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Elderly Living in Sweden
Present solutions and future trends

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Abstract

The amount of people retiring in Sweden is increasing and will continue to do so in the future. Politicians have recognized a challenge in this demographic development and it is important that they act in time and in a way that satisfies the need. The disposable income for people above the age of 65 has increased the past years and continues to increase according to the Swedish Statistics forecast, this indicates that the retired people will have more money to spend on housing in the future.

There are different types of living for elderly in Sweden; staying at home, senior living, secure living and nursing homes and an interesting question is if these will be adoptable in the future. New solutions, which address the demands for higher standards, will ease the social and security aspects for the residents as well as improve the work environment for the employees in the home care service business. These different solutions are not yet implemented in a large scale, but development show that they are influencing the future direction of building senior residencies.

Retired couples who get ill at different times might not get to live together or near each other when they require different levels of assistance to manage daily life. Moving away from a familiar area, family and friends can be stressful. By placing different types of elderly living close to each other is a solution that might help decrease that stress. There are some solutions like this already on the market today and it is a solution worth investigating more.

We believe that the availability of new and refurbished buildings needs to be more focused on easing the living for elderly people and may be achieved by implementing a certification system. Implementation and use of this certification system may create goodwill for investors and therefore force construction companies to build according to it. However a certification has to be requested by residents, municipalities and tenants, to be considered by the investors.

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Table of Contents

1. Introduction 6
1.1 Research question 7
1.2 Purpose 7
1.3 Method 7
1.4 Disposition 9
2. Background 10
2.1 Population and income prediction 10
2.1.1 Population 10
2.1.2 Disposable income 11
2.3 The population of elderly 11
2.4 Demands and requirements of the elderly 12
2.5 Political views 13
3. Types of elderly living 15
3.1 Living at home 15
3.2 Senior living 15
3.3 Secure living 16
3.4 Nursing home 16
3.5 Specialized care 16
3.6 Living solutions and services 17
4. Senior living in Sweden 18
4.1 Senior Living 18
4.1.1 Building for senior living 18
4.1.2 Service provided 19
4.1.3 Age of the tenants 19
4.1.4 Buildings with only elderly 20
4.1.5 Future demand 20
4.2 Micasa 21
4.2.1 Why senior living? 21
4.2.2 Demand 21
4.2.3 Gender and age of tenants 22
4.2.4 Combined Senior living, Secure living and Nursing home 22
4.2.5 Differences in managing senior living and ordinary houses 22
4.2.6 Future development 23
5. Directions of development 24
5.1 Availability 24

5.2 Technical solutions 25
5.3 Secure living 26
5.4 Segregation 27
5.5 Work environment 27
5.6. Certification systems 28
5.7 Trends 28
5.7.1 Collective living 28
5.7.2 Ethnical living 28
5.7.3 Victoria Park 29
5.8 Financing 30
6. Analysis 31
6.1 Transitions 31
6.1.1 Single transitions 31
6.1.2 Transitions for couples 33
6.1.3 Minimizing transitions 36
6.2 Political views 37
6.3 Critical evaluation of living alternatives 39
6.4 Directions of development 41
6.5 Trends 43
6.6 Financing 45
7. Conclusion 46
Sources 48

1. Introduction

The issue of where to live when we get older is interesting as it affects all of us. Both directly for those who are approaching retirement and start to think about it and also for relatives and friends of these individuals. The question is where and how elderly people can live to get the services they need in order to live a decent and fulfilling life. Relatives and friends do not want to worry about whether their loved ones are getting the help or the social contact they need.

Sweden has for a long time had a political view that people should be able to live in their existing houses as long as possible and get the required assistance through home care services. According to Abrahamsson (2009), this solution is not the most cost efficient way for the society and may also be very lonely for disabled or sick elderly, especially if there are no relatives or close friends nearby. When working with home care services you come in contact with many old people who live alone in their old houses, who, when the wife or husband have passed away, spend most of their time alone and whose only social contact is with the home care service personnel who help with the cleaning and shopping. We do not consider that to be a decent way of spending the last years of your life and it is one of the reasons why we want to examine the current market for elderly living. Research has been conducted about elderly living from the perspective of health care. The research based from an economic and investment and management perspective is clearly limited though there is a clear need for such information.

There will be a lot of retired people with higher demands on services in the future than for previous generations according to Abrahamsson (2009) and Bataljan (2005). The disposable income per person for people over 65 has increased with 37 percent between 1991 and 2008(Swedish Statistics, SCB). Alsnäs and Boström (2005) believe that if this development continues in the future it will make an interesting market for real estate developers. This is a potentially good costumer group for new all included service projects and we can already see this in new projects like Victoria Park in Malmö. These new circumstances make our report a contribution to the not yet very well covered field in terms of real estate business of elderly living.

1.1 Research question

The main research question of this thesis is;
Which living solutions are there for elderly in Sweden today and will they be adoptable in the future?
In order to find an answer to that question we will use several sub questions such as;

- How big is the demand for housing in terms of retired people and their economic status?
- What different types of housing alternatives are currently on the market?
- How does senior living work?
- What kind of policies does the Swedish government have concerning elderly people?
- What are the main differences in managing these types of facilities comparing to ordinary apartments?
- Which developments and trends are appearing and will these have an impact on future elderly living?

1.2 Purpose

Abrahamsson (2009) and Bataljan (2005) both agree that there is a large amount of people retiring in the future and concerns about where they should live is expressed by themselves and their relatives. There are several types of solutions already on the market, but the knowledge or awareness of these housing projects and how they should work in the long run is limited. Even the definition of the different types of living is not consistent. The purpose of this paper is to find out if the current elderly living solution in Sweden is adaptable also in the future. To do that, we will focus on what solutions are currently available on the Swedish market, how big the demand is in terms of both people and capital and also how the transitions between different living solutions work all the way from senior living, to specialized care works. It is important to investigate the development and trends on the market today to see if there is a big change approaching that should be included in the elderly living solution of the future.

1.3 Method

We have approached our problem through an empirical method where we have done a literature review as well as several interviews with companies in the market of elderly living. To get a proper overview of the current research within the area, we started by doing a literature review consisting of current solutions and demands for elderly living in Sweden today, potential problems and solutions. This information gave us the proper background and indications on how to structure the paper. After this we mapped out the different types of living arrangements for elderly people today, all the way from living at home to hospitalized care and what alternatives there are in between. We have also looked at what different services are provided within the different alternatives. As further information, the potential future demand for elderly living, both in number of retiring people and their economical status, was added. This was done by looking at statistics, both of population and potential income development.

We have conducted four interviews, two with companies that have senior living as their core business, Micasa and Seniorgården, and one with another core business, Sollentunahem, but still involved with this type of projects. We also discussed trends with Tore J Larsson, from the Science and Health department (CHB) at the Royal Institute of Technology, who conducts research within this area. We talked to the Managing Director of Micasa, Sollentunahem and Seniorgården about senior living, adjustments in the houses, the occupants, services provided, differences in property management compared to ordinary houses and what trends they believe will appear in the future. The results from these interviews are found within the Senior Living in Sweden chapter.

To get indications on how the availability of elderly living may change in the future, we have also included a chapter about directions of development. These development directions are circumstances that may change the market, not only in terms of technical improvements but also in demands and future needs. We have chosen to include a part about Victoria Park, a type of resort style living in southern Sweden, because of the medial interest about this project which is projected mainly as an elderly living alternative and because of the influences from the resort life style for elderly in the USA.

We have chosen to elaborate a bit more about Senior Living because this type of living seems to hold the solution to many of the problems perceived when it comes to having an available home for elderly people. The problems that occur are decreased mobility, which lead to an increased need for more suitable living space and better means of social interaction.

The amount of interviews preformed are not large enough to represent the senior real estate market but they give some indication as to where the market is going and they also give a picture of how the market is today. The people we have interviewed have a broad experience and knowledge of the market and where it is heading. They have experience of what the elderly want and need from their living arrangement and therefore we have chosen not to interview elderly people for this thesis. We believe that the elderly we could have reached would not give a true representation of what elderly would want from their living arrangements in the future. This is because there is such a vast span of requirements depending on physical status but also because of personal preferences. We would have had to perform such extensive interviews to reach all groups, which we are not able to do due to limited time and resources.

One of the main issues we have discovered is that elderly people need to move to a better suited living to a high extent once their needs for assistance increase. Moving is a very stressful process, not only for the person it concerns, but also for relatives and partners. Having to move to a new home, more suitable to the needs of the elderly person can cause problems such as separating from the partner. We call the process of such moves Transitions. We will investigate different types of situations developing from a need for a new living accommodation, in both text and models, in the section about Transitions. We have looked at the many transitions between different types of livings an elderly person might have to make between retirement and death. Hallberg and Lagergren (2009) comes to the conclusion that whilst many move from being healthy to being in need of home care services and around the

clock care there are scarcely any that go the other way, therefore we have not included this in our study.

1.4 Disposition

We start by investigating the demand for elderly living in the future and describing the different types of living solutions today. Further we dig deeper into Senior Living and Trends to get a proper background for the analysis and to answer the research question.

Chapter 2 investigates the demand for elderly living in the future, both in terms of number of people retiring and their disposable income. Further on we have looked at demands in terms of needs that elderly may develop later in life, as well as political development in this area.

Chapter 3 describes the different types of living solutions for elderly in Sweden today.

Chapter 4 investigates the type of living we have defined as Senior living. This chapter is based in interviews with practitioners in the real estate business for elderly.

Chapter 5 builds on the development directions and trends that we have come across in an interview with Tore J Larsson from the Center for Health and Building at the Royal Institute of Technology as well as articles in different types of media.

Chapter 6 discusses the issue of transitions, which is our definition of moving from one type of living to another. Further we also elaborate on the findings from the chapters above.

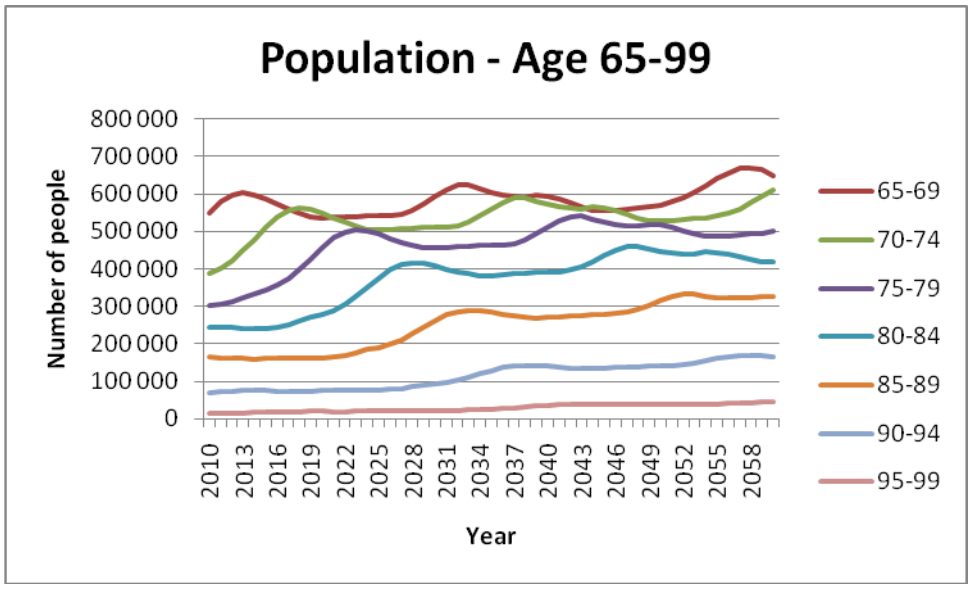
Chapter 7 concludes the findings gathered from the analysis in chapter 6.

2. Background

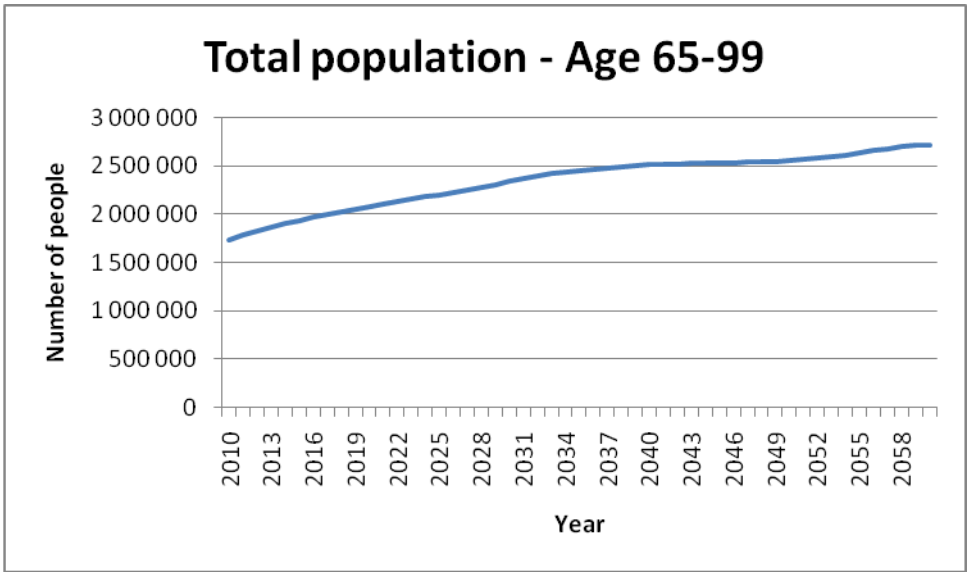
2.1 Population and income prediction

The following statistics gives an indication of future demand for living solutions adapted for elderly. The data for the following charts is gathered from Swedish Statistics (SCB) and gives a prediction of future demographics and disposable income.

2.1.1 Population

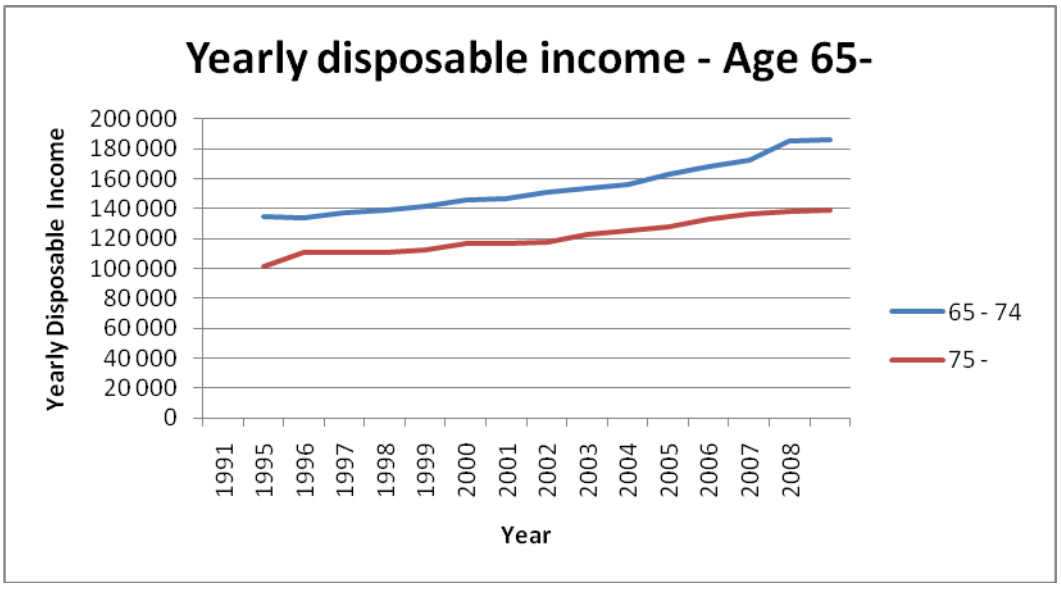


The chart above describes the population trend in different age groups from ages 65 to 99 years between year 2010 and 2058. According to this chart the population will grow during the upcoming fifty-seven years. The groups with the largest population are ages 65-69, 70-74 and 75-80. Over the next fifty-seven years the age group of 65-69 is predicted to grow with 99 000 persons or 18,1 %, ages 70-74 should grow with 222 000 persons or 57,7 % and ages 75-79 are expected to grow with 197 000 persons or 64,9 %. This is a substantial increase that put high demands on the housing market in terms of need for adapted living solutions.



The chart above shows the total increase in population between the ages of 65-99, which increases from 1 735 000 to 2 715 000 during the next fifty-seven years. That is an increase with 980 000 persons or 56,48 % over a period of fifty-seven years. This is a trend that is obvious and indicates new issues in terms of how we are going to support a population that is clearly getting older.

2.1.2 Disposable income



The yearly disposable income of people age 65-74 and 75 and older is visualized in the chart above from year 1991 to year 2008. The disposable income per year has increased with 51 000 SEK or 38 percent for the age group 65-74 and with 37 000 SEK or 37 percent for persons 75 years and older. This can be compared to the increase in income amongst people between 16 and 65 during the same years, which has been only 27 percent (SCB).

2.3 The population of elderly

The amount of people retiring in Sweden is expected to grow at an increasing rate during the upcoming years according to Abrahamsson (2009), and was recognized to do so already a couple of years back according to written works by Bataljan (2005). Bataljan (2005) also writes that the aging of the population is connected to an increasing need and claim for health care and according to Jakobsson and Niemi (2005) there has not been any plan on how to cope with this increase of the older population. During the 1990's there was a change in the trends from healthier older people to a larger proportion of sick. Large improvements in health care make people survive and become much older than what was possible before. Rosén (2005) comes to the conclusion that people nowadays tend to survive sicknesses but still carry long-term illnesses and suffer from complications. Rosén (2005) mentions that there has long been a discussion about whether the period of sickness before death will be shorter,

compression of morbidity, unchanged, postponement of morbidity, or longer, expansion of morbidity. During the last decades there have been many people who believe that there will be a compression of morbidity, this is also supported in empirical data. Older people have kept their health as they age. There is a possibility that this positive development has been a consequence of rapidly improved living conditions both social and economical, than those for previous generations. Another explanation according to Rosén (2005) is that improved living habits have changed morbidity, which is also supported by Jakobsson and Niemi (2005) who write that the improved living habits also improves both health and functioning ability among the elderly. Another important part of staying healthy is social relationships, to be active in different associations and meeting people tend to have a positive effect on the health, according to Agahi et.al (2010).

Bataljan (2005) writes about the latest trends when it comes to development of functioning ability among people in the age of 65 and older. The health development is improved because of both increased living years with health and total expected life length. Evaluating the functioning ability amongst the population over 65 years is made by collecting individual data on reduction in the instrumental activities in everyday life. These are called IADL and are for example ability to clean, cook, buy food and do the laundry. When a person needs help in these areas they are able to require home care services. In the same way it is also possible to look at reduction in the abilities in the capacity in daily life, called ADL and is for example being able to take care of ones personal hygiene, taking showers, putting on clothes and to eat. Both the IADL and ADL needs have decreased from the year of 1988 to 2002.

2.4 Demands and requirements of the elderly

It is suggested by Jakobsson and Niemi (2005) that people will want to live together to a higher extent in the future, and research made by Harrefors et.al (2009) support that couples do want to live together. The couples in their study expressed a will to stay at home as long as possible. As long as they were only in need of a little care they wanted to stay at home with their partner, but when they were in need of advanced care they were willing to go to a nursing home. The reason for that was usually that the partner would not need to take care of them constantly. However, going to a nursing home was connected with fears such as abandonment, being dependant on the staff, not having people around that know who you are as a person and being isolated without a possibility to talk to friends. The problem of not having people to talk to may also arise when living in your current home alone and being ill which might make it difficult for you to get the social aspect of life according to Abrahamsson (2009).

An option in between living in your current, not yet adapted, home and getting the last care at a hospital or nursing home is senior living or secure living. Abrahamsson (2009) find that these types of living are more social than living in your current home since all people in the building are retired and you can get new friends and networks within your building, making it easier to check up on each other and socialize. Maintaining a difference in age between the people living in senior and secure living makes it easier to organize activities because the younger ones have more energy to keep such activities going according to Abrahamsson

(2009). Lönn and Peterson (2006) however, find that the people moving into senior living are 70 years or older. Paulsson (2005) believe that an important issue is to develop the senior living arrangement according to the experiences of them so far. According to a study presented in his article, some of the most important reasons for moving to a senior living is to get living arrangements suited for older people, to get away from a high demanding house and garden, to feel secure and to get the social network often associated with senior living. These aspects should be considered when looking at different living arrangements for elderly people.

What seems to be important when choosing placement for elderly living solutions is the closeness to public communications, a pharmacy, a hospital, a supermarket and a bank or post office, this according to questionnaire by Lönn and Peterson (2006).

It does not cost as much money for the municipality to have someone living at home as it does having them stay in a nursing home, according to Lönn and Peterson (2006). It is also, according to them, more cost efficient to adjust the current housing stock to fit the needs of the elderly than to have someone living in a nursing home. In Sweden, there are adjustment contributions where you can get founding for changing and adapting you home to the standards you need as an elderly person. However there are very few persons that know about this and it is therefore not used as much as it could be. Paulsson (2005) writes about some key ways to improve the living arrangements for elderly people. One is to adjust their current living arrangements to better suit the needs of the elderly, such as installing elevators and making it easier to move around in the house. An elevator is the most needed adaption by elderly according to Lönn and Peterson (2006).

Abrahamsson (2009) writes that there has been a focus from the municipalities to let people age in their current homes, helping them with care in their homes. This is very appreciated by many, since elderly people might not want to move unless they get very ill. According to Jakobsson and Niemi (2005) elderly care is supposed to be equal for everyone today, but that people they have interviewed want to be able to choose their care once they get older. However Hellström Muhli (2010) writes that the political goals of elderly care sometimes overshadow the right for elderly people to get the care they need and want.

2.5 Political views

The goal and direction of the Swedish Elderly Policies is to provide resources to give people the right conditions to live an independent life of high quality. Most of the work is carried out by the municipalities, private actors or foundations and there is a principle of freedom of choice for the person on firstly; who should take care of them and secondly; where they should live (www.regeringen.se).

When talking about housing for elderly, the tradition in Sweden is to talk about making it possible to live at home as long as possible. This is illustrated today when the first thing mentioned under the heading *Elderly living* on the Swedish Governments homepage, is that living home is an important part of elderly policies. But the government has also recognized that, when always providing home care services instead of making people move to homes more adapted to the needs of elderly, there is a risk of isolation and also a risk of having too

few specially adapted houses in the future. This may result in people not even having the choice of moving from their current home when they want and therefore having to stay there against their will (www.regeringen.se).

The Swedish government has requested an investigation from the Handicap Institute (Hjälpmedelsinstitutet) called *Live well when getting older* (”Bo bra på äldre dar”) *S2010/5354/ST*, which is supposed to encourage initiative and development of the living solutions for people as they get older. The task is divided into three parts, *Support architect contests when constructing or remaking building projects aimed towards older people*, *Support municipalities pre-studies when they are working with actual cases* and S*upport to projects in the physical and regional matters* (www.regeringen.se).

Another Swedish Government Official Report is newly finished, *Live well your whole life* SOU 2008:113 (“Bo bra hela livet”). The Geriatric Care Delegation has suggested in this report, in December 2008, that municipalities should be able to provide safety accommodations for elderly without an investigation on needs according to the Social Services Act when a person feels concerned or socially isolated in his or hers current home (www.regeringen.se). Safety accommodations, which we define as secure living, are rooms and other areas where the people living there can be provided with meals, sit down together, act on hobbies or recreation and where there is personnel available daytime that can support the residents under certain specific hours. The requirements for the residents is that they are 70 years or older, or in the question of a couple or siblings, that at least one of them is 70 years old (www.borverket.se). The Geriatric Care Delegation has stated that the future demographic development leads to an increase of people over 85 and that there is a huge need for different types of living solutions and to increase the amount of elderly living since there are not enough houses today. They suggest that current buildings should be made more accessible and that municipalities should make an investigation on the accessibility of the current stock (www.regeringen.se).

In the report "*Live well your whole life"* it is also stated that, due to the increase in the demographic development of elderly people, there is a huge need for more and different types of houses for elderly. It is also stated that subsidies should be given to increase the accessibility of current homes. There is already a lack of space in special housing since less than half of the municipalities consulted mentions that they have a supply equal to demand. The Geriatric Delegation estimates the need for special housing to increase with 50-70 % up to the year of 2040. They also suggest that a form of special housing is developed which fulfill not only the medical needs but also the social needs of the resident as well as having a fulfilling physical environment. They state that knowledge and research in this area is highly needed and also that the terms used to describe different types of living solutions are confusing and should be clearly defined. This would simplify the process of elderly knowing what they have to choose from and get them to pick and apply for the right kind of living. Also the regulations should be clarified and the terms of different housing alternatives should be used in official statistics to give a proper picture of the past and current market (www.regeringen.se).

3. Types of elderly living

The Swedish market of elderly living today provides a variation of different solutions. These different types of living are adapted to the specific needs of the person living there. Below is a clarification on the different types we could find on the Swedish market today.

3.1 Living at home

The Swedish municipalities want people to live at home for as long as possible, therefore they have made it very easy to continue to live at home even if a person for some reason is not able to take care of himself. One solution is home care services, which is a solution where the elderly keep living in their current home and pay a fee to the municipality in order to get services to their homes. Before getting home care services the municipality makes an aid assessment to see what type of care or services the elderly are in need of. The home care services are for instance purchases, cleaning, laundry, food services, daily activities; such as mental or physical training, accompanying to the hospital or personal services such as; aid in eating, hygiene, putting on clothes, taking walks, get a feeling of security or getting some social contact (www.huddinge.se). Aside from this it is possible to get a security alarm installed in the apartment and then the resident gets an alarm button on his arm. To get this service they have to pay an additional fee to the municipality. If the person fall or get hurt he simply press the button and get a direct connection with SOS Alarm (www.huddinge.se).

The current apartment might not be adapted for elderly living when the motional abilities are decreasing. If this is the case, it is possible to get an adjustment contribution and help with adapting the apartment to the specific needs. The contribution can be used to, for example, remove thresholds or install a lift in order to get up the stairs (www.huddinge.se). The help and assistance possible to get when living at home can also be provided in all the alternatives below, except the nursing home and hospital where the services are provided by the staff.

3.2 Senior living

Senior living or 55 + living is a type of living that is aimed at active elderly, usually between the ages of 55-75, they often have a lower age restriction for moving in and sometimes there may be an upper age restriction as well (www.hiertagarden.se) These apartments are like ordinary ones that can be either bought or rented. When the apartment is bought the owner has to pay a fee to the tenant-owner's association, which includes all apartment owners in the building. The apartments can have small modifications such as lower thresholds and more accessible bathrooms, ovens and such. The apartments are usually located in buildings which house only senior living.

There are a number of living arrangements that are called either 55+ or senior living and the distinction between them is not very clear. The public versions of this type of living does usually not provide any services, what you get is a living arrangement where all your neighbors are over 55 years old and therefore there are no children in the same house (www.poseidon.goteborg.se). There can be common facilities in this type of living but there are no activities organized by the real estate manager and no nurses provided

(www.hsb.se/stockholm). The private versions of senior living vary in the services they provide. The resident can have access to a number of shared areas that can include a gathering hall, gym, sauna, carpentry room, game room, library, a pool or an outside area. Sometimes cleaning, window washing or a nurse on duty can be included in the fee for the apartment (www.blomsterfonden.se, www.ekebyhus.se), this depends on what the tenant association has decided.

3.3 Secure living

Secure living is a type of living similar to 55 + and senior living but the resident needs to be over 70 years old to get in line for an apartment. The building includes a common area, emergency alarm in each apartment and a possibility to get meals delivered. There is also staff available that organizes activities for the residents (www.stockholm.se). A secure living arrangement should be designed in such a way that the resident can continue living there even if problems with moving and walking occur (www.regeringen.se). Secure living includes both apartments that can be rented or bought, the resident pay a fee for the apartment as well as an extra fee for the common area. (www.stockholm.se).

3.4 Nursing home

This is a type of living solution for elderly people where the residents pay the municipality a fee for living arrangements. The solution is provided for people who need more care than they can get at home.

There are different types of nursing homes; some are service facilities that include an apartment with a bedroom and a small kitchen as well as a shared dining room and living area. There are nurses and service personnel available around the clock and doctors usually come by once or twice every week or when they are needed. These homes have activities for the elderly to enjoy and there is a possibility to go outside (www.caremacare.se). Some of these homes have an assurance that kicks in if the resident gets ill. This means that he should not have to move as long as he can be taken care of on the premises (www.huddinge.se). There is also a type of short-term living arrangement where the resident stay a week or just over a weekend so that the relatives who are helping at home can get some rest or a vacation (www.huddinge.se).

3.5 Specialized care

This last living solution includes all types of specialized care, for example dementia, Alzheimer's and cancer. Here the patient stays at a nursing home that specializes on specific illnesses. It is a care facility with nurses, doctors, prepared meals, cleaning and all services needed to stay alive. When living in a specialized care facility the patient usually live in a room with a bed and have a common living room area.

3.6 Living solutions and services

The chart below show which services are included in the different types of living, it also shows which age restrictions are associated with each type of living.

	Living at home	Senior living	Secure living	Nursing home	Specialized care
Home services (HS)	YES	YES	YES		
Meals	Home Service	Sometimes/HS	Home Service	YES	YES
Cleaning	Home Service	Sometimes/HS	Home Service	YES	YES
Access to nurse	Home Service	Sometimes/HS	Home Service	YES	YES
Common area		Sometimes	YES	YES	YES
Activities		Sometimes	YES	YES	
Age	All	55-75 +	70-75 +	All	All

4. Senior living in Sweden

4.1 Senior Living

Senior living can be both apartments that you rent and apartments that you buy. Sollentunahem is a municipality owned real estate company that manages rental apartments in Sollentuna, Sweden. They manage ordinary houses as well as senior living and secure living. They started building senior living in the 1980's and have continued to build and manage these since then. Seniorgården is a development company that specializes in building senior living and nursing homes on different locations in Sweden, the company is a part of the big Swedish construction firm JM AB.

The senior living apartments are sold to individuals who then form a tenant association to which they pay a fee each month. According to the MD of Sollentunahem, Lars Callemo, and the MD of Seniorgården, Birgitta Seeman, senior living is a successful concept. It is however, according to Birgitta Seeman important to build senior living in the right area with the right apartment plan and design, the right price and the proper size, otherwise no one will want to live there. Elderly are according to her a demanding group of customers, they already live well and will only move if the perfect living comes along. Many want to live in the same area where they have lived so far or to move back to where they were raised.

The elderly have high standards and are not a homogenous group of people, there are many different values within this group, according to Seeman. Within even a ten-year span people are different and want different things. The pre war generation is more prone on saving to help their children financially whilst the post war generation wants to use their money instead of just saving it. The post war generation has more in common with their children and is not that different from them, says Seeman.

Seeman mention that many elderly today have a summer house or a vacation house abroad, which means that a senior living where you can just shut the door and leave for a longer period is an attractive type of living. However, a large group still wants to live in their large house with a garden that needs tending to. Seeman estimates that 25-30 percent of people over 65 years of age want to move to a senior living, they like the community that exists in a senior living with people you own age. Children and grandchildren do not always have time to spend time with their parents and grandparents and senior living is a good way to get other social contacts when you are no longer working.

4.1.1 Building for senior living

According to Callemo the product must be suited for the market and with housing for elderly it is important with lower thresholds, ovens in higher position and other adjustments that make every day life easier. Seeman mentions some important issues when building senior living houses, if you mark the first and last step of a stair with a different color than the rest of the stair it is easier to see where it starts and ends, these simple adjustments has been adapted by the construction company JM in all of their new houses. Elevators in senior living houses should have a place to sit and a rail to hold on to and the buttons should be adjusted for the blind. The stairwell should have good lighting and different coloring on different floors, the

mailboxes should be placed lower than usual so they can be reached from a wheel chair and there should be a wheelchair storage room by the entrance. There should not be any differences in levels in either the apartment or the outdoor environment that make it difficult to walk and the parapets in the bedrooms should be lower than usual. The bedroom and bathroom should be adjacent and the toilet should be higher than it is in an ordinary apartment. The outside environment can also be adjusted for elderly, with hard surfaces that make it easier to walk with a walker or wheelchair and meeting areas to socialize.

It is, according to both Callemo and Seeman, important to have common areas in the senior living houses as well as a guest room that the tenants can rent for visitors. With a common area it is easier to connect to the other tenants in the house to avoid loneliness.

4.1.2 Service provided

There are different approaches to service provided in senior living, Sollentunahem has decided not to provide services to the tenants and Seniorgården has decided to provide them. Some services can be provided through home care services by the municipality, based on an aid assessment and that is why Sollentunahem has decided not to provide services to the tenants in senior living. Seniorgården has, as mentioned, taken a different approach and decided to provide services through a company called Elvira. The tenants choose what services they want and pay accordingly. A few examples of services provided is cleaning, window washing, carpenter, purchases, party planner, car rental and a vacation home in Turkey. Seeman says that the services provided gives an opportunity to supplement the home care services, however not many tenants today use these services, which is good because that means that the tenants activates themselves instead. But Seeman also thinks that the use of services will increase as the post war generation moves in to senior living.

4.1.3 Age of the tenants

The tenants moving in the senior living apartments are older than 55 years, which is the minimum age of both Seniorgården and Sollentunahem, according to Seeman and Callemo. The age at which most people move in to one of the building of Seniorgården is 65-70 years old, which is the age where most people retire and might want to have the freedom of traveling and still have the energy to move, says Seeman. The average age of the people living in 89:an, one of the senior living buildings at Sollentunahem is 78 years old and the youngest is 60 years old.

Since the start of Seniorgården there has not been a difference in at which age the tenants move into the apartments but Seeman thinks that maybe the age in the future will be higher since people get ill later in life. Currently there are no such indications.

The senior livings that Seniorgården build are run by a tenant owner's association lead by a board of members. A question regarding the efficiency of the board when everyone is older was raised during the interview with Seeman. She says that not all the members of the tenant association are the same age and get ill at the same time, therefore there is no problem with finding members to the board if the tenants owner's association is big enough. There might be

problems if there are only 5-7 apartments in one association, but if there are 25-30 apartments there are no problems with populating a board.

4.1.4 Buildings with only elderly

Callemo believes that placing senior living, secure living and nursing homes at the same place would segregate the elderly too much from the rest of society. It could however be nice for the elderly to be able to have a calm environment inside a house that is only for elderly. Having a building that is only for the elderly is also segregating in one sense, but then you have to plan what to build next to the senior living. If ordinary buildings surround it, all the elderly have to do in order to see other people, is step through the door. To have mixed areas like this with senior living in it can create a calming effect on the area and if the elderly think there are too many children running around, all they have to do is step inside their building.

4.1.5 Future demand

Callemo believes that the demand for senior living will continue to be high and increase in the future. The second largest cost for the municipality is elderly care, according to Callemo, and that the cost will increase in the future. In order to meet this cost increase it is important to have apartments where the elderly can stay at home as long as possible. Senior living is a form of living that is needed in the society and it is preferable for the municipality if the elderly stay at home longer and more economical if many elderly live in the same area.

Around 25-30 percent of people over the age of 65 consider senior living as a possible way of living according to research made by Seniorgården, says Seeman, which are enough people for it to be an interesting market.

Callemo believes that we are currently at a breaking point. In the past people lived in one type of living the whole life but that might not the case in the future. He believes that the rental apartment will be more in demand from elderly in the future since it is a good way not to have to worry about your living, the landlord takes care of everything that needs fixing. It is also a good way to free capital from the previous house that can be spent on travelling or other experiences. It is however important, says Callemo, that these apartments are in attractive surroundings and are attractive in their design. Seeman agrees that design is important and that apartments with small common areas will be in demand since a smaller common area decreases the rent. She believes, as Callemo does, that rental apartments will be more popular in the future.

Seeman talks about that senior living has to be in central locations for people to easily travel, access city center for restaurants, cultural events, friends and other interests. It is important not to feel isolated. Properly functioning public transport is crucial to avoid this problem.

4.2 Micasa

Micasa Fastigheter is a company owned by the municipality of Stockholm, its purpose is to provide care facilities to people in need of them. They provide homes for the homeless, protective homes for women, homes for fugitives and homes for disabled as well as other types of homes.

Micasa also provides 65+ living through Stockholms Bostadsförmedling, which acts as an intermediary between people looking for a rental apartment and the companies that provide them. The apartments provided are rental apartments that are specially adjusted for elderly. They have lower thresholds, sockets at a convenient height, different colors on different floors, lighting that suits elderly and the buildings are adjusted to have a good sound level.

4.2.1 Why senior living?

According to Anders Nordstrand, the MD of Micasa Fastigheter, the Home Services are increasing because it costs the municipality around 500 000-600 000 SEK per year to have someone staying at a nursing home. Instead they want people to live at home for as long as possible, and home care services makes that possible.

Senior living has apartments that are adjusted to fit elderly, which means that you can stay longer in your apartment with home care services than you might in an ordinary home. In Stockholm senior living is available for people above 65 years of age. They are available so that the elderly have an opportunity to move from a non-elderly adjusted apartment to an adjusted apartment. If the person for example lives in an apartment on the third storey without elevator, he or she has priority to Senior living in Stockholm. Priority cases are not the only ones that can get an apartment, but they are first in line to them.

When you have small children you get new friends from day care, school or you meet other people in your building who stay at home with children. When you get older it is more difficult to meet new people and senior living can help with that. You can easily meet people who are in the same situation as yourself. Tenants of senior living often organize activities such as book clubs, gardening groups or cooking together. This creates a good atmosphere and a sense of belonging.

4.2.2 Demand

According to Nordstrand, the need for priority living is decreasing. The amount of persons over 80 years of age are decreasing in all larger cities in Sweden, but around year 2020 the amount will increase due to the large number of people born in the 1940's. He believes there will still be a demand in the future, but most people want to live where they have always lived. The demand for senior living also depends on the tax system. If you are not allowed to bring your earnings with you from a sale of you previous home and thus has to tax the earnings it will not be profitable to move to senior living. It is not economically feasible to leave a home that is fully paid and with a low cost of capital and then buy an expensive senior living apartment. Therefore the demand of senior living is very sensitive to political decisions regarding taxes.

The concept of senior living has been successful as a niche product, there are no problems with renting them out and Nordstrand thinks that there is a high demand for this type of product and there will continue to be a need for it.

4.2.3 Gender and age of tenants

Around 80 percent of the people living in senior living are women, which is because they usually live longer than men. The biggest reason to move to senior living is loneliness and to get a sense of security. The age of the people living in senior living is usually between 75 and 85 years.

The age of those living in senior living has decreased some since the start, this is because there were a lot of priority cases that got an apartment first, and these where usually older people. When the line of priority cases reduced, the ages of those moving in decreased. The average age of the tenants is different in different areas. This depends on how long you have to wait to get an apartment, in the inner city of Stockholm the queue time is 10-15 years and outside Stockholm it can be a few months. The longer you have to wait to get an apartment, the older you get when you move in and therefore the average age is higher in the more central parts of Stockholm. It is however important to get all ages represented in a senior living so the activity and attractiveness does not decrease.

4.2.4 Combined Senior living, Secure living and Nursing home

Micasa has at least one example of a situation where senior living and a nursing home are located next to each other. What can be troublesome with that is that the tenants in the senior living find it to be awful to have to see the ones living in the nursing home because in a way you see your future, where you might not be able to take care of yourself on your own. The same thing applies to restaurants, it is not appetizing to have to watch someone unable to eat properly with food everywhere and it is not nice to not be able to have privacy if you are the one unable to eat without making a mess. Therefore it is best to separate these two groups, maybe by creating separate entrances to the different houses and create secluded areas in the restaurant.

A good thing about having the different types of living close to each other is if your partner is in need of round the clock care and you yourself are not. Living close to each other enables having no problems with visiting each other without big efforts. It is also less stressful to make the transition from one type of living to another if you move within the vicinity.

There is a high demand for this type of living, especially in the city and even though it is more expensive to live in the city, this is what many prefer. It is closer to culture, restaurants and activities.

4.2.5 Differences in managing senior living and ordinary houses

There are large differences in managing senior living and ordinary houses. One is that the residents are not working all day so there is no need for late opening hours, they can report and do their business during daytime. Instead you have to consider the fact that most people are at home all day, therefore, craftsmen working in the building have to have special rules of

conduct. In the senior livings of Micasa, craftsmen are not allowed to start working until half past eight in the morning, they are not allowed to have a radio on and they can not have cords lying in the corridors or entrances in case an elderly person would trip over it.

There are also administrative differences in managing senior living, such as communication with the tenants. Some residents do not see very well which means that all information to the tenants of Micasa is written in large letters with a typeface adapted for visually handicapped. It can also be difficult to inform and communicate with tenants if you do not know if the tenant gets the information that is delivered or if it is a trustee that gets it. Even if information is communicated properly, there is no guarantee that the tenant will remember getting the information. Therefore it is important not to be annoyed if a tenant calls several times regarding the same issue, they might not remember the previous times. Another difficult issue is signing contracts, it is difficult to know if the tenant knows what it is he or she is signing.

Micasa does not provide any services for senior living, however they have some additional services they offer for a fee, for example housekeeping. All senior living facilities have a common area, a guest apartment and if possible and a restaurant in the same building.

4.2.6 Future development

The future development of senior living will, according to Nordstrand, be aimed at what could be called lifestyle living. In these housing projects people who share a specific life style can live in the same senior living. Different ethnical associations have shown an interest in senior living aimed at a specific culture. Nordstrand believes that people who share a certain interest or lifestyle will want to have senior living aimed at that interest, for example senior living aimed at golf or senior living for actors.

5. Directions of development

5.1 Availability

The Royal Institute of Technology has a Centre for Health and Building (CHB) at the School of Technology and Health, which is led by Professor Tore J Larsson. The purpose of this Centre is to look at problems within the availability of living, both for residents and people helping them in their homes through a technical perspective once problems with mobility or other availability issues occur. The Centre collaborates with the surrounding municipalities, different real estate companies, consultants and construction companies and is a facility, which engages Larsson, four other Research Leaders and seven PhD Students with different backgrounds. CHB develops some new technical solutions but works mainly with assessing usability and functionality in existing technology.

Larsson does not find any single company that takes the lead when it comes to development within the area of adaptations in the living situation for the elderly. The issue is both political and economical, and as long as there is no strong incentive for companies to look at the availability of the living space and surroundings the possibility of change is minimal. It is, according to Larsson, important for real estate companies to remember that designing good solutions when building is more cost efficient than adapting the buildings later.

The nursing homes are a destination where people tend to come later in life than in previous generations, according to Larsson, and he believes that the number of places in nursing homes will decrease in the future. They have already started to decrease and will continue to do so in the future. It is only the number of nursing homes for dementia that are increasing due to a larger demand, Larsson believes this is because we are a larger population and a larger proportion is getting older. He believes that instead of living at nursing homes, people will live at home as long as possible, that the living areas will be adapted and that needed services will be provided through home care services. This means that the living area is important because it has to be attractive both for the resident but also for the people who work there while providing home care services. It is also important that the area looks like a home and not a hospital while fulfilling these needs. Larsson tells us that when municipalities are trying to make homes more available, problems like water damage in bathrooms occur. This is when handles to ease using the toilet has been installed and the water-protective seal is penetrated. This has led to some housing companies not allowing the availability adjustments in their buildings any more.

One of the doctoral students at CHB is studying how availability projects in homes are conducted in different municipalities. An early observation is that there is no consistency throughout the country and that no cost-efficiency calculations are done in relation to the local housing markets. The devices and installations that have been installed are not used again after the person who needed them moves out which is not very cost efficient. Larsson states that making a home available for the resident is not complicated, though it does cost money, but the municipality should calculate the cost that is saved when making such an investment.

Larsson does not think that the availability aspect is considered enough by architects, but Sweden has a high living standard, which is a good base for adapting homes compared to international standards. Despite this, a common problem in buildings today is that the bathrooms are too small and that the doorsills from balconies are too high when people lose mobility. Larsson believes that availability adjustments will be more important in the future, when the cost of health care increases.

5.2 Technical solutions

Social problems such as meeting someone in person should be solved with technical solutions like videophones, which make it possible to see the other person and interact without moving out of your own house. The phone should be connected to a large TV, if possible 3D, so that people can interact with each other if they have problems leaving their house. Simultaneous communication is vital for people to be able to stay in their houses when the mobility is decreasing. Larsson tells us about MonAMI, which is a EU-project in the Sixth Framework Programme (http://cordis.europa.eu) that is headed by the Swedish Institute Assistive Technology, conducted with 15 partners in 7 countries, for example Germany, Spain and France. As a part of this project CHB has installed a sensor system in thirty of Micasa AB:s apartments that is being evaluated. This system has for example cell phones connected to the security system by the entrance and it is also possible to adjust the lighting in the apartment with an application on the phone.

Larsson believes that the problem of being alone can be addressed by using social media, for example triple play. Triple play is when the phone, computer and television are connected to each other and create a system. Every technical device, for example lamps, have a sensor that can receive information through the phone, the computer or the television if something needs to be changed. The sensor systems need to be tested in real life and with a potential user so that errors like disturbance from other electronic devices such as microwaves or design problems can be detected and fixed. This is crucial before being able to sell a product on the market.

Seniorgården has made some tests with technical solutions in their apartments such as a TV on the refrigerator, a laundry room booking service on the Internet and an entrance security system with a video camera so you see who you let in the building. According to Birgitta Seeman the use of simple technology will increase, but not many want to pay for the new solutions. Seniorgården is currently working on an ”away button” where you can press the button if you are going on a holiday. All electrical machines will then be switched off except the refrigerator and freezer.

The technical issue is an important aspect that needs more attention when it comes to property management says Larsson. The technical infrastructure has to be adapted not only because of the social benefits of technical solutions. When managing a building for elderly it is important to remember that it is not possible to cut off electricity or water if advanced care is taking place at home instead of in a nursing home. This requires new competences and updated thinking among the property managers.

Larsson wonders why property management is not responding faster to the technical solutions on the market. The technical development has come really far and the main issue should be which devices to implement as the demand is so large. The devices are not only required by people with decreased mobility and functions but from everyone because they can provide security and simplify daily life for all. Inclusive design means that products and environments are designed to be usable for all people without specializations or adaptations. Larsson talks about seeing the world as a normal distribution where most people are in the middle and trying to move closer to the tails of the distribution which means that the product reaches more people. Therefore the design of a product should be developed so that it suits more people, then more people can use it from the start and the design is the best possible one.

Intelligent houses through technical solutions are easy enough to build but Larsson thinks that the reason they are not is that property managers are not very keen on learning new solutions. There is also a problem during the development of new products where there is no connection to the needs of the customer, the devices have been developed from other perspectives. Technical development is a process that is moving in different directions depending on the interests of the developer and seldom end up the way it was planned. The demand and willingness to pay of the customer has to be there and smart houses are only smart if they satisfy a need. Technical devices and design has to be easy to understand to really be adaptable. Larsson thinks that engineers lack knowledge about how normal people perceive, think and act, which results in poor design. Another problem that CHB has come across is that companies that provide technical solutions have not been testing these in reality. When these products are placed within the science lab problems occur, which were not expected by the developer.

It is, according to Larsson, important to adapt the solution to a problem so that it does not depend on another function, like helping people who have degenerating vision by using a sound as guidance for a specific task. This is not a good way of solving a problem because when one function is degenerating others often do too and therefore these people may also have problems with degenerating hearing. Functionalities like vision, hearing, moving and sensing often degenerate together and therefore the compensation design has to be thoroughly investigated.

5.3 Secure living

Secure living is a bad compromise of living solutions according to Birgitta Seeman, who only see a market for senior living apartments, with home care service when it is needed, and nursing homes as the next step. This is because of the larger need for care once a person gets as far as secure living. Larsson agrees with Seeman, and believe that secure living is a new concept with solutions that do not address the real problem. He also believes that more new concepts like this will be proposed from politicians in the future.

5.4 Segregation

Larsson talks about the importance to build for life-long living and to not segregate when new developments are planned. He states that the number of people over 80 who require home care services is much smaller than what can be expected, that most people manage daily life without help from the municipality. This is possible because they are married and can help each other, children steps in when needed or that they pay for the help themselves without bothering the municipality. There is a tax-reduction on services provided at home, which makes buying these services by one self less expensive than it was before.

Segregated living solutions for elderly people are not a good thing according to Larsson because no one would like to move into age-segregated housing or to the "last destination". Older people do not see themselves primarily as old, he states, and therefore do not relate to other old people already living in nursing homes. Larsson also talks about making buildings that can house three generations, buildings that will work for elderly as well as for younger people, this will help ease the segregation problems with elderly.

Larsson says that municipalities find segregated living to be a simple solution. The planning process has to be integrated with buildings, the close environment and transportation. This can be complicated because there are laws to consider which makes the process even more complex. The municipalities plan the use of the land in the municipality but some municipalities have sold most of their land to private companies, which make it more difficult to set a plan for elderly living. The municipality can choose what the land should be used for but they cannot make the owners of the land build on it if they do not want to. If the plan from the municipality does not suit the landowners they can just wait for the municipalities to change their plan.

5.5 Work environment

The health care sector has major problems with its working environment according to Larsson. This is a sector that is mainly consisting of women, the average age of the workforce is high and they are burdened with having to do more with less time when the municipalities are focusing on being cost-effective. This is not a popular science topic, but Larsson thinks that it needs attention in order to ease the workload and attract new workers in the future. One subject that another doctoral student at CHB is studying right now is how people work when assisting other people on the toilet. This is a heavy job today, which has not improved much for a long time but is still possible to improve a lot through technical solutions. Larsson thinks that all the toilets used by people who cannot cope themselves, will in the future be toilets that wash and dry the user automatically and this will improve working conditions dramatically. This solution already exists in other countries, it has been common in Japan for decades, but has not yet reached Sweden.

Working with home services is hard work, heavy and ungrateful that does not pay much money, and therefore Larsson believes that there will be a problem to attract young people to work in this sector in the future. The profession needs to improve its status and adapt the work environment for this to change.

5.6. Certification systems

There is no certification system in Sweden today that addresses the availability aspect of a building. Though, Larsson mentions that there is a system in England that works well and it might work in Sweden too. He points out that it is very important to define, when building such a certification system, what should be included. Certification makes sure that the provided elderly living solution comes with a certain level of quality. A Swedish elderly living in Nacka was the first accommodation in the world to get the WHO Collaborating Center on Community Safety Promotion. This particular project was initiated by Nacka to implement a model to improve the health operations further (www.nacka.se).

5.7 Trends

A few solutions Larsson thinks will come in the future is remote-controlled walkers, even better devices to alarm and much better and smarter designs. He also thinks that solutions to help people to get up when falling on the floor at home are a major thing. It is a very heavy job for home care service personnel and relatives to lift someone off the floor, one solution to this could be a walker with a lift.

Other trends that according to the interviewees can be seen are shown below in collective living, ethnical living and Victoria Park. Anders Nordstrand calls them lifestyle living, where the elderly choose a type of living that suits their interests and needs.

5.7.1 Collective living

Many people we have spoken to have talked about how they want to live together with their friends once they retire, one such solution is collective living. This is a solution which is not really a trend today but may be one in the future. The living arrangements are ordinary apartments but with common areas as a complement. The collective association usually rent an entire building and then let the apartments to its members. The solution provides a base for the residents to cook and spend time together if they want to. Associations do have some rules to make the workload fair in terms of having the residents cook food for the others every two weeks is common (http://kollektivhus.se).

5.7.2 Ethnical living

Because of the diversity in ethnicity in Sweden and the fact that elderly do not always speak Swedish, there has been and will be a need for elderly living adapted to these issues. These adapted facilities have personnel that speak the proper language, serve traditional food and are furbished in a traditional way with typical attributes. One example of this is an elderly living for Arabic speaking elderly in Tensta (www.kavatvard.se). Seeman says that they sometimes have nursing homes that call and ask if they can build an ethnical living.

5.7.3 Victoria Park

Victoria Park is a new type of living that got attention in media when they started a project in Malmö, Sweden a few years ago. The company is marketing itself as the first Life style living in the Nordic region and started as a project within the Annehem Fastigheter AB Company, which is a company under the very large, Swedish real estate company Castellum. Annahem Fastigheter AB developed the concept but was later transformed into a new company Victoria Park AB that was introduced on the stock exchange in 2007. (Annual report of Victoria Park 2010) Christer Jönsson, who is one of the founders of Annehem Fastigheter AB, came up with the idea of Victoria Park and got the inspiration from other countries, mainly the United States. He recognized a need of a type of living where aspects as quality, service and community were considered (www.victoriapark.se). Victoria Park AB is divided into divisions handling different subjects such as Asset Management, Property Management as well as Building and Projects.

The Victoria Park Company has recognized a trend where customers are willing to pay for better service in form of physical recreation and activities as well as social communion and safety. This type of living is relatively new in Europe, but is common in the United States where it is known as resort living (Annual report of Victoria Park 2010).

The first established project is in Limhamn in Malmö, in the southern parts of Sweden. This project consists of approximately 380 apartments and has common facilities such as a reception, a spa with pools, a health center, sauna and space for spa treatments, cinema, restaurant, wine cellar, guest apartments and a big park with boule, a tennis court and a putting green. The apartments are sold as tenant associations and the first residents moved in during 2009 (Annual report of Victoria Park 2010). The area also has a newly built district health care centre, which is managed by Förenade Care (www.forenadecare.com). The municipality's local plan provides Victoria Park the right to build up to 31 000 sqm of apartments, 3 500 sqm common facilities and 17 000 sqm park area (Annual Report of Victoria Park 2010).

Residents have access to a service program and therefore pay a fee for the coming 15 years, which is mandatory. The service program is divided into two parts, one that is basic and for free for everyone paying the fee and one that that is optional and requires ordering and additional payment. The basic services include access to common facilities and management of these. The optional service includes for example dry cleaning, window washing, cleaning and spa treatments. The residents get access to the common facilities that are closed to the public by using an entry card. This card can also be used for paying for optional services when preloaded (Annual Report of Victoria Park 2010).

When media and the people in the senior living industry talks about Victoria Park they refer to it as a place for retired people. From that you might draw the conclusion that there is an age restriction on who can move in, but there is not. Victoria Park is marketed towards everyone who can afford it. This diversifies the residents who are both families with children, without children as well as retired older people.

5.8 Financing

Trends in the future are dependent on economy and how much we take care of ourselves in the future. Larsson thinks that non-profit organizations will have to step in and help people who are not in direct need of hospitalized care, meaning that retired people will help each other. This is common in other countries but not so much in Sweden. He also thinks that the Swedish government has to address the financing problem because raising taxes even more will not work, he believes. He suggests that there could be an insurance solution connected to the owned home, a type of retirement mortgage where the banks slowly buys the house on down payment. This would leave relatives without an inheritance from the house but would also give the elderly a better life.

CHB's projects are close to the market in the way that when products have been scientifically tested, they are ready to be implemented in real life. The only question is who should pay and how. Possible solutions is that the rent is increased, that the tenant have a choice to pay extra and get the extra service or product or at last that the tenant has the full responsibility and have to purchase and install the device by himself.

Even pure investors have recognized the future growing need for elderly living as an investment. One example of that is SEB Tryggliv, which is a Swedish insurance fund that has a common venture called BoViva together with the construction company PEAB and care producer Actica Omsorg. Together they provide 55+ living for people that have some of their business in the major Swedish bank SEB, which is the owner of the SEB Tryggliv fund. These apartments are available in Stockholm, Göteborg and Halmstad (Trygghetsboende i Huddinge – En rapport). This type of recognition opens up for other joint venture developments where different experts join their competence and start new projects that benefits everyone involved.

6. Analysis

There are many aspects connected to the topic of elderly living in Sweden. The demand for living solutions that are available when the mobility and other functions are decreasing will increase due to demographic development in the future. The prognosis from Swedish Statistics on disposable income shows that the age group who may demand elderly living in the future will have an increasing income and therefore be able to pay more for their living. However everyone may not be in this economical position and might still be in need of available living due to descending health status. They will need living solutions that are adapted for their needs but might not be able to pay for it themselves. The cost for such adaptations and maybe also services is substantial and if there is a way to be more cost efficient and also have a better type of living for the target group, it would make a big difference for the society as a whole.

6.1 Transitions

In this section we will address different possible paths concerning where to live. This is in order to see how many times one might have to move between retirement and death. Some examples are shown in the figures below. Both the situation of having a single person moving and having a couple needing different types of help are shown.

6.1.1 Single transitions

Each arrow pointing downwards represents a move, for example from living at home to moving to geriatric care. The first scenario would not to have to move at all and in the last scenario the person would have to move three times in between retirement and death. To minimize the number of times an elderly person has to move during the last part of life is important. It is very stressful to move and especially so when you are older and may be ill (Vision 2030 – Framtidens seniorboende, Micasa).

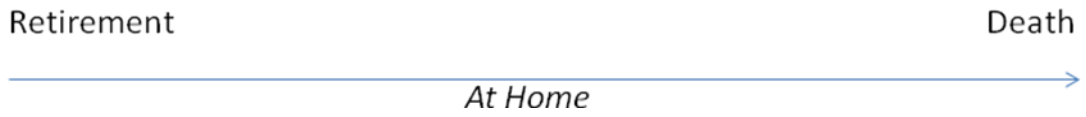


Figure 1

This scenario could be considered to be the best-case scenario. The elderly is healthy enough to not have to move to either a nursing home or a hospital before they pass away. They never have to experience the stress of moving and can feel safe in a familiar environment. However we do not know if the person gets enough social contact when living at home, it could be either way.

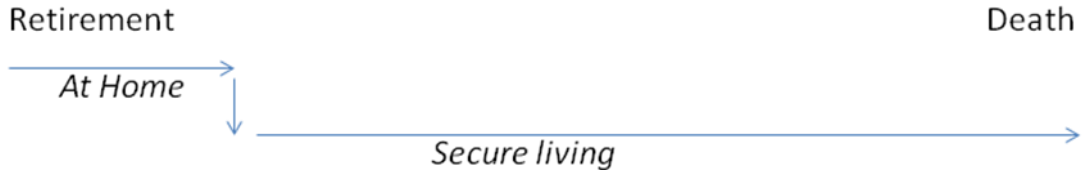


Figure 2

In figure 2 the elderly will live at home until they feel that they might need more security, maybe they are afraid of falling and getting hurt without anyone noticing or maybe the old apartment is not adjusted to the needs of the elderly. For example because of high door sills, poor availability in bathroom, many stairs or other problems with access. The elderly will then move in to a secure living where other elderly live and the where the house is adjusted for elderly living and decreased mobility.

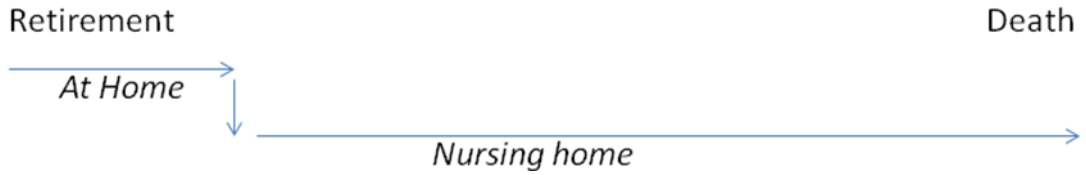


Figure 3

In the retirement to nursing home scenario the elderly will live at home until they are not well enough to take care of themselves properly in day to day life, even with the help of home care services. They will then have to move to a nursing home with round the clock services. The stress of moving is not good for someone who is already not feeling well and could be bad for the health.

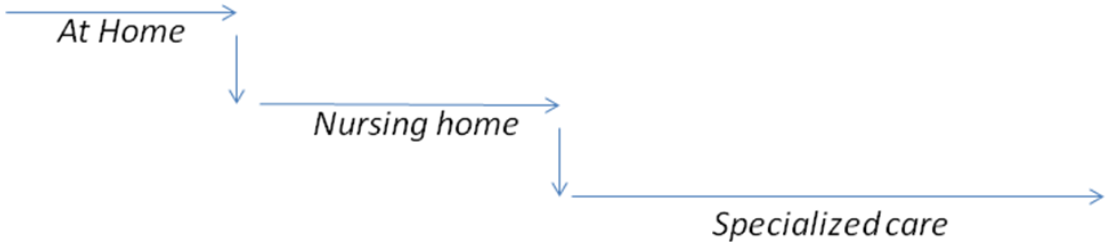


Figure 4

In the retirement to nursing home to specialized care scenario the elderly live at home while they are healthy and when they need some help they get that through home care services. When the home care services no longer are sufficient in helping the elderly they have to move to a nursing home where they stay for a while. Later on however, they become in need of specialized care and have to move to a nursing home with specialized care. This scenario contains two moves when the elderly are not in good health to begin with, this can as mentioned before result in an even more negative health.

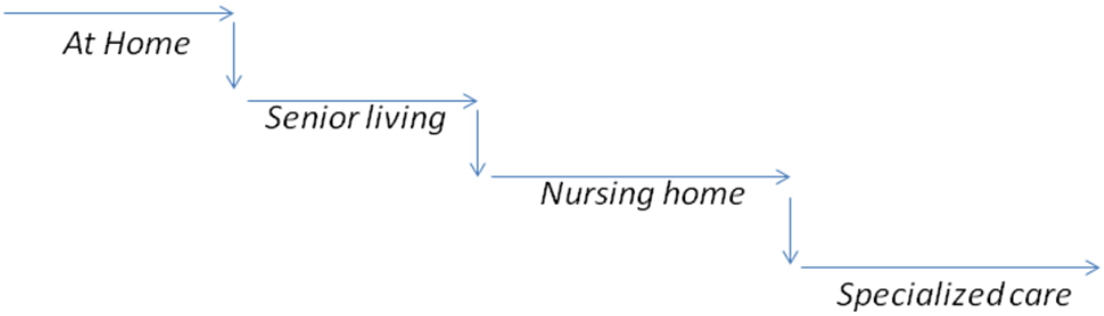


Figure 5

In this scenario the elderly retires, lives in their own home for a few years and then move to a senior living. This move is often in order to get a new social network with people their own age and to get a more elderly adjusted living arrangement. A move can always be stressful, but when one is in good health they are often better equipped to handle it. After living at the senior living they might develop a need of some help, which can be received through home care services. The elderly have to move to a nursing home for more care, if they require more help than the home care services can provide. After a while at the nursing home, the elderly, like in the previous scenario, have to move to a home for more specialized care when they develop dementia or Alzheimer's. The effect of the last two moves is the same as in the previous scenario.

6.1.2 Transitions for couples

This section, like the previous one, addresses different possible paths concerning where to live and how many times one might have to move between retirement and death, but from a couple's perspective. A couple will probably not get ill at the same time and they will most likely not be in need of the same care, therefore the moves of a couple are more complex than that of a single person. Figures 6 to12 below show examples of different scenarios where the couple gets separated and move to different places depending on the need for care.

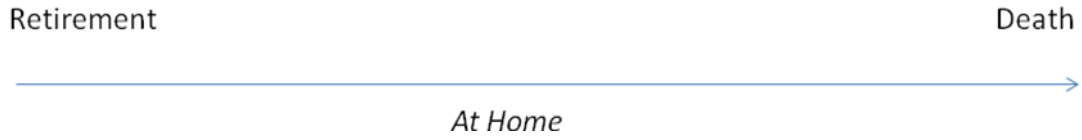


Figure 6

In figure 6, the couple can, like any single person lucky enough to be healthy and stay at home together from retirement to death, maybe with some help from home care services.

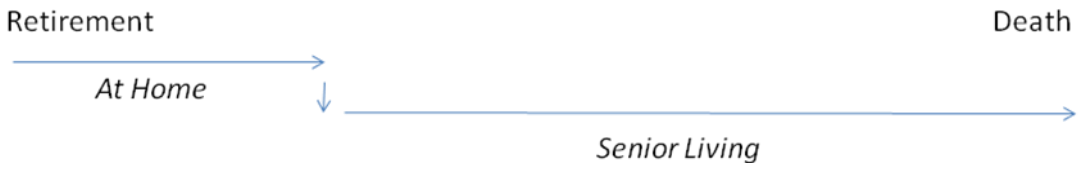


Figure 7

Figure 7 shows a couple that live at home after retirement and after a while decides to move to a senior living. The senior living is more adapted for elderly and has the possibility of more social contact than the previous home and the couple stays there, maybe with help from home care services, until death.

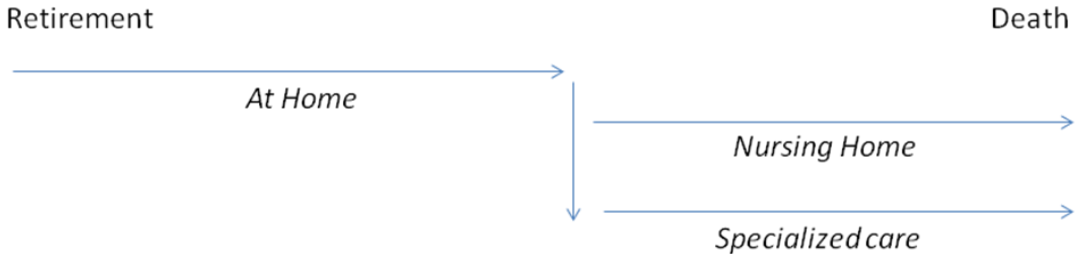


Figure 8

In figure 8 there is a couple living at home after their retirement and at some point they both get such poor health that they need more care than can be provided at home. However, one of them goes to live at a nursing home and one of them has to go to a more specialized care nursing home. The couple is therefore separated and will have problems with seeing each other, especially since the healthier spouse is in a nursing home and also in need of a lot of care. The nursing home staff will hopefully be able to arrange a few visits to the nursing home for specialized care, but it will never be the same as living together.

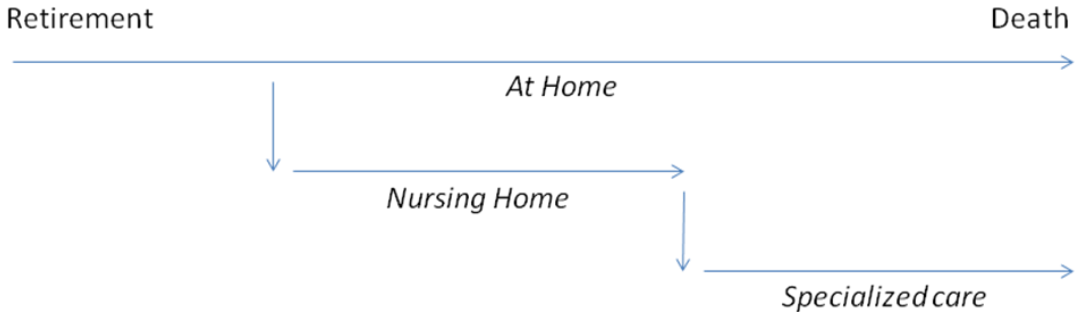


Figure 9

In figure 9 one person in the couple is healthy enough to stay at home from retirement to death. The other person however becomes in need of round the clock care at one point after retirement, that person then has to move to a nursing home. Later on that person gets an illness that requires the care of a specialized nursing home. During this scenario the couple spends a lot of time apart, as it is not always easy for the more healthy part of the couple to visit the one in a nursing home.

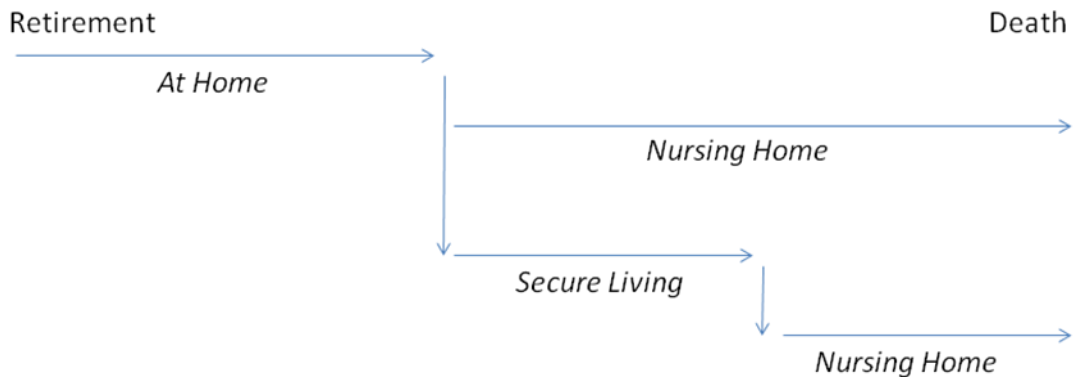


Figure 10

In figure 10 the couple starts by living at home and when one part has to move to a nursing home in order to get enough care and the other person decides to move to a secure living in order to get a more elderly adapted living. The person living in the secure living is still healthy enough to visit the one in the nursing home, at one point however the healthier person also needs the care of a nursing home. Hopefully the couple can now stay at the same nursing home but this might not be the case.

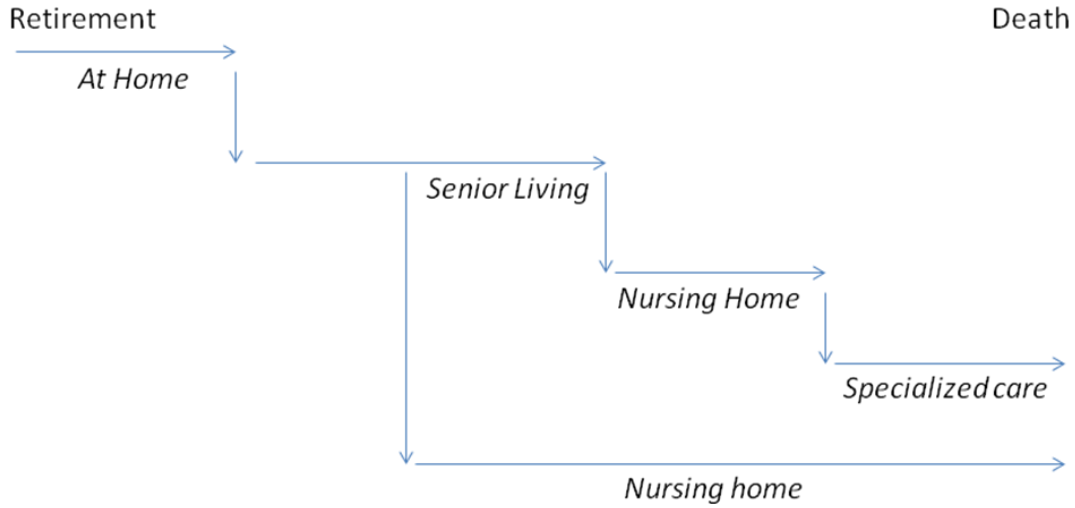


Figure 11

Figure 11 shows a couple who lives at home and then decide to move to a senior living. When staying at the senior living, one person in the couple has to move to a nursing home in order to get more care, the other person stays at the senior living a while until that person also needs the services of a nursing home. After some time at the nursing home the person has to move to a nursing home for specialized care until death. In this scenario, the first one to get ill has to move one time after retirement, the other person moves three times in between retirement and death and also has to deal with the move out of the spouse during the time in senior living.

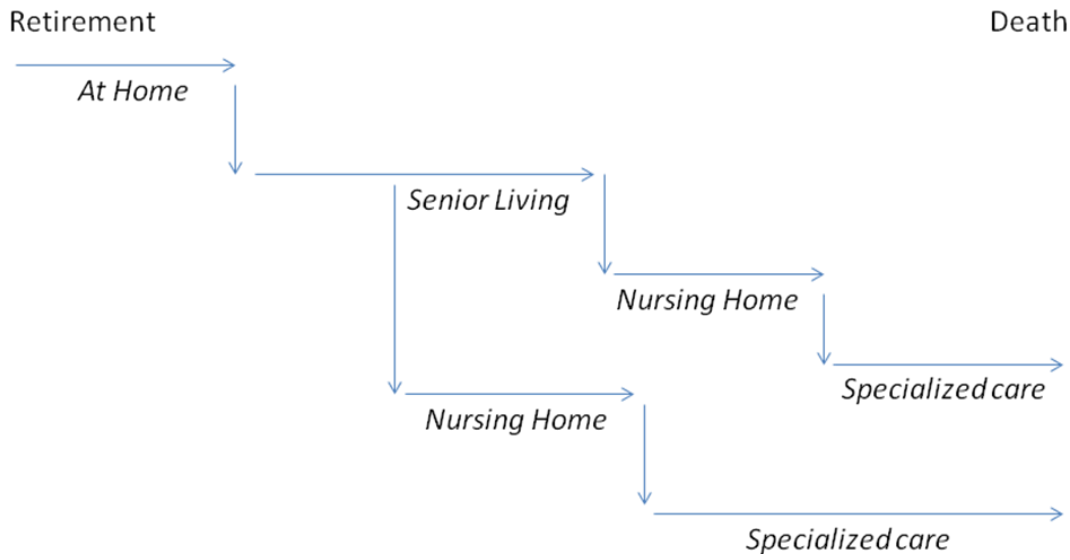


Figure 12

I figure 12 both persons in the couple follow a similar path, but with a bit of a lag. They stay at home after retirement and then decide to move to a senior living. After a while, one person needs the assistance available at a nursing home and after spending some time there needs more specialized care. The other person follows the same path but does not get ill until later and when the first person moves from nursing home to specialized care, the second person moves from senior living to a nursing home and later to specialized care. The specialized care the couple gets is probably not at the same place, which limits the amount of time they have together. In this scenario each person in the couple moves three times.

6.1.3 Minimizing transitions

When it comes to the transitions between retirement and death we should strive to keep the necessity to move to a minimum. Moving is a very stressful situation and to go through that when being old or ill can have a bad impact on the health. Therefore, finding an alternative to the many moves that one might have to make in a worst-case scenario is very important. An idea would be to place senior living, transition living and nursing homes near each other. Living in such a place should make the moves one has to make much less stressful since you do not change the neighborhood you live in, only the apartment. A move within such a facility also means you do not move far from friends and neighbors, meaning you still have the same social network. Having these types of living close to each other can have negative effects as well, as Anders Nordstrand mentions, the younger and healthier people who live in senior living or secure living will probably not want to live next to older people with more illnesses because in a way they see their future. A way to prevent the bad aspects of having these types of living close to each other is to place them in the same area, but still have them secluded. This could be done by having different entrances, as Anders Nordstrand mentions, or maybe with different gardens and food facilities. However, having a large facility like this separates the elderly from the rest of society as Lars Callemo mentions. There will only be elderly in the parks in the area except for visiting relatives. This might be something the more active elderly see as a negative thing and therefore there will be a majority of elderly sick people in

this type of home. However this type of facility can solve the problem of when a couple is not allowed to stay together during the last years of their lives if one requires special help and the other does not, or requires different help. According to Jakobsson and Niemi (2005) and Harrefors et.al. (2009) couples will want to live together to a higher extent in the future and this solution enables this to some extent. It should be possible for spouses to live together even if they are in need of different types of care. This type of living also takes care of the fears of abandonment, isolation and not being able to see or talk to friends, as Harrefors et.al (2009) discovered many elderly have. A larger facility with different types of care and living arrangements might be able to satisfy the need of being close to your loved one and your friends. According to Lönn and Peterson (2006) elderly want to live close to communications, a pharmacy, a hospital, a supermarket and a bank or post office. Many elderly want to live close to the city, according to Birgitta Seeman, but a facility that takes up this much room will be difficult to place in the city. Birgitta Seeman says that closeness to communications is important, and maybe this can be a compensation for the facility not to be placed in the very center of the city.

Building for elderly is much more complex than what the market believes. Some actors may see this as a simple and secure investment because of the potential high demand, but the problem is that these customers have a specific demand that is hard to predict without working with these questions on a daily basis. The construction sector also has a lot to learn before they can help these investors. Before getting in to the business of elderly living you should consider the differences in managing these buildings compared to ordinary houses. There are many differences according to Anders Nordstrand and most of the time it is more difficult than managing an ordinary building.

6.2 Political views

The Swedish government has recognized that a larger proportion of the population is going to be elderly in the future, however there is a question of whether they will act soon enough to meet the demand of elderly living. The goal to provide resources to give people the right conditions to live an independent life of high quality is a noble one and sets high demands on planning for the future as well as the execution. The principle of "freedom of choice" complicates the process even more. The principle means that the elderly can choose both who should take care of them as well as where they live.

The government has recognized two issues with the current politics. Firstly isolation and social contact may be more complicated when people stay in their current home. This is because relatives may not live close to the elderly or do not have the time to visit them. Another contributing factor is that home care services have to be more efficient with their time. This leaves the residents alone. Secondly, as the current homes are adapted instead of building new buildings, where these socialization problems are the focus from the beginning, there will be a lack of such buildings in the future when the demand has increased even more. That leads to people not being able to move even though they want to. The Geriatric Care Delegation has concluded that the need for specially adapted houses will increase with 50-70

% up to the year of 2040 and that half of the municipalities do not even meet the demand of today. This is a critical situation, which needs to be addressed as soon as possible.

Some actions have been suggested by different investigations, such as making the municipalities able to provide secure living to those who wants to move there without having to do an investigation according to the Social Services Act. This would ease the process of moving and also making it faster. Another suggestion is from an investigation, taking place right now, which is aimed at supporting architect contests when constructing or rebuilding projects aimed towards older people. This addresses the issue of the process of building and rebuilding projects where the planning for the surrounding environment and the availability of indoor and outdoor space as well as design of the building is not integrated. This process is today divided into several stages that in the future should be integrated to give buildings better adapted for elderly. The Geriatric Care Delegation also states that there will be a need for different types of elderly living solutions in the future. There are not enough adapted houses today and a suggested start to this is to make the municipalities investigate the accessibility of the current stock and get an indication on how much needs to be done to make these houses more accessible.

It is probably with the Swedish government official report *Live well your whole life* as a foundation that the new investigation is requested. This report gives more practical help for municipalities to improve the situation for elderly and encourage innovation within the area of building for elderly. The policy has for a long time been to provide people with the services they need to live at home as long as possible, but it seems like this has changed a bit. In the new formulations, politicians have recognized the problems with isolation and cost inefficiency in terms of sending the home care personnel around.

Future alternatives of living should not only fulfill the medical, but also social, needs of the elderly as well as having an adequate physical environment. This is a good goal but the politicians need to find a way to get there and regulations and subsidies needs to be reworked in order to get there.

One of the most crucial problems is that the different types of living do not have proper definitions and there is no official statistics to give an overview of the current and past situation. This needs to be addressed to give both politicians and the public an understanding of the critical situation. The definitions will provide a tool to work with. Making the definitions clear will simplify the choosing process for elderly in terms of easily getting information on what services are provided in different types of living.

6.3 Critical evaluation of living alternatives

After investigating the different types of living solutions for elderly we have recognized different problems with each solution. The question is whether the alternatives really fulfill the need they are addressing.

From the perspective of the elderly there are several good aspects of living at home for a long time, the familiar environment, maybe closeness to friends and family and a sense of comfort in knowing your surroundings. But when the ability to walk and take care of yourself and your home is decreased, living at home might not be the best option. In these situations it might be difficult to see friends and get out and meet new people. There is a risk of being trapped in the home with none or too little contact with the outer world. The municipality can agree to make some adjustments to the current home to more fit the needs of the elderly, these could be installing a type of elevator or door opener. The adjustments need to be approved by the owner of the building since they can impose on the use of the building for the other tenants and the apartment may need to be restored as the tenant later move out.

To have people staying at home as long as possible decreases the cost for elderly living for the municipalities. As previously mentioned, having someone live at a nursing home costs the municipality approximately 500 000 - 600 000 SEK per year. But what also has to be considered when looking at the costs for elderly care, is that it might cost the society more to have one person living in a house with four bedrooms that instead could have been used by a family with children. The effect with a housing market that is not functioning properly is that more houses have to be built instead of using the existing stock to its full potential. This can lead to more untouched forests and green areas being used for residential purposes. Another problem is that home care service has to travel between each receiver and if the distance is far, this will consume a lot of time, which is not a cost effective solution.

Senior living has become a big part of this thesis, mainly because we believe that it is a good transition living that enables elderly to stay at home longer with people in a similar situation nearby. Elderly who move to a senior living after retirement still have enough energy to meet new people and make friends with the other residents and this enhances their social life. If you have friends in the same building it is also easier to get help if you get ill and you can still visit your friends without you or them having to travel far. The apartments in senior livings are adjusted to fit elderly who get problems with walking or is in a wheelchair. This enables the elderly to stay longer and also benefits the municipalities who can continue with home care services instead of moving the resident to a more costly nursing home. The adjustments the municipalities might have to do to help someone stay at home longer are not necessary in a senior living because the house is already adjusted for elderly, this reduces the cost for the municipality.

There is sometimes a restriction on how old you are allowed to be to move into a senior living. This is because with too many older elderly there can be problems with organizing activities and maintaining a functioning tenants association. There has to be some healthier younger elderly with enough energy to engage in activities and to help engage the others.

Senior livings are usually aimed at active elderly for the same reason, to be able to socialize and attend activities to get a full social life. Information provided by Lars Callemo and Birgitta Seeman show that the ones moving into senior livings are usually higher than the minimum move-in age. However, since Rosén (2005) says that there is a compression of morbidity, which means that the period of sickness before death will be shorter, elderly will be healthier longer. Hopefully this means that the level of activity in the senior livings can be high even if the tenants are older.

In order to organize activities and meet for coffee it is important to have common areas in the building. This makes it easier to connect with the other tenants and creates a place to meet and to go to if you seek company. When you are retired you no longer meet new people at work and a senior living can substitute for that. The common area makes it possible to organize meetings where the ones who share an interest can use the room for meetings or other activities.

Secure living is a good alternative for those who are above the maximum age to move into a senior living house, where there might be such restrictions. There are many similarities between secure living and senior living but also some differences. The secure livings are usually rental apartments with one person employed to arrange activities, there is also always a security alarm installed. The security alarm is something that can be installed in all apartments, not just secure living, if the municipality believes there is a need for it.

The issue of social contact and security is very well covered in the secure living alternative and is therefore good if there is no greater need for health care. There are only a couple of personnel taking care of and attending to a large number of residents.

Secure living is cost efficient in terms of providing the help required when getting older which is crucial to keep costs down for society. As mentioned before, there is a large cost for the municipality when a person is not able to live in an ordinary house or apartment anymore.

Nursing homes are not a type of living that is used unless the need for health care is substantial. Like Tore J Larsson says, elderly do not see themselves as old and does not relate to people who are living in nursing homes. Therefore no one will want to move there unless they are in need of care twenty-four hours a day.

The problem with a nursing home is that it is a work environment as well as a home and therefore it needs to be functional for the personnel without being too institutionalized, design of these livings is therefore difficult.

All services provided in the different alternatives can be provided by home care services which means that the services provided should not be a factor to consider when choosing your living arrangement. The differences that should be considered are instead if there are common areas, if activities are arranged and what age restrictions there are. The common areas provided can differ, some senior livings have all sorts of common areas such as a gym, a sewing room or a library, and some only have a common kitchen or meeting area. Secure living might have a kitchen or restaurant where meals are served as well as a common area. Nursing homes have a common living room and dining room.

6.4 Directions of development

The section on trends does by no means cover the entire market, but shows what has come up when reading media and doing interviews. This means that other trends may also be coming without us bringing those up here. Some of the areas mentioned in the trends chapter have been mentioned by many different sources, which lead us to believe that they are important to discuss in this thesis.

As usual, when it comes to technical trends, the development and the possibilities have come much further than the actual implementation. The equipment to ease everyday life for people with decreasing abilities are evaluated and studied by the CHB in several projects that hopefully leads to successful improvements by implementing them within the real estate sector.

Collaborations with other countries and with companies enable CHB to try out new technical devices in real housing environments. Such evaluations are vital to discover the problems that might occur in a real living situation and it is due to these tests possible to address these problems before introducing the product on the market. The collaborating companies can probably to a higher extent understand the value the technical solution create and are more willing to implement technical solutions that have been tested.

When people, because of lack of places in nursing homes or other alternatives, have to stay in their old houses to a greater extent in the future this may lead to a feeling of isolation The isolation may occur due to decreased social interaction once mobility to walk outdoor decreases. Larsson believes that this isolation may simply be solved by using video phones, we agree this might be a good complement to meeting in person, especially if you do not have the strength to meet someone for more than a few minutes. This enables the resident to interact with someone else in a different place on the planet without leaving the house. Such solutions are already present on the market in the form of Skype or other computer interactions, but they do require a positive attitude towards technology. The people that are approaching retirement today and in the future will have more technical education than previous generations and this could enable solutions like this to work well.

The problem of not focusing on the need for a specific product has lead to a market full of products that are either not satisfying a need that the customer have or is not very well designed. The developers of such products has to focus more on what people would actually

need to simplify their daily life to the extent that they would actually pay for it and then design it in an appealing way. When they have found such a device they have to design it in a way that enables as many as possible to use it, this is called inclusive design. When taking it even further and addressing a decreasing physical function, the problem is to find a solution that does not depend on another function that might also have descended. The innovation of solution for these problems is crucial to develop products that are versatile enough to appeal to as many as possible and also be sellable and able to create revenue on the market.

An interesting innovation is smart or intelligent houses. This phenomenon enables the residents to monitor and command the systems within the house to act and change when ordered to do so. Intelligent houses have been a popular subject in the technical sector for a long time, but they are not practically used for elderly living in Sweden today. Larsson does not believe that it is because the systems are too complex to manage but that the real estate sector is negative when it comes to implement new things and Birgitta Seeman believes it is because they are too expensive. Intelligent houses are interesting because of the abilities to interact with people from your own home to other parts of the world. This would enable doctors to have a face-to-face discussion with a patient without either of the persons moving from their current position. Lars Callemo believes that because it still cost less money to move the patient to the doctor than to implement such a system it will not have a breakthrough until that balance has changed.

Other important technical solutions such as having a walker that may help the elderly up once they have fallen down on the floor at home and having better security systems would increase the sense of security for the resident. This feeling may decrease the need for nursing homes in the future.

Segregation is an issue that becomes more important when city planning does not consider mixing different types of living solutions in an area. Placing only one type of living in an area may seem like a simple solution to provide a certain type of housing, but it can cause problems because when a housing environment is not created for people in many different stages in life, it is not as full of life and may feel less secure. By mixing we do not mean only mixing different types of housing but also incorporating other real estate segments like retail and offices when this is possible. This makes the environment more alive and never abandoned and unsafe.

Elderly do not want to move to a senior living because they do not see themselves as old, says Larsson. This means that they want something else than what is provided on the market today. It is important to find out what it is that they want to be attracted to the idea of moving. Elderly people might want to be surrounded by younger people, not only because this enables them to stay close to family, but also because they may think it is fun to be a part of the younger generation and see how they live their life.

The work environment for home care service staff has not been addressed properly in research about elderly living. Having a poor work environment leads to unnecessary work injuries as well as the entire occupation to work with home care services becomes unattractive. Larsson

talks about the need to raise the status of this type of work and that improving work environment by easing the physical burden would be a step in the right direction. Because so little has been done within this area it has a huge improvement potential, the only problem is that it costs money both in terms of instruments and training. The need for this development is very important as the larger part of the population will be in need of home care services in the future, especially if they will live at due to lack of space in nursing homes. Larsson thinks that there is a big possibility of using technical equipment to ease the work load in the future and we can do nothing but agree. Equipment like mechanical Japanese toilets would for example decrease the physical strain for many home care service personnel. Technical development has, as mentioned before, come far but needs more attention to really make a positive impact on the status of the home care service profession that is highly needed.

The quality of care in an elderly living can be certified today. This is good because the citizen can be assured that the care should live up to a certain standard. Certifications on care is a new idea and does not guarantee that a certain facility is better than one that is not certified, but going through the certification process may lead to improvements that would not have been made otherwise.

Certification is interesting because it assures that a facility meet a lowest level in terms of following the standards. Larsson talks about the importance in having the definitions in these standards clear to avoid misunderstandings. If these definitions are not clear the certification will lose its credibility and therefore not be relevant.

An alternative solution could not only certify the quality of the care but also to have a system that certifies the availability of the building. Larsson mentions that such a system is working very well in England and could easily be transferred to the Swedish market. Such a solution would simplify the process of building available housing because the standards in what should be addressed to reach the goals are clearly defined. Having such a system could also be appealing to investors. The certification systems for environmentally friendly buildings, or Green Buildings, are very popular when larger investors are engaged in a project, the same could be applied to houses for elderly. Maybe this type of certification for availability of the building could measure the accessibility for everyone and that it could be applied to both existing and new buildings. A certification system would have an impact on the future level of availability of buildings and their surroundings.

6.5 Trends

Collective living is a subject that has come up several times in different discussions with people who tells us how they want to live once they get old. We are not sure that this will be a big trend, but the will to live close to friends and have fun together is a fact for many people. Larsson mentions that some collective livings do not consider the type of building they choose to live in from an accessibility view. The friends in the collective living have a chance to be more demanding when it comes to having a higher availability of their living areas, the availability of the areas are sometimes not very good today. To improve this in the future they should as a group come up with requirements for their living from an elderly living point of

view. By setting these higher standards they can have a better position when approaching real estate owners and therefore more easily get the availability they need to be able to house the residents even when they get older and have decreased mobility.

Ethnical specialized living solutions are high in demand right now and this demand may increase a bit in the future as there are many people immigrated from war torn countries. These people might never have learned the Swedish language and need personnel that speak their native language to feel secure. These elderly may also want an environment that mirrors their cultural heritage in terms of food and decorating of the common areas. This is not a complicated issue, all it takes is for the municipalities to recognize the need and hire personnel with the proper language skills and also let them be able to influence activities, cooking and decorating. Though, Larsson thinks that this is a need that will decrease in the future since the next generation of these immigrants have learnt Swedish and therefore will not have any problems in living in an elderly living with only Swedish speaking personnel. This question gets interesting when it comes to construction of new buildings and the architectural aspects that come from different cultural influences. These influences like having for instance a specific type of garden or façade could make a huge difference for the residents.

Larsson raised another question in terms of ethnical living and that is having living solutions that can house up to three generations. In some cultures the family is so important that they may want to live together their entire life. This is a question that needs to be addressed in research to have foundation for future planning of living arrangements. Buildings that are adapted for both children and elderly also reduce the need for nursing homes and senior living since elderly can live at home longer when someone looks after them.

Victoria Park is built upon the idea of Resort Living that has developed mainly in the US and which has become very common there. The question is whether these types of living will grow to be an important part of the Senior Living alternatives in Sweden in the future. We do not believe this because it is focused on such a small part of the elderly community. Not everyone is able to pay to live in a type of living that can offer all these luxury services in one place. Despite this, Victoria Park is an important solution in the way that it provides an alternative for those who want an all inclusive living that is like being on a vacation every day. One problem is that it divides society into richer and poorer people where the rich are living in one area and does not have much contact with the people who do not live there. Some of the services in Victoria Park are open to the public, like the restaurant and spa, this will make this small community a bit more open, but still there is some who think it is similar to a gated community. The question is whether the restaurant is open to the public because it needs to be to finance the facilities and if that was not the case, would the public be welcome without an invitation by one of the residents.

6.6 Financing

The financing of elderly care is interesting since the amount of people in need of services and adapted housing will increase in the future, this will lead to a rapid increase in costs for the municipalities. This cost has to be financed in some way and not everyone will have the capacity to pay for these services on their own. Since the tax in Sweden is high as high as it is today, we do not think that further increases will be good for the economic growth of the country. Therefore the costs of elderly care need to be financed in without tax increases and one solution is to cut costs. One way of doing that is to build better houses from the start. It costs the municipality less to have a person staying in their current home than moving into a nursing home. By adapting the ordinary houses to be more available in terms of always having elevators and better suited construction plans for the inside and outside environment, the need to move will be postponed. Another way is to finance buildings from alternative financing solutions. This will happen automatically when there is a possibility to make good investments. Several companies, including some not originated within either the real estate or senior living sector, are already investing in senior living. This means that they have recognized the large elderly population as an interesting market and that it is possible to make good investments by developing houses focused on this group.

7. Conclusion

The ultimate solution for the future Swedish senior living would be a solution that would be suitable for the resident even when the mobility and other functions decrease, that is cost efficient for the municipality and not segregating but still not expensive to build or adapt. There is a large amount of people retiring in the future and the demand for available housing will be big once the demographic develop so that a large part of the population is over 65 years old and this calls for actions.

One problem today is that, theoretically, an elderly person may have to move several times to get the services needed to live a decent life. This is an issue in terms of stress for the one who has to move but also in terms of costs for the municipality. By having a facility with different types of living within reach the elderly can be relieved from some of this stress and also be able to live together or close to a partner or a relative and visit each other without great efforts.

The solution of placing nursing homes close to a senior living or secure living is a solution that minimizes the number of stressful moves when the health deteriorates. These types of combined living should be placed close to communications and be in attractive areas so that elderly without the need of care will find them to be an attractive living option. The different types of living within a combined living should be separated by different entrances and secluded gardens. Common facilities should also be available to those wishing to meet their friends and family who are in a different type of living.

There is not that much difference between senior living and secure living, therefore it seems unnecessary to separate them, they could be the same type of living. The services provided are close to the same and the few services that are not in senior living can be delivered by home care services.

The politicians have started to recognize the big change with having a larger part of the population being elderly in the future and have started investigations, but they have to take it a step further and take action as soon as possible to be prepared for the increasing amount of elderly. Though it is comforting that they have recognized the need for different types of living solutions, we want them to focus on the planning processes and follow up on the availability adaptations that they have made, in order to be able to be more cost efficient from the start.

The problem for new developers on the market is that there are no guidelines on how to construct a senior living project. Every developer that has experience on this market has the knowledge of how to build for elderly but the new construction companies and investors do not. This is a problem that leads to less or poor executed elderly living projects, which is bad when the need for these facilities increase at a rapid pace in the future. A solution to this problem is introducing a certification system that can be used both for new projects and when rebuilding old buildings.

The trends on the market are formed in different aspects. The technical development has come very far in theory but has not yet been adopted due to cost, unfinished products and property managers who are not very keen on new solutions. The potential market is very big and the technical solutions can also improve the working environment for those working with home care services. The later would also potentially lead to an increasing status of the occupation that can attract younger people to this type of work in the future.

New living solution types are either inherited or reborn, such as the resort living from the US and collective living. These are types of living that develops and prosper from market demand and if the need is big enough, similar projects would be interesting for investors. It is interesting that new actors without housing or even real estate experience have started investing in the senior living market, which indicates that they know that the demand and solvency for these apartments in the right location is promising.

In order for the availability aspects to have a real impact on the real estate market, there need to be either regulations or a demand from investors. In such case the availability aspect will influence both rebuilding projects as well as new construction of buildings. Since there is a functioning English certification system concerning the availability of a building we suggest that this system is implemented on the Swedish market as well. If residents, municipalities and tenants demand houses with certification this would have an impact on investors and also construction companies.

The statistics that Sollentunahem provided us with shows that their senior living apartments have a higher average age than their secure livings. This seems strange since senior living usually have a lower allowed move in age than secure living. Therefore this phenomenon would be interesting to investigate in future research, if residents in senior living are on average older than the ones in secure living.

Another interesting question for further research is how the problem with a large number of retiring people without any wealth will be accommodated in the future. Where should they live and how should this be financed? One solution could be looking at housing subsidies and letting the elderly live in rental apartments of higher standards that they could afford themselves.

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