QUALITY OF LIFE FOR ELDERLY PEOPLE IN IRAN
WITH SERVICE DESIGN APPROACH

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Abstract

In the aging world of today, more attentions are grabbed towards studies on elderly. New facilities and technologies are emerged to serve to the elderly, make their life easier, better and more useful. Having participated in a study on the quality of life of the elderly in Europe, it was aimed to run a similar project to research the quality of life of the elderly in a Non-EU country. This was done through the research questions “What is the quality of life for them?” and “How a designer, focused on service design, can improve their quality of life?”

The knowledge for the study was obtained from fields Quality of Life of Elderly People, Service Design, Service Design Process, and Qualitative Research. As the key country for this study, Iran was chosen. Study on the target group in this country was done through Cultural Probes and in analyzing the probes, Process for Empathy in Design was used. To visualize the results of the target group study, Affinity Diagrams and Personas were drawn.

The result was designing a service for the target group, which is presented by Concept Scenario, Storyboards, System Maps and Blueprints. In this concept, called “Virtual Family”, the personas are encouraged to be members of a network which is supported by an organization/community in terms of health, social life, leisure activities and educational programs. This network is forming a virtual family regarding the traditional values and ethics which are important for this age group. Additionally it supports them with entertainment and educational programs. Later on, the service concept was evaluated by a number of people in the same age and social group of the target group. Evaluators found the concept an excellent complement for mentioned target group who are on the verge of losing their family and social structure, but the organizational system of the context country should be studied to know if it is planning is practical in that context.
It is a pleasure to thank those who made this thesis possible, starting with my supervisor Stefan Holmlid. He introduced Service Design world to me and opened new doors for me in this world. After every meeting we had, I exactly knew what the next step is and felt that I have got the confidence to do it. He could always take me out of the dark whole which I dived in digging the research ground. Stefan, I should also thank you to force me to read professional articles in English, and give lectures on them. I was lazy to do it before and was not this much global before participating in your Design Research Seminars.

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Chapter 1
Introduction
In result of an aging population in most of the developed countries, needs of elderly people seek to be met and their hidden capacities should be unveil. Different studies were done on improving the quality of life of this group of citizens. New services, technologies were provided in health care; and new policies were set within welfare and pension systems. A significant number of projects were done in the field of service design considering the lifestyles of the elderly people, their problems and needs. Based on service design processes and tools new opportunities are provided to make them live their lives happier, easier and more efficient. This can also reveal the capacities which perhaps were hidden in their old age.
During the spring of 2010 four students from the course Service Design Studio in the Linköping University worked on the development of a game concept which was intended to be part of a workshop arranged within the project “European Network on forward policies and actions for the seniors in Europe ¹”. “The goal for this project was to develop a long-term relation between the five participating municipalities in creating strategies and services for elderly citizens with good health conditions.” (Ardi, et. al, 2010) The five participating municipalities were Norrköping and Skövde in Sweden, Enzkreis in Germany, Tours in France and Traversetolo in Italy. The game was designed after studies were done on a group of the elderly citizens of the mentioned cities and later played by citizens and other stakeholders of the municipalities in a workshop held in Norrköping in October 2010. This game aimed to create empathy between the stakeholders of the municipalities and the citizens to help policymakers make strategies and services for elderly on one hand and help citizens to understand the complexity on decision-making process in the municipalities on the other hand. As the conclusion of the workshop, not only the empathy among the participants was created but also a number of problems in the quality of life of the elderly were mentioned and solutions were suggested by the participants. Experiencing this project among the citizens and stakeholders of municipalities in Europe, this question came to mind that what about the elderly people in non-EU countries? What is the quality of life for them? And how a designer focused on service design can help them improve their quality of life? Considering the possibilities in running the research and making connections with the elderly people in Iran for the writer (as an example of those non-EU countries), this country had been chosen as the context country of the study. Considering the welfare and social security systems in Iran and comparing it with Europe, it was possible to see problems in the lives of the elderly in the country of the context. Getting help from the design background and knowledge in user studies, it was decided to work on a project with the title of the “Quality of Life for Elderly People in Iran with Service Design Approach”. This project aims to study the selected group of Elderly People of the context country, find out problems in their Quality of lives and suggest solutions for the problems based on service design knowledge.

¹ See http://www.qlse.eu/index.html for more details on the project
Chapter 2

Theoretical Background
This chapter addresses toward the studies done to deepen the knowledge for the thesis project in its required level. It consists of two parts, first about the Quality of Life and Elderly People. The second part points to the documents needed to form the knowledge on Service Design for this project.
As the title for this project is “The Quality of Life for Elderly People in Iran”, these pages will provide an image of the quality of life of this group of the people in Iran.

As a starting point for the research it was important to know about the term “Quality of Life” in more details. Considering its widespread use, it was needed to understand the current state of knowledge on quality of life. Also it was essential to expand the definition of “Elderly People in Iran” and understand who are called elderly according to the society.

In the paragraphs bellow introductions to these two terms are listed.

Part1:
Quality of Life Studies
The definition of “The Quality of Life”

Getting more importance after 1970s, the term “Quality of life” (QoL) has been used for indicating the well-being of people or societies. (Gregory, et al., 2009, p.606) Quality of life should put apart from standard of living, which mostly refers to individuals’ income and wealth.

The turning point for the studies on this field can be the studies done on European’s perspective on aging. These studies were done by:
- The European Union (EU) and its Framework
- Research Programmes encouraging comparative work. (Walker, 2010)

The growth has been achieved in the Quality of Life studies because of different reasons:
- The increased importance of the Health Issues: psychological and biomedical issues
- The growth in Social studies
- The concerns policy makers have about the consequences of the population’s aging.

According to the studies done in the field, there are six core components for quality of life in old age: (Walker, 2010)

**Psychological Variables**- Lack of personal control and mastery over the environment by getting older, personal attitudes, optimism, pessimism, etc. all have influences on the people’s quality of life in old age.

**Health and Functional Status**- This item has the prime importance in quality of life in old age since in the old age people face different health problems, which influences their life. Sometimes these health problems and illnesses influence also their functions.

**Social Relations, Support and Activities**- “The family, in particular, seems to enhance quality of life under disadvantaged macro-structural conditions. In the face of meso-structural conditions such as deprived neighborhoods, social support can work like a buffer.” (Disch, et al., 2007) In the societies which people have more social ties to each other, people can get help in the situation of the negative
feelings and also share the positive feelings. Social relations can refer to family ties, friendship relations, neighborhoods, and etc.

**Economic Circumstances and Independence**- This item is the most important factor for life satisfaction and is closely connected to the individuals’ level of income and country’s welfare system. The economic level of the people indicates their possibilities to provide an easy, happy and desired life, which results in their quality of life.

**Environmental Conditions**- The environment in which the elderly people live affects their quality of life and also their satisfaction of life. It can be both indoor and outdoor environment in which elderly interact. The environment, including home and neighborhood sets the social relations in some cases also.

**Leisure Activities and Mobility**- “Two further components which are rarely addressed in generic quality of life scales, and research turn out to be of great importance to older people: activities and mobility. Both aspects are closely interconnected, and their significance for an autonomous and meaningful life in old age become obvious in the light of the age-related increase in mobility restrictions.” (Walker, 2010)

In the picture 1, a summary of these components is presented.
Some Facts about the Quality of Life Studies

The important point here is that most of above-mentioned items are closely connected to the country through which we are studying and its welfare and social security systems. Even geographical circumstances can affect these items, as an example weather conditions can make sense on people’s mood and moral and affect their health status. Therefore, quality of life can differ in different parts of the world and even inside a country from a city to city.

“Quality of life in old age is the outcome of the interactive combination of life-course factors and immediate situational ones.” (Walker, 2010) Considering the individualistic orientation of these two, it is impossible to form a formula for quality of life of elderly people.

Most of the available methods and models to evaluate the quality of life for elderly people are based on what are prepared for people in other age groups. Although some of the factors are similar in all age groups and especially in two last groups (the mid-age and the third-age), functional and health capacities are different in old age. (For information about age groups you can visit statcan (2012)) On the other hand, the elderly people’s perspective is often excluded in these methods and models, which means a lack of target group’s reflections in the study.

While as mentioned before quality of life has individualistic orientation, and it is essential to make the target group itself involved in the studies in this field. (Walker, 2010)
What we know about the “Elderly People” in Iran

“Ageing is a biological process with its own dynamic. But each society has its own sense of old age. In industrialized countries, the beginning of ‘old age’ is usually equated with ‘retirement’, at the age of 60 or 65. In many developing countries, chronological time has little or no importance in defining old age. Old age is defined as a state of dependence and incapacity thought to begin at the point when the person can no longer work.”

The Ageing & Development Report: a summary
Poverty, Independence & the World’s Older People

According to the pension system in Iran, “age of retirement is defined as the age of exit from the labour force”. (Sohofi Parast, n.d., p.4) General employment period is 30 years after starting the labour force. Since people can start the labour force at the age of 18, the age number of retirement in Iran’s pension system is around 50 years old, which is less than the average age of retirement in the world.

According to the statistics in 2005-2006 among fourteen thousand employees whom got retired, 78% had less than 50 years old. (Sohofi Parast, n.d., p.5) This means that while elderly in the most developed countries refers to the age of 60-65 (Randel, 1999), in Iran, we should assume it 50 and over.

Based on the Statistical Centre of Iran (SCI), sex distribution, in 2009, in the country shows 50.8 percent male, 49.2% female. (Central Bank of the Islamic Republic of Iran, 2009) Looking at the traditional Iran, women were mostly the housewives staying at home, waiting for husbands and raising children. However, since 1990s a strong women’s movement has tried to get the gender equality within the democracy movement in Iran. They started to participate in the society according to their social and economic needs, and economical independency has started among women, by the time they started to work. This movement is still in growth and in last years’ reviews; there is a more number of female entering to the universities in comparison with males.

According to the United Nations report, the population of elderly people in Iran was less than 6 million in 2007 and is predicted to be 26 393 000 in 2050, which will be the 26% of the whole population. (Pezeshk, 2010) So studies in this field will get more importance.

Although there are similarities between the concept and definition of “elderly “in
Iran and the developed countries- like health conditions and functional limitations- it should not be ignored that the cultural differences and environmental issues make it different in comparing to the studies that have been done in other countries. According to the cultural and religious values, elderly people are treated with respect and mostly will be supported by their families in the old ages. They can either live with their family (usually with son and his family) in more traditional families, or independently living alone in their own houses. In some cases, they might live in institutes or nursing homes, but it is stigmatizing to be left to such institutes.

The paragraphs below are directed towards making a general image of life in Iran for the reader, based on the personal observations of the author. The elderly in Iran are usually got retired around their 50s if they were employee, but continue to work if they had their own work. In case of retiring from an organization, they would look for a second job after the retirement or stay at home taking the rest of their life in rest, according to their economical needs. The sex distributions in the working society of Iran are nearly equal and despite the traditional and religious beliefs women have started to be same active as men and this trend is increasing. Although people are experiencing a transition to the modern lifestyle, they are not totally disconnected from their traditions and customs yet. Among those called elderly, women are still in charge of housekeeping, although they also work. Elderly are respected in the family and family ties are strong. Family members and relatives visit each other more often, and home parties and invitations are common among the relatives and friends. They usually treat different when they are in public because of the government’s force; they sometimes hide their real beliefs and lifestyles in public. They have to obey the official rules of the country like wearing scarf or veil when they are in public areas, even if they don’t have the religious beliefs for wearing them.

As mentioned above, the population of the elderly people in Iran is in growth. This means that it will get more importance in the social studies in the future. The set of pictures numbered 1 to 7 is prepared to help the reader in making a general image of the elderly in Iran. These pictures are mostly taken from the streets in Tehran.
Picture 2- Elderly in Iran.

Picture 3- Elderly in Iran.

Picture 4- Elderly in Iran.
Picture 5-Elderly in Iran.

Picture 6- Elderly in Iran.

Picture 7- Elderly in Iran.
“Quality of Life” studies have been started since 1970s and have increased since 2004. These studies are important both for the residents of a society and the policy makers, since these two groups are strongly interconnected in development of the society.

Six core components are defined for quality of life in old age, which can be summarized in: Psychology of the people, their health, social relations and supports, the economical level, the environmental conditions and the leisure activity and mobility of them.

In the study of the quality of life researchers should consider cultural, geographical, economical differences in the countries of the study. It is important to make the elderly people involved in their quality of life studies because there are individual variations in the components and also differences in the components mentioned, which are mostly formed by the characteristics of the other age groups rather than the elderly age group.

In the case of Iran, elderly people in Iran refer to people who have 50 years old and over. The sex distributions in the working society of Iran are nearly equal and despite the traditional and religious beliefs women have started to be same active as men and this trend is increasing. The population of the elderly people in Iran is predicted to be almost 26% of the whole population until 2050. This means that it will get more importance in the social studies in the future.
Part 2: Service Design

In this project, it is aimed to improve the quality of life of the elderly people in Iran with service design focus, so the required knowledge in service design is summarized here from the service design literature. As another variable in theoretical background in this project, service design literature were studied which is summarized here.

Changes in Design Community

According to Troncon (2010), the base in the most books and treatises on design is discussing the meaning of design as production of objects. (e.g. lamps, chairs, furniture, clothing, etc.) It is true, to some extent, especially when we consider the design evolution that has started since industrial revolution, from the 18th to the 19th century, and masterpieces which has been designated and produced in last century, but this view has started to change in last few years. Design is now considered as a more inclusive discipline containing a wider range of disciplines of human sciences, engineering, marketing, management, and etc. This change has different reasons:

- **Saturated Markets** - As users started to get to know the work of design and appreciate the designed objects, competitors grew and most of the manufacturers recognized the value which designers can add to their productions. Theories like “Democratic Design” and the competitive market made the designed objects reach to the users in lower prices. Markets started to be filled by beautiful objects, which could function great. This evolution made the markets, in developed countries, saturated by good designated objects. This showed the need for one step ahead and made design community search for new ways to address target groups more efficiently. Moritz (2005) talks about the “satisfied product market” and quotes from Brigit Mager that: “As a consequence of mass and serial production, products increasingly resemble each other.” This shows that in such a situation something more than aesthetic design and good functionality is needed for the users of the design community.

- **New Theories in Design** - Theories have developed focusing on user experiences, interactions, social, cultural, and environmental considerations. Designers tried to find more empathic ways to discover users, and their wants. And this led to an increased interest in ethnographic approaches to design. (Blomkvist, 2011, page 18)

- **Turned Focus to Humans** - By the change in design objectives, design started to be criticized for getting associated by some with too much of monetary agenda and consumer approach and producing cheaper and easier, just for the sake of production. Criticizers believed that these causes sustainability problems. So focuses turned from things to human activities, desires and experiences.
(Blomkvist, 2011, page 18) Moritz (2005), in acceptance of this, conveys that humans have individual needs and “...no computer, machine or robot can cope with the individual needs of clients sufficiently. “

**Booming of Service economy**- Moritz (2005) mentions that according to The World Bank, service industries increased their share of the world economy during the past two decades and services occupied up to 70% of GNP at the date, he wrote the paper.

**New technologies**- New technologies are emerging day by day, and they serve to the different needs of the people. According to Moritz (2005), similar to the industrial revolution which changed the way companies worked and offered new possibilities, the service revolution is happening now by the new technologies which serve to people. The internet, telecommunications, wireless devices are changing the way that services are offered and prepare new services.

Blomkvist (2011) discusses that Service Design is partially a reaction or answer to these views and “can be seen as a result of the changes and trends within the design community.” Moritz (2005, pg. 25) believes that “Services are used to support product competitiveness and to add value.”
What are Services?

As discussed above, the design community is experiencing changes, and an intention is going toward services. Products are not the only tool of the marketing and selling anymore. People are involving in different types of services every moment and every day, in small or big scales. Some of the services take few seconds, like buying a commercial good, and some take years, like health care services. Services can be in supporting a product (customer service) or public, consumer services. In the communication era people prefer to do their banking and shopping affairs via internet because by doing that they can save time. Home health care services are provided for elderly people. And one step ahead of the products’ competitive markets we are now experiencing services’ markets competing to provide better services. With this introduction, what is a service?

According to the Business Dictionary (BusinessDictionary, 2011), Services are: “Intangible products such as accounting, banking, cleaning, consultancy, education, insurance, expertise, medical treatment, or transportation.” Segelström (2010), claims that services are consisting of people, artifacts and their interactions.

Most of the definitions for the services are talking about the features of the services. As mentioned repeatedly in the services’ literatures during the first years of the services’ studies, the features for services are described with the abbreviation of “IHIP” as below:

**Intangibility** - services are not tangible and cannot be touched because they are performances rather than objects. What participants in a service can touch, feel, see, or taste of a service is the physical embodiments of it.

**Heterogeneity** - Services are delivered by people with different mood fluctuates overtime, which makes the outcome become hard to standardize. (Segelström, 2010) Saffer (2007) calls it as the flexible aspect of the services when both the customer, and the employee feel the need to behave different in a specific situation of a service delivery. For example, the employee should act different when a plane is delayed. And a customer requires that the service adapt to the new situation. Another point about the services, according to Saffer (2007), is that most of them vary by the time of the day, season and cultural mood. So they can’t be standardized.

**Inseparability** - This is about the inseparability of the service production and its consumption. Services can’t be stored and are consumed as they are produced. Additionally it also refers to the state that the customers of a service are the co-creators of it beside the other stakeholders. Services can perform when the customers are involved and engaged in it. So the service providers and the
customers are also inseparable in service performance. **Perishability**—“A service cannot be pre-produced and saved for a later use”. (Segelström, 2010) Saffer (2007) writes about the time services take to perform, he emphasizes that the unused service time is assumed as a missed economic opportunity.

Comparing with products, which are tangible and can be stored and also do what is put in their mechanics, services are highly depended on the environment and the performers of them. But just like products, services also should be accepted as attractive by the users and by their senses. So they should as well be designed. Additionally, in designing products designers focus on the interactions of the user and the product but in case of service design, the interaction between the user and the service touchpoints are the matter. According to Saffer (2007), touchpoints are typically the environment, objects in the service delivery, processes of the service delivery and the people involved in it. He categorized them as the service design elements. Stickdorn et. al. (2010) says that touchpoints are every contact point between a customer and the service provider.
As Stickdorn et. al. (2010) quotes from Richard Buchanan, it is a great strength of design that no single definition has settled for it. Because “fields in which definition is now a settled matter tend to be lethargic, dying, or dead fields, where inquiry no longer provides challenges to what is accepted as truth.” According to what mentioned above, there are as many definitions for “Service Design” as the people working and searching in the field. The following paragraphs represent different definitions for this emerging field. Most of these definitions had been gathered by Stickdorn et. al. (2010) in “THIS IS SERVICE DESIGN THINKING” book.

-“Service design is a design specialism that helps develop and deliver great services. Service design projects improve factors like ease of use, satisfaction, loyalty and efficiency right across areas such as environments, communications and products – and not forgetting the people who deliver the service.”

(Engine Service Design, 2010)

“Service design is generally defined as a systematic, creative & empathic approach to uncover unmet, explicit and hidden customer needs and desires and to correspondingly develop new human centred service solutions (or improve existing ones) that are usable, useful, efficient, effective & desirable from the customer’s point of view and feasible, viable & valuable from the producer’s point of view. Service design employs and adapts tools & methods from various disciplines such as product design, interaction design & graphic design, social sciences along with traditional business modelling & analytics.”

(Servicedesign.lu, 2010)

“Service design is all about making the service you deliver useful, usable, efficient, effective and desirable.”

(UK Design Council, 2010)

“One of the simplest definitions for Service Design is proposed by Blomkvist (2011, pg. 11). He explains that: “A service can be seen as a journey, a journey that, in most cases, consists of many stops (…service moments) along the way where a customer interacts with a service provider... Service Design aims to improve complete service experience, across touchpoints (…interactions with services) and service moments, across physical spaces, virtual places, graphical objects and social interactions.”

(LIVE|WORK, 2010)
Service Design Roots

Services, like most other concepts, have been around in ancient history, and since the servants were working for Greeks and Romans. (Moritz, 2005) Services as a field of academic study emerged during 1970s although individuals had been interested in it since 1950s. (Segelström, 2010)

Summarizing the evolution in service design field, Brigit Mager can be mentioned as the first professor in service design in 1995, in 2001 Live|Work launched in England as the first consultancy in service design and in 2002 IDEO included service design in their offerings. Spirit of Creation and the Interaction Design Institute in Ivera, Italy also was among those first consultancies which have set up service design departments. (Moritz, 2005)

Today(2011), Service Design Network, initially established in 2004 by Brigit Mager and Spirit of Creation, has around 71 member agencies, 38 universities and schools, and 17 businesses. (Service Design Network, 2011)

Service design in a more structured way has been discussed in the early 1990s, in two different centres. (Segelström, 2010) One was in Politecnico di Milano in Italy, by the head of Ezio Manzini, most focused on Service Design research and the first Service Design PhDs were produced there. The other was in Köln International School of Design in Germany with head of Brigit Mager and focused on creation of awareness of the emerging field.
Why Service Design?

Service sector is one of the three main sectors of an economy besides agriculture and industry. The proportion of the share that these sectors have in the country’s total output, and employment shows the structure of an economy. (Subbotina and Sheram, 2000)

As Subbotina and Sheram (2000) say: “As people’s incomes increase (... in industrialization period), their demand for food- the main product of agriculture-reaches its natural limit, and they begin to demand relatively more industrial goods (... and) as incomes continue to rise (... in postindustrialization period), people’s needs become less “material” and they begin to demand more services- in health, education, entertainment, and many other areas.”

Although most service jobs cannot be filled by machines, services stay expensive related to the agriculture and industry and also employment in the service sector continues to grow while by the development of the technology, employment in agriculture and industry sectors decline to grow. “Eventually the service sector replaces the industrial sector as the leading sector of the economy.” (Subbotina and Sheram, 2000)

Concluding these paragraphs, good designed services are important both for the economies of the countries and organisations and also for the going ahead of them.
Summary

We talked about the changing face of the design (as a discipline and a profession) and the designers’ role. Reasons for this change can be summarized as below:
1. Saturated Markets
2. New Theories in Design
3. Turned Focus to humans
4. Booming of Service economy
5. New technologies

These changes made it necessary for emergence of new approaches in design rather than the traditional ones evolving since industrial revolution. One of these new approaches is service design.

Coming to service design, there are several definitions for the field. These definitions, referred to different people, consultancies and even schools, have a range of keywords about the features of a designed service like: ease of use, user satisfaction and loyalty, efficiency, being usable, useful, efficient, effective & desirable, and etc.

A structured study on service design has been run since 1990s in two poles, one in Politecnico di Milano in Italy and the other in Köln International School of Design in Germany, although the studies have roots in 1970s.
This chapter provides an insight into the process and tools which were used during this project. The first step of forming the process for this project was to study variety of service design processes used by some chosen companies and designers active in this field and then form a process for this project. For the first step of the formed process, discover, cultural probing was used which will be explained in detail later on. The second step was studying the way of analyzing the derived data from cultural probes and performing it.
Part 1:  
Service Design Processes

As mentioned by Stickdon et. al. (2010), service design is an interdisciplinary approach. Service Design combines different disciplines and is using the tools and methods gathered from these disciplines.

The first service design researchers were all trained in other disciplines and moved to service design gradually. (Blomkvist et. al., 2010) A large part of them had background in interaction design. Therefore, more researches were done in intersection of Interaction Design and Service Design.

It is almost the same for service design processes, and the process are gathered from different fields. In the paragraphs below a collection of service design processes used by some selected service design companies and service designers is shown.
Jennifer Bove & Ben Fullerton in their presentation given at Berkeley Center for New Media, (Brove & Fullerton, 2008) described the process for Live | Work as below:

DISCOVER: the design research of the business (internal) and of the customer and the world the service exists in (external). This can include Personas and Service Ecology.

DESIGN: the unmet customers or business needs. This can include Blueprints, Experience Prototypes, Scenarios and Touchpoint Specifications.

DEVELOP: the production

MONITOR: release and monitor. Techniques include RATER (Reliable- Assurance- Tangibles- Empathy-Responsiveness)
Engine Service Design

In Engine Service Design (n.d.), a three stepped process has been used, which break down a little further. It can be summarized as below:

IDENTIFY:
- Orient: getting to know the organization, their business model and their market.
- Discover: to know how things work from the user (of the organization’s service).
In this step, it would be clear that what success might look like and what should be the key issues.

BUILD:
- Generate: generating visual responses to the challenge, through workshops with clients and their customers.
- Synthesize and Model: is about prototyping and testing the ideas. It results in refining and evaluating ideas and propositions.

MEASURE:
- Specify: to specify the services in detail, describing the near- future of a service and in detailing their content and functionality (with scenarios, maps, mock ups, storyboards...)
- Produce: designing and developing touchpoints of that service. (Training the front line workers and the tools to evaluate the experiences
- Measure: to measure the efficiency and effectiveness, desirability, usefulness, usability of the service, with empathy, and to connect the start of the project to the end.
The service design process in Minds & Makers (n.d.) covers five steps, which are developed together with their clients:

1. IDENTIFY: to identify the design problem by asking penetrative and to the point questions.
2. EXPLORE: to get deeper understanding of the whole service system in hand.
3. CREATE: to create the first innovative ideas through co-creation workshops.
4. TEST: to test for the acceptance, usability, viability, efficiency and the effectiveness of the concepts by prototypes.
5. DELIVER: to help the clients through the implementation of the concepts.
Frontier Service Design

The Frontier Service Design Framework, (n.d.) is made up of seven primary components:
In a correspondence with Sarah Drummond, director of design in Snook, via e-mail I learned the process in Snook as shown in the picture with its details. (Drummond, 2012)

Picture 12- Snook™. (Snook, 2012)- With Permission
Stefan Moritz

One of the most complete processes explained for Service Design is Moritz’s (2005). In this process explanation, we can find also tools needed for each step. This process will be useful, especially when you are hired by an organization as their service designer. Picture 13 shows the process that Moritz suggests.
Part 2: 
Service Design Process 
for This Project

The processes mentioned above have both similarities and differences and are customized according to the type and size of the projects which the companies perform. Considering the size of my project, I decided to summarize the processes I studied in a customized small process. Picture 14 is a description for the process I drew and its layers formed by five steps. Each step contains three layers of the process itself, its description, and the layer which lists the tools and methods useful for that step.

![Design Process in this Project](image)

The picture 15 shows the process I drew for this project. The process is similar to common design processes but includes tools from Service Design field. The tools which might be helpful for this project was selected from the list introduced by Moritz (2005) and Stickdon et. al. (2010).
Picture 15. Design Process and Tools pre-designed for this Project.
Part 3:
Service Design Tools

Since Service Design is a multidisciplinary field (Stickdorn et. al., 2010), it employs tools from different fields. The wide range of tools in service design literature are accessible through the online resources like Service Design Tools (2009), and through Stickdorn et. al.'s (2010), Segelström's (2010) or Moritz's (2005) publications. Studying these tools a set of them that seemed to be more relevant for this project are listed below. It should be mentioned that these tools can be used through different phases of a service design project.

Persona

Personas are fictional characters and their profiles (Stickdorn et. al., 2010), representing the target group (client, customer, user) of the study. Personas are used to make the designer or researcher engage with the target group. (Picture 16)
Customer Journey

Customer Journeys follow the customer experience throughout a service (Segelström, 2010), show, the touchpoints and help to see the service from customer perspective. (Picture 17)

![Customer Journey Map](image17)

Service Blueprints

Blueprints are showing how the process for the service is meant to work (Segelström, 2010). It will contain the actions and their priority through service transaction. It is also showing the relationships among the actions. (Picture 18)

![Service Blueprint](image18)
Desktop Walkthrough

Desktop Walkthrough is used to represent the service in a small scale and usually to follow the service experience by designers in a lower cost. 3D models like Legos are usually employed to bring the situation to life. (Segelström, 2010), (Stickdorn, et al., 2010) (Picture 19)

Storyboards

Storyboards are drawn to visualize a particular sequence of a service. It can show the flow of the service and touchpoints within it. (Stickdorn, et al., 2010) (Picture 20)
In this part I listed a number of tools, which looked to be more appropriate for this project. These tools are selected from a large repertoire of service design tools provided by the literature of service design filed, that I gathered during my study for this project. Since listing all tools here could be just an incomplete repetition of the well-prepared publications, for more information it is recommended to read the publications themselves.

**System Map**

The system maps present the service system, its components, stakeholders and usually their relationships. They can be separated as stakeholder maps, and system maps. (Segelström, 2010) (Picture 21)

![System Map](Picture 21- system Map.)

**Customer Lifecycle Map**

Customer lifecycle map represents a holistic visualization of a customer’s overall relationship with a service. (Stickdorn, et al., 2010) (Picture 22)

![Customer Lifecycle Map](Picture 22- Customer Lifecycle Map. (Stickdorn, 2010) With Permission)

In this part I listed a number of tools, which looked to be more appropriate for this project. These tools are selected from a large repertoire of service design tools provided by the literature of service design filed, that I gathered during my study for this project. Since listing all tools here could be just an incomplete repetition of the well-prepared publications, for more information it is recommended to read the publications themselves.
Part 4:
Data Collection; Cultural Probes

To collect data, and discover the target group and their needs, problems and desires, cultural probes were prepared. In this chapter the probe kit is explained in details.

In order to understand the elderly people as the target group of the project, it was essential to jump into their lives and make the empathy with them. It was decided to do this through cultural probes, since the traditional methods of user studies would definitely be hard to communicate with the mentioned age group. Publications of Mattelmäki (2006) and Gaver et.al. (1999 and 2004) were useful references for designing the probes. The first studies had run before, and first materials for the probe kits were prepared during the project done for the development of the game concept in the European project. These materials were translated into Persian, the official language in Iran, and some changes had been made to make it fit more to the context. Picture 16 presents the probe kit for this project.

Picture 23- Cultural Probe Kit.
The Probe kit was a plastic folder containing:

1. **A booklet**- the booklet was designed to ask the participants to introduce themselves at the first page, and the same introducing style was used to introduce the sender. In the next pages, the project and its goal were explained and then each task in the probe kit was described. This booklet was meant to be a guide for the participants to do the tasks. The order of doing the tasks was also considered in the booklet to keep it enjoyable to do. At the end of the booklet a page was designed for the participants to share their opinion about the kit and the project. The booklet ends up with a “thank you” page and the senders’ picture and signature. The purpose behind this was to make more friendly relationship with the participants. Picture 24 shows the booklet in different views.

![Picture 24- Booklet in Probe Kit.](image)

2. **A Disposable Camera**- the cameras were provided with a list of the topics which the participants were asked to photograph, with a space to number the captured items. This list was printed on a sticker and pasted on the back side of the cameras. The taking picture task would be an enjoyable start for the participants and also would be the easiest way to enter their homes and would also reveal a lot of information about their lifestyle and personalities.

![Picture 25- Disposable Camera](image)
3. Storyboard Cards - two storyboard cards were designed to show the journeys participants have during their visit to doctor and while traveling. Texts in the storyboards contained blank spaces to be filled by the participants. Participants could set directions to the texts by their own words. The character in the storyboards was designed unisex to communicate more with the participants. (Picture 26)

4. Post Cards - Five post cards were designed with starting a sentence in the backside. Participants were asked to write to a friend or anyone else. Starting sentences were meant to address the positive and negative aspects of their daily life. The pictures on the post cards were selected from the pictures of Sweden to make sense about the place that the kits have sent from. (Picture 27)

5. Muddy Cards - Three muddy cards were designed with the text “... made me smile today” on one side and “... made me agitated today” on the other side. Participants were asked to carry the muddy cards with themselves and fill them whenever they felt like it. The aim was addressing the sudden and direct feelings just after the agitating or smiling events in their daily life. (Picture 28)

6. Note Card for Articles - A card was prepared to ask the participants to note what they had read recently and their opinion on it. They were asked to attach the article or piece of the book with the paper clip included if they wanted. This would reveal the type of material they read and also give some insight into the interests and values of them. (Picture 29)
7. **Timeline Card**- In this card, a timeline designed, and it was asked to write down about what they have used more in the last five years and what they wish to use more in the next five years. They were also asked to take the picture of those objects and note the picture number on the card. With this task participants needs, desires and fears would be revealed. (Picture 30)

8. **Letter Card**- In this card, a letter was intended to be written by the participants for arbitrary recipients. This letter starts with a preprinted sentence, like "I would write my solutions for three of my problems, so people who will be in my age 20 years later might not have the same problems". The purpose in this task was to know three problems they select to share. It was also possible to get inspired by their solutions for the problems. (Picture 31)

9. **An Envelope**- An envelope was considered in the kits so that participants could put the material in and send back. It was explained in the booklet that the participants could keep the plastic folder for themselves.

10. **Pens**- Three pens of different colors were put in the kit to provide an opportunity to choose the color for participants. Pens had tags with an inspiring sentence on.

11. **Shopping Bag**- It was good to provide the participants with a gift or something for them to keep and remember from the project. So recycled shopping bags were prepared with the logo of the project on it. It was also intended to show the social responsibilities that the sender of the probes believes on.

Fifteen probe kits were sent to Tehran, and friends were asked to distribute the kits among the people over 50 years old. It was not easy to contact any governmental organization in Iran to ask them to distribute the kits, so it was decided to be done via friends and relative networks, and thereupon probes were distributed in Tehran and Oroumiyeh. It was asked from the friends who would distribute the kits to introduce the project in short and ask people if they would like to participate. Collecting the probes took longer than what I expected so I used this opportunity to go back home and collected them myself. Doing this also provided me with an opportunity to have a short discussion with the participants, helping me to understand their situation better. Insights from this conversations will be reflected in discussion chapter.
Part 5:
Probe analysis

The word “analysis” is used in this chapter because of its relevancy in user studies, but it would fit more if we use making sense, outlining or interpretation instead. As Mattelmäki (2006) also mentions that the word analysis is more scientific for probing than what is needed. Therefore, the word analysis, in this chapter, is referring to the process of the extracting findings out of the cultural probe materials rather than its scientific meaning in the quantitative researches.

In qualitative analysis, data is transferred to findings (Picture 32), with no formula, but guidance, so final decision remains unique for each inquirer. (Quinn Patton, 2002)

Picture 32- Qualitative Analysis.
Therefore, the method which will be explained in this chapter includes my insights, interpretations of the probe materials mixed with qualitative analysis methods that I have studied.

**Theoretical Background for Probe Analysis:**

In the modern-called data collecting methods it is the experience of the target group which contains the most important information for designers. While user experience consists of an infinite amount of details, these details should be used in a correct way in the design process. According to what Sleeswijk Visser (2009) calls the qualities of the rich experience information communication, extracting experience information should aim to:
- Enhance empathy with users
- Provide inspiration for idea generation
- Support engagement with rich experience information

Making empathy with the user is what I did for several times during my analysis so it is needed to write about it in a while. Sleeswijk Visser (2009) mentioned that in design literature, it is referred to empathy as imagining what is like to be the user. Considering psychological literature, there are three aspects to take along with empathy regarding transferring experience information:

**Empathy is an ability** - People have different abilities to get the empathy. “Although designers are taught to design products for people, their ability, willingness and education to empathize with the user can vary widely”. (Sleeswijk Visser, 2009) Furthermore, characteristics like nationality, background, age, gender, culture, and life experiences are among factors to determine empathy.

**Two components for empathy** - Psychological literature also characterizes two components for empathy. The first is affective, which refers to the immediate emotional response of the empathizer, like smiling when you see someone who smiles at you. The second is cognitive, which refers to understanding the other person’s feelings by the observer. In this case, the empathizer imagines the empathhee’s situation from his or her own perspective. As Sleeswijk Visser (2009) also emphasizes, awareness of both components is essential for designers.

(Picture 33)

![Visser's components for empathy](Picture 33-Visser's components for empathy. (Sleeswijk Visser, 2009) With Permission)

**Empathizing as a process with phases** - Sleeswijk Visser (2009) uses a four phased process for empathy in design. The picture 34 shows these phases:
Sleeswijk Visser (2009) has applied a general analysis approach for her studies in her thesis. Her approach contains a team of designers and researchers to study the users. Her research project has a qualitative and explorative nature, and the analysis includes both observations and interpretations. Her analysis process can be summarized as below:

1. Browsing through the data (notes, transcripts of the interviews or discussions, videos, photos, etc.)
2. Selecting data which might be relevant
3. Finding and discussing patterns in data
4. Forming categorizations
5. Fix the findings
6. Comparing these findings to findings from the earlier studies. (if they strengthen or contradict them)

This process is an iterative way of making sure that the findings are appropriately linked to the observations.

Sleeswijk Visser (2009) sees the data displays and discussions with co-researchers.
as central elements in her analysis. Components of data analysis in her research are 1) data reduction, 2) data displays and 3) conclusion drawing/verification. In fact, using big displays and walls makes it easier to structure, discuss and restructure and find patterns in data.

Another aspect of Sleeswijk Visser’s analysis is triangulating. (Picture 35) She does it to validate the findings and gets help from co-researchers who have been involved in the study and third co-researchers that have not been involved in the study before.

Sleeswijk Visser’s approach helped me build the first model for the analysis of the probe materials. The second model for this goal was extracted from Mattelmäki’s (2006) approach for analyzing the probe materials.

Mattelmäki (2006) talks about the four forms of the analysis for interpreting the user’s information:

**Applying interpretation models**- Although pre-established models or topics are not the most characteristic of probing, agreed topics as the important ones will help to find the direction to the results. These topics can be tied to the goals and subjects of the study.

**Interpretation in terms of material**- The details in the material can form a basis of the topics. One of the frequent ways of working with probe material is sorting the insights.

**Condensing and combining**- Creating interpretation through organizing materials in topics as a written report, a visual presentation or a browsable website is a way of condensing and combining the probe materials.

**Direct interpretation**- in a case that the designer is also the researcher, she/he can use material as a source of inspiration and direct interpretation, picking up details and elaborating ideas.

Reviewing the literature related to the qualitative research, it was concluded that no concrete method was defined as analyzing method. Combining the models extracted from the literature with my own interpretations, I drew a model for the analyzing process in this work, which will be explained in the next part.
Part 6: Probe Analysis Process

The method I have used in analyzing the probe materials for this project is summarized in the picture 36. The process will be explained in more details in next paragraphs.

When I had the probes back from the participants, I started to browse through them, get to know participants and find common points with them to start empathy. I took notes from each participant’s probe material. These notes were my first insights. (Picture 37)
I collected some of the impressive pictures photographed by the participants and put them on a wall in my working place to keep my emotional relationship with the participants and not to forget them in the other steps of the project. (Picture 38-39)

After a few weeks, I was back again to the probes from writing the other parts. I started with putting walls in my working room. Cardboard walls would help me see probe materials altogether. So I pasted the materials on it in groups for each participant. This made a kind of Action Poster, to have an overview of the participants and their material. (Picture 40)
Then I browsed again and took notes on post-its. Later, I went back to my notes from the probes (the first insight by browsing quickly through the probes), compare them with my new notes to add, combine or condense them. These post-its were all put on the walls with the related participant materials. (Picture 41)

In all these steps, I tried to keep the empathy feeling tied to the participants. The next step was intended to find the notes (on post-its) which get supports across the materials. So I browsed again through the material with each note on hand to find the similar notes in other groups. Then I wrote them on post-its again with different colors. (Picture 42)
After supported notes gathered, through another browse, I tried to extract the ideas available within the materials. These ideas could be the direct ideas which the participants mentioned or from my own interpretations through what they had written or photographed. These were again noted on different colored post-its and will be kept for the future steps. (Picture 43)

Through another browse through values and problems of the participants were also collected. These post-its were then gathered all together and put on another side of the wall to find the relations, connections, and themes between. It was possible to categorize the notes under a specific header which led later to the affinity diagram. (Picture 44)
Summary

In this chapter, the process and its steps in this project was formed by studying a number of the existing processes.
As the first step for the process is “Discover”, the target group of the project had to mainly be studied in the next part to find out more insights into the context. For this aim cultural probing were done and the method were explained in detail. Information about the lives of the target group was extracted by the help of the several materials designed in the probe kits, and empathy was conducted during these steps, after required study about it were done. In conclusion, a number of values, problems, needs, and wishes were extracted as keywords to be developed in the next chapters.
This chapter reflects the results of the target group studies done using cultural probe method. The results presented in this chapter will help to fix a problem or problems in the target group’s quality of life, which will be developed and solved in the next chapters. The information in these results will also help to form the design goals of the projects.
Part1: Probe Results

After collecting insights from the probe material in notes on post-its, the first table of notes was prepared, which is presented in the picture 45. (This picture has been divided into two parts to be readable in two pages)
This table is my first step of drawing Affinity Diagram. I collected the notes all together, then categorized them under headlines.
The Affinity diagram became summarized as the picture 46 presents. (This picture has been divided into two parts to be readable)

Values extracted from the notes, and pictures are listed as:

1. **Strong family ties** - as actually, all the participants were happy with their children and have mentioned them as their important ones.
2. **Peace in the society** - regarding economic, politic, and safety in society
3. **Ethics**
4. **Social responsibilities** like charity activities and keeping environment clean
5. **Spirituality** - religious behaviors and beliefs or mysticism, sophism were shown in their probe materials.
6. **Luxury** - it is important for them to have a luxury house with luxury furniture, and famous brands of goods.

Direct ideas collected from the letters or other materials in the probes are listed in the picture 47.
And the indirect ideas inspired from the probe material are presented in the picture 48.
Part 2:
Synthesize Research Material

My target group in this project consists of people who:
- Are +50 years old.
- Are retired or housewives
- Are Living with husband/wife, sometimes with children also
- In most cases 1 or 2 children are living abroad or in another city
- Have strong family ties
- Feel lonely far from children and have concerns about getting old and becoming more alone
- Are social in friend groups and sometimes relatives
- Most of their activities consist of: housekeeping, bank affairs, shopping, reading, social responsibilities, gardening (in big cities just indoor plants), internet surfing
- Mostly suffer from back pain- this might be because of wrong lifestyles and low physical activities
- Transportation in the city is considered as a problem for them. Like crowded traffic while driving or crowded and unscheduled buses and unsafe and expensive taxies
- Are angry to expensive life costs, hopeless and stressed society, hot weather in summers, seeing garbage around.
- Are happy with nature, flowers, being with friend, family, grandchildren, and funny e-mails and SMS they get sometimes.
- Wish to have a peaceful society, share their experiences and give advice
- Spirituality is important for them.
Part 3: Personas

Four personas were drawn for the projects combining the participants’ characters and also inspiring from them. Actually, it was possible to use the participants’ characters and profiles themselves as the personas since the number of them were small, but they would like not to reveal their real identity and information about their lives. Therefore, new characters were extracted from the participant materials.
Each persona with a short description is presented in the pictures 49-52.
Fahimeh

Fahimeh is 52 years old and lives in Tehran. She is a retired nurse. She has divorced and lives with her two sons. Her older son is studying in another city and she is happy when he comes home. Fahimeh takes care of her old mother who lives in nearby. She is active in charity activities and feels happy in that. She has a lot of social networks and likes friend visits. She does hand crafts and likes home decoration. Her sons’ study is important to her and tries to support them. Fahimeh is tired of housekeeping and official procedures which always takes long and causes troubles. She is angry to the insecure society and expensive life they have in Tehran. She likes plants in her apartment and watches movie in her free time. She likes to surf in the internet to learn more and read news. She goes to café and restaurants with her friends. She is still hopeful of having a better life with more peace. :)
She suffers from back and neck pain.

Bahman

Bahman is 50 years old and lives in Tehran. He is a retired bank employee and now is the head of a committee for retired bank employees. He lives with his wife and 2 children. His oldest daughter got married and lives in the same city. Bahman likes to spend his time with his family and goes to picnic with them. He spends rest of his time in his small garden in countryside.

Bahman does the technique repairs and helps his neighbors. He is trying to learn to use internet with the encouragements of his children. It is fun!!!
He feels pain in his back recently.

Bahman worries about the economical development of the country. He gets angry when he sees garbage thrown around. He is not social with friends and doesn’t like to share his opinion in general, and specially his politic views. He has concerns about his children’s future.
Soheila
Soheila is 54 years old and lives in Tehran. She is a retired teacher. She is living with her husband and has 2 children who are living abroad. She misses her children a lot. She has to do housekeeping but a woman comes to clean her apartment once a week. She does exercises and walking, learns to play a musical instrument. She travels a lot and has a summer house in her hometown, Gorgan.
Soheila tries to use organic food and surf the internet everyday. She likes internet because she can communicate with her children and also read funny, interesting e-mails. She laughs a lot to the funny SMS she gets from friends. She is social with her friends and participates their family friends’ home parties.
Soheila is angry to the police because of their action against clothing and also the crowded streets in Tehran. Although she tries to keep motivated. ;)
She has no physical problem but does aesthetical surgeries.

Parvin
Parvin is 69 years old and lives in Tehran. 2 years ago her husband died and she lives alone now. Her 3 children are living nearby and come to visit her relevantly. She has not worked during her life and is a housewife. She has difficulties in walking because of her pain in her knees. She also has heart problems which is under the control of her doctor.
Parvin is religious and reads Koran and prays during the day. She is happy when her gand children come to visit. She feels lonely without her family with her. She needs help in transportation, such as when she wants to go to visit her doctor.
Parvin likes to give advice to younger adults about her experiences in life.
The room in which her husbands dead body found is the hectic place for her. She seems hopless ;(
Summary

In this chapter, the results obtained from the target group studies, done by cultural probing method was presented and ideas from this study were listed to be developed in next steps. Additionally, a brief list of the information about the target group is formed. The most important part of this chapter is the personas drawn to be the image of the target group. Fahimeh, Bahman, Soheila and Parvin are characters who will represent the target group in this project.
Chapter 5
Using Theory for
This chapter customizes the theories explained in chapter 2 into this project. The target group is known now and it is required to look at the theory once more and this time with the knowledge gained about the target group of the project. It is tried to summarize how these theories play role on the quality of lives of the target group of this project.
As mentioned in chapter 2, quality of life for elderly people has six core components as shown in the picture 53.

To improve the quality of life for elderly people we can focus on these components and try to improve each according to the data from our research. The important point is that regarding the elderly definition in the context of Iran some of these components might get less importance. For example, according to the pension system in Iran, elderly refers to the 50 years old people and over. This means that they don't face health and functional problems yet as the elderly face in the age of 65 and over. This fact is also supported in the findings of the probes since participants do their housekeeping themselves and independently. In some cases, there was a paid person to help in a participant’s housekeeping which refers more to the social class of the participant rather than his/her physical need. The most important point mentioned as their health and physical status is back pain, which can be related to the unhealthy lifestyle and low level of activity also. So for the target group of this project health and functional status is no longer the most important component.

Looking again to the quality of life components, this time with the project target group in mind will help to find points which could be improved by design.

**Psychological Variables**
- People in this target group start to feel lonely by the time they get retired, which is approximately simultaneous with the time their children start to leave the home.
- They feel unsecured in the society considering the political, economic and social
status of the country. Since they have mentioned that they wish for more peace in society.

**Health and Functional Status**
- The people in this target group are +50, and the most important physical problem which they pointed to is back and neck pains.
- One of the participants who was the oldest one had also heart problems and pains in knees.

**Social Relations, Support and Activities**
- These people have strong family ties.
- They are social with their close friends and participate in the home parties their relatives or friends prepare. But they seem more conservative when it is time to communicate in public, since the governmental rules they might have different lifestyles at home and in public.

**Economic Circumstances and Independence**
- They mentioned in the probe materials that they have economic concerns, and become happy when they have lower monthly costs.

**Environmental Conditions**
- They have pointed that they get angry when they see garbage all around city and there was a picture showing a pile of garbage by a road.
- The crowded traffic in city also makes them angry and turns the streets to a hectic place for them.
- The crowded buses were also an environmental issue that bothers them when they have to transport with.
- It is hot in summers which make it difficult to transport in the city. This should be mentioned that the probe kits were distributed in two cities, which have hot climate in summers. This could be different if the participants were from cities with different climates.

**Leisure Activities and Mobility**
- As mentioned above these people are social with their close friends, participating in their home parties, in some cases going to café and restaurants with them.
- They like to participate in charity activities.
- In some cases, they participate in religious or spiritual activities.
- They would like to participate in courses like handcrafts, playing music instruments.
- Only one of the participants mentioned that goes to gym and daily walking.

Coming to the theories from service design field, a number of them could suit this project best, which are used in the next chapter to visualize the idea.
Summary

Components of the quality of life for elderly can be listed as below according to their importance for the elderly in this project:
1. Psychological Variables
2. Social Relations, Support and Activities
3. Economic Circumstances
4. Leisure Activities
5. Environmental Conditions
6. Health and Functional Status

These items can be assumed as tips to ideate around.
How to use:
1. Describe the problem or issue.
2. Write each idea in a sticky note & put on a wall.
3. Emphasize volume/subordinate judgement/piggyback on another.
4. Sort ideas into natural themes by asking:
   - similar ones / is one connected to another?
5. Create total group consensus:
   - “shared meaning of the each stated groups”?
   - “stand-alone” ideas if don’t fit today theme.
   - Create duplicate if an idea fits to more than 1 theme.
   - Total number of themes: 5-9
6. Create theme cards = affinity cards = header cards
   - 3-5 word description
   - put at the top of the theme group.
   - if needed, create super header to group the
     ➡️ 5x sub-header
   - draw lines connecting the super header.

Grouping ideas under headings and grouping headings:

Action Posters = EMPATHY Browse

...
In the previous chapters, it was attempted to draw an image of the target group of this project and their possible problems. This chapter will show the design solution for the total situation of the target group’s quality of life since a range of problems was discovered.
Part 1:
Design Goals

According to the studies on the target group, it is possible to draw these design goals:

1. They get retired in an early age- Although they have still around 20-30 years of healthy living, but they start to feel old and useless in the society. They need programs both for entertainment and sharing their knowledge and capabilities.

2. They have strong family ties- They usually have their children living apart or abroad and see them rarely. They have built their lives on their children’s and feel alone when they leave the parents for their own lives. So the elderly need to fill the blank with social relationships.

3. They don’t feel satisfied with the society- They are angry with different issues in the society and can’t find solutions for them or may have solutions but can’t share them anywhere! They need a context to complain and find solutions for their problems. It can be the garbage collecting system, expensive life costs, or crowded traffic in the streets.

4. Changes in official procedures happen- New changes happen in the official procedures and they can’t cope with in the terms of technology or the process. They need supports to learn new technologies and official procedures in their country system.

5. They are not social- Regarding the social system of the country they are not so much social with people they don’t know. They had to hide their real opinions, and lifestyles because of the force of the government or the public mind. A support coming from a non-governmental context can encourage them to be more social with people other than friends whom they already knew.

6. They have lifestyle problems- According to the data of the probes this group of people suffers from neck and back pain, which can be solved by a normal level of physical activity. The service can provide programs of physical activities.
Part 2: Ideation

After the design goals were formed, I started to read about the available service design projects done for elderly with the knowledge for the target group of this project in mind. This could help me in figuring out the level and types of the solutions for this target group and also inspire me in finding a solution for my design work. Reading the case studies and taking notes, the first ideas came to mind and the concept of the service to be designed was formed. (Picture 54)
A number of the projects studied in this step are listed here:

**Activmobs: new services for active lifestyles**
As is written in the project website, activemobs (Activemobs, 2004) is “a platform that supports people to get active and stay active in a way that fits with their lifestyle, interests and abilities. Groups of friends choose an activity and gain access to support from a personal trainer. It’s an economical way to enable people to be active in a context that is comfortable and social.”
This project was done with Kent County Council and RED (a company set up by the Design Council) in UK, to design a new Health Service to help people to stay active.

**Interactive Bulletin Board**
In a project to help elderly to be able to live independently in their own homes with a support for their everyday routines, a message based interaction platform with a communication product was prototyped for elderly people with the name of interactive bulletin board. “This board provided the user with messaging function using a known interaction metaphor.” (Interactive Bulletin Board, 2008)

**Caring TV**
“CaringTV aims to design virtual, interactive service concept with and for elderly people in order to support the well being and the quality of life in the elderly... Caring TV is a two channel interactive TV system through which guidance and support services are given as various participative programs to improve and promote the capacities of elderly people living at home.” The programs are designed together with experts and elderly according to their interests and needs. (CaringTV, 2008)

**Vitalizing Care Homes**
In order to make care homes a better place for elderly a number of designs were done by Fuelfor team. One of the examples is designing combined care facilities for elderly and children to reconnect generations through shared activities, which result in positive impressions. (fuelfor,2009)
Considering the size and possibilities of this project and the idea which is developing in this chapter a number of tools are chosen among those described in Chapter 3. This selecting is done according to the idea and the tool which can visualize it better. (Picture 55)
Part 3:
Design Scenario

According to the core idea of the service for this project, I wrote the Design Scenario to show the service concept.

“Virtual family”- A family of a society:
Our personas are in a network that is supported by a community/organization. In this network, members have access to each other via hardware in their houses that makes connections with other hardware in the network. This community/organization has branches in each city (if it is a small town) or in each area in bigger cities. It keeps track of the elderly in range. Each member has a profile in the community/organization, which is updated regularly. The community/organization is basically responsible for taking care of the elderly physically, supports them morally, and provides them with those programs which fill their spare time in a useful and enjoyable way, teach new technologies needed for their daily lives, new procedures in the governmental system, and helps them improve their life style. The community/Organization can work either by governmental support or volunteers in the form of a charity. In the charity form, each member both gets advantages of the programs within the community/organization and works for it in the fields of his or her capabilities. We will assume this community/organization as a NGO (Non-governmental Organization) in our visualizations here although the concept can be performed within a governmental context.

The hardware is consisted of a screen installed in the elderly members’ homes and has a simple interface. The total view of the screen is like a bulletin board and users can put notes, read other members’ notes as they put on the members’ board. They can also put their favourite pictures on the board digitally. The person in charge of a group of elderly in the organization sends the plans for each day and members click on the event note if they like to participate. There is always a telephone support from the community/organization in case of need. The hardware can contain the “Activity Recognition” technology in case of the

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1Activity Recognition—As a simple description for this case: Activity Recognition refers to a system that makes a list of a person’s daily and routine activities by a series of observations. This system recognizes the activities by sensors in the person’s living place and informs the server (central station) in case there is a change in the list. This can help in long-distance observation of the elderly who are living alone. For more: http://en.wikipedia.org/wiki/Activity_recognition
members who has a severe disease or is living alone. This network is forming a virtual family regarding the traditional values and ethics which are important for that age group and youth don’t value that much anymore. Values such as helping a neighbour who is sick or alone, considering a clean environment for all of the people.

The members can ask questions both to the network and the community/organization like “How is the new procedure for paying the bills?”

The community/organization forms the list of the daily programs according to the members’ questions, needs, and interests.

The basis for relationships in the network is friendship and they can continue with their friendship out of the network if they like.

In case of the users who are not familiar with internet and such technologies, the software can be implemented to TVs’ text channels, but a technical support will always available from the community/organization.”
Part 4:
Service System Map

To make the image of the concept clearer, a general system map is sketched for it. In this map (picture 56) you can see the NGO consists of different experts like a doctor, psychologist, administrators, technicians, and etc. The NGO has the connection with a group of elderly via a communication device implemented in their homes which is connected to a server in the NGO.

If we look in more details as in the picture 57, the NGO itself consists of a council, a number of administrators and research group inside the council. These 3 groups are working closely together. Each administrator is in charge of a group of elderly in an area keeping the contact with them via their communication device and profile in their network account. It is also possible to keep this contact with telephone or even in-house visits in case of need. The administrator transfers the data related to the members to the council. In fact these administrators are the faces of the NGO for the members.
Council gets the data from the administrators and evaluates and uses them with the research group to form activities for the members. Additionally, the research group can generate ideas for those activities that can improve the elderly members’ lifestyles.

In the picture 58, a summary of the activities in the council is shown.
A summary of the activities of each administrator is also shown in the picture 59. Of course these activities can differ according to the members in her/his group and their health status and needs.
To link the service concept with the personas of the project (Shown in the Results Chapter), I sketched storyboards presenting personas using the service. (Picture 60 & 61)
The first storyboard is taking place in Fahimeh’s house. (Check the profile picture for this persona in the related chapter). It shows how one of the personas can use the service, how the communication device can be placed in her house according to her lifestyle and preferences, and how the user can interact with it. In this storyboard a sample interface for the hardware is also shown just to make an image of it but it is not designed completely.
In the second storyboard one of the activities is selected to show how different personas can attend the activity and use the service. “Investment ideas” is one of the activities that can be interesting for the target group of this project since according to findings, they had economic concerns for their daily life and also the development of the country. Fahimeh and Soheila have seen the activity notification in their network page and are talking about attending it while they have their conversation in a phone call. Bahman is using the application or the software, in the personal computer at home and thinks that this program will be an interesting one since he has worked in a bank for years and would like to update his knowledge. Parvin is using the service via her TV text channel because she is the only persona that doesn’t use a computer and is not familiar with internet.
Picture 60: Storyboard 1: A Day in Fahimeh’s House.

1. Fahimeh wakes up.
2. Another day has been started.

3. Fahimeh checks the weather and determines what to do today.
4. Fahimeh decides to make cookies.

5. Fahimeh starts preparing the ingredients.
6. Fahimeh mixes the ingredients in a bowl.
7. Fahimeh heats the oven and puts the dough in.

Fahimeh looks at her digital family and talks to them.

Virtual family: Let’s see what’s on today.
Hm! Workshop on “Investment Ideas”! Seems interesting! There are 8 members participating! Let’s ask who will be the lecture!

Did you read about the workshop news Virtual Family launched this morning?!

Yes! I will attend and also take Parvin there. She said she would like to go but it was hard for her to reach there!

Will they guide me to invest with my savings?

Let’s ask if anyone can take me there!

But the location is too far for me!

The workshop was held and different ways of investing in the current economical situation, and new procedures were explained in a simple way. The lecturer also guide participants individually.
Part 6: 
Other components for the Service

Based on the data from the probes (shown in the Results Chapter), a list of possible activities is mapped in the picture 62. Although the research group in the corporation with council should generate and develop new programs and activities.
The first layer of the activities can be performed regularly, the layer which consists of activities related to their health and lifestyle. In the second layer, there are activities which are created according to the members’ needs, problems, suggestions or the research group’s projects.

The picture 63 shows examples of the specifications which the software for the network should have:

![Examples for the Software Specifications](image)

- **Digital bulletin Board:**
  - Add Picture
  - Add Notes

- **Profile:**
  - Personal Info.
  - Capabilities
  - Fields of Interest

- **Calendar Page**

- **Form the “To Do List”**

- **Favorite Stores, Magazines, Newspapers Page**
  - Launches the latest news of these

- **Add/Find Friend Page**
  - Chat friend

- **Mail Friend**

- **Contact to the NGO**
  - Mail, Telephone, Chat

- **Digital Diary**

- **Reminders by voice/image**

- **Activity Page**

- **Notifications**

*Picture 63- Specifications of the software of the communication device.*

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### Part 7: Service Blueprints

Considering the process and the journey which the service has through its touchpoints, service blueprints have been prepared as shown in the pictures number 64 and 65. It is possible to follow the service through the time and its components.

In picture number 64, the first stages of the service have been taken into consideration, when the service is born and users are getting to know and start to use it. In the picture 65 users have been turned into members and are using the service.
SERVICE BLUEPRINT: MEMBER USES THE SERVICE

PHYSICAL EVIDENCE
Communication Device

Physical Environment of an activity

Activity Page

MEMBER ACTION
Decide to Participate or Not participate in an activity
Read Private Messages
Write Notes
Add/Share Pictures
Participate in an activity
Comment on activities
Suggest new Activities
Announce to work in an activity (Volunteer)

LINE OF INTERACTION
“Like” Button
Inbox Page on Device screen
Note Page on Device screen
Picture Page on Device Screen
Activity /Program

FRONTSTAGE
Administrator

LINE OF VISIBILITY
Technical Sys. /Admin.’s checks

BACKSTAGE
Technical System

Organizer/Host NGO/…

INTEGRAL INTERACTION
Support Process
Arrangements of the council

Council & Admin.’s Arrangements

SOFTWARE SYSTEM

Time Progress
Procedure

Picture 65- Service Blueprint 2.
Summary

In this chapter a supporting-networking service was developed to improve the quality of life of the elderly people in Iran. Considering the needs and problems of the target group they need a service that supports them both socially and individually (especially in case of the elderly members who have difficulties in their mobility and health). In this service elderly in neighbors groups are members of a community/organization (assumed here as a NGO) which keeps their daily health and welfare status updated, prepares activities to improve their lifestyles and quality of life. The members can network through the communication devices they get and can have their virtual relationships and activities through them. The networking specification of the service can complement their losing family structure or conservative friendship relationships. They are encouraged to participate in social activities because of the educational, entertainment or lifestyle approaches they have. Members can also participate in working for the organization if they want.
After designing the service concept, it was shared with a number of the people in the same age group to get their feedbacks and comments. This chapter will reflect the results after their evaluation.
By ending up with the service concept and visualizing it, it was intended to evaluate it by the target group itself. Regarding the size of the project it was not possible to do the evaluation with a group of people in Iran. Again asking to the family and friend networks, 5 Iranians were volunteers to participate in this evaluation, one living in Iran, whom the contact was made through e-mail. The rest of the participants were selected among Iranians living in Linköping city who are traveling to Iran more often and are familiar with the recent life conditions of the real target group. As the evaluate package, a summary of the project and the processes used in it was prepared with necessary pictures and visualizations of the concept. A short questionnaire was also prepared to ask their opinion about the concept after they read the summary. These materials had been sent to three of the participants including the participant from Iran and two interviews where done with other two from Linköping.

In particular the evaluators assumed the service concept as an excellent concept for the predefined case study. They called it as “Ideal Concept”, “An excellent concept as a vision”, which will help “Improve the life expectancy of the elderly”, and for the members of the target group that “...are on the verge of losing the existing family structure, which can be complemented by possibilities of networking.” It was also seen as a motivation for the target group to provide them with a space to work and share their knowledge and experiences, which will help them, feel more productive.

But they were not sure if its planning is detailed enough and if the concept can be practical in Iran system. Two of these 5 evaluators believed that such a concept needs the governmental support even if it has the charity form, and by accepting the governmental support it will be abused by the political views of the government and will be forced to change nature according to their political advantages. Also having a weak welfare system in the country the quality of the service is not guaranteed when it is implemented. There are not so much good examples of such

“In any case, the possibility of networking (something like Facebook or a specialized one for this age group in Iran) would be very important and can lead to improvements in their lives that we cannot even imagine ... they just have to learn how to use it first.”

Jalal
organizations in the country of study, like Imam Khomeini Relief Foundation (2007-2008), State Welfare Organization of Iran (2012), which although they are trying to improve the quality of life for Iranians, still good results are not seen and their reliability is under question.

Considering the personas of this project, evaluators believed that this service concept will encourage Fahimeh and Soheila more to be a member, participate in the activities and work for it comparing to Parvin and Bahman. But if the service and its programs can be customized more with Parvin and Bahman’s health and functional problems, technological capabilities, and interests they will also be encouraged to participate.

One of the strong points of the service concept was mentioned as its novelty which will be brought to these people’s lives. It would encourage them to check the network page every morning and will be encouraged and pushed to participate in the activities when they see that someone has planned a nice event. In the interview with one of the evaluators said that: “If I was in Iran and saw that Fahimeh and Soheila are participating in such a network, I would do the same also.” It was also mentioned that the activities shouldn’t fill their whole week and it would be more proper to have activities 3 days a week since they would need time to handle their housekeeping and their private life.

It was also asked to the evaluators to share their ideas and suggestions in the case defined for them in this project. Good recommendations were given which are listed as below:

- It would be better to consider a part in the organization/community to provide job opportunities for members who seek. As it was written in the evaluate notes that “Some of them really need to start a new career” and “great economic problems are in lives of a group of them”.
- One of the activities can be book readings for children in city libraries or primary schools, which can be loved mostly by Soheila.
- One of the most important challenges for the organization/community will be the economic problems of the members, and their weak supported healthcare and insurance system. This should be taken under consideration when improving the service concept.
- “They should be able to play a role in their social and private life, and they should be able to decide over their lives.”
Summary

In conclusion, it seems that the service concept in its nature is a good solution for the predefined case, but its success is strongly connected to the possibilities of performing it inside the country of study and its organizing system. The nature of networking can be a complementary activity in the lives of the target group and activities which aim to provide them with “some sort of lifelong learning programs, where they are introduced to the new technology (WWW, advanced telephones,) and how it could be used for their advantage” are the best aspects of the concept. It will also provide programs for their leisure time, which will result in spending the day without thinking about loneliness and aging and instead filling it with lifestyle-improving activities. But the most important step to take this concept to reality will be the study of the organizational system in the country of study and the possibilities of starting such a network considering the political and technological conditions of it.
Chapter 8
Discussion
I will start this chapter with my research questions and discuss if I could answer them with my service idea. The second part will include my notes on my project and its process, discuss the items which could make it a better work if there were the opportunity to go back and include them, and then mention the points which could strengthen my work. In the last part I will talk about the next steps in this project and also the opportunities which this study can provide.
Answering Research Questions

One of the research questions for this project was “What is the quality of life for elderly people in Iran?” So there were 2 variables to go through them: 1. Quality of life 2. Elderly people in Iran.

For this aim, the current level of knowledge for Quality of Life studies was researched. It was important to know about the definition of the term “Quality of Life for Elderly”, its components and other related terms. This study could form a required level of knowledge to run a project in this topic.

Considering the topic of the project it was also important to draw an image of the “Elderly in Iran”, “Who are called elderly?”, and “What is their demographic information?”

It could be better to have a governmental support to get the latest statistics, but regarding the size of the project it was only possible to use the online resources, which were not still trustworthy.

Using Cultural Probes I could get to know the “Elderly People in Iran” closer. I could learn about their lifestyles, concerns, wishes, problems, their social awareness and life expectancy. It was useful to know what can make them angry or happy.

The second research question mentioned for this project was “How a designer focused on service design can help the Elderly People in Iran improve their Quality of Life?”

For this purpose, it was needed to have a required level of the knowledge in service design. Therefore, definitions, terms, processes, and tools were studied and mentioned in the thesis based on service design literature.
By the help of findings from the probes and combining them with the methods and tools from service design literature, an idea of a service was sketched and developed in the Design chapter.

To test the service idea designed in this project it was evaluated by a number of people in the same age group of the target group, one from the same environment and others from Iran but living in a developed country. These people have often visits to the country of study, which provides them with recent news on life conditions from the context country and also helps them to have a level of empathy with the real target group.

The results from this evaluation of the concept showed that the service concept can improve the quality of life of the elderly people in Iran, but its success is strongly connected to the possibility of performing it in the country system.

In conclusion, it is possible to say that the second research question is partially answered and to put it in reality it is needed to study the organizing system of the country of study and complete the concept again according to these studies. This will be put in “Further Work” chapter and will be assumed as the next step for this project.
Notes on This Thesis Work

In the paragraphs below I will write about the notes which I took all through the project to form my own evaluation of my work, to list what could make it a better work and what were the points which made me overwhelmed most.

As mentioned before the starting point for this project was the project about the development of a game concept, a part of a workshop arranged within the project “European Network on forward policies and actions for the seniors in Europe” run in Linköping University, in 2010. This caused some restrictions for this project although it had lots of advantages besides, which will be explained here.

It was not possible to get a governmental or organizational support for the project which if could be possible the probes could be distributed among a wider range of the elderly in the country. It could result in deeper studies of the target group if it could be possible to have participants for probes from different cities in Iran. For the mentioned reason the friend and relative networks were used to find participants for cultural probing, so they were approximately from a same social-economical classes.

On the other hand the probe materials were mostly the same materials used for the European project. The only changes done for these materials were translating them into Farsi and small changes in the texts. It would conclude in better results if the probe kit were designed especially for the elderly people in Iran, considering their general capabilities, cultures, and values. In its nature, probe designing is an important part of the research studies which were not taken to consideration as is needed in this work and could have been researched and designed in a same scale with what was done for the European project. When asking people to participate in the probing there were a number refusing because it seemed too complicated for them while it could be designed simpler to address more types of people even with minimum level of education. There were another group of people who were more conservative and didn’t like to share their privacy with strangers in a research project. So the group who accepted to participate in probing was a special group of people and the results after analyzing the probe materials were special for this group and in conclusion the service designed after the studies may work only for this group and not for a wider range of elderly people in Iran. So if an opportunity was in hand to do the target group study again, it would be possible to redesign the probe kit covering more people and helping to draw the image of a larger group of elderly people.
Another point in probing was about the photography task in the probes. In most cases participants couldn’t take the exact photograph of the topic asked, since they were not familiar with the cameras, although it was explained a little in the booklet in the probe kit. But still the pictures showed a lot of unmeant information. For example it was possible to learn about the types of the books they read when they took picture of their bookshelf, trying to take the picture of their living room! Therefore pictures and cameras should always be kept in probing tasks. It also contains information about the emotional status of the participants which is not revealed in traditional methods like questionnaires. It is possible to see their loved ones pictures on their refrigerator or on their living room wall which helps to make a bridge for the researcher to their emotional relationships.

In particular, probing is a useful tool to make the target group itself involved in the study, which provides lots of information and even ideas by their own language for the researcher and/or designer. This method was useful since made it possible to jump into the lives of the target group of the study and watch their homes and environments through the pictures they had taken, read their concerns with their own vocabulary. The exciting nature of taking pictures, writing post cards, and tasks like these helped to uncover the private lives of the people who seem to be conservative to reveal it consciously. To this point cultural probes are great tools for target group studies. It was also easy to draw personas and scenarios based on the characters and lifestyles of the participants in probing which could help in design phase.

Theories about analyzing the probe materials were useful to extract data from findings in probes, and combined with the theories gathered before it was possible to form design goals for the project.

Being both researcher and designer in this project and also being grown up in the same society with the target group of the project had both positive and negative reflects on the results. In some stages it was hard to get out of my own experiences and insights and solve their problems like a designer but in most phases it helped me to make the empathy easier with the participants and understand their notes better.

It could also have better results if there was an opportunity to test and evaluate the concept in real context, in Iran. It could provide useful points to redesign if it was possible to prepare workshops and involve the elderly people in Iran to test the idea.

The last point from my notes is about the process designed as the service design process in this project. The process in the chapter 3 could draw a general path to move on during the project. It showed me where to start, which steps to pass and also which tools to use during the steps. Although the tools written for each step are chosen among others, still they were not all used in this project. This process can be used in most of the cases and only needs to contain more completed list of tools to be chosen by needs of the projects. However, it is recommended to be reviewed and modified according to the properties of the projects.
Further Work

Since the research made in this study is done in continuation of another project run for the same target group in Europe, it can open up for a new study based on comparing the results in EU and Non-EU countries. Since the materials and information is in hand it is easy to compare the quality of life for elderly people in these two different contexts.

Coming to the concept of the service designed in this project and to put it one step ahead, it would be necessary to study about the possible organizations or communities which can perform this service. It is important to learn about the governmental and non-governmental organizations and their working system in the country of study. How they deal in the society and how they can find sponsors. This can make changes in the concept or cause to add components to the designed service to be adopted by the existing system or even improve it.

Another major aspect of this service which should be taken to consideration is the technical side of the concept and the communication device, which should be designed in terms of the software and the hardware. The product design of the communication device is another part of this work.

Since this concept was evaluated by a short number of people who were mostly living out of the country of study, testing the concept inside the country of study with the real target group, or even involving the participants in the probing part within a workshop to evaluate the final concept would be a good complementary next step. This should also be fruitful to see how the participants of the probing part evaluate the flow of the project in their own view.
6. CaringTV. 2008. Available at: http://www.springerlink.com/content/78w8h2q2973x03g1/about. [Accessed: 18 April 2012]
Appendix
Collected Probe Materials
... أمروز مرا عمیانه گرد.

I was visiting a big mall, where many expensive products were available to buy. It was too hot there. I wore a t-shirt before the special time on the airport. The taxi driver was angry.

... أمروز مرا عمیانه گرد.

He was looking for passengers to pass by me. He offered me $10 for a long distance. He was a very kind person. I was pleased when she smiled at me. (Good)

... أمروز مرا عمیانه گرد.

I said Food for a charity today. The cost of this meal doesn't cost a lot. People are prepared. I was pleased at what she revealed to me. (Good)

... أمروز مرا عمیانه گرد.

On my way back home I had a heavy bag. But I was happy laughing. I enjoyed it.
A Normal Day

[Handwritten text]

Don't know if my B.O.U.D. is up to a pint of

[x] yes

[Handwritten text]

Two P.M. I put together

[Handwritten text]

instead of

[Handwritten text]

in bed

[Handwritten text]

to the office. Shop-bought a pint of

[Handwritten text]

the office. Shop-bought a pint of

[Handwritten text]

Two P.M. I put together

[Handwritten text]

instead of

[Handwritten text]

in bed

[Handwritten text]
I thought about myself and what I want our society to be. These texts can give you a number of needs our society needs to fulfill.

I will be glad if my writings can help your team to make nations get closer. And complains for the short time you gave us to live.
Evaluations

Sonia:

Please answer these questions after you read files number 1 to 3 attached to your e-mails.

1. How much could you imagine the idea of the “Virtual Family- A family of a society”; a little to some extent a lot
2. Do you think that Fahimeh, Soheila, Parvin and Bahman will like to be a member of this network?
   I’m sure that Fahimeh, Soheila and Parvin will like to be member of this network but I’m not sure if Bahman will like that.
3. Will they be interested in participating in the example programs?
   As mentioned in the previous question, everyone except Bahram will participate in the example programs.
4. Will they like to work voluntarily in the programs of the network?
   Yes, I think so.
5. Can you mention the weak point or the strong points of the idea?
   The program as a vision is excellent but it needed detailed planning.
6. What could be your suggestion(s) for improving the quality of life of these elderly people?
   They should be able to play a role in their social and private life and they should be able to decide over their live.
Jalal:

Please answer these questions after you read files number 1 to 3 attached to your e-mails.

1. How much could you imagine the idea of the “Virtual Family- A family of a society”?  
   a little  to some extent  a lot  
   To some extent

2. Do you think that Fahimeh, Soheila, Parvin and Bahman will like to be a member of this network?  
   Yes.

3. Will they be interested in participating in the example programs?  
   I think so.

4. Will they like to work voluntarily in the programs of the network?  
   I am sure they will.

5. Can you mention the weak point or the strong points of the idea?  
   Weak point: Usability of the available systems for networking, this will discourage many users.
   Strengths: Most of the personas are on the verge of losing the existing family structure, which can be complemented by possibilities of networking.

6. What could be your suggestion(s) for improving the quality of life of these elderly people?  
   - Most of the people in this age group need to enter some sort of lifelong learning programs where they are introduced to the new technology (WWW, advanced telephones, …) and how it could be used to their advantage.
   - Some of them really need to start a new career, but that topic is outside the scope of this project.
   - In any case, the possibility of networking (something like Facebook or a specialized one for this age group in Iran) would be very important and can lead to improvements in their lives that we cannot even imagine. As I wrote earlier they just have to learn how to use it first.
لطفا بعد از خواندن فایل های 1 ای 3 این سوالات را پاسخ دهید. لطفا در بیان نظراتتان راحت باشید.

1. ایده شبکه اجتماعی "خانواده مجازی" تا چه حد برای شما قابل تجسم بود؟
   - زیاد
   - متوسط
   - کم

2. آیا فهمیدن، شهریار و بهمین علاقه مند به عضویت در آن خواهند بود؟
   - فهمیدن و شهریار به احتمال 90% + بهمین 70 + بهمین 50% -

3. آیا برنامه های پیشنهادی برای این چهار اثر جذاب خواهند بود؟
   - بستگی به نحوه اجرای برنامه دارد. به نظر من هرکدام از افراد فردی از افراد گروهی از افراد جامعه هستند و گروه هایی که نباید با شخصیتی مختلفی در جامعه ایران وجود دارد که در برنامه ریزی باید در نظر گرفته شود. کل برخوردار توجه است ویژه برنامه ریزی بسیار مهم است.

4. آیا 4 شخصیت بروز برای همکاری با انجمن داوطلب خواهند بود؟
   - فهمیدن و شهریار به احتمال زیاد بله.
   - برای دونفر دیگر جلسات توجیهی ویژه هرکدام نیاز است.

5. پیشنهاد شما برای بهتر کردن کیفیت زندگی افراد جهت مردگی این افراد جه منابع بهتر است؟
   - در این سرویس خدماتی، جای دادن آنها در گروه های با برنامه های ویژه و مناسب با علایق مشترک آنها.
   - باعث جلب شان به ادامه همکاری و شرکت در برنامه خواهد بود.

6. نقطه ضعف یا قوت این ایده در چیست؟
   - ایده خوبی است و به به‌هم‌آمیزی با طرفداران کمک می‌کند. ولی در ایران جنرال قابل اجراست.
   - اگر این ایده در دولت دوستی دارد و دوستی دارند و درست است با خصوصیات سیاسی جنگ حکومتی-
   - خواهد شد (مانند کمیته امداد)، نظر به موفقیت انجام یافته اینکه اینکه اینکه اینکه کار بر جنگی نیست. مگر اینکه باعث در حکومت اتفاق بیفتد و کلا نکه، ای. ها مورد حمایت مادی و معنوی حکومت قرار گیرند.
سلام سونای جان علی غریب من در خواندن این بوک همیشه نظر چندی درباره آسانی های تاریک و سال خودم داشته است. من هم چون با اینگونه فعالیت ها آشنا هستم برای من بسیار قابل تجسم بود. من همچنین با اینگونه فعالیت ها در صحنه انفجار و توانایی بهتر کردن خدمات به مردمی برخورد کرده ام. بنابراین، در اینجا نظر من به تغییر در حالت خواب حرکت در بخش انفجاری فعالیتها مربوط به این است که برای جامعه ایران بسیار هزینه بر است مگر اینکه بیمه درمانی خاص برای این گروه سنی در نظر گرفته شود.

1. ایده شبکه اجتماعی “خانواده مجازی” تا چه حد برای شما قابل تجسم بود؟

2. آیا فهیمه، سهیلا، پروین و بهمن علاقه مند به عضویت در آن خواهند بود؟

3. آیا برنامه های پیشنهادی برای این چهار نفر جذاب خواهد بود؟

4. آیا برای بهبود کیفیت زندگی در این مکان ها، نقاط ضعف یا قوت این ایده در چیست؟
På svenska

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