlier, a residential form can stimulate making emotional contacts. People have the tendency to keep a certain distance to colleagues, but become friends quickly when this is combined with daily pleasure activities. Other situations where this happens are student houses and study trips as cases on tour at the TU Delft.

Entrepreneurial

Each Thuis & variant is based on an entrepreneurial activity. This could be a Bed and Breakfast till making boats together, whatever is a need for.

Reason for the entrepreneurial part of the Thuis & is that there is an ever extending goal, which keeps challenging. Besides this, there is no room for pity, the moment there is made money on a fair basis it immediately gives a valuable place in society. It also gives a clear feeling of responsibility and control to the residents.

Collaboration with youngsters

The youngsters come by a few days a week to help with the tasks that need to be done as employees. They keep the elderly mentally and physically young and active and youngsters like to learn from the elder generation as discussed on page 31 and 35. Reason they do not live there as well, is because it increases the threshold for the elderly a bit. As they are a bit reluctant to live with people from other age groups (Jan Ruyten and Marijke de Vries). Besides this, youngsters are in a phase where they are settling down, which lowers the chance they would like to live in such a resident. This assumption is further investigated in the validation.

Brings neighbourhood closer

As mentioned on page 22, a safe neighbourhood in which a lot of people participate decreases the risk on loneliness. This is addressed in the Thuis & concept by stimulating the neighbourhood to be involved as much as possible as a volunteer or customer in the cafe.

Next chapter

The next chapter goes more in depth on the details. The multiple layers of participation should decrease the threshold of actually participating significantly. Being involved with a layer increases the chance someone will participate in another layer in a later stage.
3.4 Interaction vision

To get insight in how the interaction layer should function, there is constructed an interaction vision. This vision is used throughout the process as verification mechanism and as an inspiration and guidance for the coming design phase. In the previous chapter there is given the vision on which the conceptual layer is determined:

I want to give people around the retirement age who have a higher risk on becoming lonely, the possibility to move to a residential form that gives them the feeling of starting a new phase in life, feeling valuable and in which they are stimulated to make new emotional contacts.

To realise this vision, I want the residential form to interact with people on a safe, seducing and challenging way. See Figure 37.

Safe
I think that it is necessary to expose yourself a bit, to get to an emotional relationship with someone. To feel like someone is there for you and knows who you are, it is important that you give someone else insight in more personal stuff. This will only happen the moment an area is experienced as safe.

Seducing
The seducing interaction is meant to convince someone to come live in the resident, but also to draw someone to a common area if that person is already living there. Seducing contains a way of free will, in which the inhabitant always keeps control. Nothing is obligated, but you do want it.

Challenging
The challenging part is included because a challenge brings people together. Having a superordinate goal works stimulating in the friend making process. You have to point your noses in the same direction and you see the potential someone else can have for you. On top of this, the challenging quality prevents the emerge of pity and stimulates the feeling of pride.

If the interaction layer is safe, seducing and challenging, the design challenge should be answered.

Analogy
This analogy specifies the interaction vision by giving an example in which all words are represented and can be further analysed to find what is needed to reach this interaction in a new residential form. As an analogy there is chosen for playing with lego as a child with others in the room. As can be seen in Figure 38.

Safe
Playing with lego always feels safe, since no mistakes can be made. The previous shaped parts make sure that there is always something beautiful that comes out of the process. If not, someone can start over or change what is already made. There are never big consequences attached.

Seducing
Seeing a mountain of lego ready to be used by you, seduces in such a sense that a child almost runs towards it. The colors and shapes of the lego gives the child the impression that this is meant for them and other children. Because of the endless possibilities is stays seducing over and over again.

Challenging
By playing with it, a child is able to learn and make more beautiful creations next time. The challenge included in this analogy also gives a feeling of pride of their work.

The challenge is divided in bite size pieces (lego blocks), that give the child an ever existing perspective of the future possibilities.

Someone is able to make something on their own, but is more fun by doing it with someone else. When doing so, a higher level is reached. But even if someone plays alone with lego, there always stays a point of discussion: “Can I have the red block?”

Design principles that are collected from this analogy are:

• The target group should feel addressed
• There should be so much designed, that it is always successful but needs the input of the target group to become something.
• There should be no big consequences if something does not work out as planned.
• The elderly should be able to learn and make something they previously didn’t see themselves capable of.
• Should stimulate to work together, but is not obligated. If working alone, there should keep a discussion point.

Next chapter
This chapter discussed the direction of the conceptual layer of this project and gave the first insights and validation for the interaction layer. The next chapter goes more in detail on all layers, focused on the idea Thuis &.
This chapter makes the Thuis & come alive. With help of scenarios it gives an impression of how life will be in such a resident for all target groups on all design layers.

As last chapter gave away the essence of Thuis & , this chapter goes more in depth on the details.

There is started with an overview of the Thuis & on a conceptual layer. The phases presented here in a timeline, show the focus of the rest of the chapter. Since the conceptual layer stems from the contextual vision described on page 38, this part is guided by this vision.

The phases introduced in this timeline are then discussed in more detail, touching the interaction and practical layer. Since the design on these layers stem from the interaction vision presented in the previous chapter, this vision is guides in the parts discussing influences on the interaction of elderly.
4.1 Concept description

To be able to discuss the concept of Thuis & in detail, there is first given an overview of the working components in the service. Since the overall concept has been developed with help of the contextual vision of page 38, the design challenge and the design for happiness method, the relation to those aspects are discussed as well. Figure 41 gives an impression of the working components at a daily basis and Figure 42 shows who is involved.

As discussed in the paragraph Essence of the previous chapter, the Thuis & is:

An alternative residential form for elderly based on a collaborative entrepreneurial activity with youngsters which brings the neighbourhood closer in a low threshold way.

Figure 40 gives an impression of possible alternatives besides the ones described in the previous chapter. These alternatives make sure that the target group can be chosen rather specific, without losing scope.

Different layers of participation

As Figure 42 points out, there are different layers of participation. The higher the level of participation, the more loneliness is prevented effectively. In which the highest layer influences mostly the emotional loneliness and the lowest social loneliness. Mainly since the intentions of people are more likely to be common, there are more points of discussion and there is a larger superordinate goal.

The different layers of participation answers to the design challenge of reaching people with severe issues. As page 47 suggests, the high threshold makes it less likely for the target group to feel approached and this should decrease this threshold. The expectation is that people are more likely to move up a level of participation, than enter directly a higher level of participation. There should be noted that these layers have no strict order. People can enter every layer and can stop with every layer.

On top of this, the different layers of participation involve the neighbours and provide a positive perspective towards the future. The ones that are most involved are probably the oldest ones. In other words, you
In the daily life phase there is discussed how all target groups come together on a daily basis. Here the emotional contacts are made and strengthened.

To be able to continue with a Thuis &, it is important that customers stay coming and a resident or youngster is replaced when needed. The continuity phase discusses how this takes place.

Design for happiness
To answer on a pleasure, personal significance and virtuous level, there are made certain choices in this concept.

To stimulate personal significance, there is chosen to make multiple variants of Thuis &, which are all based on an activity with utility that include a variety of roles. Since the personal significance of people can vary widely, this increases the chance that a task answers to ones personal significance. This is besides the assumption that a resident will only join in the Thuis & if this answers to their talents and skills. The ever existing challenge should stimulate to broaden and deepen these skills.

To stimulate virtuous behaviour kindness, there is chosen to obligate social contact as less as possible, but do seduce them to do so. This lays in the assumption that one only makes random acts of kindness, if he is also free not to do so. If people have made emotional contacts, the kindness will follow as the communal living Thuishuis proofed (page 42 and appendix C).

To increase the social intelligence there is suggested to start with the bed and breakfast. This will attract people that have this virtue as one of their key virtues and can answer to this. From this variant can then be learned for future variants.
Figure 43: Phases of setting-up a Thuis & curant against time.
4.2 Initiation

Creating a board

Initiation of a Thuis & variant is done by a board, which is linked to each variant. This board is the core of a start-up facilitated by Factory of things, but operates independently. This, since Factory of things is solely a network that facilitates and does not want to carry any financial responsibility. Figure 45 shows a scenario of how the board is gathered. The amount of members in the board can grow over time, depending on the amount of available work. If someone has to be replaced or added, this is done by repeating steps two and three of the Figure 45.

The board will be mostly active in the initiation phase, creating and meeting phase and the starting of the activity phase. After these phases they can be called upon in emergencies as internal communication struggles or business related matters. The board stimulates them as much as possible to solve it on their own or teach them to overcome this situation next time. They can reach the board by phone. Besides solving emergencies, the board also watches the quality of the Thuis & variants, not to give it a bad name. This is done by a check every half year in the first two years followed by ones a year.

Laws and regulations

There are countless laws and regulation the municipality and housing corporations need to answer to. Strangely, some even contradict to each other, which creates a tension between the two parties. [Interview with Meurs, see appendix G]

Municipality

As a basic regulation, the municipality is concerned about the accessibility, patency and fire protection of a building. Especially for elderly it is important that the building is WMO-proof. This basically means that someone can grow old in that house. If needed with some small financial help from the municipality.

Besides the standard regulations, the regulations depend on who is involved inside the municipality and the current college program of the city councilor. The interest of that person can determine how ‘green’ the house should be or if it should be suitable for people with dementia. A contact person inside the municipality will guide this process.

Housing corporations

The housing corporations have to do with the ‘woonwet’. This regulates things as the maximum price of € 710,68/ month for a social renting house and the amount of people outside the financial target group that can enter a social renting house.

Architectural layer

Together with an architect, there is given an impression of how the architectural layer of a Thuis & variant is given shape. There is taken the bed and breakfast as an example.

Requirements that are taken into account in the creation of the architectural layer of a Thuis & B&B are:

- All hallways should be accessible with a wheelchair.
- There should be a communal space for residents only, located on a central spot for all rooms.
- The rooms should be close to similar, to avoid arguments and internal moving.

There should be a room for guests, which is located close to the communal space. This room should be adapted for helping elderly, so it can be used as a terminal room for the residents when needed. This stills the worry that they have a place to get old. Reason for the central location in the building, is that people are still involved in the happenings and do not feel put aside.

- If there are multiple levels, there should be an elevator in the building.
- The activity room should be constructed in such a way, that in can be reconstructed to living spaces for if the Thuis & fails or gets another destination after doing its time.
- Should have seven or eight rooms for living, including a kitchen, bathroom, bedroom and living room.
- Minimal space of a room for living is 45m² for a single room and 60 m² for a couple.
- The rooms suitable for the bed & breakfast have a minimum of 15 m², depending on the amount of beds in the room.

Since multiple requirements involve creating a space that is senior proof, it might use empty senior housings or nursing homes as a
starting point. In this way the most structural construction parts are already meeting standards. This is further investigated with some examples of the architectural layer.

Senior housings already have the measurements suitable for independent living, which is a large benefit. Nursing homes have rooms between 10 m² and 45 m², which is a bit small if this has to include a kitchen as well. For that reason there is suggested to use rooms of 45m² for a single room or combine two 25 m² rooms. To facilitate a homey and safe atmosphere, the building cannot be too large. As M. Lammers (see appendix G) indicated.

To ensure the privacy of the residents, it is important that the rooms for the residents are separated from the activity.

The rooms should be able to be rented as social renting. In this way there is a higher chance the target group is reached, since a low income is one of the risks for loneliness.

As a place for a Thuis & in Rotterdam, Feijenoord or Charlois are good options since these are areas where the loneliness rates are high. However, there is advised to start with the first Thuis & as much as the budget allows it in the city center. This gives more publicity and is seen as a benefit for customers of a bed & breakfast. For a later stage and other variants of the Thuis & there is advised to deflect to those areas.

There is created a feeling of living in a village by involving a restricted amount of people in the Thuis & variant. Besides, this should be a place where they get to know people from the neighbourhood, which makes the neighbourhood feel more safe.

The next pages give multiple examples of the architectural layer. These examples are used to get a better understanding of the upper requirements in reality. To show the possible variety, the concept is shown in a nursing home, senior housing, 'regular housing', offices and an experimental housing. To keep the options...
open not only nursing homes. Since the scope of this project covers Rotterdam, the examples narrow to this city as well. Of each example there is given a floor plan in which the yellow blocks show the largest alterations of destination. The more changes needed, the higher the investment costs will be.

**Regular housing**

**Location**
This example is located on the Kramerstraat in Prinseland. This is not central, which is a disadvantage for the bed and breakfast part. Prinseland is not the area with the highest percentage of loneliness neither, but is known for some demographic risk factors as described on page 22.

As can be seen in Figure 46, the house is surrounded by green which can be used for a terrace.

**Description**
The building is relatively large in its length, which decreases the desired homey and safe feeling. This can be overcome by separating the used part clearly from the rest by use of a different color on the outside walls or a mark in the grass.

The second and third floor are for the residents of the Thuis & variant. Since the original floor plan has the same destination, hardly anything has to be changed. There is added a stairs to the rooftop garden, accessible from each room to seduce the residents as much as possible, but keep it a safe area for residents only. The youngsters can take the stairs in the common space.

To make it senior proof there is added an elevator on the right. This elevator will not replace the stairs and will not be a very luxury one to stimulate the residents to take on the challenge of taking the stairs as long as possible. The stairs to the garden is not accompanied by an elevator, since this stairs is smaller and is only used if people are still capable of gardening which is likely to happen simultaneously. If not, there can be added a stair-lift, with help of WMO money.

**Nursing home**

**Location**
The location of Humanitas Bergweg is on the bergwegplantsoen in the north of Rotterdam. As can be seen in Figure 48, this nursing home/senior housing has green on the outside and a common space in the inside. The location is relatively central, which is suitable for the bed and breakfast variant.

The location includes a lot of facilities. From an in-house supermarket to a physiotherapist. This is on one hand beneficial since these facilities are a reason to move. However, as a side-effect it can give a feeling of an institute, something that decreases the experiences of entering a new phase. Something that is enhanced by the amount of houses included in this building.

Besides, the ground floor cannot be used as a cafe organised by volunteers, since it already is occupied by catering businesses.

**Description**
As can be seen in Figure 50, the original floor plan fits perfectly to the new destination. The

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The walls on the balcony are kept the same height, to keep the feeling of privacy.

The ground floor and first floor are meant for the bed and breakfast. (See Figure 47 for a regular room). This has as an advantage that all rooms are accessible from the outside for cleaning purposes and some facilities for the reception and cafe can be combined.

If a resident gets less mobile, they can move to one of the bed and breakfast rooms on the ground floor.

Since each room should have a bathroom, bedroom, living space and kitchen to be used as a bed and breakfast there is relatively much altered in these rooms.

In general the structure of the building is suitable, but needs some investment in the elevator and adapting the lower floors for the bed and breakfast. Since the rooms are relatively big, the residents are likely to have enough money to cover this. This means that the risk factor of lower income is neglected in this example. The location is not suitable for the bed and breakfast, but can be used for another variant that needs a less prominent spot.
rooms are senior proof and The size of 68m² is a bit large for social renting, unless it is meant for a couple in a later stage.

The used part of the building has a flat roof, which can be used for a vegetable garden.

Hoeve nooitgedacht
This is an experimental building (see Figure 51), that is built for a single family use.

Location
The location of this building is in the south of Kralingen, near the water. This makes it a good location for a bed and breakfast, targeting on customers who are looking for quietness in a big city.

The green around the house is good for a terrace, but has not the central location in a neighbourhood with risk factors.

Description
Since the original purpose of this building is for one family, there needs to be altered a lot. See Figure 52. In this proposal there is suggested to enlarge the house on the side (see the dotted line in Figure 52). Mainly for the bed and breakfast. The black lines in this floor plan show the different residents the house offers. There is room for five residents and seven rooms for guests of the bed and breakfast. There is no spare room, but there is a small common area.

The extreme altering of the space logically increases the investment costs. It has as an advantage that it does not resemble any institute for elderly and can be experienced as entering a new phase.

Figure 50: Left: original floorplan of Humanitas Bergweg room. Right: Adapted floor plan to a common space for the residents. Adapted from rotterdamwoont.nl

Figure 51: Impression of Hoeve nooitgedacht. An experimental building. Source: rotterdamwoont.nl
Figure 52: Adapted floor plans of Hoere nooitgedacht. Above: first floor. Under: ground floor. Adapted from Rotterdamwoont.nl

Figure 53: Impression of apartments at Blaak. Source: Rotterdamwoont.nl

Apartments at Blaak
Location
The location is very **central**, which is perfect for a bed and breakfast.
As can be seen in Figure 54, in the middle of the apartments there is space for green and a terrace for the cafe.

Description
As can be seen in Figure 54, the suggestion is to add a wall to separate the rooms into two residents. This makes the house more **attractive to the target group**, with **low investment costs**. The position of the apartments are very beneficial for the **homey and safe atmosphere**. Despite the fact that it is in the center of Rotterdam, a **feeling of a village** can be reached.

Since there is an elevator integrated in this building, the building is already **senior proof** enough for this purpose. This makes it a very realistic option, if such a housing gets available.

The cafe, however, cannot be seen from the outside. This means there has to be worked with signs to seduce them.
Office
Since there is a large amount of empty offices, there is looked to the possibility of reconstructing it to a residential form. The student house in Rotterdam is a good success story of such a transformation.

Location
This building is at the Oostzeedijk with is relatively central, which could be good for a bed and breakfast. There is no green around for a cafe, but the ground floor can be rebuilt if needed.

Description
Figure 56 gives an adapted floor plan of these offices. They have as a benefit that they are already facing each other, which gives a village atmosphere despite the size of the building. If the building is much bigger than this, the safe and seducing atmosphere can be lost. The building has as advantage that there is an elevator built in.

Conclusion
Blaak seems the most suitable together with the nursing homes. Since Blaak is not likely to become vacant on a short notice, th nursing home seems best for now. This needs to be further validated.
Recap

- Thuis & is a place with different layers of participation.
- The higher the level of participation, the better it works against loneliness.
- The design challenge and high threshold is answered by the different layers of participation.
- There is offered a positive perspective for all layers.
- To start a Thuis &, there are the phases initiation of idea, meeting and creating, starting, daily life and continuity.
- The people are seduced to participate instead of obligated.
- There is started with Thuis bed & breakfast.
- The main focus of the board is to initiate and start the Thuis &.
- For now it seems best to place the Thuis & variants in empty nursing homes.
- Thuis & is suitable to become old, without implying that time is reached yet. Only necessary aids are placed.
- Thuis & is social renting to reach the target group.
4.3 Creating and meeting

In this phase the youngsters are enrolled to participate and start shaping the Thuis & variant. Parallel, the first residents are getting to know each other.

As pointed out earlier, the youngsters keep the elderly mentally and physically young. This should prevent the business to get stuck in what they are already doing to keep it continuously challenging.

Enrolling youngsters

As Figure 58 indicates, the youngsters are enrolled by Factory of Things. See Figure 59 shows why they would do that.

Youngsters find it important to make the concept their own (Studential, 2016), which is why the youngsters are involved in the shaping process as much as possible.

The youngsters can be reached by Facebook, the website of Thuis & and promotion on universities or HBO education and linkedIN.

Creating

The youngsters stem from the Ithaka program of Factory of things, since they can have the support they need for setting up a business together. Besides, this enables Factory of things to know if the youngsters are suitable for the job and are motivated to commit for a certain time period.

This commitment is very important for the chance of success of a Thuis &. If someone stops half way or is not motivated to make the most of it, there will not be the progress needed and the effect on the elderly will be less. For this reason there is chosen to construct a contract that needs to be signed by the youngsters. This is mainly to show the seriousness of the concept. A talk with previous involved youngsters can tell them what is expected.

What needs to be done in detail in the creating phase, is up to the youngsters to decide. The board in collaboration with Factory of Things can guide them in such a way, that at least all topics are paid attention to. This are topics as finding sponsoring, furnishing, decide on main activities, finding elderly, enrolling the elderly, choosing the residents, creating tasks and creating and updating an financial overview.

During the creation phase, each youngster has a coach from the Ithaka program with which he can communicate with by phone, mail or face to face. Approximately one in the five weeks there is a meeting with all Ithaka members, including all coaches and youngsters with other programs.

Enrolling elderly (1st time)

During the creation process of the youngsters, the elderly are reached. Figure 59 gives an impression about the motivations these elderly would have and Figure 62 gives a scenario of enrolling the first elderly to move to a Thuis & variant. The board in combination with the youngsters have the responsibility to find elderly that have common values and are likely to have the same intentions. The following aspects are taking into account during the selection procedure:

- The future resident should have a good motivation for wanting to live in the Thuis & variant. It should answer to his passion.
- The activity should answer to his personal significance and preferably match his virtues. In other words, he is not afraid of a challenge, has some skills or talents that have to do with this activity and in case of the bed and breakfast some social intelligence is appreciated.
- Preferred are retired people
- There should be an good age division in the group. This is especially important with the replacement of residents.
- First group should be singles, which eases the facilitation of emotional contacts, since there is no leaning starting point for anyone.
- It is of great benefit it the residents share the same values and expectations
- Equal women and men division

Figure 58: Part of timeline: creating and meeting

Figure 59: Value proposition youngsters and elderly

Customer relationships

People around retirement age with the risk on getting seriously lonely in the future (allowed from 55+). The moment a life-event as losing their lifepartner or decrease of mobility happens, they don’t have the abilities and social network to overcome this.

Youngsters (18- 35 years), who are looking for a job and would like to start a business in which they can do what they love on a flexible time schedule. After the start-up phase they can also be students looking for an internship.
Enrolling youngsters

Since the Thuis & variant is new and still has a large risk of failing with only residents inside the target group, there are attracted elderly outside the powerless target group for the starting phase. People that experience a sense of control over their life and want to stay active. Despite the assumption that the reached elderly are outside the main target group, there are still enough common characteristics to resonate with the interaction vision. To get the elderly motivated to move to a Thuis & variant, the interaction qualities seducing and safe are key.

To be able to seduce the elderly to come live there, it is important that there is already a building available to walk past. In this way the curiosity of people is triggered, which is enhanced by a low key promotion method in the neighbourhood and in the glossy of the municipality (Appendix B). In the communication there is stressed that it is not too late to start a new phase of life and that this is a place where they can become old. Especially the last part of this communication gives a feeling of safety. Since they are already in doubt if they should take any precautions for the future, but are scared to take it.

Not to have to make a decision right away, the elderly is able to get some noncommital information on the website and a free brochure. The elderly is finally seduced by someone that stands close and gives the advice to take a look. Taking a look at the open day does not mean you have to live there.

The personal call from Factory of Things and the job interview flatters and gives a feeling that he is wanted and will fit in. (Design principle)

Figure 60: Scenario enrolling youngsters

Figure 61: Continuation of scenario enrolling youngsters
Enrolling elderly

Ruben knows going every day to work. He has his routines and knows what to do.

After 40 years of hard work, he finally reached his retirement. To be honest he was looking forward to it. This gives him time to do what he likes without someone constantly looking over his shoulder.

Now he can finally finish the book he was planning to read for some time.

Thuis & B&B is presented in the neighbourhood. It stresses that everybody lives independent, residents can do what they love most and the energy of youngsters is combined with the wisdom of the mature generation.

Curious about the details, Ruben goes to the Thuis & B&B website. He sees that the first house is currently built and will be a B&B. He likes the idea, but is a bit hesistant because it is the first try-out. He decides to order a

Ruben reads the brochure at home, but decides to postpone the decision a bit.

When the daughter comes by, she sees the brochure on the table. Curious she reads it and advises Ruben to take a look.

Ruben takes another look and starts picturing his life in Thuis & B&B and decides to go to the open house.

At the open day he meets the youngsters that developed the activity and the house itself. Because he likes the idea so much, he decides to leave his details behind.

Two weeks later, the board calls to ask if Ruben is still interested and would like to come to a kind of job interview.

In this conversation there is tried to get to know Ruben a bit better and to see if he would fit with the other interested ones. Afterwards all chosen elderly meet and can decide if they want to live in the Thuis & B&B variant.

Figure 62: Scenario enrolling elderly for the initiation phase
Moving

After meeting all future residents, it is time to move to the Thuis & variant. Curiosity is the most seducing factor in this phase. Figure 63 gives an impression of this process.

The moment people are both moving, there is the curiosity of people to ask what they are doing with the same space. In this way an easy impression of the other person is gathered. Since this curiosity also draws people to do a new inspection of the building, it is important that the common space in the building is seducing enough to draw everybody there in their break. A bottle of lemonade or an old coffee machine can do the trick for that moment. A space outside can do the job as well.

All future residents are in someway vulnerable when they are moving. They do not have a place to feel home yet and are surrounded by people that they are still uncomfortable with. This common vulnerability and urge to make social contact creates a safe environment to approach someone.

Elderly getting to know each other

With respect to the interaction vision, the Thuis & variant should feel completely safe and the starting phase is crucial to make this happen (Jan Royten and Ewout Oosten, see appendix C). Since this period is already challenging enough, it is important that the elderly can get to know each other before they start the actual activity. There is chosen for the short time of two months (Figure 64 and Figure 67), since it should feel that they are working towards the activity. After all, this is the reason they moved.

In these two months, the focus is on getting to know each other better and making decisions on the communal space. In this way the elderly are already having the challenge of a superordinate goal, but one without big consequences. Together furnishing the communal space also makes this communal space more seducing in a later stage. This also gives them control over the intervention.

The weekly meetings are meant to talk about the good and bad things, to make sure nothing is bottled up. To make it easier to talk about these things, the first meeting a few rules or intentions where everybody should listen to are set up. These intentions tell how to interact with each other, but also the expectations of each other. Since these rules are made together, this should increase the safe feeling of belonging and the feeling that everything can be discussed.

Getting to know each other better, including their past, increases the tolerance towards each other. In this way people know where statements or decisions come from. To facilitate this, there is extra attention payed to the past of the residents.

Not involving the elderly immediately into the creating process of the activity, but involving the elderly in steps, should increase their self-depreciation. They can do more than they thought they were capable of.
Recap

• Youngsters are offered a way to start-up a business without much risk, available staff and ability to make use of experienced elderly.
• Elderly are seduced by offering them a way to follow their passion, a place where they can become actively old and are offered a valuable place in society.
• Youngsters decide themselves what needs to be done to set-up this business, with guidance of Ithaka.
• The focus is on single elderly in the first Thuis & variants.
• The communal space is made seducing by the residents. This gives a superordinate goal from the beginning.
• There is created a safe atmosphere by facilitating the meeting phase of the residents.

Figure 6. Source: http://www.kanters-bouwbegeleiding.nl
4.4 Starting activity

In the starting phase, the activities of the elderly and youngsters match for a large part. The board introduces the youngsters to the elderly and other target groups are reached and enrolled. This paragraph gives with help of scenarios an impression of how this will work out.

**Setting-up the activity**

With the youngsters frequently visiting the Thuis & variant, it is time to start the activity. Again there is spoken about the intentions and expectations. This time regarding the activity. Being clear about this, avoids clashes in a later stage. People are more likely to follow on the expectations if they are familiar with them. If the intentions or expectations cannot be met by someone, both parties have it clear in their head what went wrong. This should easy the decision. Whatever it is.

Part of the expectations is the amount of time the youngsters spend on this activity. There is advised that they are there at least three days a week, but it is up to them. Since these youngsters already carry the responsibility for the idea for some time at this point, there is expected that they are okay with this.

Besides the intentions and expectations, they decide together what needs to be done to realise the activity and when they want to start the actual business. Since the activity is the responsibility of the elderly and youngsters, the board is only there at the first meeting to introduce everybody and to start the discussion about the things to decide. There are enough tasks to be divided among enough participants. This keeps it challenging and flexible.

The creation and division of the tasks that need to be done as a group, should increase the feeling of ownership of the place. Something that increases the feeling of safety and gives a feeling of control over the intervention. It also brings a feeling of responsibility.

Something the elderly and youngsters should be willing to take. Since this is crucial for the facilitation of emotional contacts by a superordinate goal, this intention is obligated.

The amount of days the elderly work is flexible, but should be at least three days a week.

Since the elderly and youngsters are asked in the starting phase to come up with their own tasks and task-division, there is expected they will continue doing this in a later stage as well. Something that should keep challenging them. If they would like to organise music evenings, go ahead. Organise city tours? Please! Whatever answers your pleasure or personal significance.

To stimulate the challenge, there is suggested to let everybody rotate the invented roles as much as possible. (Tasks as treasurer might be better stay the responsibility of one person) To make sure it will not be too challenging, there is also the role of a joker. This joker does not have a specific task until someone asks him to. If not in the mood or too busy, this joker can help out. In this way the requested flexibility of the elderly in their work is guaranteed. Practice shows that people love the idea of being flexible, but hardly make use of it when it is there.

To stimulate a feeling of entering a new phase and increase the self-depreciation of the elderly, there is decided to address the residents from what they are still capable of doing instead of incapable. This means that in general, youngsters and elderly participate evenly. If they are not comfortable with a task, they can ask for help from another resident, youngster or joker. If they seem to be capable of something they might not have foreseen, a feeling of pride is stimulated.

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**Figure 66: Part of timeline: Starting phase**

**Figure 67: Scenario starting-up the activity**
Enrolling neighbours

A participating neighbour is the most low-threshold way of joining a Thuis &. Everyone can be such a neighbour, but to resonate with the target group, the interaction vision is used as guideline. Figure 69 gives an impression on how to enroll the neighbours.

Figure 68 shows the value proposition of the neighbours. To seduce the neighbours to drink a cup of coffee, the Thuis & should look tempting from the outside. Visible chatting people work generally very seducing. For that reason a garden with terrace would be a good option. If that is not possible, big windows can do the trick as well.

To create a place where people feel safe to enter, a welcome sign is placed outside that tells it is open for everyone. Once entered, the space has a homely atmosphere with large chairs that invite someone to sit alone or together. Someone should feel safe to drink a cup of tea alone with a newspaper or a book. This asks the space not to be too large with the chance to lose cosiness on its way.

Since a low income is a risk for getting lonely, the first ordered drink is from the house and next visit they can pay in participation or whatever they think the drink is worthed. Besides giving an immediate safe feeling of being welcome, it gives also the experience of being seen. In here, it is not the money that we want but you. Besides giving the feeling of being unique and valuable, this should open up the empathic attitude of the neighbour towards the volunteers and stimulate a positive attitude. On top of this, the option not to pay the first time seduces people to come back next time. By the placement of emphasize on the first drink, there is created an expectation that there will be more visits to follow.

Participation as neighbour can be done in various ways. Someone can think of something themselves as bringing a homemade cookie for the volunteers every week. Another option is asking if they can mean something for the volunteers that moment. A task could then be to help out in the kitchen for an hour or so.

Customer relationships

Volunteers are people who live in the neighbourhood, want to be among others, want to work on their hobby, might have less money to spend and have a spare afternoon or morning.

Local customers are customers out of the neighbourhood who are looking for a place to drink a cup of coffee together or on their own. They are likely to have little money to spend.

Value proposition

- Can have a feeling of belonging
- Offered a valuable place in society
- Can execute their hobby without needed certification or money.
- Little obligations
- A safe place where they can drink their coffee alone or with others.
- Have the possibility to pay in participation instead of money.
Enrolling volunteers
The involved neighbours should be seduced to become a volunteer, by the way the volunteers interact with each other and their job. A desire to belong and avoidance of boredom are likely to be the main motivation. See Figure 68.

In the starting phase of the Thuis & variant, most volunteers are found with help of posters hanging in the neighbourhood. If the Thuis & is a bit further stage, the volunteers are most likely to stem from the participating neighbours.

Enrolling customers
Enrolling customers of a Thuis & variant, depends strongly on the variant. For that reason it is important in the starting phase to map the competitive benefits of the service. To give an example, this paragraph describes the benefits for a Thuis bed & breakfast. See Figure 70 and Figure 71.

To be able to stand out from other bed and breakfasts available in Rotterdam, it is important to be visible on travel websites and travel guides. To be recognized by these companies takes time, so it is important to invite them as quick as possible. In the communication with these travel guides, it is important to tell the different approach of this concept to make them curious.

This different approach is also important in the communication on the website or Facebook. The focus of this approach should avoid any vulnerability but should be on the created Dutch community that can be experienced. Besides this community, the biological roof garden is one of the selling points. page 98 discusses a few more options to stand out.

Since travelers make their booking mostly on location and price, these factors should be well considered. To emphasize this special experience, the price is set a bit higher than a regular bed and breakfast. For a location there is chosen a central place (see page 64).

The needed quality for the customers is watched by the board.

With other variants the customers are more likely to stem from the neighbourhood. In that case it is more important that the building looks inviting to the customers. As an addition there can be made promotions in the local newspaper.

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**Customer relationships**

Customers of the Bed and Breakfast, looking for the real "Rotterdam experience" and stay at a place where they want to write to home about.

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**Value proposition**

- Has a typical Dutch appearance
- Biological and local food
- Served by people with passion for what they do
- Guided by a local with history “lessons” from the elderly
4.5 Daily life

If the Thuis & variant is set-up, routines of daily life are made. This paragraph discusses these routines to give an impression of these routines and the design intentions they originate from.

**Elderly**
As discussed earlier, the elderly are very keen on their privacy and being able to keep on to their own routines. This is answered by giving them their own front door with the space for all appliances they might need. No kitchen or washing machine needs to be shared. See Figure 73. Since the elderly that want to live in such a Thuis & variant, are probably open for contact with others (otherwise they would not live there) a communal space is facilitated. As discussed earlier, this area is made seducing by the residents themselves in the meeting phase of the elderly.

The fixed roles and set intentions make sure that someone cannot hide away in his room. This keeps the challenge high. Something that answers to the longing to stay active. The taken responsibility gives a feeling of belonging to a group. The ability to ask a joker gives them the safe feeling of a safety net. The superordinate goal is in this way just as the analogy of playing with Lego. You can fulfill your tasks (or creations) on your own, but you can reach more if you work together.

**Youngsters**
Due to the facilitated equality between youngsters and elderly, daily life of youngsters correspond on many levels with elderly. Difference is youngsters are no residents. The moment the youngsters from the starting phase are replaced by youngsters that are doing an internship, the amount of time they spend on the activity on a daily basis is discussed with the educational institute.

**Youngsters arrive**

*Ruben wakes up. He is aware of his responsibilities of that day.*

*Ruben is keen on his privacy, including his daily routines. He finds a lot of pleasure reading the paper as he did for the past 40 years.*

*The day starts with one of his chores for this month: the reception.*

*The one with the joker role helps out when necessary. In this way it is never too much work and it stays a voluntary job.*

*Youngsters participate in the activity as equals. This gives some positive stimulations towards the elderly that keeps them active.*

*Great idea Jack! Let’s discuss it in the meeting next week.*

*Now can I help you?*

*Sure, no problem*
Daily life volunteers
Figure 75 represents the daily life of a volunteer, the moment they have a touch-point with the Thuis &. Each Thuis & variant has a cafe, the volunteers are responsible of.

The ability to influence the activities and furnishing of the cafeteria, makes the Thuis & also for the volunteers challenging and gives them a valuable place in society. Being able to furnish the place as they would like, also creates a safe place where they can feel like home.

To make sure the volunteers feel safe enough to come up with their own ideas and initiatives, it is important to make sure that they know their responsibility and possibilities. This can be communicated the moment they are applying to the "job" or when enrolling volunteers (see Figure 69).

It is fine that people stay a volunteer, but it is preferred if they are seduced to be a resident. This is done by showing them how the residents are emotionally connected to each other. For this reason, the cafe is located close to the residential form (preferably inside the residence).

Daily life neighbours
Since the neighbours have only a small touch-point with the service, the daily life of them is not included in this report. Figure 69 and Figure 75 give an impression of their influence in this service though. Key is that it should be seducing for them to volunteer, which can be reached by making them urge for the emotional belonging they see among the volunteers.
Daily life of customers

As the paragraph about enrolling the customer already suggests, the daily life of the customer is strongly influenced by the type of Thuis &. For this reason there is again chosen for the example of bed & breakfast. Figure 77 gives an idea of the journey of a regular customer. Figure 76 gives some expansion possibilities of this direction. The completion of such a direction is done by the youngsters in the starting phase of a Thuis & variant. In daily life, such ideas can be added or changed in collaboration with the elderly.

Figure 76: Possible expansion options to create a competitive advantage

Figure 77: Scenario of the customer interacting with the Thuis bed & breakfast without extras.
Recap

- In the meeting phase, the expectations are put in line.
- There are multiple roles, constructed by the residents and youngsters. These roles are switched monthly.
- Neighbours are seduced to drink a cup of coffee alone or together with others.
- Volunteers are working to get a feeling of belonging, valuable place in society and because it is a pleasurable experience.
- Customers are enrolled depending on the Thuis & variant.
- The joker gives the resident and youngster feeling of flexibility and control.
- Youngsters are replaced by others looking for an internship.
- Volunteers have the responsibility of the future cafe.
To make sure the Thuis & is a continuous service, it is important to design what happens if someone needs to be replaced. Since the elderly and youngsters are the core of this service, their rotation is further investigated in this paragraph. Since the service is nothing without customers, there is also attention payed to the promotion after use of the service.

**Rotation of elderly**

Even though the elderly are addressed as strong people who are in control of their life, elderly should be able to live there last phase in this residence as well. Figure 80 gives the expectation of the course of events when someone becomes older. The expectation that people will take care of each other stems from the Thuishuis (see appendix C). The emotional connections made in such a house and the decreasing of loneliness, make people actually healthier. If someone becomes ill, people start to look after each other out of free will. If the resident needs more medical help, they need to organise it themselves. This keeps the hierarchy equal among the residents and youngsters. In this way a lot of diseases can be treated from the Thuishuis, completely in line with the WMO law. [Interview with Marjon van der Meurs] If the disease is not treatable in such a way, they need to move to a nursing home or hospital. In that case there is money available from the Dutch government. Practice learns though that even if the residents of the Thuishuis became victim of the disease dementia and the other residents wanted to keep them there. There is expected that the same results can be booked with the Thuis &. In this way the virtue kindness is stimulated among the residents and the impact of a lot of causes is decreased.

To facilitate this process, it is important to make Thuis & senior proof. This means that the hallways should be wide enough for a wheelchair and if there are multiple levels it should include an elevator: Page 64, gives a proposal. Aids as brackets in the toilet are avoided in the architectural layer as much as possible, since this gives the impression of taking care of. If someone needs such an aid, it is less effort to place it there. If someone becomes terminal, there should be one room available that is completely adapted.

**Enrolling elderly**

If one of the elderly needs to be replaced for whatever reason, someone new needs to be found. Figure 81 shows how this person is enrolled and Figure 82 how the orientation of the new person takes place.

In general, the targeted elderly are in the same stage of life as the ones in the starting phase and have the same considerations. Differences are that the second class of elderly are targeted more on the elderly with a higher risk on loneliness. For that reason the enrolling procedure is a bit different than in the starting phase of the Thuishuis. Since one of the risks on loneliness is that they have a lower willingness on taking risks and have a low self-depreciation, it is important to give the elderly the feeling they are personally addressed. A personal letter and multiple moments of contact should decrease the threshold and work on the feeling of pride.

In the letter, the elderly should be addressed on their virtues and motivations, since this increases the chance of a good fit with the other residents. In return, this gives them the feeling they are asked because of who they are (design principle) and the safe feeling they will fit in. For this reason it is beneficial for the future resident to start as a volunteer.

The powerless target group is reached by the following design interventions:

- By creating social rental houses, there are people addressed with a lower income.
- In the beginning there is focused on single elderly.
- They are addressed on their personal traits and values. Which should give them the feeling they are wanted (design principle).
- The layers of participation decrease the threshold of involvement.
- The layers of participation give them their ever existing perspective on a better future, which gives them a feeling of control over their life.

![Figure 80: Scenario: Becoming older in Thuis &](image-url)
Figure 81: Scenario: enrolling elderly for replacement

Enrolling new resident

Curious about the details, Ruben goes to the Thuis & website. Here he finds a movie that gives an impression of how life is in there. He sees that the house is well located and that there are a lot of different versions available.

Two weeks later

To choose from all the options, Ruben is asked if he would like to take a test. This enables him to find a house that fits activity and human wise and he can ask a brochure about it. This test gives the board information of who is interested.

With the information gathered from this test, Ruben is sent a personal letter by the interested house with an invitation to visit them. This letter completes with the positive values of Ruben.

Rotation of residents

If someone leaves or dies, there needs to be a replacement. This is the responsibility of the residents, unless they need specific help from the board. They can ask the volunteers personally, or make an advertisement on the website.

*See convincing elderly.

When someone moved in, there is a meeting organized to talk about the intentions and the expectations. Mostly it is about welcoming someone into the house. This meeting is guided by the board.

Curious about the details, Ruben reads the brochure, which includes today life, including roles. He decides a bit and places the brochure and letter on the kitchen table.

When the daughter comes by, she sees the brochure and letter on the table. Curious she reads it and advises Ruben to take a look.

Since the house is open for customers and they don’t know his face, he is able to take a peak without any obligations.

Ruben is flattered by the letter and reads the brochure, which includes specific information about the day to day life. He finally decides to postpone the decision a bit and places the brochure and letter on the kitchen table.

Hey dad, what is this? This seems perfect for you!

Two weeks later

Since the house is open for customers and they don’t know his face, he is able to take a peak without any obligations.

The meeting afterwards she will join in the rotation of the roles just as everybody else.

Until the next meeting the person does not have to join in the rotation of the roles. She can just see what everybody is doing and get to know the house.

The next month, she will have the function of the joker. In that way she can get used to all the available roles.

Sjoerd is getting worse by the day, it won’t take long anymore I’m afraid. We should look for a replacement.

See how you do this? You write here who entered and there when someone checked out.

Figure 82: Scenario: rotation of residents
Rotation of residents
The new resident is involved in the rotation as soon as possible, without being overwhelmed. This stimulates equality among the residents and a feeling of belonging for the new resident. The phases are advised by the board in the first meeting with the new resident. If the residents have something else in mind, they are free to do that. It is important though to make sure the intentions are discussed before someone starts living there, not to stand for surprises in a later stage.

In the overlapping time between losing a resident and finding someone new, someone else will cover the task of that person. This is not a big deal since there is enough crew available.

Rotation of youngsters
If the youngsters that started the Thuis & version are leaving for another job opportunity, the gaps are filled with youngsters that are looking for an internship. Reason is that youngsters looking for an internship are generally cheaper, have extra motivation and are easier to find since they are only bound for a few months. This short time frame is the main reason that they are not suitable for the starting phase. The rotation of youngsters match the rotation of elderly in many ways. The differences can be found in Figure 83.

In the orientation phase of the new youngster, the youngster is immediately expected to be joker. Reason is that youngsters can adapt generally faster to changes than elderly. Besides, these youngsters are educated for this job which gives them an advantage and they do not have the hassle of moving.

Promotion by customers
Word to mouth advertising is a strong way to insure continuity of customers. Figure 84 gives two examples of the facilitation of this promotion.

Promotion by neighbours
The promotion by neighbours is stimulated by the free first drink. The difference in treatment to other cafeterias, should stimulate neighbours to tell others.

Next chapter
This chapter gave a detailed impression of the concept Thuis &. Next chapter discusses the validation of this concept. This includes details as the financial feasibility and expected growth, but also gives insight in the opinion of possible stakeholders.

Figure 83: Scenario: difference in rotation of youngsters compared to elderly.

Figure 84: Ways to stimulate promotion through customers.
Chapter 5

After discussing the concept in the bubble of a Thuis & itself, it is time to place it in reality. What is needed to make the Thuis & a success?

The validation of the Thuis & is done by discussing the financial feasibility, the benefit and role of stakeholders and testing it with the envisioned target group.

The information gathered is used to further develop the concept and make some adaptations.
5.1 Financial feasibility

As Dam, 2013 investigated, reconstructing a nursing home into a hostel or senior housing is financially feasible. Below is shortly described which aspects are involved to come to this conclusion.

An overview of the interest of stakeholders (Figure 86 and Figure 87) is used as the foundation for the cash flow of Figure 88 and Figure 89. A more elaborate financial overview can be found in appendix E.

The cashflows give a broad financial overview for one Thuis & variant on a general month. If the arrows point toward the center, it means that stakeholder spends money on the variant. If the arrow is pointing outwards, that stakeholder earns money from the variant. The Thuis & variants are connected in such way, that others help out when one is functioning less. To get insight in the financial situation of a Thuis & variant, the residents are asked to give a yearly financial report to the board.

The largest difference between the cashflows is the choice in collaboration with a housing corporation. Advantage of such a collaboration is that housing corporations possess suitable buildings, which can be reconstructed and are able to be used for other purposes in case of failure. The housing corporation would take the largest financial risk, since they would use their capital to pay in advance for reconstruction.

A disadvantage is that housing corporations have their own agenda and want to earn money as well. Since they carry the largest financial risk they want to make sure all rooms are constantly occupied. Also in case of failure. This can lead to decisions that do not match the desires of the board. When private, there is a need for finding investors. The lot can then stem from the municipality, who is supporting private initiatives. This ships the largest financial risk towards the board and the investors. For that reason the preference is to collaborate with a housing corporation that stands behind the same ideals as the board. This is likely to be found with smaller corporations. [Interview Meurs].

Figure 86: Interest of stakeholders in Thuis &

Figure 87: Continuation of “Figure 86: Interest of stakeholders in Thuis &”
Cash flow in collaboration with housing corporation

Figure 88: Cash flow Thuis & in collaboration with a housing corporation

Private cash flow

Figure 89: Cash flow Thuis & in when set-up private
**Structural costs**
Most of the money exchange is structural. The numbers in the cashflow are based on a combination of literature, conversation with stakeholders, comparison with Thuishuis and assumptions.

The volunteers are offered free drinks and small food, the board is offered a salary (which will be lower in the beginning), the youngsters are offered an internship compensation.

The customers pay per night, but cost the rent of the room and breakfast. This amount differs over the seasons and with the existence of a rooftop garden.

The neighbours spend money by consuming in the cafe.

Elderly pay a monthly rent to the housing corporation or towards the board. If there is revenue left, the elderly will get paid the same amount as the interns.

The estimated profit per month is 4300 Euro.

**Initial costs**
The initial costs depend on the structural costs, the construction and development costs and the investment costs for the activity.

Based on the cost ratios, reconstructing a building is approximately 75% of the costs of constructing a new building. Expressed in €/m² (Dam, 2013).

The amount of m² is calculated based on a nursing home with rooms of 45m². There are seven complete rooms used for houses of the residents, 100m² of communal space for the residents, 200 m² for the activity and in case of the bed and breakfast there are five rooms divided into ten of 22 m². This brings to a total of approximately 880 m².

The investment costs of a house with similar capabilities (Thuishuis), is approximately 920.000 Euro for 800m² (Ruyten, Thuishuis visit). This gives a cost ratio of 1150 €/m². Decreased to 75%, makes a cost ratio of 862,50 €/m² for reconstructing a Thuis & in a nursing home. An estimated amount of needed m² of 880, gives an estimated investment costs of 759.000 Euro. This matches with the estimation of Dam (2013) for rebuilding a nursing home.

Since there is extra investment needed for setting up the activity, another 10.000 is added, which brings it to 769.000 Euro.

With the estimated profit per month, this comes to a return on investment around 15 years. To get this down to 5 years, there is an investment needed of at least 531.000 Euro. This is without payment of the elderly.

This seems relatively a lot, but doable with the investment of a housing corporation in combination with investors and support from the municipality and sponsors. Besides, comparable initiatives make it without any business aspect attached.

After return on investment, the earned profit goes to the elderly and the board. The board uses this money for other variants.

**Daly (Disability-Adjusted Life-Years):** Since the Thuis & concept decreases the amount of risk factors and the implication of loneliness, it has a beneficial effect on the health of the residents and indirect of society. To calculate this effect there is taken the effect of an Thuishuis as example. A Thuishuis has impact on physical (better nourished, better hygiene, more exercise), psychic (less lonely, less worry/ stress and less gloomy/ helpless) and social level (more control and more social contact). These consequences have in its turn effect on a decrease in disease risk. Figure 91 gives an overview of the diseases a Thuis & has effect on expressed in DALY (Disability-Adjusted Life-Years). This is multiplied by the coefficient of effect a Thuishuis has.

For the precise calculations see the effectiveness calculations of Richo. There can be concluded that a Thuishuis has an increased amount of DALY’s of 0.018/year per resident. Half of this number is due to an increased amount of years.

Included with the decrease in needed informal caretakers, the amount of money the society can earn is € 15,580/year.

There is expected that the Thuis & has a comparable effect, excluding the effect it can have on the neighbours and volunteers.

<table>
<thead>
<tr>
<th>Disease</th>
<th>DALY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes mellitus</td>
<td>0,198</td>
</tr>
<tr>
<td>Mood disorders</td>
<td>0,425</td>
</tr>
<tr>
<td>Dependence of Alcohol</td>
<td>0,320</td>
</tr>
<tr>
<td>Anxiety disorders</td>
<td>0,187</td>
</tr>
<tr>
<td>Heart and vascular diseases</td>
<td>0,23</td>
</tr>
<tr>
<td>Influenza</td>
<td>0,01</td>
</tr>
<tr>
<td>Skin diseases</td>
<td>0,07</td>
</tr>
<tr>
<td>Diseases of the musculoskeletal system</td>
<td>0,18</td>
</tr>
<tr>
<td>Gastrointestinal infections</td>
<td>0,03</td>
</tr>
<tr>
<td>Diseases of respiratory system</td>
<td>0,12</td>
</tr>
</tbody>
</table>

Figure 91: Overview of gained DALY’s

<table>
<thead>
<tr>
<th>Costs</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youngsters</td>
<td>1500</td>
</tr>
<tr>
<td>Board</td>
<td>6000</td>
</tr>
<tr>
<td>Volunteers</td>
<td>450</td>
</tr>
<tr>
<td>B&amp;B</td>
<td>2300</td>
</tr>
<tr>
<td>Cafe</td>
<td>300</td>
</tr>
<tr>
<td><strong>Total costs</strong></td>
<td>10250</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Revenue</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>B&amp;B</td>
<td>13750</td>
</tr>
<tr>
<td>Cafe</td>
<td>800</td>
</tr>
<tr>
<td><strong>Total revenue</strong></td>
<td>14550</td>
</tr>
</tbody>
</table>

Figure 90: Overview of main costs and revenues
5.2 Expansion strategy

The roadmap of Figure 92 gives an impression of how the Thuis & could evolve over time. The first and last steps are a recap of the phases described in the chapter Thuis &. Initiating, creating and meeting, starting activity, etcetera. After the establishment of the first Thuis & variant, there is introduced a testing phase in which is determined the effect and possible improvements for future variants. If the variant is successful, it is used for promotion and credibility for setting up the next variants. Preferable there is made a short movie, to give an impression of how life will be inside a Thuis & variant. This should help with the scouting for new participants and convincing stakeholders.

The next two variants of Thuis & are placed in the same city (see Figure 93), since the collaborations with stakeholders are already present in that city. There is chosen to place different variants here, to communicate the idea of multiple variants clearly to the outside world. These variants are tested again after a year. This time in collaboration with an independent partner for credibility.

The future Thuis & variants of Figure 93 are mainly placed in larger cities in Holland, since these are the places where the loneliness rates are highest. However, since the concept is based on human principles, the concept is likely to have similar success in villages or other countries with similar culture. Before implementation, this should be further investigated.

If the first three variants are up and running, a new implementation strategy is introduced to fasten the process. When people are familiar with the concept, they can start their own Thuis & variant with help of the board. The board offers a toolkit that includes arrangements with the different stakeholders and a guided setting up phase as described in Chapter 4.

This gives the impression that this concept is meant for people that are still in the center of their lives and are ready to enter a new phase. People can create a residential form that fits their needs, including a specific activity. This strategy also fits the policy of the municipality, since they have more regulations and help available for bottom up initiatives. This is validated at the end of this chapter.
1. In 2026
2. In Rotterdam
3. 64% of the elderly consider to move, of which 66% between 55-64. Above 75 almost nobody wants to move. 34% of the 64% is between 65-74. This leads to the estimation that 40% of the 65-74 considers to move. This takes into account that babyboomers are probably more likely to consider moving on a later age, because of their vitality and active position in life.
4. Part of the percentage comes from people that otherwise would move to a seniors home, service flat and the small initiatives. The estimation is that it will have a relatively high popularity among the alternative residential forms.
5. This estimation is based on the reluctance of taking initiative of the target group.

5.3 Competitor analysis

A broad overview of competitors that need to be taken into account can be found in Figure 95. The different kind of activities and target groups make this scheme complex.

Other residential forms
These are the ones already on the market. Thuis & has as advantage that there are no preconceptions yet, it has a low threshold and makes people feel like they are entering a new phase. Weakness is that powerless people are often very reluctant towards new concepts.

Other social locations
In some sense, the Thuis & variants can be compared to a community center. These centers are already up and running and might have the same goal. Thuis & has the advantage that the cafe is something they are familiar with as something with a low threshold. The humanistic approach and the local placement of the Thuis & should compete with other cafes.

Other volunteering work is not included in this scheme, since volunteering in a Thuis & variant is different than general volunteering. In a Thuis & variant people are not participating because they want to help the vulnerable, but because they want to be involved. This makes the competitors on this aspect more specific for a Thuis & variant. With as example a city garden.
5.4 Worst case scenario

The implementation of a Thuis & variant takes certain risks along. These risks can be partly overcome by a thorough feasibility study, but for some cases this is not enough. Most of these aspects need to be learned from practice, but below are some guidelines.

In case no money is earned
In the case that the residents have troubles to make ends meet, the board will intervene. They will try to advise the residents and youngsters how to make the business a success again. If there are multiple variants on the market already, the well-functioning helps the less-functioning. As a last solution the activity can be stopped completely. Depending on the wishes of the residents, people can stay in the building. The space for the activity is then reconstructed to new houses. In case everybody would like to move, the building should be able to be reconstructed to student housing.

In case someone withdraws from his responsibilities
Since the intentions and expectations are made clear from the start, everybody has their responsibilities clear. If someone decides not to answer them, they can decide to leave the house.

In case no replacement can be found
The chance that this happens seems to be quite low. Since the houses are relatively small, there is expected that there are always enough people on the waiting list. In case it does happen, the board needs to have arrangements with the municipality and housing corporation to keep it from the market for a little while. If this situation continues for longer than half a year, that room should be rented to someone that is less suitable.

In case the target group is not reached
Since 75% of the elderly above 75 years old are likely to experience some sense of loneliness, this is unlikely to happen. However, it is possible the real sincere are not reached due to preconceptions. In case of a waiting list, people can be chosen on certain risk factors.

In case youngsters see the elderly still as vulnerable
The expectation is that this will not happen if the elderly show that they are capable as well. However, if this happens, a talk should be planned with the youngsters. In the worst case the youngsters are asked to leave.

In case the residence get in a fight
The variants are seen as independent as possible. The board is not meant to solve problems for them. If a fight gets out of hand, the board can intermediate. If no other solutions are possible, someone can be asked to move out of the house.

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The variants are seen as independent as possible. The board is not meant to solve problems for them. If a fight gets out of hand, the board can intermediate. If no other solutions are possible, someone can be asked to move out of the house.

Figure 96: In the worst case, the residential form could be rebuilt for student housing. Source: Grijswaard.nl
5.4 Testing

Interviews with Elderly

To get insight in the consideration behind the participation in a Thuis & variant, a broad audience is interviewed. This is done with help of a short mockumentary, that gives an impression of a future Thuis & variant.

The Thuis & variants are experienced as a place where people can be themselves without any obligations, but cannot make misuse of the concept.

The layers of participation help to lower the threshold. Everybody is curious enough to drink a cup of coffee in the cafe and indicate that they would be more likely to participate as a volunteer or a resident if they know who they are. The level of participation is also increased by the fit of the activity. As a hesitant participant indicated:

“Participation is a bit scary for me since it is new and I do not know anybody yet (...) If there is a goldsmith variant I would definitely consider it.”

The younger elderly (50-65) are more open for the idea than the older ones. They see themselves as ready to start a new phase and are in consideration on how to fill the rest of their lives. Moving is seen as an option, since the children recently moved out of the house. The older elderly are more hesitant, due to the hassle it brings along.

Everybody agrees that guidance of the is important to make a Thuis& variant a success.

Different generations that collaborate can cause different needs. If nothing is obligated, this can decrease the tolerance towards each other, which can lead to discussion and disagreements. The accompaniment is especially important in the initiation phase.

Recommendations

It is important to keep the residential form small to keep the humanistic approach. If there is some guidance needed for keeping the intentions and expectations straight, this should come from within the group. This avoids a top down approach that does not value the residents capabilities as they should.

There is a difference in the amount of desired involvement. The more extrovert elderly would like to be involved in an earlier stage. Not only do they want to be involved in the policy making process, they would also want to develop the activity on a content level.

More introvert and shy participants would like others to take the lead in the process. For them it is important that the leaders have good intentions and see them as valuable.

All participants would like to have some guidance in the policy making phase from an independent organisation with heart for the project. It is important that this organisation is not too big and is preferably no charity. It is preferred that the guidance stops at a certain moment, to give the residents the feeling they are responsible and capable of running it on their own.

“The accompaniment should not be seen as the police you go to if someone does not obey the rules”

The residential form could be suitable for all ages. Everybody is positive about the collaboration and mixture of the youngsters with elderly. Some see the youngsters as skillful people who can teach them. As someone indicated:

“If the generations stay together, it is always good. Otherwise there are skills and knowledge lost.”

Challenges

To be able to grasp the concept, the participants tend to compare it with a nursing home or communal living. This can cause preconceptions, that might harm the acceptance of the variant. Preconceptions heard are lack of privacy, the need to take care of the other elderly and the idea that you can only go there if you are vulnerable by age. However, most mentioned considerations are well reasoned.

The unfamiliarity of the concept brings uncertainties. It is experienced as something for the open minded, active, alternative people that are open for trying new things. The world is getting ready for the Thuis & variants at the moment, which means it is not ready for the mainstream yet.

Loneliness is recognised by some participants as underlaying intention. However, in combination with the activity this is not seen as something negative, but rather a positive side-effect. For people that see themselves as less social, the obligatory contact is even seen as something that eases the making of friendships.

Excluded from the target group

Logically, a Thuis & variant is not suitable for everybody. Below a list for people that are excluded.

• Elderly that have plenty of activities in their daily life.
• People that are extremely keen on their privacy and do not want to be obligated connected with someone else.
• People that prefer being alone than with others.
• People that have already a large social network (and are not looking for new contacts).
• People that do not want to be stringed to a certain activity.
• People that have social skills far below average.
• People that are in the phase of settling down and building a family.
• People that are not comfortable with taking responsibility for a task.

Figure 97: Students of the hotel education need to do an internship of six months.

Figure 98: Impression of the research
Interview youngsters

There is interviewed a student from the hotel education, currently working in the Parkhotel in Rotterdam.

The concept is seen as valuable for society, but less suitable for an internship. There is the preconception that the youngsters need to have experience with the care for elderly to apply for this job.

To extent their experience, many students are looking for a large company internship abroad. In that way they are able to learn from the experienced and commercial world.

An internship needs to take at least six months and is preferably done in the summer period, which is the high season for most companies.

Interview municipality

There is spoken with Marjon van der Meurs, responsible for the program ‘Langer thuis’ and facilitator of new residential forms. She is seen as the connection between all stakeholders. A more detailed description of the interview can be found in Appendix G.

In general she is enthusiastic about the idea of starting Thuis & variants. Thuis & fits well in the direction of ‘participation society’ and she knows a group a people that would be looking for such a house and is happy that someone would like to take initiative. The municipality, the housing corporations and care institutions all agree that the current care institutions are not suitable anymore in this time and that there is a need for alternative residential forms. The only way to reach these residential forms is by collaborating and building on ideas like this one.

There are regular meetings in which those stakeholders come together to find new opportunities. This idea could be presented in such a meeting.

Recommendations

Accompaniment of the residents is important throughout the whole time. The focus should be on managing regulations around rotation of residents, leading activities and keep the intentions of the concept clear.

As a location there is suggested to reconstruct a former nursing home. The care institutions are currently searching for new destinations and Thuis & would suit perfectly. The building is already senior proof and has a communal space. Best location in Rotterdam would be Alexanderpolder.

Challenges

Despite the fact that most stakeholders are in need for new residential forms like this one, the initiation process will not be easy. It is likely to take around five years of lobbying with different stakeholders, apply for permits and keep the energy high among the interested. Best is to start these processes parallel instead of linear.

The stakeholders are not likely to invest their time and money without the certainty they will get it back somehow. For this reason it is important that there are future residents and youngsters available that are willing to wait for approximately five years. They might even be asked to guarantee for a serious amount of money.

The municipality can help to bring the different stakeholders together and make some lines a bit shorter. This would be on the scale that the variants gets one inspector instead of six and requests from stakeholders are communicated on a shorter notice. With help of the WMO money, the municipality is able the finance needed care aids inside the house.

Interview housing corporation

Alien van der Haar is project manager of Woonbron Delfsehaven. Woonbron is there for the vulnerable. This means people with a lower income, mental and physical problems or immigrants. The largest part (95%) of the residences they own are social renting. They see it as their responsibility to make sure people live in a good neighbourhood.

Impression of Thuis &

Alien van der Haar was under the impression that the Thuis & already existed and was seriously interested. She was especially enthusiastic about the collaboration with the neighbourhood, which should increase the social network of the elderly. Something they miss in current initiatives.

On the question if this could be realised:

“Yes. As I said before, I get really enthusiastic about this idea. I wrote the housing corporation down already with the thought to visit this place. (.) I am sure Karin (branch director of woonbron Delfsehaven. Red.) will be very interested as well. She is currently working on that topic. It might be less suitable for Rotterdam with our portfolio, but we do have houses in Delft, Hoogvliet and Spijkenisse that could be suitable, or could be made suitable for this.”

Location

A nursing home would be a good alternative. The institution Laurens has currently troubles with making ends meet and could be a good partner for this initiative. There is location on mathenesserplein in Rotterdam that wants to be more connected to the neighbourhood. Another interesting partner could be SOR. They are specialised in housing for elderly and have some innovative ideas.

Role of woonbron

The housing corporation would take care of the housing, with as role a developer. This means they will help to find the requirements for that initiative. The residents would pay rent to the housing corporation.

Recommendations

It might be interesting to connect with already existing initiatives of the neighbourhood, instead of starting something completely new. She recommends not only to think about physical structures. There can be a connection and shared activity without the need to live together. If the same building is shared, it does not guarantee the creation of emotional contacts. This can be seen in porch homes. To facilitate this, there is a need for a shared goal and activity.

It would be preferable to make the building flexible. This means that there should be a back-up plan for the building. Student housing is...
Challenges
The main challenge will be to find people with the same intentions and ideals inside the target group. With previous citizen initiatives there came arguments between the future residents, with as consequence that people stepped out of the project before complete implementation. Since the target group is most of the time not aware of the current initiatives, it is important to pay attention to the publicity.

Another challenge is the location. This is not only the physical building, but also the implementation in the neighbourhood. Such an idea should be carried by the neighbourhood instead of dropped from above. This takes a good investment in the creation of connections inside the neighbourhood. Best would be to have two or three neighbours who would like to carry the idea and keep the others enthusiastic. If people put all responsibility on the board, it is likely to fail.

The financial situation is even more important. The start of the project can be done with investors or grants, but it is best if the initiative is self-sufficient over time. This increases also the feeling of responsibility of the participants and the perceived value of the concept towards others and the involved. Since Thuis & is meant for a vulnerable target group, it is important to let the concept be carried by multiple parties as housing corporations, investors, care institutions and the municipality. That increases the likelihood of success.

The common space that is attached to the Thuis & variant includes rent as well. This can be solved by including it inside the rent of the elderly, as is done with senior housings. Best would be to include a business that brings a steady income. This takes of the financial load for the main activity.

It is important to do research into all participants, including the volunteers and interns. They had a project in which they assumed people where interested in, which turned out to the reason it failed.

Implementation
For implementation there should be started with finding future residents. From that on, the lead time would be around two years. If there are a lot of struggles on the way, this could be stretched to five years including the reconstruction.

5.6 Iteration

Based on the previous validation of the concept, a few changes are made.

Target group residents
- There is chosen to decrease the minimal age of a Thuis & to 50 years. This is the minimum to keep a certain equality among the residents. If someone is in another phase of life, this person can take over control guided by the societal vulnerable impression of elderly as discussed in appendix A1.

In the younger part of the age group, people are likely to still have a job. However, the same regulation apply: they have to work at least three days a week on the activity. Expectation is, that people from this group start as volunteer until they reach the retirement age.
- The group of residents should include at least half of the people with experience in the field of the activity. This should make it more interesting for interns to be involved and can take the activity to a higher level. In this case no external professionals are needed.
- Since being introvert and a low willingness to take risk are risk factors of loneliness (see page 22), there is a high chance the real target group will feel more hesitant to be involved. The target group sees this concept as too new, which makes it scary. Comparison with other institutions as nursing homes or communal living can be used in this situation. This decreases the feeling that the concept is completely new, but changes the disadvantages of these residential forms in advantages for Thuis &.
- As decided in chapter 4, in case of rotation, there is taken a test online. This idea could still be viable, but there is advised to implement this in a later stage. The validation with elderly give the impression that people are more likely to move through different layers of participation than immediately move to this place. The test and personal attention could help, but is likely not to do the complete trick.

Youngsters
- The first youngsters involved should be able to deal with a lot of uncertainties and risks. They need to be extremely motivated to make this concept work. For this reason it might be difficult to find them. Two is the minimal amount of youngsters that should be involved from the beginning, for them to be able to discuss. If this minimum cannot be reached, the back-up plan would be to involve youngsters at a later stage as interns.
- Besides elderly with life experience, there are also some elderly with experience in the field needed. The board would in that case be responsible for the whole initiation phase. Business schools seem to be the most viable place to find these first youngsters.
- The youngsters who apply for an internship should be approached through different channels and a different approach than the elderly, to avoid preconceptions. It is important to put the focus on learning from the experienced and the amount of responsibility they can get. There should be made clear that no care for elderly is expected.
- The expectation that youngsters teach the elderly the tricks of the trade, might be problematic for the youngers. If they are interns, they want to learn from the elderly instead of the other way around. If the elderly start a bit earlier with the activity than the interns, this hierarchy is likely less prominent. The elderly can experience that they are perfectly capable of running it themselves. Some experienced elderly in the group might help as well.
- To reach the youngsters or future residents, it is important to have a professional

Figure 101: Feeling of responsibility of the participants and or grants, but it is best if the initiative is self-sufficient over time. This increases also the feeling of responsibility of the participants and the perceived value of the concept towards others and the involved. Since Thuis & is meant for a vulnerable target group, it is important to let the concept be carried by multiple parties as housing corporations, investors, care institutions and the municipality. That increases the likelihood of success.

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Initiation phase
- The elderly should be involved in an earlier stage. Since the first residents are likely to be outside of the main target group, they would like to be involved in the creation of the activity. This can be at the same time as the involvement of the youngsters. As a benefit, this decreases the chance of leaning hierarchy due to the societal expectations.
- The youngsters and elderly should be approached in a later phase than discussed earlier. This should keep the energy high among the involved. In the meantime the board should make the arrangements with all stakeholders, including the process of rotation of residence. Advised is to involve the first elderly and youngsters half a year before the start of the activity. The residents move three months before the start.
- The board needs to do a feasibility study, to increase the credibility for the stakeholders. If the board is capable of doing this study themselves, they can ask money from the municipality. The Thuishuis asked 50,000 Euro for the realisation of this study. Other option is to outsource this to an independent company.
- The atmosphere in the mockumentary is as intended and gives some sense of credibility. For this reason the mockumentary is used in the policy making process of a Thuis & variant as well. This can be used to start a discussion on how to reach the same atmosphere or what to do different.
- It is important for the target group to hear from others about the concept. For that reason a small documentary on the website, interviewing current residents might give some credibility for them. Especially if they can meet those people in the cafe as well. To enable people to understand the concept, this documentary should also include an introduction from the board who explains the intentions behind the concept.
- For a good implementation in the neighborhood and to increase the familiarity of the Thuis & variant, the neighborhood is asked to think along in the creation of the cafe. This is done with an organised information evening, in which the concept is explained and volunteers are recruited. The neighbours are asked how to make the variant a central place in that neighborhood and what their wishes are. This can include already existing initiatives and a structure of connections outside the variant.

Daily life phase
- Rotation of the roles should also be something that is advised in the initiation phase, but not obligated. It could scare away the real target group, due to a feeling on uncertainty.

Activity
- The activity seems to be needed for the impression to enter a new phase in life. To reach the ones with the most risk factors for loneliness, it is important to make those activities as specific as possible. This gives them the impression they are personally reached.
- The ones that are less socially focused (risk factors), are less likely to be involved from the start. For that reason it is good to start with a variant that is more generally appreciated, to serve as an example for the other variants.

Cafe
- Since everybody is curious enough to drink a cup of coffee in the cafe, it might not be needed to give the first drink for free. It might be good to let that up to the customers as well, to keep the impression that they are wanted because of their participation.
5.7 Fit to college program

As the Marjon van der Meurs indicated, the amount of implementation success depends for a large amount to the match with the college program of the current councilors. This part discusses which points of the concept should be emphasized and what can be included to make it even better.

Implemented points of interest
- Keep tourists longer in Rotterdam: If the tourists get the feeling they get the real Dutch experience in Rotterdam, they are likely to stay for a longer period. To answer to this point it is good to start with a bed and breakfast or tourist information point.
- Stimulation of integration of the neighbourhood.
- Stimulation of citizen and entrepreneurial initiatives. Especially for societal purposes. They are not afraid to try new things.
- Stimulate elderly to live without care as long as possible.
- Use the talent and experience of the elderly.
- Decrease loneliness among elderly in the neighbourhoods with the highest rates. For that reason it might be good to start in Feyenoord or Charlois.

Advised point of interest
- Add a playground to the cafe, to make the neighbourhood more attractive for young families.
- To answer to the sustainability point of interest, there might be considered to include solar panels.
- Green areas are seen as important: in the plans there should be included a green space around the cafe or a roof garden.
- To serve as an example for the rest of the Netherlands, the Thuis & should be presented as a beginning of a movement that can start in Rotterdam.

Location
- Because of the difficulty to find a suitable location there is chosen to focus on the reconstruction of an old nursing home. This means extra attention should be paid to the avoidance of preconceptions. The chance is higher that the Thuis & variant is linked to the old structure of a nursing home, including care. Besides, extra intention should be payed to the creation of the ‘homey atmosphere’.
- Alexanderpolder could be a good location for some Thuis & variants. For the bed and breakfast there is still advised to use the city center as location, in collaboration with woonbron.
- Another solution could be Mathenesserplein in Rotterdam.

Finances
- As discussed in sub-chapter 5.1, the rent for the activity should stem from the income from the activity itself. Since most variants include only a small business, an extra source of income could take some pressure from the financial independence. This extra source of income should fit with the variant. Examples are the rent of small urban gardens for the neighbourhood, fresh fruit from their own garden, workshops for glasblowing or the rent of a room for a longer period.

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This graduation project started with the following assignment: “Design a solution that helps to effectively decrease the feeling of loneliness among elderly in Rotterdam.”

With the main design challenge to deal with the differences in loneliness in combination with the different characteristics of elderly and to reach the ones with severe issues.

The expectation can be made that the Thuis & variants prevents loneliness from occurring and increases someone’s physical and mental health. As previously discussed, it stimulates the creation of emotional contacts with help of a superordinate goal. This is in contrast with most existing initiatives. Due to the different layers of participation, this assignment is extended towards the prevention of loneliness among multiple age groups, including different kinds of loneliness.

The use of positive design in this assignment makes sure people experience the concept as entering a new phase in life, which increases the willingness to be involved. Something that has been validated.

The different variants of the Thuis & concept, specifies the target group, which increases the likability that new emotional bonds will
be made. On top of this it is likely to address people with different characteristics.

As the validation described, Thuis & can be seen as a good alternative for current residential forms for seniors.

As a critical remark there can be noted that the implementation phase will be a challenge. Something that can decrease the chance of actual realisation and the amount of people that can be reached.

6.2 Discussion

After the validation of the concept it is clear that the Thuis & concept is viable for implementation. However, multiple assumptions and decisions had to be made to develop this concept in the available time, with the available resources.

The report discusses different target groups, to easy the reading process. There should be noted that these target groups have more complexity than discussed, which should be taken into account with further steps.

The financial overview is a rough estimation based on the knowledge that could be gathered. During the process of implementation and with help of a financial expert, these numbers should be more specified.

The same applies for the laws and regulations and the architectural layer.

The validation is done as thorough as possible. However, due to the summer period not all stakeholders and target groups are evaluated. Despite the visit of six hotels, the hotel education school and contact with an internship coach, only one possible intern is interviewed.

Comparable situation can be sketched for an expert on elderly, expert on loneliness, second architect and youngsters interested in running a business.

For this reason it is important to do a thorough feasibility study before implementation. This study would include the expected need for Thuis & among future elderly, based on interview with experts and future elderly themselves. In the ideal case this leads to a waiting list for the first variant. Besides elderly, there should be gathered information about the other participation layers as youngsters who look for an internship.

As last point of discussion, the risk factors are not completely reliable, since literature does not talk about the relations between the risk factors. However, with lack of better knowledge there is chosen to address multiple risk factors at once. This should increase the chance that the severe target group is reached.

6.3 Future steps

Figure 108 gives an impression of which future steps need to be taken in which order. Inside this timeline, there are multiple iterations that cannot be predicted on beforehand which are for that reason not represented in the figure.

In the presentation to all stakeholders it is advised to get in contact with SOR and Laurens as well.

At this moment there is contact with the municipality and the director of woonbron for further implementation. This contact can be taken over by the board. Another option is to find a company that would like to take the initiative.

Since Factory of Things is a company that mainly facilitates and brings people together, there is not expected that this initiative is taken by the company. This initiative should come from someone intrinsically motivated to make this work.

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