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D2.1 Methodology of research in WP2

Authors:

Maria Schwarz-Woelzl / ZSI

Teresa Holocher-Ertl / ZSI

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Author(s):	Maria Schwarz-Woelzl and Teresa Holocher-Ertl (ZSI)
Participant(s):	Fabio Tumiatti (ATOS) / Idoia Olalde (Andago) / Michael Mulquin (ISComm)

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Abstract

This document presents the analytic, conceptual and methodological framework that has been developed as a start-up input to the Go-myLife project and serves as a resource for the research within work package (WP) 2.

Based on an extensive literature review and explorative workshops, it contains a discussion of the theories, and a description of the state of the art regarding methods of user involvement.

The deliverable also provides a methodology for user involvement of older people in design and development work, specifically to support the conducting of two end-user workshops in task 2.2 and 2.3.

Efficient interaction patterns between older people and designers are perceived as crucial for gathering meaningful data and developing adaptive technology. Because of this, interaction guidelines are also provided.

Keywords

Older people, online Social Network Platforms, user involvement theories and methodology

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List of Abbreviations

SN	Social Network
ICT	Information Communication Technology
AAL	Ambient Assisting Living Programme
WP	work package

1 Introduction

This document presents the analytic, conceptual and methodological framework that has been developed as a start-up input to the Go-myLife project and serves as a resource for the research within workpackage (WP) 2.

1.1 About the Go-myLife project

Go-myLife (full title: "Going social: my social life") is an AAL2 project aiming to improve the quality of life for older people through the use of online social networks combined with mobile technologies. Go-myLife is developing a mobile social networking platform customised to the needs of older people, supporting interactions with their peers and families, as well as easy access to information.

Start date: 1 July, 2010 End date: 31 December, 2012

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1.2 About this deliverable

This deliverable is prepared within the second WP of the Go-myLife project, namely WP2: 'Application driven requirement & common technical problems'. As the first deliverable within this WP, its aim is to define the methodology for research of the user needs and requirements of the Go-myLife and is therefore entitled: 'D.2.1. Methodology of research in WP2'.

By doing so, this deliverable contributes to guide the research performed in other workpackages when considering the preferences and needs of the end-user.

Target audience of the deliverable

This document is a public deliverable. Still, it is mainly intended for the project partners and the European Commission services thus the document will be made public, but not specifically disseminated on a wider scale.

Research questions in WP2

There is some research surrounding questions of the adaption and use of the Internet and of mobile phones by older people, but we know little about the nature of adoption of online SNs.

Within WP2 we will explore two main areas of research:

1. Contemporary interaction patterns in social networks as such and the perceived desires and requirements of older people concerning communication and support structures for the future. Relevant research questions are:

- "What are current communication and interaction patterns of older people in their SNs?"
- "What are the main network groups with a focus on support, social well-being and feeling of attachment?"

- "Which factors contribute to reduce the generation ICT-gap and how can older people be successfully involved in the design and development of new technology?"

In this deliverable these questions are reflected in Chapters 2 and 3.

2. Strengths and weaknesses of existing online SNs from an older people's perspective and the conditions needed to increase accessibility and involvement. Relevant research questions are:

- "What are the most important ICT-tools for older people to stay in touch with their family, peers/friends and significant others?"
- "What are the use and interactions patterns of older people on online SNs and mobile phones?"
- "How should online SNs be designed for the benefit of older people?"

Methodological approach – three areas of investigations

To explore the above mentioned research questions a threefold approach has been undertaken:

1. Determinants of older peoples' social well-being and ICT usage: This was done through a ***literature review*** of relevant issues regarding older people, social networks, isolation and ICT; such as socio-economic characteristics of older people in Europe, the impact of social attachments in later life; and older people's relation to ICT in general and to online SNs and mobile phones in particular.
2. Use and interaction patterns on online SNs: this was done by ***screening*** of the most popular online SNs in the EU as such as well as older peoples' use patterns on those SNs platforms; and through interviews with operators of senior online platforms regarding aspects such as the most relevant services and functions, usability, profile creation, user interfaces and support means.
3. Older peoples' social networks and the online SNs potential benefits: this will be done through conducting two **user involvement workshops** each in two countries. Workshop 1 (task 2.2.) aims to investigate the strengths and weaknesses of mainstream online SNs. Workshop 2 (task 2.3) explores the interaction patterns in social networks and requirements for the Go-myLife platform.

The structure of this deliverable

The information in this deliverable is covered in three chapters:

Chapter 2 is the longest chapter and covers:

- The results of the research and analysis on the methods of user-involvement with older people;

- Elaboration of a set of methods for the user involvement workshops;
- Exploration and further refinement of this set of methods for the user involvement workshops, using the results of two pilot workshops in Austria;
- Training material for the end-user partner organisations in UK and Austria

Chapter 3 provides a set of interaction guidelines with older people, to support the Go-myLife researchers in the successful interaction with the target group.

Chapter 4 details the methodology of how the results from the research will be used to inform the technical deliverables of the Go-myLife project"

2 User involvement in RTD – state of the art and the Go-myLife approach

When developing new ICT products it is essential to investigate the needs and requirements for new services and solutions and elaborate appropriate concepts that relate to these specified needs.

But eliciting requirements from older people with limited experience in ICT usage for innovative products that do not even exist yet is a challenging process. Despite the increasing number of older people, many organizations design products that are primarily aimed at younger target groups. This may be due to the ignorance of the demographic realities but it is also because of the difficulty of developing appropriate technology for the target group of older people. Especially when it comes to developing new ICT products and services for older people the knowledge gap between designers and end-users is considerable. Many older people have little experience with computers and may not be aware of the opportunities that innovative technology could provide to them. The design of new products is mainly in the hand of younger people, who often could not image life without technology, and make products mainly based on their interpretations of the older population's needs. Thus the typical developer finds it easier to design for someone of their age-group and has difficulties to fully understand the daily impact of age-related impairments (Eisma, Dickinson et al. 2004). The result are often technical solutions that are ineffective and inappropriate for their target group (Eisma, Dickinson et al. 2004)

Older people need to be involved in the design and development process, but traditional methodologies are often inappropriate. Challenges arise due to participants' lack of technology-related knowledge and decreasing ability, and modifications may be necessary to address sensitive topics and different motivations.

2.1 The origins of the involvement of users

The idea of the participation of users in the design process for products and environments emerged in the 1960s in the United States and was mainly assigned to an increased sense of social responsibility that led to intensive citizen participation in urban development (Sanoff 2006). Designers, engineers and scientists began to question the assumptions and consequences of modern design and production in a global society, and began to make the case for a more socially responsive and responsible approach to design. Terminology such as "barrier-free-design" or "inclusive design" gave way to more egalitarian concepts that integrated those citizens outside the mainstream – such as older and disabled people - into the mainstream of everyday life through a more inclusive approach to the design of products, services and environments. This change of mind-set was reflected also in the design management, education and research communities, and directed attention to the design process itself (Cassim 2007), (Myerson 2007).

Inclusive design and its ideas started to spread out in Europe in the 1970s and 1980s, where it was strongly influenced by the participatory design partnerships between academics and trade unions in Scandinavia. The participatory design approach provides a crucial role to those people who are assigned to use a new computer system in the design of it. In doing so, it turns the traditional designer-user relationship upside down, viewing the user as the expert and the designer as technical consultant (Schuler 1993).

Inclusive design and other people-centred approaches have changed the way we see people in society. The tendency to refer to "the elderly" as if they form a distinct group outside of mainstream society is today being challenged by a growing trend to recognize age as something we will all experience as part of the normal course of life. Thus inclusive design not only includes the home and public buildings but embraces also personal and communications products to contemporary social expectations (Myerson 2007).

2.2 Experiences from research involving older people in the design and development of new technology

In order to base the Go-myLife user-centred design activities on previous experiences from the research community regarding the involvement of older people in the design-process of new communication products and services, WP2 conducted a review of existing literature and collected suggestions and lessons learned. Important aspects concerning ICT usage by older people are summarized in Chapter 1 and these issues from the design-process perspectives are reflected in the following chapters.

2.2.1 Older people and the reluctance to talk about individual problems

Some of the information we are trying to elicit from the older participants during the design process can be particularly sensitive, and care needs to be taken to choose topics carefully and introduce sensitive topics appropriately.

Older people seem to feel reluctant to talk about their personal problems (Subasi, Leitner et al. 2008), not only because they are proud and want to keep their self-esteem, but also because they have difficulties to explain on a cognitive level what they consider to be a topic related to their emotions. Many older people may not want to talk about topics such as social isolation, "because such an acknowledgement challenged their identity as independent people." (Russell 1999)

So older people prefer rather to talk about the problems of others (for instance of friends) or problems of the whole group together and (Subasi, Leitner et al. 2008) suggest that it's easier for them to talk about fears, understood as problems that might come one day, than actual problems they are facing right now.

2.2.2 Older people and the technology gap

Another challenge that researchers face when involving older people in the design-process is the knowledge and cultural gap between researchers and older people regarding technology.

Older people have limited experiences with new technology, and their opinion about technology is often based on very little knowledge, stories from friends, neighbours or the media. Therefore they often experience more anxiety regarding computers, need a greater amount of effort to learn to use a computer and frequently assume that computers don't have any use for them (Marquie, Jourdan-Boddaert et al. 2002). Thus older people tend to blame their fear, perception of complexity and own poor knowledge when failing to deal with new technology, instead of blaming poor design. Thus it's very important to not undermine the very low confidence that older people have in their computer skills when involving them in the user-centred design process (Newell and Monk 2007).

As a result, (Inglis, Szymkowiak et al. 2002) found out that younger, technically aware users are able to request specific functionalities, but the older generation which has less experience with new technology cannot specify the functionalities they need. (Goodman, Dickinson et al. 2004) describes the same experience in another light. The end-users they involved in the design-process of new mobile phone services agreed on a design that they thought would match the researcher's experiences. They often referred to the process of participatory design as "learning the cell phone" and saw themselves not as creators of new software, but learners of old software. For this reason they created a design that, while simpler, was a traditional form-based application.

Another important barrier in this context is "computer speak" (Eisma, Dickinson et al. 2004). Older people feel a reluctance to speak about new technology due to bad experiences with computer jargon, which is another reason why the communication between designers and older users is difficult (Newell, Arnott et al. 2007). In addition participants feel intimidated from complaining about or critiquing a new product and tend to ask if the researchers themselves created the software before making negative comments.

Researchers' suggestions to deal with the discussed challenges are threefold.

- First (Newell, Arnott et al. 2007) as well as (Eisma, Dickinson et al. 2004) insist that when involving older people in the design process an **ambience of trust** has to be established. Older people tend to feel a lack of competence about technology thus the user-centred design activities have to be conducted in an atmosphere which encourages and values the participants own opinions, invites them to express themselves honestly, and to enjoy their experience. It is important at the beginning to explain the research process to everybody and clarify the roles of the different parties involved. Researchers have to make participants aware of their own expertise (for instance, their life experience) and how valuable their contribution is.

- Second, Eisma and his colleagues (Eisma, Dickinson et al. 2004), (Eisma, Dickinson et al. 2003) recommend **hands-on sessions** where older people collect first-hand experiences with new technology. People enjoy learning about new products and technologies, which is an important motivation. Hands-on sessions are not only are fun for the participants because they experience something new, they also help to reveal the problems people struggle with and the pleasure they take in overcoming them. And it's a good basis for further discussions, as people collect their first experience of technologies that they should later think about and discuss in future interactions. And hands-on sessions partly solve problems of jargon, because they use less language than abstract descriptions.
- Third, research suggests working with **scenarios**: User scenarios are "informal narrative descriptions" (Carroll 2000) about a persona or personas (hypothetical archetypes of actual users) and their activities, emphasizing the goals the user wants to reach with a specific product, the persona's expectations concerning particular systems and the most critical tasks that she wants to execute. Scenarios can be described in different ways including text, speech, photographs and video clips (Isacker, Slegers et al. 2009).

Scenarios in particular have turned out to be very useful techniques for the elicitation of user requirements when users lacked knowledge of technical language and different technologies (Eisma, Dickinson et al. 2003). The scenarios helped them to visualize the consequences of the introduction and usage of new technology, as well as to tie the usage of technology to practical concerns from their everyday life.

Thus scenarios can be used in very different settings. Seale and his colleagues (Seale, McCreadie et al. 2002) used scenarios to introduce the participants of a focus group into the topic under discussion, which was "the problems of mobility". They began the focus group session with scenarios, telling a typical story of an older person and the problems she has to struggle with in her house. Before the story was told every participant received one envelop with picture cards that represented sequences from this story. After the story the participants had to choose those three cards that represented activities that posed most problems to them. Then they discussed the different activities that were selected and possible technical/non-technical solutions. In a similar way scenarios were used by Eisma and his team (Eisma, Dickinson et al. 2003).

As it is not easy for novices to speculate about technology about which they are ignorant, Marquis-Faulkes and her colleagues (Marquis-Faulkes, McKenna et al. 2003) used theatrical techniques, where script writers produced realistic scenarios of what might happen when technology was installed in the home of older people. These videos were very successful in facilitating the discussion with the target group and led to many useful insights by the engineers involved.

Goodman (Goodman, Dickinson et al. 2004) worked with scenarios in the design phase of new mobile phone applications, where teams of end-users created a series of illustrated scenarios describing situations where having a phone would be useful as a

personal organizer or memory aid. The elaborated scenarios were presented to the group and served as basis for very fruitful group discussions.

2.2.3 Older people and decreasing abilities

Challenges in the user-centred design process can be caused by decreasing abilities, for example in sight, hearing and short term memory. Age related cognitive deficits can also make self-reporting inaccurate (for example, in a questionnaire), with research showing that there are age differences in the ways in which people respond in self-reports. In addition, challenges may arise because older people tend to tire more quickly, which can influence the design of interactions and limit the duration of sessions (Eisma, Dickinson et al. 2004).

The research team from Eisma (Eisma, Dickinson et al. 2004) as well as (Lines and Hone 2004) have found that it isn't easy to keep a focus group of older people focused on the subject being discussed. The first people who referred to this challenge were (Inglis, Szymkowiak et al. 2002), who faced difficulties when attempting to manage focus groups comprising more than three older adults and thought that this might be due to auditory impairments of older adults. This lesson learned was shared by Lines (Lines and Hone 2004) who reported that older people tended to "wander" from the topic under discussion, providing instead unrelated anecdotes and chatting amongst themselves. It was difficult to keep the participants' attention focused on the task.

There were two factors that the researchers felt contributed to the problem: the large number of participants (12) recruited for this particular session, and the loosely structured approach that the moderators employed. In the second focus group only 5 people participated and the structure was increased by avoiding the use of overly broad, open-ended questions. The advantage of this approach was also that participants could be more involved in discussion and those who appeared nervous could be addressed more easily by the moderator.

This approach resulted in better results than the first one, but however there were still problems with keeping the attention of the group focused on the topic.

For the third focus group a highly structured approach was imposed on the participants. Very structured discussions were used, categorization was done etc. As a result less inter-group chatting was observed and the topics were discussed more quickly.

In conclusion, the researchers found that focus groups with older adults ran best when a) a highly structured approach was used, and b) a relative small group of participants was involved. Therefore the researchers recommend that the use of focus groups in user requirements elicitation for older users requires a thorough analysis of the domain beforehand. The result of this analysis should be used to design highly structured focus groups, each involving a few participants only. Thus Lines (2004) suggests that focus groups are not always a suitable method for requirements elicitation with older users, especially in situations where little is known about the domain. Another unsuitable situation is when researchers are concerned with eliciting in-depth responses. In such situations it may be that interviews or even smaller groups (3 people) may be a more effective way of interaction (Lines and Hone 2004).

2.2.4 Older people and communication with designers

Newell and Monk (Newell and Monk 2007) argue that successful inclusive design requires designers to develop a different attitude of mind, which in turn requires the use of novel ways of presenting information to designers for whom older people are an unfamiliar user group. They described that it was not until the designers saw the users trying to cope with prototypes that they understood the depths of ignorance that older people could have of new technology, missing very basic points of understanding. Older people have sometimes difficulties to communicate their message and designers, if not very well trained, tend to miss the message from elderly.

To overcome these communication problems between designers and older people Newell and his colleagues worked with a theatre group. A script-writer elaborated a series of narrative based stories that illustrated experiences, anecdotes, human factors and data from an ethnographic study in usability research with older people. These narratives communicated the experience of older people with information technology and the kind of situations that they encounter when trying to use it. The stories were then produced in videos and distributed and viewed by designers. The videos have been evaluated by elderly via questionnaires, focus groups and discussions and older people thought that they portrayed very well experiences one could have with technology.

Another suggestion is to work with **personas**. "Personas are not real people but they represent them throughout the design process. They are hypothetical archetypes of actual users". "They allow us to see the scope and nature of the design problem. They make it clear exactly what the user's goals are, so we can see what the product must do …" (Cooper 2004). There are primary personas, which represent the main target group and secondary personas, which can use the primary personas' interface but which have specific additional requirement (Casas, Blasco Marín et al. 2008).

Personas have characteristics like names, ages, and professions to make them look realistic and alive.

And they tell stories about potential users. The most accurate way to create personas is through observing real users within the environment in which the system will exist and then interviewing them with the intention of finding a common set of motivations, behaviours and goals among the end-users. The low-cost approach is to create them based on assumptions where designers use their own experience to identify the characteristics of the different user groups.

2.2.5 Conclusions

Create trust and remove fear of technology:

To create an ambience of trust and open experience exchange the first phase of user-involvement requires the researcher to:

- Explain the research process and make users aware of their role as "experts" in the design process.

- Try to eliminate the fear of new technology (e.g. through a game-like approach) and create an awareness that problems with technology can be in many cases attributed to poor product design and not to the poor knowledge of end-users
- Use interactive presentation formats to keep attention and focus high

Stimulate experiences with new technology:

To allow end-users to participate in fruitful discussions about new technology that they have not even experienced yet:

- Provide hands-on sessions with technology to collect first experiences with new technology
- Work with scenarios, photos and videos to increase imagination and tie the technology to practical concerns of the target group's everyday life.
- Involve older people as critics rather than as designers

Alternate between different group sizes and question formats:

To collect experiences and feedback from older people:

- Work with a balance of smaller groups to collect in-depth information and bigger groups to stimulate fruitful discussions
- Use structured questions

Plan the elicitation of sensitive information carefully

To collect sensitive information, like social isolation or loneliness consider in your planning:

- Which viewpoint users should take ("For me?", "For the group?" "For others?")
- Talk about future fears rather than current problems

Consider the knowledge and culture gap between end-users and designers

To assure the integration of the end-users' needs in the design process of new products:

- Provide designers with artefacts, descriptions, testimonials etc that illustrate the problems end-users have with new technology, for instance using video-sequences or personas.
- Provide training for designers to interact with older people appropriately

2.3 Design of the interviews with operators

In addition to the workshops, interviews with three to four different operators of senior online platforms will be conducted. These interviews cover mainly user pattern aspects such as the most relevant

- Services and functions,
- Communication pattern,
- Usability,
- Profile creation,
- User interfaces and
- Means of support

As method, the interviews are designed half-standardized, meaning that a mixture of open and closed questions is given. The questionnaire guideline is included in the Annex of this document.

In the project, the interviews are seen as important asset to the workshops with the end-user, since they might reveal different aspects or important topics that shall be addressed during the workshops. Obviously the outcome of these interviews will also form a part of the synthesis report of WP 2.

2.4 Design of the participative Go-myLife Workshops

In the Go-myLife DoW the project foresaw two workshops.

1. Workshop 1 "**Communication patterns in SNs**" had as its objective to investigate the structure of communication patterns of older people within their social networks, as well as end-users needs and requirements regarding technological support.
2. Workshop 2 "**Assessment of existing online Social Networks**" aimed to assess three existing online Social Networks with end-users, investigating strengths and weaknesses, as well as barriers and motivations for their usage.

Based on our desktop research on user-centred design with older people we first decided to change the sequence of the workshops. So we determined to start with the assessment of existing online Social Networks thus providing end-users with the opportunity to collect first-hand experiences with existing technology before starting the discussion about communication patterns within their own social networks and requirements regarding technological support.

Based on our literature review we **first elaborated a detailed concept** and agenda for the two workshops and **second conducted explorative workshops** in Vienna (in November 2010) to test the workshop concept with the target group.

The detailed design of the two workshops, their theoretical derivation and the lessons learned from the explorative workshops are described in the following section. A detailed agenda of both workshops with assignments for the end-user organization in England can be found in the D2.2.

2.4.1 Workshop 1: Assessment of existing online Social Networks

The main **objective of Workshop 1** is to investigate the perceived value of existing online Social Networks (online SNs) for older people, learn about barriers that might hinder them from getting involved with existing social networking platforms and understand which facilitating conditions could help to overcome those barriers.

2.4.1.1 Theoretical considerations and workshop methodology

The **participants involved in Workshop 1** are eight end-users aged 65 and older. Most researchers suggest that it is desirable to have a homogeneity within the group (Kitzinger 1995), (Morgan 1997) .."in order to capitalize on people's shared experiences" (Kitzinger 1995). Especially if the discussion contains topics about which participants may feel embarrassed or lacking in confidence, the homogeneity within the group should ensure that people feel comfortable talking with each other. Meeting with others whom participants think of as possessing similar characteristics or levels of understanding about a given topic, will be more appealing than meeting with those who are perceived to be different. But Morgan clarifies that "the goal is homogeneity in the background and not homogeneity in attitudes" (Morgan 1997:36).

One way to obtain such homogeneity within the groups is to use naturally occurring groups, where participants can relate to each other's comments to incidents in their shared lives, and can also challenge each other on contradictions. We suggest that such "naturally occurring groups" would be social and educational groups and clubs targeted at retired people. Thus participants in Workshop 1 and 2 will either come from one social groups (=group of friends) or from one association.

Concerning the group size Morgan (1997) suggests a group size of between six to ten participants. Lines and Hone (2004) rather propose a smaller number of participants for older people, as it is difficult to elicit in-depth information, especially in narrative form, from groups of six and more. (Schensul, LeCompte et al. 1999) suggest that the success of a group depends on "balancing depth and breadth of participation" (p 62). Therefore Goodman and his colleagues (Goodman, Dickinson et al. 2004) propose using different sizes of groups within one single session. The main group can be divided into smaller groups for certain activities and brought back for discussion of those topics that might profit from the interaction of the group as a whole.

Go-myLife will follow these suggestions from research and invite eight participants to the workshops, where we will split up the group into smaller groups (of two of four people) for the elaboration of more complex tasks and bring them together again for a fruitful group discussion and exchange of experiences.

The project will involve one group of eight participants in England and one group of eight participants in Austria (replacing the group planned for Poland which had to be cancelled due to temporary funding constraints).

The project team decided to assess **three different online social networks**. The first one is Facebook as the most important and commonly used online SNs in Europe, as well as among the target group of older people (see **Error! Reference source not found. Error! Reference source not found.**). Facebook will be tested by both workshop-groups, in Austria and in England, to have comparable data between the different user groups. As Facebook has no specified focus on the older generation, the second and third online SNs to be assessed within Workshop 1 are online SNs that are dedicated to the project's target group and offer services specifically for older people.

The suggested **techniques used in Workshop 1** are as follows:

Workshop 1 is the first step of the user-involvement in the Go-myLife design process, thus the establishment of an ambience of trust is one of the main objectives of this meeting. With this aim researchers want to encourage participants to value their own opinion, making them aware of their expertise and stress how valuable their contribution is. Thus participants are introduced to the project's objectives, the research process, and their role within this process. Concerning the presentation format of the project introduction, current research shows different experiences. Eisma and his colleagues (Eisma, Dickinson et al. 2004) state that Microsoft PowerPoint presentations were not always feasible, and thus a more informal information exchange was used, while Goodman (Goodman, Dickinson et al. 2004) preferred to work with PowerPoint presentations in order to help to keep the focus of the whole group on the topic.

The Go-myLife research team decided to use PowerPoint but to keep the presentations very short, using mainly illustrations and following an interactive format, with researchers putting questions to the group during the presentation, which was often more satisfying for the audience.

In addition to introducing the project the Go-myLife team aimed to eliminate from participants the fear of new technology that will be tested within the course of Workshop 1.

Therefore the project adapts the game-idea "Guess the decade" (Eisma, Dickinson et al. 2004) and elaborates the **Go-myLife Media-Quiz**: In this quiz - with the well-known format of the "Who wants to be a millionaire"- end-users are asked to answer questions that all deal with the introduction and expansion of innovative communication media, starting with the mobile phone in the 80s and ending with Facebook today. This encourages participants to think about the meaning of "communication" and "technology" and how familiar many technologies are today. It also reminds them that currently "friendly" communication technologies were unfamiliar and frightening to many people when they were first introduced.

Following the introduction the main applied participatory technique in Workshop 1 are **Walkthroughs** through selected existing online SNs. The Walkthrough technique

derives from the Cognitive Walkthrough method (Wharton, Rieman et al. 1994), a usability inspection method that focuses on evaluating a design particularly by exploration. The focus of this technique is motivated by the observation that many users prefer to learn software by exploration, instead of investing time for comprehensive formal training. In a Cognitive Walkthrough, a group of designers or software experts tries to take the viewpoint of their target user population and evaluates a proposed interface in the context of one or more specific user tasks. The group of evaluators tries to put themselves in the role of their target end-users and tell a story about typical user's interaction with the interface. They ask themselves what the user would be trying to do to accomplish the given task and what actions the interface makes available. If the interface design is a good one, the users' intentions should cause them to select the appropriate action.

This procedure uncovers implicit or explicit assumptions made by developers about users' knowledge of the task and the interface conventions. It helps to find mismatches between users' and designers' conceptualization of a task, as well as poor choices of wording for menu titles and button labels, and inadequate feedback about the consequences of an action (Wharton, Rieman et al. 1994).

Nevertheless one of the critics of the Cognitive Walkthrough technique is that the method is based on the designers' assumptions about the end-users' behaviour and knowledge.

Thus the project took the decision to ask the end-users of our workshop to participate in Walkthroughs through online SNs, using predefined tasks that cover the main functions of the applications. The aim of these Walkthroughs is to find usability issues with the existing online Social Networks and assess the learnability of selected online SNs for our target group. In addition we aim to provide the end-users with hands-on sessions in online SNs to allow them to collect experiences with the tested application as a basis for the later discussion about values and barriers of the features and functionalities provided.

To deal with task variability and alternate courses of actions, tasks are modelled as a set of likely alternate paths for achieving an intended outcome, focusing on the users' experiences with the interface while carrying out tasks, and the interface's support for helping the user to fulfil the intended outcome (Pinchelle and Gutwin 2002).

To understand the users' reasoning of action we combine the Walkthrough with **Think-aloud tests**. Based on the research from (Sayago and Blat 2003) who reported that young elderly (aged from 65 to 74) had great difficulties thinking-aloud individually while they were carrying out the test tasks, our approach is to form groups of two end-users each. Within these groups one participant is asked to take over the responsibility to solve a task and explain to the other participant why he/she is undertaking which interaction with the user interface. The groups are also allowed to discuss possible ways of solving tasks together if one person cannot find a solution alone. The dialog between the end-users is recorded on video together with a screen cast, which allows the users' interactions with the interface together with their explanations and discussions to be analysed.

To comply with suggestions from research (see 2.2.2) we embed the tasks within **scenarios**, which are very much tied to practical concerns and common situations of our target group. We created a fictitious persona – Elfie Friede, a 66 year old woman, who recently registered with the assessed online Social Network and needs help in uploading personal pictures, leaving messages for her friends, inviting social contacts to events etc. So the end-users log-in to the online SN as Elfie Friede and follow the proposed scenarios and tasks.

To allow documentation of the collected experiences from the Walkthroughs we provide **Feedback-Cards** where, after each task, end-users evaluate the task's difficulty and attractiveness, and note suggestions for improvement for the later discussion.

Immediately after the Walkthroughs each participant is requested to complete an **evaluation questionnaire**. In this questionnaire users assess the overall usability of the tested platform following the System Usability Scale (SUS) method (Brooke 1996). In addition participants are asked to provide details about the perceived social support of the tested platform, current communication styles, and socio-demographic data. The results regarding social support will provide input for the Deliverable7.1, while the other data provide additional input for the analysis of workshop 1.

Following the Walkthroughs and the filling-out of questionnaires, all eight end-users participate together in a **group discussion**, where the collected experiences are discussed in this larger audience, using the Feedback-Cards that were completed after each task as memory aids. The objective of this group discussion is to gain deeper insights regarding the perceived usefulness of the tested online SNs, barriers to get involved, as well as possible future services and facilitating conditions that could help to overcome those barriers.

2.4.1.2 Feedback from the explorative workshop on methodology

To test the workshop concept an explorative workshop was organized with 4 end-users in Vienna in October 2010. In this explorative workshop participants conducted a test-run of the envisioned workshop 1 and were requested to evaluate the whole workshop concept on four dimensions: difficulty, personal enrichment, fun, and length. In addition each of the applied techniques (Game, Walkthrough, Questionnaire etc.) was assessed via two dimensions: fun and difficulty.

Additional structured questions within a group discussion allowed insights concerning the applied techniques to be gathered, as well as suggestions for improvement of the workshop concept. The feedback from participants in the explorative workshops was very fruitful. End-users suggested shortening the introduction to a minimum level to avoid losing focus and provided suggestions on how to make the questionnaire more understandable.

In addition we learned that the timings of the workshop were appropriate, the difficulty level of the applied tasks was feasible (sometimes challenging, but not too difficult to lose interest), scenarios and tasks well understandable and the quiz an enjoyable method of familiarizing participants with the topic of the workshop. Generally participants of the explorative workshop encouraged the research team to stick to the elaborated workshop concept and apply it in the two "official" workshops of WP2.

2.4.1.3 Analysis and presentation of workshop results

For the analysis of the workshop, the information from the Feedback-Cards, Questionnaires, Discussion Group, Observation and the Think Aloud tests provide input to the following main research topics under investigation:

1. Perceived ease of use of existing online SNs

   How easy do end-users perceive the assessed online SNs are to use? How do end-users assess the effort and time they had to spend to reach the required output? What kind of usability problems occur? How can they be described? What are possible suggestions for improvement from the end-users involved?

2. Perceived usefulness of existing online SNs

   What are the functions that participants find personally useful? Why do they think that these functions are useful? How would they/or do they already apply these functions to communicate within their SNs?

3. Perceived barriers of existing online SNs

   What are the barriers to get involved with the tested online SNs in general? Which functions do people perceive as not-useful? Why are they not useful for them? What are the barriers to get involved with those specific functions?

4. Required facilitating conditions

   What kind of facilitating conditions (handbooks, videos, tutoring, training etc.) would end-users require to get involved with existing online SNs?

5. Other online SNs in use

   What other online SNs do end-users use? What is the perceived usefulness of those other online SNs?

2.4.2 Workshop 2: Communication patterns in SNs

The Go-myLife Workshop 2 has as its **objective** to investigate the structure of communication patterns of older people within their social networks, as well as end-user needs and requirements regarding technological support.

2.4.2.1 Theoretical considerations and workshop methodology

The **involved participants** in Workshop 2 are the same as in Workshop 1 and again the project follows the approach of changing between the larger group size of 8 participants for group discussion, smaller groups of 4 end-users for the elaboration of more complex tasks, and individual assignments.

In workshop 2 the project has to tackle one of the main challenges of research with older people – to investigate current problems regarding the target group's everyday lives, address the issue of loneliness and increasing social isolation, and elaborate ideas for supportive technological solutions, which try to solve these problems. As investigated in more detail in Chapter X older people are reluctant to talk about their personal problems and have difficulties to come up with innovative technological solutions due to their limited experience and knowledge concerning information technologies. In considering these challenges, the project took the decision to adapt the technique of the "**Future Workshop**" to the target group of older people and apply it within Workshop 2.

The "**Future Workshop**" was initially invented by Robert Jungk and Norbert Müllert (Jungk and Müllert 1987) in order to fill a gap in existing democratic systems which fail to adequately involve the people directly affected by political decisions into the decision-making process itself, and which also generally fail to consider the future at all. The technique was developed to involve citizen groups with limited resources in the decision making processes of public planning authorities (town planning, environmental protection, energy crisis etc.) with the means of participatory design

activities. Kensing (Kensing and Halskov 1991) adds that those participating should share the same problematic situation, a desire to change this situation according to their visions, and a set of means to enable that change. The general idea is to take as point of departure a critique of the current state of affairs through a 'structured brainstorm', turn this critique into constructive fantasy, assess the constructed visions with respect to what can be realized, and try to implement these visions.

The method of future workshops is defined initially as follows: "Typically, a future workshop can be divided into a preparatory phase and three workshop phases. The preparatory phase involves deciding on the topic and making the practical arrangements...." "The workshop itself begins with the critique phase, during which all the grievances and negative experiences related to the chosen topic are brought into the open. ... There then follows the fantasy phase, in which the participants come up with ideas in response to the problems, and with their desires, fantasies and alternative views. A selection is made of the most interesting notions and small working groups develop these into solutions and outline projects. The workshop concludes with the implementation phase, coming back down into the present with its power structures and constraints. It is at this stage that participants critically assess the chances of getting their projects implemented; identifying the obstacles and imaginatively seeking ways round them so as to draw up a plan of action." (Jungk and Müllert 1987), p. 11f)

The Future Workshop is a concept that is widely and successfully applied for system development (Brandt 2006), (Tollmar, Sandor et al. 1996) and has proved to be a well-suited technique to start with a critique of the current state of affairs, turn this critique into constructive fantasy and assess the constructed visions with respect to what can be realized (Kensing and Halskov 1991). Go-myLife decided to make use of this technique with the aim of investigating current communication patterns and especially current problems in the social networks of older people and, starting from this point, create a vision regarding the ideal social network in 10 years. To adapt the methodology to the characteristics of the involved target group of older people, the project elaborated some changes to the original workshop design.

In phase 1 Critique, we decided to introduce two additional aspects to the original workshop design: Metaphor and Visualization. Kensing (Kensing and Halskov 1991) propose that the facilitators running future workshops intervene from time to time on the content level by introducing metaphors as a means to broadening out the reflections of participants and they had good experiences with this approach. For instance in a project about a public library they suggested viewing the library as a warehouse, a store and a meeting place.

We strongly support this approach. Especially for older people, who tend to stick to concepts that they think that might be expected from them (see 2.2.1 Older people and the technology gap), the broadening of reflections seems of relevance for us.

We integrated the approach of metaphors in our workshop design, but we also added another aspect – visualization.

While in the original design of future workshops participants use language only (and this is also the case when using metaphors as suggested by Kensing), we decided to

use visualization as a means to overcome language problems. Thus we invited participants to think about their current social networks by imaging themselves as islands.

Social groups, which are related to them, are visualized as surrounding islands, where the connection between one's island and the surrounding islands represents the importance and frequency of contact between the different islands and can be visualized via bridges, boats or whatever comes to the minds of the workshop-participants. So instead of writing critiques and problems on a large poster, participants were invited to individually visualize their social networks and think about the changes that might appear within these networks in the upcoming 10 years. Thus we avoided talking about "problems" that participants have within their social networks "at the moment", but asked them to think about "possible threats" that might change the way they interact within their social networks over the next 10 years (see 2.2.1 Older people and the reluctance to talk about individual problems), following the suggestion from (Subasi, Leitner et al. 2008) and his colleagues.

In addition this approach invites participants to reflect how their social life will change with increasing age, when social isolation might become a bigger threat for those young 3rd agers, who participated in the workshops and are still fully integrated into social life with families, friends associations etc.

Based on the presentation and discussion of the individual social networks and upcoming changes the participants were invited to form groups and start phase 2 – the Fantasy phase. They were assigned to "Elaborate and visualize their ideal social network in 10 years' time", where the group-work facilitates the discussion of sensitive problems as noted above (Subasi, Leitner et al. 2008).

As in phase 1, we decided to support phase 2 via metaphor and visualization and the groups designed their ideal social network via the same metaphor – the island landscape of the future. The concluding part of this workshop was the presentation and discussion of the collaboratively elaborated future vision of social networks by the whole group of participants.

In contrast with the initial concept of the Future Workshop technique, phase 3 "Implementation" of this future vision – in our case the translation of this vision into technical requirements for the Go-myLife project and an implantation plan - is conducted by the project researchers themselves, as previous experiences with the involvement of older people clearly show that they have a limited ability to imagine and design future technologies. So in the 2nd Go-myLife workshop end-users are simply invited to imagine a future social network without making reference to technology. Suggestions on how to realize the vision are noted and discussed as well but not broken down to technological requirements.

The final adaption of the workshop concept concerns the introduction of participants to the topic under discussion. The original workshop concept does not make any specific reference to this issue. The Go-myLife project decided to use a playful approach again – socio-demographic positioning. Researchers ask questions

concerning the participants' social networks (e.g. number of grandchildren, membership of associations, travelling) and participants are requested to position themselves inside the workshop room according to their response (e.g. building an imaginary line within the room starting with participants who don't participate in any association at all, being followed by those who participate in 1 association and ending with those who have the highest number of memberships).

Following each question and positioning participants are involved in short discussions, explaining why they position themselves in a certain way (for instance discussing how many associations they are members of and which are these associations). This approach helps to guide people to the workshop topic, reveals knowledge that can be referred to by the researchers in a later stage of the workshop and helps participants to get to know each other better – an important basis for trust and the group-work later.

The workshop is moderated by one or two facilitators. The role of the facilitator in Future Workshops is setting the stage, ensuring that everyone is allowed to speak etc., but not intervening at the content level.

2.4.2.2 Feedback from the explorative Workshop on the methodology:

To test the workshop concept an exploratory workshop was organized with 8 end-users in Vienna in October 2010. In this exploratory workshop participants conducted a test-run of the envisioned workshop 2 and were requested to evaluate the whole workshop concept on four dimensions: difficulty, personal enrichment, fun, and length. In addition each of the applied techniques (Game, Walkthrough, Questionnaire etc.) was assessed via two dimensions: fun and difficulty.

The feedback to this workshop was extremely positive. Participants thought that the first task – to visualize their SN - clearly broadened their thinking and made them realize how diversified their social networks are in reality and how many different social groups they are involved with. But it also helped them to imagine how life might change in 10 years, when connections between the different islands might change due to limited mobility, older grand-children etc.

Presenting ones island landscape and listening to the elaborations of the co-participants helped participants to add to and complete their own social network - that's why participants requested some extra time after the presentation to amend their own visualizations (e.g. to add an island, add connections etc.)

The group work led to very intense discussions between participants about their visions of their future SNs. The discussions revealed the high relevance of changing SNs and social contacts with increasing age and helped the researchers to better understand the desires and also fears that older people have when thinking about their future. The wish to continue discussions on this topic was so high that the participants exchanged private e-mail-addresses to so that they could keep in contact even after the workshop.

2.4.2.3 Analysis and presentation of workshop results:

The first result of the Go-myLife Workshop 2 will be a description of the participants' current Social Networks and expected changes in the upcoming 10 years, as well as an analyse of commonalities and differences between these SNs.

The second result is a description of the participants' vision of their future SN, with a detailed explanation of the social groups involved, the role of each social group within this SN, the communication and interaction between the social groups, as well as the expected values and possible barriers of social interactions within these SNs. Having elaborated and described the individual visions we will investigate commonalities and differences, and start translating the vision into a technical vision about how Go-myLife technologies could support the implementation of the participants' vision via mobile technology.

Based on these analyses the third result of Workshop 2 will be the creation of personas (see 2.2.4) and related scenarios (see 2.2.2), emphasizing the goals the personas want to reach with the Go-myLife platform, the personas' expectations and the most critical tasks that they want to execute. These results are then used as input for the translation of user needs into technical requirements, which is described in more detail in the following chapter.

3 Interaction with older people – Guidelines

The vision of Go-myLife is to develop a technology that is suitable for, and usable by, older people. With this in mind, it is essential that the researchers involved in the project are aware of effective methods for interacting with older people. This will enable them to obtain high quality data relating to the needs of older people and to the usability of the technical solutions they build.

These guidelines aim to discuss potential barriers and obstacles in the communication with older persons during the project run, and to raise awareness for cultural gaps. The guidelines concentrate on interaction issues with Third Agers (see definition in chapter 1), whereas Fourth Agers are not represented in our test group due to their advanced physical impairments.

A bibliography of communication advice literature and scientific articles quickly reveals quite a large segment of advice literature aimed at Fourth Agers, and an even larger one dealing with persons with dementia and Alzheimer's disease. However, there is no specific literature focussing at communication with Third Agers - the Go-myLife target group for pilot testing and evaluation. This may be due to the fact that no significant communication barriers or cultural gaps are perceived during interactions. Therefore, the first section of these guidelines gives general communication rules that are valid independently of age. It is difficult to draw a clear line between Third Age and Fourth Age, i.e. that some Third Agers may display characteristics of Fourth Agers.

The Go-myLife project consortium consists of both technical and social researchers. In the course of the pilot testing and evaluation, both types of partner have an equal need to communicate effectively with people of the Third Age. Potential pitfalls in communication between technical and social researchers and older people are discussed in the second section.

The guidelines are structured in two parts:

1. General interaction guidelines with older people
2. Critical issues and recommendations for the interaction of ICT development project researchers with older people

3.1 General interaction guidelines with older people

While designed for carers of older people, the following guidelines are useful for anyone who wishes to communicate effectively with older people (Smith and Buckwalter 2006 (revised):

Key Ingredients related to effective communication with older adults includes the following main points.

1. *Communication* is much *more than words*, and the exchange of information – it is a fundamental aspect of all human relationships – the way we "connect" with other people. Caring about and communicating with the older person cannot really be separated. This involves taking time to connect with the older person, and thinking about the individual as a person first.

2. *Understanding the communication process* can help you decipher difficult-to understand behaviours. Thinking carefully about verbal and nonverbal messages, and the context in which communication occurs often helps you understand the situation from the older adult's perspective. How a person behaves is based on their perception and evaluation of the situation – not the actual events themselves.

3. *Attitudes, beliefs, and assumptions* about the older person and his/her problem make a big difference in what you *perceive about the older adult's behaviour*, how that information is *evaluated*, and then *what is done, or not done, in response.*

4. *Age-related changes, like sensory losses* may affect older persons' ability to respond "appropriately" because they are not getting accurate information from their environment. Taking time to understand the older person's perspective and adjust approaches and routines improves outcomes.

5. *Diseases and disability* may directly and indirectly interfere with communication. Illness related problems often combine with other challenges to cause complex

behavioural symptoms. Understanding illness-related problems helps you to adjust approaches.

6. *Environmental influences,* including the physical and social environments, and the "culture" or values of the facility which communication is provided, often communicate powerful messages to both older adults and to you.

7. *Many interventions* may be used to promote clear, understandable communication with older adults. Adjusting approaches used in daily care and modifying care routines better assures that that older adults accurately perceive their environment, are viewed as a person first, and are provided care that enhance dignity and shows respect.

(Quoted more or less verbatim.)

With these issues in mind, the following practical recommendations – (TSAO Foundation for successful Ageing s.a.) - are designed for interaction with Fourth Agers, but may also be useful when working with Third Agers as well, as the boundary between the two is not clear-cut:

- Approach from the front
- Speak on the side of the 'good' ear
- Encourage the use of hearing aids / glasses
- Communicate at face level
- Don't cover your lips
- Reduce background noise
- Relax
- Speak in low tones / don't shout
- Allow time to respond
- Speak slowly
- Use simple words and short sentences
- Combine verbal with non-verbal and other means of communication
- Write things down if necessary
- Pay attention to the said and unsaid
- Stop talking & listen
- Communicate respect & understanding
- Try reminiscence and validation

What is important is that these practical guidelines are used sensitively. Older people vary enormously in their physical and mental abilities and the researcher needs to adapt their style of interaction to the capability of the person they are talking with. Unthinking assumptions regarding the limitations of older people can be just as harmful as ignoring the possibilities of such limitations.

This problem is particularly acute when the subject of research is related to ICT, as is pointed out below.

3.2 Critical issues and recommendations for the interaction of ICT development project researchers with older people

Generally, difficulties of communication between researchers and users are an issue in any technical R&D project. However these problems can be much more acute when the target users are older people.

Age-adapted speech styles in technical related communication processes

Stereotypes by younger adults in the way they communicate with older people may have direct socio-psychological consequences on the self-perception and social behaviour by the older people. (Thimm and Kruse 1998:74) highlighted typical patronizing forms (supportive utterances, reassurances, and positive evaluations) in technical instructions to older people. They referred to it as "secondary baby talk":

- "Have you got this? Wonderful!" "This is quite (or very) simple". "This is not so bad, you don't need to panic."
- Remarks on physical (in)competence: "Perhaps you should put your glasses on if you need any." "The symbols are very small but with glasses you should be able to see them."
- Referring to the past: "As you might remember from your old mechanical clock." "As you know from the old days."
- Comments pointing at supposed technical incompetence: "You don't have to understand this." "When the volume is on zero then you cannot hear anything."

The following critical components and interaction guidelines are a summary of the publication by (Eisma, Dickinson et al. 2004), focused on older people, that was carried out within the UTOPIA project.

Developers' assumption: The perceptions that older people have of the complexity of applications may be partly explicable in terms of the mismatch between the assumptions of developers and the lack of knowledge of older people about computing conventions. The cultural differences between older people and expert computer users mean that developers have to be very careful about making assumptions.

1. **Sensitivity**: Motivations behind user participation should be considered: If people are lonely, is the reason that they consent to be interviewed simply the social interaction it provides them? Therefore, sensitivity and an awareness of users' motivations for participating are important considerations in working successfully with older people.
2. **Encouragement**: The lack of confidence felt by many older people about technology meant that it is important to provide a working atmosphere in which the older people are encouraged to value their own opinions, express themselves honestly, and enjoy their experience. It is also important to make the participants aware of their expertise (for example, life experiences), and of how valuable their contribution is to the project.
3. **Transparency**: At the beginning it is important to explain the research process to everybody involved, and to clarify the role of the different parties.
4. **Speed**: It is noticeable that "speed" is often not as important to older people, as is "getting the job done".
5. **Communication about technology**: One of the most off-putting aspects for older people is the terminology; "Computer-speak" is not simply confusing but can act as a significant barrier both to technology use and to communication about technology. Language and cultural differences can make such communication between younger and older people difficult. Bad experiences with jargon and unfamiliar terminology have made many older adults suspicious of talking about technology. Words may have different meanings for different age groups, and technical terms, which may seem normal words to younger people, can be utterly confusing to older non-computer users (e.g. 'monitor' or 'windows'). Older people spent their formative years when a chip was a piece of wood or cooked potato, hardware was nuts and bolts, a window was made of glass, a monitor was a school prefect and software was not even a word. It is often very difficult to avoid using such language when describing modern technology.

3.3 Conclusions

In summary, it is important to tread the narrow path between assuming too much and assuming too little.

On the one hand, the researcher needs to keep in mind that older people *may* have physical or mental limitations that make it difficult for them to hear and remember. They may also not understand many words or phrases that are completely natural to younger people.

Because of this it is important for the researcher to carefully review their interaction patterns and vocabulary so that they can communicate effectively with them.

On the other hand, in doing this, it is important to be aware of, and to correct for, any implicit bias against older people. It is all too easy for the researcher, even while aiming to be free from prejudice, to be unaware of the way their assumptions about older people can result in unintentional distortions in their behaviour towards them.

For instance, perceptions of older people as weak, cognitively deficient, and feeble are likely to result in patronizing speech. The researcher may, for instance use over-simplified grammar and vocabulary, their conversation may be more controlling, with less listening, and they may address the older person in over-familiar terms and use child-oriented phrases.

Of course several studies provide evidence that age stereotyping, perceptions, and expectations about age-associated communication behaviour is not a one-way street, with older people being the sole recipients of stereotypical reactions and age-adjusted talk. It is also quite possible for older people to negatively stereotype young people as irresponsible and/or naïve and this might influence their response to the researcher.

However, for the researcher, the starting point has to be that older people are the experts and it is their responsibility to ensure that the older person feels valued and at ease and able to contribute effectively to the research agenda.

4 Methods for Translating User Needs into Technical Terms

This chapter will describe the methods to be used for "translating" the user needs and requirements, gained from the social research activities in WP2, into technical terms. These methods ensure that the information gained from the investigation of communication patterns in social networks and from the participators' workshops can be understood and implemented by the technical team.

4.1 User Requirements

After the development and performance of the workshops, the results will be studied to extract habits/patterns of behaviour and use of the social networks. The extrapolation of this information will lead to the definition of the user requirements.

The technical partners will then study the user requirements, analyse the technical solutions and design the best solution to fulfil users' needs. During this study and analysis, different social network engines will be considered in order to select one that best fits with user requirements and build the Go-myLife platform over it. Different aspects will be analysed:

- The social tools and services
- The management of groups
- The accessibility/usability
- Access and management of geolocation information
- How existing social networks can be integrated in go-MyLife
- etc.

4.2 Social Behaviour and User Interface

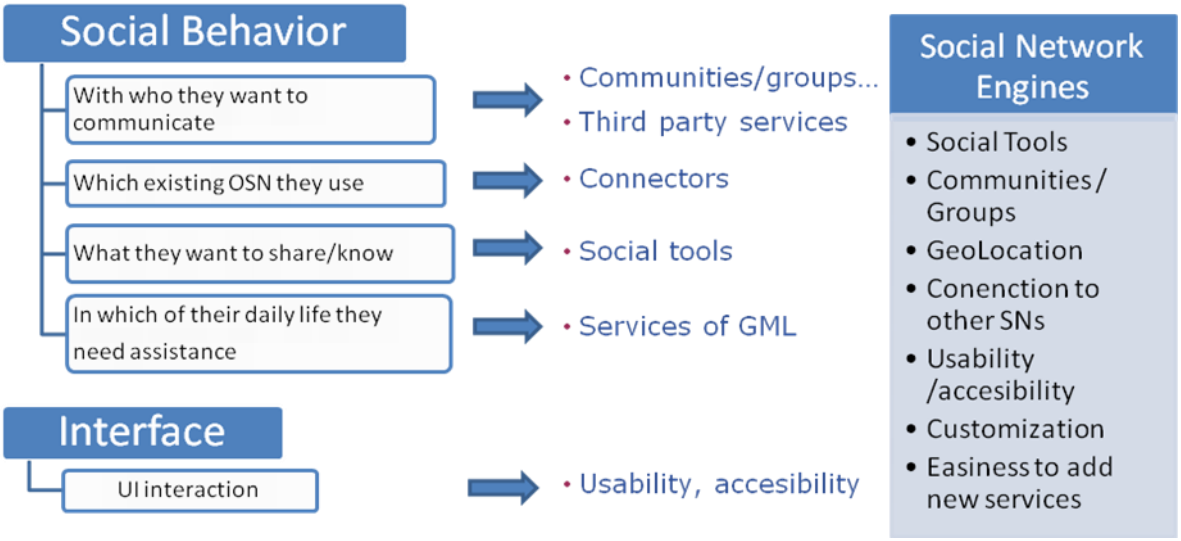
In order to "translate" the user needs in technical requirements, the workshops need to answer the following aspects:

- Social Behaviour:
  - The workshops will analyse the purpose of the social networks where the participators interact: why they use them (to share photos, write messages,

look for recommendations...) This will lead to specifying the social tools Go-myLife needs and the services it can provide based on them

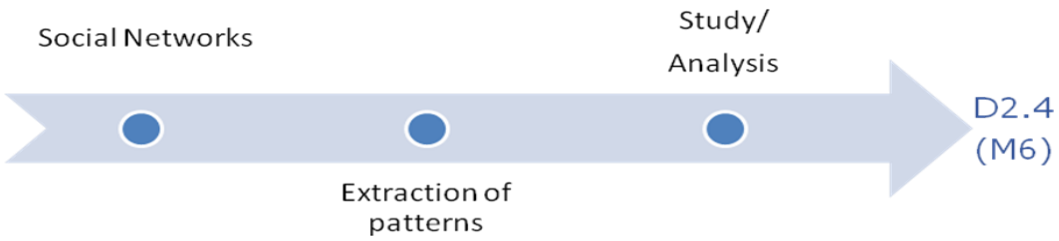
- The workshops will analyse the kinds of relationships older people maintain in their social networks (family, friends, workmates...) and the third-party services they use or they will consider useful
- Another important point of Go-myLife is the connection with existing social networks. The workshops will study the presence of the old people in them and study the technical requirements to build the connectors to them

- Interface:
  - Go-myLife will provide a user interface based on adaptability and usability, designed taken into account the needs of old people and adapted to the mobile interfaces. During the workshops, the difficulties they can have using non-adaptive interfaces will be reflected.

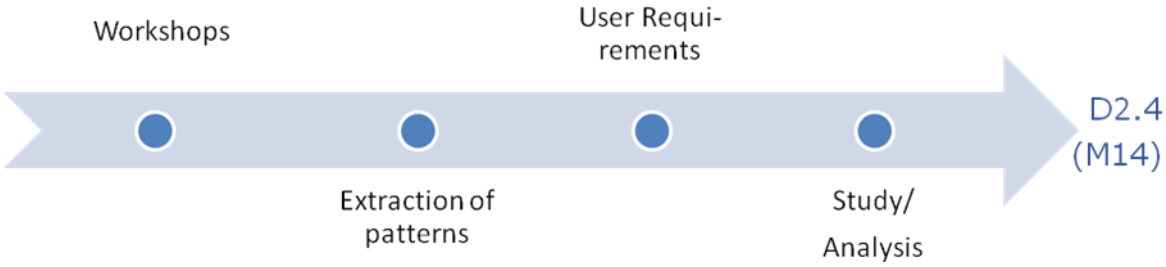


4.3 Technical Requirements Analysis

The functional and architectural specification will be defined based on the study and analysis of the outcomes coming from the investigation of communication patters in social networks and from the participators workshops. This analysis will generate two technical deliverables (D2.4), one in M6 and a second one with updated information on M14.



The first version of the deliverable will be based on the study and analysis of the existing online Social Networks, taking into account the minimum functionalities required to be implemented by the Go-myLife platform and the new functionalities that the project will develop based on mobility.



The second version of the deliverable will be an updated version of the first deliverable, adding the requirements gained from the study and analysis of the user requirements coming from the investigation of communication patters in social networks and from the participators workshops carried out in WP2. This document will be used to define the final Go-myLife architecture design and the second platform prototype.

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6 Annex

Go-myLife / Interview guidelines

Target group: Operators of online communities for elderlies Aims: To identify the interaction patterns AND social needs in (online) communities in urban areas Targeted number of interviews: 3-4 Implementation: Telephone interviews, descriptive summaries in English (send to ZSI)

Please describe the users of your online communities – who are they?

- Average age
- Gender
- Martial status
- Working / non working
- Profession
- Children
- Grandchildren
- Religion
- Geographical distance

What are the **usage patterns**? e.g.

- Frequency of visits
- Duration of visits
- Trends and tendencies

Which **interaction features** are provided (chat, mail, others?)

- What are your experiences with the usage of these features?
- Are there any gender differences?

- What are the strength and weaknesses?

Do you provide **matching**?

- If yes, which criteria?
  - Age
  - Activities
  - Gender
  - Education
  - Distance
- What are your experiences with these matching (-criteria)?

How are the people **linked up**?

- Which opportunities of **social contacts** are most appreciated? E.g.
  - arranging dates/appointments
  - establishing new contacts
  - establishing relationships
- What do they **share** mostly?
  E.g. Hobbies, sport activities, information, support and advice, … ?

Do you provide special services that support **neighbour communities** in urban areas? If yes,

- Which services?
- How are they used?
- What are your experiences with neighbouring services?

What are your experiences concerning the **profile creation**?

- What works well and are there any critical issues?

What are your lessons learned regarding the adaptation of **user interface** and **functionalities** to the target group of elderlies?

What are your lessons learned regarding the **support actions**, e.g. telephone, email, skype?

- Frequency of support?
- Most effective support system?

What else is **important** from your view point and has not been covered by these questions yet?