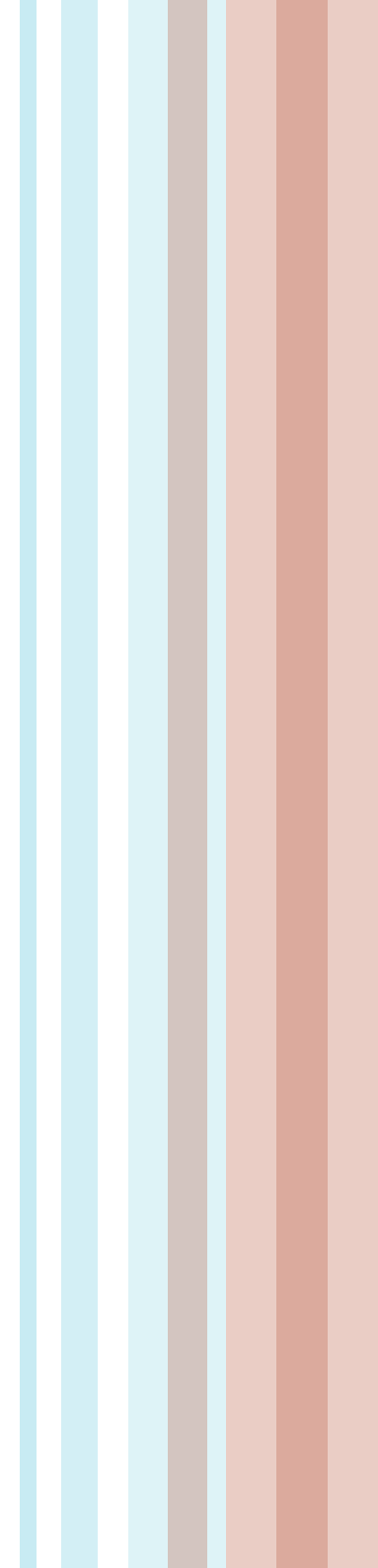


THE IMPROVEMENT OF IRANIAN ELDERLY'S LIFE STYLE THROUGH PERSIAN ARCHITECTURE
A PLACE TO LIVE AND TO BE CARED

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Maryam Jalali | 4157249

Research mentor | Dr. Cor Wagenaar
Design mentor | Ir. Robert Nottrot
Building technology | Ir. Ype Cuperus

ABSTRACT

Concerning demographic change by the end of the century the demand on keeping old generation satisfy of their home environment has generally increased. The home which elderly lives in is a home for 365 days and they need to enjoy it in every moment of their 3rd life stage. When people get older they are not more able to be active as they were before, from all age groups elderly stays the most in their direct environment; therefore the lived their living has to be sufficient to their daily requirements.

Old age is one of the most important stages of the life, which has it's own indications so as if it gets recognized, would reduce their issues and problems providing a life-style with comfort and health. In this survey increasing the health of elderly besides providing them a suitable living environment is the main intention. Defining the indications of suitable living environment for elderly (specifically in Iran) concerning their mental and physical issues aiming to increase their prosperity is the question that this research would answer it. It has been researched how the future is going to looklike, And what are the life wishes of this certain demographic group.

In developed countries, solutions concerning this issue are already conceived and also implemented. However in developing countries like Iran this issue is almost a new topic, which involves developing potentials.

The most Iranian retirements live with other age groups in same type of apartments except a group, which yet have their own private house that usually is too big for an elderly couple. Public housing for elderly in Iran is maybe the least developed architectural typology.

Inquiries have shown that the majority of older people wish to live near friends and relatives, even living with their children or grandchildren but only a very small number expressed any interest in old people's homes.

In this case we are going first find out why the retirement homes as a type of elderly settlements are sufficient as basic need of a shelter and feel of safety but the need of being respected and self-esteem and finally self-actualization is the most unsuccessful issues, which has an irreparable influence on elderly's mentality.

Therefor architects and urban designers are obligated to consider and implement spaces for this needy target group to have a safe environment in addition to keep the ownership and independency of their living conditions; maintaining to their requirements, also benefit from good social environment.

Keywords: old age- home environment- health- elderly- requirements- Iran- life style- housing- prosperity- development- living conditions

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II | Introduction

background

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BACKGROUND

One of the most former civilizations is belonging to Persia. Started with the formation of the Proto-Elamite and Elamite kingdoms in 3200–2800 BC. (Barrington,2012) Historically the most dominant religion of the Iranian nation was Zoroastrian but in beginning 633 AD, Islam has replaced. By the revolution of 1979 it renamed as Islamic republic of Iran. The cat of the middle east is a diverse country, many religious and ethnics are defining the Iranian language among Iranian culture. Today Iran ranked 17th populated country out of 223 countries in the world. Population of 80,316,957 or Approximately 1.08% of the world's population.² Due to Iran population structure, this land is from one side confronting to younger generation indications and from other side because of scientific development in healthcare and the increasing life expectancy, is struggling with elderly issues.

According to M.Mashayekhi, the united nation has divided the country population in three different demographic categories: young, middle-aged and the elderly. The countries, which are young, are consisting of elderly population with a proportion of less than 4%. Middle-aged countries have this proportion between 4-6% and the elderly countries have a percentage of elderlies above 7% of the whole population. In 2011 Iran has had a population of 25% under 15 and 8.2% above 60 years old which indicating the demographic change in past few years.(table1) According to high-speed trends on reduced birth in past 2 decades, silver tsunami indication in Iran is obviously predictable, which in 30 years will reach the percentage of 25% of whole country population. (Statistical Center of Iran) (table2)

A demographic and epidemiologic change along social and economic conditions has encountered health system of all developing countries with serious challenges. "Ageing is inevitable; so a population that lives longer is a positive prospect for all of us as individuals, and an achievement for society. "(Deans,2014)

In Persian language there is an expression in which, people wish you to become old, when you do something respectful for them. This wish means protecting you from early death and inviting you to see and enjoy the third stage of your life, which is actually your retirement. The elderly life style in Iran, which has a big moral value, has no practical social value as it supposed. Even it is called as a crisis; Aging crisis. Just a small group of retired is satisfied of their life but a big group of them are always claiming about different issues of their age. Generally speaking mostly about the way of elderly care and their living and social environment, beside all financial issues that they have.

According to different researches; education level, divorce, bachelorhood, family vulnerability in financial-social and cultural issues, and the need of hospice equipment are some reasons of increasing confide elderly to retirement home by children. Then comes the question why confide elderly to retirement home is often a failure treatment?

According to Health system vision of Iran 2025, "prosperity and justice are considered as major values and ideals in society of Iran; considering efficiency and equality health in all policies, and accountability and innovation as main orientations of health system." (Rostamigooran,2013)

PROBLEM STATEMENT

"The older adults are our only growing natural resource." (Harry,2014) Attention to this age group is nowadays vital, because in coming years the amount of elderly will gradually increase. Comparing Iran with Western world, there has always been few attention paid to the elderly's institutional care system; it is to understand how culture has a direct influence on growth orientation and aging phenomena. Therefore in Iran, as people get older they become more and more worried about their retirement and future life, because there is no ideology about the living conditions of this demographic group. Somehow the old person should be able to support his life by himself; otherwise there is no support from any higher organization. Nevertheless, today psychologists in collaboration with architects are attempting to establish new places for elderlies aiming to develop their welfare and health indicators. Increasing the life expectancy is widely related to enhance life quality and struggling with the sense of senescence, uselessness and loneliness in such a gray future society.

RESEARCH QUESTION

Now in this case comes up this question that, What are the possible solutions and design tools to improve the quality of elderly residence in field of life-style in the respective country (Iran), aiming to increase their life quality, improve mental and physical health to finally establish a society full of hope to the future, with no worries about living conditions of different generations?

Obviously providing suitable services regarding increasing the elderly's life quality in big cities will also increase the life expectancy in other age groups.

DESIGN GOAL

The typology of elderly housing is not only limited to retirement home. In the past few years, developed countries have innovated new types of housing for elderly people by changing their life style. While in Iran these types of housing are not well known and a big group of people is not familiar with this sort of architecture. Majority of Iranian elderly prefer to live in their private home, while they are not capable of living alone and special care is required for them. This is due to low quality and bad situation of retirement home therefore, their children have to take care of them or in some special cases, only if they are in a good financial state, they hire a nurse in their private home.

This can be seen as a good solution meanwhile the effect of it, is irreparable. These people feel more useless and sense of senescence, which has a direct influence on elderly as an individual as well as on society as a group. In this case the physical health of elderly is not the only issue while mentality, which is under pressure of all this external problems needs more attention and if this could be solved the elderly would live more healthy even physically up to the end.

III | Methode

the cultural aspect

evidence based design

elderly's financial situation

elderly care in Iran

the role of public realm

institutional care services

living care centers

target group

THE CULTURAL ASPECTS AMONG IRANIAN NATION

The culture plays a key role in designing for a specific group of people, mostly the older group. The old generation used to live with certain cultural and traditional aspects, which cannot be taken from them, because they used to live all their life in that certain frame. "Designing for an ageing population is context-specific. The elderly in cities such as Mumbai or Shanghai may expect to live with extended family, whereas residents of cities such as Tampa, Florida, may relocate to retirement communities away from their families to meet their needs in the later years of their lives. Among urban environments, methods for achieving accessibility and comfort must be considered at the local, cultural level." (Deans, 2014)

The new Iranian families lives today absolutely not like they lived 100 years ago, but Iranian nation always is trying to preserve its old traditions and highly adhere to them, which is sometimes in fact in contrast with modernized nowadays lifestyle and in some extend brings people expectations to some paradox.

The whole history of Iran is rich on poetry and literature and in each even after Islam the elderly and elderly care was a sharp theme. In many different literary concepts, the experience and sophistication among the elderly is emphasized, which is the most positive vision through old age. There are also negative issues like the synchronization of old age and the death, the invalidity of the elderly and the expectation of immovability among the elderly. Unfortunately there are some reasons towards sunset of the position of the old people in Iran society; the level of tradition popularity and elderly prestige, the transition of knowledge by institutions

and not by generation to generation, the collapse of huge families to small families, the decline of the presence of elderly in manufacturing and finance, the occupation of women. The industrialized life affects all these aspects. The new generation grows with new technologies and developed in big scales, while it is not easy for older people to match their technology-education level and their life style with their grandchildren, by that reason they cannot live together anymore and they cannot accept each other's life-style.

Japan might be a good example of a traditionalist-developed country to be compared with Iran. In Eastern culture even in Japan the sense of family is traditionally strong, these people have a deep believing about family membership. "Japan has been experiencing the aging of its society at an unprecedented rate, which no other nation in the world has experienced." (Nakane, 2004)

The Long-Term Care Insurance system is developed by Japanese government aiming to releasing the families from the unbearable burden of caregiving. However, there are many problems associated with the LTCI System. (Nakane. J, 2004)

In Switzerland One of the most important elderly policies is to providing a situation in which elderly could live totally independent under consideration of all standards of elderly care. The last generation of elderly in Switzerland after Second World War has lived in sanatorium for some decades, from home to sanatorium. In last decades there was an effort regarding caring elderly at home by providing their needed services in home environment. Today old Iranians are living at home but by cultural changes in new generation families, it is predictable that the same experience in Switzerland will be repeated in Iran and confides elderly to sanatorium.

To avoid the bad experience of Switzerland, treating wisely

about the future of this age group is highly important.

This is why I decided to have a study trip to my homeland to discover and analyse the situation from nearby and actually understand what are the steps that were already taken by different associations like municipality, care ministry, etc.

EVIDENCE BASED DESIGN

The “evidence based design” comes more often for architecture of hospitals, a term that was taken directly from the Evidence Based Medicine. In late eighteenth-century there was a believing through the crucial role of designed environment in healing of patients. Before the revolution in medicine and technology the architecture of hospitals were a natural setting and the provision of clean air were seen as essential.(wagenaar,2003) Still the hospitals are important public buildings, but today it turns to a functional, medical machine. “The ambition of Evidence based design is to measure the effects of the environment on the people who are exposed to it.” (wagenaar,2003. p,15)

In 1984 Ulrich has observed the differences in healing regarding the room view of patients. The patients with the same underwent treatment, but different room views. The one who has a room view of blank wall had to stay in hospital more than the one who perceives the green environment from his or her room window.

The living environment has a direct effect on its residents and their mentality. “In many new neighborhoods the half of psychosomatic complaints are due to the living environment.”(Wagenaar,2014) The modern living environments have more stress-enhancing effects. The term “Stress” is one of the souvenirs of modernism. Surveys show that the best

method to improve the living conditions of the residents consist of manipulating the environment and not from the adaptation of individual strategies.

Housing for elderly request a design, which is considered for 365 days of year life environment, and should covers the requirements of 365 days, including; living, care, leisure, social communication, etc.

Disengagement of the elderly from certain roles within society is inevitable while aging. However, there is also increasing recognition of reengagement and social interaction based on newly evolving roles for the elderly. (Green,1975. p,1)

Elderly needs more attention in mental care besides all his physical disabilities. The psychological factors have a direct effect on their physical health. This issue might be the challenge of design process and the program of requirements in beside.

Generally speaking, housing in Iran is not really specified on it's certain target group, however each age group aspirant their own home environment. Above all, elderly due to their ability level, need more attention in this field. These days you see many high rises in the city which are building but no any public space in relation with the nature. No place to take a distance with the daily modern life stresses. Urban spaces in Iran are missing facilities regarding revival of elderly social relations. Therefore, providing them a living environment adapted to their requirements may let them to flourish even in older age.



ELDERLY'S FINANCIAL SITUATION

The most substantial challenges among Iranian elderly are financial and medical issues. The retirement pension in Iran is not equal for every resident who is over 60. Only people who paid taxes during their work stage and were insured are required for a pension, which is also not always considerable. The higher the salary is, the more your pension is going to be. A major group of new retirees who used to work for themselves and were not insured by any governmental organization have no right to a pension. Even housewives receive no financial support from the government, therefore they have financial dependency on their husbands or their children.

The lack of financial support brings the older people to bigger problems even for providing their basic needs, imagine all the medical expenses also will be added.

Until these concerns have not been resolved, we could not use the natural resources (elderly) experiences and wisdom to improve their social status.

Fortunately, today elderly who are not insured anywhere, are able to join an insurance organization, which provides basic facilities to older people. However, in the case of special care, they have to pay by themselves. This is why the big amount of taxi drivers consist of retirees, because they have to support their lives anyway. Old people who need to live their retirement in peace have to drive all day in such a crowded city like Tehran, and confront with urban problems. Therefore, all the social/mental problems arise.

There was always more hope towards humanistic help than governmental support. People who are in a good financial state are helping their countrymen.

*Human beings are members of a whole
In creation of one essence and soul*
"Saadi"

ELDERLY CARE IN IRAN

Generally speaking elderly care in Iran is now a days almost a new topic with too many potentials for debate in many different fields, as much as in the field of architecture.

In Iranian-Islamic culture caregiving to elderly and even handicaps is a holly job, and these people are always used to be cared at home environment. There was never an institution existed which provide care for people with less validity, except hospitals in short term periods of special care. Always detaching less valid family members from family zone has been an immoral approach, and the media and government always encourage people to care their older family members inside the family zone at home atmosphere and there has never been any believing through institutional elderly care.

Older people who lives with their partner are more optimistic about their future, but since they get alone, the aging disabilities shows itself much more. The duty of elderly care was always going to women who were at home and were able to care their disabled family members. Sometimes they had to take their parents to their private home for caregiving or care the elderly at his or her home in shifts with other siblings. Despite the fact that in modernized societies women are also working outside and they have no time to tendance their old parents. In additions the housing stock, is not more suitable for caregiving in home environment like before. The new houses are too small to be shared with extra member, even worse if he or she needs special equipment and staff.

Above all, new generation can not accept to live with older one any more. So to protect the respect of elderly, it is better to provide them their own place. In this situation there is no body to take care of needy family members and no place for that. By that reason elderly get lonelier and aging crisis

shows itself much more.

According to existing false believing through institutional elderly care, The amount of older people who need help is high but there is no ideology for. Now, we are facing to a big challenge; too many elderly but no suitable settlements for them. So, the most former solution for coming approaches is to change society's minds about the elderly and elderly care and try to redefine the moral essence of elderly care in Iranian culture.

In the past the problems of aging like loneliness was not as crucial as today because at that time due to the Persian housing typology, people lived with their extended family. Everyone used to live with other age groups of family and by that reason interaction between different generations and even between older people was more. So they got older with much more prosperity. Although these days due to medical level people live longer, but according to cultural changes and modernized lives, people are not in contact like before, and almost everyone prefer isolated life much more, therefore they feel more lonely and depressed because there is a lack of social interactions.



THE ROLE OF PUBLIC REALM (THIRD URBAN LOCATIONS) IN IMPROVING SOCIAL INTERACTIONS

City has a direct influence on culture and visa versa culture on city. Actually the city collects many cultures in a small space, which may generate new innovations, but in contrast this property of the city also may be the reason of tension and conflict. One of the main reasons of appearance of cities is connection and interaction between people, which has cultural exchanges as a result. Through the Oldenburg's believing; the third place is a public or semi-public location, which is not home (first place) or even workplace (second place), but somewhere between these two usuals, a place that provides you social relations, and conversation might be the main activity there. (Taqavi,2014)

In this case how do we provide the third place to elderly?

Some important problems of urban public spaces for elderly in Iran are:

- 1 | The messiness
- 2 | The lack of safety
- 3 | Over crowdedness
- 4 | Inaccessibility
- 5 | The lack of facilities and needed equipment

The only public space that Tehranian older people use the most is Park, which based on its neighborhood is fluctuating in size. Because of the presence of natural elements, parks are supposed to be relaxing places while due to crowdedness, and the lack of good organization it hindering the elderly expectations.

The park was the only motivation of old men I've spoken with in a park in Tehran. He said I come usually to the park after my breakfast to gather up with my gray friends, and take a walk through the park, then I go back home for lunch and take a nap, again in the evening come back to the park with friends and talk about different issues like politics; in the evening park is more populated and we my have contact to other age groups. They enjoyed this form of interactions. But they miss recreational plans. Like going to sightseeing, having fun with each other lunch together or even learn something new. They miss the sense of socializing.



Another place that I've visited was Omid (Hope) cultural center. In this community right away the only services provided for elderly is 2 days per week classes for singing and theater; there are very enthusiastic persons involved. They really enjoyed singing all together and having shows to the public. All the songs that they sing are their old memories and good passed days.

The other facilities that the old members of this community have, is using public transport and some health services for less money, in order to use the offered facilities the elderly need to buy a monthly paid membership card. Beside that they can use the pool by the membership card, however most of them give the card to their children for the pool facility instead.

I've asked them about their future, when they get dependent to somebody else. They were all worried about that time. An old woman told me: I've also told to my children if I become so unhealthy insofar as I need 24h care, take me to a nursing home. However they all know about the bad quality of elderly care and some rare nursing homes. But elderly don't have any expectation from their children. For coming elderly generation there is a big hope towards better live-care environment. Insofar that they don't feel as a poor community anymore. As I said there has always been few attention paid to the elderly and their housing stock. as long as Iranian has had no believing regarding institutional elderly care, there is no systematic, national typology provided yet.



INSTITUTIONAL CARE SERVICES

Since 1971 the first institution for elderly care in Iran started with one patient and one room and has grown to a 1600 beds. The only humanistic association through elderly care in whole Iran with more than 6% elderly population is Kahrizak Charity Foundation. KCF is a private, non-governmental, non-profit, charitable organization where physically handicapped or elderly individuals with no financial resources are cared for, free of charge.¹

Humanism-help develops it day-by-day adding different functions on rehabilitation and handicaps in a way that it becomes the biggest care institution with patient reception from the whole country. So, the only big organization of elderly care is limited to Kahrizak charity. However there is different private nursing-or retirement homes in the city but the elderly should pay a considerable tuition fee per month to get services, which is not to pay by every different social classes. The lack of governmental organizations and the rise of private organizations in the society make the line between different social classes sharper, even in elderly.

There are many different people in waiting list of this charity, sometimes there are even homeless elderly who are left behind the door of charity by their children. In this case the charity has no remedy, they have to add extra beds in such a small rooms for caregiving to the helpless elderly. Imagine how forlorn are they, and they get totally pessimistic and disappointed towards future and the life gets ended there for them.

To conclude the atmosphere of this community is really negative and there is no sense of life there. Although, many of them are having the potential to be cared in psychological level. However the huge number of patients and less space and many other problematic issues deprive approaches towards mental care.



The private retirement homes are giving good services highly in physical care; although none of them is built based on architectural criteria as a retirement home should contain. All of them are old houses, which are re-functionalized by some small changes; adding some beds, but they are still not required to all elderly needs. Firstly, they are too expensive for old persons from different social classes, so only a limited group is using their facilities. Secondly, although mental care complete the physical care in caregiving organizations, there has always been few attention paid to it. This is why people don't feel like home there yet and don't like the existing atmosphere there.

Generally speaking I can conclude that, the elderly care in a society that no attention is paid to it by higher organizations and government become sort of business. Since past few years some communities started giving home services, there is possibility to hire nurses at home, who are actually not officially nurse and they have done some practical courses regarding physical aid. But they do not know much about Elderly Science.

Elderly who live alone and own house, are the client of these communities. The dreadful effects of this sort of care system; such as loneliness and sense of uselessness, are the cultural misunderstanding and also bad quality of existing retirement, nursing homes.

For sure we can solve the cultural misunderstandings by providing new atmosphere by providing a new type of institutional care, like Residential-Care Communities.

RESIDENTIAL CARE CENTERS (WOZOCO)

Functionalistic paradigm is the characteristic of architecture; in this case living as an emancipatory activity. By that reason the elderly housing stock find its place in modern architecture and urbanisme of Netherlands. (Mens, N. 2009)

The Residential Care zone in the city is the result of process of years. There was an effort towards providing a neighborhood which is suitable for elderly and enough facilities are existed. (shops for foodstuff, public transport station, a post office, a park, a library, old people's club, café, restaurant, cinema or theater) (Mens, N. 2009)

In Dutch "woonzorgcentra" is the development of two categories of care home and nursing homes. In wozoco's; private homes are combined with nursing and care homes. The residents actually live in their own private homes and they could use facilities belonging to nursing-care homes. A central nursing point will give services to private homes. An example on this topic will be the Schuilhoeve in Badhoevedorp. This institute consist of 85 single rooms, 5 big ones and 14 dabble rooms. There are also a recreation space, dining room with a bar and billiards, kitchen space, stockroom, central shower, staff place, linen room, laundry, infirmary with 7 beds. Beside the care centrum there is 29-sheltered housing also built which is in contact with the community via a corridor. (Van der veen, 1993)

Wozocos might be a good solution regarding our research-design topic but it needs yet some surveys on for whom we are going to design and how can we adapt this sort of typology for our certain target group. To know a bit more about architectural trends in this field, there are some reference projects provided.

1 | Woonzorgcomplex Johannes de Deo

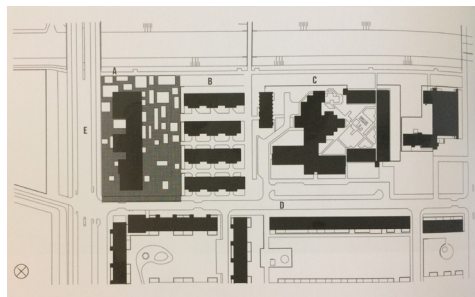
MVRDV designed a woonzorgcomplex in Amsterdam-west with private houses in which, seniors get home-care aiming to live as long as they could live independent.

To fulfill the approach of 100 houses in this complex, 87 of them are north-south oriented in a long strok and the rest 13 are divided in 5 bloks which are hanged on the long strok by applying a special truss system.



Situation

- A woonzorgcomplex
- B aanleunwoningen
- C zorgcentrum Johannes de Deo
- D Reimelswaalstraat
- E Ookmeerweg



2 | Seniors housing in Eelde

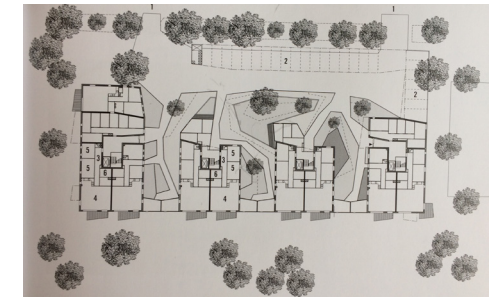
The design of this community is based on emphasizing the series of green spaces in the neighboring village. The volume that Onix has designed consist of four cluster. By letting the green against the brick wall going up, the architect wanted to substitute the border between building and nature.

Programma: 25 seniors housing



Plan groundfloor

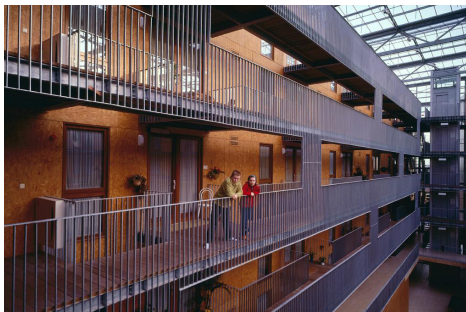
- 1 Entre
- 2 Parkeren
- 3 hal
- 4 woonkamer
- 5 slaapkamer
- 6 badkamer



3 | Woonzorgcomplex Emerald Delfgauw

The design of KCAP in Delfgauw has a direct relation with the living mall in front of it. Both buildings have simple geometric forms; living mall has a circle form plan and the wozoco a trapezium. Compared to the rest small scale housing around, these two complex are remarkably large and it makes them recognizable in the heart of the city. The materialisation and the scenic surroundings reinforce the impression that these two buildings are belonging to each other.

The wozoco has 6 layers which enclosed the entire atrium. The houses are situated on the north or east, and balconys are provided in atrium side. In this 6 floor building are 111 houses designed with seniors label. The facades are mottled brick which remains the sense of craftsmanship.



4 | Zorgcentrum Berkenstede

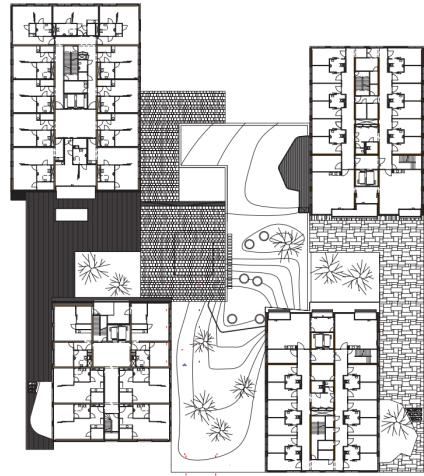
The whole design of Berkenstede consist of 6 towers which in different phases had to be realized. A district based on the combination of seniors living and care. The first tower is rental housing for seniors. The second phase was the design of “zorgcentrum” by Dick van Gameren architects. the third housing tower was the luxury houses.

Due to the master plan all these towers should make a unit by their materialisation. Moreover the Zorgcentrum had to be devided in 4 seprate volumes from second floor. The complex consist of 4 blocks with different height, and each has a sloping facade. In the groud floor all four blocks are connected with a central street. In this street the general facilities which even people from the neighborhood might use are situated, like restaurant, grand café, a relaxation room, physiotherapy, paramedical services and a barber shop.

In first floor has a service corridor placed which, conects the residential and nursing department. Inbetween the towers are gardens, terraces, patio's and ramps.

Each tower offers spaces for specific target group; forst one consist of 85 houses for hospital care of about 50 m². Block number two contains 46 independent serviceflats of 60-80 m². The third one offers spaces for temporary stay and revalidation. Fourth block involves 10 group homes for dementia.

For materialisation of four roofs and sloping facade has different natural materials applied; metal, stone, grass and wood.



Considerable points regarding the design

- 1 | The relation to the nature
- 2 | The materialisation regarding traditional sphere
- 3 | The interaction between residents and the neighborhood
- 4 | Adapting different elderly categories in the plan

The elderly settlements could be divided in two different main groups. First group or listed projects are under title of care homes. This typology is most often one unit building in different floors. The common benefit of these complexes are the physical security of the elderly. But sometimes the residential spaces are like the association of small cells, which might brings the sense of prison. This issue should be considered in design process.

The second group are the retirement communities like Galleon gardens retirement community in Australia, This type of housing are mostly designed in the form of apartment flats or villas, and the services are distributed in the whole community. Such a design is not limited in one unit building and it looks more like residential townships. Due to lack of the concentration of residentials, the control of stuff on patients and care services by nurses might be fluctuated and less than the other typology. But in this case elderly has control on his own home environment which increase the sense of self-esteem.

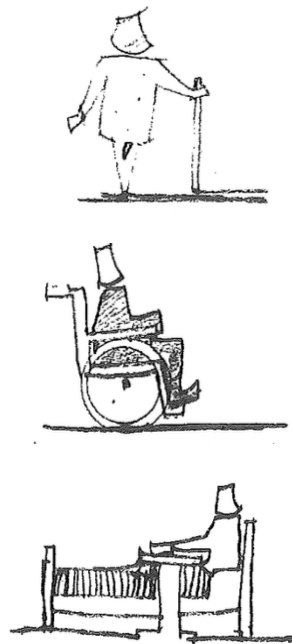


TARGET GROUP

Designing for older adults thus involves searching for design solutions that respond to their changing needs, enabling them, regardless of their limitations, to live their lives as fulfilling and independent as possible (CARSTENS, 1993). There is also some distinction in different age groups in older people; differences between male and female conditions, distinctions directly related to their age differences and variation on mental and physical health. Some important aspects of the aging process that affect urban design are discussed in this chapter, they pass in the following order: physical, psychological, social and environmental deficits.

Old age could be divided in different categories according to Isaac Green: (Housing for the elderly: the development and design process.)

1. Independent old age
2. Partially dependent old age
3. Dependent old age



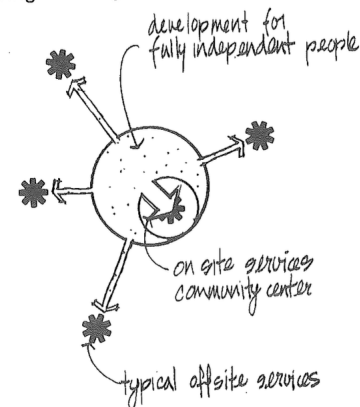
Further Isaac Green in his book “Housing for the elderly” introduces four different type of housing for elderly in different dependency level.

Type 1: Independent elderly housing

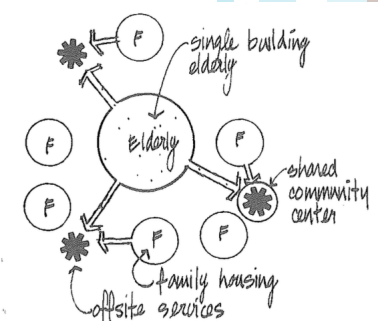
In this type there is no central dining room provided but a community center with the goal of encompassing social functions as well as some minimal independent living supportive services is provided.

Type 2: Independent elderly/ families mix

This type of development could comprise the segment of the elderly population who has the means to own a car and the ability to drive it and who desire a high level of age integration.



Type 1. Independent elderly housing (Green,1975)



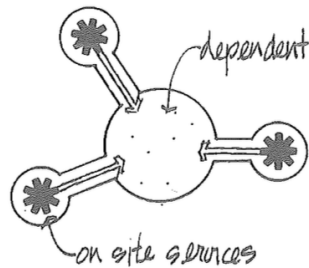
Type 2. Independent elderly/ families mix (Green,1975)

Type 3: dependent elderly housing

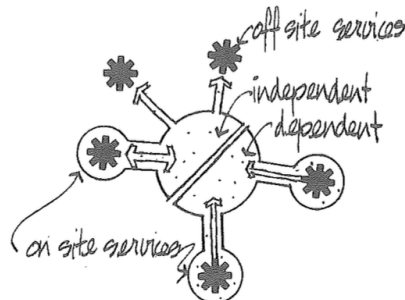
Who are more or less dependent upon congregate facilities are intended. Congregate housing is neither a nursing home nor an institution. Conceptualized as a housing development with supportive services being provided for persons who desire residential accommodations, but who require some measure of assistance in their everyday living activities. Dining facilities, housekeeping aid, and personal health services.

Type 4: Independent/ dependent elderly mixed housing

One portion of the housing would serve elderly people needing some congregate services, and the other portion would house self-sufficient elderly people. Primarily emphasizing the differences between independent and dependent elderly housing.



Type 3. dependent elderly housing
(Green,1975)



Type 4. Independent/ dependent elderly mixed housing
(Green,1975)

The most needy elderly group in Iran are who dependent on daily services and care. Beside that there are also a big group who are homeless even with physical problems or not. So as reported by Isaac Green through target group division and its housing typologies, type 3 is much more appropriate one regarding Iranian elderly status.

In this degree the coming particular community should give services, which has supportive effect upon the elderly, aiming to decrease the sense of dependency.

Above all the paradigm of home and home environment is crucial in this case. How their new home environment could revival the sense of belonging among the residents and help them towards improving mental and physical health, in such a way that they could trust their environment and feel safe there. As illustrated in diagram of type 3, all the services for this certain target group are on site services, which provides them to live in peace and not rest in peace.

Therefore I will enter to a new research section; the most appropriate site to search for my design ambitions.

SITE SELECTION

The most new international trends towards elderly care is “Intergenerational community” in these communities people can live together and support each other. Actually what we had in our old Persian houses in a smaller scale. But today the issue is the amount of homeless old people from one side and all cultural changes in people's life style from the other side. So, as a start point we need to provide specific organization towards elderly care for now and trying to adapt it regarding our traditional cultural aspects aiming modernized lives, which needs a whole process of cultivation.

Nevertheless, the interaction between different generations could be any how be solved by providing public spaces which my city miss it the most.

An example of a successful public space is the “Tabiat Bridge” or the largest pedestrian overpass built in Tehran. The 270 meters long bridge connects two big parks by spanning over one of the most popular highways. Tabiat means nature in Persian. The architect wanted people to stay and ponder, not simply



Within a background of understanding the special needs of elderly people regarding location of housing, the procedure and criteria for site selection are developed and enumerated on the basis of the community/region, the neighborhood, and the site.

Some criteria through the elderly need during the site selection process is to consider in advance:

- 1 | Elderly should first of all feel part of the community and not located physically or even socially isolated.
- 2 | To desire the sense of independency in elderly in the site, providing some convenient services like shopping clusters, health facilities, social services and activity centers, public transportation and other might be helps therefor.
- 3 | The elderly wants to participate in community events.
- 4 | As long as the elderly is less mobile the presence of public transportation is highly needed.
- 5 | Topography and the distances that elderly could walk is to consider.
- 6 | The sense of safety and socially and psychologically security is an issue for the elderly.
- 7 | People above 65 don't move their households anymore.

(Sheykhi,2007)

Since very beginning I was curious about the location of my architectural ambition, it should be some where out of the city or just inside? As a conclusion of my interviews with old people of Tehran, I've considered that most of them are used to live in Tehran and they have a deep relationship with their neighborhood. But the point that now is important is the quality of the place in different scales. The placement of the community inside or outside of the urban fabric is an effective issue.

a | The transportation: if the transportation for the elderly and their relatives could be easy to access the community, the community could be placed out of urban fabric.

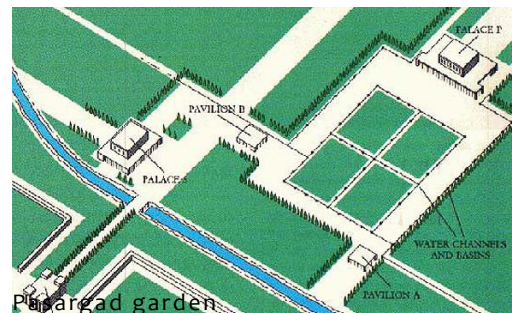
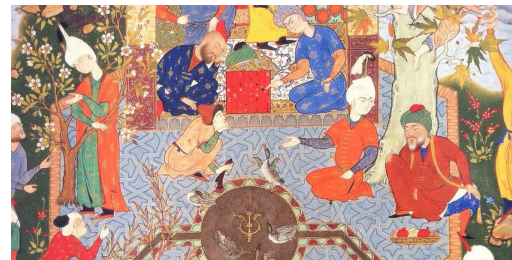
b | The climate: the community has to provide an appropriate climate system; the effects of climate factors (Sunshine, normal temperature, wind...) are considerable from one side and older people are really sensitive to climate changes from the other side. So the use of natural climate factors beside artificial ones in interior spaces might help.

c | The necessity of mixing elderly with neighboring society: undoubtedly placing the community out of the urban fabric could control environmental factors like air pollution or noisiness; while in central districts and densely populated neighborhood, mixing elderly with other age group is much easier, but the environmental factors are problem though.

Regarding the case studies I was also curious about why all the elderly communities are detached from the rest of the urban fabric and you never see the so-called interaction in such a design?

In persian traditional art, literature and even architecture the nature played an essential role. The most ancient kastels of Achaemenid Empire were completed with the famous "chahar bagh", Persian gardens which is the paradigm of Paradise; full of trees, each refers to a source of healing. The water system in whole garden which is the source of living was such an important matter that the Persians configured a Goddess for it.³ The essence of these gardens were first, the interaction and relation between people and the nature. The second is providing a pleasurable green environment to its users.³

Even later in Persian housing the role of inner garden was a decisive role. The courtyard connects different parts of the building. It is as a semi public space for gathering of family and visitors and place for holding religious ceremonies and matrimonies. At last but not least it is a climate moderating space with natural and artificial elements.



Garden of paradise

According to the Evidence based design section, there is the role of environment design regarding the healing of the patients is also emphasized. The term of nature came few times for, because my main approach towards elderly settlement is redefining the urban fabric as a public space, which is in relation to the nature, for its different users, elderly has priority, then placing resident of elderly in the heart of context to achieve my two interaction goals; first, generally the interaction between people and the nature. Second between other age groups and the elderly.



Abbasi house. Kashan, Iran



"A City Dweller Desecrates a Garden", From The Haft Awrang of Jami, Khorasan circa 1565.

IV | Result

target group

sense of loneliness

among the elderly

the selected site

design vs. programming

TARGET GROUP

The residents of architectural design are going to be the people who are old with physical or mental problems.

Providing their physical care services is not a big challenge but providing them an environment in which they could really feel home and enjoy the time is another topic.

For that reason; first of all, the elderly should understand the indication of his age, therefore attendance of a psychiatrist in this complex is highly needed. The advisor could show the elderly that the retirement period has also positive aspects. (Jaqtai,2002)

- Increasing life expectancy in elderly
- Notice about his wisdom and experience
- Solutions regarding maintaining dignity and pride of elderly
- Removing obstacles regarding not pleasing of their life
- Induce self confidence to elderly
- Prepare them to understand about their physical limitation, are all partly the duty of advisor in the community.

An expert advisor has to always keep in touch with the elderly to find out his/her physical limitation and give him solutions concerning certain problem. For example if the elderly has problem in sight conditions, the advisor should find out it as soon as possible and give solutions like providing him a suitable glasses or manage the room light. So, by providing such a little appropriate change in home environment, these weaknesses could be eliminated.

Most of the residents are missing their relatives so they need to talk to somebody and claim about their issues.

SENSE OF LONELINESS AMONG THE ELDERLY

“Loneliness is the subjective feeling of isolation, not belonging, or lacking companionship. While persons who are lonely are more likely to experience depressive symptoms, feelings of loneliness are only weakly associated with enjoyment, energy, and motivation—emotions that are central to a diagnosis of depression.” (Hughes,2004)

“The common facility must be providing the elderly with a means to overcome the loneliness, isolation, and dependency, which can be forced on the individual in the retirement process. A well-designed common facility can provide the resident with the opportunity for personal expression, service to others, a feeling of belonging, accomplishment, new experiences, continuation of past activities, and community action involvement.” (Green, 1974)

The common facility aims to reach a higher goal and is not limited to recreational activities, while the common facility serves as an important link, which influences the ability of the elderly person to adapt to and redirect his or her lifestyle around the aging process. There is also the opportunity of social interaction with age peers or even other people from neighborhood. (Green,1974. P,25)

To avoid this depression some simple approaches in the living environment of the elderly might help in advance, Storytelling therapy for seniors for example.

Storytelling in seniors provides them a way to connect with other people, rediscover the meaning of their lives, and realize other means of managing their stress or depression. While this type of senior therapy offers numerous benefits to elderly individuals, it also benefits caregivers who listen to the life stories of seniors, gaining wisdom and appreciation of life through the experiences shared to them.

Storytelling programs would usually include some form of reminiscing. According to experts, looking back on the good memories from the good old days allows seniors to reconnect with others socially, while also improving their physical and emotional well being. Creative storytelling stimulates the mind to remember memories. It also helps improve one's articulation and promotes self-esteem. Aside from the benefits that storytelling offers seniors in general, healthcare professionals affirm that this type of creative therapy is especially beneficial to seniors with dementia.⁴

Moreover due to cultural habits of Iranian who are really retrospective; they love to describe their old memories to others. Principally to the younger people, they want to let them know about their experiences, which gives them the sense of endorsement.

For memory improvement and avoid Alzheimer in elderly, collaboration of library and care institutions is helpful, elderly in group of 4a5 try to read a certain book and then start debating about it in group.

In addition doing some sportive competitions could satisfy the sense of involving society among the elderly.

THE SITE SELECTED

With an intimacy that I have with the city for a long time, and the survey that I've done on certain topics, finally I've chosen a location that is neither right in the city center nor outside. The location for coming elderly care institution is situated in an extension part of the city, which is called as last chance of Tehran to become a dream city.

Tehran as the capital city of Iran and one of the most populated metropolises is developing and growing everyday. The selected region for architectural ambition is the newest added district of Tehran and is located on west-northern part. Which is rich on weather quality and many opportunities for approaches through new life styles.

The Community/Region:

The selected area has named as the Health zone of the city, because many hospitals and care institutions are involved the municipality of 22nd region of Tehran. So all the services directly related to elderly are there.

The Neighborhood:

There are many older adults with heart and breathing problems they have to leave Tehran because of its polluted air, but the rest are struggling with that issue.

Because of that one of my main criteria towards site selection was the weather quality.

Presence of forest area and foothills condition in this region made this area an exceptional weather quality in Tehran. In comparison with central district, this site consist of less population because it is the city extension and at this time less residents.

The availability of metro and bus station in this neighborhood meets one of the most important requirements of elderly, also two crucial highways in immediate proximity of the site make it much more attainable for residents of eastern or even southern side of the city.

The Site:

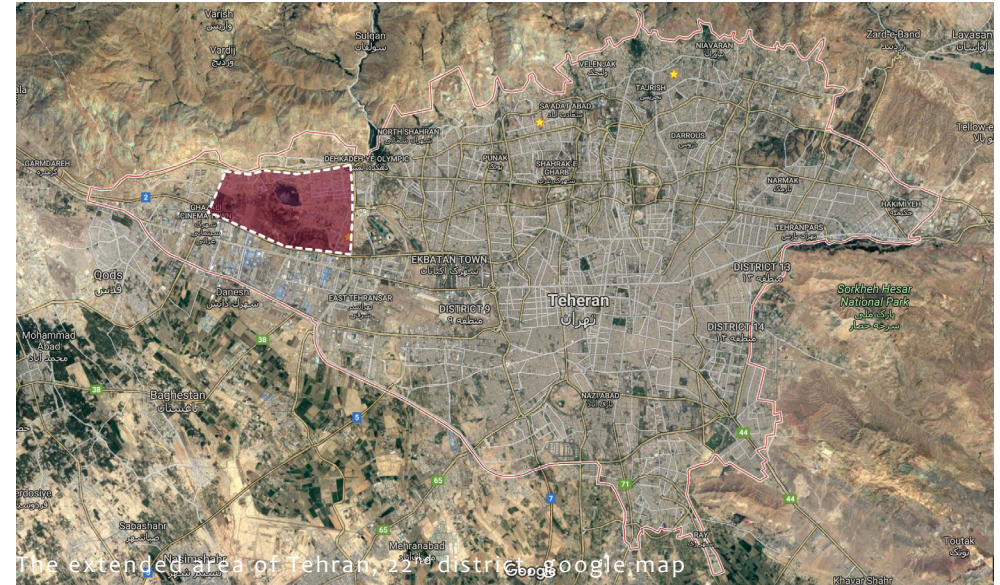
This neighborhood is quite new one and has not yet reach its maximum density that it can give service. Mostly is populated with Suburban neighborhood, so in coming years many young families come there. Due to new pavement, streets are good materialized and big enough for comfort of elderly.

The site physical characteristic is generally given in appendix 2.

A more comprehensive approach to site selection is necessary to achieve an environment where elderly people can live in dignity. Through the high sensitivity of elderly to environmental factors, the design of inner and closed space should be in a form that preserves them from climate changes, at the same time the importance of outside and open spaces is also to consider.

a | Enough attention to elderly usage of outer spaces like sport exercises, gardening activities. Generally perceiving and enjoying the environmental factors.

b | Providing opportunities regarding higher social contacts between community residents by creating little spaces outside the building in order to have meeting and providing social interaction in elderly.



The site is surrounded with many highrises which has not created a friendly neighborhood. There is no place for public realm for residents even the visitors. There are also many children residents but there is no space designed for them as a play ground. They spend their time in a strange alleys. Although this neighborhood is located among green areas, the missing link will be fulfilled by coming design. (app.2-pic1-2)

DESIGN VS. PROGRAMMING

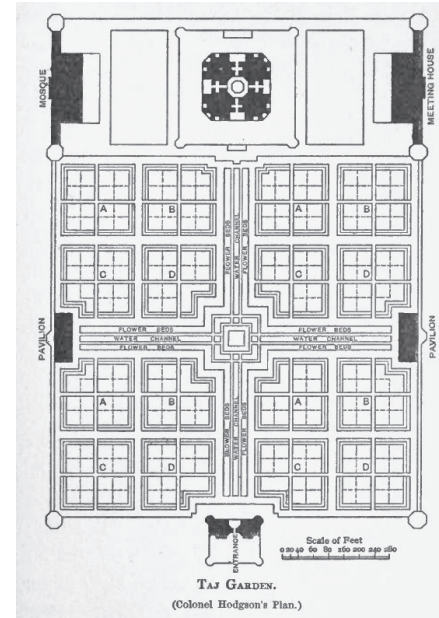
Designing for an aging population does not mean specific and isolated facilities, or initiatives tacked onto existing designs, but rather integrating quality and inclusive design into daily life and the urban fabric that will last over time.

Briefly the coming design regarding elderly care in Iran will be a congregate housing especially for homeless elderly, who need mental care as priority target group. The architectural design will provide open as closed spaces, which is in direct relation to the nature. The nature has an effective result on increasing the life quality.

As long as designing for a demographic group is culture specific, the Persian culture became my inspiration source during the design process.

In the whole Persian culture including the old paintings, Persian rugs and architecture the essence of garden is the most significant element. According to traditional Persian beliefs among the relation between people and the nature, setting the elderly in contact with the nature might be helpful towards improving their mental health. In comparison with contemporary urban life style, which miss the sense of nature the most.

In Persian culture the natural elements are sacred and ancient organization of them created the so-called Persian gardens. In ancient Parthian period (247 BC – 224 AD), in Avestan language, a garden or a place surrounded by trees and water flows had been called “Pairi Daeza”; this word is divided into two syllables: Pairi, which in Mithras cult means the connection between the sky and the earth and Daeza (root “Daiz”), meaning enclosure.⁵ Later this word in Greek language has changed to “Paradises” which is the perception of heaven.



Therefore the concept of ancient Persian garden becomes also the concept of my architectural approach. Aiming to provide my homeland elderly a living environment, which reminds of the heaven.

The pattern of Persian garden demonstrates the Zoroastrian belief through the genesis of universe, four geometrical sections called “chahar bagh” based on four elements of Zarathustra: water, soil, fire and the sky.

Regarding the outcome of research process, the collaboration of different facilities towards elderly care should be applied in architectural design aiming its main concept which is people and nature interaction.

The facilities are divided in five categories; residentials, recreationals, local services, social and cultural services and the health care services.(Appendix3)The collaboration of all these facilities will be leading towards a living-care environment for elderly. The residential parts cover the older people who also consist of different categories but the main residents will consist of single elderly with physical problems.

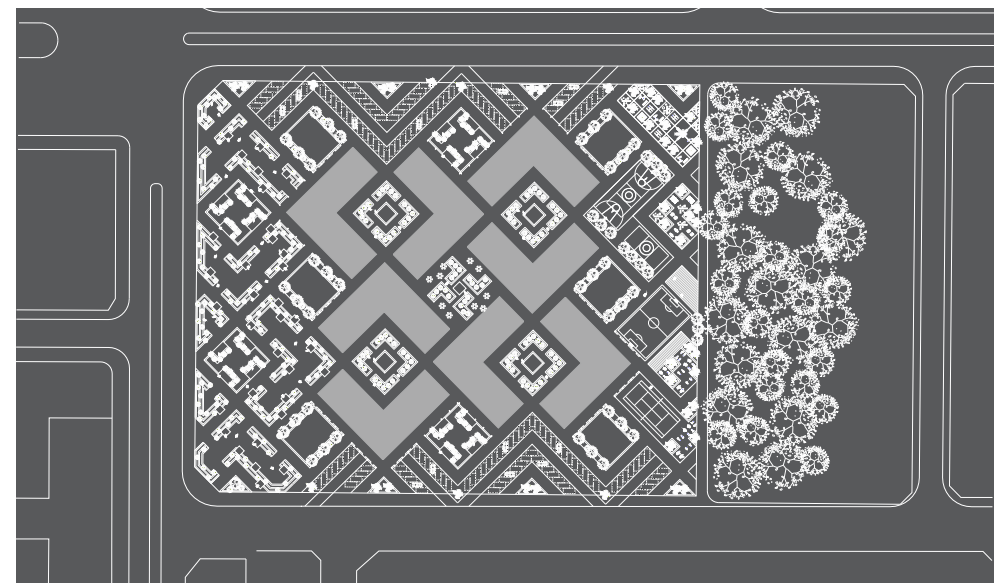
The physical structure of the gardens are always square or rectangular shape. And surrounded by walls, separated from the exterior environment. The site that I have chosen for my design has also a geometrical rectangular shape. To show my reagrreement with high density of buildings, the design will be a garden and residential low rise blocks are located in it.(appendix2-pic6)

The traditional Persian houses are based on courtyard typology; highly introverted design of courtyards with surrounding rooms besides the factor of privacy in Islamic culture is the most basic response to the hot arid climate regions.

A house with in an inner garden brings the nature exactly to the hearth of your living environment. The residents spend their most of the time in the courtyard zone, because different activities will be located there. Or even in contact with that.

The pedestrian zone in whole design and the sitting facilities is provided for people who need to have a rest in periods of time and trys to reach the goal of integration between different age groups and the nature.

The right side of site is more meeting points and the eastern side provides sport activities and playground for children. hearth of the site is the restaurant zone of residents which is more private space.





David Chalmers Alesworth, Hyde Park Kashan 1862, Pile carpet, embroidery, 2011 / Courtesy of Fundación AMA, Santiago, Chile. Photo: David Chalmers Alesworth



The Fin garden, Kashan, Iran

Armin©2013

V | Conclusion

According to Iranian cultural aspects old people always had to be cared at home environment. If someone let his or her elderly to nursing home, others consider this approach as an immoral behavior. At this moment media still advertises about caring elderly at home environment while by industrialized lifestyle people live no more like before. Housing typology has changed and the women who were the responsible of caregiving are not housewives anymore.

In coming years 10% of whole population of Iran will be the elderly. A demographic group, which the government gives them no financial support and unfortunately has no ideology towards their institutional settlement. There are some humanistic charities which are working in this field and they can financially support this kind of institutional projects.

To provide a living environment for elderly the collaboration between 3 sciences is needed; Medical sciences, social sciences, architectural sciences. Developed societies have already passed through this demographic shift and they have already invented housing typology regarding institutional elderly care. One of the last trends in this field is living-care complex, which is not yet introduced to Iranian nation.

In this survey I have tried to integrate the idea of Living-care complex (wozoco) with Persian culture, aiming to revision the nation false believing through institutional elderly care, and provide an environment, which would cover any old person from different social classes. If the living conditions of this community will be as high enough as the rich people also prefer to live there instead of private retirement home, then some financial problems would also be solved.

One of the most appropriate solutions towards increasing and retrieval of elderly social position is the interaction between them and other age groups. This statement gets realized by configuration of architectural and natural elements.

Through all Persian culture the interaction between human and nature was very important, which is missed in contemporary architecture and even lives. By that reason the architectural approach is based on revival of the traditional Persian culture and architecture aiming to increase the interaction between people and nature.

The Living-care complex through elderly care gets placed in such a large parky environment which hit the boundaries of privateness and invite other people to join elderly living environment.

The residents are almost older people with physical or mental problems. Therefore the community tries to improve their life quality through caregiving in different scales.

	Physical care	Mental care
Small scale	<ul style="list-style-type: none"> The possibility of temporary and permanent care physician Providing health 	<ul style="list-style-type: none"> Living with people with similar conditions Tranquility of having a suitable habitat
Middle scale	<ul style="list-style-type: none"> The possibility of having various physical activities appropriate to age requirements; including entertainment, sports and targeted activities 	<ul style="list-style-type: none"> The possibility of communication with peers The possibility of communication with other ages
Large scale	<ul style="list-style-type: none"> Space design in a way to suit the age and physical condition of the elderly 	<ul style="list-style-type: none"> Possibility of elimination of individual privacy Possibility of self-esteem elimination of elderly

S

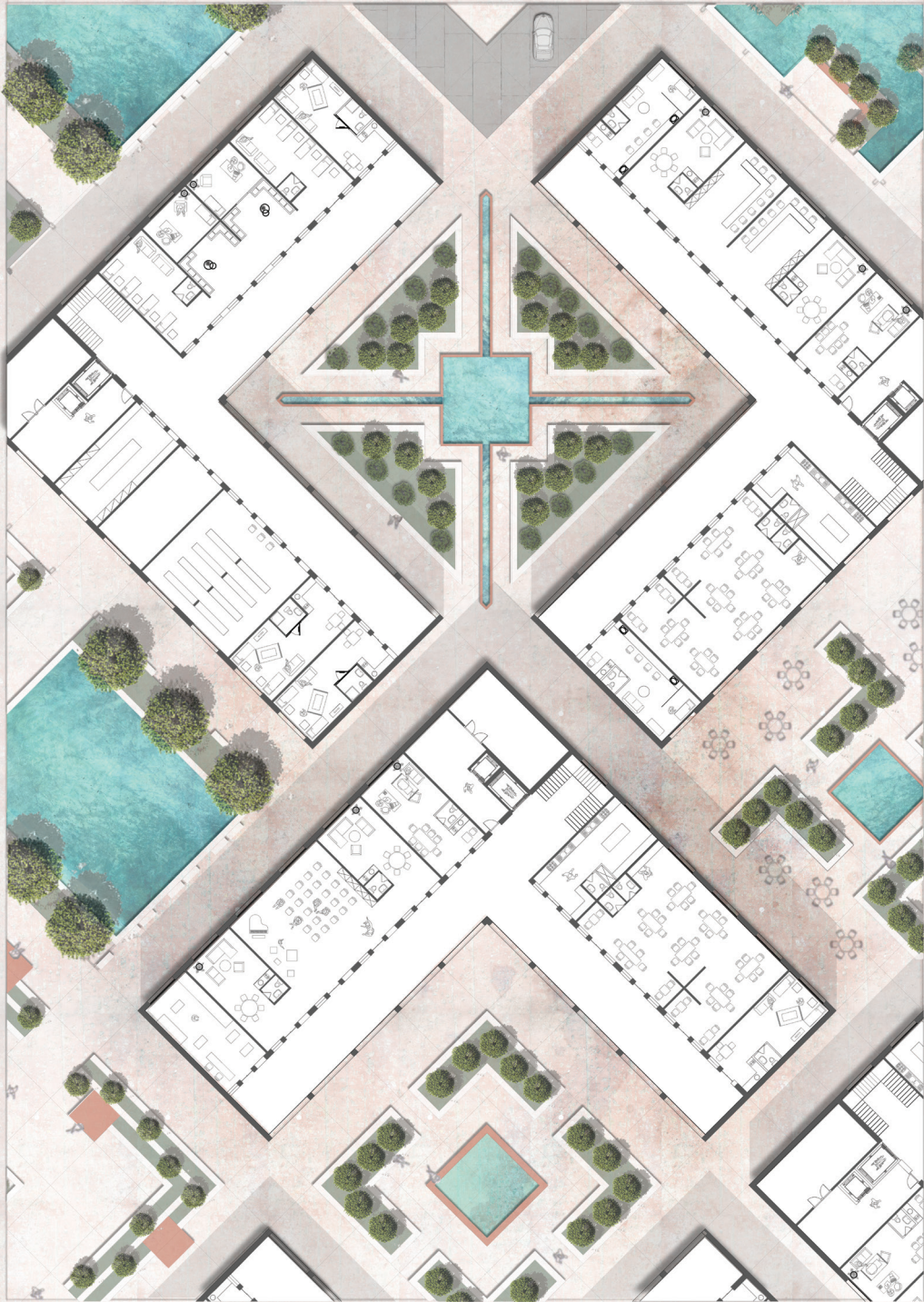
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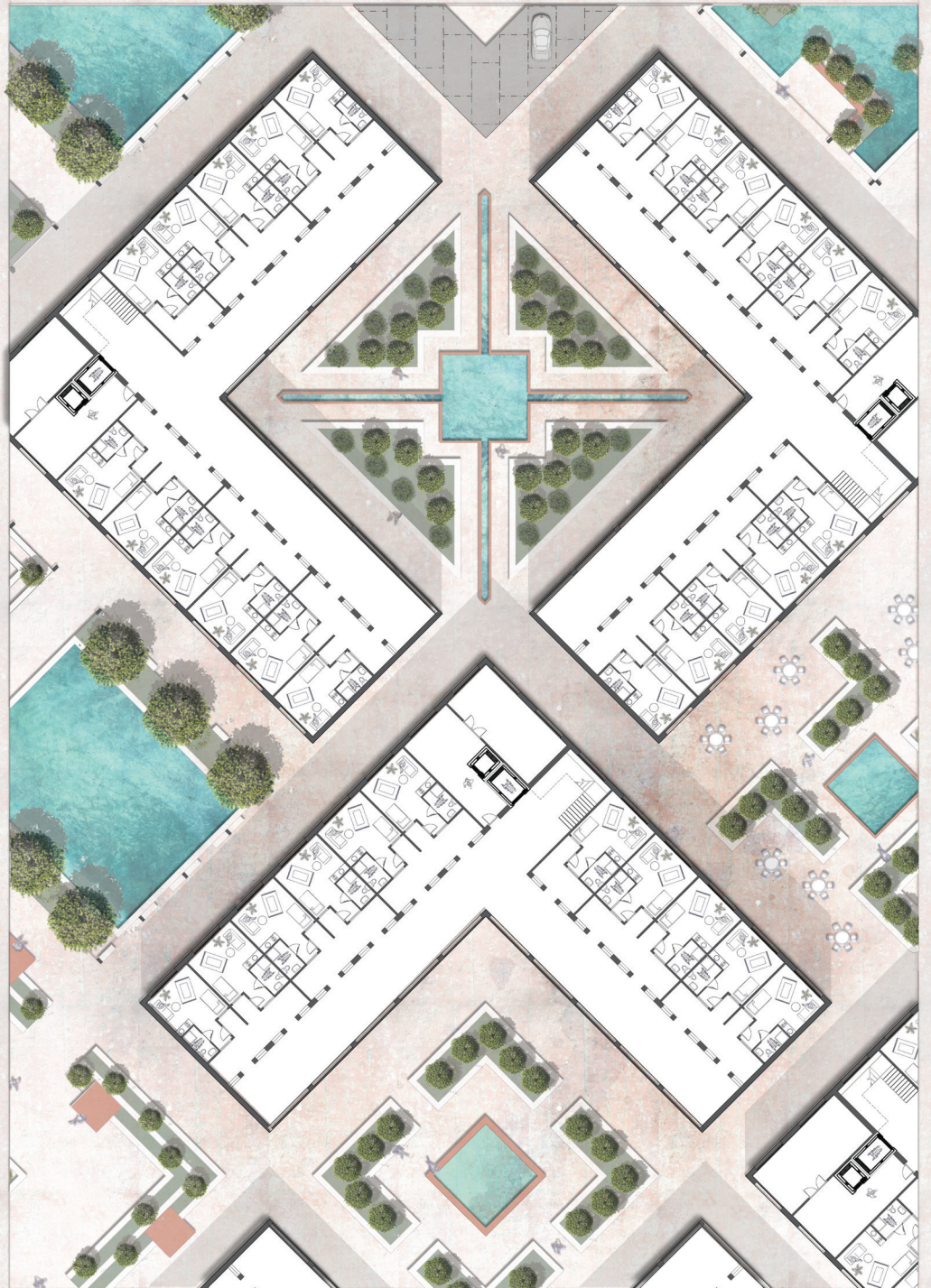
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Master plan





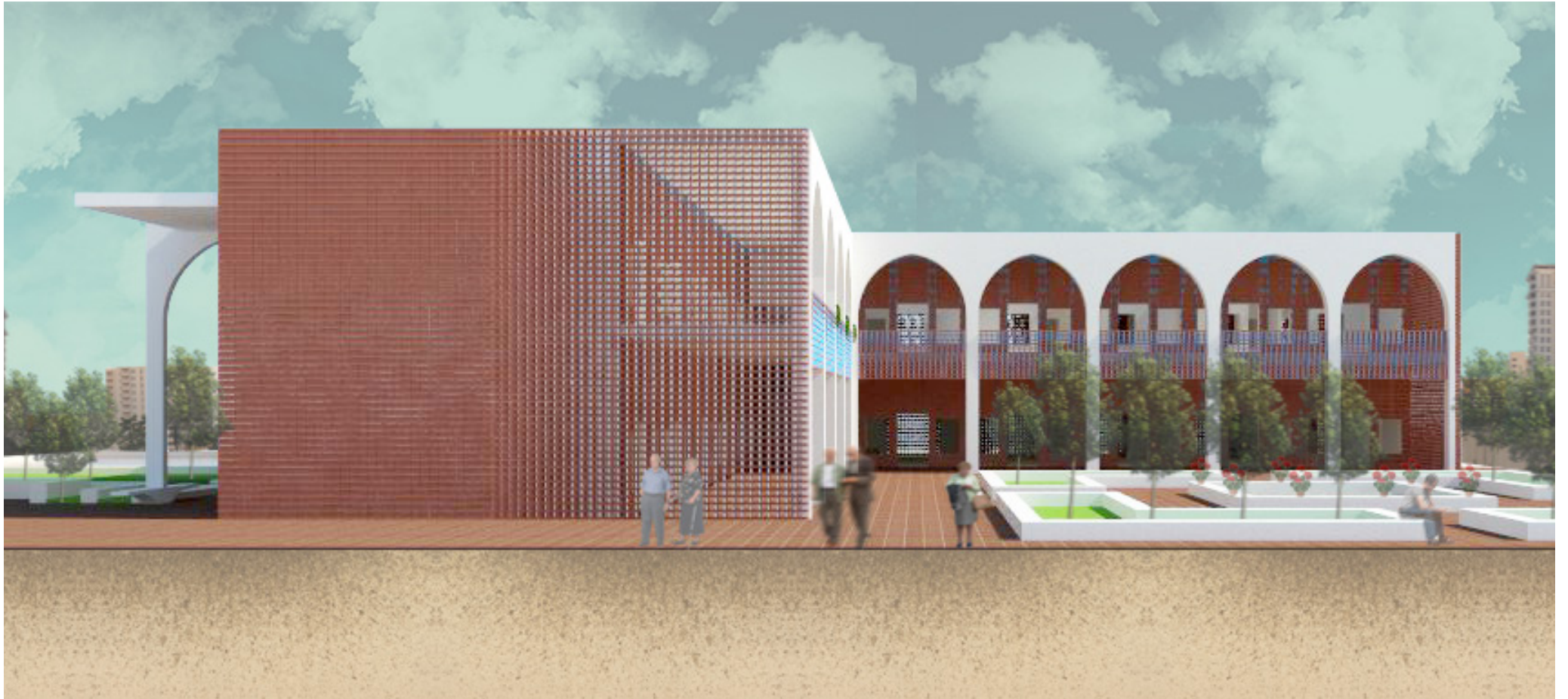
Ground floor plan



First floor plan



Cross Section 1:200



Inner courtyard facade elevation



Exterior facade elevation

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¹ :<http://www.kahrizak.com/en/>

²:<http://www.worldometers.info/world-population/iran-population/>

³:<http://www.heritageinstitute.com/zoroastrianism/garden/>

⁴:<http://www.liveyourretirement.com/blog/storytelling-therapy-seniors/>

⁵: <http://www.hayat.it/central-courtyard-paradigm-of-paradise-in-traditional-persian-architecture/>

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<https://financialtribune.com/articles/economy-domestic-economy/666/iran-ageing>

Appendix 1 | Statistics

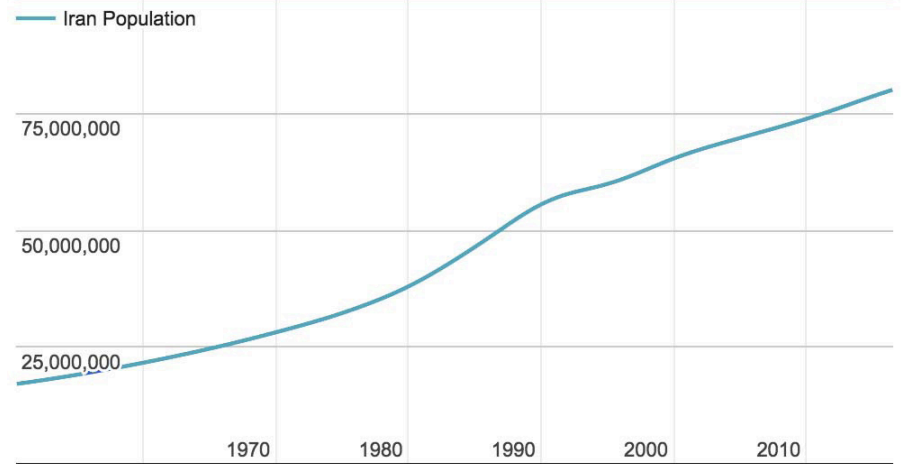
Description		1966	1976	1986	1996	2006
Total population	Total	100	100	100	100	100
	Urban area	39,1	47	54,3	61,3	68,5
	Rural area	60,9	53	45,7	38,7	31,5
65+ population	Total	3,85	3,52	3,08	4,37	5,18
	Urban area	3,5	3,3	3	4	4,7
	Rural area	4,1	3,7	3,1	4,8	6,1

Table 1 | The distribution of elderly based on their living area during 1966-2006.

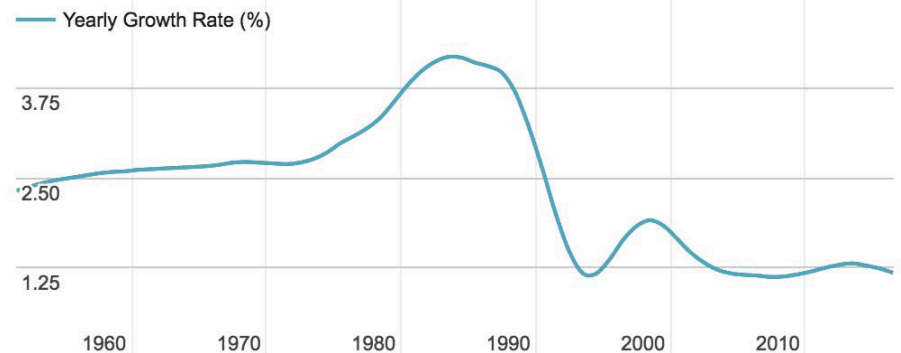
Year	1976	1986	1996	2006	2011
Percentage	3.52	3.04	4.20	5.18	8.2

Table 2 | the percentage of people above 60

Iran Population (1950-2016) 80,316,957



Yearly population Growth Rate (%)



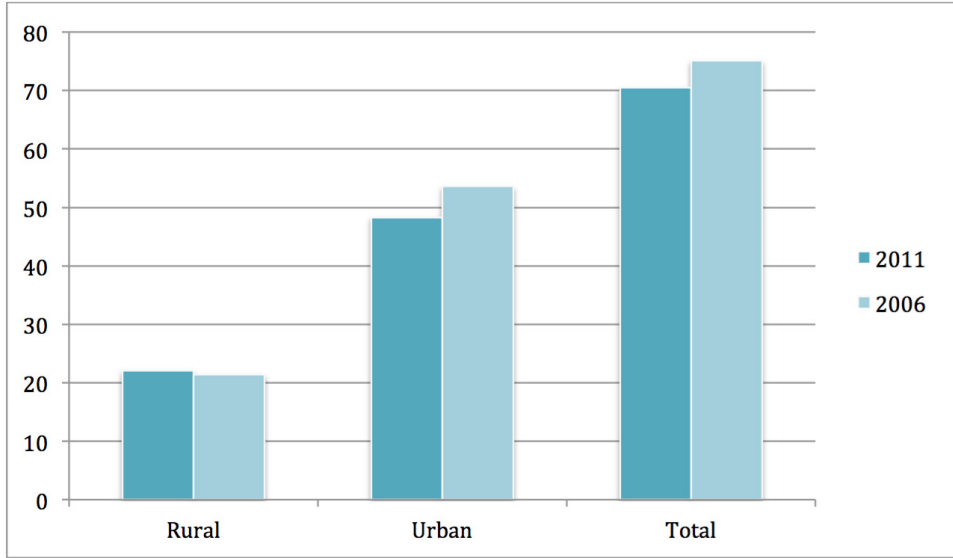


Chart 1 | the country population (in mln)

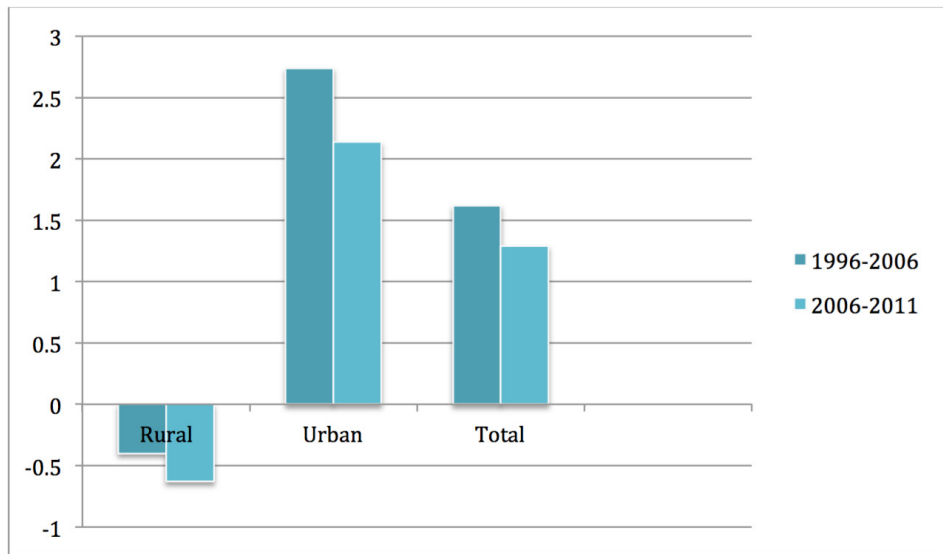


Chart 2 | the average annual population growth (in percent)

Appendix 2 | Site analysis



Picture 1 | District scale, function division



Picture 3 | Site boundaries



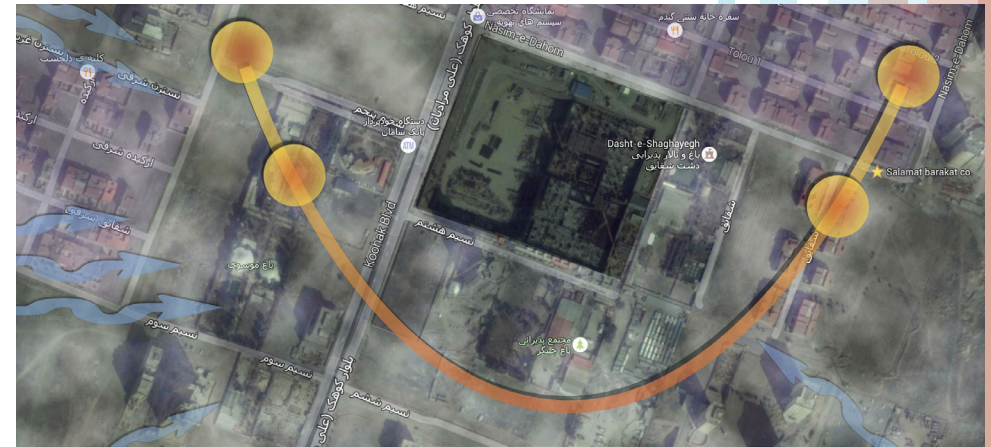
Picture 2 | Neighborhood and context



Picture 4 | Streets



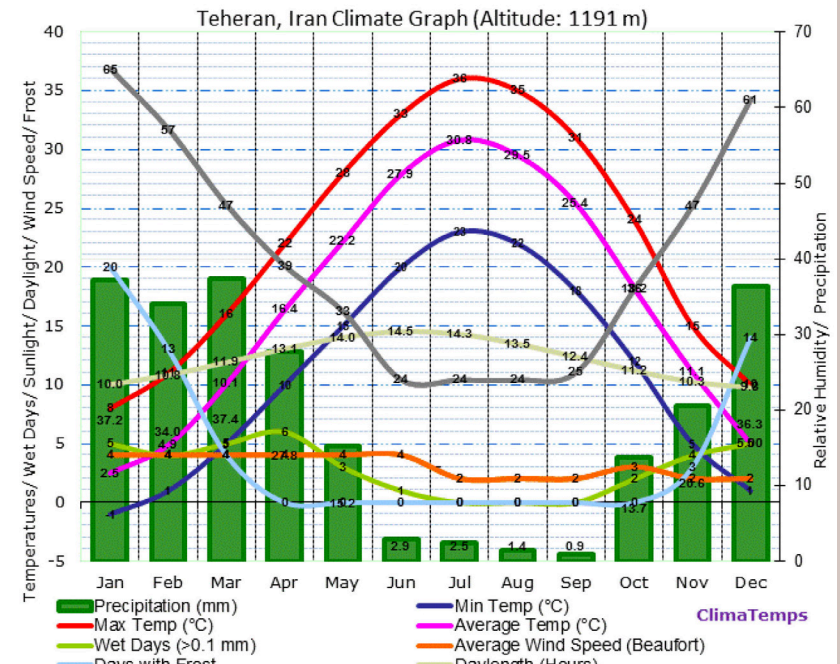
Picture 5 | Infrastructure



Picture 7 | Sunpath/Wind direction



Picture 6 | Circulation/Users



Picture 8 | Tehran climate graph(Altitude: 1191m)

Direct observations





- I. Residential:
 - a) 2 persons room
 - b) 1 persons room
 - c) Toilet+ bath
 - d) Gathering room
 - e) Eating room
 - f) Nursing station

- II. Sport cluster:
 - a) Swimming pool
 - b) Gym
 - c) Physiotherapy
 - d) Billiards, Gulf, etc.

- III. Local services:
 - a) Laundry
 - b) Super market
 - c) Café, restaurant

- IV. Social and cultural services:
 - a) Music hall
 - b) Workshops
 - c) Gardening
 - d) Storytelling spaces
 - e) Library
 - f) Mosque

- V. Health care:
 - a) Emergency
 - b) Clinic
 - c) Pharmacy
 - d) Rehabilitation
 - e) Staff residents
 - f) Manager