Villa Plus

THE WELLNESS VILLAGE FOR YOUR GOLDEN YEARS
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For the Thesis titled

Villa Plus:
The Wellness Village
for your Golden Years

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December of the same year.
Abstract

The thesis is entitled "Villa Plus: The Wellness Village for your Golden Years" and is divided into two parts: the first part consists of research on aging and subsequently, on new hospitality solutions for the new generations of the elderly, with a sustainable approach, in a historic villa near Bollate (Milan). The research proceeds with site analyses to then revitalize existing buildings. The second part of the thesis concerns the interior design of a village for the well-being of the elderly in Villa Arconati.

La tesi è intitolata "Villa Plus: The Wellness Village for your Golden Years" ed è divisa in due parti: la prima parte consiste in una ricerca sull’invecchiamento e successivamente, sulle nuove soluzioni di ospitalità per le nuove generazioni di anziani, con un approccio sostenibile, in una villa storica presso Bollate (Milano). La ricerca procede con le analisi del sito per poi rivitalizzare gli edifici esistenti. La seconda parte della tesi riguarda il progetto degli interni di un villaggio per il benessere degli anziani prevista in Villa Arconati.
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This is the first of two parts. The continuation of the project is in BOOK II.
"Aging is not 'lost youth' but a new stage of opportunity and strength."

Betty Friedan
1.1 Becoming an older adult

Being elderly today is different from the more recent past. Conventionally, the person over 60-65 is considered an elderly person, because in this age work is generally interrupted and people retire. In fact, this age is chosen quite by accident. Initially, it was defined as the term of retirement for political reasons. Germany was the first in the world in 1889 that created a national system for the protection of social rights. Chancellor Bismarck chose 70 years as the official retirement age, and later the bureaucracy reduced it to 65. However, nowadays, with the extension of life expectancy and the change of some important physical, cultural, psychological and social factors (for example the progress of medicine or awareness of lifestyles) this threshold seems destined to be moved further. Due to innovative technologies, elderly have possibilities to preserve their habitual independence, vitality and interest in the world surrounding them.

Aging is not a disease, but a regular physiological process that is the result of the accumulation of non-renewable damaged cells, tissues and the body throughout life.

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1. Decreased adaptive capacity of the body.
2. Increased likelihood of death.
3. Decreased ability to give offspring.

Age is not necessarily determined by the number of years. At the beginning of the century, 50-year-olds were considered old men. Today, we can often see 70-year-olds who run 2-3 kilometers every morning. Although the age of 65 is frequently used as an arbitrary starting point to define the elderly population, the true age is determined not by the dates, but by the biological or physiological age of an individual, by the state of health and physical condition which is far more important.

### 1.1.1 Phases of aging

People entering their 60 nowadays feels much younger than those who belonged to previous generations. According to Feddersen and Lüdtke (2009), we are witnessing the phenomenon of “Down Aging”, meaning that people already feel 10 to 15 years younger than they did 30 years ago. Aging is no longer synonymous with poor health and end of one’s life, on the contrary, the “young-old age”, the third phase of life, is for most people a very dynamic and remarkable stage.

Nowadays, the generation of boomers lives approximately other 30 years after their retirement. They are engaged in increasingly active lifestyles and this is noticeable from the clothes they wear to the places they frequent and the activities they perform. The fourth phase of life refers to people that have more than 80 years old and that need more constant nursing care. This group is often associated with more serious illness, such as dementia and sometimes multimorbidity.¹

Bordone and Arpino (2016) explain how individual and population aging are usually related to chronological age. The starting point for being old according to UN starts at the age of 60 or 65. However, there are several aspects that must be taken into consideration when dealing with the concept of aging. Time and place play a major role in the improvement of health and life expectancy and influence directly the way people age. In their research, they found that events such as retirement, widowhood, and grandparenthood are often associated with growing old. Moreover, they found that older people who tend to feel younger express positive self-perceptions of aging which lead to better health and quality of life. So, which are the factors that support a sense of feeling younger in older adults? Apparently, in older grandparents, having grandchildren can make them feel younger with a more active lifestyle. In comparison to younger grandparents, they don’t feel as much pressure and they have a closer relationship with their grandchildren. The researchers partially confirm that the subjective age of older grandparents who look after their grandchildren is youthful. The sense of isolation decreases and they are actively involved in the life of their grandchildren because it gives them something to live for.²

Furthermore, the research of Condon, Luszcz, and McKee (2018) states that grandparents welcome the opportunity to interact, nurture a child and pass their knowledge to future generations. Their exploration also shows that older people providing childcare have better health than non-carers. Babysitting enhances physical and mental well being and is considered a way of giving meaning and joy to their lives.³

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1 Lüdtke I, Feddersen E. Living for the elderly: A design manual. ; 2009.
1.1.2 Who are the Baby Boomers?

The Baby Boomers are a generation that was born during the postwar years, approximately between the 1946 and 1965. They represent around 30 percent of the total population and they are rapidly advancing toward older adulthood.6 Their cohort is characterized by a strong free spirit, focus on social causes and distrust in the government. Boomers have made enormous progress towards achieving individual freedom. Feddersen and Lüdtke point that the Boomer generation has transformed the paradigms for social justice, initiating changes in civil rights, women’s rights, workers’ rights, gender identity rights and the rights of those with disabilities.7 There is a strong sense of community that encouraged them to fight for all these causes and they grew up with the idea that progress may become commonplace and that everyday life gets better and better. Among the memorable events that occurred throughout their youth years, we can mention many political disturbances, protests against war, the civil rights movement, the ecological movement, the landing on the moon, the self-expression through rock music, and the experimentation with diverse toxic substances for recreational purposes.

They have undoubtedly set the grounds for the rights of elderly to live independent lives as full participants in all aspects of our contemporary culture. Such grounds include changing attitudes and policies on aging, living arrangements, accessibility, safety, health care, maintenance of independence, employment, community planning and life quality.8 Social media and technology have made our boomers’ lives easier. As Subramaniam and Razak (2014) found in their research, the older generations which are more and more integrated to the online community, are following the trends of their children and changing their ways of communication. Through different platforms, this cohort gets in touch with people that share similar interests or activities.9 As reported by WGSN, there is even a good amount who choose to look for a roommate through platforms such as ‘Spare Room’ even though they don’t have any financial necessity. In the case of traveling, websites such as ‘Freebird Club’, which connects hosts and guests in a more personal way or even ‘Airbnb’, have helped boomers embark on travels that they might not have done if these platforms didn’t exist.

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7 Lüdtke I, Feddersen E. Living for the elderly: A design manual. ; 2009.
Chapter 1: Aging

Villa Plus

The dynamics of our societies continue to transform themselves constantly at high speed, and the demographics of aging are changing radically. Our generation is witnessing a large increase in the proportions of older people. The life expectancy nowadays is way longer than it used to be years ago. In the USA, the life expectancy in 1900 was 48 years, while 100 years later it was already at 77 years of age. Not only is this group gaining numbers but also they have become healthier and more affluent than previous generations.

Diverse are the reasons for the shift in life expectancy of the older population: as Gaymu, Ekamper, Beets found, there might be changes in the structure such as a higher level of education and lower paid workload, or behavioral changes such as attitudes toward prevention; Feddersen and Lüdtke affirm that some of the reasons include advances in medical science, technology, healthcare, nutrition, and sanitation; Brawley mentions that the main factors responsible for the aging of our societies are declining infant mortality, longer lives, and falling fertility rates. All of this factors indicate that the elderly from tomorrow will have the benefit of a better health condition in contrast with the older generations. Moreover, with a good health, young-old adults nowadays are engaging themselves in second careers, volunteer service, and leisure activities.

However, the older adults who are 85 and older are under the risk of losing their independence as a cause of some modified abilities.

1.2 Demographic analysis

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Figure 1.

Figure 2.
1.2.1. Aging as a global phenomenon

Global aging is occurring at a rate never seen before especially in developed and developing countries. Japan and Italy are predicted to be the countries with the highest percentage of older people by 2030.14

According to UN (2017) Population Prospects, developed countries such as Sweden, Netherlands, Germany, Finland, Italy, UK, Canada and Japan will have a higher percentage of populations aged 60 and plus by the year 2030 in comparison to other population groups. Other countries such as Colombia, Chile, Brazil, Costa Rica, Portugal, Spain, to mention some, are going to follow the same path by 2050. Furthermore, by 2020 the percentage of people around the globe over 65 will outnumber the percentage of children under 5 years old. In Italy by the year 2000, the number of people in retiring age had already outnumbered those under 18 and nowadays more than one-fifth of the population is already over 65 with the prediction of increasing this number to over one-third of the population by 2050.15

So how is the response from the society towards this challenge that we are facing? Who is providing care for the group of elderly that need constant help? According to Gaymu, Ekamper, Beets,16 and later to Feddersen and Lüdtke1 the care for old people in Europe is being approached in different ways. While in the northern countries they prefer to leave the care of their elderly in professional hands, in the southern countries the intergenerational care is more common. Com-

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who live in outlying regions. Through the use of internet and computers, they are able to augment the doctor-patient relationship and monitor basic medical conditions.

In Italy, considering that the migrant workers represent an increasing number in the population, the so-called ‘badanti’ are often employed to take care of the elderly. They have also come up with a wide range of different solutions like nursing homes or daycare, including regionally-specific solutions.17

1.2.2. How is the situation in Italy

As it is already mentioned before, according to the demographic prediction of National Institute of Statistics (Istat) of Italy, it is expected the peak of aging in Italy in 2045-50, when approximately 34% of the population will be 65 years and more.18

From 2015 Italy has entered a phase of demographic recession and for the third year in a row, the total population decreases, of almost 100 thousand people compared to the previous year. According to the annual report of Istat,19 the number of newborns in Italy in 2016 was 474 thousand, and thus reached a historical minimum since the formation of the single Italian state in 1861.

According to this document, as of January 1, 2017, 60 million 579 thousand people lived in Italy. In this case, over the past year, the population of the country has decreased by 86 thousand people. This is the worst indicator in the last ten years. Official statistics confirm the trend towards further aging of the population. The total number of residents aged over 65 years was 13.5 million, exceeding 22% of the country’s population. The number of elderly people overcoming the 80-year-old line reached 4.1 million (almost 7% of the population), and 727,000 Italians are over 90 years old (1.2%). The number of long-livers over 100 years old is currently about 17 thousand in Italy.

The average age of the Italian is now 44.9 years. The country recorded a further increase in life expectancy, which for men is 80.6 years, and for women is 85.1. (fig. 4)

The demographic index showing the number of children, which on average accounts for one Italian, has been declining for the sixth year in a row and now is only 1.34. This is twice less than during the so-called “baby boom” period, which Italy experienced for years after the end of World War II. Moreover, as stated by official statistics, for every 100 young Italians there are currently 168.7 elderly people, which leads the country to the second place in the world according to the aging of the population.

At the same time, the phenomenon of social loneliness, which most strongly affects the lives of the elderly, is becoming more and more noticeable. So, according to experts, each senior citizen spends ten or more hours a day without any communication with other people. It is also noteworthy that more than 17% of citizens in Italy feel almost completely devoid of any social support.20
1.2.3. Zoom in Milan

In particular, a remarkable percentage of elderly is noticed in Milan. This fact is proved by the analysis of the Statistical Services Office of the Metropolitan City of Milan, according to which, the population of Milan is defined as regressive because the elderly population is higher than the young. As a matter of numbers, in the last decade (2008-2017), the number of senior citizens has increased by 1.8% and, now, they are about 22.5% of the entire population residing in Milan. (fig. 5) 22

Gian Carlo Blangiardo, demographer and teacher at the Bicocca University of Milan, finds that the average age of people living in Milan increases over time. Furthermore, he explains: “This is an aging city, where the component of the elderly with more than 55 years has increased by a time and a half in 15 years, whereas with the percentage of young people decreased by 15%. 23

Living in Milan or Turin causes aging faster: this is the conclusion reached by a study promoted by Sisa (Italian Society for the Study of Arteriosclerosis). According to the statistical elaboration of a series of data, including those on fine powders in the city provided by Ispra Ambiente, a significant difference in heart and brain health has emerged between the people living in Milan and Turin and those residing in Rome which has a relatively lower average pollution rate.

The aging of heart and brain in Milan and Turin takes place up to four times faster than what occurs in Rome, due to the combination of pollution and cholesterol. 24

Urban pollution causes serious damage to health, and fine particles cause and accelerate atherosclerotic and arteriosclerotic processes and lead to more rapid occlusion of the carotid. It costs the heart, which is more at risk of cardiovascular events such as heart attack, and the brain, which ages faster, especially in those with too high cholesterol levels. Which are the consequences? Difficulty of concentration, fogging of memory, slow conceptions.


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Aging-related topics are quite worrisome for every human being. There has always been a dreamlike wish to remain young and find a way of prolonging human life. As early as in the second century BC., the Greek physician Galen claimed that old age is not a disease but a lifelong process and begins at the very conception of the organism. 25 Aging is a natural and inevitable process, the final stage of human existence, which concerns all living species. It involves physical and lifestyle changes. Biological, social, and psychological aspects of human life are influenced in this period of life. However, it is not possible to identify a model that absolutely defines aging, because old people are different from each other, everyone is unique with specific own issues and history.

1.3 General aspects of aging

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Figure 5.


1.3.1. Main factors

According to gerontologists, who study the biological, psychological, and sociological aspects associated with old age, the cause of aging lies in the accumulation of damage to macromolecules in cells, tissues, organs. 26 Many factors influence the process of life in the organism, including hereditary aspect, as well as a lifestyle which includes hygiene, level of physical activity, diet and quality of food, the level of development of healthcare, as well as environmental conditions.

Losses are not related just to elderly people, because everyone experiences loss since birth. What characterizes the elderly is the accumulation of losses that may sometimes weaken them. As identified by a study conducted in Chile, 27, the main losses that elderly people usually experience are the following:

1) biological and physical changes (body);
2) cognitive changes (mind);
3) retirement and decreased quality of life in a material sense;

4) reduced emotional relationships which may include the separation from children and becoming grandparents;
5) the death of spouses, relatives, and friends;
6) the need to change accommodation and loss of social integration.

The physical changes in aging compromise the functionality of many organs and in the long run may lead to pathologies or cause loss of self-sufficiency. According to the study carried out by the University of Niš in Serbia, among the physical changes are the following: gaining weight, decreased muscle strength in both arms and legs, less flexibility, agility, and endurance.\(^\text{27}\) Moreover, physical losses may include hearing and vision problems.

Conceptually, it is not easy to indicate the precise characteristics that make the seniors self-sufficient and not self-sufficient. Today, in fact, these two terms are used mainly in medical appearance. Generally, a self-sufficient elderly person has no need for external assistance and is able to take care of himself. Whereas, the not self-sufficient elderly is no longer in control of his life, therefore, needs to be supported in daily activities.

Analyzing the phenomenon of the limitations in the older age classes, it was observed that there are many not self-sufficient senior citizens in Italy. Among over 55-year-olds, 11.2% have a lot of difficulties or are unable to carry out daily activities without receiving any help such as eating and preparing food, moving in and out of bed or a chair, dressing and undressing, using the toilet and taking a bath or shower autonomously.\(^\text{28}\) This issue may lead to a request for an additional assistance and in some cases, consequently, to transfer to an elderly home.

Regarding the cognitive changes, the mind is the least prone to aging, especially if it is kept in training. Exercises maintain and improve mental abilities. A healthy elderly has a few functional issues concerning the cognitive losses (memory, the speed of response, etc.), which do not prevent the normal carrying out of daily activities.

As it is usually the case, retirement leads to leaving the job, losing the professional position and somehow changing the identity. It may cause a loss of work-related relationships, reorganization of the couple’s life, organization of free time, put an end to projects not completed before. However, as it is mentioned in an article published by the The New York Times newspaper, nowadays, the “baby-boomers” keep on working even after the retirement age, in contrast to people of previous generations.\(^\text{29}\)

Another new stage of life for elderly is the separation from children and a moment of becoming grandparents. During this period, the couple may find themselves alone where they should dis-
cover a new conjugal balance without their children. Nevertheless, becoming grandparents may have a good impact, because this new change of family role stimulates the feeling of being useful.

Among the challenging losses is the death of loved ones, especially of wife or husband which may lead to several other losses such as the security, the joy, the presence of the partner, someone with whom he/she could make decisions. Moreover, it is quite difficult to overcome the progressive disappearance of friends of the same age. Consequently, friendship relations become weaker which may cause solitude and fear of death.

Other modifications that cause suffering are the house changes. Sometimes, this occurs when they do not feel safer at home, but it happens, especially, for economic reasons, because the house becomes too big for the elderly person and he/she is not able to maintain it anymore. Such changes include a loss of a network of relationships and friendships with neighbors. Furthermore, senior citizens sometimes change their accommodation and enter an institution when they do not feel safe at home or perhaps feel too lonely.

1.3.2. Diseases

Diseases in old age are characterized by a slow onset. The first signs, as a rule, are not very pronounced, but rather vague. The period of “accumulation” of diseases begins at the age of 35-40 years, and only in the old age do diseases manifest themselves.

As mentioned by David Hogan, the professor of medicine at Calgary University, some often occurred diseases of old age are the following: cardiovascular disease, cerebrovascular disease (strokes), high blood pressure (hypertension), cancer, diabetes, Parkinson’s disease, dementia (including Alzheimer’s disease), chronic obstructive pulmonary disease (COPD), osteoarthritis, osteoporosis, cataracts, age-related macular degeneration (AMD), hearing loss.

Diseases such as dementia and Alzheimer are associated with a significant decrease in abilities and progressive impairment of cognitive functions. In fact, Alzheimer’s disease impairs memory, judgment, language, decision-making skills, causes negative emotions, sleep disorders, and destructive behavior, consequently isolation, depression, agitation, and aggression. As Alzheimer’s disease develops, to the previous problems add also perception of reality, dim consciousness and anxiety. Some architectural features may play a role in reducing the progression of Alzheimer’s disease. Simple and understandable environmental requirements include: human scale, using the maximum amount of light, proper furniture, contrasting colors, reducing internal movements, using visual signs, controlling noise in the interior, and organizing the courtyard with clearly defined entrances and exits, not using sliding doors in external spaces. Many factors, among which are comfortable furniture, privacy, socialization, connection with nature and relatives, play significant role. Each of these factors awakens the memories of patients and helps to preserve them, while at the same time creating a sense of independence in people.

In the case of Parkinson’s disease or trembling paralysis, it is important to take into consideration the high risk of falling on the ground because of the condition as to use certain design tools specifically created for such patients. This disease primarily affects the motor abilities, for instance, the coordination of movements is disturbed. Afterwards, the mental disorders come on the stage. Hence, in design process it is useful to install handrails along walls, hallways, and stairwells where there is nothing to hold on to, as well as use chairs with straight backs, armrests, and firm seats.

1.4 Senior living arrangements

The living dynamics for the elderly have been changing a lot in the past years due to demographic shifts in societies. Not only is the fact that older generations have raised their life expectancy but also the fact that the fertility rate has decreased significantly in many European countries, meaning that people have fewer children and relatives to give them support when they age. Moreover, the situation has changed because many women, who used to take the role of informal care-providers, have committed more to their professional lives, leaving less time to occupy themselves with the older generation.18

While in northern countries of Europe the situation has been approached in a more-institutionalized way, either in assisted living facilities or with professional caregivers 19 in Italy, this situation has been compensated with the so-called “badanti”. This term refers to the often-immigrant informal care-providers who took the place of daughters or daughters-in-law. A possible reason behind this approach is the marginal availability of formal care in institutions and at home compared to northern European countries. Additionally, many badanti provide care up to 24 hours a day when the person requires constant care. Such a service performed by formal caregivers would be normally divided into three shifts, and obviously, the wages would increase considerably. 20

However the situation in different countries will develop, the fact is that seniors are achieving independence by living in good health, and with a further improvement in health status, the number of elderly living alone will increase. 8 In this part, we explore some of the living arrangements for elder generations nowadays in the quest for the best option for aging.

1.4.1 Different approaches now and then

The living conditions for the generations of elderly nowadays are full opportunities and advantages. There is a wide range of options when it comes to deciding how to spend the closing stage of life. While there are still many aspects to improve, we can assure that the living situation of the elderly has had a positive development in the last years. In previous decades, the trends for housing and care for the elderly were much more institutionalized, with rigid boundaries and a strong medical model. The approach was “we are taking care of you”, and there was a hierarchical structure with a paternal attitude towards residents and families. 21

However, the situation is very different now, with the rights of old people as a key component in social sustainability. According to Fiedersen and Lüdtke, there is special attention to developing programs, processes and products that promote social interaction and cultural enrichment for seniors. Social sustainability puts special attention in protecting the most vulnerable and marginal groups. 22 According to Feddersen and Lüdtke, there is special attention to developing programs, processes and products that promote social interaction and cultural enrichment for seniors. Social sustainability puts special attention in protecting the most vulnerable and marginal groups. 22

Elderly living alone now not only has the advantage of having access to information through different channels and thus being in control of their own lives. Furthermore, technology gives boomers the opportunity to age in place with procedures that can be delivered in the household and with the possibility of making the home an intelligent environment with health monitoring and safety features. 31

With such a full agenda, the help of technology and the consent of good health, boomers mostly prefer to grow older at their own home. Previous elderly generations, for example, the parents of boomers, have experienced living in retirement homes that look rather sad and unprosperous. No wonder that boomers prefer to stay in the comfort of their homes!

“Aging is not about slowing down; it’s about pursuing encore careers, looking for new hobbies, traveling, dating and socializing. The trend now is to have a new and positive way of talking about aging. With the possibilities of living longer, this generation looks for opportunities for learning, creating, producing and consuming. Aging represents an opening for new experiences and a way to reinvent oneself.” 34 More than ever, this generation of elderly is making their own decisions about how they want to spend the last phase of their lives. With the benefit of technology, the silver segment has the advantage of having access to information through different channels and thus being in control of their own lives. Furthermore, technology gives boomers the opportunity to age in place with procedures that can be delivered in the household and with the possibility of making the home an intelligent environment with health monitoring and safety features. 31

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“Age most neither define us nor serve as only a limiting, negative factor, but should become a powerful, life-changing tool that enables us to elevate, celebrate and transcend being old in ways that have profound influences in our personal world and the greater world around us”. 35

18 Lüdtke, I. Feldkamp, E. Living for the elderly: A design manual. ; 2009
21 Agronin ME. The end of old age: Living a longer, more purposeful life. Da Capo Lifelong; 2018.
1.4.2 Aging in place

Aging in place is the tendency that consists of “The ability to live in one’s own home and community safely, independently, and comfortably, regardless of age, income, or ability level.” (National Center for Environmental Health, 2017). As reported in a survey realized by AARP magazine, 87% of adults aged 65+ were more likely to say that they would prefer to age in place compared to a 71% of adults aged from 50 to 64.

Home is seen as the place older adults can’t imagine living without; it is the place where people feel the most comfortable and free. Moreover, the home is an intimate place full of memories close to one’s heart. Evidently, the majority of older adults prefer to stay at home for the rest of their days, but for many householders that scenario is unfortunately not always possible. According to a survey conducted in the USA by Lindquist et al. (2016), there are five Advance Life Events (ALEs) recognized by seniors which impact one’s ability to stay independent at home: hospitalization, falls/Function Loss, Dementia/ Cognitive Loss, Spousal Illness or Loss, Home Upkeep Is 

The ability to live in one’s own home and community safely, independently, and comfortably, regardless of age, income, or ability level.”

sues. Despite the recognition of these events, most older adults didn’t perceive the likelihood of needing long-term caring services in the future. This research suggests that being prepared for one’s future needs empowers seniors and gives them the opportunity to make choices in their care.

Unfortunately aging in one’s longtime home is not always possible or the best option. As mentioned in Forbes magazine, one of the most common barriers to the success of this tendency is the fact that many houses are not adequate for aging. In many cases, there are stairs either to get to the house or to a bedroom or bathroom, which raises the risk of falling for older people aged over 80.

Another issue is the fact that the capabilities for driving are decreased with age, which means that people tend to leave the house less and thus the risk of isolation becomes bigger. Moving into a new home can be a very demanding experience, and as people become older this gets only more difficult. Baby boomers are now in an appropriate age to make conscious decisions about the type of house they will need later and where they want to age without being forced when there is no other options. The matter becomes no longer aging in place, but “aging in the right place.”

1.4.3 Typologies in Italy

It is considered that the old age is characterized as a special social vulnerability. In old age, a person needs much more attention and custody, because in most cases, they cannot take care of themselves independently. That is why social assistance is needed for old people.

In particularly, due to the rapid aging of the population in Italy, the demand for the health care and social services for the elderly is expected to increase. These days, 18.5% of old people over 65 (2.1 million people) report a condition of total lack of self-sufficiency for at least one of the functions essential to everyday life.

In Italy there are different forms of social care services for retired people provided by the government, depending on the particular needs expressed by elderly citizens. Such services, whose definitions may vary according to the norms of regions, include interventions and aids aimed to improve quality of the lives of old people as well as promoting their mobility, social integration and the performance of the primary functions. According to Istat analysis of 2015, 18.9% of the social expenditure of municipalities is devoted to elderly, which amounts to approximately 1 billion and 307 million euros.

In Italy the public long-term care (LTC) system is based on two types of services: the most important one includes the reimbursement programs (the so-called “cash-for-care”, as compensation for disability and accompaniment), the second covers residential services and home care

16 Istat. Condizioni di salute anziani anno 2015
17 Istat. La spesa dei comuni per i servizi sociali anno 2015.
(with social and health programs) provided by local health and social organizations.

Generally speaking, according to regional regulations the social care services are divided into two main groups: “open” and “residential” services. The first ones include economic assistance, domiciliary care, relationship life support, day care centers, recreational and cultural activities, housing assistance, geriatric day hospital and holiday and care homes. These services allow to the elderly to stay with their family members, without driving away from their domestic environment and also permit significant savings for the public service provider. In the second group of services, the residential ones, can be found the housing, hotel, protected communities, retirement homes and health care residences.45

In addition to public services, a large part of caregiving is widely supported with informal services provided by the family; or from neighbors and voluntary organizations in the case of the elderly living alone, or provided by immigrant workers paid by the family.46 It may be useful to refer to the conceptual scheme, elaborated by the Commission for the Guarantee of Statistical Information (CoGIS) in 2005, illustrating the various ways in which the request for assistance from the elderly can be met (fig.6).

It has to be mentioned, that the major part of the care given to non-self-sufficient elderly people in Italy is provided by the family, as an informal aid, and only secondarily from the network of public and private services. (fig.6)47

1. OPEN SERVICES

Home care (L’assistenza domiciliare(AD))

It is a form of assistance that aims to provide support and help to the elderly who live in their own houses but are not in a state of complete self-sufficiency. It is a service managed by Municipalities and Local Health Authorities (Aziende Sanitarie Locali (ASL)), often realized in collaboration with private bodies and also thanks to the commitment of voluntary associations. Among the services offered are, for example, forms of practical help for the management of personal care, of the home, for shopping or for commissions related to medical needs, personal or to the handling of paperwork.

The main objectives of home care are following:48

a) assistance to people with treatable pathologies at home to avoid inappropriate recourse to hospitalization or other residential facilities;

b) continuity of care for the discharge from health care facilities with the need to continue treatment;

c) family support;

d) recovery of residual autonomy and relationship capacities;

e) improving the quality of life even in the final phase.

According to the patient’s health needs and the level of intensity, complexity, and duration of the assistance, there are some types of home care. The main ones are programmed home care (Adp), integrated home care (Adi), home hospitalization (Od) and social home care (Sad). It is most often used the Integrated home care (Assistenza domiciliare integrata (ADI)). In Italy, 4.9% of the elderly receive home care, of which 3.2% in Adi and 1.7% in Sad.49

Structured forms of ADI have been present in Italy since the 1990s. Even if there are no age restrictions for access to ADI, almost 90% of ADI patients are elderly. Integrated home care is aimed at ensuring:

- the assistance of general medicine
- specialist medical advice
- nursing care
- rehabilitative and functional recovery assistance
- the supply of necessary aids and health facilities


48 Libertà, M. Barbagallo. Long-term care in Italy. Gerontologia Clinica. 2012;60:231-234
49 Ketty Vaccaro. Davide L. Vetrano. La babele dell’assistenza domiciliare in Italia: chi la fa, come si fa. 2017

Figure 6.
Assistance for the elderly in Italy: conceptual scheme

Figure 7.
People over 65 who are not completely self-sufficient, by source of assistance received, Italy, %
- home care for carrying out daily activities
- emergency alarm (use of the remote control service and remote-assistance)

**Integrated Social Center**

It is a place of meetings and activities managed autonomously by associations, often of the elderly, but totally open to citizens. In these centers, the elderly, relatively with a higher degree of self-sufficiency, spend time chatting or playing, promoting sport activities, dancing or organizing theatrical evenings, singing, cultural and design courses, etc. Basically, it is a place of entertainment, attended mainly by retired and lonely elderly. Generally speaking, there is a tendency to create these centers near the neighborhood offices or in areas where the social identity of the inhabitants is most felt: squares, gardens, parish churches, etc.

**Daycare Center (Centro Diurno)**

Daycare centers are multi-functional semi-residential facilities with a territorial character (municipal, neighborhood, etc.) mainly intended for the senior citizens with different degrees of self-sufficiency and in particular for people alone, but usable by all citizens regardless of age, configuring itself as a place for social, cultural and recreational meetings. These centers provide an integrated assistance for elderly to support in domestic life and relationships. These centers aim to provide the elderly with effective opportunities for independent and social life, fostering interpersonnal communication and recreational, cultural and entertainment activities.

2. **RESIDENTIAL SERVICES**

The residential facilities for the elderly can be classified into two groups: 49
- residences for not self-sufficient elderly,
- residences for self-sufficient elderly.

It is difficult to define the exact number of residential facilities for elderly people located in Italy due to their diversity of services and resources provided. According to the surveys conducted in 2011 by Auser 50, 6,389 residential structures have identified in the area, in particular, through the Yellow Pages website and additionally 526 residences through the Chamber of Commerce lists and other sources connected to third sector associations. As a result, for a total of 6,715 residential facilities have been established.

**Retirement houses (Le case di riposo)**

These facilities offer accommodation for self-sufficient or at least partially self-sufficient senior citizens, in addition to providing services such as laundry, restaurant, spaces dedicated to meeting and socializing, recreational and cultural initiatives, essential health services (including the general practitioner, the medical clinic), personal hygiene assistance, hospice. In this case, the elderly people choose themselves to move into these facilities, which are composed maximum of 90 places per structure, where they may have community life. Each of these structures defines the monthly fee payable by its guests who, on the basis of income criteria, can be supported by the Social Services, or at least partly by the elderly or their families.

**Hotel houses (Le case albergo)**

The hotel houses consist of minimal apartments with different internal distributions, equipped with all the accessories to permit the self-sufficient seniors an independent life. Moreover, these houses include common areas reserved for socializing. Basic health care and a range of leisure and recreation activities are ensured in these facilities. These are structures designed for retired users who do not need specific forms of assistance, enjoy a certain autonomy but wish to live in a community environment. Usually, these facilities include not more than 80 places per structure. Also, in this case, the payment fee is defined by the different structures and on the basis of income criteria can be supported internally by the Municipality or paid in part also by the host.

**Sheltered houses (Le case protette)**

These amenities are designed for the assistance of not self-sufficient elderly people. Sheltered houses are able to accommodate a limited number of patients per structure (usually around 30) and ensure the presence of medical staff, nurses and therapists to carry out health-rehabilitative activities and social assistance. As in other structures, catering and laundry services are also provided, as well as initiatives related to the cultural and recreational sphere. The relative cost can be partly provided by the Municipality and partly by the patient.

**Holiday centers (I centri per le vacanze)**

Holiday centers are residential or semi-residential services realized in climatic places particularly suitable for thermal treatments. The service can also be offered by conventions with thermal establishments, hotels, and touristic villages. The aim of these centers is to ensure, specifically for the elderly, a period of leisure and the possibility of psycho-physical recovery and the achievement of new social relationships.

**Nursing homes (R.S.A., Residenza sanitaria assistenziale)**

As it is stated in the guidelines published by the Italian Health Ministry in 1994, the Nursing homes (RSA) are public or private extra-hospital residences for not self-sufficient elderly people. The R.S.A. realizes a medium level of health care (medical, nursing and rehabilitation) supplemented by a high level of protection and hotel assistance. Regarding the structural and organizational aspects, the basic unit of the R.S.A. is the module (or nucleus) composed of 20-25 places for the not self-sufficient elderly and 10-15 places (depending on the severity of the patients) for physically, mentally and sensory disabled, using the same building spaces in a flexible way.

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50 Le case di riposo in Italia*, prima indagine nazionale sulle case di riposo, Auser, 2011.
51 Linee guida del Ministero della Sanità n. 1 del gennaio 1994
1.4.4. Alternative models: Cohousing and Intergenerational Living

Co-housing is an innovative living arrangement based on the principles of solidarity, participation, and mutual assistance. It has become in the last years a very popular option for senior residents, particularly for baby-boomers, and it involves the sharing of certain spaces, services and activities such as eating together. This phenomenon can be seen especially in Europe but also in North America, Japan and Austria. This kind of housing can be attractive to governments to deal with an aging population. It was founded in the 1970’s in Denmark, and the first senior co-housing project was developed in 1987 in the same country. One of the reasons for its appearance was for families with children to mutually assist each other. Nowadays the mutual assistance can be with other elder or intergenerational according to the type of project. Women are the driving force behind co-housing. Since the 1970’s and 1980’s young feminists wanted to get rid of the unfair amount of housework by turning it into a collective task in a community. Several factors such as the size of the group; the professional and status diversity; the management of communal spaces and activities and the apartment design must be taken into consideration. Labit’s research conclusions confirm that a greater solidarity and group cohesion is achieved if there exists proximity in terms of age, political and cultural values, social class and way of life. Another crucial aspect of the co-housing life that must be taught from the beginning is the organization of the communal life and mutual assistance.

Social participation is supposed to contribute to a healthier aging; according to Herber (2009) “empowerment” and “social capital” are two concepts that make co-housing a good option for aging well. Aside from self-organized communal housing projects, there has been a tendency to run professional housing projects for seniors with communal agreements. The typologies can vary from having own apartments and sharing communal spaces to sharing entire flats with private living areas for each householder. Co-housing has become an attractive model to perform volunteering work among elderly who are still capable and willing to help others.

Besides Denmark, other countries of reference in the co-housing matter are the Netherlands, Germany which recently has been increasing in numbers and Sweden. Around Europe, self-managed co-housing projects have been springing up especially for seniors who want to take part in the decisions of their retirement. Such a situation has happened in the United Kingdom, Belgium, France or Italy. One of the common factors for this countries is that there is no great support from authorities to develop this model in large scale. However, in the United Kingdom and France, developing the co-housing option for more seniors is now on the agenda.

54 Lüdtke I, Feddersen E. Living for the elderly: A design manual. ©Flashpop.
1.5 Elderly Wellness

While many people struggle with aging, experts have found the key aspects that help achieve wellness successfully. To look and feel young there are some considerations that should be well taken care of. It’s not about taking medications or expensive creams, it’s about maintaining a balanced healthy diet, doing exercise regularly, socializing with other people, training the brain and resting well.35

The research from “The Treviso Longeva TRELONG study” confirms that physical activity, social contact, and cognitively stimulating activity such as reading, can improve cognitive performance.36 In this section, the topics of body fitness, mind fitness and social health, specifically for seniors, are confronted as the basis to live a healthy and joyful life. Even though the nutrition and sleeping aspects are not profoundly described in this part, it is important to underline that they also play a crucial role in aging gracefully. Afterall, these factors are meant to work together in order to be efficient.37

1.5.1 Body fitness

The Baby Boomer generation is realizing the benefits of an active lifestyle. According to Times magazine, recent publications have made emphasis on the importance of a regular exercise routine to preserve the body. Exercise can be considered the elixir of life and this is not a new concept. For hundreds of years doctors recommended diet and exercise to keep people healthy, but in the 1900’s with the rise of surgery and pharmaceuticals, doctors started focusing on the treatment of diseases instead of on the prevention of them; and the health benefits of exercise were neglected.38

Exercise is not only good for the physical health problems associated with aging, but it is also beneficial with mental problems. While doing exercise people are encouraged to socialize and meet other people, therefore, combating loneliness. Besides, old people who exercise tend to have lower levels of anxiety in contrast to higher levels of self-esteem. Geriatric psychiatrist Marc Agronin confirms that the participation in competitive events by aging people gives them a sense of purpose and thus a wide benefit psychologically speaking.39

There is a misconception that exercise is about lifting weights or running marathons, the truth is that doing physical daily activities already accounts for a good amount of the work. Exercises that involve using oneself’s body weight are very recommended to build enough strength to carry out everyday tasks.40 Among the recommended exercises for aging people, there is yoga, taking walks and doing barre exercises.41

40 Agronin ME. The end of old age: Living a longer, more purposeful life. Da Capo Lifelong; 2018.
Not only is exercise beneficial for the heart, the muscles, lungs, and bones but it is also beneficial for the brain; there is a link between exercising and less depression, better memory, and quicker learning. There is even some research that suggests that exercise can delay the onset of Alzheimer's.

### 1.5.2 Social fitness

With the purpose of staying active and, independent seniors must also invest some of their time and energies in having a proper social agenda. While aging, the social-network composed by family, friends, neighbors, colleagues, acquaintances, and even pets, turns to be essential for a physical and psychological well-being. Staying social allows people to stay up to date, invest in the community, and meet new people. In his book, Hollwich makes some recommendations that can help family, friends or even strangers with simple actions and even pets, turns to be essential for a physical and psychological well-being. Staying social allows people to stay up to date, invest in the community, and meet new people. In his book, Hollwich makes some recommendations that can help towards achieving this goal: having a weekly and monthly appointment with friends or family in a place that you like makes a good habit for socializing and making acquaintances with the staff of the restaurant/bar; organizing with the neighbors to do the weekly grocery shopping is a way to spend some time to socialize while doing a task that is mandatory; using social media to keep in touch with people that are not necessarily in the neighborhood makes people maintain close relationships.

The neat part of socializing is that it can be done with most of the every-day activities. It can and should be easily combined with the body and mind training. Taking a class to learn something new will not only make people activate their brains but also interact with new people; doing group sports or with a partner is already a way of socializing while putting the body into action.

Hollowich also talks about the importance of being generous with one’s time. Since seniors have time on their hands, they can volunteer to help family, friends or even strangers with simple tasks. One example of this is babysitting for the grandchildren, which allows them to build good relations with the kids and at the same time gives the parents some extra time for themselves.

### 1.5.3 Mind fitness

A very important factor that contributes to a healthy social life is where people live. According to AARP’s findings, living in a community that has supportive features and services allows people to age in a place independent way while engaging in a social life in their environment.

To keep in shape, seniors must also train their minds. Harvard Medical School recommends among other things, challenging the brain through continuous learning and having the habit of being mentally active; using all of the senses to engage more of the brain in the retention of memories; economizing the use of the brain by focusing on the meaningful experiences and not worrying about banal things and believing in one’s self power to improve. Some of the activities mentioned to keeping seniors active are: engaging in a hobby or learning a new skill, pursuing music or art, reading or joining a book club, writing one’s own story, playing chess, cards or just doing crossword and jigsaw puzzles. Many and diverse are the activities that one can perform according to personal preferences, it’s just a matter of deciding how to invest one’s time. Baby Boomers are a generation that, after having worked for most of their lives, now have some free time. Play and recreation should not be seen as an extravagance, on the contrary, they must be seen as opportunities for growth, learning, and enrichment. Furthermore, more leisure time should be received with a positive attitude, otherwise, it can become a burden.

Hickson and Housley (1997) affirm that another key aspect of achieving wellness is creativity. This aspect is not related to chronological age. Many aging people engage in the creative process and experience well-being and life satisfaction. According to their research, creative acts can reveal the meaning of life and the meaning of aging.

Moreover, an optimal brain health is achieved by keeping a healthy lifestyle. According to Time Magazine, a new scientific research from the American Heart Association and American Stroke Association advice seven steps to reduce the risk of the cognitive decrease in old age. The steps include eating healthy, not smoking, losing extra weight, exercising and maintaining acceptable levels of cholesterol, blood pressure, and blood sugar.

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1.6 Empowerment for seniors

Empowerment is a concept which focuses on "building abilities for an individual responsible and autonomous life." This concept is becoming very important for elderly, especially the Baby-Boomer generation. The potential of this cohort is not fully recognized in terms of the possibilities that they can offer between generations. 21

The Boomers are the best well educated generation, it’s also a known fact that they enjoy better health than previous generations. On top of that, they are known to be a generation of having a history in effecting change. Many baby-boomers want to continue working help other people and their communities, or have a desire to keep active and involved during their retirement years by starting new projects. 20

The potential of the working force of seniors must still be recognized and taken advantage of. Many companies still promote early retirements without taking into consideration the huge losses in knowledge that they are provoking. Older workers should continue acquiring skills for them to be attractive in the labor market; however directors of companies must understand that to keep the value of an experienced older worker, they need to provide challenging and inspiring projects with the possibilities of organizing ones time independently. 28

The empowerment process when it comes to seniors involves promoting all the tools for boomers to get acquainted with the retirement transformation, mobilize, learn and connect to resources. In the next paragraphs there are descriptions of some movements that help empower the Baby Boomer generation according to Heber: 28

From Retirement to Re Engagement - It refers to the match that happens when aging adults identify personal motivations, visions, dreams, goals and values and are able to translate them into work opportunities that help them re-engage in society in a meaningful way.

From Senior Center to Community Wellness Center - Senior centers need to be presented with a different approach; in order to attract the current flows of boomers, the emphasis should be put in health, education and culture programs. The empowerment movement proposes to reinvent the senior centers into wellness centers and be attractive in an intergenerational level. Furthermore it talks about the importance of presenting it in a way that leaves out the stigma of being for old people, meaning for example that the word senior should be left out.

From Aging in Place and in Isolation to Intentional Communities - It refers to the will and capacity of people to organize themselves in order to obtain a benefit or service that can be shared and divided among several people for a lower price. It can be the provision of offered ride, home maintenance or repair, companionship, etc. The co-housing concept also fits into the category of intention communities and they can be organized around specific, common interests or values.

From Nursing Home Institutions to Supportive Homes - The concept of nursing home with the traditional institutional approach is out of date. Older adults require a life worth living for in a safe and efficient environment. The focus now is on smaller residences with home-like environments; on empowered residents who make their own lifestyle choices; and on an empowered staff that has expertise, autonomy and proper salary to provide a top quality performance at their job.

From Geriatric Reminiscing to Intergenerational Life Review - An intergenerational life review of one’s life that contains domains such as family and work can improve emotional health by accepting the worth of one’s life and by acknowledging that they are leaving a record for younger generations which at the same time get enriched by knowing about other people’s experiences.


1.7 Design principles for elderly care

1.7.1 Universal design

By designing for a diverse population, universal designers integrate usability by everyone in today your work on a routine basis. This approach leads to greater inclusion for many groups often neglected and that design-up process including older persons, people of small stature, frail people, etc. If independence is the ‘what’, universal design is the ‘how’. The seven principles of universal design, developed in 1997, point the way to the implementation of this approach, and can be adapted to any situation. When considering housing for older persons, the principles can be applied to a specific situation.

Principles of Universal Design

Principle One: Equitable Use - Housing is usable by anyone, and does not disadvantage, stigmatize or privilege any group of users.

Principle Two: Flexibility in Use - Living environments accommodate not only a wide variety of individual choices, but also adapt to user’s varying functional abilities.

Principle Three: Simple and Intuitive - All aspects of the domestic environment are easy to understand regardless of the inhabitant’s experience, knowledge, language skills or concentration level.

Principle Four: Perceptible Information - The housing communicates all necessary information effectively to all users regardless of ambient conditions or the user’s varying cognitive or sensory abilities.

Principle Five: Tolerance for Error - The design of residences minimizes hazards and adverse consequences of accidental or unintended actions by all users.

Principle Six: Low Physical Effort - Everyone can use the dwellings efficiently, comfortably and with minimal fatigue.

Principle Seven: Size and Space for Approach and Use - Housing provides appropriate size and space for approach, reach, manipulation and use regardless of the user’s body size, posture or functional abilities.

case studies
examples of retirement homes worldwide
Below are presented some case studies of retirement homes with different characteristics, selected in order to highlight conceptual, functional, dimensional or formal aspects.
La Dunette
Housing for Elderly People

Architects: Dominique Coulon & associés
Location: Huningue, France
Area: 3932 m²
Project Year: 2018
Typology: independent-living
Ownership: apartments for rent
Units: 25

La Dunette is a non-medical seniors residence which offers housing for rent. It is all about a project of social life. Its principle is to combine private housing around shared spaces and services to create safe and warm places of life.

The Dunette, managed by the Municipal Center for Social Action of the City of Huningue, is animated by a team of professionals. Located along the Rhine, it promotes a pleasant and functional living environment. Its geographical location at the crossroads of Swiss and German borders makes it unique. Moreover, it is close to various shops and services.

Red brick is used to clad all of the external surfaces of the building, like many houses around the area. The selected bricks are the result of the work of local craftsmen, and this artisan trait translates into non-standardized forms, sometimes irregular, which help to create richly textured facades that catch the sunlight. It may be considered also as a tribute to the memory of the place, which connects the housing complex and the city.

To match, much of the interiors — including a hall at the centre of the building and the main staircase — are made from concrete that is pigmented to match the terracotta floor tiles. The aim was to create spaces with a “benevolent atmosphere”.

Highlights

Main features
- Generous collective living spaces with abundant natural light
- Places designed to encourage exchanges and social interaction
- Social and intergenerational diversity due to many associations, cultural facilities

Main services include
- The maintenance of the common parts
- The animations
- Making and serving meals
- The presence of day with the residents and the harassings the nights

Complementary services
- Catering: breakfast and/or lunch and/or dinner with kitchen on site
- Regular animations within the residence and in the space shared with the seniors’ square

"Connection" is the key word for the project, which dialogues with the landscape, but above all aims at building relationships between the residents of its dwellings. The building contains 25 individual residences destined for the elderly, each 50 m², incorporated into the structure. The latter unfolds on three levels - a basement and two above - that in addition to housing include a restaurant, a computer room, a hobby laboratory, a vegetable garden and a bowling alley.

The collective spaces are the soul of the project: generous in size, with plenty of natural light and a design that combines functionality and style, these meeting places invite residents to spend their time together, offering a convincing answer to the problem of isolation and marginalization that affects many elderly people, especially in metropolitan contexts.
Chapter 1: Aging

Villa Plus

The project, proposed by Sergi Serrat, includes a series of innovative technical, technological and architectural solutions aimed at stimulating the autonomy of the elderly and providing independent rented partially furnished, small-sized accommodation with extremely low fees. Due to the urban central placement of the dwellings, rapid integration between the residents and the district occurs. The welfare services also ensure socialization activities, individual assistance, cleaning and maintenance of accommodation and community spaces.

The building is divided into two blocks which forms an L shape. On the ground floor, the community spaces and the civic center of the district are located arranging public functions, while on the upper floors there are the 85 private apartment units.

Unit plan layout creates the longest interior diagonals possible so the space is perceived in its maximal length. Services areas are placed on the north side (corridor, maintenance, bath, kitchen) while relation areas (living, bedroom, terraces) are faced to south. Due to the South-East orientation the dwellings save a high degree of energy in illumination and climatization.

85 sheltered homes in Can Travi
Housing for Elderly People

Architects: GRND82
Location: Barcelona, Spain
Area: 8925.0 m²
Project Year: 2009
Typology: independent and assisted-living
Ownership: apartments for rent

Taking advantage of the Mediterranean climate, each unit is provided with a large terrace that condense the life inhabiting them. These terraces expose the domestic activities of the users to the city beyond where each user makes the space their own. The units alternate floor to floor, thus forming across the facade a staggered chessboard pattern of white and black that cloaks the building in a distinctive texture.

Main features
- bathrooms with flush-to-floor showers to facilitate access and avoid falls;
- emergency lights to help residents’ orientation;
- centralized alarm system in the bathroom and bedroom;
- kitchens equipped with electric hotplates and power sockets located at a height sufficiently comfortable from the floor to avoid efforts


First floor apartment type - 42 m²

Highlights

- bathrooms with flush-to-floor showers to facilitate access and avoid falls;
- emergency lights to help residents’ orientation;
- centralized alarm system in the bathroom and bedroom;
- kitchens equipped with electric hotplates and power sockets located at a height sufficiently comfortable from the floor to avoid efforts
Audley St George’s Place
Retirement Village

Company: Audley Villages
Location: Birmingham, England
Project Year: May 2017
Typology: independent and assisted-living
Ownership: apartments for sale
Units: 95

St George’s Place Retirement Village\(^1\) is one of Audley luxury retirement properties, established in England near to the center of Birmingham. It hosts in a restored Victorian building and new buildings house 95 cottages and apartments. The village is restricted to people over the age of 55 where the residents pay monthly fees for extra support such as home care, leisure clubs and catering.

At Audley Villages, senior citizens have an opportunity to experience an independent lifestyle in a beautiful and secure environment, where their own property and gardens are maintained for them. It is their home, held as their own asset – and they are free to sell at any stage, on the open market. So they are able to enjoy the benefits of a continued investment in a property of their own.

At the heart of St George’s Place is a centrepiece building housing the facilities one would normally expect to find in a country house hotel. Here seniors can dine out in the restaurant, relax with a book in the library or enjoy a dip in the swimming pool. There’s also a bar/bistro, beauty treatment rooms and a fitness room. At St George’s Place seniors get a community in harmony, where they are totally free to join in the activities and facilities on their doorstep, or just enjoy their home and their independence.

Audley Care St George’s Place provides care to owners in the village and those living within a 20-mile radius, ensuring the promptest response possible.

Moreover, Audley Group provides a sustainable travel plan which aims to reduce car journeys and encourage the use of sustainable transport system providing its own bus used by owners and staff for journeys to the city/village centre and to and from transport hubs.

**Internal finishes**
- Double glazed and timber framed windows
- Painted white internal doors with chrome ironmongery
- Integral wardrobe to master bedroom
- Carpet to living/dining areas and bedrooms
- Non-slip ceramic floor tiles to kitchen, bathroom and en suite

**Sustainability features**
- Low energy lighting
- A & B rated appliances to kitchen
- Facility transport
- Solar photovoltaic (PV) technologies: convert sunlight into electrical energy reducing Audley’s carbon footprint

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\(^{1}\)We See Retirement Differently. Luxury Retirement Villages & Properties | Audley Villages. https://www.audleyvillages.co.uk/
The apartments are provided in three main types: one, two or three bedroom units. Each of them includes its own kitchen, bathroom and a spacious living/dining room which often opens on to a delightful balcony facing to the garden of the village.

Cranbrook Residences
Retirement Village

Company: Cranbrook Care
Design studio: Architectus
Location: Kellyville, Sydney, Australia
Project Year: 2018
Floor area: 7250 m²
Typeology: independent and assisted-living
Ownership: apartments for sale
Number of units: 39

Cranbrook Residences is a boutique retirement lifestyle located in the heart of a vibrant community, providing an exclusive home environment with carefully curated facilities. From enjoying a game of cards with friends, a yoga class or simply relaxing, senior citizens can savour retirement surrounded by the peace and tranquility of the Castle Hill Country Club golf course setting.

First aid trained staff is on hand to provide extra security and assistance for residents. As well as, personalised services from meal delivery, cleaning, nursing, laundry and ironing to handy jobs are provided.

At the centre of this enviable lifestyle is the Waterlily Café overlooking a central courtyard and tranquil pond. Its positioning creates a central hub to meet family & friends. There is a children’s toy area, children’s library and outdoor playground offering plenty of activity and action for visiting grandchildren. There is also a well stocked library, purpose built cinema and fitness centre available to enjoy at their leisure.

Highlights
- Community kitchen
- Library
- Café
- Cinema
- Multi-purpose arts and craft studio
- Playground for grandchildren
- Vegetable and herb garden
- Facility transport
- Wellness Center including:
  - Fitness center
  - Hair and beauty salon
  - Hydrotherapy pool
  - Doctor’s consultation suite

www.audleyretirement.co.uk
0121 454 5270
2 Church Road, Edgbaston, West Midlands B15 3SH

Audley St George’s Place

Internal Measurements Metric (m) Imperial (ft)

<table>
<thead>
<tr>
<th>Total Apartment Area</th>
<th>80.4 m²</th>
<th>865 ft²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bedroom 2</td>
<td>3.72 m</td>
<td>12'2&quot;</td>
</tr>
<tr>
<td>Master Bedroom</td>
<td>6.10 m</td>
<td>20'0&quot;</td>
</tr>
<tr>
<td>Kitchen</td>
<td>4.05 m</td>
<td>13'3&quot;</td>
</tr>
<tr>
<td>Living/Dining Room</td>
<td>5.31 m</td>
<td>17'5&quot;</td>
</tr>
</tbody>
</table>

www.audleyvillages.co.uk
2 Church Road, Edgbaston, West Midlands B15 3SH

Chapter 1: Aging
All apartments have been designed to achieve a high degree of adaptability with the discrete placement of future infrastructure elements enabling SEPP Seniors Living requirements whilst allowing residents to maintain their preferred lifestyle in a dignified manner. The residences are contemporary in style and provide a blank canvas for seniors to personalise and create a home that is uniquely theirs.

Tailored options are available to suit every lifestyle with a choice of one bedroom, two bedroom, two bedroom plus study, three bedroom and extra-large three bedroom residences.

The seamless connection from inside to out is reinforced by maintaining 2.7 metre floor-to-ceiling height across all living spaces and balconies.

Internal finishes
- Natural materials such as limestone wall linings in wet areas
- Marble kitchen benches
- Natural oak flooring in living spaces
Chapter 1: Aging

Statton Court
Retirement Village

Company: Aura Care Living  
Design company: Aura Design Collective  
Construction company: Aura Care Construct  
Location: Cranberley, England  
Project Year: 2017  
Typology: independent and assisted-living  
Ownership: apartments for sale  
Units: 31 independent-living apartments

Aura Care Living ensure emotional, physical and spiritual wellbeing of senior people, taking into account personal and cultural preferences to create an active lifestyle and support healthy ageing. Stratton Court has been specifically designed for a new generation of over 65’s who expect the highest standards.

Stratton Court’s luxurious retirement apartments offer the highest class of living arrangements, spacious ensuites and first class facilities including Relaxation & Wellness Suite with lots of exciting activities to enjoy. Stratton Court provides the latest gym and fitness equipment, with a personal trainer if required, as well as exercise studio for a range of classes from aerobics to yoga. In addition, the facilities include a therapy room for massages, a small library and an IT suite.

Moreover, Aura provides a programme of informative health care advice by highly trained health care professionals. They are available to both the residents and their families, to inform and support individual health care needs and maintain an optimum healthy lifestyle. Conventional therapists such as Physiotherapists, Dieticians and Occupational Therapists will be accessible, together with alternative therapies such as Reiki, Massage and Aromatherapy.

<table>
<thead>
<tr>
<th>Highlights</th>
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<td><strong>Service Charge include</strong></td>
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| • Access to all amenities  
• Access to all village activities, social events and trips  
• 1 hour per month social care service for companionship, shopping and domestic services etc.  
• 24 hour onsite emergency response  
• Video surveillance  
• External window cleaning every 6 weeks  
• Minibus service with a booking at reception  
• Concierge service  
• Night porter/security  
• Removal of rubbish from apartments if required  
• Servicing of lifts  
• Grounds maintenance  
• Building Insurance  
• Free health assessment on arrival  
• Water & sewerage bills  
• Communal heating and lighting  
• Management Fees |

https://www.audleyvillages.co.uk/

“In the olden days, many older people would retire to the seaside and spend their later years in a hotel and I’m sure that was the true beginning of care homes.”

Aura Care Founder and CEO  
Linda Lloyd
The Villages
Retirement Community

Developer: H. Gary Morse and family
Location: Florida, USA.
Area: 83 km² approximately
Typology: independent living
Ownership: houses for sale
Project Year: mid 80's

The Villages is a master-planned age-restricted community with one of the most well known and fastest growing retirement communities in the USA. It is ranked as one of the best places to retire in the United States as well as one of the most popular active adult communities because of all the activities that they offer. The residents must be at least 55 years old to be able to move into this community. The Villages is divided into different individual neighborhoods. Each neighborhood has a committee, which consists of residents, and it reviews and approves modifications to the properties built by the developer. Many of the residents use golf carts to move around, and there is also a shuttle that operates around The Villages. 1  

The residents pay a monthly amenities fee and in exchange, they are able to choose from a wide range of indoor and outdoor activities. There are, among other facilities, golf courses with a golf instruction academy; recreational centers which include pools, tennis courts, bocce courts, billiard meeting rooms, full kitchens, stages for theatrical and musical production, woodworking shops and arts & crafts; town centers where people gather and socialize; parks, dog parks, and fitness trails. Besides all of these amenities, there are vast commercial developments which include supermarkets, retailers, restaurants, entertainment and service providers. There are also fitness centers, healthcare facilities, social clubs and camp villages for intergenerational activities with grandchildren.

Whether seasonal or year-round living, there are different typologies of homes and they go from 80 to 330 living sqm. In one level they can host a dining room, living room, kitchen, laundry room, garage, golf cart garage, terrace, one to four bedrooms and one to three bathrooms. 2

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Chapter 1: Aging

Villa Plus

Chapter 1: Aging

66

Patio Villa - "Cottage"
115 total sqm / 80 living sqm

*Garage
*Full kitchen
*Living room and Dinning room
*Master Bedroom
*Walking closet
*1 Bathroom
*Laundry closet
*Entrance garden

These typologies of one-level homes give service to single people and couples with the possibility to host guests such as grandchildren. An extra bed-room can also be useful if there is a necessity to host a caregiver. The spaces are quite big and in both cases, the kitchens are quite well equipped.

Patio Villa - "Vineyard"
140 total sqm / 100 living sqm

*Garage
*Full kitchen
*Living room and Dinning room
*Master Bedroom
*Bedroom 2
*1 Bathroom
*Laundry closet
*Entrance garden

There are no steps around the house and the circulations are very clear. There is enough space for storage according to the number of people that can live in each house and there is even a garage because in the USA the car is essential.

"Wohnfabrik Solinsieme"
Self-organized community

Architects: Archiplan AG
Location: St. Gallen, Switzerland
Area: 1440 sqm approximately
Typology: co-living
Ownership: private flats
Project Year: 2002
Number of units: 17

Solinsieme “Factory of Living” is a self-organized project which combines individual living with community cohabitation. The name comes from the two Italian words: Solo - alone and Insieme - together. Because of its innovative model they were awarded the Age Award 2007 by the Swiss Aging Foundation.

The residence center Solinsieme has 17 private flats and shared areas owned by the cooperative. The building was built by restoring an old factory and adding adjacent spaces.

The project came to life due to the initiative of four women in their 50’s that didn’t want to live alone in their houses and decided to create a community where they could live together under the same roof but each one having their own space. Mutual help and solidarity was a key for the realization of this project.

For the rehabilitation of the building, the architects had in consideration some ecological principles such as a solar system to heat the water and photo-voltaic system for electricity. The materials and interior furnishings are ecological as well. The units are accessible for disabled people with the use of an elevator, but the interior of the apartments isn’t barrier-free. The people involved in the making of this building were able to cleverly handle the relation between the private and shared communal spaces, creating a good balance that allows the residents to be alone and also together whenever they decide it.

Sustainable features
- Recovery of an old factory building
- Solar system to heat water
- Photo-voltaic system for electricity
- Ecological materials and interior furnishings

Highlights
- Individual living + community cohabitation
- 20% shared spaces:
  - Terraces, communal rooms with bar and kitchen, two workshops, guest room, bicycle store, laundry room and small utility rooms.
- All flats are different according to each owner’s taste and space necessities.
- Intergenerational living

6 Lüdtke I, Feddersen E. Living for the elderly. A design manual .2009. Pages 146-147
The flats distributed on the ground floor, the first floor and the second-floor range in size between 56 and 93 sqm. They vary in the number of rooms (from one to three) as well as in plan arrangements, design solutions, and materials. They are light-filled which gives the aspect of being more spacious than they are. The common areas which represent a 20%, are distributed in all the levels, having a main common room with kitchen and bar, where they organize different events. There are also common terraces, two ateliers, a guest room, a bicycle store, and smaller utility rooms.
"Sustainable is a choice we have to make every single day. It is a maintenance plan where we constantly make little and big decisions that allow us to exist in productive harmony with nature."

Bielle Bellingham

Sustainability
In this chapter, the focus is on understanding what sustainability is and the possibilities it has in the design field. We consider sustainable design as a cornerstone in our project because nowadays it should be the only viable approach towards making a positive effect in our world. Sustainability is not only about doing actions to preserve the environment, but it is also a whole complex system that should always be in balance. First of all, to understand what sustainability is, it’s easier to subdivide it into three dimensions: the environmental, the social and the economic.¹

2.1 What is sustainability

2.1.1 The Environmental dimension

The environmental effects can occur in two ways, as input: extracting substances from the environment; or as output: emitting substances into the environment.

To avoid these effects, we must preserve the resources by using less and more renewable ones, and prevent pollution. This actions can be explored in three scenarios:

- Biocompatibility: the resources for the production are compatible with the natural system using

renewable sources and disposing of biodegradable and biocompatible waste.
- Non-interference: the resources are recycled or used in cascade if they are energy resources.
- Dematerializing how we satisfy the demand for well-being - resources flows would be diminished in relation to a given social demand.

### 2.1.2 The Social dimension

Future generations should be able to meet their own needs by taking into account the equity principle where every person has the right to the same availability of global natural resources and to the same level of satisfaction that can come from these. Some of the actions that should be considered are access to information, training, and employment. The cultural diversity and the regional identity are factors that should be respected at all times to achieve social sustainability.

### 2.1.3 The Economic dimension

An environmentally and socio-ethical sustainable model should also be possible to succeed in terms of the economic dimension, and it should be attractive to markets by applying economically practical and prosperous solutions. The initiatives to promote economic sustainability should be innovative, knowledge-rich, competitive and eco-efficient. This approach should provide high living standards and high quality employment.

The design for sustainability contributes to a sustainable development through practice, education and research, and it also enables people to engage in alternative and more sustainable lifestyles.

The role of design in the sustainability field has changed its approach from remedial actions to prevention. Design for sustainability can be understood with four different approaches that can coexist with one another not necessarily in a chronological way:
- Selection of low environmental impact resources: avoiding toxic or harmful materials, recycling, considering biodegradability and using renewable sources.
- The eco-design of products with low environmental impact: designing a product to last, taking into consideration all the life cycle stages.
- The eco-efficient Product-Service Systems: the offer of products and service systems that altogether are able to satisfy a particular demand.
- Designing for social equality and cohesion: provides equal opportunities and combats all types of discrimination.

Over the next years, we should transform the society’s satisfaction benchmark on well-being and economic health from growth in production and material consumption, to a context where economic growth cannot be seen as the ultimate goal. Freedom is the initial means to improve one’s life.²

In the design for sustainability, there are different research approaches and concepts that ensure conscious practices towards the conservation of our natural environment. In this area we mention some of these concepts and approaches.

#### Figure 1

The dimensions of sustainability

#### Figure 2

Evolution of the potential role of design for sustainability

2.2.3 Cradle to Cradle

Cradle to Cradle is a design concept developed by Prof. Dr. Michael Braungart and William McDonough which focuses on innovation, quality, and good design through the safe and potentially infinite use of materials in cycles. The concept, inspired by nature and the principles of an ideal circular economy, is about eco-effectiveness and its implementation creates equal economic, social and ecological benefits.

The structure of Cradle to Cradle design concept is divided into two nutrient cycles: the biological and the technological cycles for materials. The functioning is quite simple: the waste of an old product becomes the food for a new product. In the biological cycle, the waste returns to the biosphere as compost, and new materials are created from that; in the technical cycle, materials can be reprocessed in order to be used in a new product.1

The transition to eco-effective involves the elimination of undesirable substances and the reinvention of products reconsidering how they can fulfill the needs for which they are creating and at the same time being part of supportive ecological and social systems. 4

Eco-efficient models have a linear flow: materials are extracted from the environment, they are transformed into products and eventually, they are disposed. The purpose of this type of model is to minimize the volume, velocity, and toxicity of the material flow system, drawing upon methods such as recycling. The problem is that what they are actually doing is downcycle, which is a downgrade in material quality which happens when materials that are not to designed to be recycled, go through this process as an end-of-pipe solution. Downcycle limits the usability of materials and creates a cradle-to-grave dynamic.


Figure 3
The two nutrient cycles.

In contrast with eco-efficient models, the purpose of an eco-effective model is to minimize the cradle-to-grave flows and to generate cyclical cradle-to-cradle “metabolisms” with materials that maintain the status as resources and eventually accumulate intelligence by a process called Upcycling. This model creates a positive recoupling of the relationship between economy and ecology.

The eco-effective approach doesn’t focus on eliminating waste, minimizing material use or prolonging product lifespan, on the contrary, it actually encourages the creative application of materials even in short product lifespans as long as all the materials maintain their status as productive resources. 4

Opposed to the eco-efficiency approach which begins with the premise that industry is 100% bad, the eco-effectiveness approach departs with the assumption that industry can be 100% good and that it can support and regenerate ecological systems and empower a long-term economic prosperity. Cradle to cradle is a promising model because it promotes awareness within companies and presents itself as an appealing market solution.

2.2.1 Resilient Design

“Resilience is the capacity to adapt to changing conditions and to maintain or regain functionality and vitality in the face of stress or disturbance. It is the capacity to bounce back after a disturbance or interruption.” - Resilient Design Institute

The Resilient Design Institute proposes strategies that help maintain livable conditions under any abnormal situation. The Resilient Design gives intentional and practical proposals for the vulnerabilities of any given place. Resilient systems ensure that basic human needs, such as potable water, sanitation, food, energy, and occupant health, are covered and equitably distributed. According to this approach, the local availability and renewability of resources such as solar energy and local food make a more resilient design and the risk of running out of sources is diminished in comparison to depending on non-renewable resources, or resources that come from far away. Among other aspects, living in social equity can contribute to resilience because communities in which people know, respect and care for each other tend to do better under stressful situations.

Some of the actions that can be taken to generate resilient design are: optimize the use of on-site renewable energy, gather rainwater as a backup supply, build social structures where the community can gain strength (community gathering gardens, central mailbox locations, and community boards), and deliver food security through reliance on local food systems.


2.2.2 Biomimicry

“Biomimicry is an approach to innovation that seeks sustainable solutions to human challenges by emulating nature’s time-tested patterns and strategies.” - Biomimicry Institute

The approach of Biomimicry is quite simple: follow the designs and processes that nature has already tested to give sustainable and innovative solutions for industry and research development. Nature already knows what works, is appropriate and lasts in Earth.

Janine Benyus, the co-founder of the Biomimicry Institute, affirms that through this approach we can confront waste, resource efficiency and management problems that we face today. According to Benyus, there are nine basic laws that sustain the concept of biomimicry:
- Nature runs on sunlight,
- Nature uses only the energy it needs
- Nature fits form to function
- Nature recycles everything
- Nature rewards cooperation
- Nature banks on diversity
- Nature demands local expertise
- Nature curbs excesses from within
- Nature taps the power of limits

The biomimicry institute is already working with engineers, architects, and designer to provide new and sustainable solutions in different technological fronts. This approach is an alternative to today’s industrial model of progress and is based on the understanding of the natural systems on which we are dependent.


2.3 Sustainability in Interior Design

Besides focusing on the aesthetics of spaces, the interior design must engage in looking for solutions that are concerned about energy savings, emission reductions, harmful effects on consumers’ mental and physical health and the environmental pollution. 8

Fortunately, societies nowadays are becoming every time more conscious about the connection between buildings, people and community and consumers are focusing more on living in interior spaces that are sustainable and environmentally responsible. 9

2.3.1 Environmentally Sustainable Interior Design (ESID)

ESID is an approach which is concerned in green design, meaning by this the health, welfare, and safety of people; on sustainable design focusing on the health, welfare, and safety of the planet; and in the fair trade goods, which improves the working conditions of farmers and workers around the globe. 10

It focuses on materials intended application, aesthetic qualities, environmentally and health impacts, availability, ease of installment and life cycle cost.

The material selection should be a major concern when it comes to designing interior spaces because it has a huge impact on the sustainable outcome. Taking into considerations the world’s limited resources; the demand for healthier, energy efficient and environmentally sustainable homes and workspaces; and the greener building policies that have emerged, is quite surprising that the attention towards material selection hasn’t gotten the interest that it should have gotten by now. 11

By choosing environmentally sustainable materials it is possible to reduce environmental impacts through less energy consumption, less natural resource depletion and pollution, less toxicity for the occupants and for the ecosystem. 10

While choosing materials, factor such as volatile organic compound (VOC) emissions, susceptibility to microbiological growth and long-term environmental impact.

In Europe and USA, we spend around 90 percent of our time indoors, from which 65 percent is at home. We eat, sleep, relax, socialize, learn and work in interior spaces such as homes, offices, and schools; that’s why the interior design is a key factor to create functional spaces that improve our health and level of satisfaction. 12 The design of interior environments has a huge impact on the health and well being of its users because it is responsible for successfully adjusting factors such as quality of air, space, light, and storage. 13 Social and psychological benefits can be enhanced when a building has features such as daylight, connection to nature and spaces for interaction.

Sustainable interior design creates environments with materials that are intended to make an ecological balance with nature and improve people’s quality of life. The three dimensions of sustainable interior design are: global sustainability, which focuses on minimizing negative effects and maximizing positive effects on the global environment; indoor environmental quality which tends to improve indoor quality and reduce indoor air pollutants, as well as improving thermal comfort and interior lighting; sustainable materials that minimize use of resources and generation of waste during the different phases of the life cycle. 11

SMALL GUIDE TO SUSTAINABLE MATERIALS

Some of the factors that should be take into consideration to determine if a material is sustainable are: provenience of compounds, use of chemicals, renewability, longevity and biodegradability. Sustainable and green materials can fall into five categories, in the next pages we present some materials that are considered to be sustainable. 9

Fabrics - used in furniture, rugs, window treatments that help to regulate the heat, etc.
Surface materials - for kitchens and bathrooms
Flooring - interior and exterior
Walls - interior and exterior
Ceilings and Roofops

Green and sustainable plant fabrics

- Organic Cotton Fiber
- Organic Linen Fiber
- Bamboo Fiber
- Lyocell Fiber
- Hemp Fiber
- Nettle Fiber
- Alpaca Fiber
- Soybean Fiber
- SeaCell Fiber

Green and sustainable animal fabrics

- Organic Wool
- Alpaca Fiber
- Cashmere
- Camel Hair
- Leather
- Silk

Flooring

- Bamboo
- FSC Wood
- Cork
- Linoleum
- Recycled Rubber
- Recycled Terrazzo
- Concrete Floor
- Natural Stone
- Recycled Glass Tiles

Surface materials

- Recycled Polyester Composite
- Recycled Acrylic Composite
- Recycled glass
- Recycled Paper Composite
- Stainless Steel
- Bamboo
Chapter 2: Sustainability

Walls, ceilings and roofs

- Non VOC Paint
- Recycled Material Tiles
- Wall Panels
- Earth Plaster
- Recycled Material Stone
- Natural Wall Cover
- Mycelium Bricks
- Bamboo
- Straw Bales
- String Eating Bricks
- Photovoltaic Glass
- Solar Roof Tiles
Site Analysis

"It is not the honors that you take with you, but the heritage you leave behind."

Branch Rickey
Villa Arconati, also known as Castellazzo degli Arconati, is a palace and extensive garden located in the countryside in the Castellazzo district of Bollate, in Groane Park, near Milan. Built in the Lombard Baroque style in the 17th – 18th centuries, today it functions as a museum and a venue for various cultural events and meetings.¹

The royal villa is considered an Italian variation on the theme of Versailles by Louis XIV; its present appearance was finally formed at the end of the 18th century, when the building was last completed by representatives of the Arconati family. Various kinds of restructuring and reconstruction of the complex had happened before: starting in 1610, the villa was repeatedly altered. And yet, despite the imposition of various styles, the building as a whole looks organically and meets the aspirations of Arconati, who wanted to give the exterior and interior of their villa a noble appearance.

¹ http://www.villaarconati-far.it/
3.1.1. Location

Villa Arconati is located in a strategic position from an environmental and naturalistic point of view. It is in fact one of the principle attractions of the Parco delle Groane, a protected area that covers over 3,000 hectares north of Milan, characterised by extensive moors, which are among the last to survive in the area around the city.

This zone is today at the centre of a process of landscaping and environmental development thanks to its inclusion in the circuit of Landscape Expo Tours as the epicentre of the LET 1, and in the project Le Vie d’Acqua. The project involves the open spaces in the greenbelt to the west of the city, the Navigli and the irrigation network, to create a new green-blue ring around the Expo, from the Parco delle Groane to the marina. In doing so, it creates a bike path which links city and country, offering a new way to take advantage of the area in accordance with the central themes of the Expo. Passing among parks, lakes, woods and moors, Villa Arconati represents a fascinating stop on this itinerary, uniting environment, history and culture.

In this context, the plan to restore and convert Villa Arconati – with the 200 hectares of woods, moors and cultivated land that surrounds it – is open to projects, activities and innovative events linked to nature, both relating to the Gardens and the agricultural area of the Villa.
Figure 2.
Bollate and the surroundings

Figure 3.
Main services in Bollate/ the Villa Arconati property in the context of Bollate
3.2 Historical evolution

In the Middle Ages, a castle was located here, from where the name Castellazzo originated.¹ In 1610, it was bought by Galeazzo Arconati, the cousin of Cardinal Federico Borromeo. Galeazzo was a famous patron of the arts, during the years of his possession of the castle, the building was reconstructed and newly furnished. In 1621 he transported his collection of ancient Roman sculptures here, among which the Statue of Tiberius, anciently called Pompeo’s Statue. Moreover, once one time, the Arconati family owned the famous “Atlantic Code”, the manuscript of Leonardo da Vinci (nowadays preserved in the Biblioteca Ambrosiana in Milan) and “Funereal Monument of Gaston of Foix”, Duke of Nemours (today at Sforza Castle in Milan).²

Construction work in the castle continued after 1648 with the grandson of Galeazzo, Count Luigi Maria Arconati, and in 1671 with Giuseppe Maria Arconati. In 1742, the architect Giovanni Ruggieri was hired to decorate the castle-palace and its expansion, and the brothers Galliari were engaged in painting the interiors with frescoes. After 1772, the palace passed to the Busk family, which attracted Giocondo Albertolli to decorate the staircase with frescoes in the style of “trompe l’œil”.

Since 2011, the villa is owned by the Augusto Rancilio Foundation and is part of the project of the Ville Gentilice Lombarda network of the Lombardy government. The project aims to preserve the architectural heritage of the region and its use for the purpose of education. The garden of the villa, broken back in the 18th century, is under reconstruction today.

Figure 4. Evolutionary scheme of the Villa Arconati plan

3.3 Description of the spaces

The area of Villa Arconati is divided into three main parts: garden, villa and ancient village. The Garden of Villa Arconati is the classic example of a 'French garden' with straight avenues, water features and architectural elements. Of a very articulated plant and particularly rich in tree species, decorative elements, sculptures and fountains, it represents one of the peculiarities that make Villa Arconati of great importance in the Lombard and national heritage. Whereas, the Village (the Borgo) with its agricultural courts, surrounding land and ponds, has been developed as a rural agglomeration around the 'Villa franca del Castellazzo'. It is documented from the Middle Ages, in a territory covered by woods and moors, which went on to be used for tilling and grazing.

![Diagram of Villa Arconati showing the garden, villa, and village](image_url)
The entrance to the Villa is preceded by an avenue called Viale dei Leoni at the beginning of which there are two obelisks and four feline statues. Passing along the Lion Alley, you will see the building of the villa appears in all its unchanging magnificence: the traces of the centuries did not weaken it at all, although serious restoration works to the monument are necessary.

In terms of the building, it resembles the letter H: it welcomes guests with its western facade, and from the east side it is decorated with a portico overlooking the garden.

3.3.1 The Villa

The entrance to the Villa is preceded by an avenue called Viale dei Leoni at the beginning of which there are two obelisks and four feline statues. Passing along the Lion Alley, you will see the building of the villa appears in all its unchanging magnificence: the traces of the centuries did not weaken it at all, although serious restoration works to the monument are necessary.

In terms of the building, it resembles the letter H: it welcomes guests with its western facade, and from the east side it is decorated with a portico overlooking the garden.

The interior vividly testifies to the taste and love of art that once lived within the walls of this noble house, the epicenter of culture, where architecture, classical art, music and science were valued.

As soon as the visitors enter the Villa, there is a wooden door on the left, which leads to the interiors of Villa Arconati. Like every noble residence that respects the first visual impact is given by the Scalone d’Onore, in this case presents a stone balustrade, a domed vault (made even higher by the presence of the fresco), walls covered with frescoes and last but not least, a copy of the famous statue of Laocoon devoured along with his two sons by giant snakes. The second room of the Noble Floor that can be admired is the magnificent Salone dei Galliari. It is one of the largest of Villa Arconati, wanted by Giuseppe Antonio Arconati was used as a dining room or as a reception room for visitors.

The hall was created after the construction of the Villa, which is why it was not possible to raise the ceiling due to structural problems, consequently the Arconati called the Galliari to court, who tried to make the hall as large as possible through painting Trompe l’oeil.

Going through the Piano Nobile of Villa Arconati the Ballroom appears which is a gallery with the vault covered with gilded stucco on a pastel blue background. The idea of dedicating the ballroom to a gallery is another clear reference to the Palace of Versailles, which has one of the most beautiful baroque galleries in the world, namely the Gallery of Mirrors. The Arconati ballroom has ten mirrors throughout the gallery, these were designed to reflect the light of the candles, which were placed in front of them, thus enhancing the gold of the stucco on the ceiling; even today the perimeter of every single mirror blackened by smoke can be seen.

One thing that catches the eye of the visitor is the fact that in this room there is a complete absence of frescoes and a lack of wealth on the walls; this is due to the fact that the Arconati wanted to highlight the pompous dresses of the ladies while they danced, rather than channeling attention to the ballroom.

The room adjacent to the ballroom of Villa Arconati was a multi-purpose venue used as a lounge for music or to have conversations. The decorations are similar to the previous room, but on a lilac shade.
CHAPTER 3: SITE ANALYSIS

Figure 7.
Ground floor of the Villa

- Stables
- Storage of Carriages
- Stables court
- Library
- Museum
- Dining room
- The Gaston de Foi cameronino
- Bookshop
- Red Room
- Portico

Figure 8.
First floor of the Villa

- Ladies wing
- Salone dei Galliari
- Sala dei Podesti
- Scalone d’Onore
- Ballroom
- Men’s rooms
The ground floor of the Villa is characterized with particular ceilings. In fact, they are no longer like all those on the noble floor, but are made of wooden beams positioned according to the technique of "sopra sotto", rustic but at the same time refined, thanks to presence of frescoes.

On the ground floor there is situated the Museum Salon, where a Roman statue of Pompey the Great is installed, and the hall with the Gaston de Foix tombstone by Bambaya (today his bas-reliefs and sculptures belong to the city museums of the Sforza Castle in Milan). The floor of the Museum is made in terracotta with "medone variegato " type, otherwise known as the "medone lombardo". In addition, there is a sequence of door-windows that allows the most natural light to penetrate in, an ideal feature for the exposition of sculptures. Nowadays, the Museum Salon, like the other rooms of the Villa, serves for official and private events (conferences, lectures, meetings).

Adjacent to the Museum there is the library, where nothing is left inside up-to-date. In 1700 the Arconati family bought the Atlantic Code of Leonardo da Vinci, which later was donated to the Ambrosiana Art Gallery in Milan. The Atlantic Code contained various annotations, drawings of experiments or discoveries that Leonardo made during his life.

The Red Room located on the ground floor is quite different from the predominant Lombard baroque throughout the rest of the building. Completed towards the end of the nineteenth century and originally used as a game room, it overlooks the prestigious Portico and the Parterre delle Ballerine. It has a very rich and complex decoration system. Also in this hall we find the typical Lombard terracotta floor, the "variegated medone" which is present in two variations of textures that both recreate a three-dimensional visual effect. On the walls there is a wooden paneling, with a geometric engraved pattern, while the coffered ceiling is decorated with a square motif with golden inserts. Another characteristic element in the Red Room, which among other things takes its name from the color of the walls, is the fireplace, full of details and decorations.

All over the interiors of Villa Arconati, various kinds of decorative doors and windows are present with different opening types. One of the fairly common details are "false doors", which imitate the frames of the existing openings with decorations to provide the symmetrical appearance of the space.
Another architectural feature of the Villa is the strong presence of enfilade which represents a sequence of openings placed along an axis that ends in the last room with a window. This was common from the Baroque period onward. Until the eighteenth century in every building there were no corridors, nowadays every house has at least one, but it was only an "invention" that took place after 1700. Up until that time people passed directly from one room to another.
Adjacent to the Museum Salon on the ground floor there is another courtyard almost hidden to the public. It represents the area between the noble spaces of the villa with the functional areas, such as the laboratory of the blacksmith, the storage of carriages and the main stables of the Villa Arconati.

The stables can be accessed both from the outside and from the internal court. They have a very beautiful semi-high ceiling from the aesthetic point of view and very practical from the structural point of view because the load of the overlying structure is distributed better both on the columns and on the walls.

The storage of carriages and the stables together form a volume that extends mainly along one direction, organized along an axis of central symmetry, which starts from the large entrance for the carriages and ends with the gushing waters of a fountain where horses of the noble lords could drink, placed in a niche on the opposite side of the long vaulted space.

At the time it was unusual to put items of furniture in places frequented by animals or servants, but at Villa Arconati at the end of the stables there is an imposing statue of Neptune with a semicircle base and topped by a pair of curtains that highlight the coat of arms of the Arconati family.

3.3.2 The Garden

Villa Arconati merges with its Garden in a single organic space, a meeting place between nature and architecture, between culture and leisure, between past and present. Subject of subsequent interventions by the Arconati, the monumental Garden includes 10 hectares of Italian garden with classical stone sculptures enclosed in the theaters and water games; and 2 hectares of French garden - one of the very few that is still preserved in Lombardy, where the charming Parterre of Ballerinas draws an ideal perspective towards infinity, in which the hornbeam trees with the shape of dancers decorate the sides of the avenues.

The Theater is certainly one of the protagonists in Villa Arconati; great theatrical enthusiast was Giuseppe Antonio, who among others invited Carlo Goldoni, a famous Venetian playwright. But the Theater is also one of the fundamental places of a “Delizia” garden. Set up in the green or built in masonry, adorned with groups of statues or place dedicated to performances and dances, the Theater was above all a symbolic space of expression of knowledge and culture.

The Diana Theater, equipped with daring hydraulic mechanisms, showed the full range of types of water games distributed in the garden. At the foot of the Andromeda Theater, a mosaic pavement offered the joke of many small jets that started from the ground, while the Theater of Hercules celebrates the male element, the Arconati lineage.

Another fundamental element of this garden was water: used to support the vegetation of the park, however, was a true protagonist of the pleasure of the Nobles. Numerous as we have seen the water games that enlivened the walks and complex the mechanism that regulated them.
A system of waterfalls accompanies, for example, the majestic Scalinata dei Draghi that connects the Teatro Grande - also called the “delle Quattro Stagioni” - to the 18th century parterre. The system that regulates the fountains - located in the Tower of the waters, which are still present nowadays - is instead a work of avant-garde hydraulic engineering that probably Galeazzo Arconati picks up from the studies of Leonardo da Vinci.

The path in the garden of Villa Arconati continues with a visit to the Limonaia, or in French Orangerie, a structure where citrus trees were cultivated in special pots that during the hot seasons were exposed outdoors near the Delfino fountain. The Limonaia is one of the symbols of leisure in the Garden. Its structure, which acts as a connection with the Villa, is characterized by noble architectural forms, especially in monumental front, with large windows interspersed with light partition walls ending with sculptures of cherubs. In the center a niche lined with mosaic floors, adorned by a statue depicting Bacchus concludes one of the axes of the garden, further underlined by the water tower, home of the hydraulic mechanisms of the “Delizia” garden.

At the center of the space is the Dolphin Fountain, so called, as written by Marc’Antonio Dal Re, “because with double vein flows from the nostrils of an image of that, carved in marble.” In 1700, the square of the Delfino Fountain was one of the focal points of the garden, due to its immediate access from the Corte Nobile and the celebrated citrus collection.

A structure adjacent to the Andromeda Theater, was used as a woodshed. It represents a volume divided into two rooms: the right-wing hall is marked by five arched openings and is full-height, the second half is lofted. The woodshed had a strategic position, adjacent to an entrance that connected Garden and Borgo and therefore allowed the entry of the carriages that could then deposit the wood as soon as they entered.

In January 2015 a fire broke out in the woodshed of the villa, fortunately without causing damage to the Villa.
Around the Villa Arconati itself, over the centuries, a real rural agglomeration has developed, with farm houses, stables, rustic houses, which were later added to the homes of craftsmen, farmers and kiln workers.

Located north of the Villa, it has developed in adherence to it, with subsequent adjustments of the buildings and courtyards until it reaches its current configuration at the beginning of the twentieth century.

The complex is divided into several courts: from the Corte Grande - with the well in the center - to the Corte Nuova, once reserved for the peasants, up to the Corte delle Case Nuove and the Corte del Fabbro. In addition to the Castellazzino, the Cascina Scessa, the Fornaci, the oratory of the Fametta and the ancient cemetery were later annexed to residential use.

Moreover, the village was also the set for a film on the Resistance «The sun rises again», set between the end of 1945 and the first months of '46, the subject of conferences and debates.

3.3.3 The Village
Based on the demographic analysis, it has become clear that senior citizens will outnumber the rest of the population groups in the upcoming future. Considering the continuous rise in the number of this particular age class, the demand for senior housing will also increase. In order to create appropriate facilities designed for them, firstly, it has to be stressed that current and upcoming generations of senior adults, also known as baby boomers, are quite different in several aspects from that of previous ones. Specifically, the recent generation is unique of its kind by being healthier, more active, with greater life expectancy and with a clear objective of engaging in activities specific to young adults. As the chief executive officer of Cranbrook Care Kerry Mann (Cranbrook Care is one of the case studies) mentioned retired “baby boomers” had greater expectations of retirement living than previous generations. In addition, based on this trend, one may predict that the upcoming generations of senior citizens will strive to boost even more the aforementioned characteristics. It is clear that the needs of this age group has changed dramatically. Therefore, more suitable accommodations should be designed for this particular target group, where they may feel like home according to their needs and live their live accomplishing their tasks.

Research has found that socialization can play a significant role in overall well-being as people age. Moreover, developing connections with a younger generation can prevent the isolation of the seniors, make them feel useful again, gain energy and positive attitudes from contact with young, be active and find joy through intergenerational activities. New and innovative facilities promoting intergenerational learning need to be provided to enhance apprehension among young people of the advantages of learning also from the elders and contrary. Thus, the new housing project should provide opportunities of interacting with its members as well as with younger generations through different activities, which, in turn, will bolster their mental and physical health.

Based on the research and worldwide case studies analysis, the ideal model of senior housing, more flexible and open to relations, which have not yet been met in Italy at the regulatory level, will be proposed and will be applied it in Villa Arconati, located in an italian countryside. The connection with such a historical site is quite strong as our target group also has a strong history and experience. Furthermore, the sustainable aspects in design process should be considered as it is the only viable approach towards making a positive effect in our world.

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“Wellness is not a ‘medical fix’ but a way of living - a lifestyle sensitive and responsive to all the dimensions of body, mind, and spirit, an approach to life we each design to achieve our highest potential for well-being now and forever.”

Greg Anderson

Project: "Villa Plus"
Our target group for the development of the project in Villa Arconati is the so-called Boomer generation. This group of people is well situated economically speaking and know the importance of maintaining themselves in shape. They have a motivation to continue living healthy lives and, unlike previous generations, the boomers are already digitally connected and looking for new experiences rather than accumulating material possessions.

The project aims at proposing flexible and elder-friendly spaces designed for this target group, where they can make a home according to their needs and age not only with dignity but also with the fulfillment of achieving their goals and aspirations for the last active stage of their lives.

Despite Italy's largest percentages of aging populations in the world, the variety of options for senior housing is not very appealing. Throughout our research, we have seen different examples of successful cases around the globe, and we believe that a project dedicated to older adults, based on the best characteristics of different studied schemes, can take place in the property of Villa Arconati.

The lot lies on the north-east edge of Milan and looks out over open countryside, providing an attractive natural landscape which can be beneficial for older adults who wish to have the comforts of having the city close enough but at the same time be able to live in a natural environment.
4.1.1 Project goals

The old buildings of the Borgo and some part of the Villa host a wellness community center with residential villages for people over 55. The project's ambition is to attract older adults who are in a transitional phase, whether because they are in their retirement years or because their children left the house, and instead of living in a high-maintenance family house or apartment, they are seeking an easier-to-care home in a more suited environment for their future needs.

The objective is that older adults choose to move into a new home under the premise that it will be the home where they will grow old. This premise comes from the understanding that enjoying good health gives a greater facility to move into a better-suited home. Instead of holding a reactive response when aging problems arise, we propose the proactive solution of aging at home and at a community that will still cover one's needs in the next 30 years at least.

On the other hand, our principal goal is to achieve a sustainable project in its three dimensions.

*On the environmental dimension: through the choice of eco-friendly materials that come from sustainable sources; through technologies that help consume less energy or even generate green energy on their own; through the generation of own food and resources. In the bigger picture, our intention is to create in the way sustainable and respectful environments.

The idea of combining these twoologies is that the non-sufficient people can benefit from the company and help of auto-sufficient people. On the other hand, as auto-sufficient people become older or begin to have health problems they can benefit from care services that already exist in the facilities. If it is necessary, they can even transfer eventually to the non-sufficient apartments. The two typologies of residences are designed for accessibility and are adaptable to the needs of residents with impaired mobility. In both cases, they can request special services such as grocery shopping, laundry washing, cooking or cleaning.

According to the demands of baby-boomers, The Wellness Community Center comprises:

* A co-working section where pensioners are encouraged to embark on new projects or pursue their careers under a consultant modality of work.
* Spaces dedicated to fitness and health with the purpose of maintaining an active and healthy lifestyle.

4.1.2 General program

According to the aim of the project, we propose two types of living arrangements:

*Senior residential apartments for auto-sufficient older adults. This typology is dedicated to empty-nesters and young pensioners that enjoy good health and can manage to live an independent life on their own.
*Senior residential apartments for non-sufficient older adults. This typology is especially addressing to people whose health condition require more attention and care.

The idea of combining these two typologies is that the non-sufficient people can benefit from the company and help of auto-sufficient people. On the other hand, as auto-sufficient people become older or begin to have health problems they can benefit from care services that already exist in the facilities. If it is necessary, they can even transfer eventually to the non-sufficient apartments. The two typologies of residences are designed for accessibility and are adaptable to the needs of residents with impaired mobility. In both cases, they can request special services such as grocery shopping, laundry washing, cooking or cleaning.

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4.1.3 The name

The name Villa Plus comes from an empowerment approach which consists on eliminating the stigma of elder age being a negative thing. By following the simple trend of giving up old-age terms such as "senior", the venue for older adults gets rid of the institutional mark. We want to change the conception of what is known as a senior center by presenting it as a community wellness center with the emphasis put on health, education and culture programs. It needs to be attractive in an intergenerational level, that is why the word "Plus" refers to a model focused on older adults but it leads the door open for an ageless public to come and join us.

The 74 residences have been designed as self-contained freehold units following an Italian ownership model, meaning that each householder is the owner of its own home. However, the project highly promotes community life, self-organized arrangements and integrate forms of mutual assistance. These characteristics can be appreciated through the inclusion of common areas as extensions of the houses. The project intention is to create spaces that allow people to enjoy their privacy or the company of others whenever they decide to, creating in the way sustainable and respectful environments.

Help and support are given when necessary, but the idea is to remain independent for as long as possible with a structure in the area that provides for the whole community.
# Population in Italy

This chart shows the evolution of the population in Italy in the last 55 years. The two groups shown - 0 to 14 years and 65+ years old change radically during the mentioned lapse of time. The Villa Plus project is relevant in proposing such a complex project for older adults, specially nowadays, when the demands are higher.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Population of Italy</th>
<th>0-14 years old</th>
<th>65+ years old</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>50,199,700</td>
<td>12,567,225</td>
<td>4,766,245</td>
</tr>
<tr>
<td>1965</td>
<td>52,122,350</td>
<td>12,811,291</td>
<td>5,292,295</td>
</tr>
<tr>
<td>1970</td>
<td>53,821,850</td>
<td>13,271,811</td>
<td>5,973,206</td>
</tr>
<tr>
<td>1975</td>
<td>55,441,001</td>
<td>13,388,084</td>
<td>6,738,075</td>
</tr>
<tr>
<td>1980</td>
<td>56,433,883</td>
<td>12,396,466</td>
<td>7,521,390</td>
</tr>
<tr>
<td>1985</td>
<td>56,593,071</td>
<td>10,822,985</td>
<td>7,426,410</td>
</tr>
<tr>
<td>1990</td>
<td>56,719,240</td>
<td>9,340,424</td>
<td>6,423,807</td>
</tr>
<tr>
<td>1995</td>
<td>56,884,303</td>
<td>8,524,783</td>
<td>5,414,421</td>
</tr>
<tr>
<td>2000</td>
<td>56,942,108</td>
<td>8,157,199</td>
<td>10,335,787</td>
</tr>
<tr>
<td>2005</td>
<td>57,969,484</td>
<td>8,168,560</td>
<td>11,329,207</td>
</tr>
<tr>
<td>2010</td>
<td>59,277,417</td>
<td>8,305,209</td>
<td>12,150,780</td>
</tr>
<tr>
<td>2015</td>
<td>60,730,582</td>
<td>8,336,311</td>
<td>13,381,102</td>
</tr>
</tbody>
</table>

* Figure 01: Evolution of the population in Italy. Source: World Bank

> 1 square equals 100,000 people
Empowerment is the process of becoming stronger and more confident, especially in controlling one’s life and claiming one’s rights. We propose a community project with activities for everybody and where people can feel encouraged and supported by one another. Everyone is equal and everything is planned under the principles of universal design. As people become older, there is a tendency to reduce the physical and mental agility due to lack of encouragement and motivation.

While developing a complex city where elderly people interact, we identified three main opportunity areas that help activate the mind, the body and the social relations of the users in order to achieve a state of wellness. Following this methodology, almost all of the spaces fit into three categories: mind fitness, body fitness, and social fitness. With this organization, we intend to stimulate all categories of users to train themselves for the purpose of feeling well.

Having a regular basis physical activity is essential for younger and older elderly. The boomer generation is the first to be especially mindful of taking care of their body. As part of an integral well-being program, we propose a big repertoire of physical activities suitable for every need.

Going into retirement is the perfect opportunity to develop all the hobbies that were too time-consuming in the past. Having new passions or developing one’s interests keeps the mind fresh and updated. Keeping the mind nurtured is fundamental for elderly people, therefore we provide an extensive program of activities to achieve this purpose.

Engaging in social activities is a basic requirement of the human being. People need to relax and have fun in the company of family and friends, consequently, as a part of the integral well-being program, we provide our elderly with plenty of activities and spaces to socialize and enjoy.

4.2 Concept

empowerment
Chapter 4: Project Villa Plus

Concept Implementation

Ideal Model in the Villa Arconati

Facilities

- Cafeteria
- Pool
- Co-working
- Fishing Pond
- Common areas
- Restaurant
- Fitness area
- Greenhouse
- Performing stage
- Arts Workshops
- Reception
- Physiotherapy
- Driving service
- Herbal Therapy
- Events room
- Lounge bar
- Common rooms
- Commercial area
- Urban Gardens
- Pet Therapy

80 Residences

- 46 apartments
  - Auto-sufficient older adults
- 25 apartments
  - Non-sufficient older adults
- 6 rooms
  - Visitors
Bubble Diagram

Direct connections
- Mind fitness
- Social fitness
- Body fitness
- Basic services
Chapter 4: Project Villa Plus

Access Diagram

- Main access
- Secondary access
- Service access
- Filter for visitors
- Parking
- Service Parking

Access to the Villa Arconati

Levels of Privacy

- Public in general
- Semi public - Under request
- Private - only residents

Reception
Commercial area
Urban gardens
Storage area
Staff area
Medical center
Lounge bar
Arts and Crafts
Cinema
Museum
Fishing pond
Bakery
Coworking area
Pet therapy
Residences
Canteen
Fitness area
Social Hub
Green house
Restaurant
Art cafe

Note: the semi public spaces are included in the monthly fee of the residents but can also be open to the public upon request with a fee.
Chapter 4: Project Villa Plus

Building Facilities Plan
Zone II

- Storage area
- Staff area
- Medical center
  1. Clinic
     - Pharmacy
     - Physician office/consult
     - Exam rooms
     - Nurse work area
     - Medication storage
     - Toilets
  2. Physiotherapy area
     - Therapeutic massage rooms
     - Acupuncture rooms
     - Fitting rooms
     - Toilets
- Assisted Residences
- Guest rooms
- Mensa
  - Reception
  - Dining area
  - Kitchen
  - Staff fitting rooms
  - Office
  - Cleaning area
  - Toilets
  - Storage space

Fitness area

3. Gym
   - Reception
   - Fitting rooms
   - Lockers
   - Toilets
   - Workout spaces
   - Classrooms
   - Storage space

4. Hydrotherapy & Spa
   - Massage rooms
   - Steam room
   - Mineral baths
   - Toilets
   - Storage space
   - Swimming pool
   - Jacuzzi
Chapter 4: Project Villa Plus

Project Program

Description of the spaces
Reception area

The Reception area is located at the northern side of Villa Arconati and it is the main access to the Village Plus Community. This area serves as an info and meeting point for residents and visitors; special services and information about activities can also be requested in this area. The reception building also hosts the administration offices. This space is characterized by a cozy and very home-like environment.

Driving service pick-up point

Mobility is essential for seniors to do their activities, that is why among other services, the Village Plus facilities offer a driving service for residents that are no longer able to drive themselves or simply prefer the commodity of private transportation. With this service, we also encourage people to use fewer cars. The meeting point for this service is located in the reception area because of its proximity to the parking lot.
The Fishing Pond is situated at the northern entrance of Villa Arconati, right outside the Farms. Its current use is already for fishing by the local villagers. We intend to introduce rental boats in order to create a venue that can be enjoyed by children and their grandparents. We promote an exchange of experience between generations by proposing outdoor activities that strengthen the bonds between families and friends.

The Pet Therapy, situated at the northern part, between the Farms and the Borgo is a place where residents can interact with trained animals. This kind of therapy has been proven to be a great help when treating some health problems or mental disorders. The Pet Therapy is also a nice opportunity for children to learn how to treat animals in company of their grandparents.
Community Gardens

The community gardens are located around the Borgo area and they are meant to be used by the residents. Gardening is a popular activity among elderly and it is a perfect opportunity to spend time with their grandchildren. The gardens have either east or south orientation, so they receive a lot of light during the daytime. We propose a design based on raised beds with wide aisles in order for it to be comfortable for elderly even when using a wheelchair.

Pergolated paths

Around the parking area we propose wooden pergolas with plants in order to give shelter to the cars and create a nicer view for the residents. The paths that lead the way to the villages are also pergolated and are wide enough to have seating spaces to rest or even dinner gatherings where elderly can socialize in a casual way.
Apartments - Independent living

This apartments are for active and mobile senior citizens and have east and west facing windows ranging from 80 to 110 sqm. They have an open-kitchen which can be divided with sliding screens, a living room, a bedroom and an extra flexible room which can be used for guests or as a studio. The design of the apartments is based under the principles of universal design so that the boomers that move into this houses can easily age in place.

Apartments - Assisted living

This apartments are for the less able-bodied residents and they are adjacent to the main building with access to a 24-hour care service and a clinic when necessary. These 30 sqm large single rooms have windows facing to the interior courtyard of the main building as well as the exterior to ensure sufficient illumination and to create an impression of space. The rooms and bathrooms are designed for the elderly and equipped with a variety of technical installations.
Apartment typologies

Total number:
74 apartments
+ 6 visitor rooms

Ground floor
38 apartments

1st and 2nd floors
42 apartments

Common areas
- 26 Apartment for auto-sufficient 60-70 sqm
- 13 Apartment for non-sufficient 30-40 sqm
- 15 Apartment for non-sufficient 50-55 sqm
- 6 Visitors rooms

Example of apartment for auto-sufficient people from 60-70 sqm
Example of apartment for auto-sufficient people from 90-100 sqm
Example of apartment for non-sufficient people from 50-55 sqm
Example of apartment for non-sufficient people from 30-45 sqm
Example of common area

These apartments repeat on the 2nd level
Retail area

The Retail area is located next to the reception so that besides the elderly users, external visitors may access easily to this area. Here the senior citizens have an opportunity to act both as sellers and as customers. A range of small shops/boutiques are present in this space where the seniors are able to sell their own planted fruit and vegetables, flowers, pastries as well as their vintage items and hand-made objects crafted by themselves. Moreover, some services such as Hairdressing salon and Barber shop are provided.

Coworking area

Considering that there is a number of elderly people, who wish to keep working after their retirement, the project provides a coworking area including semi-open working space, private meeting rooms, computer and working rooms, library, reading rooms and classrooms. The idea is to create a social platform where the seniors living in this retirement community could pass their experience to young generations and offer consulting services. Thus, the area serves a purpose to keep elderly through the intergenerational connections mentally active and create advantages for youth.
Culinary and bakery workshops

Culinary and bakery workshops are situated in the middle of coworking and retail area and serves as a bridge between these two different areas. The idea is to provide homemade, traditional dishes which have the purpose to remind kids and parents the food just like grandma used to make. The space will be equipped with all necessary appliances to organize workshops and culinary classes offered by elderly, where traditional recipes may be shared and passed down from one generation to another. Involving the elderly in such activities makes them to feel useful and important.

Events area

The Culinary and bakery workshops area is considered to be quite flexible and may be transformed into a private dining space which the residents may use to host events or organize family gatherings for special occasions and holidays. Here the seniors are able to be involved in meal planning and preparation of the food with family members. Reuniting with family members has a positive impact on seniors, primarily keeping them emotionally happy and through socializing physically young.
**Courtyard**

The Courtyard of the central part in Borgo is a multifunctional space. The surrounding buildings of this courtyard include apartments for assisted living, mensa and fitness facilities. The main intervention in this space is the connecting glass rooftop which permits to take advantage of this area even in winter time. It is not just a transition space but a relax area where especially assisted seniors may enjoy the sunlight without many displacements. In addition, some playground elements are present in this area to children while visit their grandparents.

**Mensa**

The Mensa is an integral part of the central Courtyard where the elderly mostly are going to spend their daytime. Having a social, behavioral and cultural meaning the mealtime is essential to daily living, so it is designed as an open space where a sense of freedom may be conceived. Additionally, mealtime companionship may enhance seniors’ appetite.
Fitness and Hydrotherapy area

Fitness and Hydrotherapy facilities and courses are provided in the project area in order to keep or make the elderly physically active which is essential for them to stay healthy. The space is designed in the way that permits to move without difficulty inside the facilities and easily access from fitting rooms both to gym and classrooms, to Hydrotherapy area including swimming pool, jacuzzi, sauna, steam room.
Green House

The Green House is located in the existing Green House. It has a privilege south-facing orientation towards the gardens of the Villa. Besides its original purpose of protecting and cultivating plants, we propose a space to relax and enjoy a good book.

Herbal Therapy

The Herbal Therapy is adjacent to the Green House and it is a place where people can use plants or plant extracts for medical purposes. It consists of an innovative experience surrounded by steam composed by water and a medicinal plant. In this place people can enjoy, meditate and relax.
Restaurant

The Restaurant is situated where the Woodshed use to be. It enjoys from a south orientation and a wonderful view to the gardens of the Villa. In order to have direct access from the Cedar Tree Piazza, the houses adjacent to the woodshed are also part of the restaurant. There is also a service access from the back with a parking lot for downloading. The restaurant embraces an open-kitchen concept that has nothing to hide!

Lounge Bar

The Lounge Bar is situated in the old horse stables. It is part of the socialization area around the cedar tree. Here people can enjoy a drink with friends and family, play games, listen to music and relax. The main access is from the Cedar Tree Piazza but it also has a service entrance from the back and a direct access to the Performance Stage (p. 21).
Workshops

The workshops are situated in the inner courtyard of the stables. This space is dedicated to the arts & crafts. Here the elderly can practice different hobbies and express their creativity. There are different options such as painting, sculpture, pottery, woodworking, and crocheting. The interior design is intended to merge with the existing architecture and in order to create a connection with the courtyard we propose a metallic and glass structure that serves both as an indoor-outdoor space to work and share.

Performance stage

The performance stage is right in the courtyard of the stables. It is a space to dance and have fun. We propose an area of benches and an area of a stage so that it can become a flexible space where elderly can act as spectators during different performances, or even be performers themselves while attending a dancing lesson. This area shares a connection with the workshops (p.18) due to the glass wall and also with the lounge bar (p.16) in the stables which can work together with the stage.
During the course of "Final Synthesis" we have already developed the spaces of Lounge Bar, Workshops and Performance stage, which became as a starting point for us to deepen and continue developing this project as thesis.
Chapter 4: Project Villa Plus

Render of the sculpture workshop

Details of the spectators area

Render of the painting workshop

Section B-B'

Section C-C'

Render of the performing stage

Details of the spectators area
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