Project acronym: **Go-myLife**

Project full title: **Going online: my social Life**

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D2.3 Synthesis Report on target group analysis and user needs and requirements

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Abstract
Go-myLife is developing a social network platform customised to the needs of older people. This document presents the synthesis of research findings that were investigated within work package 2. In line with the research questions and the different methodological approaches as defined in D2.1., the presentation of the findings is structured in three chapters: Chapter 1: introduces the framework of this deliverable and the guiding research questions. Chapter 2: aims to enable a better understanding of the target group and portrays the socio-economic characteristics of older people with regard to social communication and support patterns as well as ICT usage, based on an extensive literature review. Chapter 3: in dealing with the question: "What are the interaction patterns of older people on social network platforms?", this chapter explores the most popular online SNs, based on desktop research. In addition, it provides four cases studies that review the strengths and weaknesses of existing online social networks, the pros and cons of different kinds of interfaces, the trust and reputation functionalities and specific features supporting the social needs of older people, all based on interviews with operators of senior social networking platforms. Chapter 4: presents in-depth and additional findings from seven user-involvement workshops that were held in two countries. The seven user-involvement workshops were of two types: Workshop type 1 investigated the strengths and pitfalls of Facebook, along with four popular senior platforms. Workshop type 2 explored the interaction patterns of older people in their social networks. Both types of workshop were used to derive the functional requirements for the target group for this deliverable. The deliverable concludes by providing key recommendations for the design of the Go-myLife platform that come out of the study.

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List of Abbreviations

SN	Social Network
ICT	Information Communication Technology
AAL	Ambient Assisting Living
WP	Work Package
s.a.	Sine anno (= without a day) Used in the bibliography to indicate that the date of publication of a document is unknown.

1   Introduction

In line with the research questions and the methodology of research that were defined in D2.1, this document presents the compilation of the findings that came out of the investigation that were designed to identify the user needs and requirements for the Go-myLife platform.

1.1 About the Go-myLife project

Go-myLife (full title: "Going online: 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.

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1.2 About this deliverable

This deliverable is included within the second WP of the Go-myLife project, namely WP2: 'Application driven requirement & common technical problems'. Based on the research questions and methodology defined in D2.1 its aim is to report the research findings regarding the user needs and requirements of the Go-myLife project. This document is entitled: 'D.2.3 Synthesis report on target group analysis and user needs and requirements'.

Target audience of the deliverable

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

Research questions in WP2

There is some research regarding the adoption and use of the Internet and of mobile phones by older people, but we know little about the nature of their adoption of online SNs. In the course of the literature review on online SNs for older people for this deliverable we noticed a substantial lack in research.

Within WP2 we will explore two main areas of research:

Strengths and pitfalls of existing online SNs from an older person's perspective and the actions needed to increase accessibility and involvement. Relevant research questions are:

- "What are the functionalities used? Which considerations need to be taken into account concerning the design and structure of online social networks?"

- "What are the use and interaction patterns of older people on online SNs and mobile phones?"

- "How should online SNs be designed for the benefit of older people?"

In this deliverable these questions are reflected in:

Chapter 2:

- Mainstream online SNs (such as Facebook) via desktop research

- Senior online SNs (such as 50plusnet.nl) via interviews with operators

Chapter 3:

- Workshop type 1 "Assessment of existing online Social Networks"

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 the 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?"

- "How can innovative technologies support older peoples' networks?"

In this deliverable these questions are reflected in Chapter 1 and in Chapter 3: Workshop type 2 "Communication patterns in social networks"

The work done for this deliverable can be summarized in five main phases

1. Desktop research on socio-economic characteristic of the target group;

2. Identification and analysis of the most popular online SNs in Europe;

3. Explorative interviews with operators of four senior online SNs;

4. The conduction of seven end-users workshops in Austria and UK of two different types:

    o The first type of workshop "Workshop 1" was aimed at assessing existing online Social Networks,

    o The second type of workshop "Workshop 2" investigated the communication patterns in SNs.

    The research consisted of:

    o Transcription, codification and analysis of tape recorded assessments, experiences and presentation of the end-users personal social networks;

    o Artefact analysis of the end-users personal social networks and future perspectives.

5. Discussion of the results within the Go-myLife consortium and writing up the Summary and Conclusion.

Structure of the deliverable

This deliverable is structured as follows:

Chapter 1 introduces the Go-myLife project and the research questions in WP2.

Chapter 2 provides a review and synthesis of the wide range of issues regarding older people, social networks, isolation and ICT. It describes the most relevant socio-economic characteristics of older people in Europe, who, however, present a highly diverse group. Exploring the impact of social attachments in later life, it highlights the importance of peers and the local community for social well-being. Further, it examines older people's relation to ICT in general and to online SNs and mobile phones in particular. Thus this chapter provides an important basis for the better understanding of the target group.

Chapter 3 discusses use and interaction patterns on online SNs from the perspective of older people. Based on a screening of the most popular online SNs and on interviews with operators of senior online platforms, this chapter profiles the user groups and deals with usability issues such as profile creation, user interfaces and the methods of support provided by operators.

Chapter 4 presents the findings derived from the end-user workshops in UK and Austria. Workshop 1 (task 2.2) investigates the strengths and pitfalls of mainstream online SNs. Workshop 2 (task 2.3) explores the interaction patterns in social networks and requirements for the Go-myLife platform.

Summary and Conclusions analyses the most important requirements for online SNs for the successful involvement of older people and suggests possible application scenarios for the Go-myLife platform derived from the literature review, case studies and user-involvement workshops.

A **methodology** for an interactive **transfer workshop** of the social research findings in WP2 into technical terms is provided in Annex 1.

2 Determinants of older people's social well-being and ICT usage

The projection of the ageing society highlights the importance of adapting online SNs to the needs of this rapidly growing age group. In EU27, the percentage of people aged 65+ years in the total population is projected to increase from 17.1 % to 30.0 % and the total number is projected to rise from 84.6 million in 2008 to 151.5 million in 2060. Similarly, the number of people aged 80 years or over is projected to almost triple from 21.8 million in 2008 to 61.4 million in 2060 (Eurostat 2008).

This chapter starts with socio-economic characteristics of older people, examines the relevance of social networks for older people's social well-being, and comes up with a discussion of use patterns of ICT, particularly of online SNs and mobile phones. Based on the extensive literature review, this chapter aims to derive conclusions for the services of the Go-myLife technology from state-of-the art research.

2.1 Older people constitute a diverse group

Mainstream online SNs are usually designed with younger and middle aged people in mind and the designers themselves tend to be from these age groups. The risk comes from the social distance[1] between them and older people, which may result in the latter being considered as a homogenous group, linked with an assumption that older people suffer from declining physical and cognitive abilities.

Contrary to this stereotype, a plethora of evidence emphasizes the diversity among older people, which is even larger than among other age groups. For example, individual variations in biological characteristics (e.g. blood pressure or physical strength) tend to be greater between older people than between young ones: 'the characteristics of two ten-year-olds would be more similar than those of two eighty year-olds' (WHO 1999).

Thus, the aim of this section is to provide an overview of the socio-economic characteristics of older people. Although the data that is provided is related to different age cohorts, this should not divert from an individual approach in considering older people. In fact, ageing is a complex process with large variations between groups and individuals.

2.1.1 When does ageing start? – Approach to a classification

The onset of ageing is mostly determined by a chronological age of 60 or 65 years. In the approach taken by the AGILE project (cit. in: Isacker, Goranova-Valkova et al. 2008) three age-categories were identified:

- Young older people: aged 55-65, i.e. people who are healthy and, in most cases, can still lead busy and active lives but who have just started to experience slight deteriorations in their quality of life due to ageing.

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[1] Newton, Becci et al. (2005) found evidence to suggest that most people consider 'older' to be around 15 years above their current age

- Older people: aged 65-75, i.e. people who are healthy but more likely to experience mild cognitive and physical problems due to ageing.

- Old older people: aged 75+, i.e. people who are very likely to experience cognitive and physical deteriorations due to ageing.

More generally, in the health report of the German federation a distinction is made between a group of "young older people" (65 years and older) and a group of "old older people" (85 years and older) (Böhm, Tesch-Römer et al. 2009).

Based on functional capabilities of persons aged 60+, the SOPAAL study came up with the following categorization (together with related figures for Austria):

Table 1 Categories of older people, Austria 2007

Segment	2004	% Population	% of 60+
Go-Goes ("independent performers")	1.3 Million	16 %	72 %
Slow-Goes ("independent survivors")	0.33 Million	4 %	18 %
No-Goes ("supported retirees")	0.18 Million	2 %	10 %

Source: Waibel 2007

GO-GOES are still in good mental and physical health with an active lifestyle. Health and wellness are of high importance within this group, while SLOW-GOES and NO-GOES are characterized by a number of varying deficiencies and needs.

Frequently, a distinction between the 'Third Age' and 'Fourth Age' can be found. Whereas, for example, retirement from gainful work is regarded as the beginning of the Third Age, there is less agreement about the definition of entry to the Fourth Age. Smith's (2000) literature review found that those in the Third Age are described as being in relatively good health and are socially engaged. In other words, Third Age exemplifies positive characteristics, such as personal achievement and fulfilment. The Fourth Age is typified by the onset of all the negative stereotypes of old age, such as final dependence, decrepitude, and death. Hence, ageing is a relative concept, which suggests that the boundary may be dynamic.

While there is no standard definition of the age at which an individual is 'older', there seems to be a consensus that ageing is both an individual and dynamic process with great variation within the group of older people. In fact, diversity among older people is larger than among other age groups, as ageing is a process of continuity as well as of change. Ageing needs 'to be understood as a process of transformation that goes on throughout a lifetime, leading to the emergence and changing of various physical, mental and social traits during different phases of life'. The differences across the age range are not so much a matter of 'more versus less' or 'better versus worse' but 'qualitatively different' (Morschhäuser, Ochs et al. 2003).

2.1.2 The future old are the baby boomers

Beside substantial variations among the contemporary cohort of older people, there are also differences related to the next generation of older people. There is a widespread feeling that

the so-called baby boomers (the generation born in the forties and fifties who will be retired soon) are different from previous generations. They grew up without war and with the economic miracle, went through their adolescence during the time of the sexual freedom movement, studied at a time of student revolution, got married during the flower power movement and earned money in the eighties. In particular, they are seen as more comfortable at asserting their rights and also as having more spending power. They are healthier, more active and more engaged in their lives and their communities than any previous generation in history (Sentha Projekt 2001; Evans 2009). This generation is also much more comfortable with the use of modern communication technologies.

2.1.3 Ageism & Intergenerational Communication

Differentiating between groups only on the grounds of age is predominantly based on casual stereotypes and subscribes generalized behaviour to groups (e.g. older age) (Healy and Schwarz-Woelzl 2007). Although stereotypes are not necessarily negative in nature, they influence product development, with the outcome that the product might not meet the needs and requirements of the target group.

Williams and Garrett (2002) found a plethora of empirical evidence of beliefs about older people being unable to contribute to society, and of socially acceptable expressions of negative attitudes toward them. Although positive stereotypes of older people have been identified too, older people are consistently and typically negatively stereotyped as abrasive, frail, vulnerable, incompetent and overly self-disclosive.

Given this context, reflection on potential age bias in the (intergenerational) interaction is important. Hence, perceptions of older people as weak, cognitively deficient, and feeble may result in patronizing speech (i.e., with simpler grammar, more controlling features, less listening, over familiar address terms, and child-oriented phrases) by younger people.

Furthermore (Williams and Garrett 2002) several studies provide evidence for the claim that age stereotyping, perceptions, and expectations about age-associated communication behaviour is not a one-way street with elders as the sole recipients of stereotypical reactions and age-adjusted talk. Evidence is also found, that older people negatively stereotype the young as irresponsible and/or naïve. On the other hand, young people tended to describe themselves as "reluctantly accommodating" to older dissatisfying partners—they had to restrain themselves by "biting their tongues" and felt under obligation to show respect for age.

2.2 Diverse networks contribute best to well-being

> *… in an active ageing framework, policies and programmes that promote mental health and* ***social connections***[2] *are as important as those that improve physical health status.*

> (WHO 2002)

The concept of 'active ageing' is a key element of the concept of the 'Ambient Assisted Living' (AAL) programme, as well as being included in the contemporary European Employment Strategy and Health Strategy, and addressed in the EU initiative 'i2010 – A European information society for growth and employment'. As expressed in the WHO report (WHO 2002) 'active ageing' includes continuing participation in social, economic, cultural, spiritual and civic affairs, and does not simply mean the ability to be physically active or to participate in the labour force. Moreover, ageing takes place within the context of others – friends, work associates, neighbours and family members.

Ample evidence suggests the importance of social relations in maintaining the quality of life for older people. Meaningful social interaction is essential for health and well-being; it leads to lower rates of depression, decreased risk of dementia and lower mortality rates. Overall, the risk of all-cause mortality of socially isolated people is two to four times that of people with extended ties to kith and kin and in the community (Fratiglioni, Paillard-Borg et al. 2004).

In this section we explore the SN types of older people and discuss their social needs.

2.2.1 Community and social networks: clarifying the concepts

Community and social networks (SNs) are related concepts, in the sense that SNs bind communities together (Evans 2009). 'Community' can be defined as a sense of belonging to a social group or groups, based on communalities that span physical space, interests, identities and concerns (Hopkins and Thomas 2002; Evans 2009).

The concept of 'social networks' defines `the actual set of links of all kinds among a set of individuals' (Pillai and Verghese 2009). Social networks have a dual function: the provision of social support and social connectedness. Reviewing existing SN typology studies in relation to well-being, Fiori et al (2007) identified the four most commonly described network types of older adults:

- diverse networks, with the highest degree of well-being

- family focused, which tend to be high on instrumental support

- friend focused, which tend to be high on emotional support (because friends are generally age-peers)

- restricted or socially isolated networks, with the lowest degree of well-being.

Diverse networks (with family and friends) offer more opportunity for well-being than do restricted networks. The more restricted a network is (e.g., in terms of potential for support), the more vulnerable is the position of the older person with respect to well-being.

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[2] Emphases by the author

Fiori et al (2007) also found that the older people are, the more restricted are the network types most commonly used (see also prevalence of loneliness in section 3).

2.2.2 Family practices and relationships

Frequently, worries can be heard about the decline of family solidarity. The SHARE study "50+ in Europe"3, however, didn't find any indications of a crisis of intergenerational relations. The members of most families live geographically close and mutually support each other. The majority of older people are the main source of instrumental and material support within their families. Grandparents may support young parents in raising their children, and maintain intergenerational support ties. One third of all persons aged 65 and above, for example, spends an average of 4.6 hours per day looking after their grandchildren or otherwise supporting family members.

Especially, young older people, 'who are currently entering retirement play a crucial role in caring and support, not only for their own family members but also for other members of their SN and indeed even in a voluntary or semi-professional capacity.' (Attias-Donfut, Ogg et al. s.a.)

This is echoed by public opinion among the EU citizens, where around 80 % of EU citizens agreed that financial support from parents and grandparents is important in the event of setting up their own household or family (Flash Eurobarometer 2009). The SHARE data (Kohli, Künemund et al. 2005) confirm that financial transfers to the younger family members are quite common in EU, although the percentage giving transfers declines markedly with age.

Graph 1 Proportion giving financial transfers to children
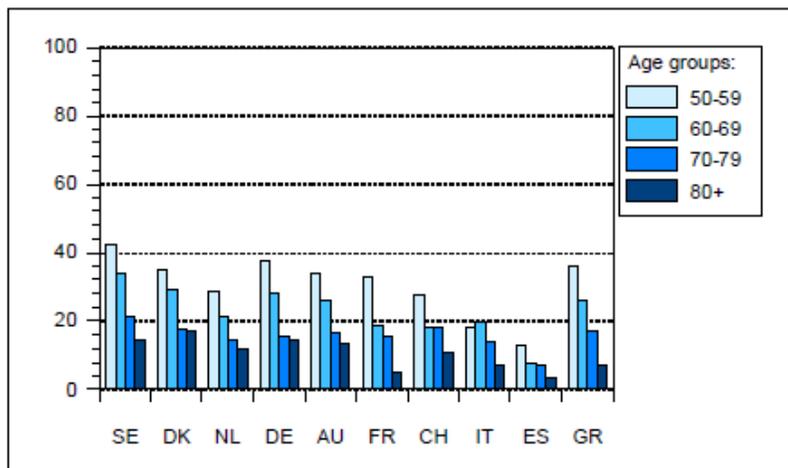
Source: SHARE (wave 1, release 1), weighted; in: (Kohli, Künemund et al. 2005:7)

In fact, according to (Hoff 2007), several surveys showed that older people give substantial support to the younger generations, providing far more support than they themselves receive.

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The SHARE data (wave 2) indicate different support patterns: about one quarter of older Europeans give help to a family member or other person within their SN and under one third receive help (Attias-Donfut, Ogg et al. s.a.).

2.2.3 The impact of peers

Family and kinship ties are important but the family is not the main source of emotional support. Intergenerational relationships in the family are inherently ambivalent and the balance between solidarity and autonomy has to be continually negotiated among the family members. Moreover, support offered in the family context 'may exhibit negative outcomes due to role obligations and expectations, whereas companionship relationships are usually more egalitarian in nature' (Department for Communities and Local Government 2008).

Friendships, especially those sustained for long periods of the life time, are an important source of emotional support and contribute to the psychosocial well-being in more positive ways than family relationships do. Such long-term friends provide support in times of transition, e.g. retirement and bereavement, by providing continuity and an acceptance of ageing. (Cattan, White et al. 2005; Chambers, Allan et al. 2009; Cattan s.a.) 'Friends are helpful in adapting to change with age in various ways: as sources of information and as role models undergoing similar changes; for confirmation of identity and self-esteem; as companions for pleasurable activities' (Stevens, Martina et al. 2006).

Given the social changes, it is likely that the significant role of non-kin ties in older age may become even more prominent in the future (Chambers, Allan et al. 2009).

2.2.4 The importance of local neighbourhood

A plethora of evidence in the field of gerontological research (Godfrey, Townsend et al. 2004; Department for Communities and Local Government 2008; Evans 2009) suggests that the bond of place and neighbourhood becomes an increasingly important factor in the quality of everyday life as people get older.

Older people tend to spend more time in their local neighbourhood and they invest a great deal of themselves in the area and therefore have strong social networks. This is confirmed by a study (Department for Communities and Local Government 2008) among urban neighbourhood networks in the UK, which highlights that local communities are of enormous importance for older people. 'As they get frailer, their lives are increasingly affected by, and bounded within, their immediate physical and social environments.' For older people who need assistance in daily activities, reciprocal relationships and mutual help systems are preferred over family support, where 'children have their own lives to lead' and help may therefore be subject to complex negotiation. The study revealed a rich pattern of reciprocity, with high value of giving and receiving help (Godfrey, Townsend et al. 2004). Therefore, being part of a local community where people care about and look out for each other is considered as a central component of ageing well.

A major source of social interaction in local communities is local services, on which older people become increasingly dependent as they spend more time at home. Local services, such as post offices, general practices, shops and banks, are the traditional venues for social interaction and resources for their independence. However, in the light of the on-going trend of closure of many local services and the way in which services are delivered, the

opportunities for social interactions are under threat. This has an especially strong impact on rural communities, where social life is often arranged around local services (Evans 2009).

2.2.5 The broader social embeddedness

Community activities such as volunteering or caring are widespread. The (Flash Eurobarometer 2009) showed that 78 % of EU citizens consider the voluntary work of older people in charitable and community organisations as providing a major contribution. On the other hand, the majority of EU citizens believe that there are not enough associations and local community initiatives providing opportunities for older and younger people to meet (Flash Eurobarometer 2009).

Another aspect of community involvement is related to religion, which over time seems to become more and more important to older people. According to the ESS data 2002/3 (Lelkes 2008) even non churchgoers show increasing engagement in religious activities as they get older.

Summing up, older people value a sense of community and it is a 'major factor in their decisions about where to live' (Evans 2009).

2.3 Social integration is the recipe for longevity

The importance of tackling social isolation and loneliness to improve older people's well-being and quality of life have received a substantial amount of empirical and theoretical attention in gerontological science in the past 30 years. While there is no equivalence between isolation and loneliness, both increase with age. However, living alone, social isolation and loneliness are three distinct but interrelated concepts; therefore this chapter starts with a short definition. Further in this chapter the prevalence of loneliness is discussed and it concludes that online SNs will be increasingly important to older people for social interaction.

2.3.1 Living alone, social isolation and loneliness: clarifying the concepts

'Living alone' refers simply to people living in a separate household. 'Social isolation' is defined as an objective state, based on the absence of contact with other people that can be measured by the number of contacts and the number of interactions between individuals and their wider social network. Meanwhile loneliness is a subjective, negative and unwelcome feeling of not having a close companion, desirable friends or social contacts. It is characterized by feelings of being left out, boredom, sadness, depression and anxiety. Social isolation is often associated with loneliness but it is not always the cause of loneliness. (Victor, Bowling et al. 2003; Wenger and Burholt 2003; Cattan, White et al. 2005; Cattan s.a.; Cattan s.a.).

2.3.2 Prevalence of living alone, social isolation and loneliness in old age

The proportion of European citizens living alone is increasing generally, however, this is particularly so among older people. Living alone is a status that is clearly age-related as well as gender-related. Due to the fact that women live longer, elderly women are more likely to be widowed and more prone to social isolation. According to the labour force survey for 2005 (Eurostat 2008) gender difference related to the living status even increases with age:

- in the age category 65-74 years old, 30 % of women and only 13 % of men are living alone.

- in the age category of 75+, some 52 % of women compared to only 21 % of men are living alone.

The SHARE data (second wave 2004-2007) mirrors the gender related proportion, however, related to widowhood:

- in the age category of the 50-59 year old, 2 % of men but 9 % of women were widowed.

- in the age category of 80 and older, 30 % of men and 73 % of women were widowed.

As a result, 63 % of men but only 17 % of women of age 80+ still live with a (married or registered) spouse. Living alone is not directly associated with loneliness. Many who live alone live fully integrated in social networks, however, loneliness is more common amongst those living alone (Wenger and Burholt 2003).

The extent of loneliness cannot be specified definitely since various studies reach differing conclusions. For example, according to (Chambers, Allan et al. 2009) a 'range of studies from the 1940s up until the present time have identified that 5-10 % of older people perceive themselves as lonely all or most of the time.' Similar data was derived from the European Social Survey 2002/2003; (Lelkes 2008) found that one out of 7 people have no friends with whom they could discuss personal matters (or have social contacts less often than once a month) among the 60+ year olds. This ratio increases to 1 out of 6 among those aged 70 years and over. This group suffers the most from the death of a spouse, with widows making up almost one third of the age group 70+.

Table 2 Occurrence of negative life situation, %

	Health	Social Isolation	
Age	Self-reported bad health	infrequent social contacts	has no friends
16-29	2,2	3,4	4,6
30-39	2,9	6,0	5,3
40-49	6,0	8,8	7,6
50-59	11,4	10,9	8,7
60-69	14,1	13,9	12,6
70+	20,3	17,4	16,1

Source: ESS 2002/3, cited in Lelkes (2008)

UK data shows a much higher prevalence of loneliness: 68 % of people who live alone are socially isolated and 65 % of these people feel (sometimes or often) lonely. The researchers believe these figures may even be an underestimation, as many older people are reticent to

speak about social isolation and loneliness because they feel there is a stigma attached to them. Others downplay their feelings or find ways to cope (NHS Health Scotland 2003).

Loneliness has an influence on life expectancy and loneliness can be even more harmful to health than 'smoking or obesity'. A very recent analysis of 148 studies from around the world shows that people with high levels of social interaction had a life expectancy which was 50 % higher than those with a smaller social network. General social integration has the biggest influence on life expectancy; whether people live alone or with someone else is decisive (Stickler 2010).

Social integration is often associated with close family ties but family is not always the source of overcoming loneliness. Findings show that older people living with their children are among the loneliest and are more likely to suffer from depression. It has been claimed that loneliness amongst older people (widows in particular) may be ameliorated by visits from children. However, it has been found that such visits make little impact on loneliness, and very old widows living with children are frequently amongst the loneliest. Research found that, while older people may turn to the family for instrumental help, they are least likely to do so in times of loneliness. In contrast, loneliness is related inversely to frequency of contact with children and friends but not neighbours (Wenger and Burholt 2003).

When asking older people which interventions could best combat loneliness and isolation they come up with similar suggestions to those already discussed in the previous section: They 'suggested enhancing social networks, promoting a sense of neighbourliness/community, developing a portfolio of 'appropriate' activities and attending to structural barriers to social participation such as transport and financial provision for later life' (Victor, Bowling et al. 2003). Interestingly, family related approaches were not mentioned.

2.4 Older people are enthusiastic to learn new ICT

The use of ICT is seen as ready means for older people to connect with others or with the outside world. It is argued that ICT is a source of increased social support and enhancement of well-being for older people. The data provided in this chapter highlights that ICT per se is not a means of inclusiveness for older people; it can only be effective once a number of issues are recognized and certain conditions are met.

This section examines the nature and extent of ICT use by older people; it highlights the fact that ICT use patterns are more complex than simply considering the dichotomy between 'technology oriented' and 'technology refusal'.

2.4.1 Generation gap in ICT use and attitudes – state of the art

It is well documented that the use of technology among older people is substantially lower compared with other age groups and that it declines with the age of the user. For example, in EU27, the group of 55 to 74 year olds used a computer 'in the last 3 months' only a third as often as the group of 16-24 years old (Eurostat 2009). Computer use is not only a minority activity amongst older people but is also highly stratified by gender, age, marital status and educational background (Selwyn, Gorard et al. 2003). As graph 3 shows, within the older generation, more men than women use computers daily. In 2006, some 26 % of men in this age group reported using a computer at least once a day during the preceding three months as

opposed to only 14 % of women.

The good news is that internet use among the older people is constantly growing by more than 10 % per year.

Graph 2 Individuals who used the internet on average at least once a week, by age group and gender, EU-27 (%)
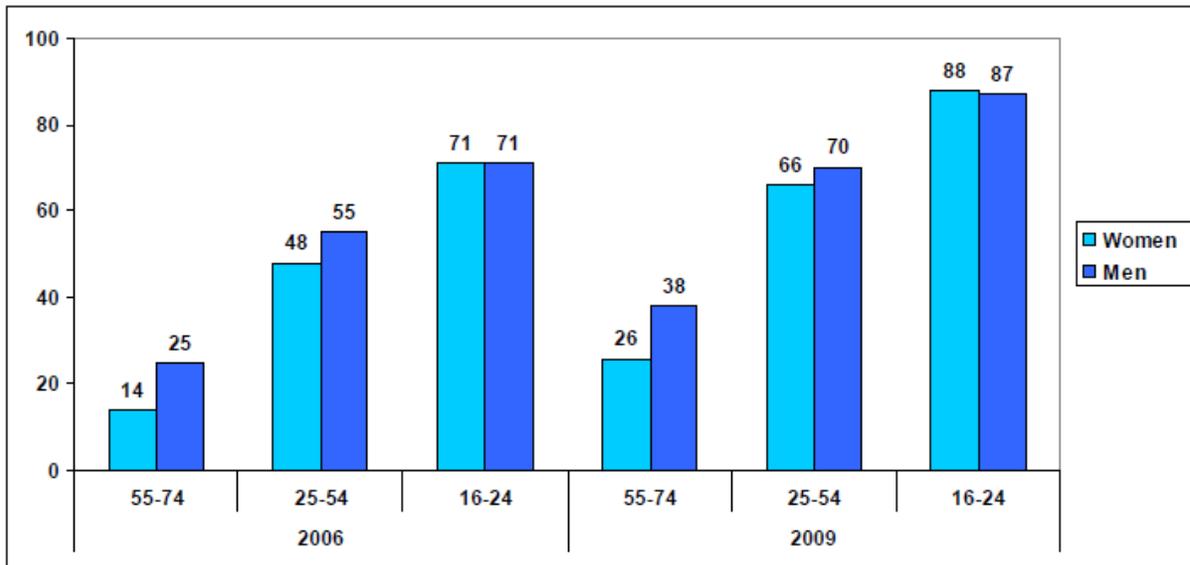
Source: Eurostat 2009

As for basic computer skills, the gap between men and women is even wider than in the take-up and use of ICT. In 2006, 12 % of men aged 55–74 surveyed in the EU-25 were considered to have high skills as opposed to only 3 % of women (Eurostat 2009).

2.4.2 Use patterns of mobile phones

In a similar way to ICT usage, older people's use patterns with mobile phones are very different than for younger people. Generally, older people tend to be more oriented towards meeting their 'significant' other face-to-face and phone contact is normally on the landline telephone (Smoreda and Thomas 2001). For example, in a cross-national survey of grandparents-grandchildren communication, the data show that face-to-face contact remained the most frequent means, followed closely by landline telephone; mobile phone use was only moderate, and letters/cards only occasionally used. Only a minority used SMS and e-mails. However, most grandparents used a variety of forms of contact (Quadrello, Hurme et al. 2005).

Older people tend to use mobile phones only on special occasions and mainly for casual conversations, such as short calls in an emergency or when trains are delayed; and for limited purposes, such as for calling or texting in emergencies. Older users seem to be less familiar with the mute option and therefore tend to have the phone turned off in public. Furthermore, some feel confused regarding the blurring of public and private spheres in mobile communications (Kurniawan 2006; Fiori, Smith et al. 2007).

In coping with the challenges of mobile phones, older people often look to an 'innovator' within their social networks who would have an important role in the spread of new mobile

devices and their uses. 'They are often mediators of information connected with mobile phones and computers: advice in the purchase of devices and in the choice of operators', teaching the use of mobile phones to their peer group (Fiori, Smith et al. 2007).

With regard to older women (Kurniawan 2006) found that older women do not tend to have the newest phones. Their phones were mostly gifts from their children or grandchildren, provided when they upgrade their own phones. However, mobile phones do provide a sense of security, especially when older women are in trouble.

Further findings of (Kurniawan 2006) are:

- Camera and video functions are deemed unnecessary

- Too many functions makes mobile phone operation an unfavourable experience

- Text messaging (featured high in the focus group)

- Music, maps and diary (featured high in the survey)

Analysing the diverse uses of mobile phones by older people, in relation to their expectations from mobile communication, (Abascal and Civit s.a.) conclude that this is not very different from what generic users expect: 'fully reliable personal communications and services to improve, as much as possible, safety and quality of life.' However, older people are not interested in products that carry an age label, as this is not compatible with their own image of being an 'active senior' (Fiori, Smith et al. 2007).

Being aware the above presented surveys can't be viewed as up-to-date, there is room left that greater familiarity with their use and improvements in usability may have made older people value them more.

2.4.3 Use patterns and benefits of online social networks

Online social networks (online SNs) have the potential to facilitate social interaction and the formation of support and companionship networks. On the one hand, mainstream online SNs were started with young people in mind and so may only partly meet the needs and requirements of older persons. On the other hand online SNs hold a tremendous potential for sustaining older people's sociality. By facilitating their access to online SN through adapted technologies, online SNs can continue or even enhance their social interactions, even when they are geographically dislocated or socially isolated.

Contrary to the argument that the use of online SN may limit people's participation in the local community, the findings among 2,500 Americans show that using the internet for neighbourhood social contact causes very high levels of local engagement (Hampton, Sessions et al. 2009):

- '60% of those who use an online neighbourhood discussion forum know "all or most" of their neighbours, compared to 40% of Americans.

- 79% who use an online neighbourhood discussion forum talk with neighbours in person at least once a month, compared to 61% of the general population.

- 43% of those on a neighbourhood discussion forum talk to neighbours on the telephone at least once a month, compared to the average of 25%.

- 70% on a neighbourhood discussion forum listened to a neighbour's problems in the previous six months, and 63% received similar support from neighbours, compared to 49% who gave and 36% who received this support in the general population.'

Despite initial assumptions that spending time on the internet inevitably reduces 'real-life' community involvement, the evidence suggests that virtual communities may actually augment face-to-face ones. (Wright 2000; Hampton, Sessions et al. 2009) confirm that much online contact is between people who see each other regularly and live locally. Further, a high degree of participation contributes to social relationships as well as to increased direct action in coping with difficulties. A number of Wright's (2000) survey participants developed very close relationships with their Internet friends, even though they had met online and were complete strangers beforehand. Another aspect was found by (Hampton, Sessions et al. 2009): online SN users are much more likely to reconnect with people from previous periods of their life 'and these renewed connections can provide a powerful support network when people near retirement'. About 50% of the 50+ online SN users studied had found or had been found by people from their past.

However, studies on older peoples' social interaction patterns in online SN are rare so far. Wright's (2000, cit. in: Pfeil 2007) examination of SeniorNet found that valuing the community, giving advice based on one's own experiences and sharing life experiences are the core topics, whereas informational and emotional support are equally valued. Wright (1999, cit. in: Pfeil 2007) found further, that the time older people spent in online communities correlates positively with their satisfaction with the support they receive as well with the number of people they are in contact with.

Examining studies related to online support groups (Pfeil and Zaphiris 2007) identified the

emergence of long lasting and close relationships. While suffering from illness, members of online support groups reported that their online community was an important source of support and helped them cope with problems.

2.4.4 Obstacles in ICT usage

A body of research suggests that older people are physically and psychologically disadvantaged regarding ICT use.

Examples of physiological restrictions faced by older people are 'decrements of sight, hearing, dexterity, motor functioning, hand-eye co-orientation and cognitive processing, also making new screen-based technologies more difficult to use' (Selwyn, Gorard et al. 2003).

Socio-psychological factors such as a general computer anxiety, or negative perceptions about the amount of effort required to learn to use a computer, might often be accompanied by the assumption that they have no use for ICT (Eisma, Dickinson et al. 2004). *'Negative attitudes are caused by a variety of factors: popular perception of age and technology, lack of awareness of technology, the feeling that technology is not useful to older people and the feeling that it is too difficult to use by them.'* An additional problem is that older people often regard this fear or perception of complexity as their own fault and not as a failure in the design of the technology.(Eisma, Dickinson et al. 2004)

On the other hand, studies showed that the competent use of ICT can have positive psychosocial effects. (Pfeil and Zaphiris 2007) found in their literature research that if older people regularly use computers their mental ability and social interaction increases.

Aside from physiological and socio-psychological considerations, there are linguistic barriers which have to be taken into account. As (Thimm and Kruse 1998) pointed out, the dominance of English terms connected with the use of these ICT might be an obstacle for older people. (Related to the German case…) *'Not only the names of the objects themselves (like "der Computer", "der Walkman", "der Chip", "die Stereo-Anlage"), but also the manuals are often in English only. Even the writing on the functional buttons on many household appliances is English which might cause feelings of incompetence regarding the understanding (speech perception) as well as the correct use (speech production) of the technical terms, resulting in "latent feelings of being 'out of touch' with today's modern world'*. (Thimm and Kruse 1998).

2.4.4.1 Implication on design

Given this background of the structural barriers for older people in the use of advanced technologies discussed above, designers need to be aware of a series of factors. The findings from the UTOPIA survey indicate that older people often find computer applications and their documentation too complicated, with too much jargon and inadequate support, both during learning and on-going use (Eisma, Dickinson et al. 2004). 'If older people have a positive attitude towards technology in general they will be more likely to use a specific device, but this is unlikely to happen unless the usefulness of the device is clearly communicated. (Eisma, Dickinson et al. 2004)

As these factors are so clearly elaborated by (Abascal and Civit s.a.), they are presented as direct quote:

Box 1 Clichés which need to be overcome by technology designers

Designers 'have to have to overcome some extended clichés: the lack of ability of the hypothetical users to handle complex devices, and also their acceptability. The last one is frequently formulated as: "older people reject technology". Nevertheless, there is no evidence that older people dislike the use of novel technology in any greater measure than other people do (apart from, of course, very young people that are usually enthusiastic about technology). Rejection is frequently due to the poor quality of the interface, automatic teller machines being a paradigmatic example. Moreover, some studies show that adequately trained older people are in general able to use technology. The origin of this cliché can be found in the fact that technological aids have frequently been introduced without a deep study of user needs, an adequate training period, a good support service and, in many cases, as a substitute for human care. These conditions lead to certain failure and, consequently, to rejection. Another frequent cliché is: "technological devices are too difficult to be used by older people". Many experiences show just the opposite: designers who have had contacts with older people are surprised at the rapid adaptation and the level of efficiency that these users are able to reach in short time when the device adequately fulfils their needs. If the user-system interface is appropriately designed, there is no reason for misuse of the device. Moreover badly designed equipment is difficult to be used, not only by older people, but also by everyone.'
Source: (Abascal and Civit s.a.:AJ-3)

Similarly to the previous section related to computer and internet use patterns, the use of mobile phones depends fundamentally on appropriate learning experiences. (Kurniawan 2006) reports from training courses that 'older women are keen to understand, enthusiastic to learn, and are quite well informed about some advanced features of mobile phones such as MMS (multimedia messaging services)'.

It is, however, all the more important to provide older people who do not have this ICT literacy with technologies which are adapted to their needs.

2.4.4.2 Future perspectives

It is assumed that the described generational gap in relation to ICT can be ascribed to cohort effects which will decline in the near future with the baby boomers as the generation of the new young older people.

Relating to involvement in online SNs, it seems likely that this will be an increasingly important form of social interaction for older people. According to Wright (2000), online SN use by older people has grown an estimated 15 % each year since 1990. These numbers are expected to increase as computer education programmes for older adults increase, and the cohort of late baby boomers (many with a certain level of ICT literacy) enters retirement age. Recently published US-American data even showed a near doubling in the use of online SN among internet users in the 50+ age group within a single year: While only 22 % in this group used online SN in 2009, it was 42 % in 2010 (Madden 2010).

2.5 Conclusions

2.5.1 Implication for process design throughout the Go-myLife project implementation

The cultural differences between older people and ICT interface designers mean that developers have to be very careful about making assumptions. It is important for designers not to treat older people as a homogeneous group. Classifying "older people" as a single separate group implies homogeneity and may lead to a narrow stereotyping of the potential user. Rather a 'holistic mind-set' (Pohlmeyer and Blessing 2009) is required, where the pitfalls and strengths, needs and desires of older people are respected. A holistic mind-set implies further a self-reflection about age-stereotypes in both directions: in relation to oneself as being a "younger" person and related to older persons as well as regarding negative and/or positive stereotypes.

Relating to direct interaction with end-users it has to be emphasized that many older people may not want to talk about topics such as social isolation or loneliness, because such an acknowledgement challenges their identity as independent people being able to cope with the activities of daily life (Wenger and Burholt 2003; Cattan, White et al. 2005; Cattan s.a.). It is therefore important that interactions with end-users are carefully planned and sensitive issues are investigated with care to avoid embarrassment among participants. Further theories, guidelines and recommendations for interaction with the target group are elaborated in D2.1.

2.5.2 Implication for Go-myLife product design

Making a contribution to maintaining and even enhancing social networks of older people is the core aim of Go-myLife.

Social interaction online can be beneficial especially for older people as it allows them to stay in contact with family and friends despite decreased mobility or time-constraints; it fosters the link with 'significant others' outside the household and supports the local neighbourhood community.

It has been suggested that having social networks that include diverse types of relationship is better than having restricted networks in terms of good health and wellbeing. Family ties are an important source of joy (e.g. grandchildren) and provide a strong notion of solidarity with the younger generations and the normative feeling of giving support to them. However, the findings suggest that friendships contribute to the psychosocial well-being of older people in more positive ways than family relationships do. As peers often share a similar life situation (e.g. retirement) it is likely that an online SN for older people will display a high degree of emotional support and trust.

The work of Wright (2000) and Hampton (2009) emphasizes the positive effects that online social networks have on the social life of their community members. Given the increased importance of local proximity in social networks of people as they get older, this means the Go-myLife platform should include services and measures supporting interactivity in local neighbourhoods; in particular, to create offers that provide alternatives to traditional service provisions, such as online local neighbourhood groups.

Summing up the findings reported in 2.3, central to a 'good life' in old age is the value

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attached to inter-dependence: being part of a community where people care about and look out for each other; a determination 'not to be a burden', especially on close family; and an emphasis on mutual help and reciprocal relationships (Godfrey, Townsend et al. 2004).

Asking what are the keystones for social well-being of older people, Cattan, White et al.(2005) summarise the following components, which have to be recognized in the service provisions of the Go-myLife platform:

- Access to friends and family

- Intergenerational activities

- Support in times of transition, e.g. bereavement & moving home

- Shared enjoyable activities – the importance of reciprocity

Hence, meaningful connections with peers, neighbours and communities are central components against loneliness, while family ties seem to have little impact in this respect.

- This suggests that services on the Go-myLife platform that link lonely older people with others outside the household may be particularly helpful. Especially the link with local neighbourhoods and promoting a sense of community seems to be of high relevance to combat loneliness.

- Social isolation frequently causes boredom: Thus entertainment or even self-entertaining services, like games and learning facilities could bring pleasure and distraction into daily life.

- Women are more affected by isolation: Thus the provision of facilities has to be carefully reviewed from a gender perspective.

- As widowhood can lead to devastating loneliness, depression, apathy, and lethargy, a need for bereavement support should be given.

- Support for spouse caregivers can alleviate loneliness and have a long-term protective effect against deterioration in the well-being of the caregiver. This suggests the provision of online self-aid groups of family care givers.

The diversity of older people already discussed has further implications for the Go-myLife product to be developed:

- Newly retired people may be dealing with the challenge of moving out of their current working-life network and may therefore search for alternative social networks and community activities, such as alternative paid work and/or volunteering.

- On the other hand, people in the post retirement age may be more interested in information related to health and social care.

As a general, normative guideline, Go-myLife should support older people in their use of online SNs in order to boost their levels of both virtual and face-to-face social interactions.

As people increasingly use online SNs for social interaction, we believe that our project has a significant contribution to make to the social needs of older people.

3   Use and interaction patterns on online social networks

Social support and meaningful interaction is a key concept in online SNs. Studies of online SNs have so far been mainly focused on health-related online communities for people suffering from an illness and/or for their caregivers (Pfeil 2007). As social interaction correlates positively with the perceived well-being of older people, it is believed that participation in online SNs can prevent loneliness and enhance the quality of life for older people.

However, little is known about the profile of older users of online SNs and which mainstream online SNs are most appreciated by them. How could online SNs be designed to encourage their participation and support them in their virtual interaction? What are the usage patterns? Which social interactions are most valued?

Dealing with these questions, desktop research on older people using popular mainstream online SNs has been carried out in order to match the findings from senior online SNs, based on interviews with operators.

3.1   Analysis of popular online social networks

This chapter delves into investigating mainstream online social networks (online SNs) and identifying those that see the maximum number of members from the Go-myLife target age group of 55-64 and 65+ in Europe.

3.1.1 Ranking online social networks

As per the Eurostat regional yearbook for 2010[4], in 2009 about 65% of households with members between 16 and 74 had access to internet in Europe (EU-27). Using 2009 demographics data from Eurostat5 Table 4 shows the percentage of population using the internet, aggregated for EU-27 and across all the respective countries within EU-27.

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[4] http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home)

[5] http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database - last updated – Nov 2010

Table 3 Percentage of population having access to internet

Country	% of total population[6]	% of 55-64[7]	% of 65-74[8]
European Union (27 countries)	67	48	25
Belgium	76	59	29
Bulgaria	45	16	4
Czech Republic	64	39	14
Denmark	87	78	53
Germany	79	64	37
Estonia	72	48	14
Ireland	67	40	20
Greece	45	14	2
Spain	63	31	12
France	72	N.A	N.A
Italy	49	28	8
Cyprus	50	18	9
Latvia	67	38	10
Lithuania	60	26	8
Luxembourg	87	78	51
Hungary	62	40	10
Malta	59	25	26
Netherlands	90	83	54
Austria	73	51	22
Poland	59	30	8
Portugal	48	23	7
Romania	37	12	3
Slovenia	64	36	9
Slovakia	75	40	15
Finland	N.A	N.A	N.A
Sweden	91	88	54
United Kingdom	84	N.A	N.A

Source: Eurostat 2009 Database

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[6] Percentage of total population having access to internet

[7] Percentage of the people in 55-64 age group having access to internet

[8] Percentage of the people in 65-74 age group having access to internet

Countries such as Belgium, Netherlands, Austria, Luxembourg, Sweden and Denmark have a higher percentage of people in the 55-64 and 65+ age categories accessing the internet. However comparable online SN usage data was not available from the sources used for analysis.

As per European Commission's Information Society[9] there were 41.7 million regular users of online SN sites in 2008 in Europe, a figure they expect will reach 107.4 million by the end of 2012. Since aggregate EU-27 wide demographic data was not available, online SNs across some of the relatively larger and populous countries across EU-27 were analysed using publicly available statistics from internet sites such as Google's DoubleClick ad planner[10], Amazon's Alexa.com[11] and Facebook's advertising data[12]. It is assumed that these countries and the online SN sites operating there will be representative of the usage pattern across the wider EU-27. Table 2 below shows the most visited sites from the 55-64 and 65+ age groups.

Table 4 Top 2 sites visited by 55-64 and 65+ year olds

Country	Online SN	# of unique views p.m[13] (Sep 2010 – Doubleclick Ad planner)		Country Site Rank[14] (Alexa.com)
		55-64	65+	
UK	Facebook	1,200,000	320,000	2
	FriendsReunited	57,000	17,000	495
France	Facebook	570,000	140,000	2
	Trombi	69,000	20,000	244
Spain	Facebook	220,000	36,000	2
	Taringa	36,000	4,400	18
Germany	Facebook	1,300,000	470,000	2
	Stayfriends	630,000	200,000	75
Italy	Facebook	1,000,000	170,000	2
	Badoo	57,000	11,000	47

Source: Facebook Advertising Data, Sep 2010

After Google, which is more of a search and email provider, Facebook dominates the internet space across most of EU-27. However, there are a few regional sites which occupy a prominent share of the online SN market in some of the EU-27 countries. As per Alexa.com, online SN's such as Hyves in Netherlands, Skyrock in France, Tuenti in Spain and Wer-kennt-wen in Germany figure prominently amongst the local favourites. For example Tuenti now

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[9] http://ec.europa.eu/information_society/activities/social_networking/index_en.htm

[10] www.google.com/adplanner

[11] www.alexa.com

[12] www.facebook.com/advertising

[13] # Unique Views p.m – Estimated number of users from the defined country that visit a specific site in a month

[14] Country Site Rank – Total ranking amongst all the internet websites in a country

owned by Telefonica has 8 million users, Hyves with 7.6 million members has twice as many users as Facebook and Skyrock in France competes neck and neck with Facebook for subscription members.

If Facebook can be thought of as a social platform and hub that provides friend-finding, sharing objects (photos, comments, videos, likes, places), promoting events and groups, playing games, chat and now email, then the second rung sites attract their audience because of their specialized format such as finding old friends, dating etc. For our target group Stayfriends in Germany has recorded the highest absolute number of page views after Facebook. Using criteria such as subscription numbers, unique views and site rank we have selected Facebook, FriendsReunited from the UK, Stayfriends from Germany and Badoo from Italy for the analysis of interaction patterns amongst the 55-64 and 65+ age categories.

3.1.2 Case studies of mainstream online social networks

3.1.2.1 Facebook

Facebook is a global online SN site with around 500 million members, out of which around 200 million also access the site through their mobile phones. Facebook provides a platform for users to find and make friends, upload and share photos and videos, create groups and events, follow other friends, comment and "like" on postings created by others and, last but not least, play games and buy and trade virtual currency credits. Facebook Mobile also has other features such as Places, which allows users to share their location with friends. The site is not just an online SN site but also a communication hub with several third party applications integrating with Facebook for login credentials, accessing user profiles and several other social media requirements.

Member statistics

The largest Facebook user base in Europe is in the UK with around 28 million users, against a total of 133 million users across EU-27. Next is France with 20 million, closely followed by Italy with 18 million users. Germany and Spain have around 12 million each. Sweden, Belgium, Poland have around 3.5 million users each while EU nations such as Denmark, Norway and Austria have around 2 million users respectively.

We have been tracking the three largest Facebook user countries in EU-27 since July 2010, till the compilation of aggregate data in September 2010, and found some impressive growth in the number of new registrations from the 55+ age group. In the UK, 7% of Facebook users belong to the 55+ age group, a segment that has seen 10% growth in the 3-month period. The next largest user base of Facebook, France has around 6% users in the 55+ age group having seen an impressive 18% growth, in the above mentioned period. Similarly the third largest Facebook user country, Italy has around 5% users in the 55+ age group and has recorded around 15% growth in this target age group in the same period.

The average 55+ Facebook user represents around 8% of the elderly population across the top 5 Facebook user countries (UK, France, Italy, Germany, Spain) in the EU-27. Table 3 shows the countries in the descending order in terms of total number of Facebook members.

Table 5 Facebook user countries in EU-27

Country	Total members (in Millions)	Total 55-64 (in Millions)	Total 65+ (in Millions)
UK	28.4	3.1	1.4
France	19.7	1.9	0.8
Italy	17.3	1.4	0.5
Germany	12.7	0.8	0.3
Spain	11.7	0.9	0.3
Poland	4.0	0.2	0.08
Sweden	3.9	0.5	0.26
Belgium	3.7	0.4	0.2
Netherlands	3.1	0.4	0.2
Greece	3.0	0.1	0.06
Czech Republic	2.9	0.2	0.09
Portugal	3.0	0.2	0.09
Denmark	2.6	0.4	0.2
Austria	2.2	0.1	0.05
Hungary	2.1	0.2	0.08
Romania	1.9	0.07	0.02
Finland	1.8	0.2	0.08
Ireland	1.7	0.1	0.06
Malta	1.7	0.02	0.008
Bulgaria	1.6	0.1	0.04
Slovakia	1.5	0.08	0.03
Lithuania	0.8	0.03	0.01
Slovenia	0.6	0.03	0.01
Estonia	0.3	0.01	0.005
Cyprus	0.3	0.01	0.008
Luxembourg	0.25	0.02	0.007
Latvia	0.2	0.01	0.004

Source: Facebook Advertising Data, Sep 2010

Interest areas

As per the data available for Facebook UK, it was found that the greatest proportion of the Go-myLife target users accessed Facebook for entertainment. Table 7 shows the population distribution as per interest areas.

Table 6 Profile interests on Facebook

Age	Indoor[15]	Games	Outdoor[16]	Entertainment[17]
55-64	181,500	42,340	59,100	173,300
65+	74,660	13,300	24,500	69,260

Source: Facebook Advertising Data, Sep 2010

As most of the members do not completely input their profile data, the above data is at best an indication of the interests of the target segment. From the sample above it can be inferred that apart from connecting with family and friends, entertainment and indoor activities are the most popular interest areas for the target segment of the Go-myLife platform.

3.1.2.2 FriendsReunited

FriendsReunited is an online SN site for people to connect with old friends from school, university, work, armed forces, clubs and nearby localities. Their aim is to provide a forum for members to exchange memories on the site's message boards. Online since 2000 the site was founded by Julie and Steve Pankhurst in London, UK. The idea took shape after Steve realised that the internet would be the best medium for his pregnant wife's need to remain in touch with her old friends. In 2005 with 12 million registered members FriendsReunited became part of ITV plc. In 2009 Brightsolid acquired the company, which now has around 20 million registered members with an average age of 42. The site also operates two other sites GenesReunited and Friends Reunited Dating, the former having 52% users out of the 7 million registered members in the 55+ age category while the latter has around a million registered members.

Member statistics

20% or 4 million registered members belong to the 55+ age category out of which 53% are male. Members have generally shown interest in friendship, family & relationships and acting and theatre.

Interest areas

Members typically join the site for the following reasons:

 - Social need - Reuniting with past contacts or friends

 - Showing off or comparing themselves with their peer group

 - Curiosity about their local areas

 - Driven by nostalgia

Member activities

Members on FriendsReunited engage in the following activities on the site

 - Add friends – Add friends and remain updated about their activities on the site. Users can also follow other members who are not on the friend list.

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[15] Activities include - gardening, home decorating, cooking, reading, writing, photography

[16] Activities include - sports, travel, shopping

[17] Activities include - movies, music, drama, theatre, television, comedy central, shows

- Places – Join schools, university, place of work or any other institution with which the member has an affiliation.

- Groups – join interest groups such as music, video, cars and motoring, travel etc. and connect with other members

- Photos – upload photos and tag other friends

- Games – Play games online, challenge other members, share tips and earn virtual rewards.

- Blog – create blogs and share

3.1.2.3 Stayfriends

Owned by Seattle, USA based Classmates Online Inc. and founded in 2002 the Erlangen, Germany based site has around 11 million members and around a million class photos uploaded by members. Stayfriends manages social networking platforms with a total of over 20 million members in Germany (StayFriends.de), Austria (StayFriends.at), Switzerland (StayFriends.ch), France (Trombi.com) and Sweden (StayFriends.se). Stayfriends.de primarily targets German speaking users in finding and keeping in touch with old class mates, friends across German, Austrian and Swiss schools and colleges. The site underwent a major overhaul this year coming out with a fresh look, enhanced privacy settings and an iPhone app.

Member statistics

4% of the total Stayfriends members belong to the 65+ age category while 13% are from the 55-64 group. The site has a higher representation of females who constitute around 60% of the site traffic. As per a study published by AGOF (Association of Online Research) in 2009 over 43% of German internet users aged 50+ visited Stayfriends.de.

Interest areas

Users registered with an interest in school reunions and findings. Members wanted to:

- Compare themselves with their peer group

- Renew an old friendship

- Look for support and advice from their peer group

- Organise events and groups

- Start a relationship

3.1.2.4 Badoo

Badoo is headquartered in London, UK, claiming around 83 million members worldwide. This online SN has returned sizeable number of Go-myLife target users from its Italian site. The site claims its allowing users to find and meet people in their locality with the aim of socializing. Badoo provides a platform for users to create their profiles, send messages and rate each other's profiles. The site has been integrated with around 40 webmail services using which users can import their contact list and invite other friends to Badoo. The site promotes itself around the flirting element in the social network. Badoo has released its iPhone app this year along with integration with Facebook.

Member statistics

In Italy the following table shows the number of members registered on Badoo. Globally the number of members in the 65+ age category totals 750,000.

Table 7 Membership numbers on Badoo

Age	Members
55-64	98,582
65+	53,332

Source: Badoo.com Nov 2010

Interest areas

As per the site, members have typically spent their time on the site to:

- Meet new people who share the same interests within their own locality
- Make friends
- Find events or groups such as dance lessons, mountain climbing etc.
- Update their profile and keep it current with their interests
- Flirt or date
- Send virtual gifts

Member activities

Members of the site typically visit the site to meet new people and make friends. Members search for people with similar interests with the aim to meet them for dinner, lunch, at the local pub or meet over the weekend.

3.1.3 Conclusion

Online SN sites serve a variety of needs that can range from connecting with family and friends to just pure play entertainment. Some of the sites such as Facebook with their large social platform offer not just a means to connect but also to play games and express themselves using various social tools and features. Others such as FriendsReunited and Stayfriends work by reviving old communities and encouraging interaction between peers. Across most online SNs, the most active users within the 55-64 and 65+ are female. In both the 55-64 and the 65+ age groups, one of the concurrent themes observed is the need to connect with old friends and peers, as is evident from higher rankings of friend- finder type online SN sites.

3.2 Case studies of senior online social networks

The participation of older people in online SNs is a relatively new phenomenon where little research is yet available. The few studies existing mainly deal with participation rates and are mostly commissioned studies by the operators. However almost no research is available that investigates the strength and weaknesses of senior online SN, their experiences with interface design and the trust and reputation functionalities and regarding specific features supporting

social needs.

Thus, four interviews with operators of online SN in Europe dedicated to older people were carried out during autumn 2010. The choice of operators was mainly based on the results of section 3.1. Other criteria were language aspects as regards communication with the operators and personal experience with the online SN. For instance, 50plusnet.nl had been presented at the AAL Forum in 2009 and was considered a "best-practice" project. BeGrand was selected because of their specific approach to the intergenerational aspect. All in all, we chose eight operators of online SN and contacted them; the following four invited us for an interview.

This section summarizes the findings from these interviews.

3.2.1 Description of the sample

In the following section a short description is provided of the four senior online SN investigated, their aims, background and history of origin as well as their particularities.

50plusnet.nl

50plusnet – based in Netherlands – has been actively presented in the AAL Forum 2009 and can be considered as an example of good practice. It is aimed at older people who wish to extend their social network. It facilitates online joint activities of its members. People are linked up through a matching system, in order to share a hobby, go out together or engage in sports activities. The objectives of 50plusnet are:

- To get older people out of their isolation and/or to prevent older people from becoming isolated
- To stimulate participation, independence and social involvement of older people
- To support 'Self-management': to motivate older people to take initiative over their lives
- To stimulate the (physical) activities of older people and to promote a healthy lifestyle and mental well-being

Further, 50plusnet strives to establish new contacts, information exchange, the giving and receiving of support, advice and contact with others, the provision of useful tips, relationships and activities with others.

50plusnet has more than 30,000 active members and between 100 and 200 members are online at any one time.

The costs to manage the internet community are about 80,000 Euro per year (including personnel, hosting, implementation, development of new functions and technical maintenance) which is funded mainly through the selling of licenses. Organisations that acquire a license receive a local version of 50plusnet. 50plusnet is operated by the National Institute for Health Promotion, Netherlands.

Overfiftiesfriends.co.uk

Overfiftiesfriends is a social and dating network for over 50s in UK that was launched 4 years ago with the aim of bringing older people closer through the internet. The network allows

members to find friends who share their interests, organize activities and start clubs, find a date, browse profiles, chat, open blogs or post on forums. The site focuses on creating the active participation of members around activities and clubs so that members can make new friends. The site also runs certain promotions and competitions in partnership with commercial organizations. Members create their profiles on the site, list their interests and they also have the option to post their professional skills.

The site has currently around 10,000 registered users and is a privately owned site.

Finerday

As Go-myLife has a strong focus on intergeneration, Finerday (in UK) has been chosen to learn how interaction between family members can best be supported. Finerday focuses on the provision of a secure and private online networking space for families. Participation is based only on invitation from an active member, and no-one who is not invited can find out any personal information on the site or search for anyone on the site. Any "friends" who are invited tend to be those friends who are almost family members – who get invited to weddings and other family events. A typical user will use the site to connect with 8 – 12 family members and one or two friends.

The service has been developed around the requirements of older people but it is used by all generations. In fact the most active users are children between 9 and 11 who are too young to go on normal social networking sites and who like the opportunity to chat, post photos and so on.

It is also aimed at playing a key role for separated families; to allow grandparents to keep in touch with grandchildren even when the parents have divorced or separated and otherwise they would find it difficult to do so.

It does allow posting to and from mainstream online SNs to make it easy for people who mostly use other social networking sites to keep in touch with and post messages to family members that they can be sure are only seen by family members.

Finerday.com is supported by the Department for Business, Innovation and Skills. It was originally developed by a care home owner to meet the needs of the residents. There currently are about 5,000 users.

BeGrand.net

BeGrand.net (also based in UK) can be considered as a good practice example for the particular needs of grandparents.

BeGrand.net provides information, advice and a community for grandparents. It contains articles, factsheets, quizzes, surveys, resources, activities and helpful guides to making best use of the internet, written in plain English. Users can create profiles, send messages and join groups. There is a very strong community building aspect to the site.

BeGrand.net is a partnership between three bodies closely working with grandparents or the over 50s community: Opportunity Links, Digital Unite and The Grandparents Association. It also works closely with many other groups working with families throughout the UK.

3.2.1.1 Who are the users? – Socio-demographic characteristics

Apart from Finerday.com (whose aim is to link generations), the users in the four case studies tend to be young older people with average age of 55 years.

The gender proportion among the users shows a significantly higher degree of female participation (66% are female in the overfiftiesfriends.co.uk case, 75% in the 50plusnet.nl case and in the Begrand.net even 80%).

However, the marital status shows heterogeneity: the users of overfiftiesfirends.co.uk are mainly divorced or widowed, whereas the users of BeGrand are overwhelming married.

The relative percentages of working and retired users were not available, however, a (certain) part of the users are still in gainful work ("in all sorts of professions") while in the BeGrand case "most users" are already retired, "partly because many have had to undergo forced early retirement to look after grandchildren or to campaign for a better deal for grandparents or as a result of a mental health breakdown". An exception is 50plusnet.nl, where concrete percentages are available: 40% are still working and a majority of their users either currently or previously work in the medical care and business sectors.

Records relating to numbers of children and grandchildren are rare or only general, such as children who have "flown the nest" and "most have grandchildren". 50plusnet.nl is an exemption again: 75% have children and 45% have grandchildren.

Finally, the users predominantly coming from the country where the online SN is provided and cross-border communications are very rare. Also ethnic minorities are rarely represented in the user groups.

3.2.1.2 What are the usage patterns? (Frequency and duration of access)

In all cases the frequency of visits is only 3 to 4 times per week and the duration is on average only 2 to 6 minutes. An interpretation of the low activity level of older people is provided by Finerday, as older people tend to "check posts passively, look at messages posted and photos uploaded, etc." and participate more as information takers rather than information providers.

3.2.1.3 What are the experiences with the interaction features provided?

Asking which features are most valued by the users, the experiences are partly contradictory: in the Finerday case the "uploading of photos gains the greatest reaction" while in the Overfiftiesfriends.co.uk case "not many people use the facility to upload photos". The same applies to the facility of messaging: in one case this features ranks on the top of preferred features and in another case it is not very much used. However, in the 50plusnet.nl case the message traffic is impressive: 8,000 e-mail messages are sent and about 6,000 messages are put on the message boards every week on average.

In all cases, the options of **voting** and **chats** are rarely used.

Groups seem to be a highly valued feature for interaction, according to 50plusnet.nl experiences, where 11,000 different groups (such as bicycling, walking, theatre or cinema, going out to the restaurant together) are set up.

> *"Lots of the members use the platform to arrange activities in real life. They*
> *also exchange telephone numbers to make arrangements in real life. People*

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> *can make one-to-one appointments or join one of the hundreds of groups that*
> *have been established by the members of the site."*

However, the users are predominantly active when it comes to share opinions, activities, jokes and stories, discussing e.g. meals, theatre trips and others, to provide support and advice and companionship. One interviewee pointed out that "comments on memories that have been shared" gain the greatest attention.

Looking deeper into the question how interaction can best be stimulated, the experience of BeGrand shows that personal issues matters most:

> *"It is important to keep discussion focused on practical issues and not on*
> *politics. For instance people are not interested in talking about whether the*
> *Government is right to cut the budgets, or even about whether they think that*
> *the budget cuts are likely to affect them. However they are interested to talk*
> *about how they can save money from their weekly bills."*

This is echoed by 50plusnet.nl given these illustrative examples of interactions which also reflect very well what is on the mind of older people:

> *"Sometimes people post messages of loneliness, going to the hospital, fear of*
> *operations. In these cases they get support from other community members.*
> *If community members go to the hospital often the children leave messages*
> *on the bulletin board about the status of their parents so that the community*
> *knows what is going on in the hospital. Sometimes they then send postcards*
> *to the hospital to support the sick community member. (...) Health is a*
> *popular issue on the bulletin board. You can read quite often that members*
> *are about to be admitted to hospital. Those members receive many*
> *supportive messages. We also hear that their children take these messages to*
> *the hospital and read them to their fathers or mothers."*

Further, the 50plusnet.nl experiences are that SNs have a strong influence on decision making:

- Messages originating from their own social network create an openness towards anonymous senders
- Describing one's own experiences and learning from them is effective
- It is possible to experiment with new attitudes and behaviour
- Self-help and peer support are necessary for the sustainability of behaviour
- People tend to be more open about themselves if they don't see each other face-to-face.

Security and trust are crucial in all cases, e.g. "The strength of the service is its simplicity and security. People greatly value the way they can be certain that this is a private space for them and their family and close friends." (Finerday). "People seem confused about what "share" is, so they need to find a way of explaining this more simply." (BeGrand)

In order to keep people's interest, BeGrand features:

- Blog of the week
- Question of the week
- Weekly round up

50plusnet.nl follows a similar approach where the "new groups of the month" is presented on

the individual homepages.

Also related to general usage patterns, gender differences related to interaction patterns can be identified too. Generally, women are more actively communicating via the interactive facilities and they suggest face-to-face meetings more often than men. One operator found that when a couple joins, the male tends to dominate and take over all the activities. Another one reported that the interactive features are predominantly used by women, while when it comes to talking with advisors men tend to use the phone. Another again pointed out that female users look for other women to share activities with, while men very often look for a new partner.

The impacts of interactivity through 50plusnet are:

- 30% see each other in a 50plusnet group
- 35 % see each other in real life
- 40% mention more connection (real life, chat and mail)

Table 8 Interaction and other facilities provided by the senior platforms

	50plusnet.nl	Overfiftiesfriends.co.uk	<u>Finerday</u>	BeGrand.net
Which interactive features are	o Chats o Mail o Message board o Groups: 11,000 different groups (!) o Individual pages o 4 Bulletin boards: − Plus café[18] − Activities − Acquaintance/Get to know someone − Poems/Stories	o chats o "private" messages o Forums o activities o clubs	o Photo sharing o "Secure" messaging o Building and sharing memories o Sharing special dates, e.g. birthdays, anniversaries	o Chats o Photo sharing o "private" messaging o Blogs o Talking to online advisors and to telephone advisor o Starting own group o Adding in quick comments o Voting on articles

[18] The bulletin board "Plus café" is a place, where users can talk about daily affairs, such as the weather, cooking, interesting encounters with other site members etc.

Criteria to link up	Yes, related to: o Activity o Age o Male/female o Education o Distance o Smoking o Sexuality	Yes, related to: o Age o Activities o Male/female o Education o Distance	No	No

3.2.1.4 What are the experiences with user matching provided?

Two senior platforms are providing specific facilities to link users up with each other, whereas BeGrand focuses instead on providing information about local events and local support groups and considers this approach as the best way to facilitate social contacts among their users. Their policy is also to support local branches of the Grandparents Association. 50plusnet.nl's system matches the users according to stated criteria in table 9 and members receive an e-mail message with the matches that have been found on a weekly basis.

3.2.1.5 What are the experiences with profile creation?

Generally and not surprisingly, the simpler the registration and profile completion feature, the better. "Keep it simple!" recommends Overfiftiesfriends.co.uk and "users want everything to be as simple as possible" emphasizes BeGrand.net. In spite of the fact that this paradigm has been recognized in advance, "many people" tend to put very little information in their profile. Instead of their real name, typically people just put their username, email and password as they prefer to stay anonymous. However, those who act as "information providers" tend to provide more personal information when they register than those users who tend to be passive and act as "information receivers": "people who blog tend to fill in more information about themselves", is the experience of BeGrand.

A more elaborate approach is chosen by 50plusnet.nl where the creation of the user profile is based on a multiple choice questionnaire, "as research had shown that people find it difficult to describe themselves".

3.2.1.6 What are the experiences with support provided by the operators?

The importance of providing direct support to their users is recognized in all cases. With regard to the means of direct support, email interactions only seem to be sufficient in two cases. 50plusnet.nl even strongly recommend not to provide a telephone hotline ("FAQs work out well too"), while in another case there are both "online and telephone advisors available for much of the time".

Setting up a number of moderated groups to help people provide support to each other, is recommended by BeGrand. In the case of 50plusnet.nl a team of 7 volunteers both monitor the posts on the bulletin board, profiles, pictures and others on a daily basis and answer requests for instrumental help via e-mail. However, support should not be provided via the platform itself:

> *"At the start of the project volunteers also answered posted requests, but the*
> *users did not like it that volunteers from 50plusnet answered on the bulletin*

boards. They prefer that only the community interacts on the platform".

However, 50plusnet learned that support often comes from the online community as well. "When someone does not understand how to deal with the platform the community helps on the message board."

3.2.1.7 Success factors and miscellaneous

Similarly to the registration form, the platform itself has to be very simple and easy to use "Not too overloaded, no flashy banner and that kind of things. Very quiet and 'boring'!" Navigation icons always have to be in the same place and changes are irritating.

Looking back, 50plusnet.nl concluded

- Pre-launch research: find out which elements of social contact are important for older people
- Pre-test of structure and function: undertake continuous observation of the use of the website
- Focus on one message: for instance "get in touch with people of your own age"
- Attract many members at the start in order to facilitate matches and interaction
- Provide a safe environment: Undertake constant monitoring including evening and weekends
- Publicity
- Co-operate with partners active in older people's networks

Asking what else should be provided on the SN, 50plusnet.nl suggests a netiquette: "There are netiquette rules on the platform. Sometimes (around once in two months) profiles of an offending member are blocked via blocking the IP-address. When there is a good excuse for the bad behaviour, sometimes the blocked member is allowed to re-join the community again. Sometimes the person will use another computer with a new IP-address – and in that case will generally demonstrate good behaviour then."

3.2.2 Conclusions

As outlined in chapter 3.1, online SN sites serve a variety of needs that can range from connecting with family and friends to just pure play entertainment. Obviously many users, including people from the 55-64 and 65+ age groups, are actively using the Facebook platform. However, specific SN platforms for older people offer services that take into account the special characteristics of these users, which all serve the function of connecting (either virtually but also locally) elderly people to address loneliness and isolation. The screening of four case studies for senior SN platforms allows a more in depth view and could be described by following profile:

Simplified, the typical user of a SN platform for the elderly is female. She prefers a user-friendly, national platform with simple features (upload of pictures, facility of messaging) that allows her to share and comment on memories with her family and (old) friends as well as to find and communicate with new likeminded friends, having the same interests. She is rather gathering information than actively providing messages, thus the frequency of her visits is rather low, around 3 to 4 times per week and the duration is on average only 2 to 6 minutes.

She is not fond of voting and chat but is member of several groups that are focused on practical issues affecting her life and lifestyle. The topic of health is a major issue for her. Therefore personal information that she shares with others needs to be kept in a secure private space. To deal with any problems with the SN platform, she has found some friends in the online community, who advise her how to overcome these issues.

This activity pattern demonstrates that SNs for older people require (at least in some areas) increased attention or even an adapted SN platform in order to fulfil the different needs. Consequently, an ideal SN platform for older people would consider including the following items in their design:

- The motivation to join a SN site is mainly because of a social need (to reunite with or find past contacts or friends, the organisation of meetings, finding a partner), showing off or comparing themselves with the peer group, curiosity about their local areas or they are driven by nostalgia. Thus the favourite features used are the uploading of pictures, messaging, groups, match-making feature or finding and organizing events and bulletin board. Features that might be neglected are voting and chat.
- The design is constrained to offer a simple and user-friendly SN in terms of the features applied (especially in Profile creation). No flash or banners are used.
- Once the SN platform has been launched, no changes in design and approach are made.
- The tools that support the finding of like-minded persons sharing the same interests or the finding of old friends from previous periods of one's life are highly appreciated.
- The target group favours both virtual as well as face-to-face connections and meetings that result from the matching.
- Older people don't spend much of their time on the SN platform. Thus the platform is designed to allow a quick overview of the news.
- Topics that are launched in groups are chosen for the way that they affect the life of the users (i.e. health) and are discussed on a practical level rather on a theoretical or political level.
- The ideal SN platform is absolutely safe. No information can be retrieved by outsiders.
- Support is given by a combination of several support systems (i.e. FAQ, telephone support, moderated groups). Also, the users themselves give support, which is highly appreciated.
- The SN platform has a large number of members, which facilitates matching up and interaction between the members.

4   Findings from end-user involvement workshops

Between October 2010 and March 2011, seven workshops with older people in Austria and in the UK were conducted according to the research questions and the methodology defined in D2.1. The profile of the participants, the date and location of the workshops, the agenda and first impressions of the facilitators are presented in D2.2.

This chapter presents and synthesises the qualitative and quantitative research findings from the seven end-user involvement workshops, which were structured into two different types:

o   Type 1 workshops "Assessment of existing online Social Networks" (task 2.2.) asked for an assessment of five existing online Social Networks by end users. Questions centred around the platforms' strengths and weaknesses, the existence of barriers and the motivations for their use.

o   Type 2 workshops "Communication patterns in SNs" (task 2.3) investigated the structure of communication patterns of older people within their social networks, as well as end users' needs and requirements regarding technical support.

4.1 Workshop type 1: Assessment of existing online Social Networks

The workshops' core exercise (task 2.2.) was to explore user interfaces of SNs based on specific user tasks.

This type of workshop was held four times:

1.   Workshop in Vienna / Austria (four participants, urban area)

2.   Workshop in Weikersdorf / Austria (eight participants, rural area)

3.   Workshop in Derby / UK (seven participants, urban area)

4.   Workshop in Cambridge / UK (four participants, urban area)

Each assessment was divided into three parts:

1.   The participants were invited for a "walkthrough" of specific tasks in pairs of two. Each pair received a set of materials, consisting of a "Scenario" and seven "Situation Cards" and "Situation Feedback Forms".

2.   After this session, each participant was asked to complete a standardized questionnaire about the frequency of their use of new media, the usability of the assessed SN, and the added value derived from a particular SN.

3.   At the end, a semi-structured discussion followed, where the participants talked about their experiences gained from the "walkthrough" exercise.

Between parts two and three a short "storytelling walk" was inserted, giving the participants - again in pairs of two - an opportunity to share their experiences of modern communication media. They were asked to follow loosely the topics that had been presented or discussed by the larger group. The results supplement the findings from the questionnaires.

In the following section, we present the findings from the type 1 workshops structured

according to the three mentioned parts. It starts with data on general usage patterns and the frequency with which modern communication technologies are employed; the data are derived from the "storytelling walk" and the questionnaires. We then continue with the assessments of the five SN platforms.

4.1.1 Methodology of analysis

The analysis of the **quantitative data** (in workshop type 1) relies on:

a) feedback-forms: after each task ("situation"), the participants completed their assessment on feedback-forms in order to gain quantitative data for the analysis on the one hand and to provide the participants with aid-memoires for the discussion group later on (in part three). Up to seven "situations" were provided for assessment per platform.

They were asked to assess the "situations", and to evaluate them using five quantitative questions with five answer categories (using Facebook as the example):

1. "How did you feel while going through this situation?" 5=very happy to 1= very unhappy.
2. "How easy or difficult would you describe the solution of the described situation was on Facebook?" 5=very easy to 1=very difficult.
3. "How content are you with the functions Facebook offered for handling the situation?" 5=very content to 1=very discontent.
4. "How much time would you estimate it took you to handle the described situation?" 5=very little time to 1= too time consuming.
5. "How useful would you find the communication tools in your own social network?" 5= very useful to 1= not useful at all.

The total mean value of the results is composed by the sum value of the five quantitative questions with five answer categories divided by the number of valid answers: the higher the mean value, the higher the satisfaction.

The open questions were:

- "I liked" …,
- "I did not like" …,
- "Ideas, proposals, suggestions for improvement"…..

b) Questionnaires regarding current media usage and overall impression regarding the tested SN. After the "walkthrough" sessions the participants were asked to fill out a standardized questionnaire supplementing the findings from the "situations" exercise, dealing with the usability of the assessed SN as well as the added value perceived from this SN.

Qualitative data relies on individual presentations (current media usages as well as personal communication patterns in social networks and future perspectives), group presentations and discussions. The presentations and discussions were tape recorded, transcribed, coded with

MAXQDA[19], analysed and systematically summarised. At least two researchers were involved in analysing every transcript. Only those codes and respective sub codes that they agreed upon could be introduced and retained respectively. This method of co-analysis provides improved objectivity: The results do not depend on one specific person and are reproducible independently of the individual researcher. As anonymity was guaranteed to the workshop participants each person was numbered instead of revealing their names. The findings consist of a systematisation of relevancies, a generalisation and an interpretative framework. The direct quotations of the participants in the Austrian workshops have been translated into English by the authors.

4.1.1.1 Sample description and social demographic characteristics of participants

Following a convenience sampling approach, 23 persons participated in workshop type 1, among them seven men and 16 women. In Austria three men and nine women and in United Kingdom four men and seven women were asked to rate their experience with social network platforms.

Table 9 Participants by country and sex

	men, N	women, N	total, N
AT	3	9	12
UK	4	7	11
total	7	16	**23**

The majority of the participants belonged to the 61 to 65 age group, a quarter was older and another quarter was younger.

With regard to their educational level, half of the participants had an academic degree, while there was only one person with secondary school and another one with primary school as their highest degree.

The participants in UK rated (on a scale from 1=very little to 5=very good) their computer skills slightly higher (2.82 mean value) then the Austrian (2.75 mean value). Comparing computer skills by gender, men rated their skills better (3.14) than women (2.63).

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[19] MAXQDA is software supporting the analysis of qualitative data.

Table 10 Computer skills of participants

Computer skills			
Mean value		**Mean value**	
AT	2.75	**Men**	3.14
UK	2.82	**Women**	2.62

Reflecting Go-myLife's core aim of developing a platform for urban computing, the main focus in the recruitment of participants were in urban areas (namely Vienna, Derby and Cambridge); however one control group from rural area was included too (Weikersdorf).

4.1.2 General use patterns of communication media – quantitative and qualitative findings

Generally, most participants had a positive attitude towards technology and stressed the usefulness of modern communication technologies. Asking the participants why and how often they use modern communication technologies, the data show that landline and e-mail messaging are employed most frequently.

The following findings were established with the storytelling method and questionnaires filled out by 23 participants of the type 1 workshop.

4.1.2.1 Telephony

No great surprise: most participants use the telephone in their social networks, and it is also the medium used most frequently in their communication with their families.

However, there is a wide range of technology employed. The vast majority of the participants still use their landline "daily or several times per week"; others already use a smartphone, e.g. for uploading pictures into Facebook.

The participants have no clear position on the use of video telephony. When communicating with their peers, people feel "uneasy" and think it is unnecessary. "*When talking to former lovers, for example, I'd always have to dress up beforehand.*" (woman, Austria/urban area). When communicating as mothers, however, the participants recognise the benefits of video calls, such as being able to ascertain whether the child looks neat and tidy.

In some regions, there is not really an alternative to telephone calls; due to weak internet connections, the use of Skype is impossible. "*Only when we have broadband connections in our area, I'll be prepared to get myself a notebook computer.*" (man, Austria/rural area).

One female participant still writes letters for communicating with her mother-in-law, who lives abroad.

4.1.2.2 Internet, email and Web 2.0 tools

A majority of the participants use and generally endorse the internet as a means of communication; "*you couldn't imagine life without it*". Activities range from publishing

photos on Picasa, using Skype or Doodle, online banking and information research.

However, the internet is used most frequently for "e-mail messages" in particular in UK (mean=4.45) and by women (mean=4.45). It is followed by "searching for information" with 3.87. Almost never is the internet used for "chat" with a mean of 1.32 or "blogs, forums" with a mean of 1.61.

E-mails are used for communicating with immediate neighbours as well as with persons who are geographically far away. "*The greater the distance between those who like each other, the greater the role that technology plays.*" (woman, Austria/urban area).

Table 11 How often do you use the following media and communication tools?

(Comparison by country and sex plus total mean value)

Mean value (5= daily to 1= never)	AT	UK	Men	Women	Total
Landline telephone	3.91	**4.55**	4.17	4.25	4.23
Mobile phone for …					
calling	4.42	3.36	3.57	4.06	3.91
sending SMS messages	2.92	1.91	2.14	2.56	2.43
taking pictures	2.67	1.91	2.71	2.12	2.30
taking videos	1.42	1.27	1.57	1.25	1.35
surfing the internet	3.5	3.09	4.29	2.87	3.30
navigating (GPS)	1.33	1.36	1.71	1.19	1.35
other	3.00	1.00	1.00	2.20	1.86
The internet for …					
searching for information	3.92	3.82	3.92	3.82	3.87
e-mails messages	3.83	4.45	3.83	4.45	4.13
sharing experiences with others (blogs, forums)	1.75	1.45	1.75	1.45	1.61
connecting with friends/business partners/family	2.83	2.55	2.83	2.55	2.70
chats	1.50	1.10	1.50	1.10	1.32
playing games	2.58	2.18	2.58	2.18	2.39
calling (Skype)	2.1	1.73	2.1	1.73	1.90

4.1.2.3 Attitudes towards social network platforms

When discussing social network platforms with the workshop participants, a critical issue in attitudes and usage patterns can be observed. Apart from the concrete pros and cons of SNs - which will be elaborated in the following section - we need to bear in mind that online SNs may be useless because of structural circumstances.

On the one hand, a person's social network may be located in the immediate surroundings if family and friends have remained in one place throughout their lives.

> *"I was born in this place, my husband was born in this place, our friends live in this place and our relatives too. Nobody lives more than six miles away. Such technical means of communication may be nice but they are not*

important". (woman, Austria/urban area).

On the other hand, in many rural regions broadband internet is hardly available.

Several participants already had experience with SN but failed to see their benefits as compared with e-mail and online chat and discussion forums.

> *"I'd have another question: what good does Facebook do me as opposed to e-mail? (...) Well, they are lots of messages leaving at someone's. I can do that by e-mail too, can't I?" (woman, Austria/rural area)*

> *"I couldn't see personally much difference between Facebook and the internet and e-mail. This is only personal." (man, UK)*

> *"Well, I feel that e-mails are much more practical, whatever I write to my friend on Facebook I can write by e-mail just as well." (woman, Austria/urban area).*

Facebook versus senior platforms

Generally, the participants have a critical attitude towards Facebook, especially in view of its image, which they do not identify with in their age group. *"I see you're no longer 16"*, one of the participants humorously said to another when the latter voiced criticism of Facebook, raising a laugh of approval in the group.

However, senior platforms as such are rated more positively; especially the communication with peers is described as "more interesting".

> *"Generally I think it is good that there is such an older people's platform, I have many younger friends [in real life, authors' note] and here I have the opportunity with people of my age ..." (woman, Austria/urban area)*

> *"Yes, we are those of 1968 and after all we have a common culture and many common interests." (woman, Austria /urban area)*

> *"... especially that people's ages are close [is positive, authors' note] After all, there are many platforms but when a 38-year old Norwegian rates a holiday and I as well being a 60-year old Austrian, that doesn't fit well." (man, Austria/rural area).*

Still, not all find communication with their peers most important but prefer social interaction within interest groups.

> *"I'd rather have a community of interest than of age" (woman, Austria/urban area).*

4.1.3 Assessment of social network platforms – quantitative and qualitative findings from the "Walkthrough" method

The aim of this exercise was a detailed analysis of user-friendliness in order to identify the perceived usefulness of particular functions of five SNs. The sessions were based on "scenarios" and "situations" (= walkthrough method), on questionnaires and, additionally, on a semi-structured discussion after those first two parts. In the following, we will present the data

on Facebook according to the three methodological approaches: feedback forms, questionnaires, semi-structured discussions, all after the "walkthrough" exercise. Due to the low sample size, the qualitative data from the senior platforms is presented in Annex 2.

4.1.3.1 Assessment of Facebook

Facebook has been assessed by 13 participants:

- by six persons in Austria
- by seven persons in the UK
- Of those were eight female and five male.

Findings from the "walkthrough" exercise

They were asked to solve 7 situations:

- Situation 1: seeing what is new
- Situation 2: changing the profile picture
- Situation 3: sharing pictures with friends
- Situation 4: getting information about a club
- Situation 5: leaving somebody a message
- Situation 6: announcing an event
- Situation 7: getting news about an organisation

In total 37 Facebook situations were analysed.

The comparative evaluation of situations shows that **Situation 7**, "Getting news about an organisation", received the best rating when considering all aspects of the question: three quarters of respondents said that they felt good while going through this situation. They think it is easy, they are content with how it went, it took little time and therefore all participants consider the function useful. However, the participants criticised the fact that no feature to sort the news for "most recent" was provided.

Similar results can be seen for **Situation 5**, "Leaving somebody a message". Because it was easy to both find and post messages, the participants considered it a "nice" feature that they appreciate. It had the highest usefulness rating of all assessed features. The Austrian participants, however, criticised the UI term "Teilen" ("Share") which is misleading or unclear due to translation issues.[20] They suggested using the terms "Senden" ("send") or "Speichern" ("save"). One Austrian participant also had difficulties with the term "Pinnwand" ("pin board", in anglophone Facebook: "Wall").

At the other end of the spectrum, **Situation 3** ("Sharing pictures with friends") was rated worst: nobody said this was an easy task, in consequence no one felt it took "little time". The users were unsure whether or not a picture had achieved the status of "Shared" – in other words, it was unclear whether the pictures had been sent successfully. The participants missed

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[20] "Teilen" is one literal German translation of "share" but no idiomatic usage in this context.

any monitoring or feedback feature on the success of this action; additionally, there were technical issues as the pictures rotated sideways and/or upside down. More guidance and instruction from Facebook would have been appreciated, such as a preview feature. They also missed an editing tool.

The picture is similar for **Situation 4**, "Getting information about a club". None of the participants felt content with this task and only half of them found it useful. They would have liked a step-by-step instruction and again a monitoring and/or feedback feature. All in all, the participants thought that researching a club was a feature for advanced users.

Graph 3 Mean values of "situations"- Facebook

	S1: Seeing what is new	S2: Changing the profile	S3: Sharing pictures	S4: Information about club	S5: Leaving a message	S6: Announcing an event	S7: Get news - organisation
How did you feel?	3.4	3	2.17	2.2	3.8	2.67	3.75
How difficult?	3.67	2.67	2.17	2.5	3.6	3.75	3.75
How content?	3.33	2.83	2.17	2.33	3.6	2.5	3.5
How much time?	3.17	2.67	2	2.33	3.6	3.25	3.75
How useful?	3.83	3.83	3.67	3.17	4.6	3.5	4.5
Total	3.48	3.00	2.44	2.51	3.84	3.13	3.85
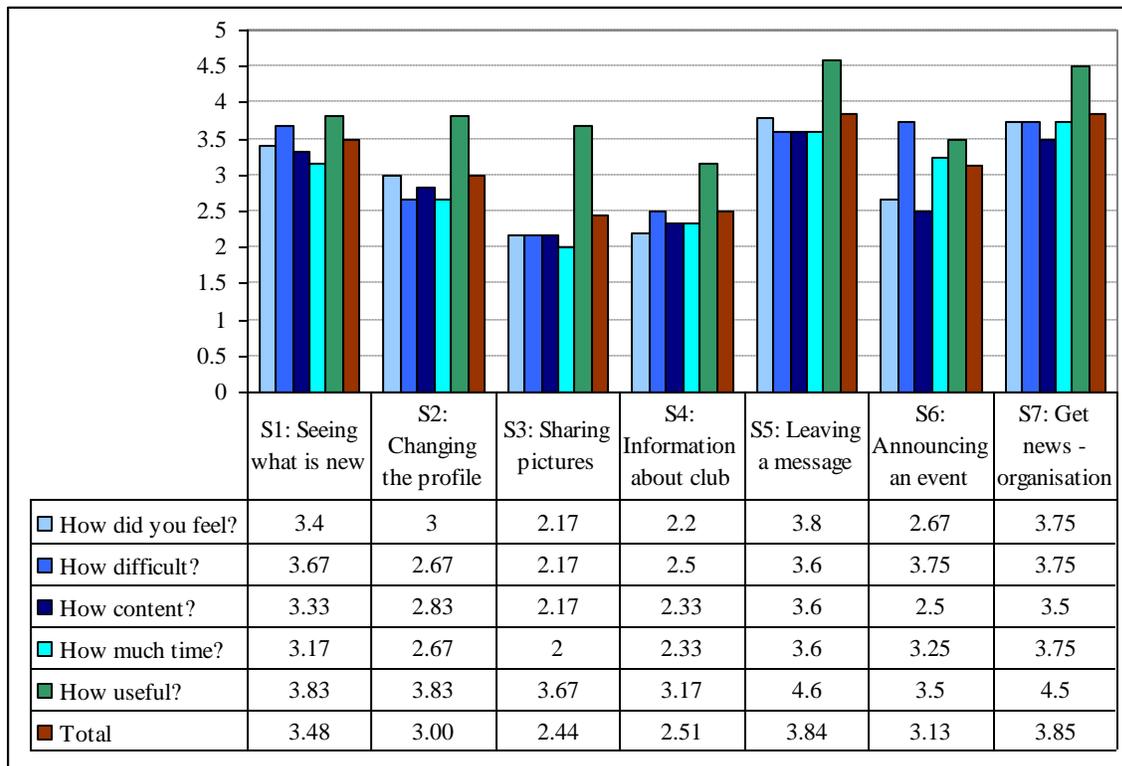
The country comparison didn't show significant differences: the tested "situations" were rated slightly more positive in UK with a total mean value of 3.55 compared to 2.97 in Austria. In both countries, situation 7 was rated best with 4.58 in UK and 3.81 in Austria and also in both countries situation 3 was rated worst with a mean value of 2.67 in UK and a mean value of 2.20.

Summing up the qualitative answers of the feedback forms, there are three central suggestions or points of criticism:

- The majority of respondents would appreciate some feedback mode, informing them of the success of their actions (or the lack thereof).
- Similarly, the participants would appreciate a preview feature.
- The unidiomatic (German) translation was mentioned several times, as important terms like "Teilen" ("Share") or "Pinnwand" ("Wall") do not match the German connotations. Additionally, the German translation does not use gender-sensitive language; this is

especially criticised by women of the Baby Boom Generation who see themselves as pioneering feminists.

The country comparison does not show any significant differences: the tested situations were rated slightly better in UK than in Austria (with a total mean value of 2.66 vs. 3.03). In both countries, Situation 7 was rated best with 2.19 and 1.42, respectively; also in both countries, Situation 3 was rated worst: in UK with a mean value of 3.33 and in Austria with 3.8.

Graph 4 Comparison AT and UK by "situations" – Facebook

	S1: Seeing what is new	S2: Changing	S3: Sharing pictures	S4: Information	S5: Leaving a message	S6: Announcing	S7: Get news -	total
AT	3.3	2.53	2.2	2.34	3.6	2.94	3.81	2.97
UK	3.67	3.47	2.67	2.67	4.2	3.6	4.58	3.55
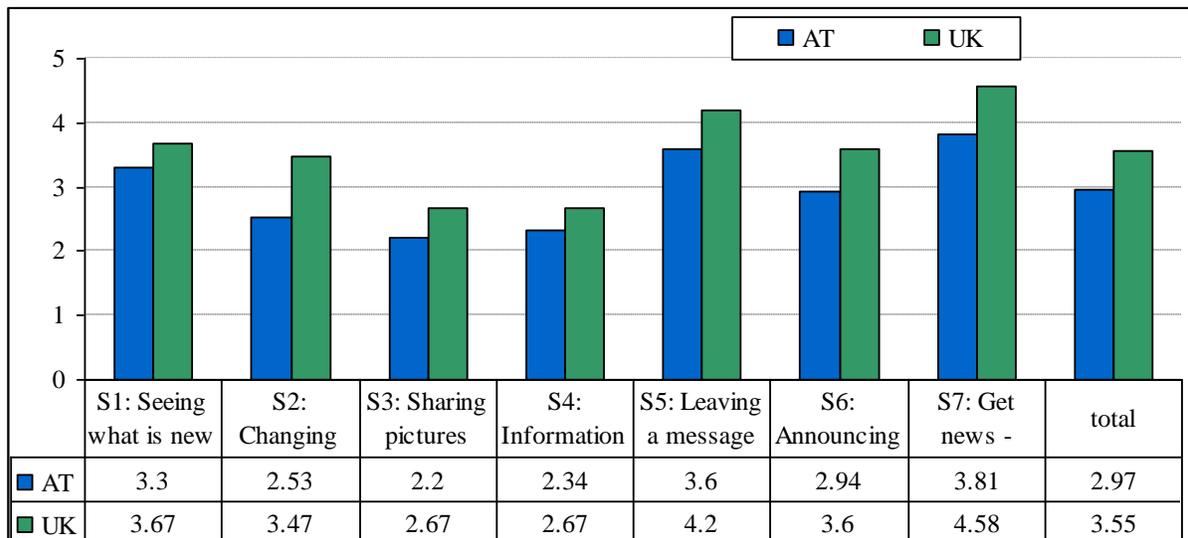
Findings from the questionnaires

(As regards the assessed senior platforms, see below.) The **usability** of Facebook received the following average ratings: most participants found Facebook not easy to handle with a mean value of 2.27, and do not want to use the platform regularly (2.23). They are not confident to work with it (2.38). Austrians rated usability worse than participants from the United Kingdom. When comparing Facebook users in Austria and the UK, there are no significant differences (p < 0.005). Strongest acceptance with a rating of 3.42 found the item "Using Facebook is tedious".

When asked for the **benefits** of using Facebook, the participants mentioned that it could "help lonely people" (4.10) and "one could fill lonely minutes" (3.48). However, nobody really believed that "through Facebook the actual get-togethers with my friends and family would increase" (2.05) or that Facebook "would prevent losing sight of friends and family" (2.20). For the respondents, Facebook is not a useful means for supporting and enabling real-life relationships and communication with friends and family.

Comparing the data from Austria and the United Kingdom, significant differences can be found for the item "Through Facebook one also becomes more active in the real world and with friends and family" (p = 0.009) and "Through Facebook the actual get-togethers with my friends and family would increase" (p = 0.009) (marked in bold).

Table 12 Usability of Facebook, by country; N=13

Usability						
Mean value (1= do not agree to 5= fully agree)	**Facebook, N=13**	**Ahano, N=4**	**Finerday, N=2**	**BeGrand, N=2**	**Senior-kom, N=2**	**total, N=23**
I think I would like to use (platform) regularly.	2.23	2	**3.5**	1	2	2.18
I found (platform) to be unnecessarily complex.	2.75	**4**	2.5	2.5	3	2.85
I found (platform) easy to handle	2.27	2	**3**	2	2	2.26
I think I would need other people's help to be able to use the (platform)	3.92	**4**	3.5	2	1.5	3.48
I think that the different applications of (platform) are well arranged.	2.85	2	**4**	**4**	3	2.85
I found there too many inconsistencies on (platform)	3.15	3.5	3.5	**4.5**	3.5	3.19
I can imagine that most people learn to handle (platform) very quickly.	2.92	2	**4.5**	1	3	2.81
Using (platform) is tedious.	3.42	4	**5**	4.5	4.5	3.79
I feel confident to work with (platform)	2.38	2.5	**3.5**	1	2	2.33
I would have to learn many additional things to be able to handle (platform).	3.38	**4**	2.5	**4**	2	3.29
I find the use of (platform) to be fun.	2.62	2	**3.5**	1.5	1.5	2.43
I find using (platform) enjoyable	2.77	2.5	**3.5**	1.5	1.5	2.57

Table 13 Benefits of Facebook, by country; N=13

Benefit: If I used (platform), then …						
Mean value (1= do not agree to 5= fully agree)	**Facebook, N=13**	**Ahano, N=4**	**Finer-day, N=2**	**Be-grand, N=2**	**Senior-kom, N=2**	**total, N=23**
(Platform) would help me keep in touch with my friends	**3.08**	1	2.5	1	1	2.43
(Platform) would deepen my relationship with my friends	**2.85**	1	2	1	1	2.3
Through (platform) one also becomes more active in the real world and with friends and family	**2.83**	2	2	1	1.5	2.37
(Platform) would help me meet new friends	**2.92**	1	2.5	2	2.5	2.57
(Platform) would prevent losing sight of friends and family	2.62	2	1.5	1	1	2.2
(Platform) could help lonely people	**4.38**	3.5	3.5	4	3.5	4.1
Through (platform) I would get a wider circle of friends	3.31	2	**4**	2	3	3.1
Through (platform) the actual get-togethers with my friends and family would increase.	2.17	**2.5**	**3**	1	1	2.05
With (platform) one could fill lonely minutes	**4**	3	2.5	2.5	2.5	3.48

Outcomes from the semi-structured discussion

Generally, it becomes obvious that the critical statements on Facebook are longer and more

frequent than the positive ones. A slight cultural difference between the Austrian and the UK participants can be observed; among the latter, two to three persons are decidedly pro-Facebook, whereas there is no such supporter in Austria.

Strengths of Facebook

When compared with the number of critical statements, there were only few arguments in support of Facebook. Three (of 13) participants generally assessed the social benefit of Facebook positively. These unequivocal supporters all come from the UK and are younger than 60 years. However, their attitude clearly shows the potential Go-myLife might have for the Baby Boom Generation. In Austria, on the other hand, there were no participants with a general pro-Facebook outlook.

Content applied strengths

The most positive characteristic of Facebook is described as being able to keep contact with one's social network, in a manner that is "quite brief", "without any particular costs" and "quick". In comparison with the telephone or with e-mail, Facebook gives an opportunity to reach and a large group of people in a simple way. In short, the participants feel that Facebook offers a good way for staying in touch; its costs being practically nil.

> *"...instead of keep ringing to everybody, if one person sends a message all the friends can read it, it brings close to everybody and quick as well". (man, UK)*

> *"...it's quite brief; you don't have to go into a lot of detail to keep in touch with people." (man, UK)*

> *"It's actually a brilliant tool.(...) Yeah, it is, it is, whereas posting something on Facebook people can read it, if they want to contact you about it or have a conversation they can, but they don't have to." (woman, UK)*

Firstly, people felt they might find current real-life friends (again) on Facebook or be able to renew past friendships. The participants assume that their (real-life) friends are already Facebook users and feel an urge not to miss the boat.

> *„But I think once I can get into Facebook I think I'll probably enjoy it because I think there might be friends certainly there and there." (woman, UK)*

> *"You might find also that your holiday friends that you have sort of lost, you might find actually they are on there." (man, UK)*

> *"Yeah, holiday friends and indeed past war colleagues, particularly from years ago when I worked abroad and stuff. (man, UK)*

On another level, the participants saw an important Facebook benefit in the possibilities of reaching **many people**. These positive arguments, however, were only theoretical deliberations and were not based on personal experience.

The opportunity of being able to communicate with a large group of people is regarded especially important when inviting to events. The participants referred to events personally involving the Facebook user or his or her social environment, e.g. a garage sale or the performance of an amateur choir etc.

Another use might be increasing security in the local neighbourhood as information can be

passed on easily and quickly.

> *"I mean like if somebody sees a strange person in the area they can put on Facebook what they sort of look like or what vehicle they drive so everybody knows". (man, UK)*

From a democratic point of view, the participants felt that the great number of individuals who could be informed via Facebook was a great benefit when it came to e.g. citizens' participation. It was also regarded an interesting tool for political activists.

> *".. this system is very good for somebody like a politician, he can do, send the message, make the friends on the top level and the public send the message at once, short time. (man, UK)*

Another benefit of Facebook is the promotion of commercial activities like the opening of a Shiatsu practice, participants said.

Additionally, the participants liked the opportunity of using forums for exchanging information or ideas on concrete topics with many people, especially when it comes to founding interest groups and self-help groups.

> *"I mean if they are more it's a more wide benefit for knowledge things. (...) In the cookery programme, somebody they know good recipes they pass to their friends, it's good for that, good for their friend, they improve their health." (man, UK)*

All that being said, the participants felt they needed an important feature in order to make use of these extended contact opportunities, i.e. being able to define certain groups of recipients.

> *"It wouldn't make sense if I invited my neighbour or my grand-daughter and my friend in America all to the same event." (woman, Austria/urban area).*

The participants also stressed the opportunity of being able to keep in touch with geographically distant **relatives**. However, respondents in the Austrian workshops stressed several times that they did not like Facebook for their interactions with their core family. They were especially critical of Facebook when it came to communicating across the generations (with children and grand-children).

> *"It appears to me that if I were to join my children's Facebook pages as a friend then my information would be available to their friends as well and I think that is a little bit too much." (woman, UK/urban area).*

> *"My daughter would never accept me as a "Friend". And I myself wouldn't dream of intruding into her sphere. Her Facebook site is her own world; that's none of my business." (woman, Austria/urban area).*

Additionally, the website's **attractive design** was emphasised several times.

> *"It is colourful, varied and certainly more fun than opening my e-mail list" (woman, Austria/ rural area)*

Asking the active users among the participants if Facebook had changed or even intensified their social interactions in the past, two participants answered enthusiastically.

> *"Yes, with my friend who is living in US, the contact is now more intensive"*

(woman, Austria / urban area).

"I think I'm probably closer to my family now because I absolutely know what they all are, whereas what would happen, we'd meet up at Christmas and perhaps on one occasion in the summer as a whole family, because we are quite a big family, and that would be it." (woman, UK)

Functional-technical strengths

Compared with e-mail messaging, the participants especially liked the fact that they did not "have to keep e-mail addresses in mind" as they were able to contact persons of whom they only knew the name or even only parts of it. Additionally, the birthday reminders were mentioned as positive.

Weaknesses of Facebook

Content applied weaknesses

The **self-exposing communication behaviour** of most users is regarded with amazement - to the participants, it seems like a display of exhibitionism.

"In our day one had a diary that nobody was to see and today it is exposing oneself before as many people as possible." (woman, Austria/urban area)

"This is an exhibitionism that I don't like." (woman, Austria/urban area).

"What is terrible is how the children really have 100 pictures on Facebook, and how they then write: "had a hilarious afternoon with Lisa. Kisses!" (woman, Austria/urban area).

The participants especially disliked using the Wall for personal communication; it is semi-public, they said, and therefore impersonal.

"I never write on the Wall, I find it so idiotic. You read "Wolfgang is now friends with such-and-such", and that is commented by three people. I think to myself: What's that to me?" (woman, Austria/urban area).

"I would never write on the Wall, this would be an intrusion into my intimate life, that's my greatest objection against Facebook." (man, Austria/rural area).

The majority of the participants said that their **personal desire for privacy** was diametrically opposed to communicating via Facebook. They added that this desire became even more pronounced with age.

"There are also people who could find out stuff about me, which personally, I'm quite a private person. I wouldn't want to expose my soul to people all that much. I feel that it could be intruding." (man, UK).

"I like being private so this is just within my family. I hesitate before putting information about myself. I don't even like telling people I live in Derby." (woman, UK)

In a similar vein to the desire for privacy in social networks, most participants prefer direct communication (usually on a person-to-person level) with a chosen and often small group.

Especially the last quotation stresses that older persons favour **quality** before **quantity** in their social networks where a large "group of friends" even has negative connotations. Having many friends on Facebook would mean losing oversight and control; the **reliability and seriousness** of the relationships among friends seemed questionable. One did not have any control over the "friends" of "friends", they said, and self-determined communication and sharing of information was practically impossible. The participants felt that problems might arise especially if a friendship deteriorated and if Facebook would be used to take revenge for hurt feelings.

> *"It's not about the large numbers – it is about whom are the people I want to share my information with. (man, UK).*

> *"Another thing is that they should recognise their friends first and is it OK to give the information to them? First it could be anybody. So some people find it easy to pass on information to the others or whatever." (man, UK)*

> *"Because the friend can send your things around and the next friend sends them too and one is always connected with it. Strangers can see exactly: What do you like? What are your priorities in life? How much money do you have?" (man, Austria/rural area).*

> *"I like my circle of friends but I don't want to be connected to everybody else's." (woman, UK).*

> *"… there is a circle of friends on Facebook, wherein I do have in my emails – I have my email addresses, which is quite limited actually – I probably have about 12 or 14 email addresses, whereas with Facebook it could be, as my sister said, a can of worms." (man, UK)*

The critical statements on Facebook mentioned two main points that related to **social reasons**. On the one hand, communication was felt to be too superficial; on the other, the participants stated that dealing with unwanted "friendship requests" put them under psycho-social stress:

> *"… I never actually receive a message on Facebook that is significant for me" (woman, Austria/urban area).*

> *"Because I started to get lots of messages from people saying a mutual friend wants to be a friend of yours. If I just click delete, I'm thinking it is quite stressful in a way pressure somebody wants to be friend of you and you don't know who the hell they are, but by clicking no you might be upsetting someone that you do know, but you just can't bring them to mind. I do think it gives you undue pressure". (woman, UK).*

Photos

The feature for sharing pictures and videos was discussed in great detail (in the Austrian workshops). Only a few of the participants liked the options for transferring pictures and videos onto and via Facebook. These persons thought that being able to share photographs spontaneously with a given group was "simply nice" and liked to look at other persons' pictures.

Being able to upload pictures into Facebook by cell phone, without having to establish a wired connection, was seen as a great benefit.

The majority of the participants, however, did not want to share current events or impressions like skiing or hiking trips with others in real-time, and therefore also did not want to publish or share pictures on Facebook.

One woman related her experience with an unwanted publication of pictures on Facebook, and another warned of possible side-effects of disadvantageous photographs on somebody's career:

> *"The other side of the coin and our granddaughter and we went on a holiday with them and she just sent this photograph of me and we all had swimsuits on, I went onto her Facebook page and it's for everyone to see it." (woman, UK)*

> *"There have been enough stories about people who had posted stuff up when they were drunk at a student do and it comes up when they are trying to get a job." (woman, UK)*

Functional-technical weaknesses

On the same frequency and importance level as privacy, the participants stated several technical and functionality issues that make Facebook unattractive for older people.

A point of criticism concentrates on the fact that during the creation process of a profile, Facebook asks its users for **information that go beyond individual feelings of privacy**. Accordingly, a coping strategy is to fake certain information.

> *"The profile is encouraging you to put private of information on Facebook and in my family everyone found out about a certain person's birthday. My way of dealing with it is that even if I do have to fill in these things, I don't put the real information on it. (woman, UK).*

> *"It does say profile picture but my picture is not my photo but a decorated egg that my grandson won in a competition." (woman, UK)*

> *"You see, I'm not using mine since it was set up." (woman, UK).*

Finally, most participants have little confidence in the respect for privacy and security that **Facebook itself** might have. They widely hold the view that the traces of personal communication will be preserved for all time.

> *".. all that has been in at some point can't be deleted. While I can delete my account, all that I ever put on Facebook still remains there forever." (woman, Austria / rural area).*

> *"... people can find out what political affiliation they [the users, authors' note] have." (woman, Austria/rural area).*

> *"Privacy is the main thing that I am concerned about. If people want to keep something secret, they shouldn't put it on Facebook. That's the one safety thing. Confidential." (man, UK)*

Only one participant said they were decidedly satisfied with the options for privacy settings on Facebook.

> *"There are now privacy settings sufficient to prevent the things that probably would have happened a few years ago because they realised there was an issue*

didn't they?" (woman, UK).

While the respondents think that Facebook provides all important features for successful communication, they felt that **menu navigation was poor** because it was "unstructured and unconvincing" and (too much of!) a challenge.

> A former software engineer criticised*: "In my opinion, the interface is for young people who understand at some point how everything works. I myself am used to working in a well-structured way and therefore have real problems with Facebook, when I click on certain features I have certain expectations that however never come true." (man, Austria/rural area).*

> *"It is a design that we are not used to normally from our work applications." (woman, Austria/rural area).*

> *"There are so many icons and pictures; it is difficult to find the tree view." (woman, Austria/urban area).*

As regards the presentation of messages on the Wall, the participants would appreciate a filter function for sorting according to user-defined criteria like "Culture", "Friends", "Private", "Regional" or "Older than three hours".

Other functional weaknesses

A preview function and a feedback confirming the success of an action are missing.

- The general help topics are at an unsuspected location (in "Account"), and there is no help for individual activities.
- There is too much information on one page, and some participants perceived it as incoherent. They said that advertisements put a particular strain on perception.
- The participants criticised the fact that the messages on the Wall were not sorted according to date (most recent news should appear on top).
- There is no breadcrumb navigation and no "Backward" button. The participants needed to go back to their Home pages whenever they lost orientation.
- Although it is possible to group friends, the participants suggested options for subgroups, e.g. a group "Travel friends" with the subgroup "Hiking friends".

The user interface terms of certain features like "Share" were criticised several times because the participants felt them to be misleading or creating uncertainty about what had been shared with whom exactly.

4.1.3.2 Assessment of Seniorkom.at

Seniorkom.at[21] was assessed by two women in Austria / urban area.

Graph 5 Website of Seniorkom.at
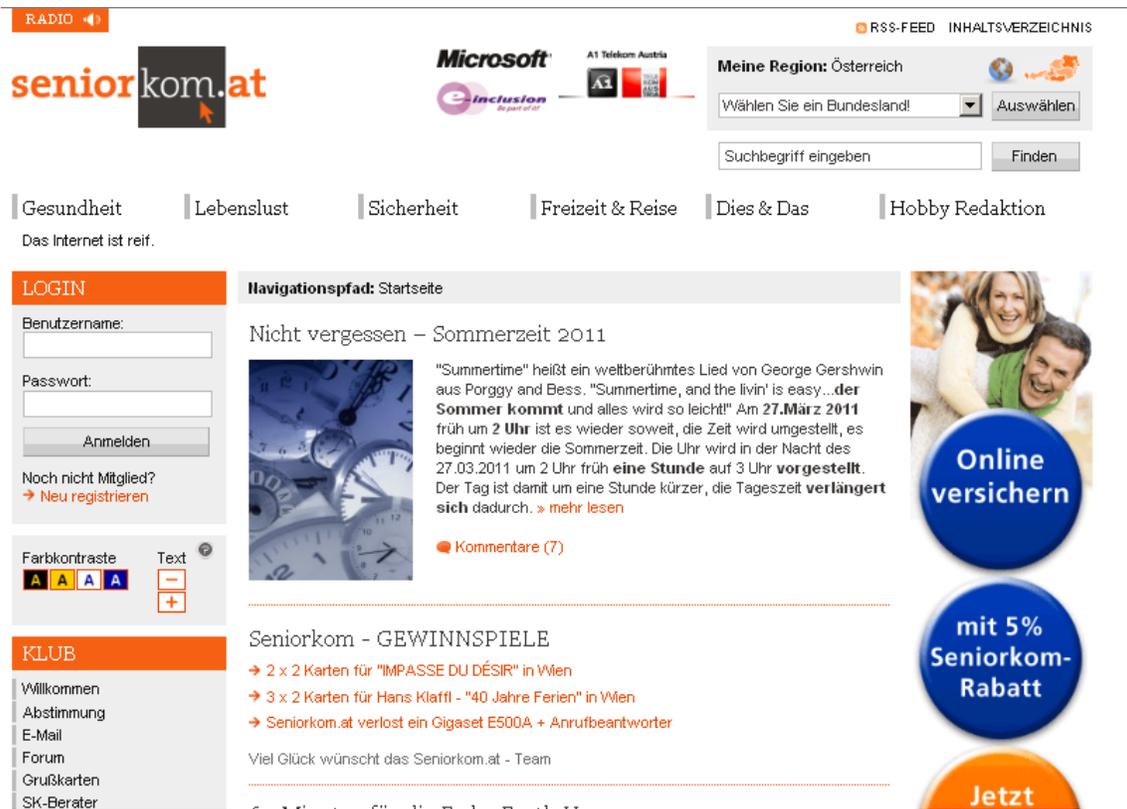
They were asked to solve three situations:

- Situation 1: seeing what is new
- Situation 2: changing the profile picture
- Situation 3: sharing pictures with friends

In total Seniorkom was analysed in (only) three situations. Reflecting the small sample size, the results can only be interpreted very cautiously.

Generally, both participants appreciated the fact that such a platform for older people actually exists in Austria.

Functional-technical strengths

One positive aspect was the well-functioning regional search. This was important, they said, because people tend to look for information and contacts in their immediate neighbourhood. The two participants were quite satisfied with Situation 1 "Seeing what is new" and considered Situation 3 "Sharing pictures with friends" less useful.

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[21] http://www.seniorkom.at/

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Content-applied weaknesses

- The unappealing layout and design; the women said it was not very motivating and old-fashioned. *"It makes you feel ten years older straight away. It has the charm of a local paper."* (woman, AT/urban area).
- The forums were considered interesting but located at the bottom of the website where one would not suspect them. The participants suggested giving the forums a more prominent place.

Functional-technical weaknesses

- The platform received little administration and the entries were unstructured, the participants said.
- They disliked advertisements, especially when they came with Flash elements.

4.1.3.2.1 Assessment of Ahano.de

Ahano.de was assessed by four persons in Austria / rural area: two men and two women.

Graph 6 Website of ahano.de

They were asked to solve 7 situations:

- Situation 1: Changing the profile picture
- Situation 2: Get information about important topics
- Situation 3: Find an activity friend
- Situation 4: Service for honorary grandmas and grandpas
- Situation 5: Reply to a messages
- Situation 6: Online games
- Situation 7: Contribute to the Forum

All in all, 14 situations were analysed with Ahano.

The figures show that Situation 6 "Online Games" was ranked top with a total mean value of 4.8, while situation 7 "Contribute to the Forum" received the worst rating with a total mean value of 2.0. A significant difference (p= 0.048) can be found in the category "feeling" where Situation 7 was rated worst with 1.0 and Situation 6 best with 5.0. However, Situations 2, 5 and 6 were considered quite useful.

Content-applied strengths

- Strengths are the layout and the visual arrangement and design.
- Online games are much appreciated.
- The platform seemed serious and well administered.
- There were interesting and useful topics and search functions, such as brain jogging, babysitter searches, caregiving for older people, travel stories.
- There is the criterion of gender when trying to find new contacts.

Functional-technical strengths

- Compared with Facebook, structure and design of the menu navigation were much more user-friendly. The structure is clearly laid out.
- The user profile may contain a picture.

Functional-technical weaknesses

- Weaknesses are that uploading the profile picture seems to be too complicated, pop-ups with advertisements are too irritating, and there is no search function for finding an activity friend and no feedback function.
- The website's design elements are not employed well, e.g. the yellow bar with the Ahano.de logo was said to be a waste of space at the expense of important menu items and features; in other words: the screen is not used well.
- The font size cannot be changed.
- The text structure was felt to be confusing. *"What is the actual text, what is the title and which article does a title belong to?" (man, Austria/rural area).*

4.1.3.3 Assessment of Finerday.com

Finerday.com was assessed by two women in UK / urban area.

Graph 7 Internal area of Finerday.com
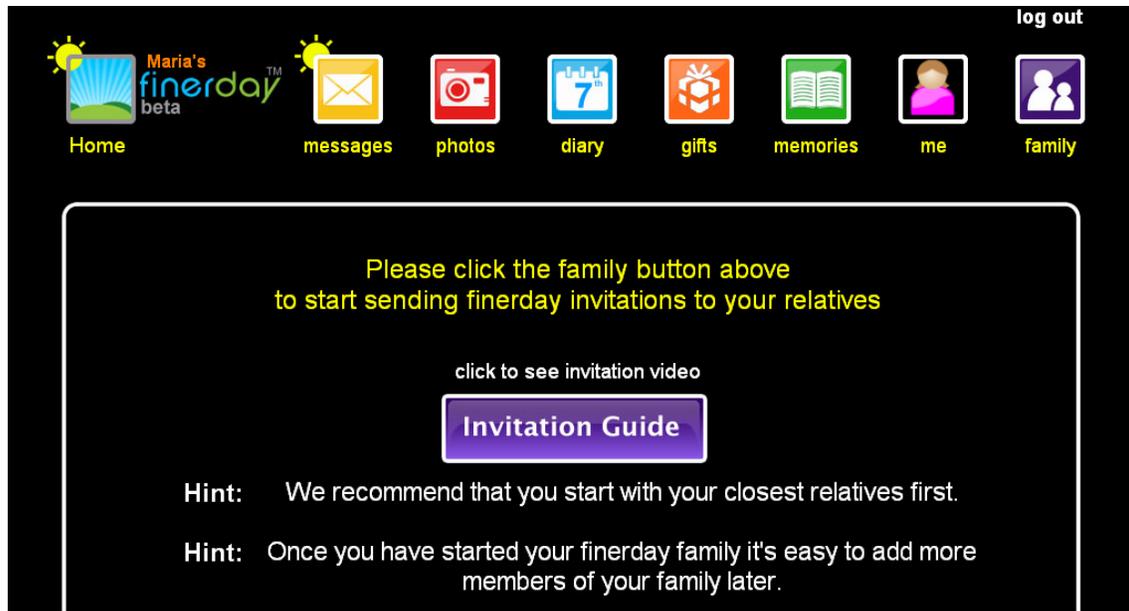
The participants were asked to solve three situations. As we did not receive any values for Situation 3, however, analysis is based on only two situations.

- Situation 1: Friendship requests
- Situation 2: Changing the profile picture

In total, four situations were assessed.

Content-applied strengths

- Generally, the participants considered Finerday to be "*very interesting*" and said they would continue to use the platform in the future.
- They stressed that the instructions were "fairly" clear and that the hints gave useful advice. *"It told me what I needed to do".*
- The two women especially liked the "sharing memories" feature. *"I have been thinking that I'd like to set up some way to share memoires in a simple way. And this sets out to be simple."*

Functional-technical weaknesses

- Finding pictures - be it for the profile page or for some other use - was quite challenging. The instruction to look within "documents" was not clear enough.
- There is no integrated spell checker.
- Although the platform provides step-by-step instructions it is time-consuming to get acquainted with the various features.

4.1.3.4 Assessment of BeGrand.net

BeGrand[22] was assessed by two women in UK / urban area.
Unfortunately, the platform ceased its operations only few days after the assessment workshop without notice. Therefore it is no longer possible to verify the criticism of some features.

They were asked to solve 5 situations.

- Situation 1: Keeping up to date with news of our friends
- Situation 2: Reading the latest articles on BeGrand
- Situation 3: Changing the profile picture
- Situation 4: Sharing pictures with friends
- Situation 5: Friend requests

In total six situations with BeGrand have been analysed. All in all, the platform received bad ratings, and the participants did not mention one single positive aspect.

Functional-technical weaknesses

The comparison of situations highlights substantial differences between Situation 2 and all others. Nobody was satisfied with "Sharing pictures" as it was "confusing and difficult for absolute beginners". The participants stated that uploaded pictures should only be highlighted in case an image was submitted.

- It was complicated to get into the platform and to find out what you wanted to know; a tree view could not be found.
- Just as with Facebook, the participants were confused by the user interface's terminology: the term "post" was associated with e-mail functions; terms like "social network", "blogs", or "edits" were not familiar to the participants, and "invitation" also was not obvious to them.
- Again similar to Facebook, the necessity of having to scroll down far received negative comments.

4.1.4 Comparative analysis

Depending on the method, the data leads to differing and partly contradictory results. In the following, we will compare briefly the platforms in general, and Facebook and the senior platforms in particular. As three of the four senior platforms have been assessed by two persons only, the data should be considered only as "snapshots" or tendencies. The full data analysis can be found in annex 1.

4.1.4.1 Usability, benefits and satisfaction with the five platforms

The comparison of platforms by tasks (= "situations") of Facebook with all senior platforms shows only a slightly higher satisfaction with the latter; however the difference (p= 0.267) is not significant.

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[22] No screen shot can be provided as the platform closed with less than a week's notice on the 31st March.

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The figures depict best rating for Seniorkom and worst rating for Facebook, whereas the senior platforms in German languages achieved better satisfaction ratings than the British ones. But results have to be interpreted very carefully due to small and different size of sample.

Graph 8 Overall satisfaction with SN platforms, by "situations"

	Facebook (n=13)	Finerday (n=2)	Begrand (n=2)	Seniorkom (n=2)	Ahano (n=4)	Total (n=23)
■ Total mean	3.14	3.25	3.16	4.20	3.40	3.25
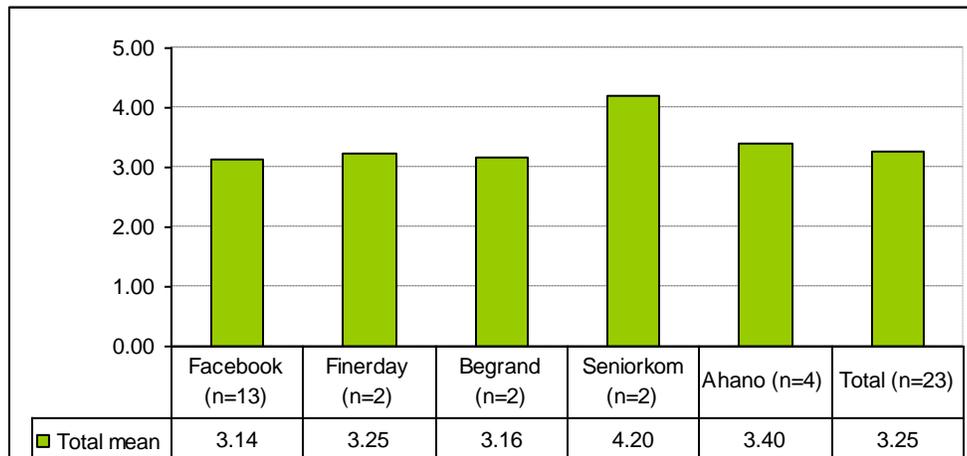
There were two particular tasks with constantly negative ratings: "Changing/publishing the profile photo" and "Sharing photos with friends". Obviously, these two features are a challenge for platform providers who aim at user-friendliness. Bearing in mind the small sample size, we can state only with caution that the technical solutions developed by **Seniorkom** for handling pictures might be a **good practice** example.

Graph 9 Comparison of platforms by tasks[23]

	Facebook (n=13)	BeGrand (n=2)	Finerday (n=2)	Ahano (n=4)	Seniorkom (n=2)	total (n=23)
■ Change profile photo	3.00	2.88	3.10	2.60	3.60	3.04
■ Share photos with friends	2.44	2.00	0.00	0.00	4.20	2.88
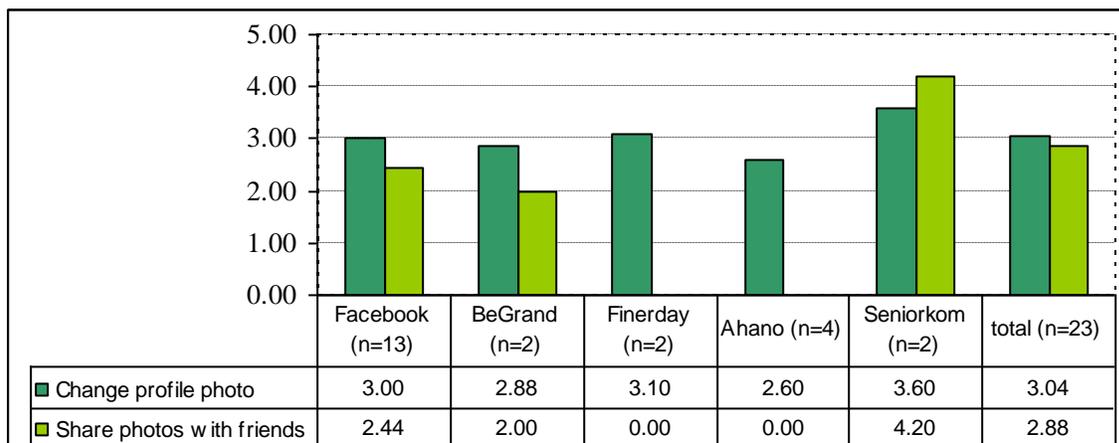
Looking into the usability and benefits of all platforms (data gained from the questionnaires), the data shows different rankings among the platforms as compared to the "situation" results.

Finerday was rated best with regard to **usability**, as users found:

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23 the higher the mean the better the ranking

- it easy to handle;

- the application is well arranged;

- they will learn to handle the platform very quickly;

- the use of the platform is enjoyable.

While Facebook was rated best with regard to **benefit**, as users found:

- the platform will help to keep in touch with and to meet new friends;

- it could help lonely people and fill lonely minutes.

Table 14 Usability and benefit index[24], questionnaires

	Facebook, N=13	Ahano, N=4	Finerday, N=2	Begrand, N=2	Seniorkom, N=2	Total, N=23
Usability index	2.59	2.38	3.64	1.57	2.14	2.52
Benefit index	3.16	2	2.79	1.78	1.89	2.76
Total index	2.88	2.19	**3.22**	**1.68**	2.02	2.64

4.1.4.2 Functionalities of four senior platform

Summing up the criteria that were mentioned as important during the workshop discussions; we can state that a platform's design should be appealing and tasteful. The participants appreciate good platform administration as it guarantees a secure social environment. Most of all, the menu navigation needs to be logically structured, clearly arranged and easy to use. Having to scroll down in order to see a page's contents or to find important features was decidedly rejected. The font needs to be resizable or (as is the case with Finerday) should be large in the first place. When assessing these criteria, **Finerday** can be regarded a **good practice example** among the four analysed senior platforms.

Table 15 Comparison of senior platforms

	Seniorkom	Ahano	Finerday.	BeGrand
Appealing design and layout	no	yes	yes	no info
Scrolling necessary for finding important features	yes	yes	no	yes
Administration	little	very good	very good	no info
Menu navigation	poor	poor	very good	poor
Font resizable	yes	no	large font	no info
Search function	good	poor	good	no info
Help/support facilities	poor	poor	very good[25]	no info
Feedback function	no	no	yes	no info

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24 The mean value of the seven positive usability statements is considered as index here.

25 Instruction video and step-by-step guide together with hints and recommendations.

4.1.4.3 Excursion: How can older people be motivated to use SNs? – the older person's perspective

In the Austrian workshops, a noticeable "digital divide" between urban and rural regions was observed. Although older people would like to have computer skills there are no opportunities for acquiring them. Thus, the participants were directly asked which didactic approaches and what kind of technical support might motivate older users.

ICT training for new comers:

- Compared with virtual training, face-to-face training sessions would be preferable. These sessions should include an explanation of the "objectives and concepts" of an online SN. *"If I know from the beginning what is a Wall and why is it there, I can handle it more easily."* (woman, Austria/rural area).
- Older people do not need technical manuals but concrete training exercises with step-by-step instructions that can be repeated individually later on.
- An indirect approach would be preferable. The training should not put its focus on computer skills as such but on exercises that directly concern older people such as brain jogging and memory games.

Technical support provision on the SN platform:

- With one exception, the participants did not think that manuals were helpful.
- They favoured short introductory videos and video tutorials.
- A support helpdesk was considered very important and should provide direct contact with peers.

4.1.5 Summary of Workshop type 1: assessment of existing online social networks

During October 2010 and March 2011 four workshops with older people were held in UK and Austria with the aim to assess the interaction patterns on online SNs, their usability and perceived benefits. 23 older people (16 women, 7 men) assessed five SN: Facebook and four senior platforms (Finerday, BeGrand, Seniorkom, Ahano). The assessment was based on "situations", (=tasks to be carried out on the SN) and on standardized questionnaires. Additional findings were retrieved from semi-structured discussion rounds after the assessments.

Facebook versus senior SNs

Senior platforms were slight better rated, as they are considered as more user-friendly, the content of the interactions as more interesting and technically easier to handle. When it comes to the perceived benefits of SNs, the participants think that Facebook can better help lonely people and to keep in touch with relevant others than senior platforms.

Facebook might be attributed with the power of widespread communication opportunities, where "social stalking" is easily feasible, in other words: older people tend to "consume" rather than to "give" interaction, and show passive interaction patterns on the "wall" of Facebook.

However, from the older people's perspective, Facebook has the image "of young" with a superficial and self-exposing communication culture; the "wall" in Facebook is considered as quasi semi-public and the majority of participants refuse to use it. The desire for privacy

becomes even more pronounced with age. Older people favour quality before quantity in their interactions; having many "friends" on Facebook means losing oversight and control as the reliability and seriousness of the relationships among friends seemed questionable.

They favour communication in a safe and secure environment, in small groups with meaningful content of interactions.

How should a platform for older people be designed?

Content-applied usability components/criteria are:

- serious presentation and carefully administered/ monitored;
- A small amount of information on each page;
- appealing layout and design (old-fashioned style should be avoided);
- useful topics, such online games, brain jogging, babysitter searches, caregiving for older people, travel stories, others;
- terms should be clear and familiar to older people (example of confusing terms are: "post" "social network", "blogs", "edits", "invitation");
- when translating (from English) into other languages avoid confusing terms;
- gender sensitive wordings;
- forums should have a prominent place, as they are highly appreciated (while the active communication via the "wall" is less valued)

Main functional/technical usability components/criteria are:

- menu navigation: simple, clear and logically structured;
- breadcrumb navigation and "backward" button;
- feedback mode: informing users of the success of their actions (or the lack thereof); including a monitoring and preface function;
- well-functioning search function in general and location-based in particular (for search in the local area);
- well-functioning sort function (most recent news/info should appear on top);
- editing tool;
- spell checker;
- option to create groups of relevant others (= "islands), together subgroups, e.g. a group "Travel friends" with the subgroup "Hiking friends";
- uploading pictures should be easily feasible
- pop-ups with advertisements are avoided;
- no flash;
- font size should be changeable;
- no scroll-down should be required.

4.2 Workshop type 2: Communication patterns in social networks

The workshops' core exercise was to explore the structure, involved social groups and communication patterns of the participants' social network. The participants were asked to illustrate their social networks (artefact) and to present it to the workshop group. In a second round, they created a group vision about the ideal network in the future (ten years later) as basis for an in-depth discussion. Group visions helped to deduce technical requirements for the Go-myLife platform.

This Workshop type was held three times:

1. (explorative) Workshop in Vienna / Austria (eight participants: 1 male, 7 female)

2. Workshop in Weikersdorf / Austria (seven participants: 3 male, 4 female)

3. Workshop in Derby / UK (five participants: 3 male, 2 female)

The presentation of the workshop results are divided into two sections. In Section 4.3.1 the investigations of older people's social network are presented. Section 4.3.2 introduces the future visions of the workshop participants about the ideal social network.

4.2.1 Methodology of analysis

The qualitative data of the analysis relies on the individual presentations of social networks, group presentations and discussions of future visions. The presentations and discussions were tape recorded, transliterated, coded with MAXQDA[26], analysed and systematically summarised. At least two researchers have been involved in analysing every transcript. The findings consist of a systematisation of relevancies, a generalisation and an interpretative framework. Direct participants' quotations from the Austrian workshops are translated into English by the authors.

In addition the artefacts (visualizations of participants' social networks) were analysed according to Jansen (2003).

4.2.1.1 Sample description and social demographic characteristics of participants

Following a convenience sampling approach, 19 persons participated in workshop type 2, among them five men and 14 women. In Austria four men and ten women and in United Kingdom three men and two women were asked to analyse their social networks and develop a vision for an ideal future social network.

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[26] MAXQDA is software supporting the analysis of qualitative data.

Table 16 Participants by country and sex

	men, N	women, N	total, N
AT	4	10	14
UK	3	2	5
total	7	12	**19**

More than half of the participants belonged to the 61 to 65 age group; a quarter was older and less than a quarter younger.

With regard to their educational level, half of the participants had an academic degree; nearly half of the sample had completed secondary school while there was only one person with primary school as their highest degree.

Reflecting Go-myLife's core aim of developing a platform for urban computing, the main focus in the recruitment of participants were in urban areas (Vienna, Derby); however one control group from rural area was included too (Weikersdorf).

4.2.2 Analysis of the communication patterns within one's social network

In the first task participants illustrated individually their ego-centric[27] social networks, using the metaphor of islands around individuals; with the objective of learning about the target groups' existing social networks and initiating the thinking process among participants about possible changes in their SNs with increasing age. The analysis of the workshop results showed the homogeneity of the participants' "islands" from the two Austrian workshops, thus the results from Austria were summarized in one chapter. The presentation of results starts first with the artefact analysis (Chapter 4.4.1.1) and then introduces the detailed findings for the Austrian (4.4.1.2) and the UK workshops (4.4.1.3).

4.2.2.1 Artefact analysis of the ego-centric social networks

From the 19 older people, who participated in Workshop type 2, an analysis of 18 artefacts (visual representations of their ego-centric social networks) was conducted. One artefact was not labelled and thus not included in this analysis. From the 18 analysed SN visualizations, 13 were originated from Austria and five from UK.

The artefacts were investigated as following:

- the physical proximity of the visualized social groups to the "me"
- the type of connection (fine, thick, continuous, interrupted) between the social groups and the "me" and
- the size of the visualized social groups.

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[27] With ego-centric networks one means „the around a focal person, the ego, anchored social network" (Jansen, D. (2003). Einführung in die Netzwerkanalyse. Grundlagen, Methoden, Forschungsbeispiele. Wiesbaden 2006, VS Verlag für Sozialwissenschaften/GWV Fachverlage GmbH. ., p. 80)

According to these three parameters a ranking of the social groups was conducted, defining for each represented ego-centric social network the most important, second important, third important etc. group. In the course of the analysis it turned out, that the family members were visualised by a number of diversified "islands". In order to facilitate a sound comparative analysis between social groups, the diversified members of the close family (e.g. grandchildren, children, life-partner/husband/wife) were consolidated in one group: "close family" and the breakdown of social groups per participant re-investigated.

Figure 1 Ranking of social islands around the ego according to importance

The first ranking (without group variable "close family") showed that nearly three-quarter of participants (13 out of 18 participants) visualized either the close family, or subgroups of the close family, such as their spouse/partner, children or grandchildren as the most important social group.

The country comparison, showed a clear difference: In Austria nearly all participants (12 out of the 13) sketched their close family as the most important social group (= nearest "island" on the visualizations), where in UK only one person visualized the close family as the nearest "islands", two had social friends as the most important group, two displayed their work friends and one participant visualized activity friends as the most relevant social group.

On the second rank more than half of the sample (10 out of 18 participants) visualized other members of the close family again. This time three out of the five UK participants were part of this group. Nearly half of the sample displayed social friends and only one participant referred to neighbour friends.

Groups represented on the third rank were diversified. A third of the sample mentioned their social friends, while one quarter of participants again visualized some part of their close family. Three out of the 16 participants illustrated spiritual/religious groups (e.g. church) on the third place.

The fourth rank was split up between activity friends, social friends, and spiritual/religious

groups.

The investigation using the group variable "close family" showed very homogenous results for **Austria**: nearly all participants (11 out of the 12 participants) had the consolidated group "close family" as the most important group and three-quarter of the sample visualized social friends as the most important group following the close family. Among the remaining three participants, one man had distant family members as a second group (he mentioned no social friends at all), another man illustrated volunteering as the most important group after the close family and one sketched his spiritual friends in his SN.

In **UK** there was a bigger heterogeneity of social groups: There was less focus on the family than in Austria (it ranked on first place for one out of the five participants and on second by three out of the five participants) but activity friends were closer to the "me" than in Austria. Activity friends were visualized among the four closest social groups by a large majority (four out of the five) of UK participants (compared to two out of the 13 Austrian participants). But also the spiritual/religious community (church) was visualized among the closest social groups by three out of the five UK participants (compared to three out of the 13 Austrian participants).

In investigating which social groups will become more important or stay important with increasing age, the results showed similar tendencies for Austrian and UK participants:

Family and social friends were visualized as being the most important groups when growing older, but also spiritual/religious groups and health organizations were illustrated as moving closer to the "me".

Analysing the social groups which are foreseen to fall away with increasing age, the artefacts showed that colleagues, activity friends and volunteering will become less important.

4.2.2.2 Analysis of the presentations of individual social networks - in Austria

In this section the results from the analysis of the oral presentations are introduced from the Austrian workshops in Vienna und Weikersdorf.

Family

In the Austrian participants' SNs, the family was the most important cluster for nearly all participants. The participants mentioned children, parents, siblings, grandchildren, but also stepchildren, sister and brother in law and their children, stepdaughter and –son as well as godchildren or their children's animals as part of the close family (a detailed list can be found in the Annex).

On the 1st and 2nd rank position were mainly very close family members, like spouses, children, grandchildren and parents. From the 3rd rank position many different family members are mentioned and include also stepdaughter and stepsons, parents-in-law or even children's pets. Nearly all participants mentioned their own children, grandchildren and relatives as part of their social networks. Wives, husbands and partners of lives were only mentioned, when the partner participated in the workshop too. Then, the participants declare him/her as the most important person in their life.

> *"Central is my wife of course" (male, Austria /rural area)*

"There is me and my husband; he belongs somehow to me, if he wants to or not (laughing)" (woman, Austria / rural area)

The types of relationship with the families are very diverse. While some of the participants have a very close relationship to (some) of their children, others state that the main relationship is established with the grandchildren, where the participants also play an important supportive role in child-care. Relationships with the participants' own brothers and sisters are not always problem-free and - especially with regard to the future development – it's not clear if the relationships will continue to be kept alive. Apart from the close family, other relatives are predominantly seen occasionally for important high days and holidays and do not play an important role in the participants' social networks.

"I meet the rest of the family very seldom, only if somebody has an important birthday or for Christmas, but we contact them only by phone or sometimes by e-mail" (woman, Austria/rural area)

Concerning the **communication with close family members**, regular face-to-face meetings and telephone conversations are seen as most important means of communication. E-mails are already used as well and Skype with those family members who live at a distance. For family members at a distance, occasional meetings, phone calls and sometimes e-mails are the main means to communicate. Only three participants in Austria actually use Facebook, but state that they would not use this platform to contact their grandchildren as it is perceived as intruding in their private life.

There were only two Austrian participants who did not mention a member of their family in the first place: A woman from the urban area mentioned her social friends in the first place, and a man from urban area referred to his ex-colleagues from work in the first place.

Social and activity friends

After the family, an important cluster is represented by social and activity friends. The participants have intensive contact with their social friends, where some of them have originated as far back as their school days. Friends are mainly an important emotional support and help participants to broaden their personal horizon. The **means of communication** are diversified and range from meetings and phone-calls to the exchange of e-mails. Facebook is used by one participant to stay in contact with her best friend.

"The biggest group represents my Austrian friends. They constitute a big emotional connection. We exchange opinions – this is very important for me." (woman, Austria/urban area)

"The friends - [together] we have a huge emotional exchange, but also assistance and consultancy. We are a diversified group, there are a lot of emotions and cultural interests – this is very multi-layered." (woman, Austria/urban area)

After the social friends the group of activity friends is related to sharing the same interests and hobbies. A large majority of Austrian participants has some activity friends, related to sportive activities, volunteering and spiritual communities. Here face-to-face meetings are the main means of exchange and communication.

"There is my Qi Gong and Feldenkrais[28] (...) the writing and my consulting group – these groups are all emotionally very important. The choir has also become emotionally very important for me." (woman, Austria/urban area)

"I have my gym colleagues; they represent a lot of fun. I have my travel friends, who represent fun and broadening my horizon. I have my senior association, which is very relevant for me and I have my political activities in the local community." (woman, Austria/rural area).

Neighbours

For the Austrian participants, a good neighbourhood is important. Some of the participants have good relationships with their neighbours, when they, for example, look after their children. Some of them have also a very good relationship with the neighbours of their parents, who keep an "eye" on them and inform the children, when something happens with their parents. Neighbourly help is mainly seen as instrumental support and gives participants a good feeling that somebody is "just" here. It is based on face-to-face meetings.

"One island is the children of my neighbours, these are my immediate neighbours with three girls; they visit me regularly for a play afternoon; we have been doing this for years" (woman, Austria/urban area)

"There are two women who live in the house of my parents. When I visit my parents, they are very important for me, they are an emotional support for me when there are problems, they are right there on the first place, I like them very much" (woman, Austria/urban area)

Working friends and colleagues

Old contacts from work are still important and maintained from some participants. Although, face-to-face meetings are rare, the regular exchange via e-mail or letters is still appreciated.

Visions of the future social networks

Talking about the personal social networks in 10 years, the following changes are expected:

- Less contact with grandchildren, when they grow older
- Losing activity friends (due to limited mobility and capability)
- Losing interest groups (due to limited mobility and capability)
- Losing a secure environment (due to changing place of domicile)
- Losing good neighbours (due to changing place of domicile)
- Losing working contacts (due to decreasing interest)

Hopes for the future are:

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[28] The Feldenkrais Method was created by Mr Feldenkrais and is designed to improve human functioning by increasing self-awareness through movement

- That everything remains as it is
- More time for new hobbies
- More time for important contacts and friends
- More grandchildren and observing how the grandchildren grow older
- Not having to provide home care to one's parents anymore

4.2.2.3 Analysis of the presentations of individual social networks - United Kingdom

The presentations of the participants' social networks in UK can be summarized as follows:

Family

A number of participants started with the presentation of the family members (like parents, children and grandchildren) and highlight the importance of this group for support giving and receiving. One participant also distinguishes between close and distant family, since he also has family in America, Ireland and Australia.

> *"....most important group of people here would be my family; close family and some distant family. In other words, I mean, I've got family in America, I've got family in Ireland, I've got family in Australia and so keeping in touch with them is important. (man, UK)*

Activity and social friends

Other participants started with the activity friends. The "islands" of activity friends was related to institutions; such as clubs (social club, golf club, agility club, dog club, bee club, quiz nights) or shared activities, like biking, gym, golf, holiday, choir or walking. Social friends are important for exchanging emotional support and are not connected with a specific activity.

Church

Four out of the five participants mentioned the church as important part of their social network; as religion helped them to "*enjoy and balance their lives*".

> *"..the same with church, really, I tend to sort of just go to church and not do an awful lot for them"* (woman, UK)

> *"...very close, or I like to be, to family, to church."* (woman, UK)

> *"...oh yes, I am a member of...well I'm just a member of a congregation at our local church and I also volunteer to help out as much as I'm asked to do when I can. I used to be more involved when I was more active, but I do what I can when I'm asked to do something, so that's important to me and that's like on a weekly basis. (man, UK)*

> *"The church, church I'm very involved down there with things going on and again that's face-to-face."* (man, UK)

Neighbours

Neighbours were only presented by one participant of the UK group. It seems that the

neighbourhood is getting more and more important in the future vision but not at the moment.

Working and school friends

Besides the social and activity friends also school and working friends were listed in the social network presentation.

Although participants use all kind of communication possibilities like meeting each other face-to-face, phoning, using email and even Facebook, they think that face-to-face is the most enjoyable way to get in contact with the diverse groups mentioned above.

Visions of the future social networks

In ten years' time, the participants' life will get more balanced and a lot of pressure will disappear with retirement. The contact with working and activity friends will change or maybe disappear under certain circumstances. In contrast to that, the contact with family, relatives and close friends will further intensify. Also their need for health support will increase to cope with physical impairment in future.

Two participants do not even want to think about changes in the future and still hope, there would not be many for them.

> *"...well now, I don't even want to think about that, I don't want to dwell on that because it's obvious that I'm one of the older members of this group, and so therefore I don't look too far ahead." (man, UK)*

> *"...I haven't put that this will change because I'm hoping it won't for the next...I still want to go to dog club, I still want to keep my bees and so on, so I actually haven't put that that will change, although it may do, who knows what the future holds." (woman, UK)*

4.2.3 The ideal social network in 10 years – presentations of group visions

Participants from all three workshops were required to elaborate a vision of their social network in 10 years in groups and visualize them in the same way as their individual social networks. Each group had to present their vision and discuss it with other workshop participants. The objective was to understand the vision of the participants regarding how their social networks should ideally look like in the future (without sticking too much at what is the status currently) and thus understand the participants' desires, values and requirements that can be used as the basis for technical development in the Go-myLife project. The presentations of the different visions of the groups and the subsequent discussions were tape recorded, transcribed and codified. The results are presented in the following section.

4.2.3.1   Vision "household with friends"

Group 1: four women, Austria / urban area

Figure 2 Vision "household with friends"

In their vision of the ideal social network in 10 years, this female working group elaborated a concept of their ideal future place to live. Based on the wish to stay independent as long as possible without being a burden for one's family, they suggested creating a common *household with friends*. The participants of the female working group want to get closer with their social friends, where privacy issues are an important factor in the exchange with others. It seems that participants want to increasingly surround themselves with people they trust and where deep social relationships are already in place. Nevertheless even when being enclosed by social friends the possibility to retreat at any time and to be independent from others is essential. Financial issues concerning the funding of this *household of friends* should be regulated by the public authority. They envision a shared building with their social friends, where everyone has his/her own apartment and is as far as possible independent, but there are common places where they can meet and socialise.

Facilitator

An important role in this *household with friends* is the "facilitator", who is a kind of caretaker and enables the residents of the household to live autonomously and stay independent with increasing age. The facilitator is seen as a contact person, operating as an information node, helping with information regarding:

- any issues related to the house and the departments, like *"Whom to call if the washing machine doesn't work?"*
- any issues related to health, like *"which doctor should I consult?"*
- administrative affairs, like *"where to go?"*
- the coordination of internal resources, like *"who could cook for the neighbour?"*
- internal conflicts, being a mediator if the situation demands it

Committee

The "facilitator" should be a person of trust, who could be contacted if help or information about a specific topic is needed, but the "committee" actually decides, what happens in the "household". This committee is formed by the residents themselves, who would like to be self-determined and autonomous as long and as possible.

Residents

The residents of this "household" should be friends or people known to each other. Participants also discussed whether the household should be open for young people and families in order to get a slight age-mix, but some of them were worried that this might lead to them having to take too much responsibility (e.g. through babysitting services), so they agreed to have a maximum age-diversity of approximately 30 years. In each **household of friends** there should be not more than 20 residents to keep the size small and manageable.

Summary of "household with friends"

This vision stresses the importance of the "local neighbourhood" and the peer-to-peer interaction with increasing age and suggests a vision where social friends become part of this local neighbourhood.

Social friends are the most important emotional support and help to fight against increasing social isolation, but also provide instrumental support (e.g. through cooking for each other).

To make this vision happen smoothly and autonomously, respecting the increasing requirement for privacy, it needs a "facilitator" who

- screens relevant information according to older peoples' needs.
- organizes the instrumental support
- acts as mediator

The public administration is only seen from a financial perspective as enabler of this vision.

4.2.3.2 Vision "a "residential-free" society for older people"

Group 2: two women, one man, Austria / urban area

Figure 3 Vision "free society for elderly people"

Envisioning the ideal social network of the future the gender-mixed group with two women and one man elaborated a new concept of living autonomously until an older age and called it *"residential-free society for older people"*. The group members claimed that the term and the concept of current older people's residential homes are not perceived as adequate and motivating. In their opinion many prejudices are associated with this terminology and the aging society in general, where the reflections in politics and media often leave the impression that older people are worthless, take the money of the younger generation and are simply a cost, an observation which is also reflected in studies from William and Garret (2002). But participants thought that not only people who live in older people residential homes suffer prejudiced by society, but also the nursing staff is insufficiently valued in today's society and has to work hard for low salaries. Thus, in the opinion of the participants, the poor appreciation of older people and the support stuff makes themselves feel like "fringes of the society".

Similarly to Group 1, the participants of Group 2 wish to be independent as far as possible and hope that with increasing age they do not burden their families with their daily concerns. The family is perceived in this future vision as providing important emotional but not instrumental support. Nevertheless, the vision of this group is to create a society which is free of residential homes for older people and properly supports older people.

The most important pre-condition to enable this vision, is defined by the group as the **access to and support by nursing services and accompanying medical aid** - especially when older people still live in their own homes. To make this support happen the group envisions not only

the appropriate financial funding by the government, but also a growing acknowledgement of the value of the nursing staff, to make an appropriate aging possible.

To combat potential loneliness of older people the participants require "places for encounters" – understood as places to meet other people. In the participants' vision these places to meet are visible, non-political and accessible for all interested older people, and are provided by a range of agencies, from voluntary associations, through interest groups to inter-generational residential homes.

In addition civic engagement plays a role in this vision, where political interest groups and participative media should allow older people to take part and be represented in civic society and political decision making.

Concerning the phase of life when living independently is not possible any more, participants think that **more information about different ways to reside** with increasing age should be provided via information resources. Older people should be invited to think about different accommodation options in good time in order to be able to organise everything which is related to their new environment and get familiar with their "new" homes. Experiences from others show that the closer the day for the relocation comes; the less the older people want to think and speak about it. The participants envision a flexible system, where the residents could choose according to their preferences which household or residential home they would like to move in. Some would like to live together with young people or families; whereas this is exactly what some would like to avoid and are looking for a household with people of the same age. Some would prefer a household with animals. The preferences and needs are quite varied and should allow everybody to find the best solution.

Retirement homes should not be associated with ghettos, where old people are deported. Participants highlight the fact that with growing age it becomes more and more difficult to get to know new people, thus a secure and familiar environment could be very supportive. And in their vision people who get to know and become accustomed to each other in the above mentioned "places of encounter" could then chose to live in residential homes together.

Summary of "a "residential-free" society for older people"

This vision stresses the importance of "places of encounter" which provide the opportunity to meet like-minded people and receive emotional support. Thus again, it is the local community which is stressed and looked to, in order to fight loneliness.

Instrumental support is mainly seen from the side of nursing and medical services which have an important role in this vision. But instrumental support is also required concerning the planning of one's life with increasing age (for instance via information services about future residential opportunities).

The public administration is integrated into this vision first of all via the aspect of financing older peoples care services but also through civic engagement via interest groups and participative media.

4.2.3.3 Vision "my me – time for self-reflection"

Group 3: four women, Austria / rural area

Figure 4 Vision "my me – time for self-reflection"
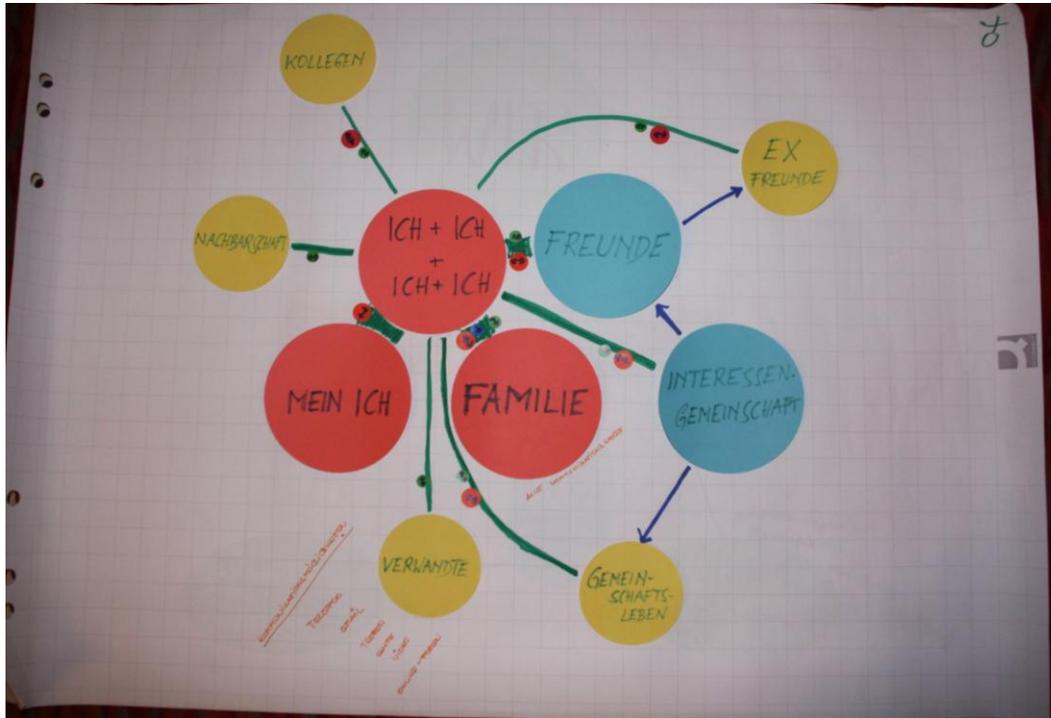
Group 4, which was composed of four women, introduces a new element to their future vision – the focus on the "my me". The members of this group think that 10 years later, they will have much more time for themselves and be able to find themselves. In 10 years they consider that maybe their responsibilities will be much more restricted and their support for family will not be needed so much anymore. This gives participants "time" to concentrate more on their own life.

The ideal SN in 10 years has three circles:

- **1ˢᵗ circle:** To the first circle belongs "*my me*" and the family. For the women in the group it is important to stay independent as long as possible and to have more time to reflect on and find themselves. In 10 years, they want to be satisfied with themselves without the fear of old age. But family will be important in future too, especially with regard to children and grandchildren.

- **2ⁿᵈ circle:** The second circle includes their friends and their communities of interests.

- **3ʳᵈ circle:** The third circle consists of many different groups. There are the relatives, neighbours, former colleagues and the local community, but also "ex-friends", who are understood as those friends that are becoming less important with increasing age.

Reflecting about different ways as to how to stay in relationship with these three circles different possibilities were elaborated:

The preferred possibility would be to reduce geographic distance and create a social network

that does not require physical mobility. This could be realized by living together in a big house with good friends or people they know well and helping each other to organise their daily lives. Or by the increasing importance of the local community and associations, which support them, not only in finding new friends, but also in contributing to the local society in general. Also a caring neighbourhood, where neighbours become friends is envisioned.

If this physical proximity is not possible, new technologies start to play an important role in the group's vision. Participants highlight the fact that new media would allow them to participate in associations even when having limited mobility and stay in close contact with distant family members or friends. Although participants prefer to stay in contact with others via face-to-face meeting, they expect new technologies to overcome space and time, where *"it is not the physical room that determines proximity but the intensity of contact is the new dimension of distance"* (man, Austria/rural area).

Summary of "my me – time for self-reflection"

This vision introduced the new element of the "my me" which is understood as a (spiritual) focus on oneself with increasing age.

The vision stresses again the importance of the "local neighbourhood" with increasing age and suggests

- social friends becoming part of this local neighbourhood and

- the importance of local associations, which provide access to the local community and help with finding new friends.

Thus either social friends or new friends of the local community provide the most important emotional and instrumental support and help to fight against increasing social isolation.

New media will allow overcoming geographical distance if this "moving closer" is not possible in real live.

4.2.3.4 Vision "technological support for participation"

Group 4: three men, Austria / rural area

Figure 5 Vision "technological support for participation"

In group 4 the participating men differentiate between the private and the public space of their ideal social network in 10 years.

In the participants' understanding the private space is a space, where people meet others face-to-face, whereas the **public space** represents a space, where the real live meeting with others might possible or even not of interest. The public space is a space to participate or establish new groups of interest and to contribute to society, for instance through active participation in political decision making. Envisioning the future, the participants think that more advanced technology will facilitate access to the public space. They want "…*that you have the possibility of participating in public opinion forming supported by new technology*" (man, rural area) and take part in different online communities of interests. Thus new technology will enable older people to still have an influence in public life when their mobility is restricted and the emotional barriers to contact new people are higher. In this vision new and easy-to-handle technologies will also help to compensate for age-related limitations, such as voice-controlled operations that support people with visual impairment.

Group 4 agreed on the importance of **private space** for older peoples' well-being and in the group's vision face-to-face meetings are the preferred way to stay in contact with members of the private space, such as friends or close family members. Nevertheless, in the case of geographical distance, new technology will facilitate the exchange of data between the

members of the private space and help to overcome physical distances with better communication possibilities such as advanced video techniques.

Regarding the handling of existing and new technologies, the participants' vision would be that the user interfaces become more intuitive so that time is not wasted in trying to understand and use new technologies correctly. In future, the protection and privacy of personal data would be guaranteed and users will be enabled to declare his/her content private and anonymous at any time.

In general, Group 4 thinks that many technologies such as mobile phones already have, and will continue to have, a strong influence on the life and life-style of human beings. Through advanced communication possibilities such as Skype, video-telephony and mobile phones, physical distances will be overcome and we will be able to get in contact with even distant family and friends almost whenever we wish.

Summary of "technological support for participation"

This group stressed the importance of civic participation despite the fact that with increasing age we feel it more difficult to contact and discuss with people we don't know. New technologies are seen as important enablers for older people to get involved in e-participation and thus still be able to positively influence the future of one's children and grandchildren. The public space is the area, where technology-supported participation in polls, discussion forums and (political) interest groups gives an authoritative voice to older people to shape their own and their family's future.

In the private space, which is seen as the place where relationships with close family members and friends are maintained, new technology will have a place (e.g. via video-telephony) only if face-to-face meetings with loved-ones are hindered by geographical distance.

4.2.3.5 Vision "The neighbours as self-aid group"

Group 5: three men, two women, UK

Figure 6 Vision "Facebook for SN"
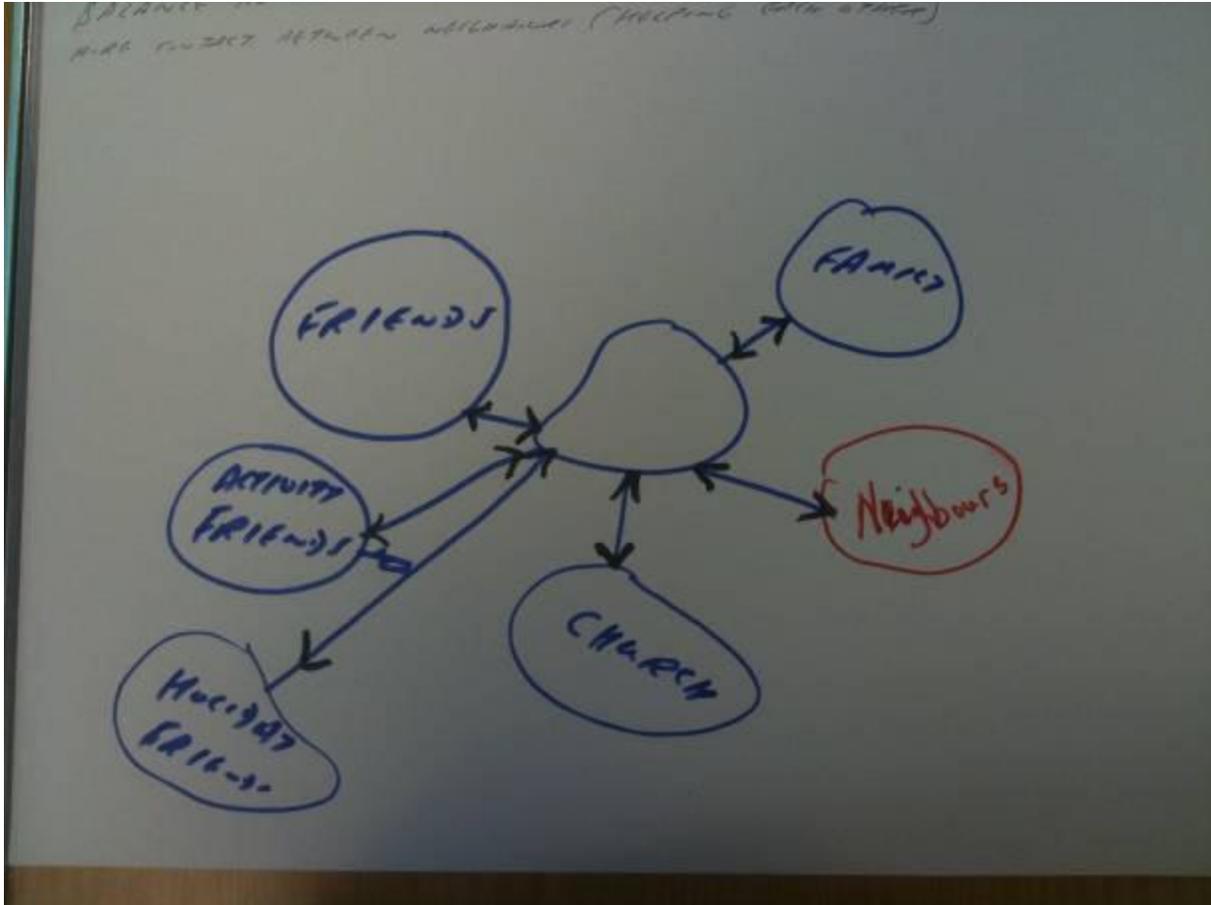
In UK the vision of the ideal social network in ten years is elaborated by all five participants together. Participants define the main clusters of their social networks in 10 years as follows:

1. "**Me**", is in first place and in the centre of the social network, where "me" also included the spouse who was seen as a part of "me" like

   "With me I didn't actually mention my wife specifically because we are as one." (man, UK)

   "I would think if somebody is married generally speaking, that is the situation, you just think as one." (woman, UK)

2. **Family** is on second place. In 10 years the family will still be part of the SN, even though it is not clear how often real face-to-face meetings will take place, which is strongly determined by the geographical distance of family members. In addition there could be some family members with whom participants might not wish to stay in contact in the future.

3. **Neighbourhood:** This vision emphasises the importance of a caring neighbourhood,

where people living in the surrounding area are seen as central to instrumental support. In this vision participants highlight the importance of neighbourhood support and claim that it will be important to collaborate together in taking care of one's neighbourhood and the close friends who live nearby as one's age increases. The aim of this surveillance is to make sure that everything is okay and be able to respond if specific help is needed. In the participants' vision more communication and interaction, especially with neighbours, is encouraged – also by the use of new technologies.

> *"So we actually go up to see her once a week, just check 'are you okay, do you need any shopping?' ...." (woman, UK)*

> *"So I think it's just thinking a bit more of each other as well, because once you start doing that other people I'm sure will start doing that back. And even if they don't, it doesn't matter, you can only do what you can do." (woman, UK)*

4. **Activity friends:** Activity friends are understood as friends, who are performing activities together with the participants, such as meeting up at the dog or beekeepers' club or going on holidays together. In ten years these friends may not be there anymore because the current relationship is related to the specific activity and people may not share the same interests anymore or might be hindered from carrying on with the activity by decreasing capabilities.

5. **Social friends:** In contrast to activity friends, social friends are not related to any specific activity and are met up with in order to share personal issues. In 10 years, it is foreseen that social friends will continue to be part of the SN, where the frequency of face-to-face meetings will again be determined by the geographical distance. In addition, even good friends can change over time, where new people might become friends and replace others.

6. **Church:** In the UK focus group, the church plays and will continue to play an important role in 10 years, although the participants were quite young compared to the two Austrian groups, where the church was not mentioned at all (Austrian participants rather referred to alternative spiritual communities, like druid groups and Feldenkrais).

7. **Health institutions and support in general:** Health institutions are foreseen as becoming more important with increasing age. The participants want there to be a continuity of health care workers, to enable them to establish a relationship of trust with one person, who knows the whole details of their medical history. Therefore, the UK participants envisioned a small team of health workers, who could give them competent support and advice.

> *"So in visionary situation I would far rather have an on-going relationship with a little team, a small team of health workers that would deal with any issues and maybe even pre-empt things, because of their advice." (woman, UK)*

Having described the social network in 10 years the participants elaborated ideas as to how new technologies could facilitate and support the maintaining of relationships with the groups of this social network. This exercise was done, using Facebook as example.

Possible benefits of Facebook

In general Facebook is perceived as quite useful, nearly all voted for it. Only one male participant was not sure about its usefulness due to privacy issues.

For the participants, Facebook can support users in quickly gaining new friends. It could also

be used to stay informed about one's own children and grandchildren who post news there. For some of them, they could feel more involved when they get more insights into their families' activities.

> *Interviewer: "Do you have family and friends on Facebook?"*
>
> *"oh yes, you see I've got five sort of teenage grandchildren and I know they all go at it, yes, so yes, oh yes" (woman, UK)*
>
> *"It actually is a very…it's just nice really, you just feel…you feel more involved, you know." (woman, UK)*

Participants also thought about new possibilities to use Facebook, like organising sponsored events by creating a group or asking for help. The list below shows in short the information, which would be interesting to have for each SN cluster:

- Family

    o News "what is happening in the family members' lives"
    o Asking for help
    o Exchanging news, especially from family members who live abroad

- Activity friends

    o News
    o Exchanging information about shared interests
    o Just staying in touch

- Social friends

    o "Light-touch" about what is going on
    o Making an appointment

- Church

    o News
    o Integrating new members
    o Building interest groups

- Neighbours, support and volunteers

    o Asking for help
    o Being informed about general issues
    o A worry: maybe burglars could get the information as well

- Police Station in the close surroundings

    o News
    o Being informed about general issues

- Health and social care

    o News
    o worry: maybe too much of their private information might be available on Facebook

Summary of "Facebook for SN"

This group's vision stresses the importance of the local community and reciprocal mutual assistance between neighbours to support the independent living of older people in their intimate environment. Although care, health and even security services (e.g. police) are foreseen as playing an increasingly relevant role with later age, this group envisions mainly close neighbours and friends interacting more closely and taking care of each other. New technology could facilitate this mutual help system and make it easier to observe each other, ask for help and retrieve relevant information for the support of one's everyday life.

4.2.4 Summary of Workshop type 2: Communication patterns in social networks

During October 2010 and March 2011 three workshops with older people were held in UK and Austria with the aim of investigating the social networks of older people and developing requirements on how to support these social networks using the Go-myLife platform.

The workshops were based on the elaboration of ego-centric social networks of the participants and the development of visions of the ideal SN of older people in the future, which enabled the researchers to deduce technical application scenarios and requirements for Go-myLife.

4.2.4.1 The social networks of older people

In the social networks of older people the close family is both the most important and highly diversified social group, which ranges from spouses, children and grandchildren to older peoples' siblings and their own parents. Close family members provide emotional support and require a lot of instrumental support from older people, who are heavily involved in child-care and are care givers to their parents. After the family, social friends (in Austria) and activity friends (in UK) are the second most important group and a source of reciprocal emotional support, where the latter ranges from gym and walking friends to friends from the bee club or the church. Also volunteering is a relevant "island". Relatives living far away, former colleagues and neighbours are among the social groups which are less important for the social life of older people.

Whereas the importance of relatives living far away and former colleagues tend to decrease with increasing age, the neighbours are considered to become increasingly important and sources of mutual help in later days. The participants agreed that the relationship will be influenced by geographical distance and the growing age of grand-children. The role of close family members in later days is seen diversified. Participants of workshop 2 agree that the relationship will be influenced by geographical distance and the growing age of grand-children. But opinions differ in how far the family will still be the most important social island in later days. While some participants say that the family itself will become less important and one might also choose with whom to stay in contact or not, others are convinced the family will stay the most important social group with increasing age. Social friends are considered to become a highly relevant source of emotional support in later age and activity friends will be part of older people's SN in future, if it is related to less physical activities, such as religious or spiritual activities.

Vision of older peoples' SN of the future

The discussion of the ideal social network of older people with increasing age, showed several important aspects which can be summarized as follows:

- The importance of the local community – in the ideal form seen as a community where social friends live under one roof together and provide each other with emotional and instrumental support. Different aspects were mentioned regarding how to support the local community (with the help of new technologies):
    - o First allow people to better connect with the local community (access to existing associations, being informed about association activities, participation over distance)
    - o Create and establish local community of neighbours who look after each other, provide help to the community members and allow them to live independently as long as possible.
- The importance of social friends – and partly close family members – as a source of emotional support, where new technologies could help to overcome geographical distance and provide the feeling of "local proximity".
- The importance of civic participation, where new technologies enable older people to take part in political and civic decision making and interest groups to shape the future of their children and grandchildren.
- The importance of instrumental help to allow living independently until later old age, where the filtered and sorted provision of information helps Slow-Goes to cope with every-day problems, and also facilitate the planning of one's future life in various kinds of residential homes in the No-Go Phase of life.

5 Summary and conclusion

5.1 Description of the target group

Ample evidence suggests the importance of social relations in maintaining quality of life for older people. Meaningful social interaction is essential for health and well-being; it leads to lower rates of depression, decreased risk of dementia and lower mortality rates. Social networks have a dual function: the provision of social support and social connectedness, and research suggested that having social networks that include diverse types of relationship is better than having restricted networks in terms of good health and wellbeing.

The core aim of the Go-myLife project is to make a contribution to support the social network activities of older people. The Go-myLife platform will provide a technical infrastructure for older people to continuously and actively involve themselves in their diverse networks, which may consist of "islands"29, such as family, social friends, neighbours, interest groups, local service providers and associations. With Go-myLife older people should be enabled to more easily give and receive support, information, and advice, communicate directly and safely with their "islands", enhance their social wellbeing by meaningful interactions with relevant others, and all this despite decreased mobility or time-constraints.

But what are the main "islands" of older people and how does this change with increasing age?

Family ties are an important source of joy (e.g. grandchildren) but with a strong notion of solidarity with the younger generations and the normative feeling of giving support to them. The results from our workshops show the importance of family relationships in the early years after retirement and highlight the uncertainty regarding future family ties with increasing age. Although close family relationships are also wished for during older age as a source of emotional support, it became clear that those relationships may change as grandchildren grow older.

The findings from literature suggest that friendships contribute to the psychosocial well-being of older people in more positive ways than family relationships do, as peers often share a similar life situation (e.g. retirement) – a finding which is reflected in the Go-myLife workshops as well. Central to a 'good life' in old age is the value attached to inter-dependence: being part of a community where people care about and look out for each other; a determination 'not to be a burden', especially on close family; and an emphasis on mutual help and reciprocal relationships (Godfrey, Townsend et al. 2004). Thus the local community and neighbourhood play an increasingly important role in later life, intensified by the fact of limited mobility and capabilities which make distant relationships more difficult to maintain.

Looking at the role of new technology in older peoples' lives, it is well documented that older people use ICT substantially less and have less IT skills compared with other age groups. Socio-psychological factors such as a general technology anxiety, or negative perceptions about the amount of effort required to learn to use a new technology, often accompanied by the assumption that they have no use for ICT, are some of the factors that explain the low ICT

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29 This metaphor was used in the participatory workshops for illustrating the groups within one's social network.

use. Additionally, older people often regard this fear or perception of complexity as their own fault and not as a failure in the design of the technology. Aside from physiological and socio-psychological considerations, there are linguistic barriers which have to be taken into account: the dominance of English terms or poor translations of them (e.g. German Facebook site) might be an obstacle for older people, which is confirmed by scientific literature as well as by the findings from our workshops.

Research (as discussed in chapter 1) shows that mobile phones are currently used by the target group only on special occasions and casual conversation, e.g. when missing a train or in an emergency. But the increasing acceptance and use of new media (internet, e-mails, SN), especially by the baby-boomer generation indicates that mobile phone usage might also change with time. To cope with the challenges of mobile phones, older people often have an 'innovator' within their social networks, who supports them with new devices or services.

However, apart from usability problems and the related effort of using new technology, most workshop participants have a positive attitude towards technology and stress the usefulness of modern communication technologies. They consider SN platforms as a mean to help lonely people where the members can get a wider circle of friends. Senior platforms are slightly better rated than mainstream SNs (Facebook) as the communication with peers is described as "more interesting".

An investigation of four existing online social network platforms (chapter 2) for older people, suggest a typical user profile: female, around 55 years old and partly still in gainful work. She participates more as information-taker rather than information-provider and prefers to stay anonymous. Further, she uses the senior platforms only three to four times per week with an average duration of only two to six minutes. She prefers local information and networking; she is more actively communicating via the interactive facilities and suggests face-to-face meetings more often than her male counterpart. She is not fond of voting and chat but prefers forums due to the anonymity they provide. Therefore personal information that she shares with others needs to be kept in a secure private space. When she has problems with the SN platform she has found some friends in the online community, who advise her on how to overcome these issues.

So how can Go-myLife improve this experience of older people in online SN, offer relevant services to older people and overcome technological barriers?

As a major output of this WP, the following section will suggest major components for the architecture of the Go-myLife platform, covering usability and features. The list is derived from the research described in the first chapter as well as from the case studies of senior platforms (chapter 2) and the seven end-user involvement workshops undertaken (chapter 3).

5.2 Usability

"Simple as possible" is the paramount requirement for a senior platform, with as few advertisements as possible. Navigation icons always need to be in the same place as changes are irritating. No flash or banners should be used as they require an unnecessarily high strain on perception.

Further components of a user-friendly senior platform are:

Stability of architecture and design

Any change in design and architecture is confusing for older users, thus, once the SN platform has been launched, no change in design and approach should be made.

Security and privacy

The ideal SN platform is absolutely safe. No information could be retrieved by outsiders. Older people are extremely sensitive concerning data protection. Thus security is a must for the Go-myLife platform.

Reliable search and sorting functions

As older people tend to spend little time in online SN and they are less IT literate, clear and reliable search outcomes are crucial in order to avoid any discouragements. Effective sorting functions to help access the most relevant information are vital to avoid the user getting lost and overburdened with too much information.

Gender aspect

Since women are the main users of senior platforms, the provision of facilities has to be carefully reviewed from a gender perspective. This is particularly an issue regarding translation into languages where female and male genders are used in the grammar: gender sensitive wordings are important to gain female users' acceptance.

Easy profiling

Creating and editing profiles is an important challenge and potential barrier for older people in social networks. Therefore functions that facilitate the creation of personal profile pages are recommended. The senior platform 50plusnet.nl can be considered as a good practice example, where the creation of the user profile is based on a multiple-choice questionnaire, as people find it difficult to describe themselves without such help. Another example would be step-by-step instructions on how to upload a profile-picture.

Appealing design

Apart from careful design of the functions, the layout of the platform itself has to meet the taste of the target group. (Guidelines on the use of colours for older people have already been presented in D2.4)

Easy navigation

To support older people in finding their way around the Go-myLife platform, it is crucial to focus on only the most relevant functions and information. Further usability aspects have to be reflected:

- No scroll down should be required: older people want to navigate in a way similar to a book; in other words, they want to "turn" the site rather than scroll down to look for relevant information. "Back" buttons are therefore important;

- Breadcrumb navigation tree is an important foundation; Finerday.com can be considered as a good practice example where each function and service is marked with a separate colour.

- A preview function and feedback confirming the success of an action are important;

- Sort functions for criteria like date, topic or author are important; the most recent news should appear on top;

- Fonts should be re-sizeable or large as default.

5.3 Potential benefits of online SN for older people

It will be a challenge for Go-myLife to provide features to support this diversity and complex patterns of interactions in relation to the different social groups ("islands") of older people. The following potential benefits of Go-myLife and related services can be considered for the development of the Go-myLife platform. All of them are only feasible if the communication area is safe and the architecture is carefully structured and user-friendly.

Foster relationship with distant family members and friends

Despite the findings in the literature that friendships contribute to the psychosocial well-being of older people in more positive ways than family relationships do, the link to family is a priority for the target group themselves, according to the findings from the workshops.

The majority of older people are instrumental and material support givers within their families and they often provide far more support than they themselves receive. On the other hand, the source of emotional support for themselves is their peers. In particular, the friendships that have been sustained for long periods of their life time contribute most positively to social well-being.

Face-to-face meetings are the preferred means of communication with close family members and friends, but new technology can have a considerable impact in keeping and maintaining relationships with family members separated by distance.

Potential services/functionalities:

Group building: Older people clearly alter their communication behaviour with respect to the different groups they communicate with. Thus older people would provide different information with different wording to their group of travel friends, walking friends or close family members. Thus the creation of groups is essential in a future older peoples' SN where each group of friends and family members should be separately and easily addressable, and also where the communication history be documented and accessible separately.

Video-telephony: The facilitated transfer of data (e.g. images) between family members and friends as well as high quality and easy to handle video-telephony could help older people to stay in contact with distant family members.

Support local community and neighbourhood

Local neighbourhoods are enormously important for older people, where they may give and receive assistance in their daily activities and which promote a sense of community, something that seems to be of high relevance in combating loneliness

Newly retired people may be dealing with the challenge of moving out of their current working-life network and may therefore search for alternative social networks and community activities, such as alternative paid work and/or volunteering.

Older people are also keen to meet new friends who share the same interests. To find and match themselves with people nearby is particularly appreciated by the target group. The potential of organising, finding and participating in (interest) groups is a highly appreciated feature of SNs, and again, local groups are of particular interest.

Possible features and services are:

Neighbourhood self-aid groups: The reciprocal support and monitoring of neighbours and friends within the local community is becoming increasingly important with later age. Self-aid neighbourhood communities can be supported by Go-myLife with a kind of "blackboard" function where members of this group offer and request support services, such as gardening or shared meals. Also the facilitated posting of status messages within a well-defined group of neighbours (to avoid data misuse) can support local self-help groups.

Information on local organisations and events: According to the findings, one of the most useful functions of existing online SNs is to get "news about organisations", which would allow older people to stay up to date with local community life despite limited mobility. In addition, easy to find information about cultural, social, political and physical events, especially in the local area, are highly valued by older people.

Service for match making: Functions that support the finding of like-minded persons sharing the same interests or practicing the same activities, especially those who are in their local area, are highly appreciated. This has an impact on profile creation, where again 50plusnet.nl serves as good practice as the data collected with the multiple-choice profiling questionnaire also serves to match people. Further, the 50plusnet.nl members receive an e-mail message with the matches that have been found on a weekly basis.

Participation in interest groups related to politics, religion, health etc.

After retirement it is still important to have an influence on political decisions, this is particularly valued by men. The (male) workshop participants expressed strong interest in discussing and participating in political issues, either on the macro level (EU-wide) or in order to shape their immediate environment (local communities).

Also over time religion seems to become more important to older people, which helps them to balance their lives. The church, as the representative institution of religion, plays an important role as people are getting older. The same refers to esoteric and/or spiritual affairs, expressed in statements such as "to find myself more deeply" by workshop participants.

Another important issue is related to older peoples' health. For the target group long term relationships with care services are desired, to support growing older independently from family support and to avoid having to move to residential homes. Support for spouse caregivers can alleviate loneliness and have a long-term protective effect against deterioration in the well-being of the caregiver. This suggests the provision of online self-help groups of family care-givers.

The contact and active participation and experience exchange with those different interest groups can be supported by services and functions like:

Service to allow the launch of groups or forums

Groups are a highly valued interactive feature where participants like to share opinions, activities, jokes and stories, organise theatre trips and other activities, and gain support and

advices and companionship. The most appreciated topics in groups are those focused on issues that affect the life of the users (i.e. health) and that deal with them on a practical level rather on a theoretical or political level.

On the other hand communication via "walls" (e.g. Facebook) tends to be seen negatively, as the communication patterns are semi-public and tend, in consequence, to be superficial.

Functions to leave messages in forums and groups anonymous

As privacy and security issues are of high relevance for older people and workshop participants reported their increasing reluctance to communicate with people they don't know as they get older, functions that would enable messages to be left anonymously in forums and groups are highly recommended. The suggestion is that the user should be able to decide individually if they want to join the discussion within a group anonymously or fully authenticated.

Political forums, online polls etc.

Concerning the (predominately articulated by men) wish to participate in political decisions Go-myLife could integrate the research results and functions that have been developed from numerous and up-to-date e-participation projects.

Support in organising one's life

Staying independent as long as possible without burdening one's own family is an important and predominant wish of older people, who therefore require third-party support for organising their everyday lives. As the acquisition, filtering and handling of information becomes increasingly complex with increasing age, older people require a kind of "information node", which provides them with information regarding the maintenance of one's household, health or administrative affairs, which is filtered, sorted and validated according to older peoples' needs.

Possible features and services are:

"User-generated" Yellow pages: A possible feature would be an index of local service providers, public services and organisations to which members of the local community can add their comments and ratings, and which would allow older people to quickly find answers to questions like "Who is the favourite plumber in town to repair my washing machine?".

"User-generated" AroundMe: Another service idea would be a personalised AroundMe[30]. AroundMe is a mobile application which allows users to quickly find information about their surroundings, based on geo-location data. AroundMe shows users a list of businesses according to categories (gas station, hospital, bank, bar, hotel etc.). For every listing, users can see the location on a map, view the route from where they are, add the information to their contact list or email the information to a friend. The idea for a Go-myLife service adapted for older people would be to allow the information provided by "AroundMe" to be enhanced with user comments and ratings and thus provide suggestions and recommendations from the local community about the most appropriate places, businesses, public services and service providers in the region.

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[30] http://www.tweakersoft.com/aroundme.html

Enjoyable, entertaining activities

Social isolation frequently causes boredom. The findings have highlighted that entertainment aspects, such as games are important. They combat boredom for one thing, and at the same time often train the memory.

Potential services and functions:

One element of the Go-myLife platform could therefore be dedicated to attractive entertainment features.

On the other hand, the browsing of news and messages from one's friends and related groups itself provides an entertainment factor and addresses boredom. In this case it is essential that the information provided can be searchable and sorted according to author, date etc.

5.4 General facilitation activities and functions

User support systems

In general, older people are not as comfortable with new technology as young ones. Thus, Go-myLife should support older people in their use of the platform, using a variety of support systems, such as FAQ, telephone support, and moderated groups. Support given by the users themselves is highly appreciated as is video tutorials. Good practice examples are Finerday.com and again 50plusnet.nl[31]

Netiquette and monitoring

A clear code of conduct displayed in a prominent place is important for two reasons: on the one hand it regulates the use of the platform and provides a safe and secure communication environment for its users and on the other hand it demonstrates the seriousness of the platform. The latter aspect is important for older people, as they are very concerned to know whether a platform is continuously monitored for offensive content and behaviour and that members who offend against the code of conduct are effectively dealt with.

Features that require special attention are:

- voting and chat, as they are rarely used by older people;
- GPS functions on mobile phones, as they are also rarely used;
- Photos and videos: contrary to initial assumptions, the sharing of photos and videos does not seem to be greatly appreciated.

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[31] See: https://www.finerday.com/Hints/Default.aspx,
http://www.50plusnet.nl/index.cfm?act=rondleiding.video50plus

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7 Annex

7.1 Annex 1: Methodology for an interactive workshop

Transfer of the user needs into technical functionalities

This appendix describes the methods used for "translating" the user needs and requirements, gained from the social research activities in WP2, into technical terms. These interactive methods used in a one-day workshop ensure that the information gained from the investigation of communication patterns in social networks and the assessment of SN platforms gained from a) desktop research, b) interviews with operators of senior platforms and c) from seven participatory workshops can be understood and implemented by the technical team. (See chapter 3 in D2.1)

In the following section a detailed agenda is provided. It describes the agenda items and the objective of each activity on the agenda, with the aim of providing other AAL projects with a knowledge source of methodology when it comes to creating a common vision between social and technical researchers.

Session one: Understanding and communicating with older people

Overall timeframe: 120 minutes

Aim: 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 older people. This session focused on potential pitfalls in communication between both technical designers and social researchers and older people. It provided an opportunity for participants to reflect on any stereotypical assumptions they might hold and consider how they might best tackle these so that they could properly understand the requirements of older people and design effective services to meet those requirements.

Introductions

Timeframe: 20 minutes

Aim: This sets the tone for the workshop by providing a safe and easy way for participants to begin to interact with the group, as well as anchoring them in their work in the project.

Implementation: Each participant had about 1 ½ minutes to tell the group:

- Their name
- The company or organisation they represent
- Their role in the project
- What work they have done on the project in the previous six months.

Sociometry – Differences and Commonalities

Timeframe: 20 minutes

Aim: This activity demonstrates the differences and commonalities within a particular group. It is a good way to warm-up and can serves as energizer.

Implementation: A series of questions was asked of the group about their identity or experience and people kept moving into different groups according to their answers to each of these questions. The questions they were asked included:

- Whether it was their first time in that city or whether they had been there before

- Whether they are parents or not

- Whether they thought of themselves as technical or non-technical

- Whether they were men or women

- Whether they were football fans or not interested in football

- Whether they were young people, middle-aged people or older people

At the end of the questions, participants had the chance to share any thoughts or reflections from the exercise.

Identifying differences between life stages

Timeframe: 30 minutes

Aim: to help participants focus on the differing perspectives and experiences of people at different stages of life.

Implementation: Participants were split into three groups focusing on three different age groups

- Twenties and thirties

- Forties and Fifties

- Active over sixties

The groups then spent ten minutes on answering the questions:

- What is the life situation in each of those age groups; and

- What is good and what is difficult about being each of those ages

Each group then had a chance to share their ideas with the rest of the participants. At the end of the whole-group session each participant had the chance to say which age they would most like to be and why.

Communicating between age groups

Timeframe: 30 minutes

Aim: Having allowed participants to get in touch with the life situations of the different age groups, this exercise gave them the opportunity of reflecting on the things we need to keep in mind when attempting to communicate with people of a different age and life situation to our own.

Implementation: Participants went back into their three groups and discussed what "their" age group would like each of the other two age groups to keep in mind when they talk together with them. A representative from each group then had the chance to address each of the other two groups in turn to tell them what their "age group" wanted them to know.

Summing up the learning

Timeframe: 20 minutes

Aim: To enable participants to reflect on what they had learned from these exercises.

Implementation: An open discussion was then held addressing the points:

- What have we learned?
- What have we learned about communicating with older people?
- What have we learned about designing Go-myLife for older people?

The key points from this discussion were captured on a flip chart.

This session concluded with a short overview presentation of the Guidelines on Interacting with Older People included as Annex 2 in report D2.1.

Session two: developing a common vision of how the project should be implemented

Timeframe: 290 minutes

Aim: Building on the work of the previous session, the objective was to give people a chance to reflect on the aims of the project, to gain an in depth understanding of the results of the social research into the user requirements and to agree together the overall technical design of the project.

Mission Reflection

Timeframe: 30 minutes

Aim: A reflection and analysis of the (often un-reflected) interests, expertise and missions of the consortium members and/or its representing organisations for this project. It supposes to turn out potential gaps between the consortium's mission/interests and the user requirements.

Implementation: each participant notes her/his interests and mission on cards, brings them to the flipchart, presents them to the others; the facilitator takes the cards and groups them into clusters.

Cognitive walkthrough

Timeframe: 30 minutes

Aim: with this exercise the consortium members put themselves in the position of their future users and try to sensitise themselves to the needs and requirements of their target group. In addition they undertake for themselves tasks that were fulfilled by their future users during the requirements elicitation workshops.

Implementation:

First, the participants were instructed to put themselves in their grandparents' position and conduct the following tasks:

Task 1: Uploading pictures in Facebook

- What kind of usability issues would you struggle with?

- What kind of additional barriers would you face?

- What would motivate you to become Facebook member and share pictures with your friends?

The participants then talked about their experiences during the task and gained a better sense of the technical barriers their users might face.

Task 2: Think about the Social Network of your grandparents

- What are the most important islands around them?

- How are they connected to these islands?

- How will this island landscape change with increasing age?

The participants were invited to think about the social network of their grandparents and to draw it out on paper by using the metaphor of "islands" for each social group. Then the commonalities and differences between the "island"-landscapes were discussed.

Knowledge fair

Timeframe: 90 minutes

Aim: to give the technical researchers insights into the findings of the social research investigated before, not in a classical tutorial manner but rather in an interactive format.

Implementation:

- The findings were presented on a number of flipcharts (already prepared before the workshop);

- Participants were split into two groups. One group started off dealing with social networks of older people and the other group started with the assessment findings of SN platforms. The number of participants per group: 7-8;

- Each group built a circle around the presenter;

- Each participant made notes on papers regarding anything considered as important and relevant as basis for further discussions (laptops were not allowed);

- The focus of the groups moved on to the other topic after 45 minutes;

Comments:

To have the presentations of findings not on PowerPoint slides but rather on old fashioned paper with some drawings, overcame social distance and helped to establish a lively discussion atmosphere.

Brain walk

Timeframe: 20 minutes

Aim: to gain a structured overview of what is considered as important and relevant by the participants as basis for creating a common vision of the technical application.

Implementation: the participants were invited to fill empty cards with issues that:

- are most relevant for them from the knowledge fair for the technical application;
- additional aspects that have not been mentioned yet;
- and add these cards to empty flipcharts with the following headlines:
    - Characteristics of older people's social networks
    - Barriers for older people in online SNs
    - Motivation/drivers of older people to use online SNs
    - Possible application scenarios of the project's platform
    - Visions of the ideal SN of older people

Each participant briefly presented the issues noted on his or her card and added it to the empty flipcharts. The moderators structured these individual contributions on the flipcharts and summarized these contributions into five visions for the Go-myLife project.

Vision forming

Timeframe: 120 minutes

Aim: elaborate a common Go-myLife project vision based on the user-requirements, taking into consideration the perceived relevancies of the project partners.

In a next step the more detailed elaboration of the project vision was started by a discussion, and prioritization of these five visions (each participant received 3 dots and could attribute these dots to his preferred vision/s).

As a result of this task the two visions that got the highest number of points were considered as being the most relevant for the consortium. Now two groups were formed around these two visions. The groups elaborated in more detail the benefits of the respective visions for end-users and possible Go-myLife services and functionalities to support these benefits. This group-work lasted 45 minutes.

The results of this work were presented to all participants and in a discussion process the group decided on one Go-myLife vision which integrated parts of the two final visions.
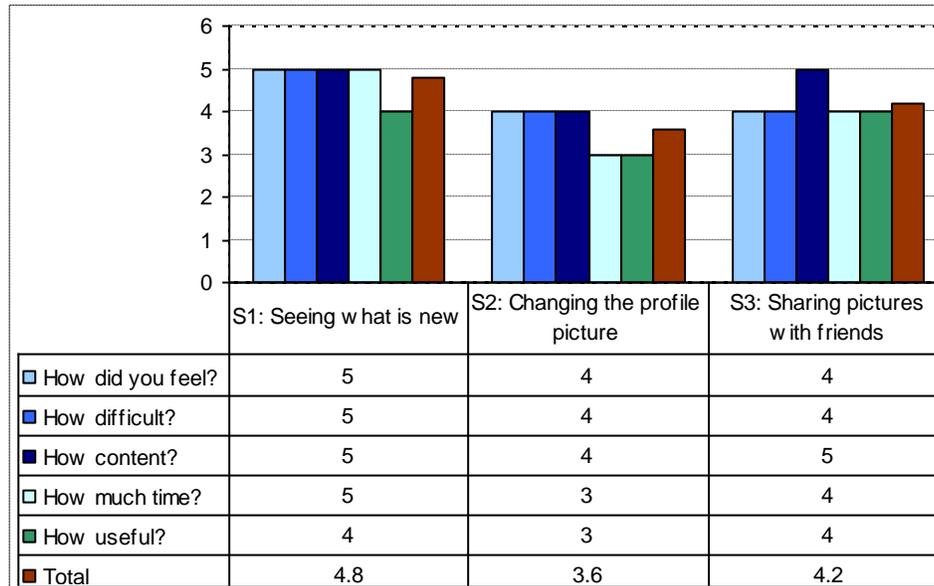
Comments:

It was very worthwhile to dedicate an entire day for the transformation process from social research findings into technical terms. Based on a genuinely common and clear vision, the consortium was able to start directly with the creation of the interface (of the project's platform) and came up with good results, to the satisfaction of all.

7.2 Annex 2: Data statistics of workshop type 1

Assessment of **Seniorkom** by tasks (the higher the value the better the rating on a 5-point likert scale, n=2)

Graph 10 Mean value – Seniorkom

	S1: Seeing what is new	S2: Changing the profile picture	S3: Sharing pictures with friends
How did you feel?	5	4	4
How difficult?	5	4	4
How content?	5	4	5
How much time?	5	3	4
How useful?	4	3	4
Total	4.8	3.6	4.2

Assessment of **Ahano** by tasks (the higher the value the better the rating on a 5-point likert scale, n=4)

Graph 11 Mean value – Ahano

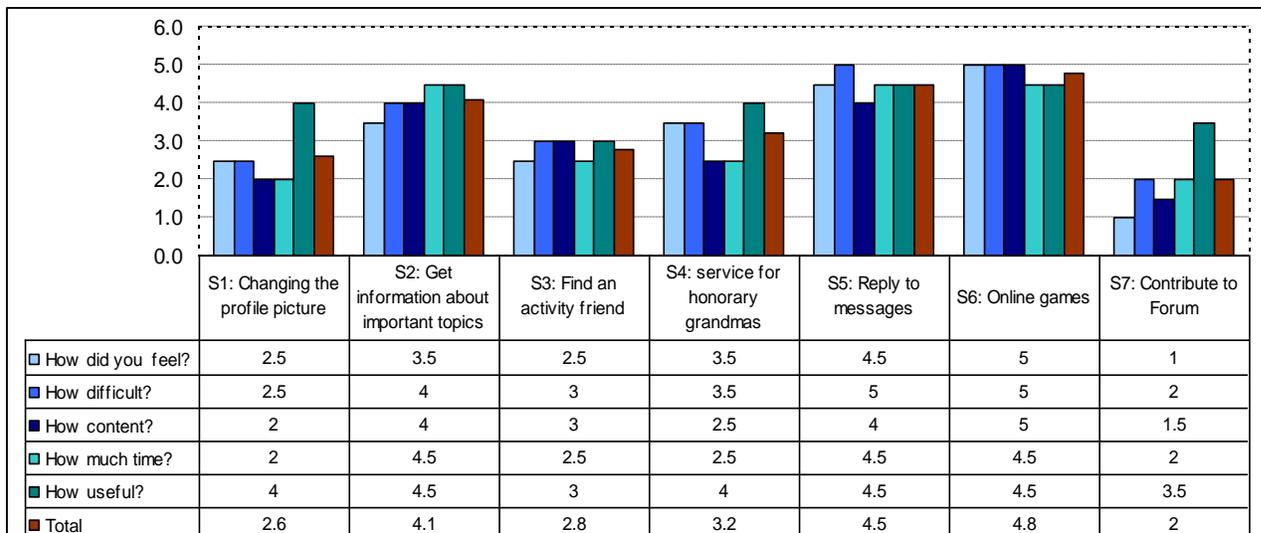|	S1: Changing the profile picture	S2: Get information about important topics	S3: Find an activity friend	S4: service for honorary grandmas	S5: Reply to messages	S6: Online games	S7: Contribute to Forum
How did you feel?	2.5	3.5	2.5	3.5	4.5	5	1
How difficult?	2.5	4	3	3.5	5	5	2
How content?	2	4	3	2.5	4	5	1.5
How much time?	2	4.5	2.5	2.5	4.5	4.5	2
How useful?	4	4.5	3	4	4.5	4.5	3.5
Total	2.6	4.1	2.8	3.2	4.5	4.8	2

Assessment of **Finerday** by tasks (the higher the value the better the rating on a 5-point likert

scale, n=2)

Graph 12 Mean value - Finerday

	S1: Friend requests	S2: Changing profile picture
☐ How did you feel?	3	3.5
☐ How difficult?	4	3
☐ How content?	4	3
☐ How much time?	3	3
☐ How useful?	3	3
☐ Total	3.4	3.1
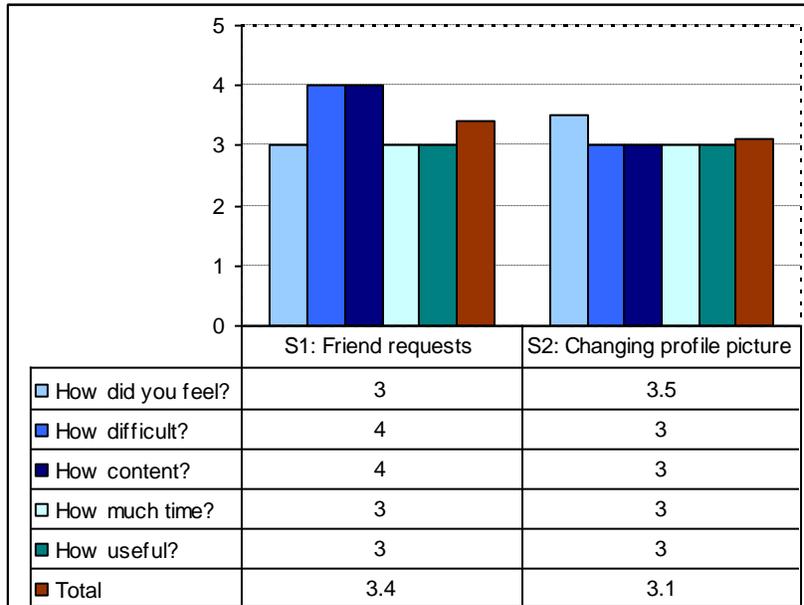
Assessment of **BeGrand** by tasks (the higher the value the better the rating on a 5-point likert scale, n=2)

Graph 13 Mean value – BeGrand

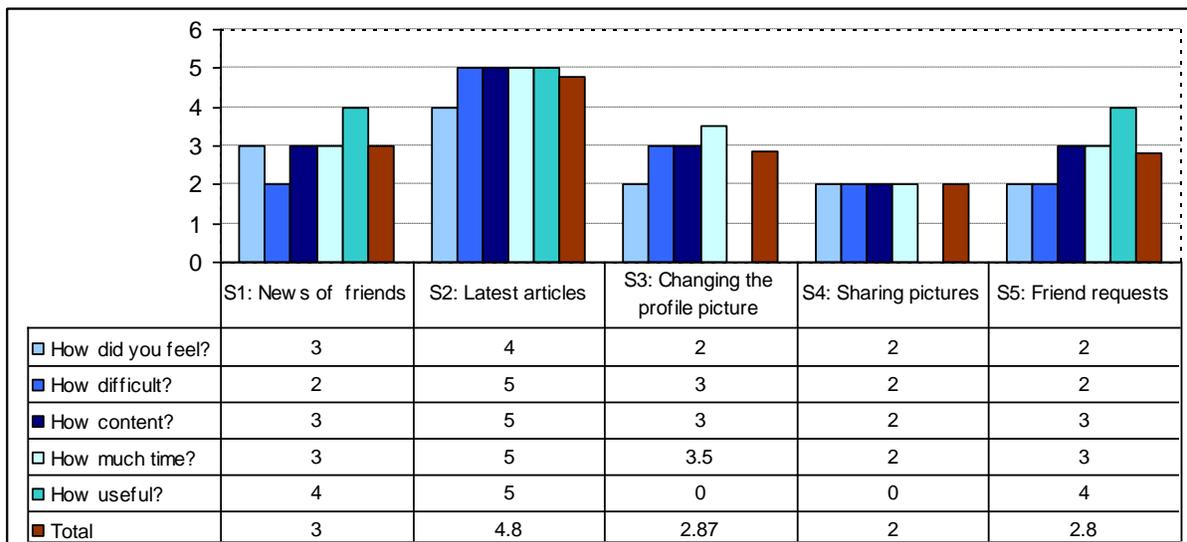|	S1: News of friends	S2: Latest articles	S3: Changing the profile picture	S4: Sharing pictures	S5: Friend requests
☐ How did you feel?	3	4	2	2	2
☐ How difficult?	2	5	3	2	2
☐ How content?	3	5	3	2	3
☐ How much time?	3	5	3.5	2	3
☐ How useful?	4	5	0	0	4
☐ Total	3	4.8	2.87	2	2.8

Table 17 Position of social groups with focus on family members

(Based on individual presentations of social networks)

Participant		mentioned 1st	mentioned 2nd	mentioned 3rd	mentioned 4th	mentioned 5th	mentioned 6th	mentioned 7th	mentioned 8th
woman	urban	1st daughter	grandchildren	mother	2nd daughter and husband	friends	ex-colleagues	dancing friends	relatives
woman	urban	family	dog from children	relatives	school day friends	theatre friends	club friends	community of interest	club friends
woman	urban	elder daughter	younger daughter	friends	Qi-Gong friends	Feldenkrais friends	writing friends	friends of the intervention group	choir friends
woman	urban	children	grandchildren	activity friends (trekking, dancing)	ex-colleagues	real friends (theatre, cooking)	children neighbours		
woman	urban	family	relatives	friends	friends of the actors group	activity friends	neighbours	gym friends	doctors
woman	urban	friends	parents	twin brother	children	friends from Spain	friends	neighbours from the parents	communities of interest
woman	rural	husband	children	grandchildren	sibling	sister-in-law	nephew	friends	neighbours
woman	rural	spouse	grandchildren	children	god-child	friends	bookshop		
woman	rural	husband	family	relatives	school day friends	ex-colleagues	gymnastic friends	holiday friends	seniors
woman	rural	husband	children	grandchildren	friends	children of friends	clients	colleagues	relatives
man	urban	ex-colleagues	neighbours	music friends	club friends	daughter with grandchild	partner of life	old friends	
man	rural	spouse	daughter with family	parents of son-in-law	relatives	relatives of mother	relatives	ex-colleagues	friends
man	rural	wife	daughter	Step-daughter and -son	grandchildren	relatives	neighbours	dog	
man	rural	wife	family	relatives	friends	trekking friends	club friends	community of interest	neighbours